

## Materials Palette

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# MetroLink

CONCEPT ARCHITECTURE:  
MATERIALITY VISUAL DESIGN INTENT

AUGUST 2022



GRIMSHAW



# Contents

## 1 INTRODUCTION

### 1.1 Design Vision Principles

## 2 OPEN CUT STATION

## 3 COMMON STREET LEVEL COMPONENTS

# Purpose

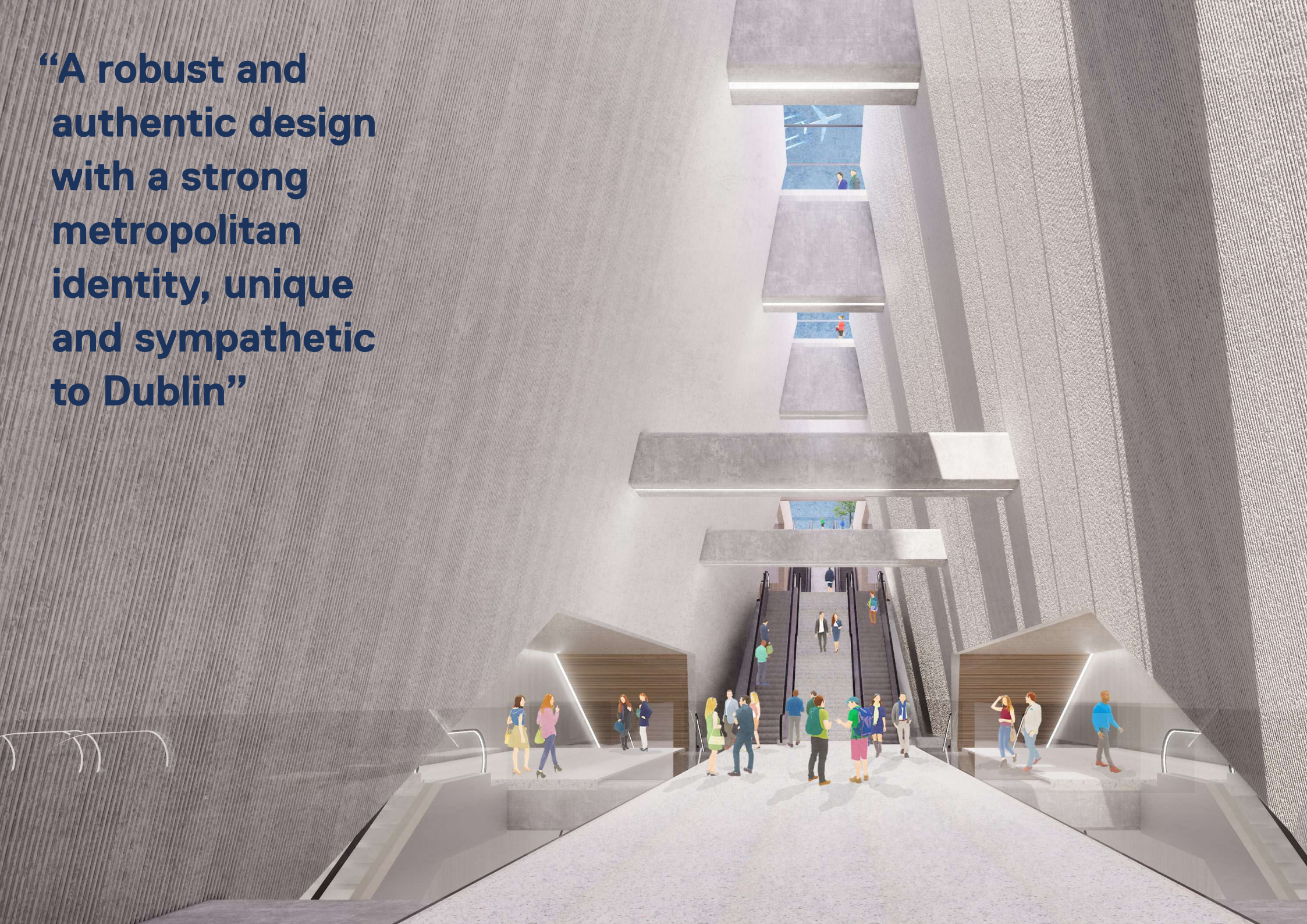
## OVERVIEW

This document delineates the architectural materiality vision, establishing the principles to a comprehensive look and feel for Metrolink.

All materials specifications will need to be developed and validated against all project requirements by the lead consultant during the following design stages.



**“A robust and authentic design with a strong metropolitan identity, unique and sympathetic to Dublin”**





**METROLINK  
DESIGN VISION  
PRINCIPLES**

## Project Context

The MetroLink project is the development of a north-south urban railway service that will run between Swords and Charlemont, connecting key destinations including Dublin Airport and the City Centre along the 19km route.

A large proportion of the route will be underground, including where it passes under the important city center area and Dublin Airport. The underground section will terminate close to Charlemont Stop on the Luas Green Line.

**“Deliver a safe, high frequency,  
high capacity, fast efficient and  
sustainable public transport light rail  
service connecting Swords, Dublin  
Airport and Dublin City Centre”**







# Design Vision

## Design Vision Principles

The core of the Design Vision has been established around three factors that are identified as key to delivering a successful MetroLink Design:

- » Clear design principles as a foundation for all design matters
- » Strong design leadership to carry these principles through to project completion
- » Client commitment to the design

The Design Vision aims to realise a station environment that, through these core values, can meet the expectations of the MetroLink project.

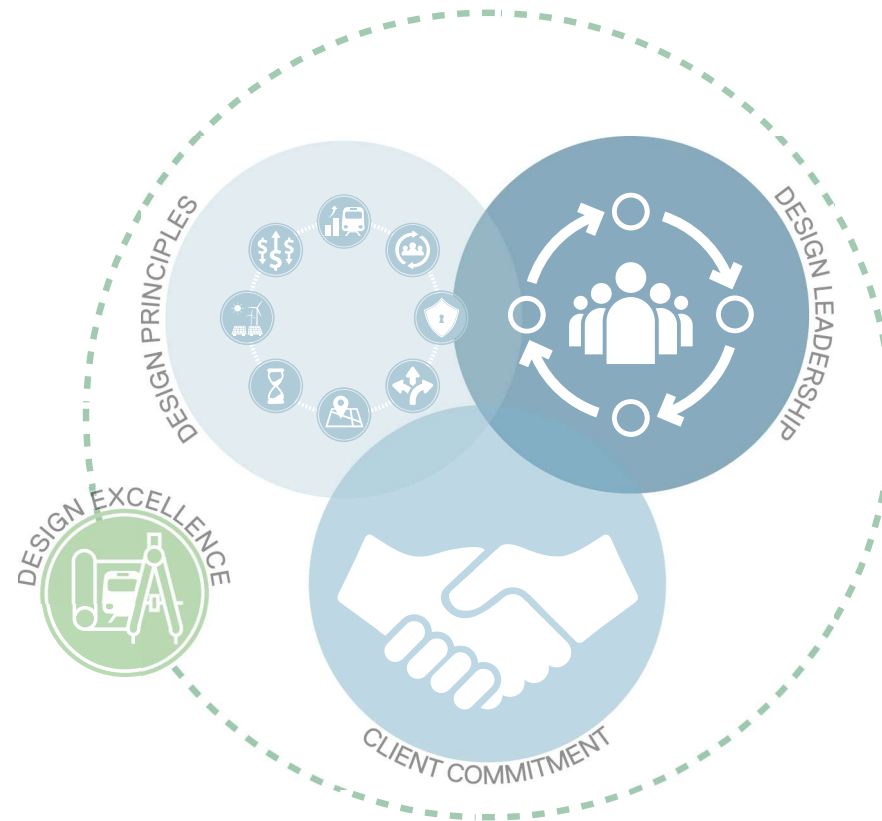


Fig.1.Core Design Vision Diagram

Sustainability is a primary design driver of the design intent for MetroLink. All design vision principles have sustainability at their heart and is integral to the design.

**Sustainable:** A project that considers the environment and actively seeks to reduce the impacts caused by its construction and operation.

**Efficient:** Develop an efficient station design that optimises its engineering process and creates a station layout that minimises travel distance and time between transport connections, the station and trains.

**People Focused:** Provide an inclusive and accessible environment that creates an uplifting experience for both passengers and staff.

**Safe & Secure** A design that provides spaces that can be easily monitored and are safe.

**Legible:** A simple and easy to navigate station design. Legible spaces that provide intuitive routes to and from trains, supported by clear sight-lines and wayfinding.

**Sense of Place:** Create generic stations that can be adapted to context to reflect the place where they are located. Commonality in design that reflects the identity of the local area.

**Timeless:** A flexible design that can be easily maintained, modified and changed in time without disrupting the stations' normal operations. A future-proofed building that can adapt to changing needs.

**Value for Money:** Apply economies of scale, where standardisation and modular design processes will capture a positive cost-benefit while maintaining quality and commonality across all MetroLink stations.



#### Sustainable

Reduce traffic congestion, catalyst for regeneration, low carbon



#### Efficient

Express functional & elegant engineering solutions



#### People Focused

Inclusive, accessible and enjoyable to use by all passengers



#### Safe & Secure

Clear sight lines, natural surveillance, robust materials



#### Legible

Consistent identity, naturally intuitive, uncluttered, clear zoning of information



#### Sense of Place

Responsive design solutions that are appropriate to the City and the local context/ character



#### Timeless

Future proof, zoning services, easy to maintain and operate



#### Value for Money

Standardisation, economies of scale, value of common design





# Timeless

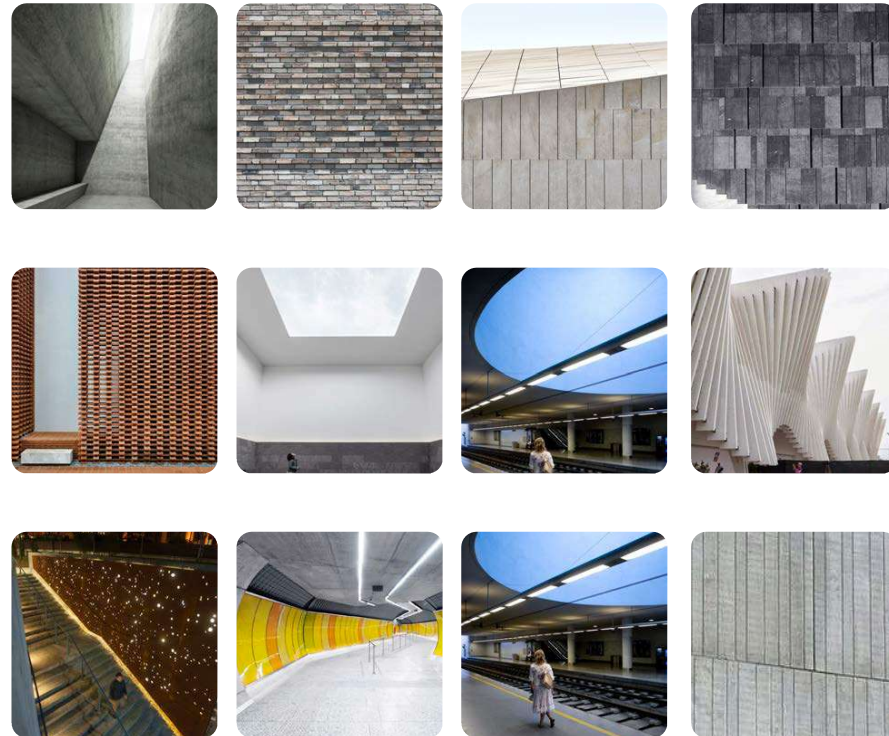
## Material Palette

The mark of truly world-class transport architecture is the ability to stand the test of time. The designs need to respond to the impact of huge volumes of pedestrian traffic, as well as dust from the tracks and tunnels. The Dublin MetroLink's design vision response has been to create clean, simple spaces which integrate components into cladding elements to create a contemporary environment that minimises opportunities for dirt and dust to accumulate.

Materials selected in future phases of the design should be highly durable, elegant, vandal resistant (where they come into contact with patrons) and have minimal embodied environmental impact.

The design and selection of these materials should include, but not be limited to:

- Simple, modular systems that allows maintaining consistency (repetition), efficiency and replicability
- Responsibly and locally sourced materials where possible
- Design for disassembly
- Economies of scale
- Durability









**“The project offers the unique opportunity to contribute to the vitality of Dublin.”**





# OPEN CUT STATIONS

The visual design intent for the material palette is supported by key principles, benchmarking and contextual precedents alongside an illustration of the consistency between urban and surface stations to support the MetroLink linewide identity.

## Materials

### Materiality principles



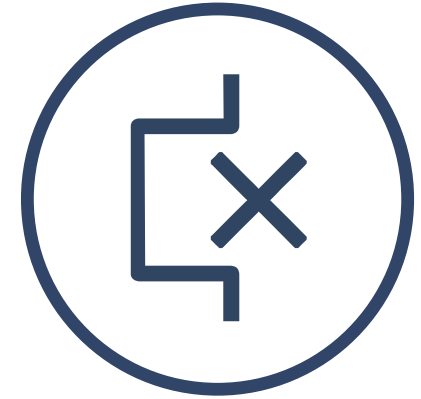
HIGH QUALITY ROBUST  
MATERIALS



AVOID WEATHER  
PENETRATION



PASSIVE OBSERVATION



NO ALCOVES IN  
PERIMETER WALL





PASSENGER  
EXPERIENCE



INTUITIVE WAYFINDING



RESPONDS TO LOCAL  
CONTEXT



COMMON DESIGN  
LANGUAGE ACROSS  
METROLINK STATIONS

# Materials

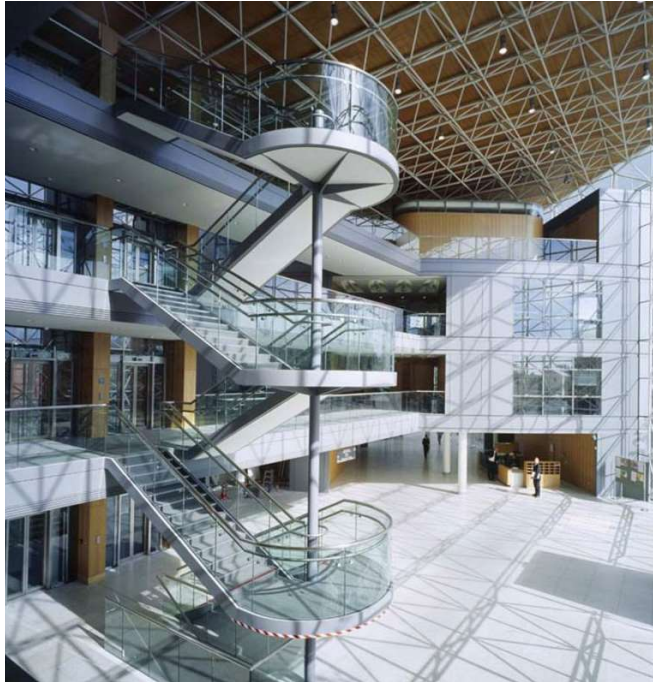
## References



### LOCAL EXAMPLES OF STONEMWORK

It is important to distinguish the surface stations as being local to the FCC area and generate a material palette which responds both to a language which is consistent throughout the Metrolink system and a palette of materials which highlights to Metrolink users the geographic location of FCC. Therefore we have looked to stone, timber and metals in the FCC area and how they are presented. This has been brought into our design of the material palette and implemented along with that of the urban stations.

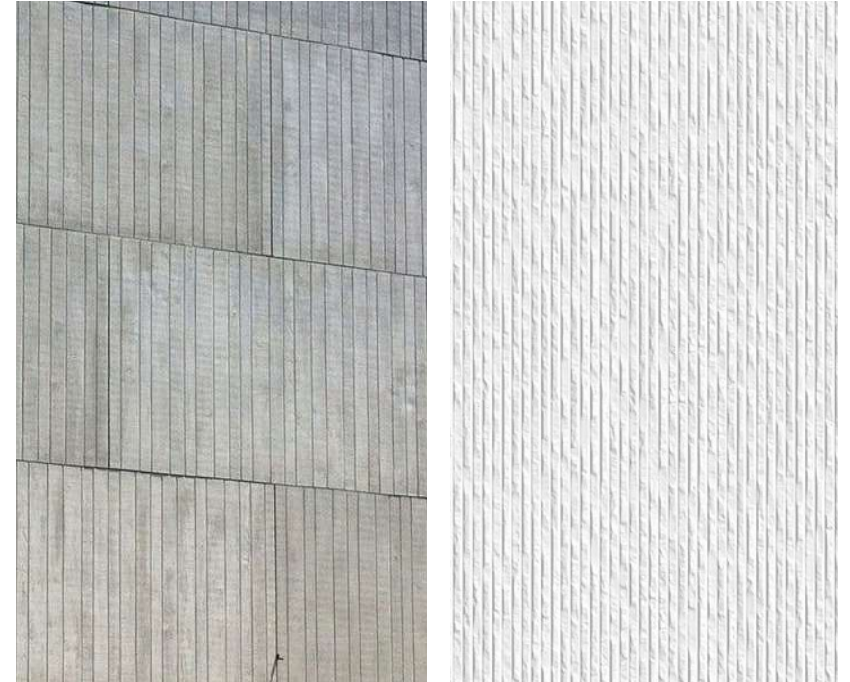




CONTEMPORARY BUILDINGS WITH  
METAL DETAILING AND TECHNICAL  
ELEMENTS



TIMBER CEILINGS



STONE REFERENCES FOR PLATFORM WALLS AND  
STATION INTERNAL ATMOSPHERE

# Materials

## Palette of materials

Carrying out a rigorous material selection process for the flooring is crucial to this typology of project. Large quantities of a single material palette will be used within each station, of which flooring will make up the quantitative majority. Ensuring suitable materials are selected is of paramount importance.

These pages touch on the visual intent for materials currently been considered at concept stage and their appropriateness of application within the MetroLink project. An in depth optioneering study, along with prototyping and material benchmarking / mock-ups, should be conducted at a later stage of the project to assist with material selection for the project.

- Natural textures
- Contemporary details and technical equipment



**METAL CANOPY**  
Dark metal



**LIFTS**  
Glazed lifts with black metal framing (frame can sit proud or be recessed subject to further design development as part of reference design stage)



**CANOPY SOFFIT**  
Timber slatted soffit



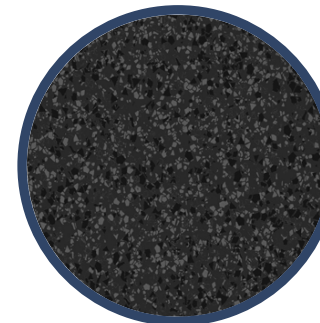
**PLATFORM SCREEN DOORS**  
Back painted and transparent glazing with dark metal and technical elements



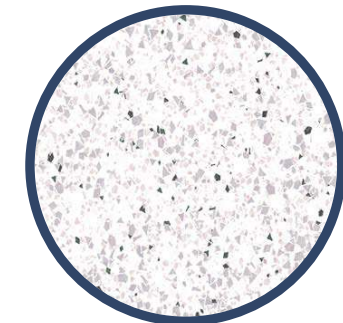
**PERIMETER BARRIER**  
Glazed barrier



**PLATFORM WALL**  
A panelled cladding system with vertical pattern which can be light shade natural stone or GRC



**PERIMETER UP-STAND**  
Stone or precast to match platform walls or dark terrazzo



**PLATFORM FLOOR**  
Light terrazzo or natural stone (light granite)

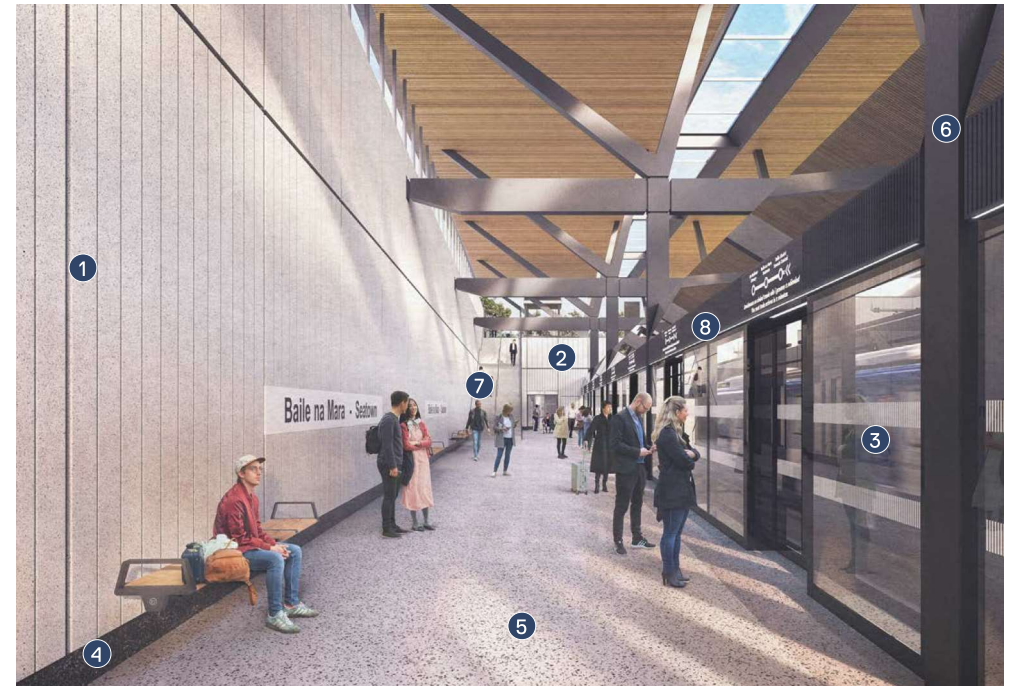


## Urban and surface station consistency



### URBAN STATIONS

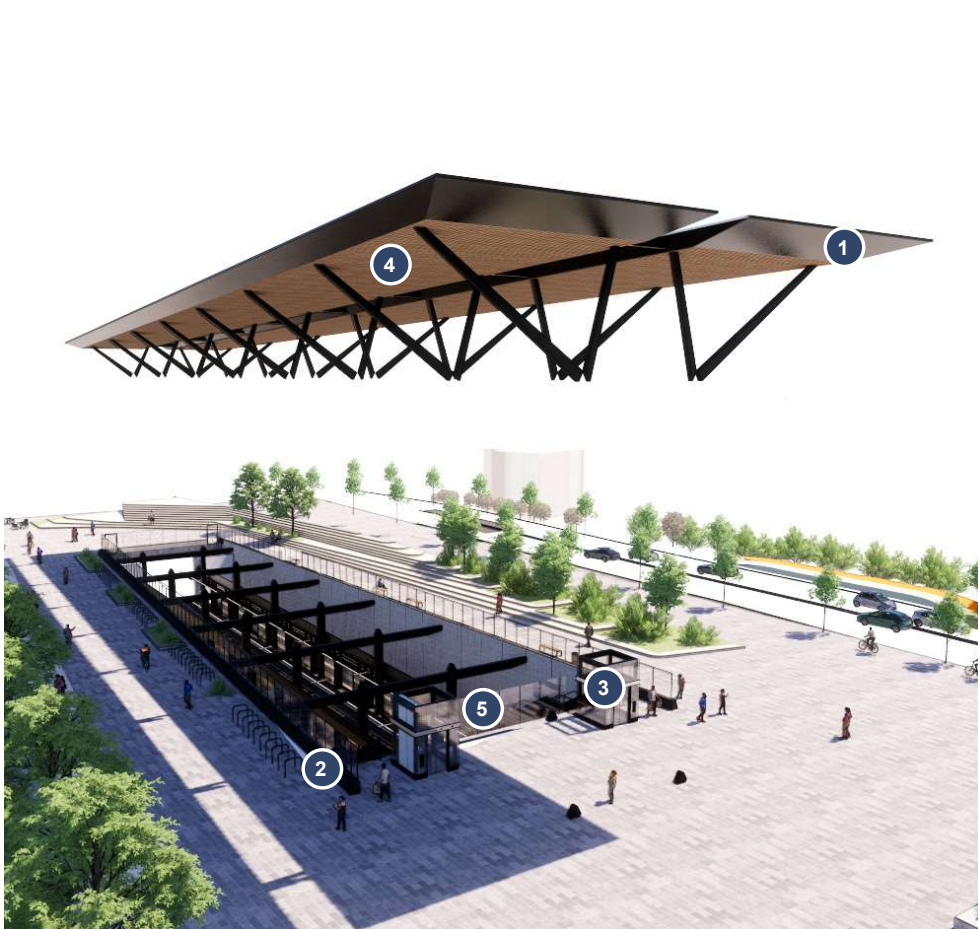
1. Platform walls
2. Tunnel walls
3. Platform screen doors (PSD)
4. Skirting
5. Platform flooring
6. Column connection to platform
7. Staircase materiality
8. PSD lighting



### OPEN CUT/SURFACE STATIONS

# Materials

## Palette of materials



**METAL CANOPY**  
Dark metal



**PERIMETER UP-STAND**  
Stone or precast to match platform walls or dark terrazzo



**LIFTS**  
Glazed lifts with black metal framing (frame can sit proud or be recessed subject to further design development as part of reference design stage)

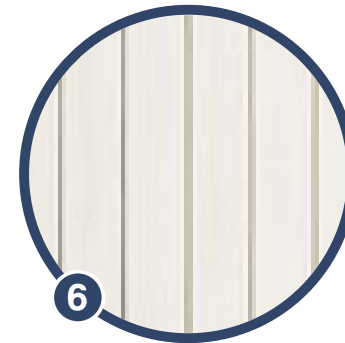
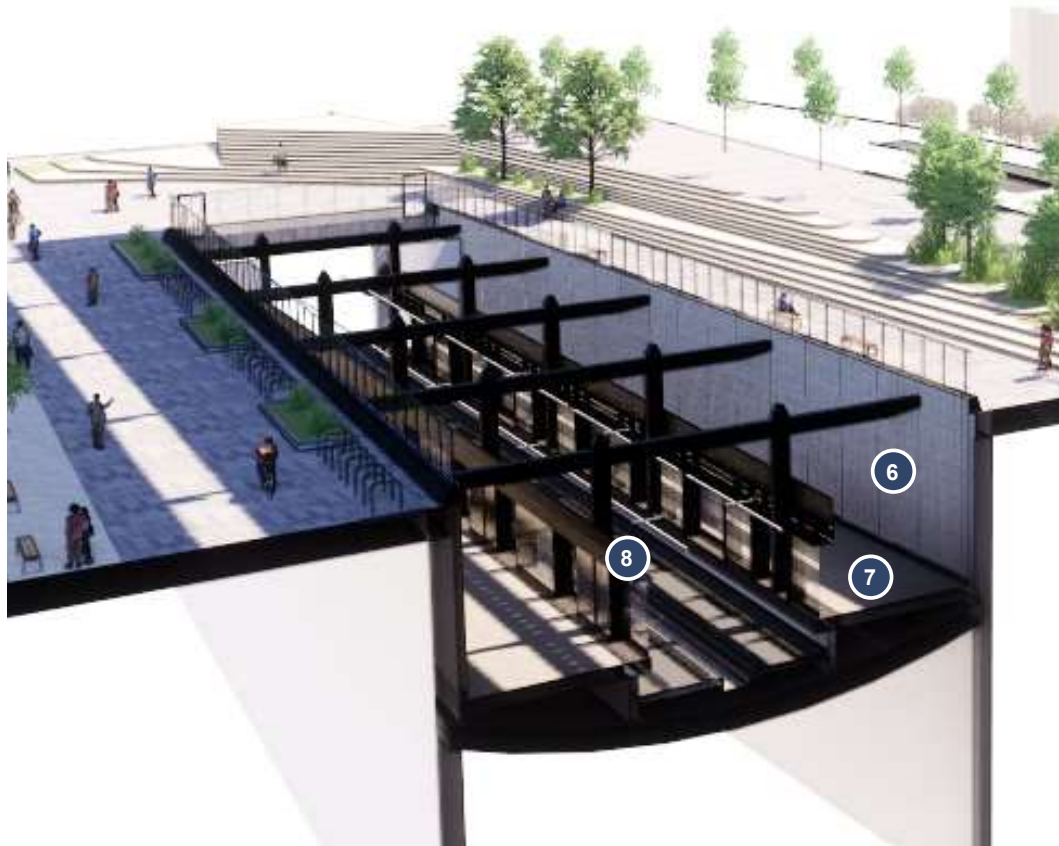


**CANOPY SOFFIT**  
Timber slatted soffit

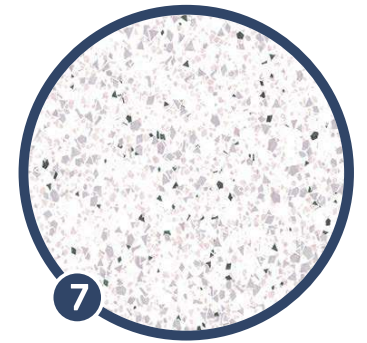


**PERIMETER BARRIER**  
Glazed barrier





**6**  
**PLATFORM WALL**  
 Light shade stone or precast  
 panellised cladding system with  
 vertical pattern



**7**  
**PLATFORM FLOOR**  
 Light terrazzo floor



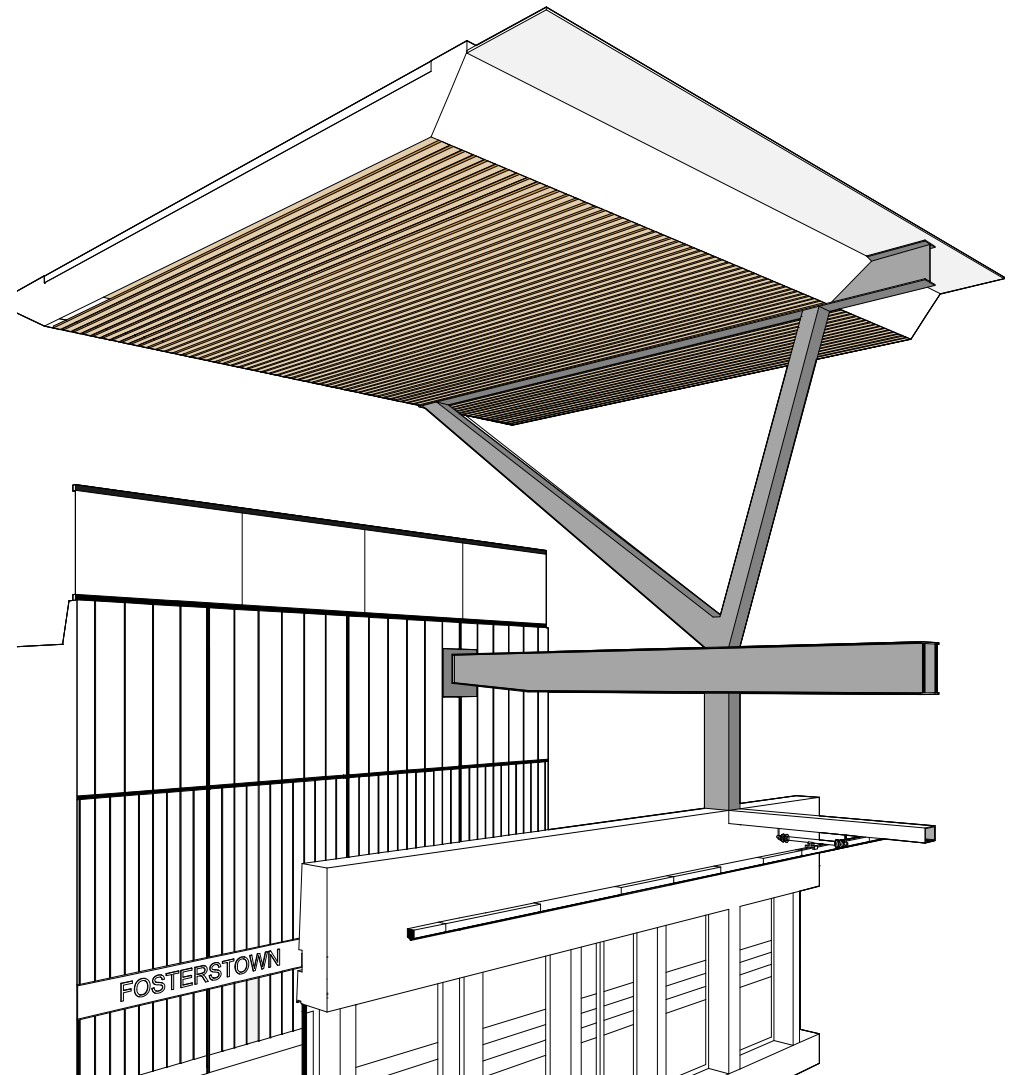
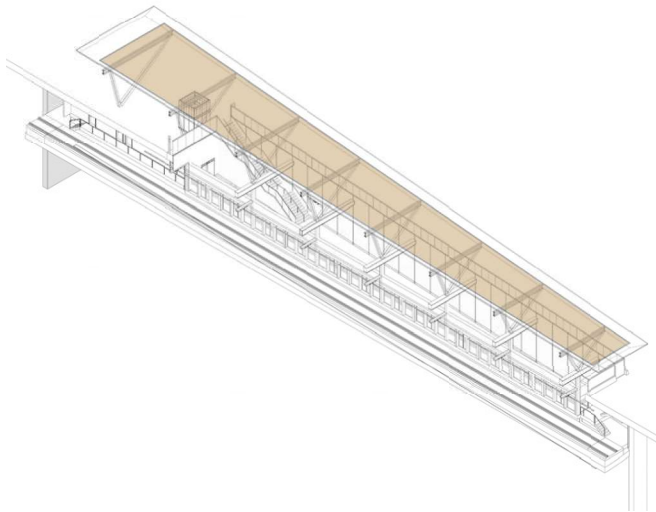
**8**  
**PLATFORM SCREEN DOORS**  
 Back painted and transparent  
 glazing with dark metal and  
 technical elements

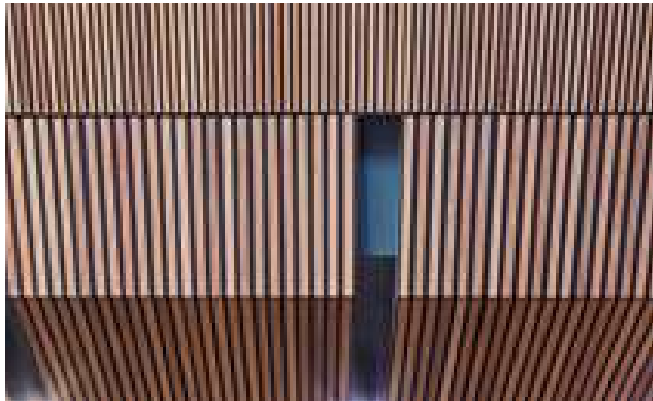


## Open Ceilings

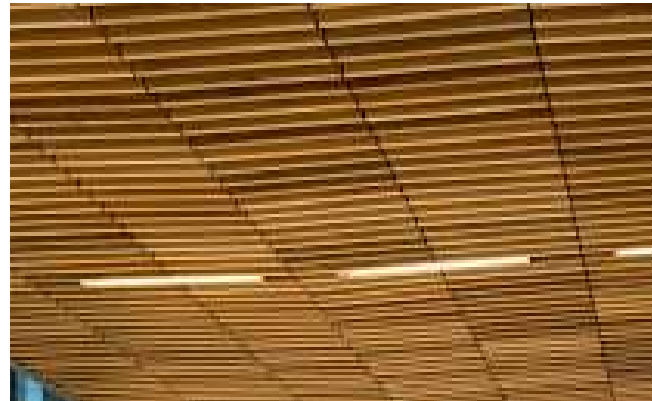
### Timber soffit

The timber soffit gives a warm feeling and softens the internal atmosphere of the station. The density of timber panels and the relationship of the steel beam to the timber soffit should be studied as part of further design development and coordination.





LONDON BRIDGE STATION



STOKE BUS STATION



HELSINGBORG STATION

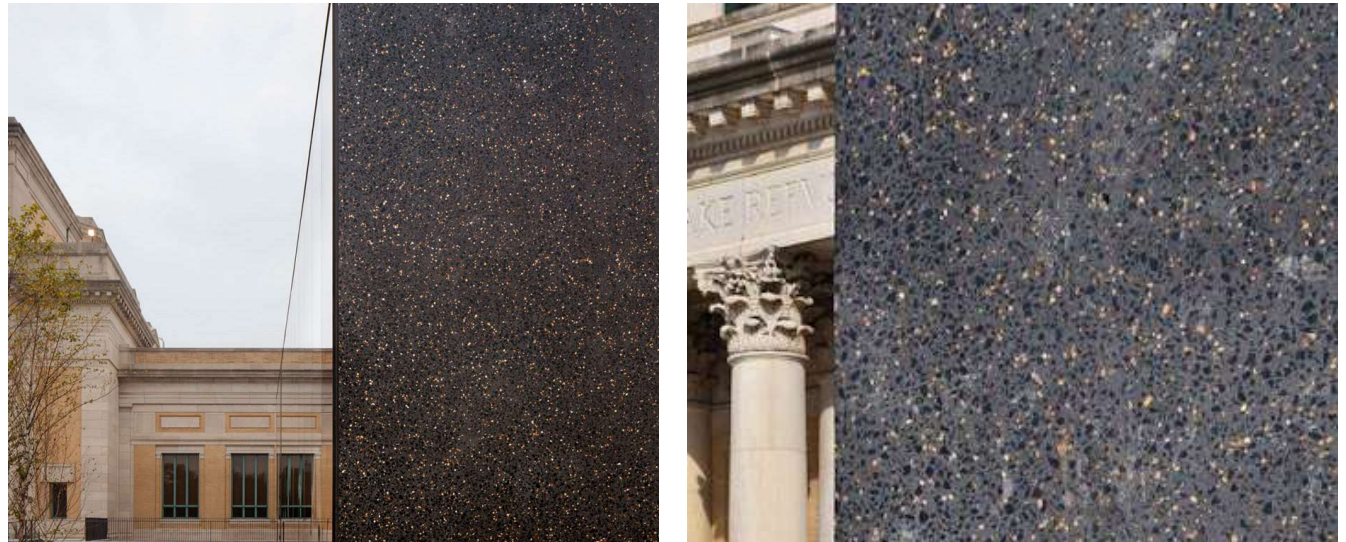


## Perimeter Upstand

### Cast stone upstand

Our preference for the perimeter upstand is that this will be a dark cast stone such as terrazzo or uses pieces of granite in the constituency.

The adjacent images show the high quality finish that can be achieved with cast stone and terrazzo. The mouldings can be designed with carved recesses where concrete is not structurally required, to provide a visually stimulating surface that plays with light and shadow.



MATERIAL REFERENCES



PERIMETER UPSTAND



REAR UPSTAND



**“Common components will provide a consistent, high quality passenger experience”**





# COMMON COMPONENTS

This section sets out the concept design intent for the above ground common components:

- Entrance Portals
- Skylights
- Public Facing Lifts
- Service Lifts

Together they provide a consistent linewide identity that form part of the Dublin streetscape. The key design concepts, benchmarking studies, and contextual considerations that informed their material palettes are outlined in this section.



# Common Components

## Introduction

The common “Station Popups” are integrated within the public realm environments above the underground Metrolink stations. The scope of stations is indicated on the adjacent line map.

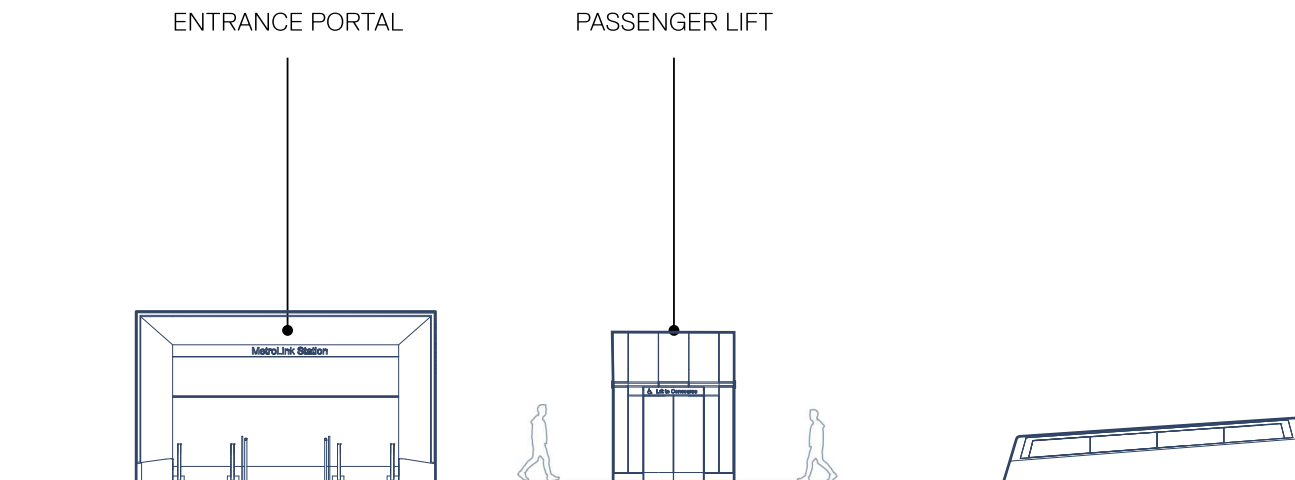
Repetition of elements across multiple locations brings benefits from economies of scale and improved functionality.

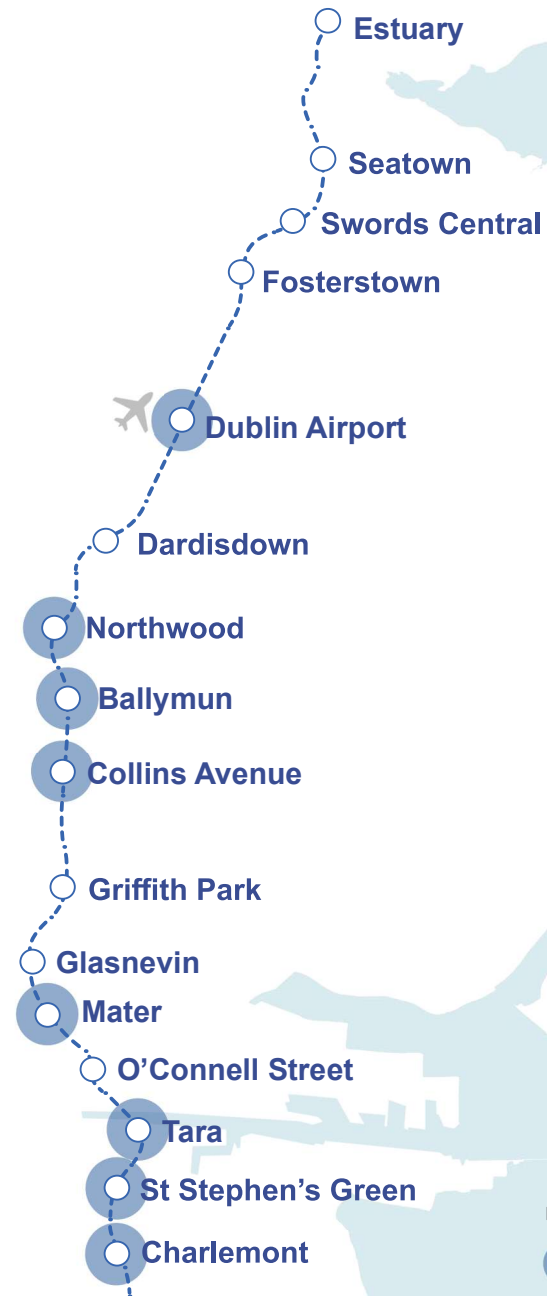
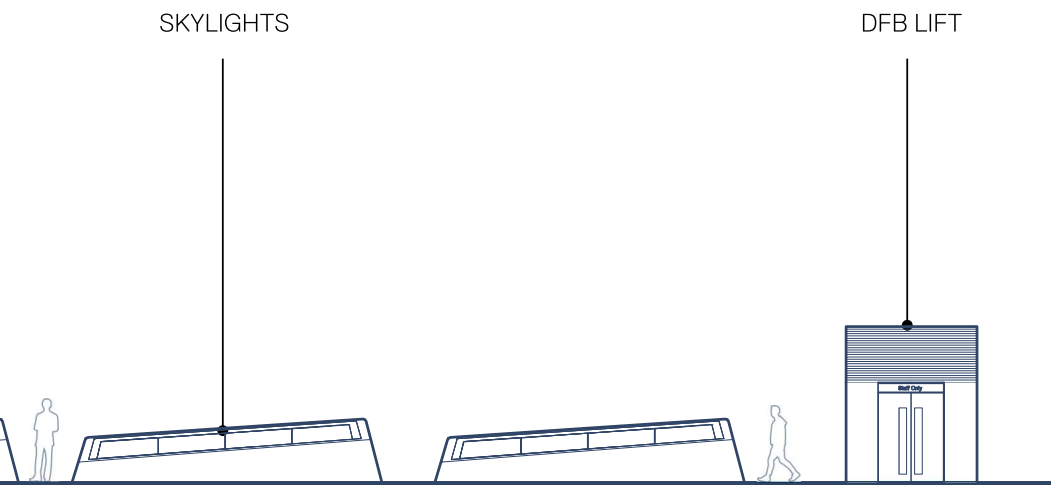
The common elements provide a consistent linewide identity and strong MetroLink brand within the public realm. The concise and recognisable material palette takes inspiration from both historical and contemporary elements of the city’s built environment.

The entrance portals provide secure shelter over the escalators to the underground station, with glazed elevations to maximise natural light and aid wayfinding

The passenger lifts also utilise glazing, helping users quickly orientate themselves and enable good visual permeability across the public realm. DFB lifts are clearly differentiated in their approach to materiality

The skylights draw natural light into the underground station environment with forms that maintain visual permeability in the local area and ensure durability. A shared approach to materiality and detailing creates a coherent and highly identifiable set of station elements within the above ground public realm.







# Common Components

## Principles

The station popups share a set of principles that ensure a high-quality passenger experience is achieved across the Metrolink network.

High quality, self-finished materials, robust forms and careful detailing provide highly functional, secure, and durable station elements. Commonality across the entrance canopies, lifts, and skylights ensure a strong brand identity across contexts whilst aiding wayfinding.

The designs provide shelter for passengers before onward travel whilst protecting key assets such as escalators and lift entrances. In tandem with this, the designs allow for responses to environmental contexts and integration of sustainable solutions such as PV technology and greywater recovery.



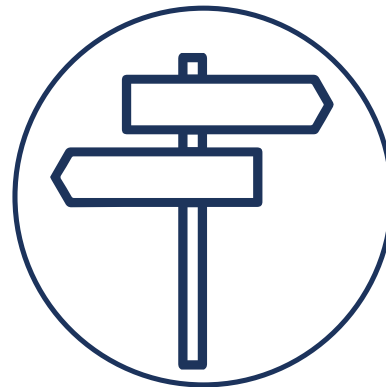
DURABILITY / SECURITY /  
FUNCTION



COMMONALITY ACROSS  
CONTEXTS



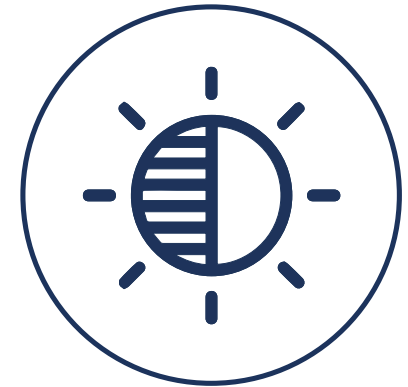
BRANDING / IDENTITY



UNIVERSAL ACCESS



WEATHER PROTECTION /  
SAFETY



ENVIRONMENTAL

# Common Components

## Contextual Character / Materiality



Four Masters Park Railings - Mater Station Location



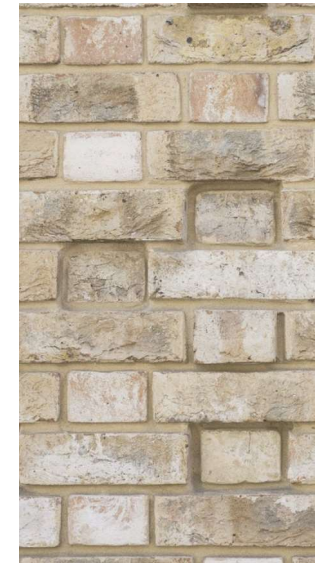
Light Reflecting Off Cobbles + Rails



Dark Cladding + Cast Elements



Glazed Elements



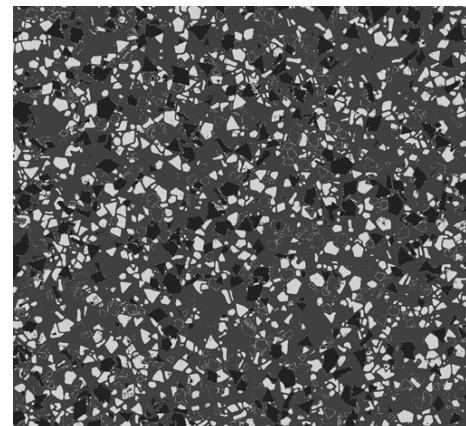
Warm Brickwork



Granite Steps Along Liffey Banks



Bollards and Railings - Henrietta Street



Dark Precast Elements



Timber Soffits + Tactile Elements



Sráid na Teamhrach - Tara Street



Lift to Concourse

# ENTRANCE PORTALS

This section details the design principles and visual intent for the materiality for the entrance portals. The portals provide highly identifiable entrances to the underground stations which additionally provide shelter, security, and an approach to materiality drawn from the local context.



# Entrance Portals

## Principles

### 1. Escalator & Stair Opening

- Passengers & escalators unprotected from weather;
- Security line not possible at street level;
- Poor passenger experience.

### 2. Shelter & Weather Protection

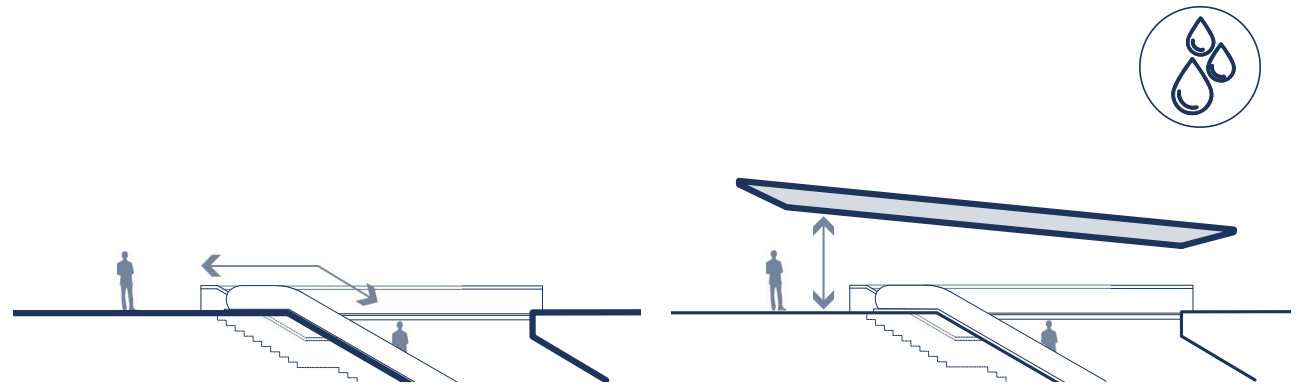
- Introduction of overhead canopy helps improve passenger comfort, experience and reduce slips/trips;
- Helps protect mechanical equipment from direct rainfall.

### 3. Safety & Security

- Lockable secure line at street level;
- Removes requirement for gates at concourse level, saving space underground.

### 4. Visual Connectivity / Context

- Introduction of glazing improves lighting levels within the station for enhanced experience and added safety;
- Glazing helps the visual connectivity in the public realm and reduces the perceived mass of the canopy.



1. ESCALATOR & STAIR OPENING

2. SHELTER & WEATHER PROTECTION



3. SAFETY & SECURITY

4. VISUAL CONNECTIVITY, CONTEXT + IDENTITY

# Entrance Portals

## Benchmarking / Precedents

- » No secure line at street level;
- » No weather protection for passenger comfort and reducing slippery surfaces.



Barcelona Line 9 - Barcelona, Spain

- » Sufficient space for runoff, matwell & tactile paving at the top of escalators;
- » Bespoke geometry & fabrication - minimal opportunities for economies of scale.



Canary Wharf Station - London, England

- » Incomplete weather protection for passenger comfort and reducing slippery surfaces;
- » Upstand for durability.



MTA Subway Retrofit - New York, USA

- » Varied space for runoff, matwell & tactile paving at the top of escalators;
- » Inconsistent linewide identity, signage zones & common design.



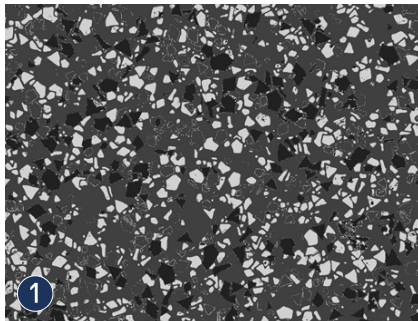
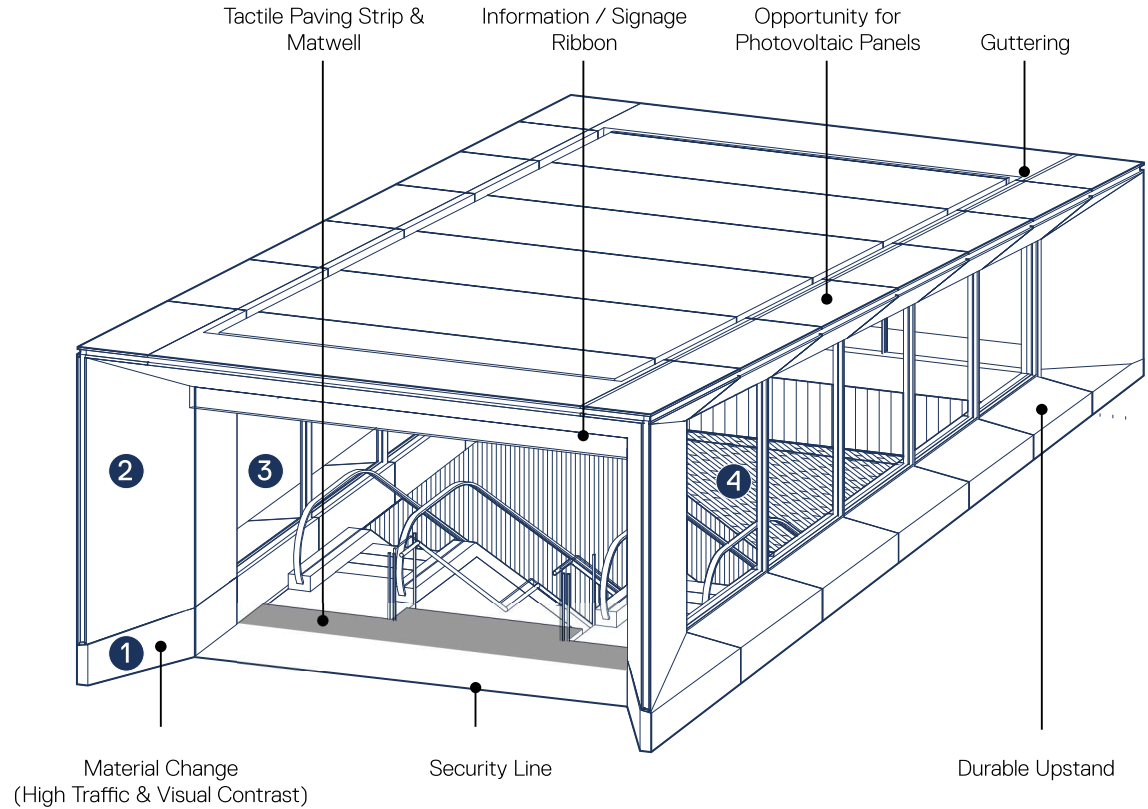
Warsaw Metro - Warsaw, Poland



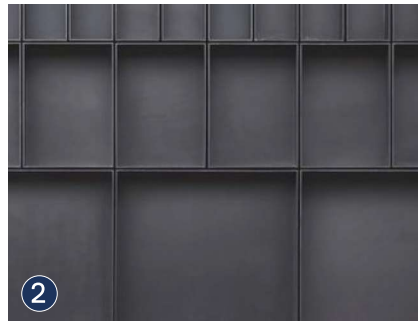
# Entrance Portals

## Elements & Materiality

- The canopy utilises a set of durable, self-finished materials including a robust precast base with expressive dark metal cladding above;
- Warm timber is used internally, lit by both the uplighting and the generous natural light provided by the glazing;
- The material palette takes inspiration both from the dark street level finishes and furniture and from the rich timber interiors, found in the city and detailed early in character studies earlier in this chapter.
- The entrance portal provides a sheltered envelope to house a street-level secure line and matwell, whilst creating an elegant, intuitive meeting point at the station entrances.



Dark precast sidewalls / upstands



Dark metal cladding for visual contrast



Glazed sides & mullions



Timber soffits



Station Entrance Portal in Context at Tara







# SKYLIGHTS

This section details the design principles and visual intent for the materiality of the skylights, which provide natural light and a strong visual link to the underground station environment. Through form and materials, the designs create highly durable and identifiable elements in the local streetscape.



# Skylights

## Principles

### 1. Environmental Performance

- Ability to position and tailor light angle capture at each station location to minimise artificial lighting;

### 2. Visual Permeability / Context

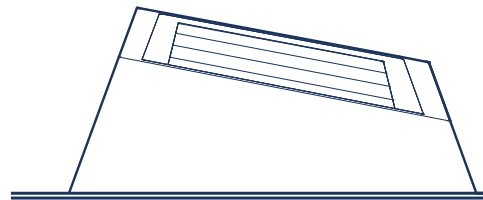
- Low lying elements help keep visual sightlines clear, helping wayfinding and clarity of space. Smaller individual elements retain pedestrian permeability to help people flow throughout the public realm;
- Ability for common skylight design to alternate, introducing a playful + interactive sculptural element to the public realm;

### 3. Robustness + Durability

- Robust, self finished pre-cast sidewalls are designed for longevity in the public realm;
- Angled sidewalls will help to discourage anti-social behaviour by keeping distance from glazed areas;

### 4. Line-wide Identity

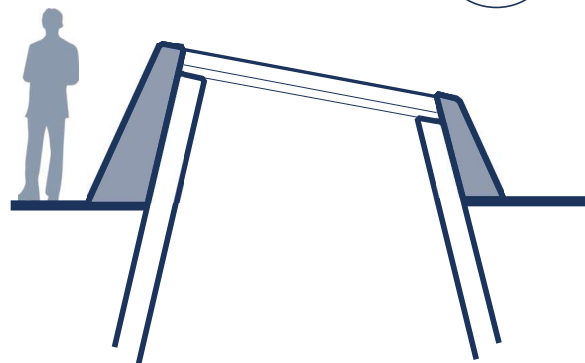
- A distilled material palette of dark pre-cast sidewalls and glazing, along with familiar angular geometry help tie the skylight design in with the overall Metro-Link identity;



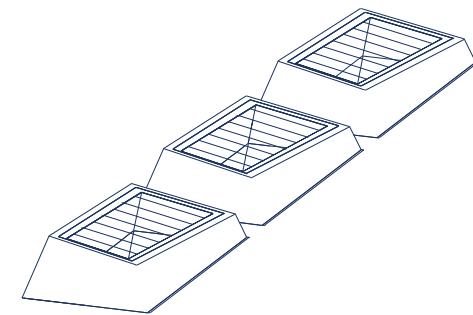
ENVIRONMENTAL PERFORMANCE



VISUAL PERMEABILITY & CONTEXTUAL INTEGRATION



ROBUSTNESS, DURABILITY & SECURITY



LINE-WIDE IDENTITY & BRANDING

# Skylights

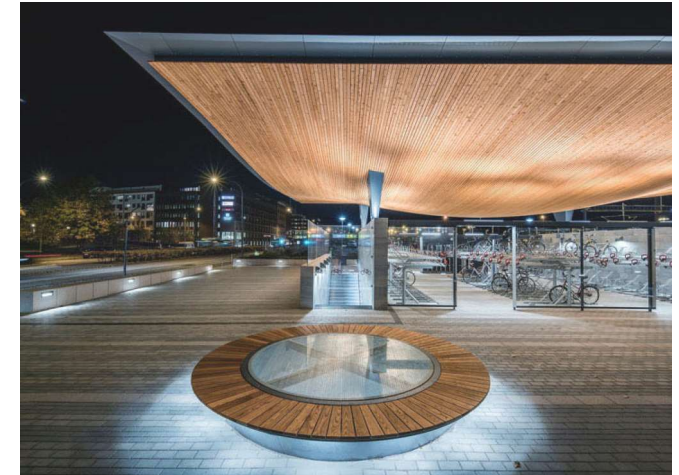
## Benchmarking / Precedents

- » Robust edges with identifiable detailing;
- » Bespoke geometry with little rhythm or playfulness.



Copenhagen Metro - Copenhagen, Denmark

- » Skylight integrated within purpose provided seating;
- » Replicable, modular elements.



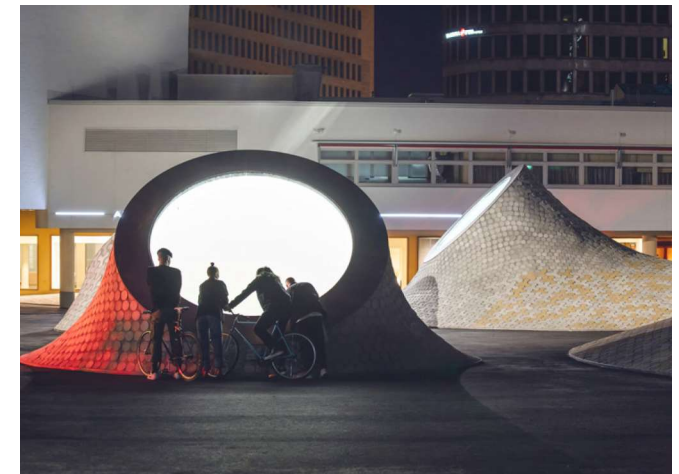
Helsingborg Station - Helsingborg, Sweden

- » Less robust detailing due to location within secure and monitored context;
- » Element encourages interaction from above and below and serves as a barrier for level changes.



V+A Gallery - London, UK

- » Highly interactive elements encourage play and selected views in and out of the gallery below.



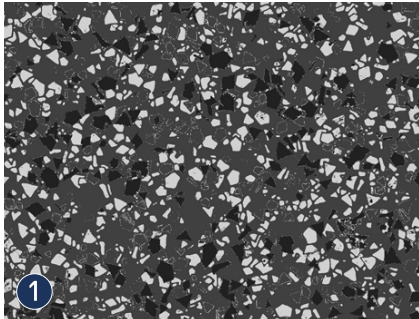
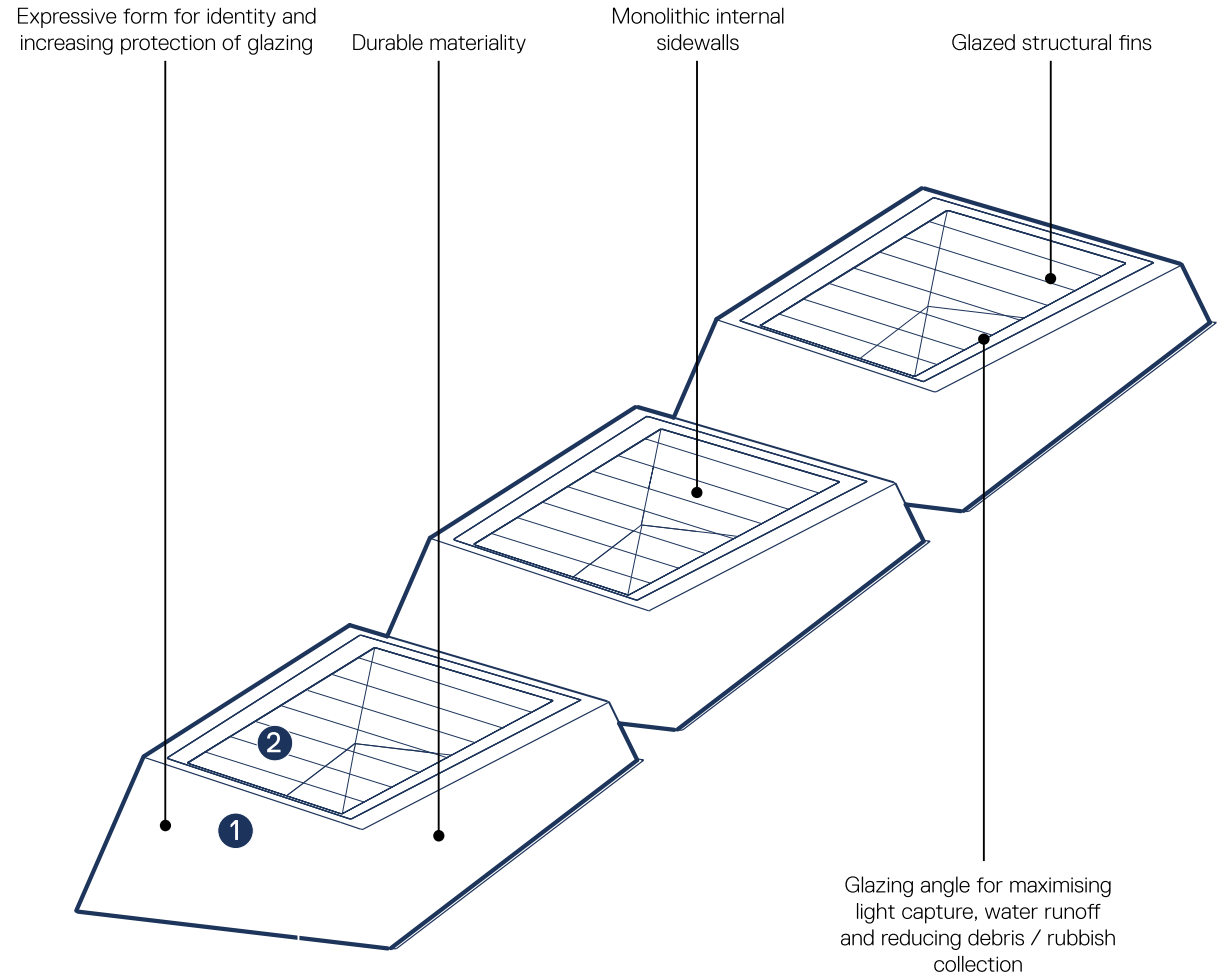
Helsinki Art Gallery - Helsinki, Finland



# Skylights

## Elements & Materiality

- The skylights provide a direct visual link to the station box below through an expressive, interactive and identifiable form.
- Natural light is brought down to mezzanine and platform level, helping reduce artificial lighting and improving passenger experience and wayfinding.
- The skylights can be oriented to control solar gain, whilst the draft angles ensure efficient water and debris runoff, helping reduce requirements for maintenance.
- The design ensures that visual permeability within the adjacent area is maintained to ensure wayfinding and connections, whilst a robust material palette and approach to detailing ensures they are secure and long-lasting.



Dark precast sidewalls / upstands



Glazed top surfaces





Skylights in Context at Ballymun





♿ Lift to Concourse

# PASSENGER LIFTS

This section details the design concepts and visual intent for the materiality of the passenger lift shafts. The lifts provide clear entrances to the station for all users, and create a strong visual identity within the public realm. This section includes benchmarking examples, key principles and materials.



# Passenger Lifts

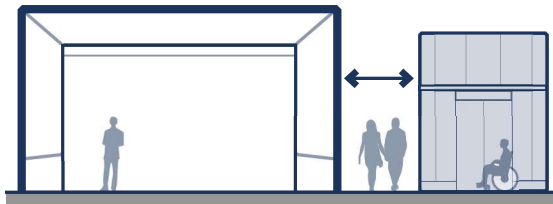
## Principles

1. The passenger lifts provide an identifiable entrance and exit to the station in close adjacency to the main canopies. Glazing to all sides of the lift provide good visual permeability, helping passengers quickly orientate themselves within the public realm.

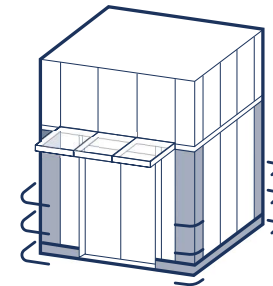
2. Protective upstands and solid corner panels ensure long-lasting, highly functional designs that are designed to stand up to wear and tear in busy urban public realm environments.

3. Glazed canopies provide shelter for waiting passengers, improving comfort. The canopies also help to reduce wet surfaces where possible, improving safety and reliability.

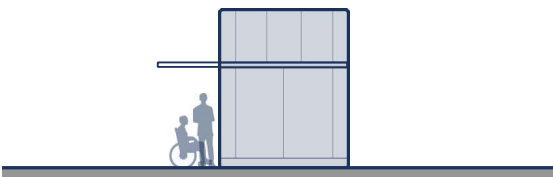
4. The lifts sit as a consistent and identifiable element within the surrounding public realm by using similar materials with the adjacent station canopies. The designs allow for potential integration of sustainable elements such as PV panels and greywater collection.



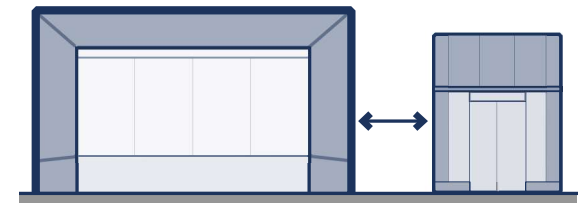
1. UNIVERSAL ACCESS + WAYFINDING



2. DURABILITY + SECURITY



3. SHELTER + SAFETY



4. IDENTITY + CONTEXT

# Passenger Lifts

## Benchmarking / Precedents

- » Identifiable lift with metro branding;
- » Highly glazed for good visual permeability.
- » Low robustness on corners requires additional protective barriers;
- » Transparent upper portion requires high levels of cleaning adjacent to machinery;
- » No weather protection.



Cityringen - Copenhagen, Denmark

- » Identifiable material and branding.
- » Glazed for good visual permeability;
- » High robustness throughout;
- » No weather protection for passengers;



Lincoln Center MTA - New York, US

- » Highly glazed for good visual permeability;
- » Dark, retrofitted canopy casts signage and entrance in shadow with poor lighting;
- » Low robustness on glazed corners;



Alexanderplatz Station - Berlin, Germany

- » Identifiable and integrated lift + shaft with brand identity;
- » Weather protection for passenger comfort;
- » Cluttered + concealed entrance for poor universal access / intuitive wayfinding.



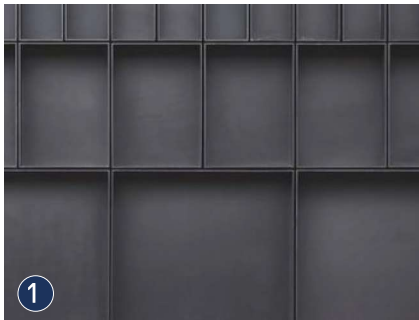
East Croydon Station - Croydon, UK



# Passenger Lifts

## Elements & Materiality

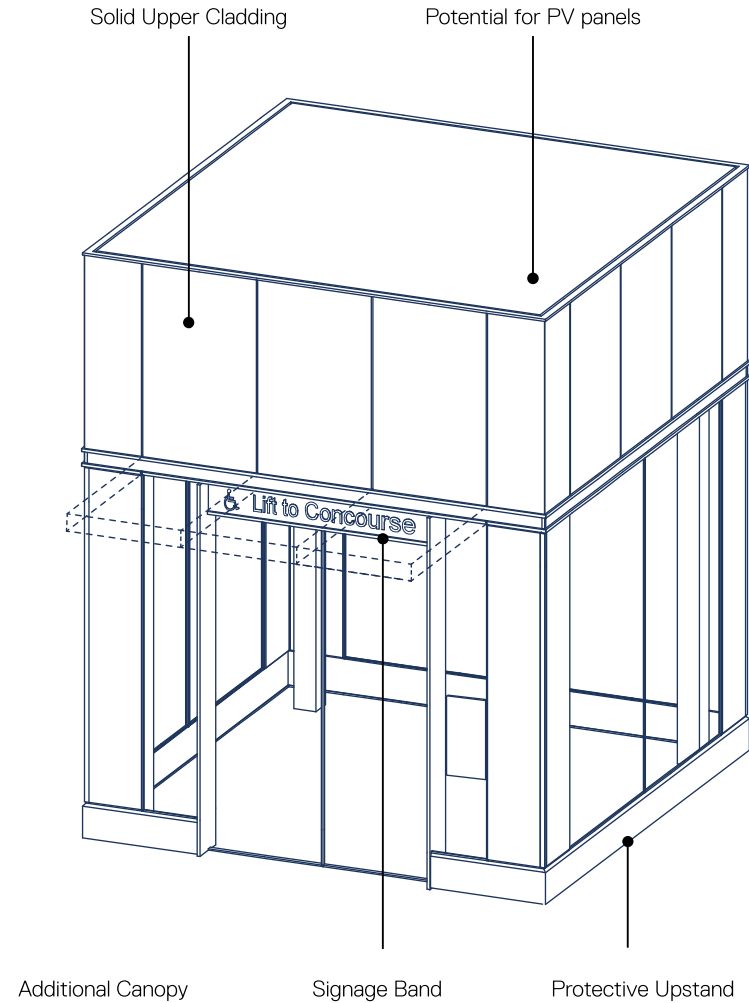
- A dark metallic base, protective corners and upper cladding zone provide highly durable finishes that take visual cues from the character studies earlier in the chapter and share a common material language with the entrance portal.
- Glazed areas allow passengers to quickly orientate themselves and benefit from increased natural light.
- A consistent approach is taken to materiality of the common components to ensure the linewide identity is maintained.



Dark metal cladding for visual contrast



Glazed sides & mullions







Passenger Lift in Context at Ballymun







# SERVICE LIFTS

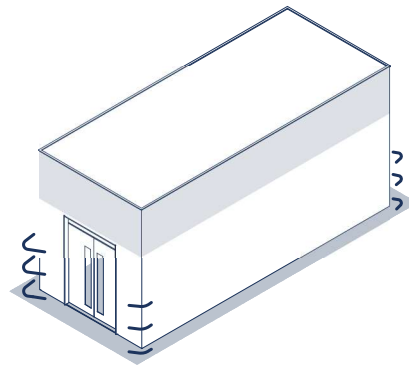
This section outlines the key principles for the design of the DFB service lifts. The design concepts and materiality approach are outlined, denoting the secondary elements within the surrounding station context whilst providing performative service integration.



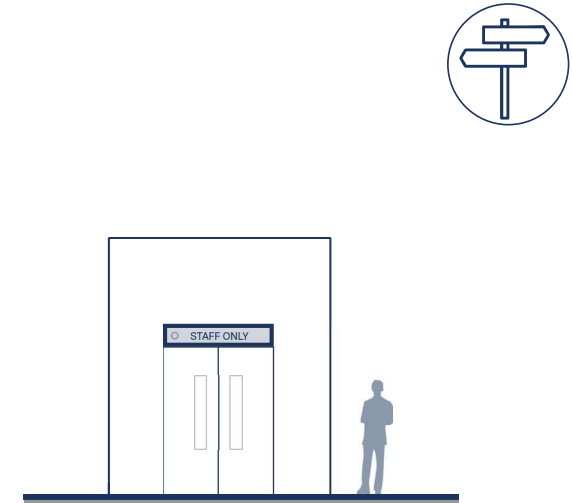
# Service Lifts

## Principles

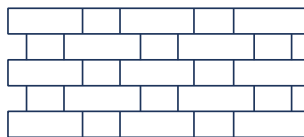
- The material choice and corner detailing help to create a simple, durable, high quality functional element within the public realm.
- The materiality, signage and overall design of the Dublin Fire Brigade lifts indicates them as secondary to the front of house elements, ensuring there is no confusion for passengers, whilst maintaining them as recognisable for the DFB;
- Context dependent brick tones can help allow the DFB lift sit calmly within its surroundings.
- Potential for integration of multiple service-critical station elements such as MEP service routes and intake / extract zones within the service lifts provides benefit beyond the fire-fighting and maintainer requirements, helping to group and de-clutter the public realm;
- These dual function lifts with integrated MEP risers can utilise perforated brickwork for ventilation requirements, helping simplify the material palette.



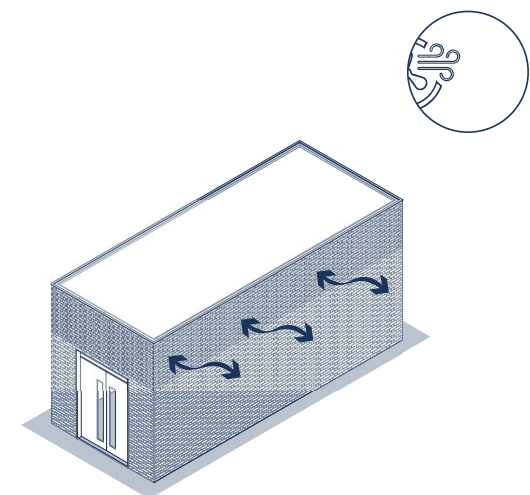
1. DURABILITY + SECURITY



2. SECONDARY WAYFINDING



3. CONTEXT + IDENTITY



4. PERFORMANCE / FUNCTION

# Service Lifts

## Benchmarking / Precedents

- » Robust, self finished material selection which integrates well with the historic context;
- » No glazing, identifiable as a public facing service element.



Granary Square - London, UK

- » Robust, self finished materials;
- » Contemporary materials well integrated within the historic context.



Vaumm Lift - Hernani, Spain



- » Robust, self finished materials;
- » Contemporary materials well integrated within the historic context.



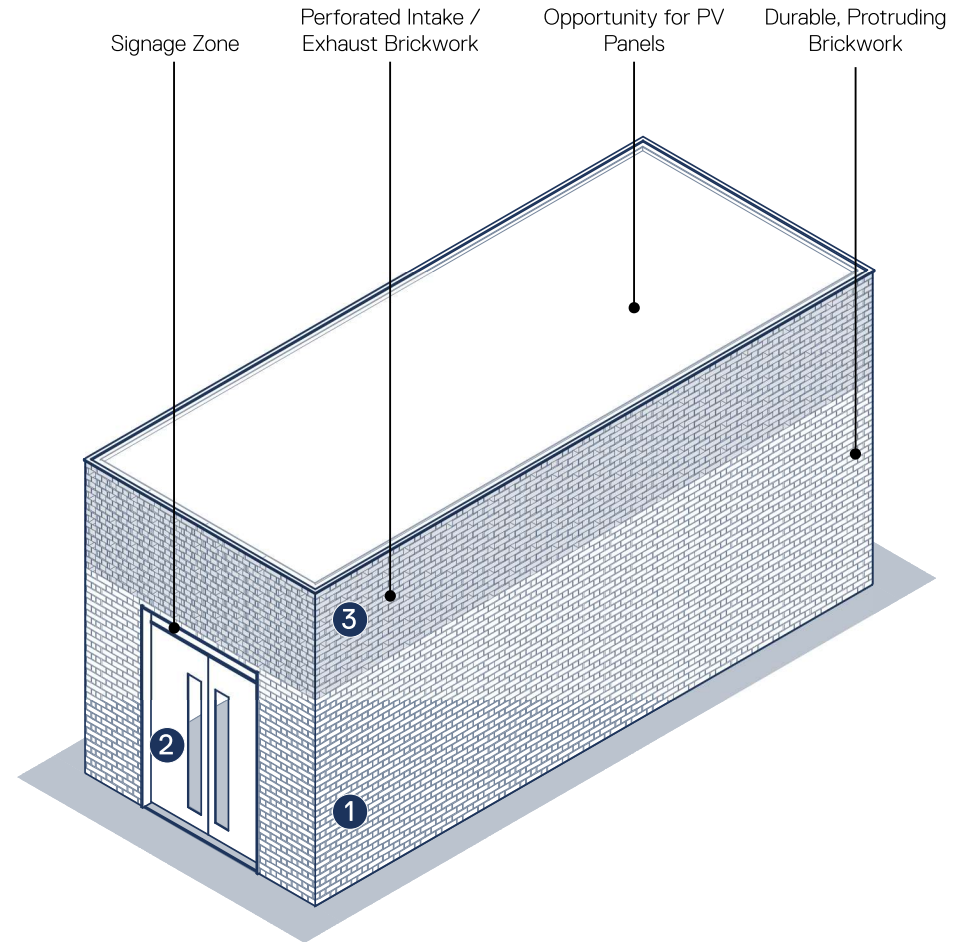
Gironella Lift - Gironella, Spain



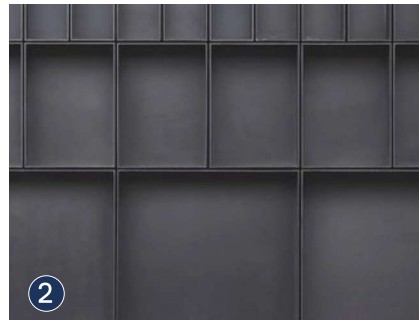
# Service Lifts

## Elements & Materiality

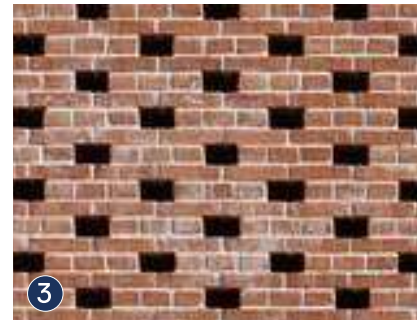
- Context appropriate, highly robust simple brickwork helps differentiate the DFB lifts as secondary from the passenger lifts which utilise large amounts of inviting glazing and clear signage bands;
- Open brickwork at high level provides the option of a performative facade with intake and extract air handling, whilst protruding brickwork at low level can help deter anti-social behavior;
- Entrance doors and signage utilises a similarly muted palette to differentiate from the passenger lifts, whilst ensuring clear routes to staff, maintainers and the emergency services.



Relief + Perforated Brickwork



Dark Metal Doors + Trim



Perforated Intake / Exhaust Brickwork



# Service Lifts

## Contextual Visualisations



DFB Lift in Context at Ballymun



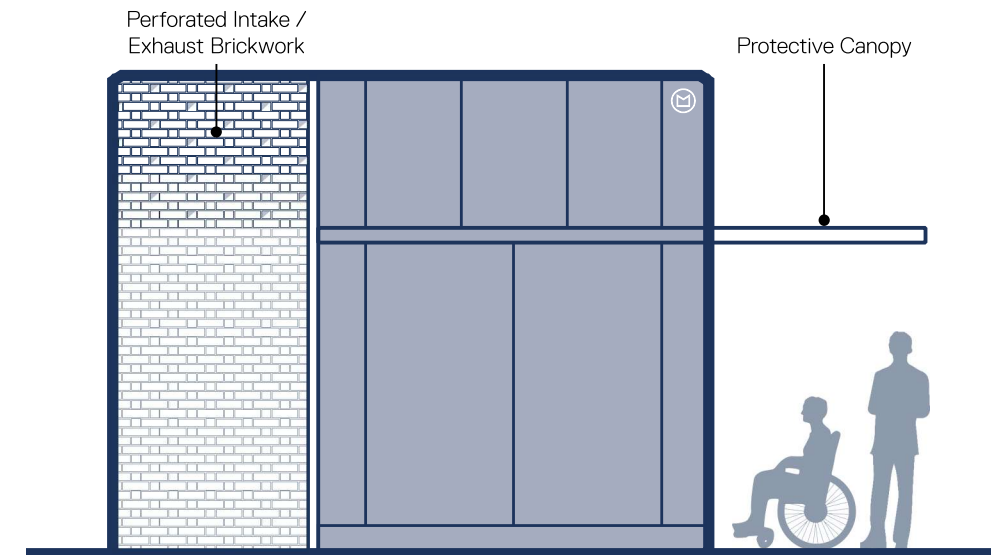
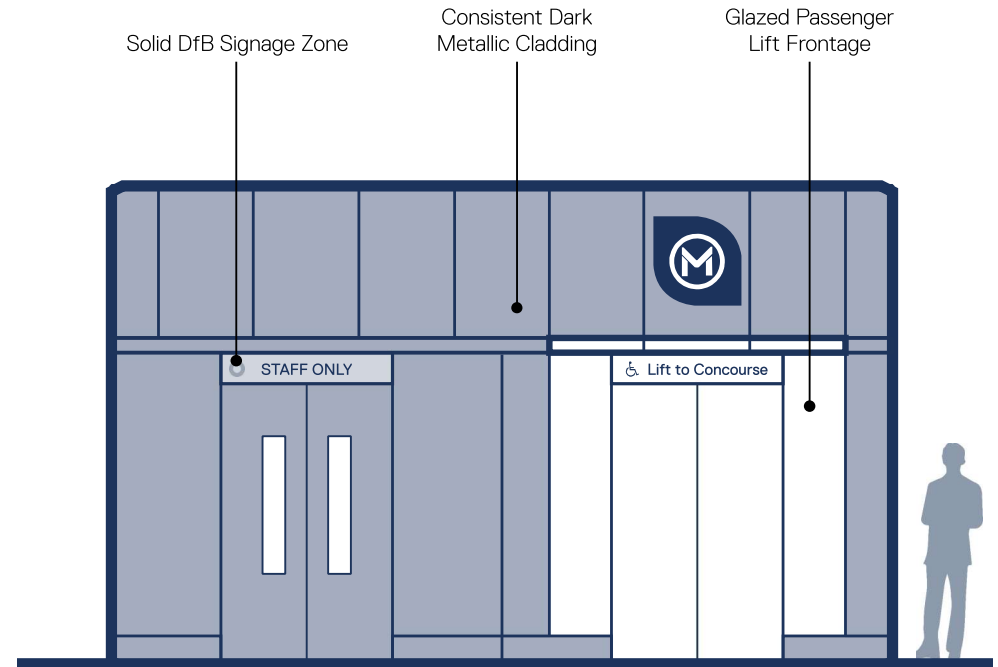
DFB Lift in Context at St Stephen's Green



# Service Lifts

## Passenger Lift Combination

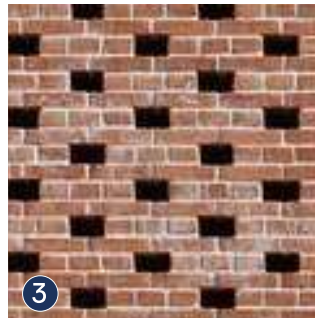
- In certain contexts, public realm enhancement, service routing, or passenger wayfinding benefits can be achieved through combining passenger and service lifts.
- The design of this combined approach maintains the principles of each lift, ensuring that the signage and transparency of the passenger lifts are maintained.
- Careful massing of the service elements ensure priority of the passenger lift is maintained and footprint of the combined lifts & services is minimised.



Dark metal cladding



Glazed passenger lift frontage



Perforated Intake / Exhaust Brickwork



Combined DFB + Passenger Lift in Context at Mater



Combined DFB + Passenger Lift in Context at Mater



Combined DFB + Passenger Lift in Context at Collins Avenue



Combined DFB + Passenger Lift in Context at Collins Avenue







# ESTUARY

## PARK & RIDE

This section outlines the key principles and materiality visual intent for the park & ride car park at Estuary station.

Design development of the car park, its surrounding landscaping and interface with the overbridge and adjacent station should be undertaken at the next design stage.



# Estuary P&R

## Principles

- Articulation of the architectural elements, such as cores and the facade, used to break down the long elevations add visual interest and breakdown horizontal mass of facade elevations.
- Facade screen of staggered vertical fins provide surface, light and shadow variation across long horizontal facades - the changing angle of fins creating varying levels of density and porosity.
- Ground and roof level adopt perforated metal screening for facade hierarchy, wayfinding and natural surveillance benefits.
- Warmth provided through colour choice and surface interest provided through variation in daylight reflectance across elevation.
- Entrance cores expressed for wayfinding, branding and to break down overall building mass. Glazed stair cores improve user experience and natural surveillance.
- Supergraphics aid wayfinding and align with MetroLink linewide identity.

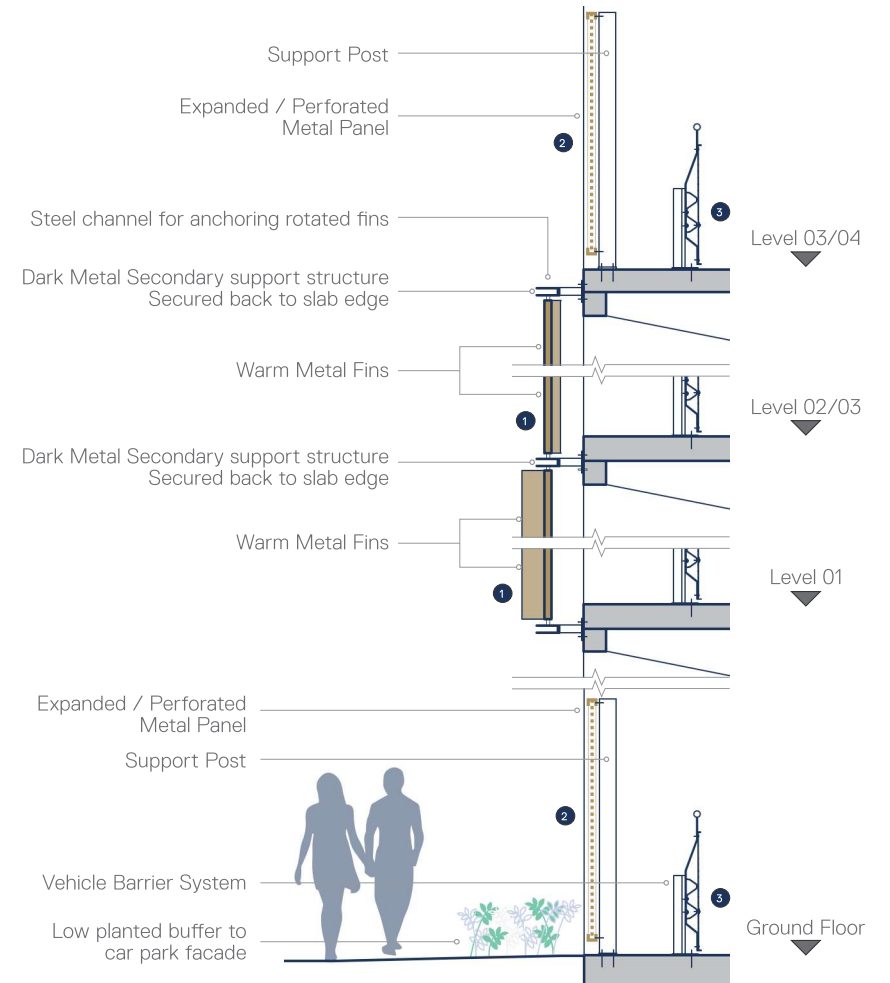
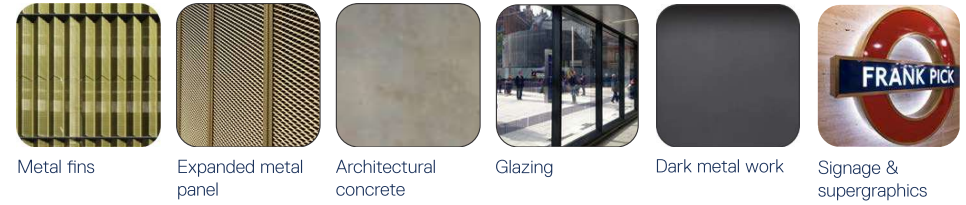
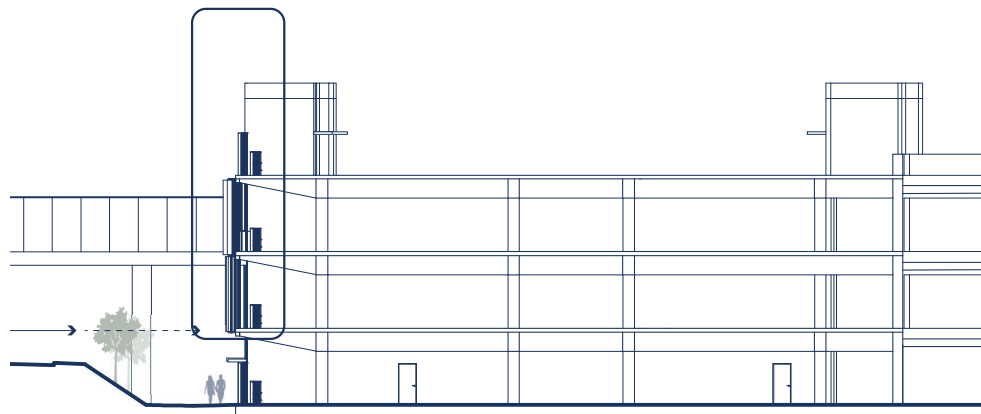


# Estuary P&R

## Section in Principle

N.B Connections and details to be reviewed at next design stage.

1. Metal fins / panel system - Warm in colour. Running slab to slab, with changing orientation to create interest and movement across the facade. Each fin pivoted about its centre, fixed in place and oriented to different rotations. Black metal subframe secured back to slab edge and recessed behind vertical fins. Support system, bracketry and details have opportunity for additional architectural expression. Subject to detailed design.
2. Expanded / perforated metal panels - Warm in colour. Aperture and specifications to be determined at next design stage, informed by natural ventilation requirements. Set back from primary facade line. Secured back to support posts. Subject to detailed design.
3. Crash Barrier | Offset from facade to consider deformation on vehicle impact.



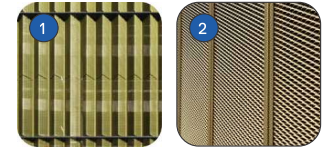
Illustrative Sketch Section | Details to be reviewed at next design stage



# Facade Treatments & Materiality

## Typical Conditions - Facade

1. Metal fins / panel system - Warm in colour. Running slab to slab, with changing orientation to create interest and movement across the facade. Black metal subframe secured back to slab edge and recessed behind vertical fins.
2. Expanded / perforated metal panels - Warm in colour (aperture and specifications to be determined at next design stage, informed by natural ventilation requirements). Set back from primary facade line. Secured to floor slab.



UCL Cancer Institute & Rolls Royce Plant & HQ, Grimshaw



Precedent Example of Fins with Support System, Bracketry & Details



Concept Design Intent for P&R Facade - West Facade Illustrated

# Facade Treatments & Materiality

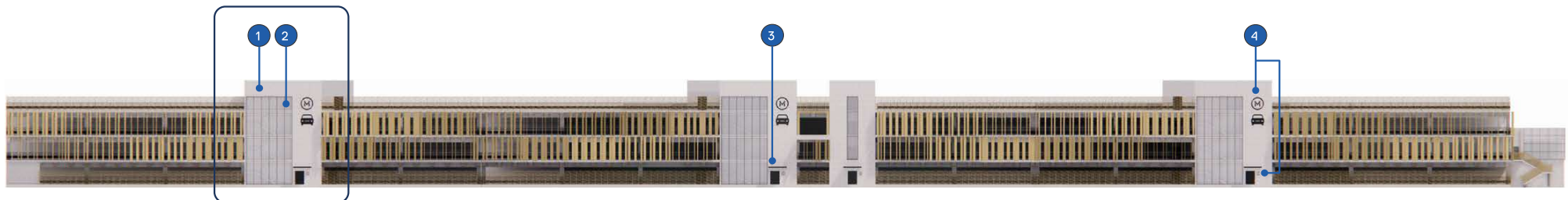
## Typical Conditions - Primary External Cores



1. Architectural concrete - High quality, special concrete finish. Light in colour. Exact surface finish and formwork requirements to be determined at next design stage.
2. Glazing - Glazed stair cores providing natural light, and natural surveillance. Dark metal framing. Verticality of mullions expressed.
3. Entrance Canopy - Dark metal canopy over entrances. Providing shelter and a wayfinding guide to demarcate each entrance.
4. Signage and Supergraphics - Backlit, dark enamel signage, offset and pinned back to facade. Enabling cores to act as wayfinding devices for approaching pedestrians and as indicator of MetroLink identity when passing in wider context



Precedent Example of Concrete Finish



Concept Design Intent for P&R Facade - West Facade Illustrated



# Facade Treatments & Materiality

## Additional Elements - Lift Only Core

1. Architectural concrete - High quality, special concrete finish. Light in colour. Exact surface finish and formwork requirements to be determined at next design stage.
2. Glazing - Glazed opening in lobby area providing natural light, and natural surveillance. Dark metal framing.
3. Entrance Canopy - Dark metal canopy over entrances. Providing shelter and a wayfinding guide to demarcate each entrance.
4. Signage and Supergraphics - Backlit, dark enamel signage, offset and pinned back to facade. Enabling cores to act as wayfinding devices for approaching pedestrians.

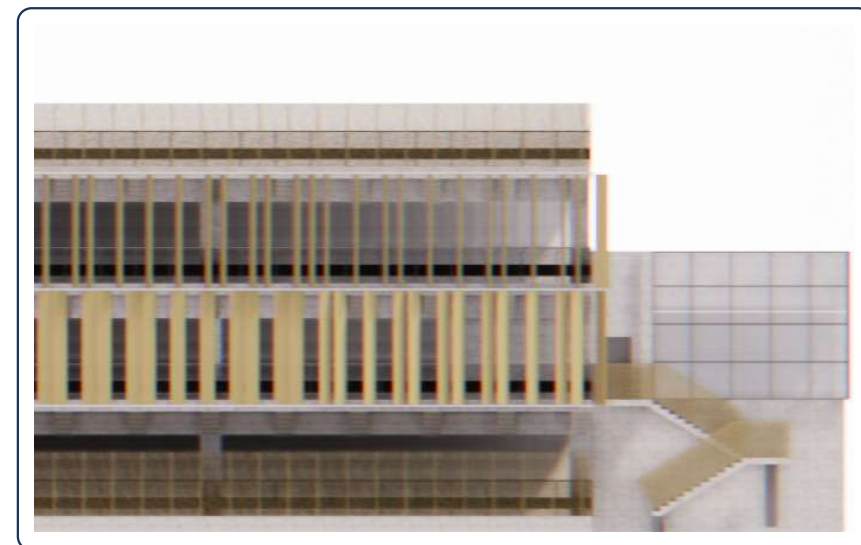
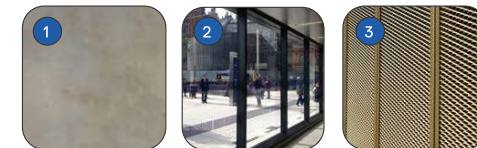


Concept Design Intent for P&R Facade - West Facade Illustrated

# Facade Treatments & Materiality

## Additional Elements - Office & External Stairs

1. Architectural concrete - High quality, special concrete finish. Light in colour. Exact surface finish and formwork requirements to be determined at next design stage.
2. Glazing - Glazing with dark metal framing.
3. Expanded / perforated metal stair balustrade - Warm in colour (aperture and specifications to be determined at next design stage). To match GF treatment.



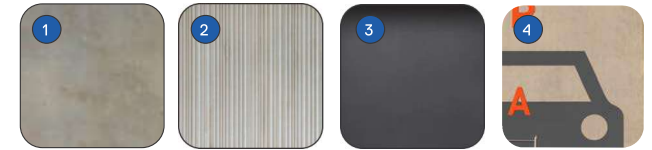
Concept Design Intent for P&R Facade - West Facade Illustrated



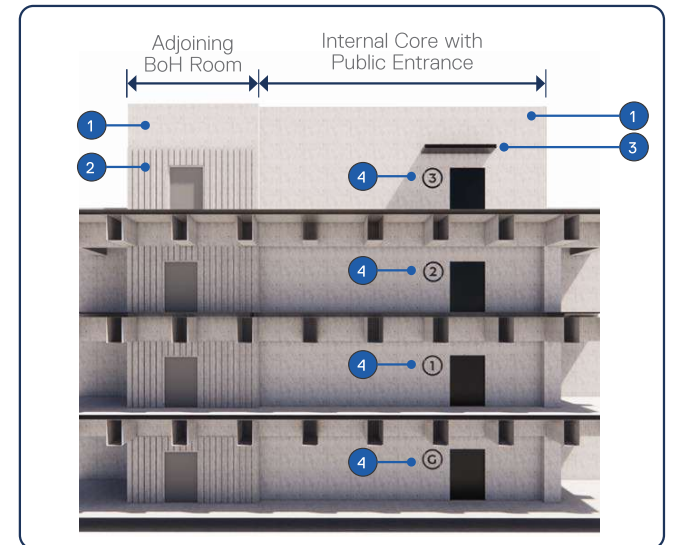
# Facade Treatments & Materiality

## Additional Elements - Internal Cores with Adjoining BoH Rooms

1. Architectural concrete - High quality, special concrete finish. Light in colour. Exact surface finish and formwork requirements to be determined at next design stage.
2. Profiled concrete (for adjoining BoH rooms only, to differentiate from public entrance) - High quality, special concrete finish. Light in colour. Exact surface finish and formwork requirements to be determined at next design stage.
3. Entrance Canopy - Dark metal canopy over entrances. Providing shelter and a wayfinding guide to demarcate external entrances.
4. Signage and Supergraphics - Colour contrast to base material. Enabling cores to act as wayfinding devices and demarcating the entrances.



Precedent Example of Profiled Concrete Finish - IBRB University of Warwick, Hawkins Brown



Concept Design Intent for P&R Facade - West Facade Illustrated

# Facade Treatments & Materiality

## Additional Elements - Ground Floor Electrical / Storage Rooms



1. Architectural concrete - High quality, special concrete finish. Light in colour. Exact surface finish and formwork requirements to be determined at next design stage.
2. Metal access doors / louvres - Dark metal doors / louvres where required for electrical rooms.



Precedent Site Photo of Dark Access and Louvred Doors - Nine Elms Station, Grimshaw



Concept Design Intent for P&R Facade - West Facade Illustrated





**CYCLE HUBS  
AT SURFACE STATIONS**



# Cycle Hubs

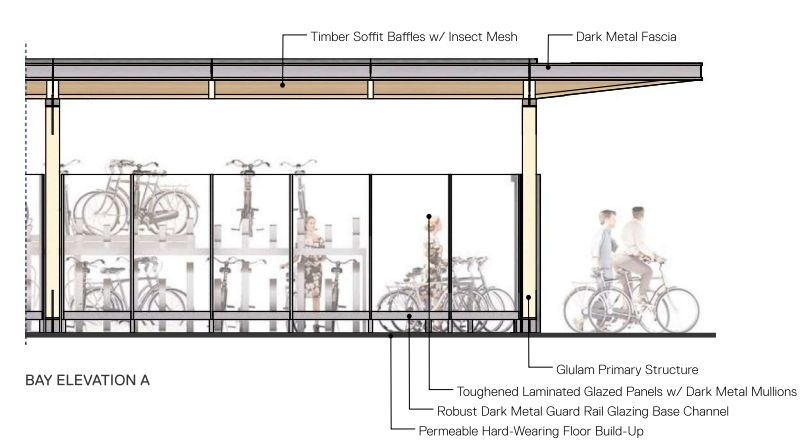
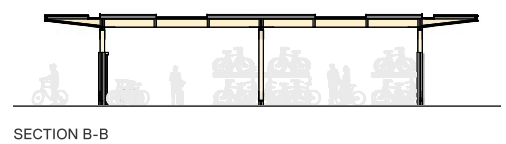
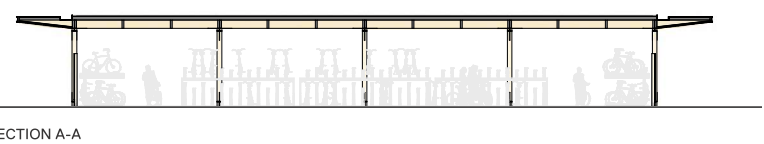
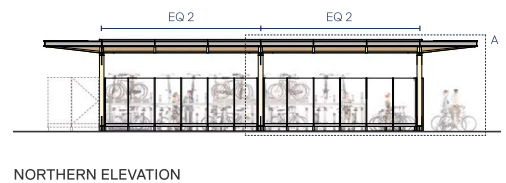
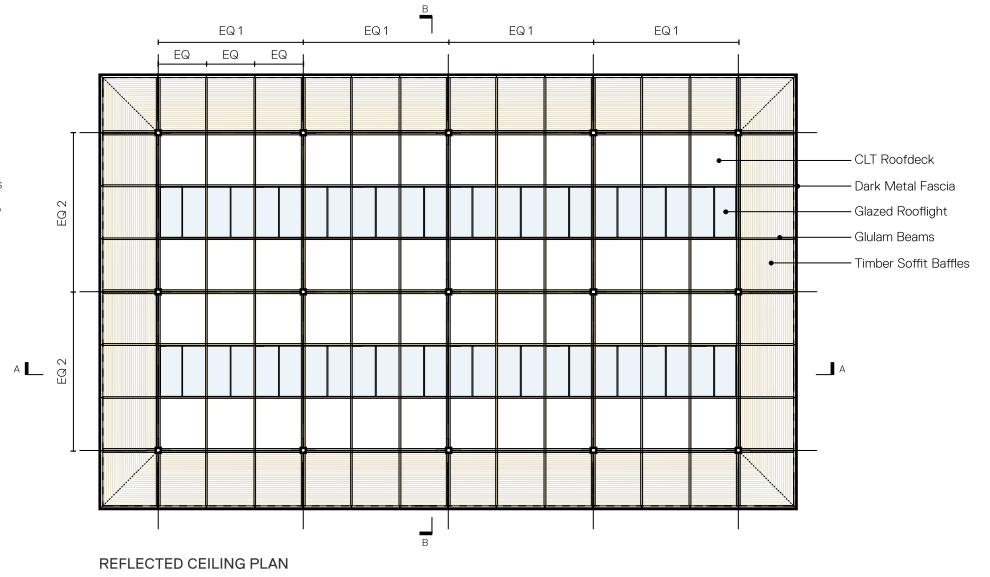
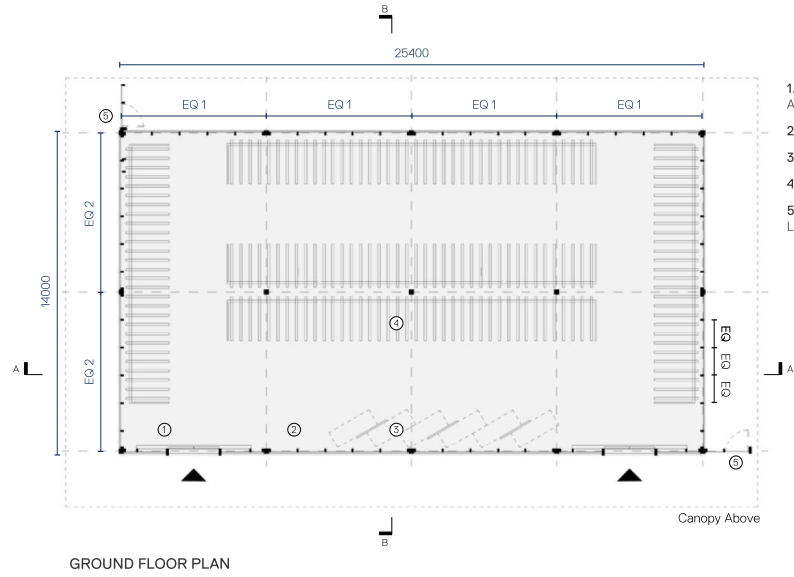
## Principles

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- Supergraphics aid wayfinding and align with MetroLink linewide identity.



# Cycle Hubs

## Indicative Arrangement





# Cycle Hubs

## Contextual Visualisations



### EXTERNAL MATERIALITY

**Canopy Edge:** Dark Metal Fascia

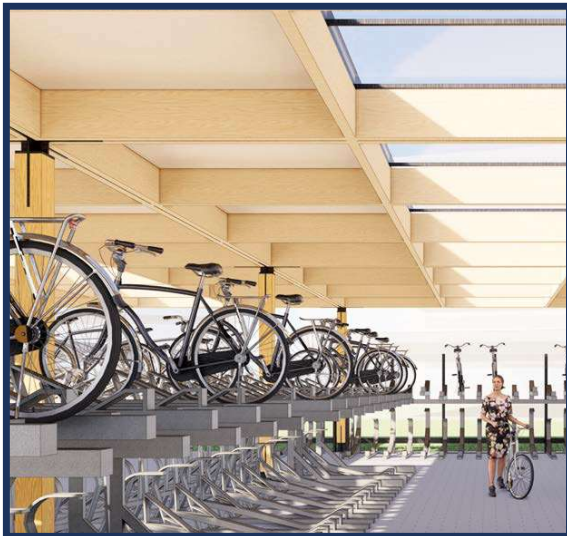
**Canopy Soffit:** Timber Baffles w/ Insect Mesh

**Structural Columns:** Glulam Columns

*Suggested Alternative for Lifecycle Material Assessment:*  
*Steel Frame*

**External Screen & Door:** Toughened Laminated Glazing

**Screen & Door Framing:** Dark Metal Mullions w/ Robust Guard Rail



### INTERNAL MATERIALITY

**Flooring:** Hard Wearing Permeable Build-Up

**Rooflight:** Toughened Laminated Glazing

**Roof Structure:** Glulam Beams

*Suggested Alternative for Lifecycle Material Assessment:*  
*Steel Frame*

**Roof Deck:** CLT Decking w/ Sedum Roof

*Suggested Alternative for Lifecycle Material Assessment:*  
*Steel Deck*



Western Elevation Across R132



Interior Perimeter View



# Cycle Hubs

## Contextual Visualisations



Cycle Hub & Station Context



Western Elevation Approach



Interior Circulation View

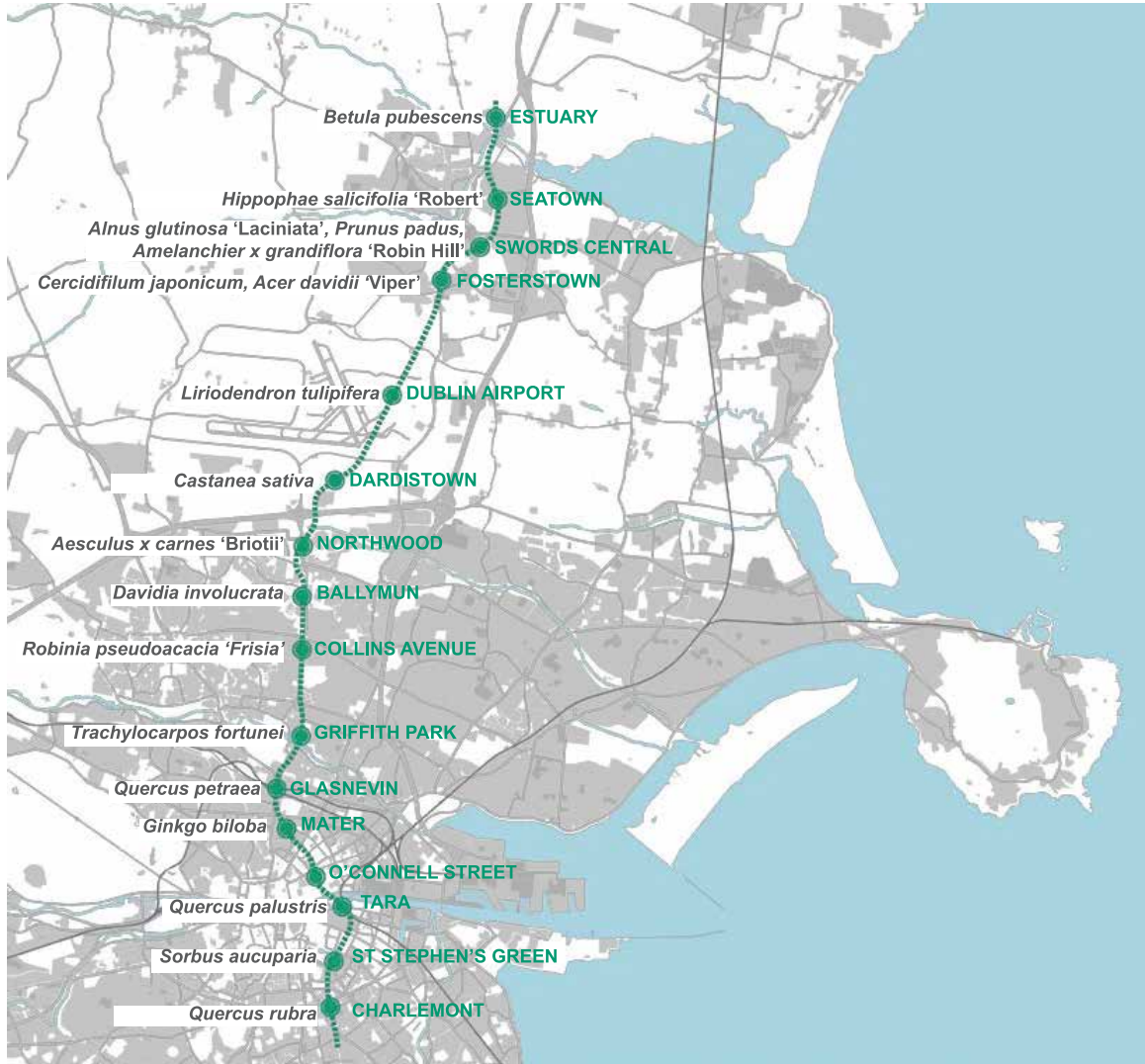


Western Elevation & Station Context



**LANDSCAPING**

## PLANTING STRATEGY Feature trees/ feature planting





## PLANTING STRATEGY Planting palette



↑ Pollinator friendly feature perennial planting



↑ Amenity grassland with wildflowers



↑ Verge planting



↑ Urban microforest planting



↑ Swale planting



↑ Tree planting to plaza



## PLANTING STRATEGY

### Planting palette - R132 specific



↑ Orchard



↑ Wild flower meadow



↑ Wetland planting - Estuary



## PLANTING STRATEGY

### Wet periodically flooding meadow



*Filipendula ulmaria, Sanguisorba officinalis, Lychnis flos-cuculi, Ranunculus repens, Alopecurus pratensis, Geranium pratense, Festuca rubra and other*

### Raingardens/detention basins



*Iris pseudacorus, Carex vulpina, Carex acuta, Spartina pectinata and other*

*Mostly green grassy water tolerant planting*



## PLANTING STRATEGY Swales

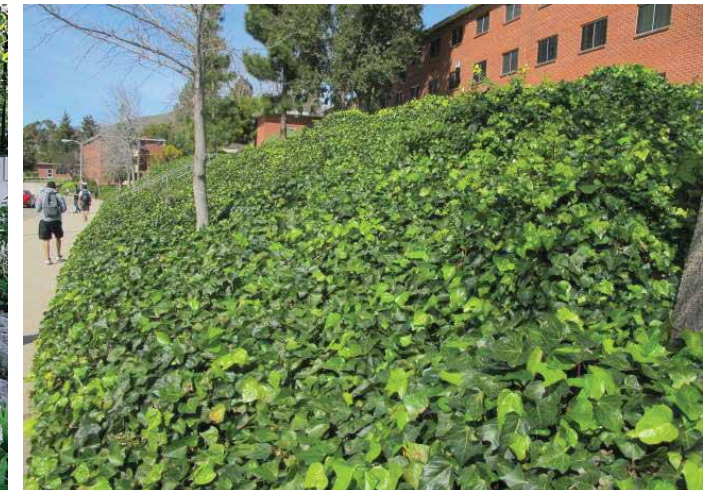


*Deschampsia cespitosa, Lobelia cardinalis, Eupatorium, Rudbeckia fulgida, Lythrum salicaria and others.*

### Wildflower meadow / existing groundcover to trees / Groundcover to slope



*Wildflower meadow*





## PLANTING STRATEGY

# Wild decorative perennial planting to terraces station plaza

*Decorative planting including many native perennial evoking an open country landscape feeling.*





## PLANTING STRATEGY

# Wetland planting to shallow water water filtration



*Glyceria maxima, Thypha latifolia, Sparganium erectum, Nuphar lutea, Iris pseudacorus, Geranium pratense, Juncus effusus, Gagea lutea and other.*

## Pond edges



*Lythrum salicaria, Caltha palustris, Mentha aquatica, Symphytum officinale, Petasites hybridum, Eupatorium cannabinum, Filipendula ulmaria and other*



## PLANTING STRATEGY Trees

*Native trees such as Alder, Downy birch (feature tree of the station), Bird cherry, Oak and Rowan are proposed.*





## PAVING STRATEGY

# MetroLink stone paving

### Paving Strategy Design Criteria

The below criteria informs or will inform the Paving elements on the project.

- Receiving environment and reactive to landscape types and specific landscape character areas and landscape sensitivities.
- Baseline Environment for cultural heritage.
- Statutory Designations and listings.
- Protect, relocate, salvage existing hardscape features along the project route.
- Architectural Design Strategy of the EIAR
- The findings of the landscape and visual impact assessment and mitigation measures.
- The findings of the cultural heritage impact assessment and mitigation measures.
- The findings of the architectural heritage impact assessment and mitigation measures.

### MetroLink Paving

#### Project Wide

Sustainably sourced materials of high quality. The appropriateness of materials within a given context, together with performance in terms of durability, movement, anti-slip and maintenance will be key considerations in the selection process.

#### Station specific paving features (see associated station chapter in this document for information)

Griffith Park  
Glasnevin  
Tara  
St Stephen Green (heritage)

#### Consultations

- Dublin City Council (Public Realm Generally)
- Office of Public Works (St. Stephen's Green – National Monument)
- Fingal County Council (Public Realm Generally)
- Project Conservation Architect (Conservation and Heritage items)
- Associated adjacent stakeholders





## PAVING STRATEGY Material palette



↑ *Natural stone paving to metro station plaza*



↑ *Resin bound gravel to bicycle parking*



↑ *Rough stone tactile surface to station pillars*



↑ *Concrete footpath to road*



↑ *Compacted gravel path*



↑ *Boardwalk to wetland*



## HERITAGE STRATEGY

### MetroLink heritage items

#### Heritage Strategy Design Criteria

The below criteria informs or will inform the Heritage elements on the project.

- Baseline Environment for cultural heritage.
- Statutory Designations and listings.
- Protect, relocate, salvage existing hardscape features along the project route.
- Architectural Design Strategy of the EIAR
- Put in place and monitor protective measures for heritage items.
- Reinstatement of modern granite paving, kerbs, granite and cast iron bollards and heritage lamp standards along the perimeter of St. Stephen's Green
- Reinstatement of lengths of historic granite paving and kerbing where impacted by the development.
- Reinstatement of other items including areas of historic granite kerbs, plaques, bollards, cobbled setts, modern granite paving and kerbs, heritage railing and historic lamp standards.
- remove / relocate and subsequently reinstate, heritage railing and historic lamp standards affected on the project

The need to protect, where possible, temporarily relocate and/or salvage the existing hard landscape features of the Metrolink interface likely to be impacted by the works. The need for protection extends to areas adjoining the works. Such features will include paving, kerbing, railings, walling, lighting standards, and other streetscape elements and is of particular significance where such features are of architectural, cultural or historic relevance.

#### Consultations

- Dublin City Council (Public Realm Generally)
- Office of Public Works (St. Stephen's Green – National Monument)
- Fingal County Council (Public Realm Generally)
- Project Conservation Architect (Conservation and Heritage items)
- Associated adjacent stakeholders





## PLANTING STRATEGY

### Plant selection

#### Orchard

- *Cydonia oblonga* 'Vranja'
- *Pyrus communis* 'Doyenné du Comice'
- *Pyrus communis* 'Catillac'
- *Prunus avium* 'Early Rivers'
- *Prunus avium* 'Merton Glory'
- *Malus domestica* Ballyfatten
- *Malus domestica* Kilkenny Pearmain

#### Swale planting

##### Trees :

- *Fraxinus excelsior*
- *Salix alba*
- *Alnus glutinosa*
- *Rhamnus frangula*
- *Quercus robur*

##### Rich meadows :

- *Holcus lanatus*
- *Agrostis stolonifera*
- *Cardamine pratensis*
- *Ranunculus repens*
- *Rumex palustris*

##### Poor meadows :

- *Molinia caerulea*
- *Agrostis canina*
- *Ranunculus flammula*

##### Wetland :

- *Iris pseudacorus*
- *Mentha aquatica*
- *Lythrum salicaria*
- *Filipendula ulmaria*
- *Equisetum palustre*

##### Feature plants to swale :

- *Crocsmia* 'Lucifer'
- *Osmunda regalis*
- *Camasia quamash*
- *Carex grayi*
- *Carex pendula*
- *Iris douglasiana*
- *Iris versicolor* 'Kermesina'
- *Lobelia cardinalis*
- *Polystichum munitum*

#### Woodland planting - Miyawaki method

##### Canopy layer :

- *Fraxinus excelsior*
- *Quercus robur*
- *Ulmus glabra*

##### Tree layer :

- *Betula pendula*
- *Betula pubescens*
- *Sorbus aucuparia*
- *Prunus avium*

##### Sub-tree layer :

- *Corylus avellana*
- *Crataegus monogyna*
- *Euonymus europaeus*
- *Malus sylvestris*
- *Prunus spinosa*
- *Sambucus nigra*

##### Shrub layer :

- *Ilex aquifolium*
- *Ligustrum vulgare*

## PLANTING LISTS

# R132 planting

### ESTUARY

#### Terraced plaza planting

*Achillea millefolium, Campanula rotundifolia, Centaurea cyanus, Cichorium intybus, Crocosmia 'Goerge Davison', Deschampsia caespitosa, Foeniculum vulgare, Geranium 'Elke', Knautia arvensis, Leucanthemum vulgare, Papaver orientalis, Primula veris, Primula vulgaris, Leucocjum vernum, Silene dioica, Silene vulgaris, Succisa pratensis, Verbascum chaixi 'Album', Fuchsia magellanica, Rosa 'The Fairy'*

#### Feature tree planting to upper station plaza

*Betula pubescens*

#### Tree planting to lower station plaza and street

*Sorbus aucuparia* (plaza), *Ulmus 'Dodoens'*

#### Tree planting to P&R and existing R132 tre belt

*Betula pubescens, Prunus padus, Quercus petraea, Sorbus aucuparia*

### SEATOWN

#### Swale feature planting

*Camasia leichtlinii, Carex ripare, Carex vulpinoidea, Deschampsia caespitosa, Dianthus carthousianorum, Juncus effusus, Juncus inflexus, Festuca rubra, Leucanthemum vulgare, Lychnis flos-cuculi, Molinia caerulea, Primula vulgaris, Spartina patens*

#### Feature 'Cliff planting'

*Armeria maritima, Aster alpinus, Aster novi-belgii, Athyrium filix-femina, Campanula rotundifolia, Carex morrowii 'Irish Green', Erigeron glaucus, Erigeron karwinskianus, Geranium sanguineum, Hypericum perforatum, Jasione laevis 'Blue Light', Knautia arvensis, Leucanthemum vulgare, Primula vulgaris, Primula veris, Scabiosa 'Butterfly Blue', Scilla verna, Silene maritima, Silene vulgaris, Thymus vulgaris, Verbena bonariensis*

#### Feature tree:

*Hippophae salicifolia 'Robert'*

### SWORDS

#### Feature planting

*Achillea millefolium 'Lilac Beauty', Anemone hupehensis 'Pretty Lady Maria', Aquilegia vulgaris 'Blue Barlow', Bergenia cordifolia, Campanula persicifolia 'La Belle', Echinacea purpurea 'Butterfly Kisses', Echinacea purpurea 'Summer Cocktail', Euphorbia cyparissias, Euphorbia seguieriana niciana, Helleborus orientalis 'Double Green', Heuchera 'Root Beer', Heuchera 'Red Lightning', Hosta tardiana 'Halcyon', Hosta undulata 'Erromena', Phlox paniculata 'David', Salvia 'Anistad', Salvia argentea, Salvia x superba 'Reine Rose', Narcissus poeticus, Asplenium scolopendrium, Blechnum spicant, Polystichum polyblepharum, Carex pendula, Miscanthus sinensis 'Purpurescens', Pennisetum messiacum 'Red Bunny Tails', Stipa gigantea, Stipa capillata*

#### Feature trees

*Alnus glutinosa 'Laciniata' (Irish provenance), Prunus padus, Amelanchier x grandiflora 'Robin Hill'*

### FOSTERSTOWN

#### Feature planting - low groundcover perennials combined with tall transparent perennials

*Allchemilla mollis, Allium 'Purple Sensation', Bergenia cordifolia, Cirsium rivulare 'Atropurpureum', Dierama pulcherinum, Euphorbia polychroma, Foeniculum vulgare, Geranium 'Bikovo', gladiolus communis, Helleborus nniger, Knautia macedonica, Libertia grandiflora, Sanguisorba 'Pink Elephant', Sisyrinchium striatum, Stipa 'Pony Tails'*

#### Feature trees

*Cercidiphyllum japonicum, Acer davidii 'Viper'*

### DUBLIN AIRPORT

#### Feature planting

*Achillea millefolium, Asphodeline lutea, Centaurea scabiosa, Foeniculum vulgare, Galanthus nivalis, Geranium Bikovo, Hypericum perforatum, Knautia arvensis, Narcissus peoticus, Primula veris, Rosmarinus officinalis, Scabiosa 'Butterfly Blue', Silene dioica, Thymus vulgaris, Verbena bonariensis, Agrostis tenuis, Dactylis glomerata, Deschampsia caespitosa, Festuca, Imperata cylindrica, Leymus arenarius, Nassella tenuissima*

#### Feature trees

*Liriodendron tulipifera*

#### Tree planting:

*Acer campestre, Alnus glutinosa 'Imperialis' (Irish provenance), Quercus petraea, Populus alba*

#### Semi-mature tree planting to existing planted areas

*Arbutus unedo, Prunus spinosa, Prunus padus*

#### Shrubs

*Cornus alba 'Sibirica', Viburnum davidii, Rhus typhina 'Tiger eyes', Symphoricarpos 'Hancock', Hedera hibernica*

### DARDISTOWN

#### Feature tree

*Castanea sativa*

#### Semi-mature and standard trees and shrubs to swale and land drain

*Alnus glutinosa (Irish provenance), Betula pendula, Crataegus monogyna, Corylus avellana, Sambucus nigra*

#### Semi-mature and standard trees to wildflower meadow areas

*Crataegus monogyna, Malus sylvestris, Prunus padus, Betula pubescens, Quercus petraea (Irish provenance), Quercus robur (Irish provenance), Salix caprea*

#### Semi mature street trees

*Tilia cordata 'Greenspire', Tilia 'Euchlora', Ulmus 'Dodoens'*



## PLANTING LISTS

# R132 planting

### ESTUARY WETLAND PARK

#### Tree planting:

*Alnus glutinosa, Betula pubescens, Prunus padus, Quercus petraea*

#### Wetland planting to shallow water filtration planting:

*Glyceria maxima, Thypha latifolia, Sparganium erectum, Nuphar lutea, Iris pseudacorus, Geranium pratense, Juncus effusus, Gagea lutea, Iris pseudacorus*

#### Pond edges planting:

*Caltha palustris, Carex grayi, Carex riparia, Butomus umbellatus, Eupatorium cannabinum, Filipendula ulmaria, Glyceria maxima, Lythrum salicaria, Mentha aquatica, Petasites hybridus, Scirpus lacustris, Symphytum officinale*

#### Wet periodically flooding meadow seed mix

Wildflower species: *Alopecurus pratensis, Achillea ptarmica, Carex flacca, Carex echinata, Carex nigra, Carex panicea, Carex pulicaris, Carex viridula, Carum verticillatum, Cirsium dissectum, Crepis paludosa, Equisetum palustre, Festuca rubra, Filipendula ulmaria, Galium palustre, Galium uliginosum, Juncus acutiflorus, Juncus articulatus, Juncus conglomeratus, Lathyrus palustris, Lotus pedunculatus, Luzula multiflora, Lychnis flos-cuculi, Mentha aquatica, Molinia caerulea, Ophioglossum vulgatum, Potentilla anglica, Potentilla erecta, Ranunculus flammula, Ranunculus repens, Succisa pratensis, Viola palustris, Viola persicifolia*

#### Raingardens/detention basins to P&R

*Carex acuta, Carex grayi, Carex riparia, Carex vulpina, Butomus umbellatus, Eupatorium cannabinum, Festuca rubra, Filipendula ulmaria, Iris pseudacorus, Juncus effusus, Lythrum salicaria, Mentha aquatica, Molinia caerulea, Scirpus lacustris, Spartina pectinata*

### ORCHARDS TREES

*Cydonia oblonga 'Vranja', Pyrus communis 'Doyenné du Comice', Pyrus communis 'Catillac', Prunus avium 'Early Rivers', Prunus avium 'Merton Glory', Malus domestica 'Ballyfatten', Malus domestica 'Kilkenny Pearmain'*

### SWALE GARDEN FEATURE PLANTING

Trees: *Fraxinus excelsior, Salix alba, Alnus glutinosa, Rhamnus frangula, Quercus robur*  
 Rich meadows: *Holcus lanatus, Agrostis stolonifera, Cardamine pratensis, Ranunculus repens, Rumex palustris*  
 Poor meadows: *Molinia caerulea, Agrostis canina, Ranunculus flammula*  
 Wetland: *Iris pseudacorus, Mentha aquatica, Lythrum salicaria, Filipendula ulmaria, Equisetum palustre*  
 Feature plants to swales: *Crocsmia 'Lucifer', Osmunda regalis, Camasia quamash, Carex grayi, Carex pendula, Iris pseudacorus, Lobelia cardinalis, Polystichum munitum, Thalictrum dasycarpum, Verbena hastata, Veronicastrum virginicum*

### CHERRY LINE - TREE PLANTING

*Prunus cerasus 'Bigreau Napoleon', Prunus x yedoensis, Prunus 'Accolade'*

### ARTISTS' PARK

Plants to be planted in large groups of the same species.

*Achillea millefolium, Anemone 'Honorine Jobert', Aster novi belgii, Calamintha nepeta, Camasia leichtlinii, Cosmos atrosanguineus, Echinacea paradoxa, Euphorbia graffitii, geranium 'Elke', Geranium 'Bikovo', Hordeum jubatum, Imperata cylindrica, Kalimeris incisa, Limonium latifolium, Mulhenbergia capillaris, Nassella tenuissima, Narcissus poeticus, Penisetum villosum, Phacelia tanacetifolia, Reseda alba, -Salvia 'Caradonna', Sedum 'Matrona'*

### BUTTERFLY GARDEN FEATURE PLANTING

Perennials: *Achillea millefolium, Allium 'Purple Sensation', Anemone 'Honorine Jobert', Aster novi belgii, Aster alpinus, Astrancia major 'Dark Desire', Bergenia cordifolia, Centaurea cyanus, Centranthus ruber, Crocus vernus, Cynara cardunculus, Echinops ritro, Erisimum 'Bowles's Mauve', Foeniculum vulgare, Gaura 'Whirling Butterflies', Helleborus niger, Knautia arvensis, Leucanthemum vulgare, Monarda dydima, Muscari areniacum, Narcissus poeticus, Nepeta x fassenii, Origanum vulgare, Salvia nemorosa 'Mainacht', Sedum 'Autumn Joy', Stipa arundinacea, Stipa 'Ponytails', Verbena bonariensis*  
 Solitary flowering shrubs into the perenial planting: *Budleja 'Nanho Blue', Hebe 'Garden Beauty Blue', Mahonia, Sarcococca h. var. humilis, Viburnum farrerii, Weigela 'Pink Poppet'*

### GARDEN OF EDEN TREE AND SHRUB EDIBLE FOREST CLUPMS

Trees and shrubs: *Amelanchier alnifolia, Aronia melanocarpa, Caragana arborescens, Cornus mas, Corylus avellana, Juglans regia, Lonicera caerulea, Malus sylvestris, Prunus avium, Ribes sp., Sambucus nigra 'Laciniata'*  
 Understorey: *Allium ursinum, Gallium odoratum, Symphytum officinale*

### BUSINESS PARK ENTRANCE FORMAL PLANTING

Tree planting to street entrance: *Carpinus betulus 'Fastigiata'*

### STREET TREES

*Pyrus calleryana 'Chanticleer', Corylus colurna, Tilia cordata 'Greenspire', Hippophae salicifolia 'Robert', Carpinus betulus 'Fastigiata', Ginkgo biloba, Quercus macrocarpa, Pyrus calleryana 'Aristocrat', Gleditsia triacanthos intermis 'Sunburst', Alnus incana*

### TREEAND SHRUB PLANTING

*Acer platanoides, Alnus glutinosa, Arbutus unedo multistem, Betula pubescens, Corylus avellana, Corylus avellana 'Contorta', Crataegus monogyna multistem, Euonymus europaeus, Frangula alnus 'Asplenifolia', Malus sylvestris multistem, Prunus padus, Qercus robur (Irish sourced), Quercus petraea (Irish sourced), Sambucus nigra 'Laciniata', Sorbus aucuparia, Viburnum opulus 'Compactum'*

## ESTUARY Plant lists

### ESTUARY

#### Terraced plaza planting

*Achillea millefolium, Campanula rotundifolia, Centaurea cyanus, Cichorium intybus, Crocosmia 'Goerge Davison', Deschampsia caespitosa, Foeniculum vulgare, Geranium 'Elke', Knautia arvensis, Leucanthemum vulgare, Papaver orientalis, Primula veris, Primula vulgaris, Leucojum vernum, Silene dioica, Silene vulgaris, Succisa pratensis, Verbascum chaixi 'Album', Fuchsia magellanica, Rosa 'The Fairy'*

#### Feature tree planting to upper station plaza

*Betula pubescens*

#### Tree planting to lower station plaza and street

*Sorbus aucuparia* (plaza), *Ulmus 'Dodoens'*

#### Tree planting to P&R and existing R132 tre belt

*Betula pubescens, Prunus padus, Quercus petraea, Sorbus aucuparia*

#### SWALE PLANTING

*Camasia leichtlinii, Carex greyei, Carex ripare, Carex vulpinoidea, Deschampsia caespitosa, Dianthus carthousianorum, Festuca rubra, Juncus effusus, Leucanthemum vulgare, Lobelia cardinalis, Lythrum salicaria, Molinia caerulea, Osmunda regalis, Polystichum munitum, Primula vulgaris, Spatula patens, Thalictrum dasycarpum, Verbena hastata, Veronicastrum virginicum*

#### GROUND COVER PLANTING

*Crocosmia 'Lucifer', Hedera hibernica, Leucojum vernum, Liriope muscari, Narcissus 'Tete a Tete', Sarcococca hookeriana var. humilis, Vinca minor 'Gertrude Jekyll'*

#### WOODLAND PLANTING MYAWAKI METHOD

Canopy: *Quercus robur* (Irish provenance, 10%), *Ulmus glabra* (5%)

Tree layer: *Betula pendula* (5%), *Betula pubescens* (10%), *Sorbus aucuparia* (5%), *Prunus avium* (5%)

Sub-tree layer: *Coryllus avellana* (20%), *Crataegus monogyna* (5%), *Euonymus europaeus* (5%), *Malus sylvestris* (10%), *Prunus spinosa* (5%), *Sambucus nigra* (5%)

Shrub layer: *Ilex aquifolium* (5%), *Ligustrum vulgare* (5%)

#### UNDERSTOREY PLANTING (as new planting or reinforcement planting to existing tree understorey)

*Allium ursinum, Anemone nemorosa, Anthriscus sylvestris, Blechnum spicant, Dryopteris affinis, Galanthus nivalis, Hedera hibernica, Hyacinthoides non-scripta* (Irish provenance), *Silene dioica, Luzula sylvatica, Polypodium vulgare, Polystichum setiferum, Primula veris, Primula vulgaris*

## Feature trees



*Betula pubescens*

#### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

#### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium, Anacamptis pyramidalis, Antennaria dioica, Anthyllis vulneraria, Arabis hirsuta, Asperula cynanchica, Blackstonia perfoliata, Brachypodium pinnatum, Briza media, Bromopsis erecta, Campanula rotundifolia, Carex flacca, Centaurea nigra, Ctenidium molluscum, Carex caryophyllea, Carlina vulgaris, Centaurea scabiosa, Daucus carota, Filipendula vulgaris, Galium verum, Gentiana verna, Gentianella amarella, Gentianella campestris, Geranium sanguineum, Helictotrichon pubescens, Homalothecium lutescens, Hypericum pulchrum, Hypochaeris radicata, Knautia arvensis, Koeleria macrantha, Lathyrus pratensis, Leontodon hispidus, Leontodon saxatilis, Leucanthemum vulgare, Linum catharticum, Lotus corniculatus, Lotus corniculatus, Odontites vernus, Ophrys apifera, Origanum vulgare, Pilosella officinarum, Primula veris, Prunella vulgaris, Ranunculus bulbosus, Rhinanthus minor, Sanguisorba minor, Sesleria caerulea, Thymus polytrichus, Trisetum flavescens, Vicia cracca, Vicia sepium*



## SEATOWN Plant lists

### SEATOWN

#### Swale feature planting

*Camasia leichtlinii, Carex ripare, Carex vulpinoidea, Deschampsia caespitosa, Dianthus carthousianorum, Juncus effusus, Juncus inflexus, Festuca rubra, Leucanthemum vulgare, Lychnis flos-cuculi, Molinia caerulea, Primula vulgaris, Spartina patens*

#### Feature 'Cliff planting'

*Armeria maritima, Aster alpinus, Aster novi-belgii, Athyrium filix-femina, Campanula rotundifolia, Carex morrowii 'Irish Green', Erigeron glaucus, Erigeron karwinskianus, Geranium sanguineum, Hypericum perforatum, Jasione laevis 'Blue Light', Knautia arvensis, Leucanthemum vulgare, Primula vulgaris, Primula veris, Scabiosa 'Butterfly Blue', Scilla verna, Silene maritima, Silene vulgaris, Thymus vulgaris, Verbena bonariensis*

#### Feature tree:

*Hippophae salicifolia 'Robert'*

#### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

#### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium, Anacamptis pyramidalis, Antennaria dioica, Anthyllis vulneraria, Arabis hirsuta, Asperula cynanchica, Blackstonia perfoliata, Brachypodium pinnatum, Briza media, Bromopsis erecta, Campanula rotundifolia, Carex flacca, Centaurea nigra, Ctenidium molluscum, Carex caryophyllea, Carlina vulgaris, Centaurea scabiosa, Daucus carota, Filipendula vulgaris, Galium verum, Gentiana verna, Gentianella amarella, Gentianella campestris, Geranium sanguineum, Helictotrichon pubescens, Homalothecium lutescens, Hypericum pulchrum, Hypochaeris radicata, Knautia arvensis, Koeleria macrantha, Lathyrus pratensis, Leontodon hispidus, Leontodon saxatilis, Leucanthemum vulgare, Linum catharticum, Lotus corniculatus, Lotus corniculatus, Odontites vernus, Ophrys apifera, Origanum vulgare, Pilosella officinarum, Primula veris, Prunella vulgaris, Ranunculus bulbosus, Rhinanthus minor, Sanguisorba minor, Sesleria caerulea, Thymus polytrichus, Trisetum flavescens, Viccia cracca, Vicia sepium*

## Feature trees



## SWORDS CENTRAL Plant lists

### SWORDS

#### Feature planting

*Achillea millefolium* 'Lilac Beauty', *Anemone hupehensis* 'Pretty Lady Maria', *Aquilegia vulgaris* 'Blue Barlow', *Bergenia cordifolia*, *Campanula persicifolia* 'La Belle', *Echinacea purpurea* 'Butterfly Kisses', *Echinacea purpurea* 'Summer Cocktail®', *Euphorbia cyparissias*, *Euphorbia seguieriana* niciana, *Helleborus orientalis* 'Double Green', *Heuchera* 'Root Beer', *Heuchera* 'Red Lightning', *Hosta tardiana* 'Halcyon', *Hosta undulata* 'Erromena', *Phlox paniculata* 'David', *Salvia* 'Anistad', *Salvia argentea*, *Salvia x superba* 'Reine Rose', *Narcissus poeticus*, *Asplenium scolopendrium*, *Blechnum spicant*, *Polystichum polyblepharum*, *Carex pendula*, *Miscanthus sinensis* 'Purpurescens', *Pennisetum messiacum* 'Red Bunny Tails', *Stipa gigantea*, *Stipa capillata*

#### Feature trees

*Alnus glutinosa* 'Laciniata' (Irish provenance), *Prunus padus*, *Amelanchier x grandiflora* 'Robin Hill'

#### GROUND COVER PLANTING

*Crocsmia* 'Lucifer', *Hedera hibernica*, *Leucosium vernum*, *Liriope muscari*, *Narcissus* 'Tete a Tete', *Sarcococca hookeriana* var. *humilis*, *Vinca minor* 'Gertrude Jekyll'

#### WOODLAND PLANTING MYAWAKI METHOD

Canopy: *Quercus robur* (Irish provenance, 10%), *Ulmus glabra* (5%)

Tree layer: *Betula pendula* (5%), *Betula pubescens* (10%), *Sorbus aucuparia* (5%), *Prunus avium* (5%)

Sub-tree layer: *Coryllus avellana* (20%), *Crataegus monogyna* (5%), *Euonymus europaeus* (5%), *Malus sylvestris* (10%), *Prunus spinosa* (5%), *Sambucus nigra* (5%)

Shrub layer: *Ilex aquifolium* (5%), *Ligustrum vulgare* (5%)

#### UNDERSTOREY PLANTING (as new planting or reinforcement planting to existing tree understorey)

*Allium ursinum*, *Anemone nemorosa*, *Anthriscus sylvestris*, *Blechnum spicant*, *Dryopteris affinis*, *Galanthus nivalis*, *Hedera hibernica*, *Hyacinthoides non-scripta* (Irish provenance), *Silene dioica*, *Luzula sylvatica*, *Polypodium vulgare*, *Polystichum setiferum*, *Primula veris*, *Primula vulgaris*

#### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

#### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium*, *Anacamptis pyramidalis*, *Antennaria dioica*, *Anthyllis vulneraria*, *Arabis hirsuta*, *Asperula cynanchica*, *Blackstonia perfoliata*, *Brachypodium pinnatum*, *Briza media*, *Bromopsis erecta*,

### Feature trees



*Alnus glutinosa* Laciniata



*Prunus padus*



*Amelanchier x grandiflora* 'Robin Hill'

*Campanula rotundifolia*, *Carex flacca*, *Centaurea nigra*, *Ctenidium molluscum*, *Carex caryophyllea*, *Carlina vulgaris*, *Centaurea scabiosa*, *Daucus carota*, *Filipendula vulgaris*, *Galium verum*, *Gentiana verna*, *Gentianella amarella*, *Gentianella campestris*, *Geranium sanguineum*, *Helictotrichon pubescens*, *Homalothecium lutescens*, *Hypericum pulchrum*, *Hypochaeris radicata*, *Knautia arvensis*, *Koeleria macrantha*, *Lathyrus pratensis*, *Leontodon hispidus*, *Leontodon saxatilis*, *Leucanthemum vulgare*, *Linum catharticum*, *Lotus corniculatus*, *Lotus corniculatus*, *Odontites vernus*, *Ophrys apifera*, *Origanum vulgare*, *Pilosella officinarum*, *Primula veris*, *Prunella vulgaris*, *Ranunculus bulbosus*, *Rhinanthus minor*, *Sanguisorba minor*, *Sesleria caerulea*, *Thymus polytrichus*, *Trisetum flavescens*, *Viccia cracca*, *Vicia sepium*



## FOSTERSTOWN Plant lists

### FOSTERSTOWN

#### Feature planting - low groundcover perennials combined with tall transparent perennials

*Allchemilla mollis*, *Allium* 'Purple Sensation', *Bergenia cordifolia*, *Cirsium rivulare* 'Atropurpureum', *Dierama pulcherinum*, *Euphorbia polychroma*, *Foeniculum vulgare*, *Geranium* 'Bikovo', *gladiolus communis*, *Helleborus niger*, *Knautia macedonica*, *Libertia grandiflora*, *Sanguisorba* 'Pink Elephant', *Sisyrinchium striatum*, *Stipa* 'Pony Tails'

#### Feature trees

*Cercidiphyllum japonicum*, *Acer davidii* 'Viper'

### SWALE PLANTING

*Camasia leichtlinii*, *Carex greyei*, *Carex ripare*, *Carex vulpinoidea*, *Deschampsia caespitosa*, *Dianthus carthousianorum*, *Festuca rubra*, *Juncus effusus*, *Leucanthemum vulgare*, *Lobelia cardinalis*, *Lythrum salicaria*, *Molinia caerulea*, *Osmunda regalis*, *Polystichum munitum*, *Primula vulgaris*, *Spatina patens*, *Thalictrum dasycarpum*, *Verbena hastata*, *Veronicastrum virginicum*

### GROUNDCOVER PLANTING

*Crocsmia* 'Lucifer', *Hedera hibernica*, *Leucojum vernum*, *Liriope muscari*, *Narcissus* 'Tete a Tete', *Sarcococca hookeriana* var. *humilis*, *Vinca minor* 'Gertrude Jekyll'

### WOODLAND PLANTING MYAWAKI METHOD

Canopy: *Quercus robur* (Irish provenance, 10%), *Ulmus glabra* (5%)

Tree layer: *Betula pendula* (5%), *Betula pubescens* (10%), *Sorbus aucuparia* (5%), *Prunus avium* (5%)

Sub-tree layer: *Coryllus avellana* (20%), *Crataegus monogyna* (5%), *Euonymus europaeus* (5%), *Malus sylvestris* (10%), *Prunus spinosa* (5%), *Sambucus nigra* (5%)

Shrub layer: *Ilex aquifolium* (5%), *Ligustrum vulgare* (5%)

### UNDERSTOREY PLANTING (as new planting or reinforcement planting to existing tree understorey)

*Allium ursinum*, *Anemone nemorosa*, *Anthriscus sylvestris*, *Blechnum spicant*, *Dryopteris affinis*, *Galanthus nivalis*, *Hedera hibernica*, *Hyacinthoides non-scripta* (Irish provenance), *Silene dioica*, *Luzula sylvatica*, *Polypodium vulgare*, *Polystichum setiferum*, *Primula veris*, *Primula vulgaris*

## Feature trees



*Cercidiphyllum japonicum*



*Acer davidii* 'Viper'

### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium*, *Anacamptis pyramidalis*, *Antennaria dioica*, *Anthyllis vulneraria*, *Arabis hirsuta*, *Asperula cynanchica*, *Blackstonia perfoliata*, *Brachypodium pinnatum*, *Briza media*, *Bromopsis erecta*, *Campanula rotundifolia*, *Carex flacca*, *Centaurea nigra*, *Ctenidium molluscum*, *Carex caryophylla*, *Carlina vulgaris*, *Centaurea scabiosa*, *Daucus carota*, *Filipendula vulgaris*, *Galium verum*, *Gentiana verna*, *Gentianella amarella*, *Gentianella campestris*, *Geranium sanguineum*, *Helictotrichon pubescens*, *Homalothecium lutescens*, *Hypericum pulchrum*, *Hypochaeris radicata*, *Knautia arvensis*, *Koeleria macrantha*, *Lathyrus pratensis*, *Leontodon hispidus*, *Leontodon saxatilis*, *Leucanthemum vulgare*, *Linum catharticum*, *Lotus corniculatus*, *Lotus corniculatus*, *Odontites vernus*, *Ophrys apifera*, *Origanum vulgare*, *Pilosella officinarum*, *Primula veris*, *Prunella vulgaris*, *Ranunculus bulbosus*, *Rhinanthus minor*, *Sanguisorba minor*, *Sesleria caerulea*, *Thymus polytrichus*, *Trisetum flavescens*, *Viccia cracca*, *Vicia sepium*

## DUBLIN AIRPORT Plant lists

### DUBLIN AIRPORT

#### Feature planting

*Achillea millefolium, Asphodeline lutea, Centaurea scabiosa, Foeniculum vulgare, Galanthus nivalis, Geranium Bikovo, Hypericum perforatum, Knautia arvensis, Narcissus peoticus, Primula veris, Rosmarinus officinalis, Scabiosa 'Butterfly Blue', Silene dioica, Thymus vulgaris, Verbena bonariensis, Agrostis tenuis, Dactylis glomerata, Deschampsia caespitosa, Festuca, Imperata cylindrica, Leymus arenarius, Nassella tenuissima*

#### Feature trees

*Liriodendron tulipifera*

#### Tree planting:

*Acer campestre, Alnus glutinosa 'Imperialis' (Irish provenance), Quercus petraea, Populus alba*

#### Semi-mature tree planting to existing planted areas

*Arbutus unedo, Prunus spinosa, Prunus padus*

#### Shrubs

*Cornus alba 'Sibirica', Viburnum davidii, Rhus typhina 'Tiger eyes', Symphoricarpos 'Hancock', Hedera hibernica*

### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

### Feature tree





## DARDISTOWN Plant lists

### DARDISTOWN

#### Feature tree

*Castanea sativa*

#### Semi-mature and standard trees and shrubs to swale and land drain

*Alnus glutinosa* (Irish provenance), *Betula pendula*, *Crataegus monogyna*, *Corylus avellana*, *Sambucus nigra*

#### Semi-mature and standard trees to wildflower meadow areas

*Crataegus monogyna*, *Malus sylvestris*, *Prunus padus*, *Betula pubescens*, *Quercus petraea* (Irish provenance), *Quercus robur* (Irish provenance), *Salix caprea*

#### Semi mature street trees

*Tilia cordata* 'Greenspire', *Tilia* 'Euchlora', *Ulmus* 'Dodoens'

### SWALE PLANTING

*Camasia leichtlinii*, *Carex greyei*, *Carex ripare*, *Carex vulpinoidea*, *Deschampsia caespitosa*, *Dianthus carthousianorum*, *Festuca rubra*, *Juncus effusus*, *Leucanthemum vulgare*, *Lobelia cardinalis*, *Lythrum salicaria*, *Molinia caerulea*, *Osmunda regalis*, *Polystichum munitum*, *Primula vulgaris*, *Spatina patens*, *Thalictrum dasycarpum*, *Verbena hastata*, *Veronicastrum virginicum*

### GROUND COVER PLANTING

*Crocsmia* 'Lucifer', *Hedera hibernica*, *Leucojum vernum*, *Liriope muscari*, *Narcissus* 'Tete a Tete', *Sarcococca hookeriana* var. *humilis*, *Vinca minor* 'Gertrude Jekyll'

### WOODLAND PLANTING MYAWAKI METHOD

Canopy: *Quercus robur* (Irish provenance, 10%), *Ulmus glabra* (5%)

Tree layer: *Betula pendula* (5%), *Betula pubescens* (10%), *Sorbus aucuparia* (5%), *Prunus avium* (5%)

Sub-tree layer: *Coryllus avellana* (20%), *Crataegus monogyna* (5%), *Euonymus europaeus* (5%), *Malus sylvestris* (10%), *Prunus spinosa* (5%), *Sambucus nigra* (5%)

Shrub layer: *Ilex aquifolium* (5%), *Ligustrum vulgare* (5%)

### UNDERSTOREY PLANTING (as new planting or reinforcement planting to existing tree understorey)

*Allium ursinum*, *Anemone nemorosa*, *Anthriscus sylvestris*, *Blechnum spicant*, *Dryopteris affinis*, *Galanthus nivalis*, *Hedera hibernica*, *Hyacinthoides non-scripta* (Irish provenance), *Silene dioica*, *Luzula sylvatica*, *Polypodium vulgare*, *Polystichum setiferum*, *Primula veris*, *Primula vulgaris*

## Feature tree



*Castanea sativa*

### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium*, *Anacamptis pyramidalis*, *Antennaria dioica*, *Anthyllis vulneraria*, *Arabis hirsuta*, *Asperula cynanchica*, *Blackstonia perfoliata*, *Brachypodium pinnatum*, *Briza media*, *Bromopsis erecta*, *Campanula rotundifolia*, *Carex flacca*, *Centaurea nigra*, *Ctenidium molluscum*, *Carex caryophyllea*, *Carlina vulgaris*, *Centaurea scabiosa*, *Daucus carota*, *Filipendula vulgaris*, *Galium verum*, *Gentiana verna*, *Gentianella amarella*, *Gentianella campestris*, *Geranium sanguineum*, *Helictotrichon pubescens*, *Homalothecium lutescens*, *Hypericum pulchrum*, *Hypochaeris radicata*, *Knautia arvensis*, *Koeleria macrantha*, *Lathyrus pratensis*, *Leontodon hispidus*, *Leontodon saxatilis*, *Leucanthemum vulgare*, *Linum catharticum*, *Lotus corniculatus*, *Lotus corniculatus*, *Odontites vernus*, *Ophrys apifera*, *Origanum vulgare*, *Pilosella officinarum*, *Primula veris*, *Prunella vulgaris*, *Ranunculus bulbosus*, *Rhinanthus minor*, *Sanguisorba minor*, *Sesleria caerulea*, *Thymus polytrichus*, *Trisetum flavescens*, *Vicia cracca*, *Vicia sepium*

## NORTHWOOD Plant lists

### NORTHWOOD

#### Feature planting

*Cornus sanguinea* 'Magic Flame', *Deutzia x rosea*, *Forsythia x intermedia* 'Spectabilis', *Ligustrum ovalifolium*, *Mahonia* 'Soft Caress', *Rosa rugosa*, *Sarcococca confusa*, *Viburnum opulus* 'Compactum', *Weigela* 'Victoria'

Groundcover planting to shrub planting

*Ajuga reptans*, *Anemone nemorosa*, *Brunnera macrophylla*, *Galanthus nivalis*, *Galium odoratum*, *Pulmonaria officinalis*, *Symphytum officinale*

#### Feature trees

*Aesculus x carnea* 'Briotii'

#### Semi-mature and standard trees to swales

*Acer x freemanii* 'Autumn Blaze', *Cercidiphyllum japonicum*, *Gleditsia triacanthos intermis*, *Pyrus calleryana* 'Aristocrat', *Quercus palustris*, *Zelkova serrata*

#### Semi-mature and standard trees to shrub planted areas

*Acer griseum*, *Liquidambar styraciflua*, *Malus* 'Evereste', *Ostrya carpinifolia*, *Prunus serrulata* 'Kanzan', *Pterocarya fraxinifolia*, *Quercus petraea* (Irish provenance), *Quercus robur* (Irish provenance), *Sorbus aucuparia*, *Tilia cordat* 'Greenspire', *Tilia* 'Euchlora'

### SWALE PLANTING

*Camasia leichtlinii*, *Carex greyei*, *Carex ripare*, *Carex vulpinoidea*, *Deschampsia caespitosa*, *Dianthus carthousianorum*, *Festuca rubra*, *Juncus effusus*, *Leucanthemum vulgare*, *Lobelia cardinalis*, *Lythrum salicaria*, *Molinia caerulea*, *Osmunda regalis*, *Polystichum munitum*, *Primula vulgaris*, *Spatina patens*, *Thalictrum dasycarpum*, *Verbena hastata*, *Veronicastrum virginicum*

### GROUND COVER PLANTING

*Crocsmia* 'Lucifer', *Hedera hibernica*, *Leucosium vernum*, *Liriope muscari*, *Narcissus* 'Tete a Tete', *Sarcococca hookeriana* var. *humilis*, *Vinca minor* 'Gertrude Jekyll'



### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed

### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium*, *Anacamptis pyramidalis*, *Antennaria dioica*, *Anthyllis vulneraria*, *Arabis hirsuta*, *Asperula cynanchica*, *Blackstonia perfoliata*, *Brachypodium pinnatum*, *Briza media*, *Bromopsis erecta*, *Campanula rotundifolia*, *Carex flacca*, *Centaurea nigra*, *Ctenidium molluscum*, *Carex caryophylla*, *Carlina vulgaris*, *Centaurea scabiosa*, *Daucus carota*, *Filipendula vulgaris*, *Galium verum*, *Gentiana verna*, *Gentianella amarella*, *Gentianella campestris*, *Geranium sanguineum*, *Helictotrichon pubescens*, *Homalothecium lutescens*, *Hypericum pulchrum*, *Hypochaeris radicata*, *Knautia arvensis*, *Koeleria macrantha*, *Lathyrus pratensis*, *Leontodon hispidus*, *Leontodon saxatilis*, *Leucanthemum vulgare*, *Linum catharticum*, *Lotus corniculatus*, *Lotus corniculatus*, *Odontites vernus*, *Ophrys apifera*, *Origanum vulgare*, *Pilosella officinarum*, *Primula veris*, *Prunella vulgaris*, *Ranunculus bulbosus*, *Rhinanthus minor*, *Sanguisorba minor*, *Sesleria caerulea*, *Thymus polytrichus*, *Trisetum flavescens*, *Vicia cracca*, *Vicia sepium*



## BALLYMUN Plant lists

### BALLYMUN

#### Feature planting

*Achillea millefolium, Centaurea scabiosa, Cichorium intybus, Geranium Bikovo, Helleborus niger, Hypericum perforatum, Knautia arvensis, Leucosium vernum, Malva moschata, Narcissus peoticus, Primula veris, Rosmarinus officinalis, Scabiosa 'Butterfly Blue', Silene dioica, Thymus vulgaris, Valeriana officinalis, Verbena bonariensis, Imperata cylindrica, Mulhenbergia capillaris, Nassela tenuisima*

**Climbers to trees - add interest. Only small (up to 4 m) herbacious climbers that would not damage the trees are chosen. Plant to larger trees in soft landscaping**

*Clematis 'Taiga', Dactylicapnos scandens, Tropaeolum speciosum*

#### Feature trees

*Davidia involucrata*

#### Trees

*Morus alba, Tilia cordata, Quercus petraea, Betula pubescens*

#### Semi-mature trees to existing planted areas

*Prunus padus, Arbutus unedo, Prunus spinosa, Malus sylvestris*

### SWALE PLANTING

*Camasia leichtlinii, Carex greyei, Carex ripare, Carex vulpinoidea, Deschampsia caespitosa, Dianthus carthousianorum, Festuca rubra, Juncus effusus, Leucanthemum vulgare, Lobelia cardinalis, Lythrum salicaria, Molinia caerulea, Osmunda regalis, Polystichum munitum, Primula vulgaris, Spatina patens, Thalictrum dasycarpum, Verbena hastata, Veronicastrum virginicum*

### GROUNDCOVER PLANTING

*Crocsmia 'Lucifer', Hedera hibernica, Leucosium vernum, Liriope muscari, Narcissus 'Tete a Tete', Sarcococca hookeriana var. humilis, Vinca minor 'Gertrude Jekyll'*

### Feature tree



## COLLINS AVENUE Plant lists

### COLLINS AVENUE

#### Feature planting - medicinal herb garden to church axis

*Chamaemelum nobile, Crambe cordifolia, Cynara scolymus, Digitalis purpurea 'Sutton's Apricot', Echinacea purpurea 'Sunrise', Foeniculum vulgare, Lavandula angustifolia 'Walberton Silver Edge', Mentha pulegium, Pulmonaria officinalis, Rheum rhabarbarum, Rosmarinus officinalis, Salvia officinalis, Symphytum officinale, Thymus officinalis, Valleriana officinalis*

#### Feature planting - Religious perennial planting

*Alchemilla mollis, Aquilegia vulgaris, Artemisia officinalis, Dicentra spectabilis 'White Gold', Echinacea purpurea 'Sunrise', Foeniculum vulgare, Galanthus nivalis, Lavandula x intermedia 'Phenomenal', Matricaria chamomilla, Myosotis secunda, Origanum rotundifolium 'Kent Beauty', Sanguisorba officinalis, Vinca major, Viola odorata, Stipa tenuissima 'Pony Tails'*

**Climbers to trees - add interest. Only small (up to 4 m) herbaceous climbers that would not damage the trees are chosen. Plant to larger trees in soft landscaping**

*Clematis 'Taiga', Dactylicapnos scandens, Tropaeolum speciosum*

#### Feature tree

*Robinia pseudoacacia 'Frisia'*

#### Trees

*Cercis siliquastrum, Ficus carica 'Violette de Sollies', Prunus dulcis 'Robijn', Malus 'Red Jewel'*

#### Semi-mature trees to existing planted areas

*Betula pubescens, Quercus robur, Ulmus glabra*

#### SWALE PLANTING

*Camasia leichtlinii, Carex greyei, Carex ripare, Carex vulpinoidea, Deschampsia caespitosa, Dianthus carthousianorum, Festuca rubra, Juncus effusus, Leucanthemum vulgare, Lobelia cardinalis, Lythrum salicaria, Molinia caerulea, Osmunda regalis, Polystichum munitum, Primula vulgaris, Spatina patens, Thalictrum dasycarpum, Verbena hastata, Veronicastrum virginicum*

#### GROUND COVER PLANTING

*Crocsmia 'Lucifer', Hedera hibernica, Leucojum vernum, Liriope muscari, Narcissus 'Tete a Tete', Sarcococca hookeriana var. humilis, Vinca minor 'Gertrude Jekyll'*

## Feature tree



#### UNDERSTOREY PLANTING (as new planting or reinforcement planting to existing tree understorey)

*Allium ursinum, Anemone nemorosa, Anthriscus sylvestris, Blechnum spicant, Dryopteris affinis, Galanthus nivalis, Hedera hibernica, Hyacinthoides non-scripta (Irish provenance), Silene dioica, Luzula sylvatica, Polypodium vulgare, Polystichum setiferum, Primula veris, Primula vulgaris*

#### AMENITY GRASSLAND

Wildflowers: Birdsfoot Trefoil, Black Meddock, Burnet Saxifrage, Century, Wild Chamomile, Cowslip, Eyebright, Meadow Buttercup, Marjoram, Red Bartsia, Mallow, Forget-me-not, Hoary Plantain, Kidney Vetch, Lady's Bedstraw, Ox-eye Daisy, Red Clover, Ribwort Plantain, Rough Hawksbit, St Johnswort, Wild Carrot, Sorrel, Yarrow, Quaking Grass, Lady's Smock, White Bedstraw, Selfheal, Smooth Hawksbit, Corn Marigold, Corn Poppy, Cornflower, Corncockle, Scented Mayweed



## GRIFFITH PARK Plant lists

### GRIFFITH PARK

#### Semi-mature tree planting to sport pitch perimeter

*Quercus robur, Ulmus glabra, Betula pubescens, Sorbus aucuparia*

#### Feature tree

*Trachycarpus fortunei*

#### Urban microforest to station roof - canopy layer is left out in this instance

Tree layer: *Betula pendula* (5%), *Betula pubescens* (10%), *Prunus avium* (10%), *Prunus padus* (5%), *Sorbus aria* (5%), *Sorbus aucuparia* (10%)

Sub-tree layer: *Corylus avellana* (15%), *Crataegus monogyna* (5%), *Euonymus europaeus* (5%), *Malus sylvestris* (7%), *Prunus spinosa* (3%), *Sambucus nigra* (5%)

Shrub layer: *Illex aquifolium* (10%) *Ligustrum vulgare* (3%), *Frangula alnus* (2%)

#### Feature planting to plaza - 'exotic'

*Acanthus mollis, Crocosmia 'Lucifer', Crocosmia 'George Davison', Fatsia japonica, Osmunda regalis, Camasia quamash, Hosta clausa, Iris pseudacorus, Iris siberica, Iris versicolor 'Kremesina', Liriope muscari, Lobelia cardinalis, Asplenium scolopendrium, Blechnum spicant, Polypodium vulgare, Polystichum munitum*

#### Native berry bearing shrub planting to northwestern boundary of Sports pitch

*Prunus spinosa, Rosa rubiginosa, Sambucus nigra 'Laciniata', Viburnum opulus*

#### Native nut and berry bearing shrub planting to Withall college entrance.

*Corylus avellana, Ligustrum vulgare, Sambucus nigra 'Laciniata'*

#### Botanic wall feature planting: climbing plants - mix of flowering, evergreen and autumn colouring species

*Campsis radicans, Hedera hibernica, Hydrangea petiolaris, Partenocyssus tricuspidata, Pileostegia viburnoides*

#### GROUND COVER PLANTING

*Crocosmia 'Lucifer', Hedera hibernica, Leucojum vernum, Liriope muscari, Narcissus 'Tete a Tete', Sarcococca hookeriana var. humilis, Vinca minor 'Gertrude Jekyll'*

#### UNDERSTOREY PLANTING (as new planting or reinforcement planting to existing tree understorey)

*Allium ursinum, Anemone nemorosa, Anthriscus sylvestris, Blechnum spicant, Dryopteris affinis, Galanthus nivalis, Hedera hibernica, Hyacinthoides non-scripta (Irish provenance), Silene dioica, Luzula sylvatica, Polypodium vulgare, Polystichum setiferum, Primula veris, Primula vulgaris*

## Feature tree



*Trachycarpus fortunei*

#### WILDFLOWER MEADOW

Wildflowers: *Achillea millefolium, Anacamptis pyramidalis, Antennaria dioica, Anthyllis vulneraria, Arabis hirsuta, Asperula cynanchica, Blackstonia perfoliata, Brachypodium pinnatum, Briza media, Bromopsis erecta, Campanula rotundifolia, Carex flacca, Centaurea nigra, Ctenidium molluscum, Carex caryophylla, Carlina vulgaris, Centaurea scabiosa, Daucus carota, Filipendula vulgaris, Galium verum, Gentiana verna, Gentianella amarella, Gentianella campestris, Geranium sanguineum, Helictotrichon pubescens, Homalothecium lutescens, Hypericum pulchrum, Hypochaeris radicata, Knautia arvensis, Koeleria macrantha, Lathyrus pratensis, Leontodon hispidus, Leontodon saxatilis, Leucanthemum vulgare, Linum catharticum, Lotus corniculatus, Lotus corniculatus, Odontites vernus, Ophrys apifera, Origanum vulgare, Pilosella officinarum, Primula veris, Prunella vulgaris, Ranunculus bulbosus, Rhinanthus minor, Sanguisorba minor, Sesleria caerulea, Thymus polytrichus, Trisetum flavescens, Viccia cracca, Vicia sepium*

## GLASNEVIN Plant lists

### GLASNEVIN

#### Feature planting to plaza - White&Blue (N=native, P=pollinator friendly)

*Anemone nemorosa* (NP), *Anemone* 'Honorine Jobert' (P), *Campanula rotundifolia* 'White Gem' (NP), *Chamaemelum nobile* (N), *Centaurea cyanus*, *Cichorium intybus* (N), *Echinacea purpurea* 'Baby Swan White' (P), *Delphinium* 'Blue Bird' (P), *Echinops ritro* (P), *Eryngium planum* 'Hobbit' (P), *Gaura lindheimerii* (P), *Geranium* 'Bill Wallis' (P), *Hyacinthoides non-scripta* (NP), *Iris douglasiana*, *Jasione laevis* 'Blue Light' (P), *Leucjum vernum* (NP), *Linum perenne* 'Blau Samphyr', *Primula denticulata* var. *alba*, *Pulmonaria* 'Blue Ensign' (P), *Salvia* 'Black n Blue' (P), *Silene vulgaris* (N), *Verbascum chaixii* 'Album' (P), *Deschampsia caespitosa* 'Goldtau' (N), *Luzula nivea*, *Narcissus Thalia*, *Muscari armeniaca*

#### Feature tree

*Quercus petraea*

#### Native berry bearing shrub planting to bike parking area

*Prunus spinosa*, *Rosa rubiginosa*, *Sambucus nigra* 'Laciniata', *Viburnum opulus*

#### Tree planting to bike parking

*Betula jacquemontii*

### Feature tree





## MATER Plant lists

### MATER

#### Feature shrub planting

*Cordiline australis, Cornus sanguinea, Salix cinerea, Salix aurita, Sambucus nigra, Euonymus fortunei, Eleagnus ebbengei, Crataegus monogyna, Brahea armata, Atriplex halimus, Hydrangea serrata, Hydrangea paniculata, Ligustrum vulgare, Rosa nitida*

**Climbers to trees - add interest. Only small (up to 4 m) herbacious climbers that would not damage the trees are chosen. Plant to larger trees in soft landscaping**

*Clematis 'Taiga', Dactylicapnos scandens, Tropaeolum speciosum*

#### Feature tree

*Ginkgo biloba*

#### Grass planting below shrubs

*Carex extensa, Holcus lanatus, Poa pratensis, Dactylis glomerata, Phalaris arundinacea, Agrostis tenuis, Leymus arenarius*

#### Trees to forest area

*Magnolia, Betula pendula, Carpinus betulus, Acer platanoides*

#### Semi-mature trees and shrubs to existing planted areas

*Prunus padus, Crataegus laevigata, Prunus spinosa, Malus sylvestris*

## Feature tree



## TARA Plant lists

### TARA

Prior to the 1600's the site would have been estuarial marsh land. The proposed planting palette should reflect this as an acknowledgement to the history of the site, focusing on native species and texture. As this genre of planting requires much water, the hard landscape is designed to shed excess water into the soft landscape areas.

#### Feature swale planting inspired by estuarial marsh land, which was here prior the 1600's

*Luzula sylvatica, Polystichum setiferum, Dechampsia cespitosa, Juncus effusus, Primula vulgaris, Molinia caerulea, Foeniculum vulgare, Mentha aquatica, Iris pseudacorus, Filipendula ulmaria, Lythrum salicaria*

#### Feature groundcover planting mix

*Aquilegia vulgaris, Dicentra spectabilis 'White Gold', Myosotis secunda, Galanthus nivalis, Vinca major, Viola odorata, Alchemilla mollis, Artemisia officinalis, Stipa tenuissima 'Pony Tails', Sanguisorba officinalis, Origanum rotundifolium 'Kent Beauty', Matricaria chamomilla, Echinacea purpurea 'Sunrise', Lavandula x intermedia 'Phenomenal', Foeniculum vulgare*

#### Trees and shrubs:

To swale: *Pinus mugo, Salix viminalis, Salix alba* (pollared), *Corylus avellana*

Semi-mature trees: *Ginkgo biloba*

Semi-mature columnar trees: *Corylus colurna*

Feature tree: *Quercus palustris*

### Feature tree



*Quercus palustris*



## ST STEPHEN'S GREEN Plant lists

### ST STEPHEN'S GREEN

#### Feature tree

*Sorbus aucuparia*

#### Forest semi-mature / mature trees

*Platanus x hispanica*, *Acer pseudoplatanus*, *Aesculus hippocastaneum*, *Parotia persica*, *Tilia x euchlora*,  
*Quercus ilex*, *Ulmus ssp.*, *Fraxinus excelsior* 'Pendula', *Tilia cordata*

#### Semi-mature and small trees

*Salix purpurea*, *Crataegus monogyna*, *Salix cinerea*, *Sambucus nigra*, *Acer campestre*, *Acer dissectum*, *Prunus avium*, *Betula alba*, *Betula pendula*, *Prunus spinosa*, *Prunus padus*, *Malus sylvestris*, *Corylus avellana*

#### Feature groundcover understory

*Hedera hibernica*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *Dryopteris filix-mas*, *Osmunda regalis*, *Polypodium vulgare*, *Polystichum setiferum*, *Galanthus nivalis*, *Leucojum aestivum*, *Narcissus*

### Feature tree



## CHARLEMONT Plant lists

### CHARLEMONT

#### Feature planting - shrubs and grasses

To sun: *Ceanothus thyrsiflorus* var. *repens*, *Ilex crenata* 'Green Hedge', *Lonicera nitida*, *Perovskia* 'Blue Spire', *Rosa* 'Flower Carpet Pink', *Rosa rugosa* 'Alba', *Calamagrostis brachytricha*, *Stipa gigantea*

To shade and under trees: *Daphne* 'Pink Fragrans', *Deschampsia caespitosa* 'Goldtau', *Ilex crenata* 'Green Hedge', *Sarcococca confusa*, *Viburnum opulus* 'Compacta'

#### Feature trees

*Quercus rubra*

#### Small trees to central plaza

*Betula utilis* var. *jacquemontii* multistem, *Magnolia x loebneri* 'Leonard Messel'

#### Trees to Grand Parade (R111)

*Tilia cordata* 'Greenspire', *Tilia* 'Euchlora'

#### Trees to Eastern boundary

*Sorbus aucuparia*, *Prunus Subhirtella* 'Autumnalis Rosea', *Pterocarya fraxinifolia*



*Quercus rubra*



