

09. Facade and Materiality

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The Warehouse District is characterised by industrial materials and textures (bricks, concrete, corrugated metal and cement board, etc.), Typically existing buildings have been occupied and adapted by residents in an organic manner over long period of time. This has helped to create a distinctive streetscape.

The following pages set out a summary of the design process for the façades and material selection proposed in the new build blocks.



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Architectural Expression

The site is located at an intersection of 4 townscape character areas, each with an array of architectural expression and typologies.

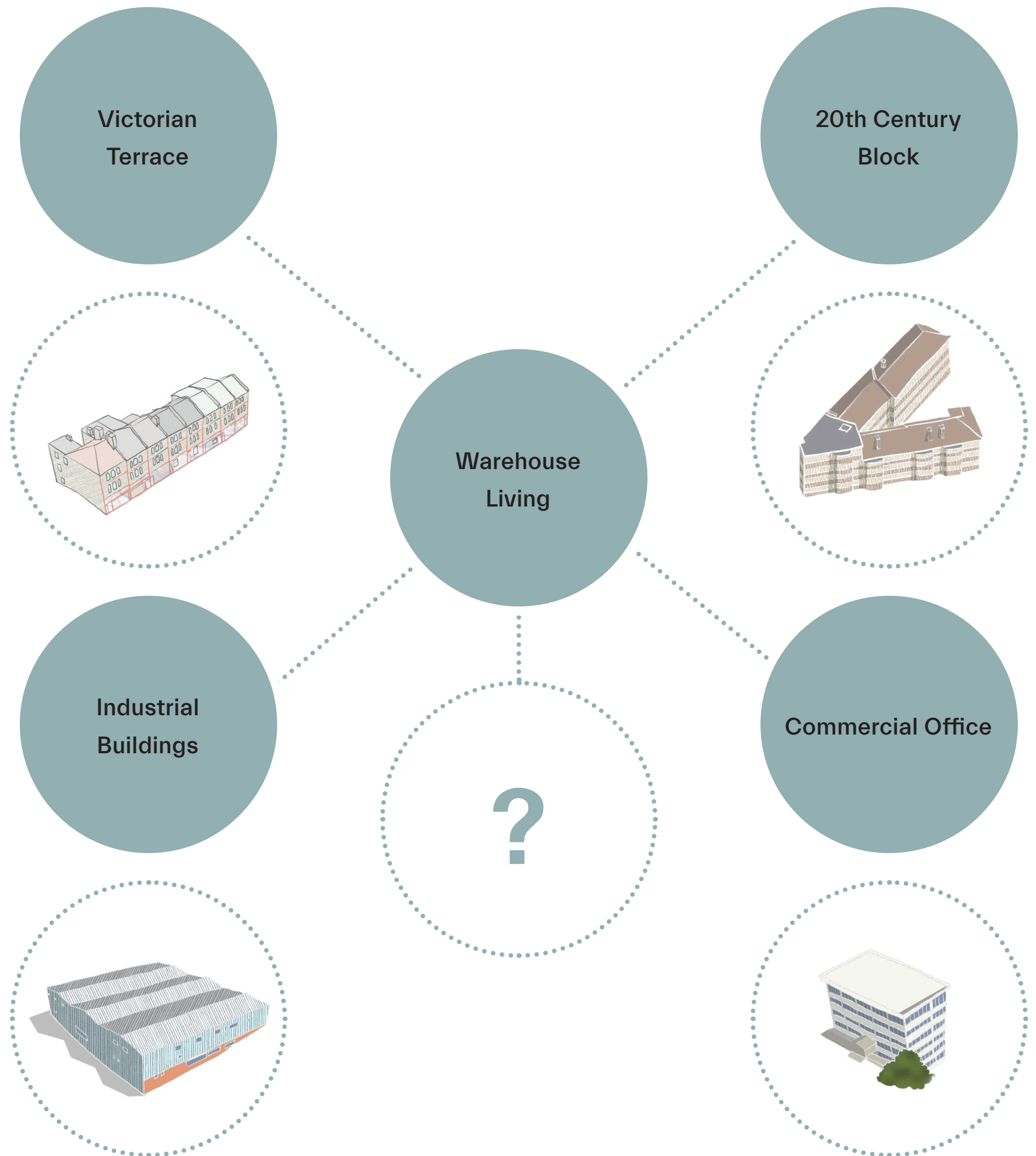
This boundary condition means the building is responsive to a variety of influences both **subtle** and **explicit**.

The building is not just living and working provision but also a unique opportunity for the Warehouse community to be more **recognisable** within its local context on a key route through the city.

London is a city of ever evolving traditions and culture. Architecture being a **manifestation** of society and its traditions should reflect the diversity of the community and place.

When developing the facade the team has explored the following themes:

- + Local order and hierarchy
- + Common and unique architectural forms
- + Internal expression of programme
- + Visual and tactile interest
- + Materiality and Sustainability
- + Longevity and robustness



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Surrounding Materials

The prevalent materials within the area include brick, corrugated metal, painted finishes, curtain wall.

Corrugated sheet metal

Corrugated sheet metal can be found primarily in the industrial areas. It is synonymous with the notion of mass production and typically as an applied wrap.

Glazing/ curtain walling

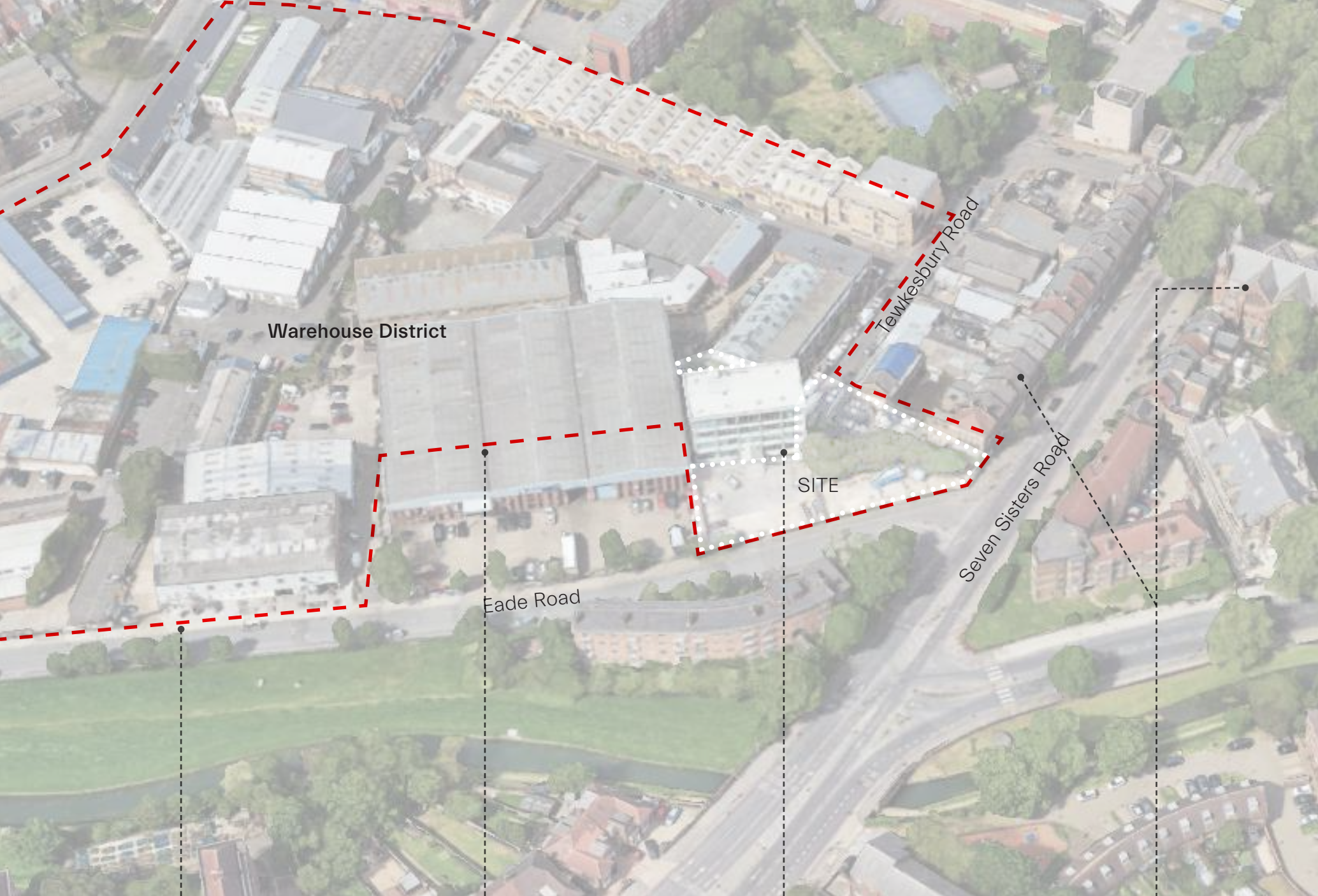
There are a variety of languages for windows and openings within the area. This included punched windows, framed window, and curtain wall systems.

Masonry

Brick is a common material across the area. It can be found in a range of tones, textures, and colours.

When developing the building façade, the team has drawn on the various contextual references in terms of materiality, texture, tone and sustainability credentials. The façade design aims to celebrate local themes while striving to create a unique and recognisable identity of its own.

Some of the common themes that can be observed across the different building typologies include themes of **banding, layering, applied colours/renders.**



Rendered/Painted



Corrugated Metal



Curtain wall



Masonry

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Material Application

Banding

This is expressed through change in materiality, extruded or inset forms and even changes in translucency. In instances where banding is expressed through a ‘wrapping form’; it is not uncommon for the building to celebrate the position of the slab.

Where banding is expressed through colour or tactile changes, it is also common for alignments to correspond to the primary window heights.

Layering of materials

This theme can be seen across the more industrial areas, sheet material is used to warp the building form. In this application it is typical to extend the material as far as feasible but leave exposed the robust masonry base.

Applied colours/renders

This theme is the reverse of the layering. Where a softer and more perishable layer is applied to the robust base. Change of colour is also used within a variety of applications, domestic and industrial. This expression is used to create additional emphasis on the ground datum. It is found typically on low rise buildings where users have chosen to express individuality.

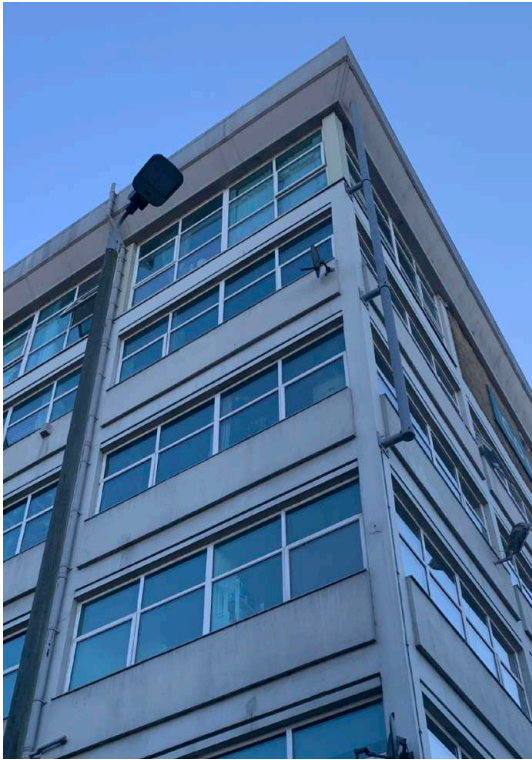
Banding



Amhurst Court, Seven Sisters Road



Pickering House, Seven Sisters Road



Cara House, Eade Road

Layering



Back of unit 2, Eade road

Rendered datum



Overbury Road

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Context - Warehouse District

This page catalogues a sample of Warehouse District materials, compiled early within the **design process**. It has formed an ongoing reference point for material selection and refinement of the proposal.

Materials



Textures



Street art & Colour



Metal Details



Light Structures



Signage



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Cladding sustainability

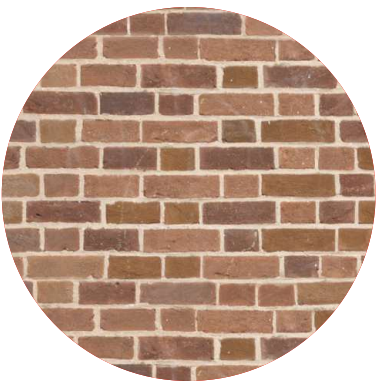
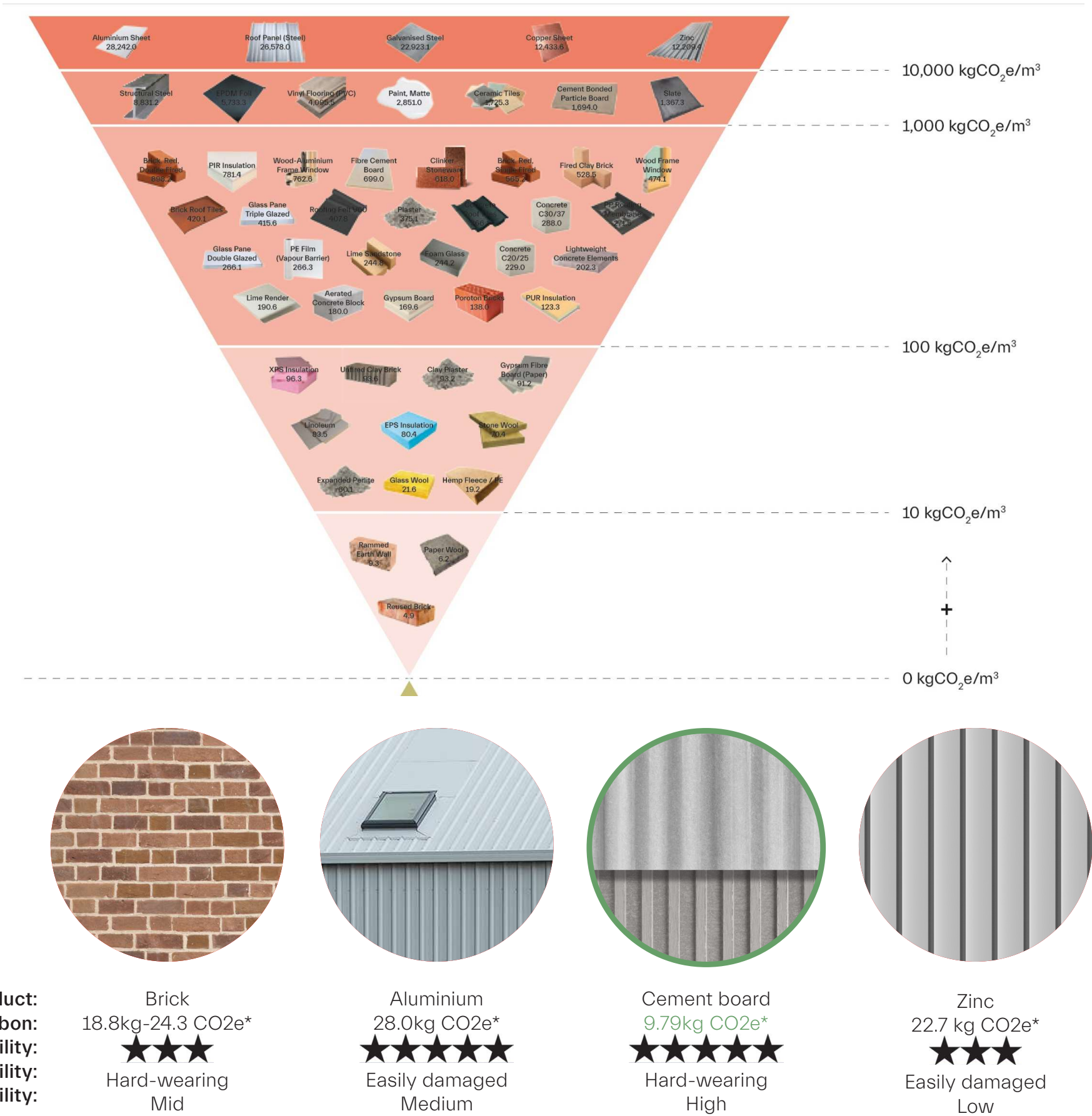
Corrugated cement board has been chosen for its contextual similarities to the industrial estate. The material has a significant environment benefit when compared to similarly deployed sheet materials such as aluminium. These include:

- + Low embodied carbon
- + Easily recycled, reused and adapted
- + Robust and durable
- + Cost effective

The cement board panels are mechanically fixed allowing for easy replacement or disassembly. The flexibility of a mechanically fixed board system is that it allows the product to be re-purposed in its original form without the need for re-manufacture. The selected product contains high recycled content but can also be easily recycled again.



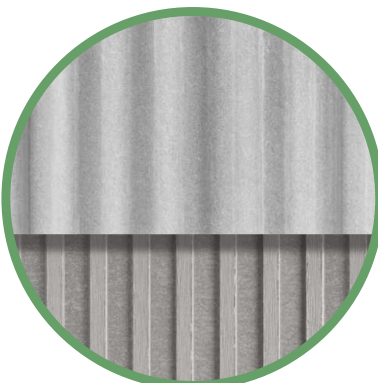
‘Building in layers’ Diagram by Useful Projects



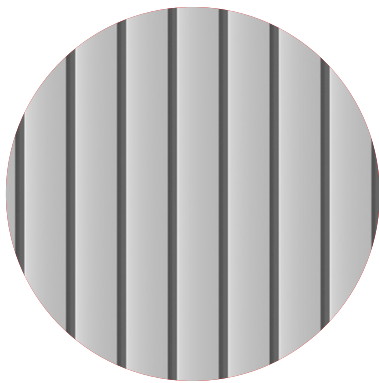
Product: Brick
Embodied carbon: 18.8kg-24.3 CO₂e*
Recyclability: ★★★★★
Durability: Hard-wearing
Viability: Mid



Product: Aluminium
Embodied carbon: 28.0kg CO₂e*
Recyclability: ★★★★★
Durability: Easily damaged
Viability: Medium



Product: Cement board
Embodied carbon: 9.79kg CO₂e*
Recyclability: ★★★★★
Durability: Hard-wearing
Viability: High



Product: Zinc
Embodied carbon: 22.7 kg CO₂e*
Recyclability: ★★★★★
Durability: Easily damaged
Viability: Low

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Windows and Fenestrations

Paired windows

A variety of window configurations can be found throughout the local area. A common architectural expression is that of paired windows to create **horizontal emphasis** within facade. This move is typically found on the post-war residential developments. However, similar forms can also be found on some of the smaller industrial building

An **alternating rhythm** can be achieved within an otherwise repetitive arrangement. They appear increasingly more frequently in more modern schemes.

Circular windows

Circular windows and motif can be found through out the local area. The use of this expression varies but is typically found in domestic wet spaces (kitchens ad bathrooms) or to create a **focal point** on the gable end of industrial buildings.

Crittall or Curtain Wall glazing

This glazing type is most commonly found in the industrial and commercial buildings. It is typically for **‘workspaces’** where particular emphases on **daylight** quality is required.



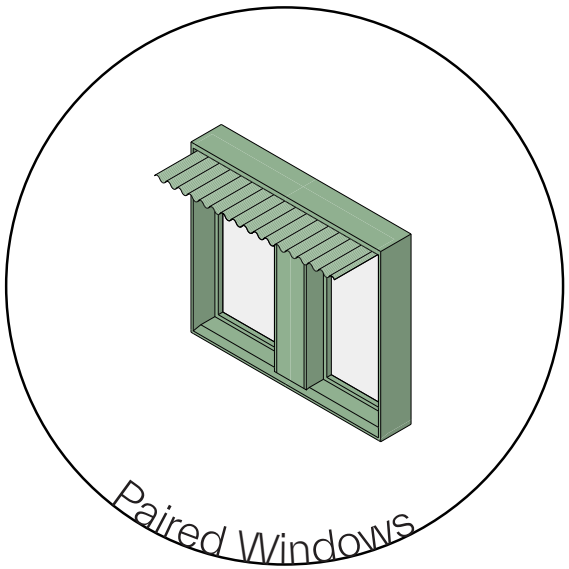
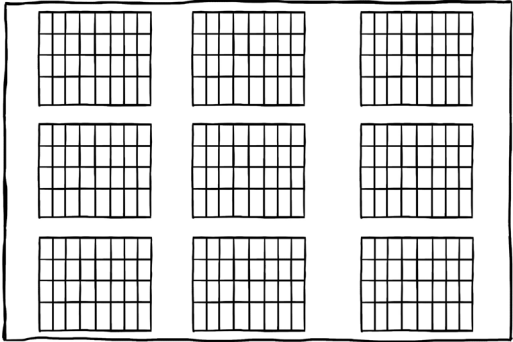
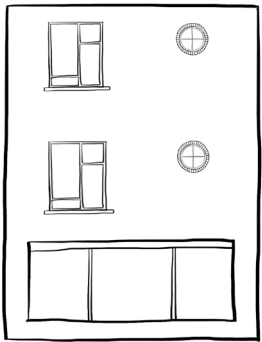
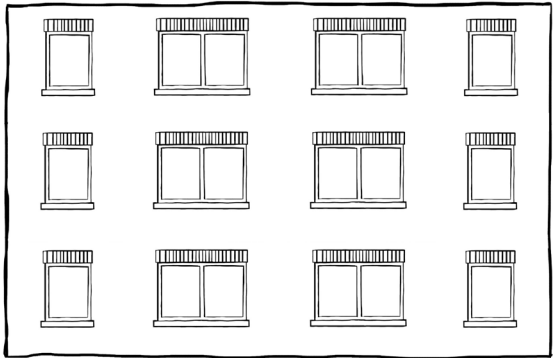
39 Tiverton Road



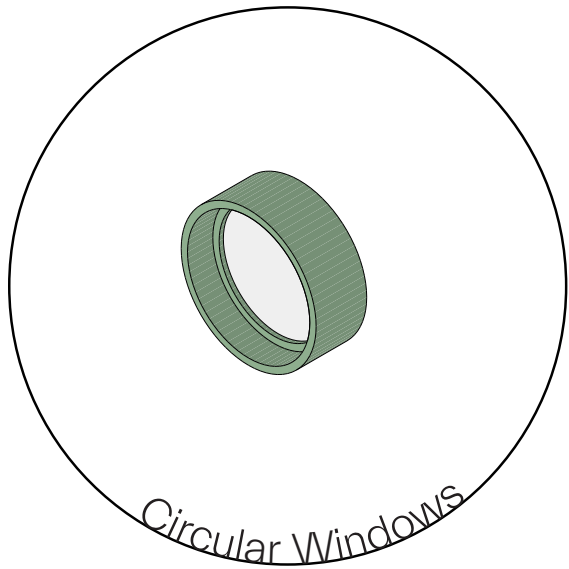
Vivian House, Eade Road



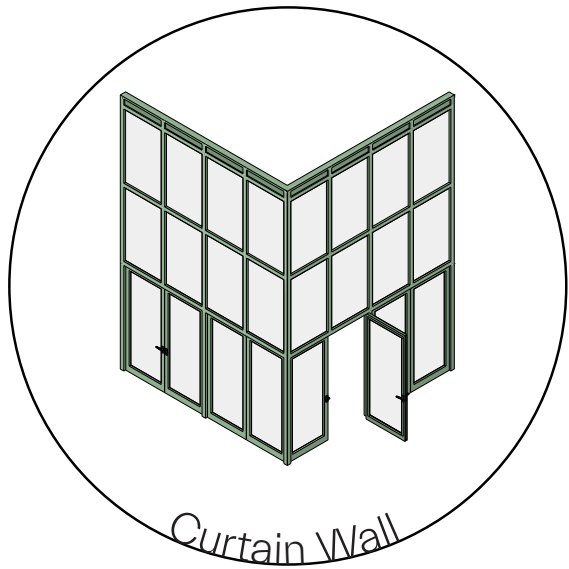
Cara House



Paired Windows



Circular Windows



Curtain Wall

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Window Arrangement Studies

The window arrangement has a critical impact on the facade appearance, and was tested through a process of physically modelling the facade ‘wrap’.

The preferred option was found through the following steps:

1. Windows centred on bedrooms

The baseline was to align windows with the midpoint of the bedrooms. It gives the most direct reflection of the interior from the facade, but created an overpowering grid.

2. Windows to sides of bedrooms

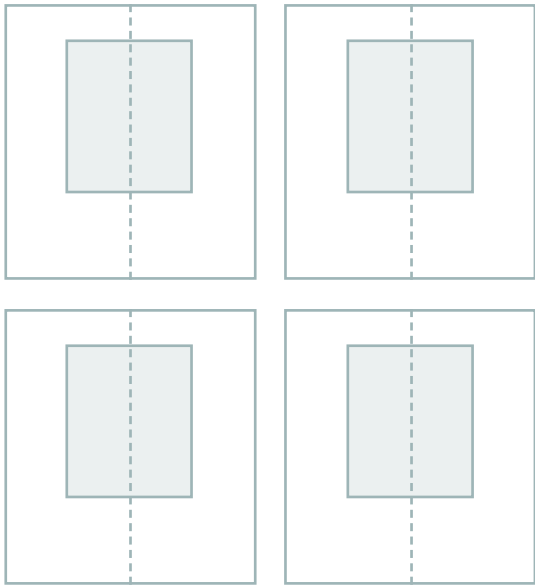
Aligning windows to bedroom sides and alternating by floor creates a staggered pattern, giving relief on the facade

3. Windows to alternating sides

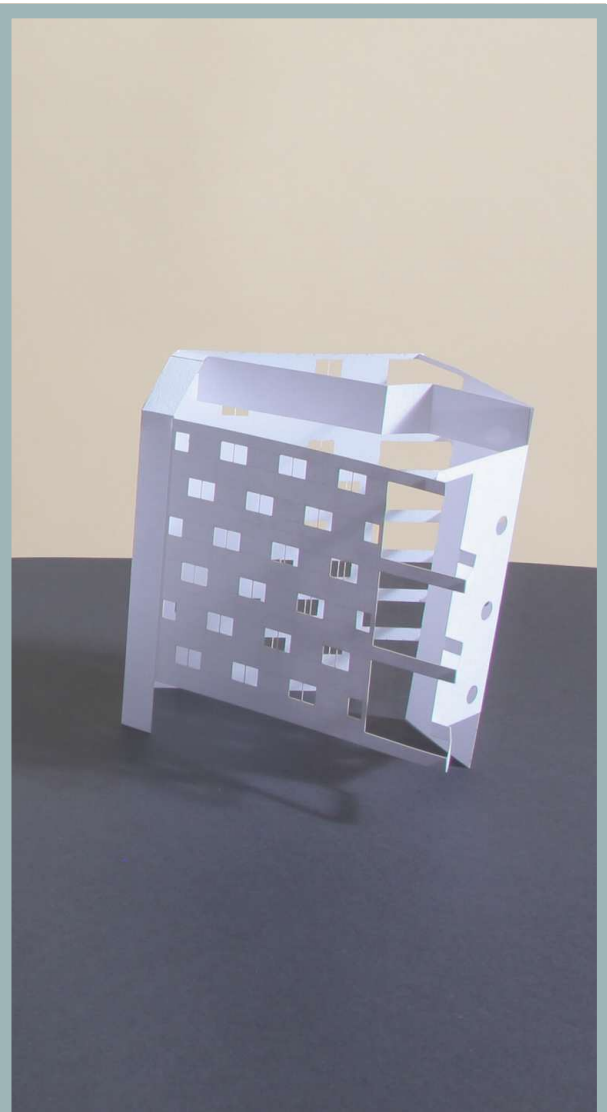
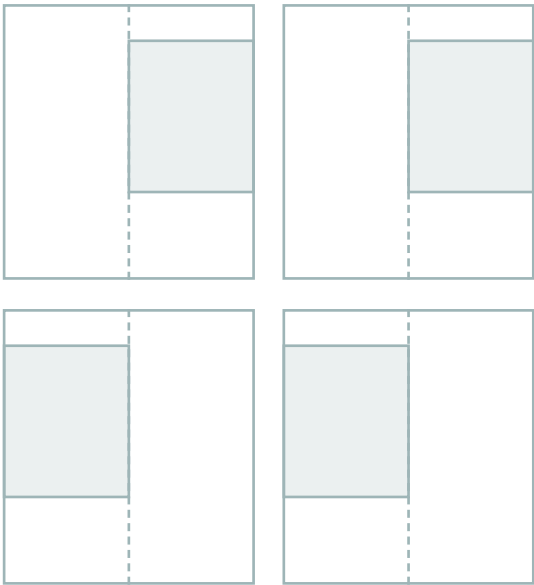
Aligning the windows to alternating bedroom sides creates staggered pairs of windows, bringing simplicity to the overall facade



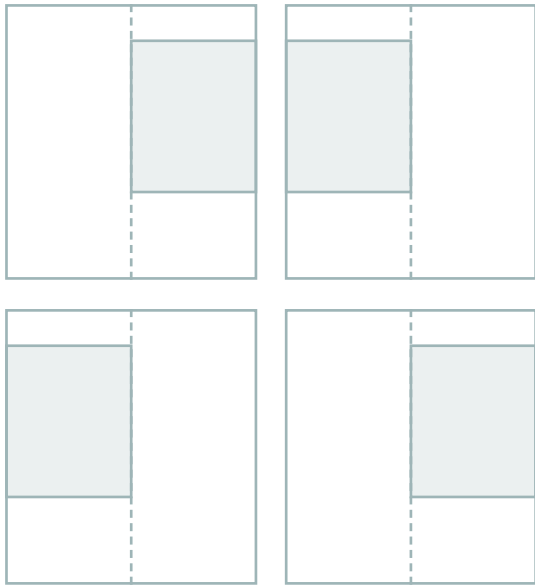
Windows centred on bedrooms
Grid pattern on facade



Windows to side of bedrooms
Staggered pattern on facade



Windows to alternating sides
Staggered pairs on facade



Facade and Materiality

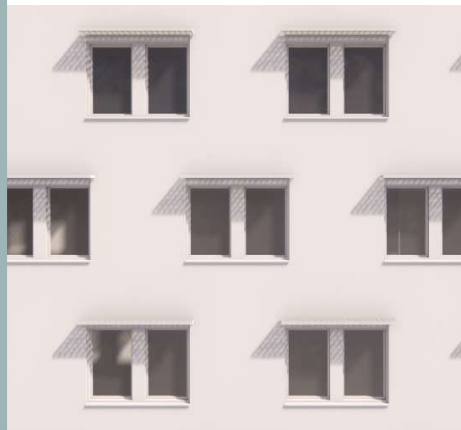
Window Panel Studies

The window type and opening method was assessed for robustness, maintenance, internal experience, and impact on the facade.

This page sets out a range of the panel variations explored through the design process. The single panel was found to be the most effective option.

Opening inwards, the single panel is the easiest and safest to clean, lets in the greatest amount of daylight, and brings the most simplicity to the facade.

01 Single Panel



02 Mid Transom



03 High Transom



04 Low Transom



05 Desk Height



06 Central Mullion



07 Two Squares



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Facade Development

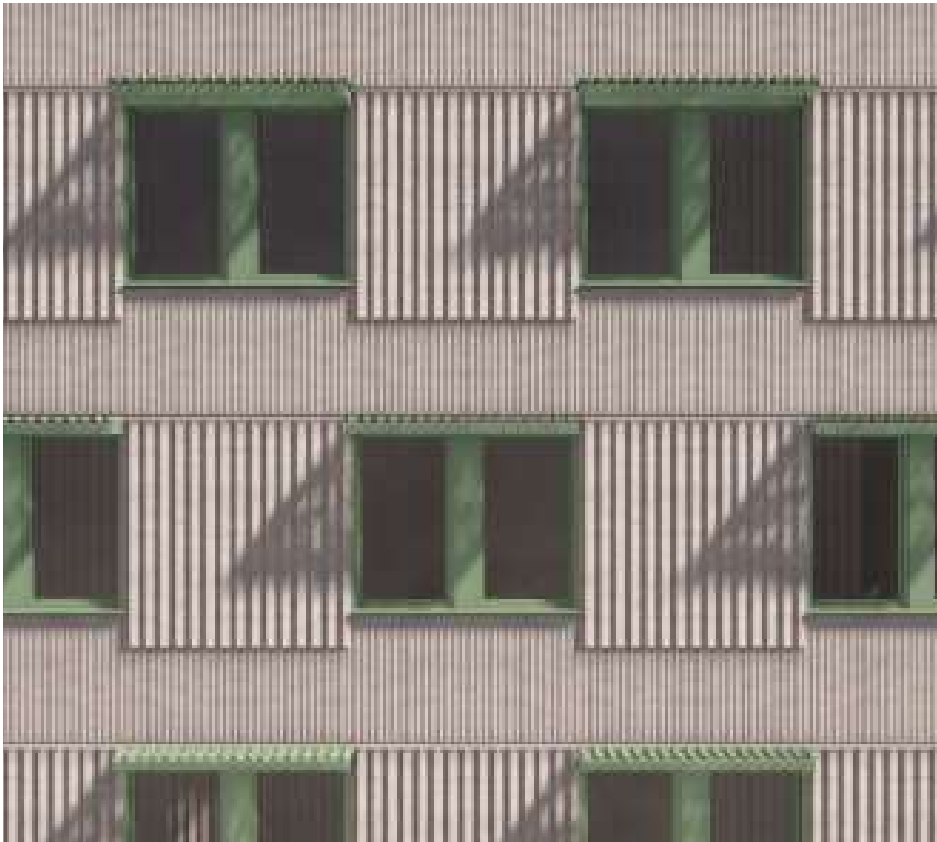
The next stage of facade development addressed the cladding composition.

Hierarchy is brought to the facade through two types of cement board: a primary tier of corrugated cement board between the windows underlined by a secondary tier of textured cement board.

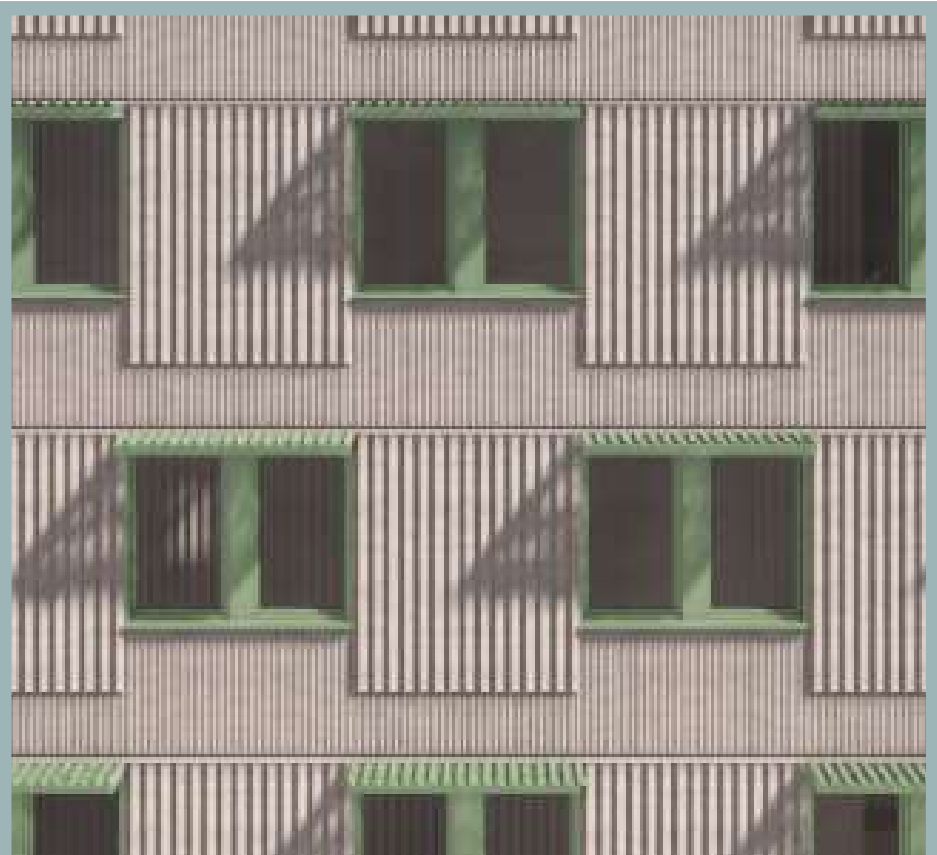
This page shows design options for the relationship between the two cement board types. The preferred approach is for the corrugated board to ‘hang’ to the midpoint of the band below.



Continuous Bands



Square Panels



Midpoint of Band



Slab Level

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Crown and Plant Studies

The balconies form a continuation of the bands, connecting one face of the building to the next.

The top row of images explored options for how this logic extended to the crown of the building. On aesthetic grounds the chosen option is for a ‘single projection’.

The escape stair and plant screens provide a secondary aesthetic device. Set back from the plane of the south facade, they bring relief to the cement board’s neutral tones.

Several options were tested for how this could appear but the simplest ‘box frame’ was the most complementary to the overall architectural arrangement.



No Projection



Single Projection



Double Projection



Box Frame



Warehouse Pitches



Sawtooth

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Balcony Options

The contending options were either:

- + Cement board-clad balcony (continuing the bands materially); or
- + Perforated metal balconies (continuing the bands in depth but introducing a new element)

The cement board-clad option was felt to be more aesthetically coherent and a stronger continuation of the band logic.



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Tewkesbury Steps Frontage

In terms of both safety and experience, the pedestrian journey between Eade and Tewkesbury Road is of critical importance to the scheme. The facade facing this route has therefore been carefully considered.

Numerous ground level elevation options were tested through physical and digital modelling. These explored the scale and location of glazing, its utility towards passive surveillance and internal quality of light.

The preferred option is to have rectangular panelled curtain walling lining the steps, giving the best balance of visibility, aesthetic balance and viability.

Physical Modelling Tests



01. Rectangular panels



02. Circular window - single height



03. Circular window - double height



Elevation of facade sequence along steps

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Metalwork Framework

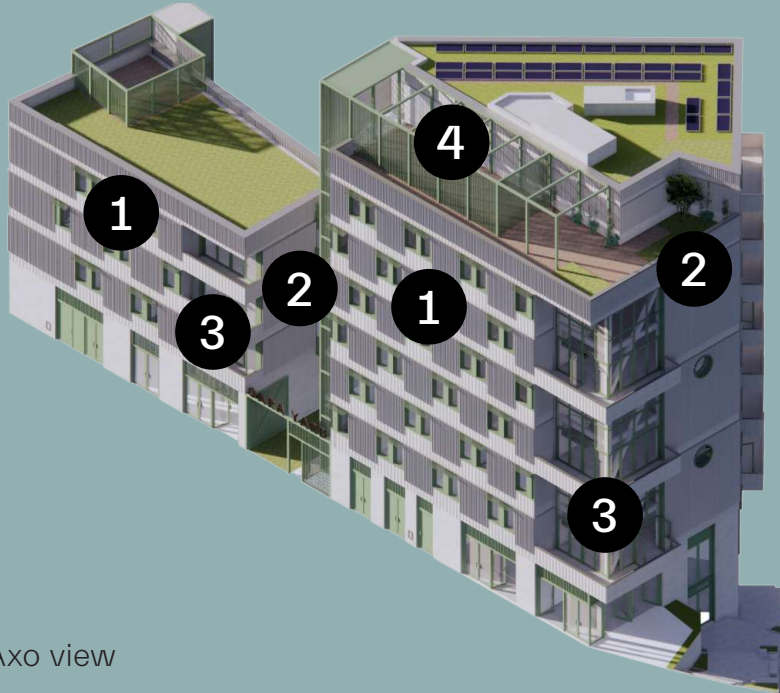
The illustrations here outline the relationship between metal elements and the corresponding **residents and communities**. A simple language was developed which allows internal uses to be identified on the facade.

Curtain wall glazing indicates a larger gathering space, ideal for communal working or interaction.

Rectilinear windows identify personal/private spaces.

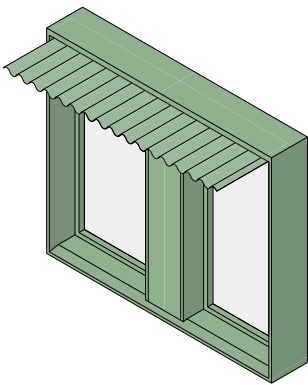
Circular windows are used for kitchens that serve domestic activities.

Open frames are used where people congregate externally and to allow the residents some level of personalisation. These frames are **filled in** where they serve as key circulation routes.



Axo view

1. Bedroom

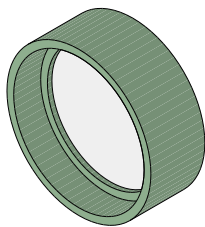


Personal Window

Live + Sleep + Work



2. Kitchen

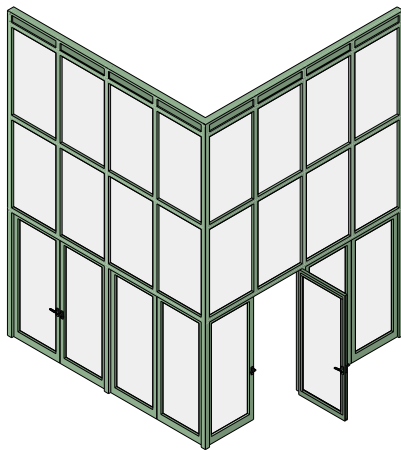


Shared Window

Cook + Eat + Meet



3. Communal Space

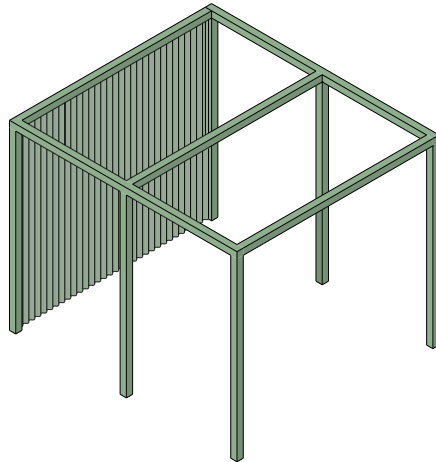


Unit Curtain Wall

Commune + Collective Work

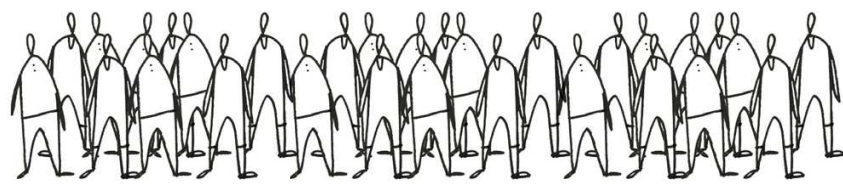


4. Roof Terrace



Rooftop Frame

Gather + Participate



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Ground Floor Facade

In keeping with warehouse character and logic, the ground floor provides a more **robust base** to the building. More neutral textures and colours, such as blockwork or concrete, provide a canvas for street art.

Prominent ground floor windows, the Cara Yard gate and Tewkesbury Yard containers also provide opportunities for makers within the **Warehouse community** to make the development their own.



Street Art
Street art is an integral part of the Warehouse District identity, bringing colour to an historically hard built environment



Signage
Prominent windows at ground level give opportunities for further expression of Warehouse identity



Proposed Ground Floor Facade

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Upper Facade

A typical characteristic of Twentieth Century warehouse design was to have a robust ground floor (to withstand industrial activities at ground level) with upper levels clad in more economical lighter-weight materials.

Generally these would be sheet materials (thin metal or cement board skins) cladding a structural frame. Corrugation would give these sheets stiffness, reducing the requirement for secondary structure.

This material logic is reflected in the design proposal. Through extensive testing and sampling we have explored different corrugated sheet materials and settled on cement board for its balance between economy, embodied carbon, robustness and textural expression.

This page outlines our material palette rationale. Cement board forms the primary material, with its ‘natural’ colour and texture expressed. Flashes of colour can then be introduced through penetrating elements: windows, brise soleils, curtain walling, etc.



Corrugated sheet materials
Simple corrugated materials offset with colour gives the architecture greater depth and interest



Thresholds
Composition of textures and reveals allows play of light across the facade



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Ground Floor Base Condition

- + Several engaging options to think about on the ground floor. Material choices include - **exposed blockwork**, **street art on blockwork**, **brick** and a **painted block**
- + The site is **known for its street art** and therefore providing a base for this would be ideal
- + Leaving untreated is the most cost effective and financially **sustainable** approach.



Blockwork Base
Composition of textures and reveals allows play of light



Articulated Block
Composition of textures and reveals allows play of light



Brick base - Victorian Context
Composition of textures and reveals allows play of light



Painted Base - Disrupt Scale
Composition of textures and reveals allows play of light

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Material Colour

Looking at the available products on the market, we can test colour options which best suit the schemes context and material longevity.

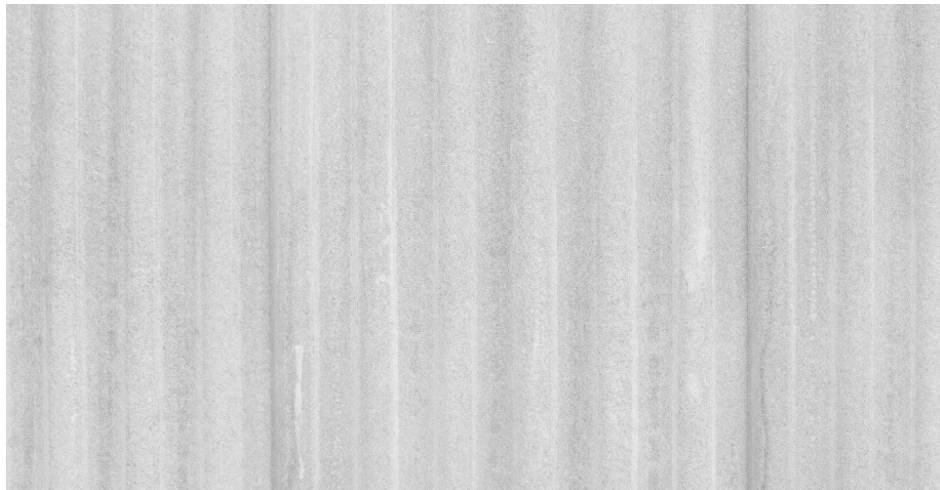
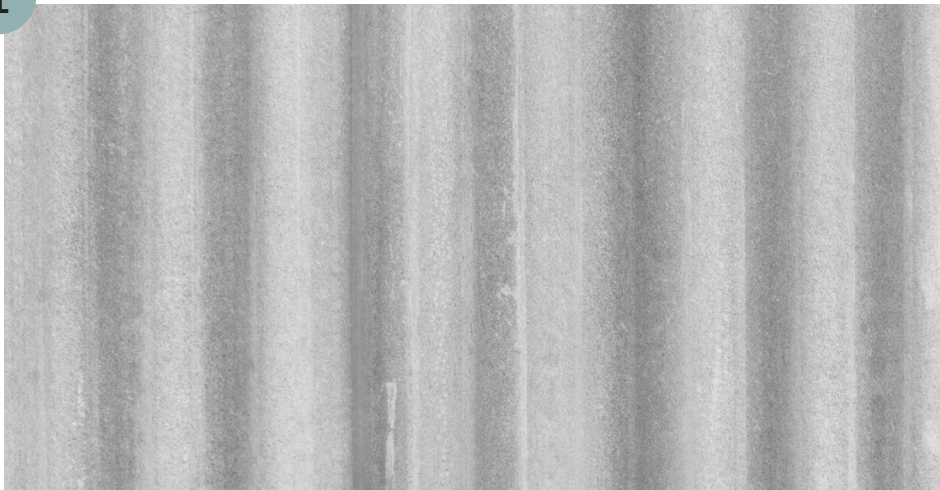
1. Natural - The most effective and sustainable approach, leaving untreated keeps the materials true and allowing residents to make their own.

2. Blue - connection to Cara House and the warehouses in the immediate context.

3. Green - Relationship to Eade River and mirroring the greenery in specific elements of the longer lasting materials. i.e.. metal work and entrances.

4. Red / Brown - Relating to the Victorian roofs and terraces which continues the boundary up from Seven Sisters Road.

1



Eternit (Profile 6) - Natural Grey

Cembrit B5 - Natural Grey

2



Slate Blue

3



Laurel Green

Sherwood

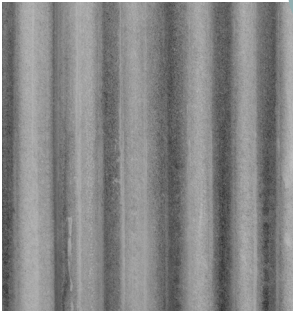
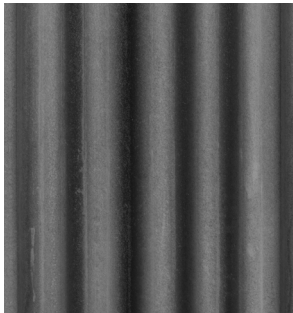
Olive Green



Blue/Black

Black

4



Black

Farmscape Anthracite

Van Dyke Brown

Mocca

Red

Tiled Red

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Facade Colour Tests

The team investigated many design and colour options working with suppliers to test the product and colour availability.

Colour testing was done by breaking down the facade into component families and exploring various combinations.

The component elements can be broken down into the balcony soffits, corrugated panel bands, routed panel bands, Ground blockwork(base) and framed openings.



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Facade Colour Tests



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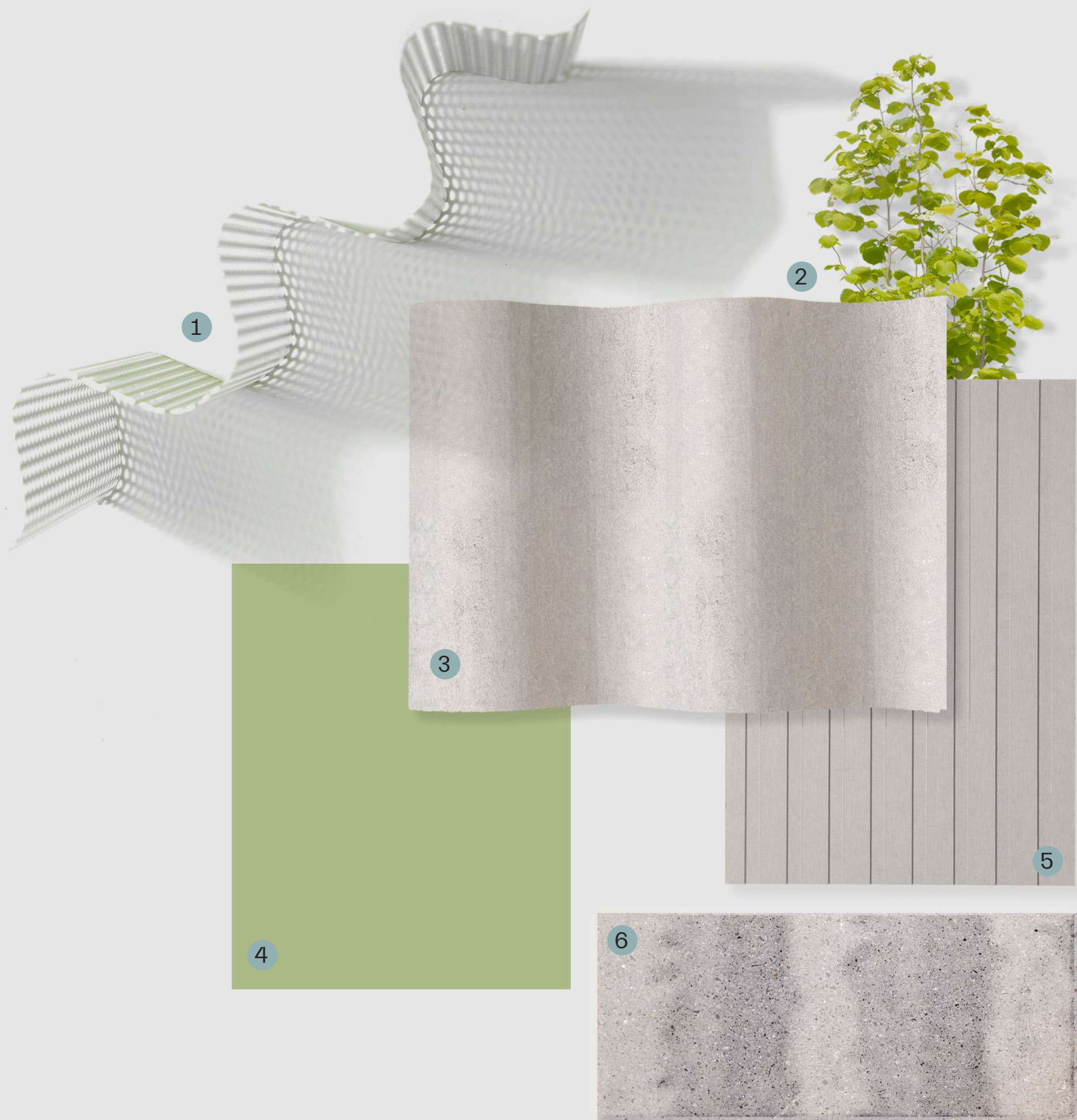
Proposed Material Palette

The material palette reflects the character of the Warehouse District. A robust ground floor faced in masonry grounds the corrugated cement board of upper levels.

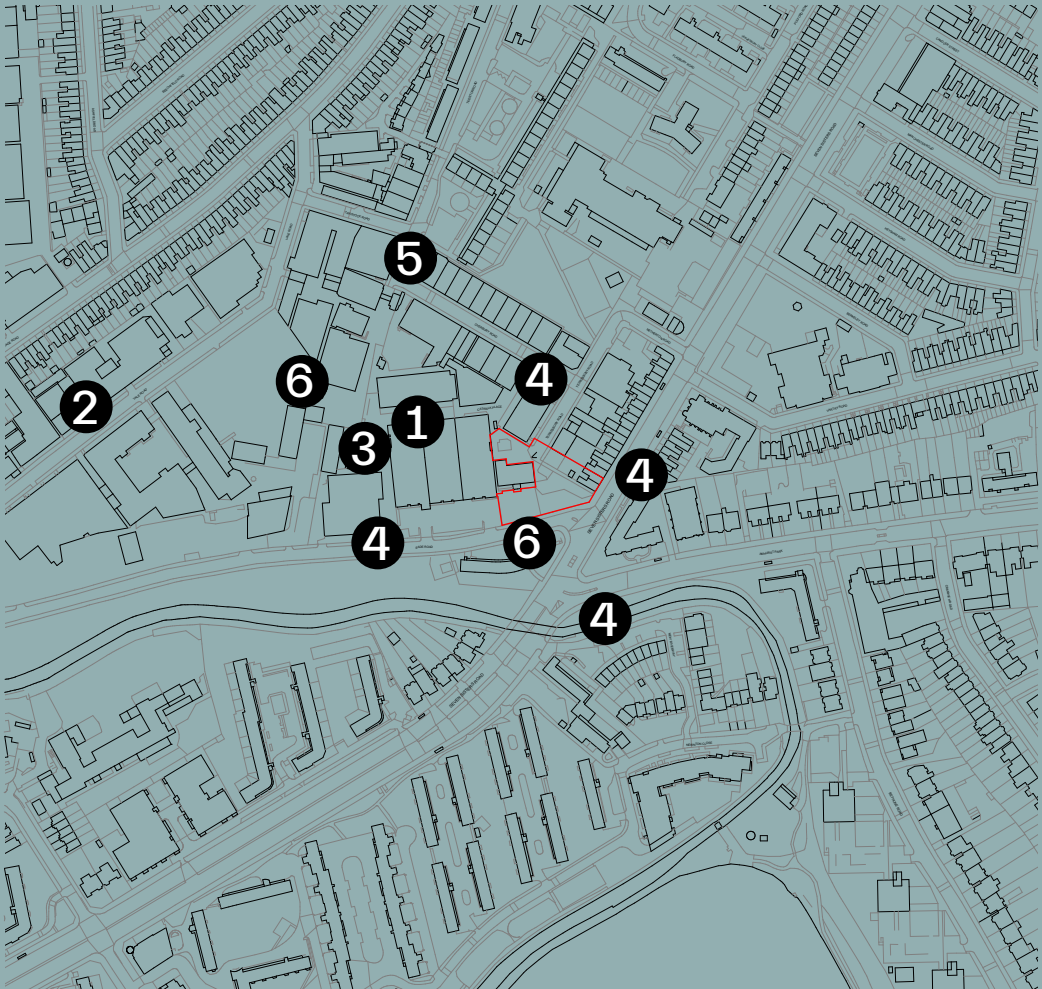
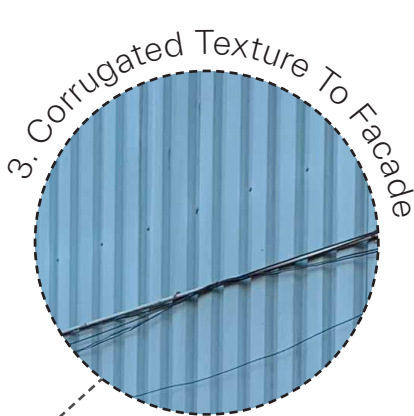
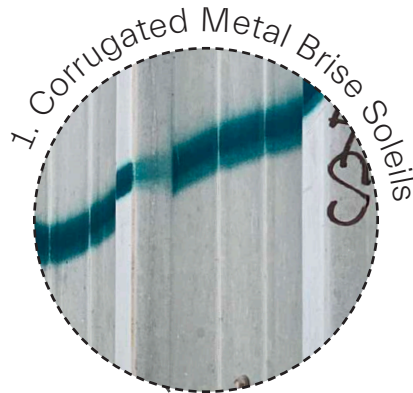
Colour is introduced through powder coated aluminium windows and curtain wall elements. Street art is accepted as a core part of the Warehouse identity and brings vividness to ground level areas.

Unenclosed parts of the building - external plant screens and escape stairs - will be faced in perforated corrugated metal to give them a translucency

- 1 **Corrugated Metal**
Escape stair and plant
- 2 **Planting and Greenery**
Roof terrace and outdoor areas
- 3 **Sinusoidal Cement Board**
Primary cladding elements
- 4 **PPC Aluminium**
Windows and curtain walls
- 5 **Routed Cement Board**
Secondary cladding elements
- 6 **Masonry**
Ground floor, internals and basement



09. Facade and Materiality
Proposed Colour Palette



09. Facade and Materiality Visualisations

The following pages contain illustrative renderings for the envisaged scheme in use. The location map of the viewpoints can be seen on the right.

- # Internal view
- # External view

