

3.08 Materiality and Expression

3.08.1 Overview:

The primary design intent is the creation of a high quality long term sustainable residential environment, with an architecture of strong character, expression and identity, engendering a real sense of place.

Given the overall size and extent of the site and proposed development at 11.7 ha and 436 no. dwellings, rigorous design focus was placed on achieving:

- Variety, local identity and register of the place of the individual dwelling within the building/ terrace and its place in turn in the overall urban design
- Balanced with clarity of street hierarchy and frontages (as defined in the SDZ) and critically, the coherence and order of the overall organisation.

This is achieved through:

- Design development of the buildings' form and expression (see 3.08.2 below)
- Careful selection of high quality and robust materiality (see in 3.08.2 below)
- Prioritisation of durability, material quality, efficiency and reduced life cycle costs (see 3.08.3 below)
- Delivery of a Net Zero Energy Building (NZEB) (see 3.08.5 below).

3.08.2 Form and Expression:

Architectural Form and Transitions in Scale:

The 2-storey house, as a prevalent dwelling type, defines the Local and Intimate streetscapes. It is designed to have a clear pitched roof form, readily associated with domestic architecture. This form is consistently applied but in two distinct configurations:

- With the pitch line parallel to the front street-facing facade
- With the pitch line perpendicular to the front street-facing façade.

The first condition is typically applied to the longer north-south terraces, giving a visually calm form, a normative condition which anchors these streets and which, articulated by the materiality, acts as a strong visual datum. The second condition is typically applied to the shorter east-west terraces, where its more expressive, pronouncedly pedimented front facades provide visual counterpoints to the first condition, within a harmonious overall composition.

Triplex buildings bookend those 2-storey terraces, animating and marking key corners and junctions and introducing further variety and visual interest. Triplexes have a more elaborate articulation, with carved volumes and terraces reflective of the programme within, but with the roof pitches and materiality shared with the 2-storey houses, thereby achieving clear synergies in form and continuity in terms of architectural language, while also forming a 'stepping stone' transition to the duplexes.

Duplexes form the significant outward-facing perimeter frontages and key parts of the primary frontage onto the South Link Street, continuing the architectural language in an subtly increased bay width, with an articulated pedimented frontage, again of consistent slope, reflective of their significance at an urban design scale. In perimeter locations to the east and north, Duplexes step in plan configuration in response to site layout, giving a strong rhythmic architectural volumes, expression and character.

The 4-storey Duplex over duplex condition continues this form, with a further change of height and register to align and seamlessly integrate with the adjacent 4-storey apartment blocks at Clusters H and J. The pedimented frontage transitions into the Apartment Block flat (sedum) roof treatment, with the Duplex capped pediment visually aligning through with the Apartment parapet level.

Scale steps up at Cluster F, as the 'landmark' location, with a 6-storey form fronting westwards towards Griffen Valley Park. This building has an elaborated and articulated ground floor frontage to the west, with the secure external play space to the north, and expresses the 3 main classrooms in the Childcare Facility with screened wintergardens and tree planting between. A deep fenestrated vertical cleft marks the main apartment entrance and a retail premises with extensive glazing, direct opening to the footpath and a projecting canopy above turns the prominent corner and extends to connect directly with the 5-storey building fronting southwards onto the South Link Street. A deep break articulates the 6 and 5-storey parts, emphasising the slenderness of the south gable of the higher part and accommodates two external secure communal roof terraces with optimised orientation and aspect while allowing through daylight penetration to the spaces behind.

The South Link Street:

The primary facades and streetscapes along the South Link Street are characterised by a range of dwelling/ building types and configurations which create variety, visual interest and synergy across the parts, in particular the offset diagonal relationship between Cluster H and J. Cluster F is distinguished as the 'landmark' building. An overall coherent shared architectural formal language and materiality delivers a high-quality environment, commensurate with the South Link Street's central position in the overall street hierarchy.

Roof Forms:

The use of pitched and mono-pitched roofs, in two consistent pitches (40 and 25 degrees) acts as a unifying feature. The capped parapet to the pedimented frontage houses and duplexes provides a distinguishing character, seen as a contemporary abstraction of a traditional Dutch Billy house form, which provides strong, architectural identity and aesthetically enhances the streetscapes. In addition, it creates a subtle harmonious interplay across the different scales of development, emphasizing visual continuity, in particular with the flat roof apartment Blocks H and J as described above. This capped form is discretely echoed on the gables of the standard 2-storey terraces, where the parapet to the conventional A-framed roof behind appears as a vestigial chimney form familiar to domestic architecture.

Fine Grain Frontage:

The frontage in Cluster J fronting the Canal is designed in a distinct configuration and treatment, with two dwelling types/ organisations unique to this location (a 3-storey townhouse and a bespoke, heavily articulated corner triplex building), pronounced stepping in plan, articulated pavement and associated hard and soft landscaping and a unique material treatment. As such it is clearly differentiated from other streetscapes and conditions, while remaining an integral part of a cogent and coherent overall design, and thereby establishes a clear 'Fine urban grain' along the Canal frontage as required under the SDZ Planning Scheme. Refer to 3.6.3 above for full details.

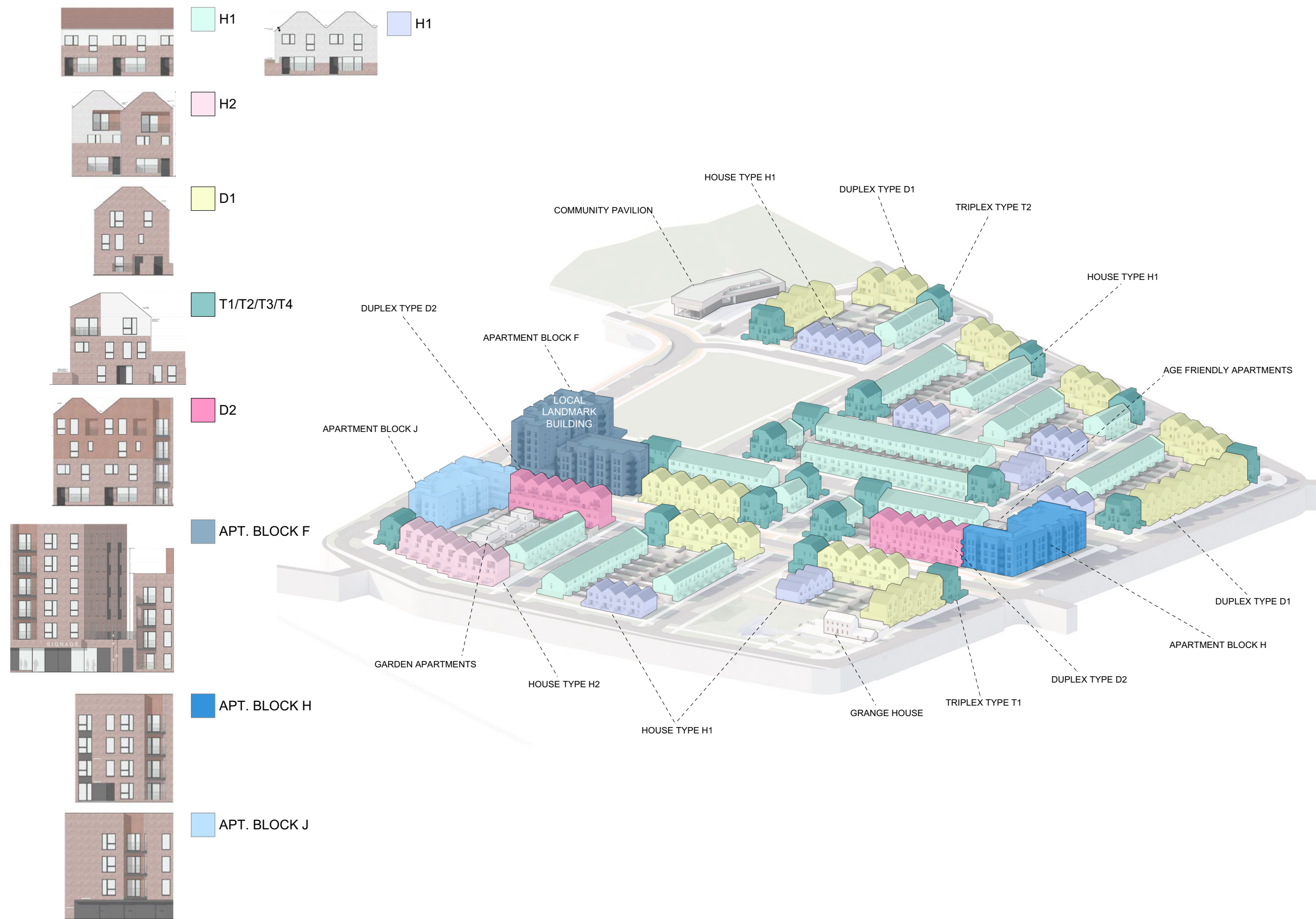
Privacy Buffer Zones:

Throughout, the front 2250 mm deep hard and soft landscaped privacy buffer zones are articulated, seamlessly encompassing refuse storage, bike storage, railings, gates and thresholds. In conjunction with the extensive green and blue infrastructure zones integrated into all street types, they contribute to a rich layering from public carriageway to private threshold – carriageway, planted green and blue zones, with tree planting and alternating parking zones, footpaths, privacy buffer zones, thresholds and recessed entrances/ front doors. A direct outcome of the integrated building and landscape design intent, these components combine to deliver streetscapes of very high quality aesthetic, amenity, ecological and environmental value, and the delivery of meaningful long-term sustainability.

Façade Treatment and Fenestration:

Façades are treated in a controlled palette of high quality materials, employed in various configurations and combinations related to building type, street type and location, which modulate massing, augment variety and visual interest, while having an underlying order and consistency.

Fenestration uses a carefully controlled suite of window sizes, proportions and opening sections appropriate to the room use and size. These are applied consistently to the relevant dwelling/ building types. The disposition of different dwelling/ building typologies described above is reflected in the fenestration, the repeating terrace conditions engendering a pleasing sense of a calm, latent underlying architectural order, in turn offset by greater fenestration variety at the more articulated corner conditions. These combine to create subtle rhythms and undulations across façades, balancing consistency with differentiation, enhancing visually engaging and characterful streetscapes. For all types, and in particular for the larger apartment buildings, there is a clear register on the facade of each individual dwelling, aiming to engender a sense of ownership and belonging.



3.08.3 Materiality:

Overview:

Materials reinforce the volumetric and façade design intent described above. Emphasis is placed on materials which are of high quality, aesthetically pleasing, robust, long lasting and which do not rely on extensive maintenance regimes.

For walls/ facades, the primary material palette is clay brickwork and render, in two colours for each. Light coloured/ white mortar is used throughout in jointing to brickwork, visually interlinking different treatments and colours. These are complimented by clay roof tiles, again in two colours, as a robust materiality with a complimentary of texture. Combined, these materials facilitate a wide range of material/ finish/ colour permutations and combinations, designed to respond to the changing typology and scale across the site and achieving a dynamic yet cohesive aesthetic that ties the entire scheme together, as described below.

Materiality Strategy:

The foundational material expression is introduced through the ‘H1’ 2-storey terraced house type. In the terraced configuration they feature predominantly brick with a horizontal band of render applied to the part of the first floor. In the pedimented front configuration, the brick is extended over the full façade. The corner triplex units, which introduce greater formal articulation as described above, and terraced duplexes have a corresponding combination of render and brick, predominantly brick to street facing facades. Duplex Types D2 front facing facades introduce a portion of coloured render which expresses the change in typology and moderates the transition to the adjacent apartment Buildings H and J, where the ground and first floor treatment runs through unbroken, grounding the overall façade.

Throughout, the walls to the recessed terraces are treated in render, which is read in contrast to the brick outer façade or as the outer façade ‘folded in’, dependent on location. This acts as a unifying device, consistent across all façade treatments and contributing to a sense of coherence.

As described in section 3.08.2 above, the pitched roof treatment is a central element in defining the architectural character of the development. Pitched roofs to all houses, duplexes, and triplexes feature traditional clay tile roofing, which anchors the design in a familiar, vernacular material. Two distinct colours are employed - the red/ terracotta tiles are predominantly used on the housing clusters to internal Local and Intimate Streets, while the dark grey tiles are reserved for the outer perimeter blocks, most notably the Duplexes, the distinction creating a subtle visual hierarchy.

Apartment blocks (Blocks F, H, and J), as well as the Age-friendly (Cluster H) and Garden Apartments (Cluster J), feature flat roofs finished with a sedum/ green roof system. This solution not only provides the necessary Sustainable Urban Drainage Systems (SUDs) functionality and water attenuation but also contributes to the overall biodiversity strategy of the development, offering ecological benefits through increased green natural habitat.

Throughout, the privacy buffer zones are consistently defined by low-level red brick walls, as a unifying element which stitches the various buildings together, emphasising design continuity and defining the perimeters of each cluster or urban block.

Non-Residential Components:

The non-residential elements of the scheme continue the materiality above, but are subtly distinguished by scale and detailing. In Block F, the Childcare Facility and Retail unit are incorporated into the ground floor of the residential block. The use of larger-scale screens and panels establish a visual distinction from the residential spaces above while still adhering to the overarching material language. Similarly, the standalone community Park Pavilion, while more expressive in form with clerestory windows and large glazed picture windows, again retains a materiality consistent with the wider Site 4, thus balancing compositional coherence while being outward facing to address the Park lands.

Secondary Materiality:

A further finer grain material layer is added through architectural detailing including screens, louvres, panels, railings, gates, fencing, rainwater goods (related aluminium box gutters and downpipes), canopies, etc., which:

- Provide a material, tactile and machined finish, as a visual contrast to the more robust materiality of the masonry elements
- Contribute to the overall refinement of the façade and fenestration
- Are employed at the ground floor to demarcate apartment entrances and to unify service areas, such as bin stores, bicycle storage, and plant rooms into a cohesive composition
- Are typically finished in a dark grey/ black metal (marching the external window and door systems)
- With treated hardwood used for the doors to the bin and bicycle stores and rear garden fencing.

The Use of Colour:

Within the above overall order, the use and distribution of colour is a central being used to:

- Reinforce the visual distinction of different street types within the overall
- Create visual differences which express variation in residential type and condition
- Create streetscapes and zones of distinct and varying character
- Provide visual interest and avoid monotony and through the graded variation in colour balance and appearance
- Within an overall structured framework and coherent whole.

Landscape:

The landscape and streetscape design further complements and enhances the architectural materiality of the development. Through the careful integration of hard and soft landscaping, the outdoor environment works in tandem with the built form, reinforcing the architectural language of the project. For further details, refer to:

- Sections 3.05 and 4.03
- Landscape Design Statement and associated drawings prepared by Bernard Seymour Landscape Architects.

Summary of Key Materiality:

Facades - Primary Materials:

- Red Clay Brick, light coloured/ white mortar
- Very light Grey/ White Clay Brick, light coloured/ white mortar
- Red Colour Render
- Very light Grey/ White Colour Render.

Pitched Roofs - Primary Materials:

- Red/ Terracotta coloured Clay Tiles
- Dark Grey coloured Clay Tiles
- Capping/ Trimwork in dark grey metal (to match metalwork elsewhere).

Flat Roofs - Primary Materials:

- Parapet cappings and trimwork, in dark grey metal (to match metalwork elsewhere)
- Top level parapets of Apartment Buildings, in naturally anodised/ silver powder coated aluminium
- Roof surfaces in proprietary sedum/ green roof systems, gravel bed surrounds and access walks.

Windows:

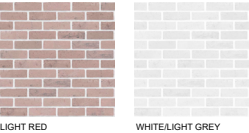
- Dark grey/ black aluminium frames and double glazing.

For reference, visual studies of the proposed material palette, including exemplar built precedents and rendered depictions of the primary building typologies, are included in the DTA Architects 5000 series drawing pack, submitted as part of this planning application.

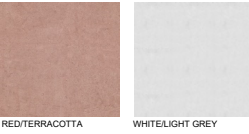


MATERIALITY

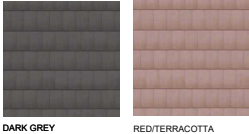
BRICK - WHITE MORTAR



RENDER



ROOF - CLAY TILES



GENERAL NOTES

GREEN ROOF APPLIED TO ALL FLAT ROOFS OF ALL APARTMENT BLOCKS (Ap Block H, J, F, Age-Friendly and Garden Apartments)

ALL BOUNDARY WALLS TO RECEIVE LIGHT RED BRICKS MATERIAL FINISH

ALL WINDOW FRAMES AND METALWORKS TO RECEIVE DARK GREY COLOR MATCHING FINISH (Refer to Image 02)

HARDWOOD TIMBER TO DOOR PANELS AND COVERS OF ALL BINS & BIKES STORES, AND TO ACCESS GATES TO BACK GARDENS

REFER TO SHEETS 5001 TO 5008 FOR TYPICAL HOUSES & APARTMENTS MATERIALITY DRAWINGS

REFER TO SHEETS 5009&5010 FOR BICYCLES & BINS MATERIALITY DRAWINGS

- PALETTE 1**
RED BRICKS
- PALETTE 2**
RED BRICKS UP TO LEVEL 02
RED RENDER UPPER FLOORS
(Refer to View 01)
- PALETTE 3**
RED BRICKS AT GROUND FLOOR
RED RENDER UPPER FLOORS
- PALETTE 4**
RED BRICKS AT GROUND FLOOR (Up to 1F Window Sill)
WHITE RENDER UPPER FLOORS
(Refer to View 03)
- PALETTE 5**
RED BRICKS AT GROUND FLOOR (Up to 2.4m)
WHITE RENDER UPPER FLOORS
- PALETTE 6**
WHITE BRICKS
- PALETTE 7**
WHITE BRICKS AT GROUND FLOOR (Up to 2.4m)
WHITE RENDER AT UPPER FLOORS
- PALETTE 8**
WHITE BRICKS AT GROUND FLOOR
WHITE RENDER UPPER FLOORS
- PALETTE 9**
RED RENDER
- PALETTE 10**
RED BRICKS AT GROUND FLOOR
WHITE BRICKS AT UPPER FLOORS
(Refer to View 05)
- PALETTE 11**
WHITE BRICKS AT GROUND FLOOR (Up to 1F Window Sill)
WHITE RENDER AT UPPER FLOORS
- PALETTE 12**
RED BRICKS AT GROUND FLOOR
WHITE RENDER AT UPPER FLOORS
- PALETTE 13**
RED BRICKS AT GROUND & FIRST FLOOR
WHITE RENDER AT UPPER FLOORS
(Refer to View 04)
- PALETTE 14**
BLACK METAL & GLAZING SYSTEM PANNELLING
(Refer to View 02)



CGI View 09 - Apartment Block J & Duplex Type D2



CGI View 08 - Apartment Block F - Retail & Childcare Facility at Ground Floor



CGI View 14 - House Type H1, Duplexes Type D1& D2 in the Background



CGI View 02 - Triplex Type T1 & House Type H1



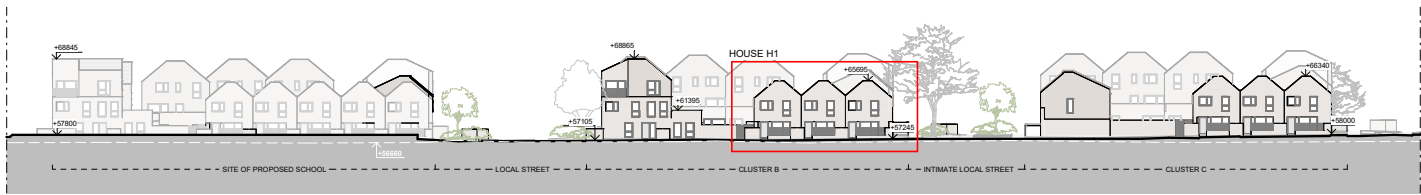
CGI View 13 - House Type H2 & Triplex T4



HOUSE H1 - MATERIALITY - FRONT ELEVATION
1 : 50



HOUSE H1 TERRACE - MATERIALITY - FRONT ELEVATION
1 : 50



PROPOSED SITE SECTION 10 - 1:500



PROPOSED SITE SECTION 01 - 1:500

MATERIALS SELECTION

EXTERNAL WALL FINISHES

BRICK - WHITE MORTAR

LIGHT RED WHITE/LIGHT GREY

RENDER

RED/TERRACOTTA WHITE/LIGHT GREY

ROOF FINISHES

CLAY TILE

TERRACOTTA DARK GREY

WINDOWS & EXTERNAL DOORS FINISHES

ALUMINIUM FRAME/SILL

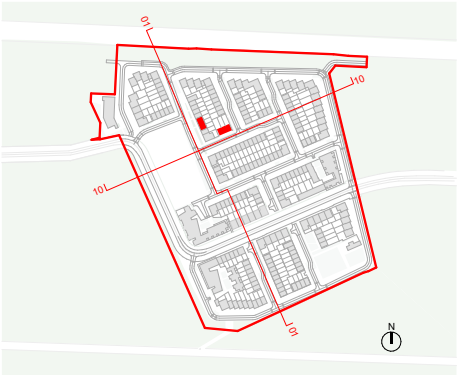
METAL & GLAZED IN WALL PANELS SYSTEM

BALCONIES AND LOUVERS

PAINTED MILD STEEL

FRONT GARDEN & BINS STORE

BRICKS & PAINTED MILD STEEL BALUSTRADE





TRIPLEX T1 - MATERIALITY - FRONT ELEVATION 01
1 : 50

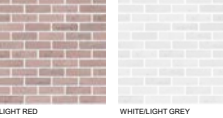


TRIPLEX T1 - MATERIALITY - FRONT ELEVATION 02
1 : 50

MATERIALS SELECTION

EXTERNAL WALL FINISHES

BRICK - WHITE MORTAR



RENDER



ROOF FINISHES

CLAY TILE



WINDOWS & EXTERNAL DOORS FINISHES

ALUMINIUM FRAME/SILL

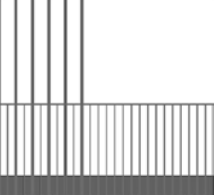


METAL & GLAZED IN WALL PANELS SYSTEM



BALCONIES AND LOUVERS

PAINTED MILD STEEL



FRONT GARDEN & BINS STORE

BRICKS & PAINTED MILD STEEL BALUSTRADE



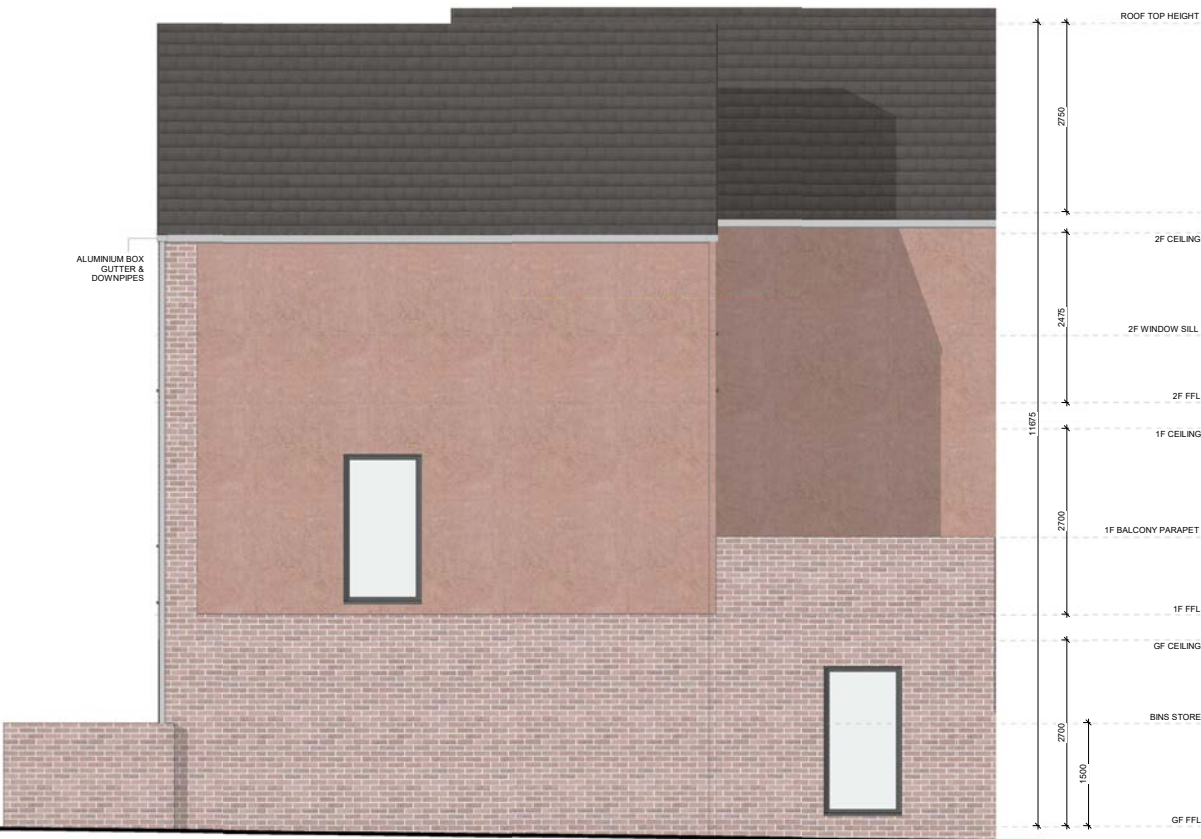
PROPOSED SITE SECTION 10 - 1:500



DUPLEX D1 - MATERIALITY - FRONT ELEVATION
1:50



DUPLEX D1 - MATERIALITY - REAR ELEVATION
1:50



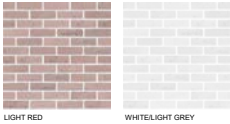
DUPLEX D1 - MATERIALITY - SIDE ELEVATION
1:50



MATERIALS SELECTION

EXTERNAL WALL FINISHES

BRICK - WHITE MORTAR



RENDER



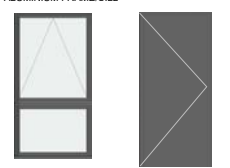
ROOF FINISHES

CLAY TILE



WINDOWS & EXTERNAL DOORS FINISHES

ALUMINIUM FRAME/SILL

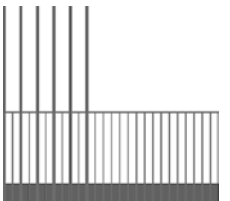


METAL & GLAZED IN WALL PANELS SYSTEM



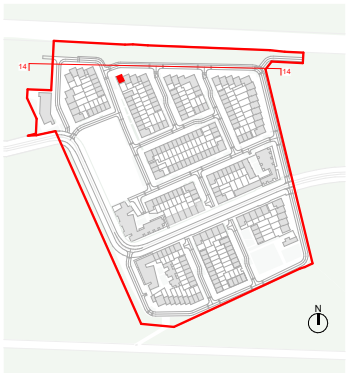
BALCONIES AND LOUVERS

PAINTED MILD STEEL



FRONT GARDEN & BINS STORE

BRICKS & PAINTED MILD STEEL BALUSTRADE





MATERIALS SELECTION

EXTERNAL WALL FINISHES

BRICK - WHITE MORTAR



RENDER



ROOF FINISHES

CLAY TILE



WINDOWS & EXTERNAL DOORS FINISHES

ALUMINIUM FRAME/SILL

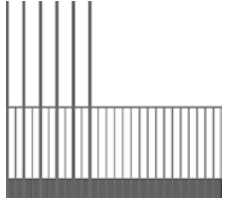


METAL & GLAZED IN WALL PANELS SYSTEM



BALCONIES AND LOUVERS

PAINTED MILD STEEL



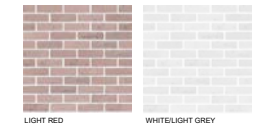
FRONT GARDEN & BINS STORE

BRICKS & PAINTED MILD STEEL BALUSTRADE



EXTERNAL WALL FINISHES

BRICK - WHITE MORTAR



RENDER



ROOF FINISHES

CLAY TILE



WINDOWS & EXTERNAL DOORS FINISHES

ALUMINIUM FRAME/SILL

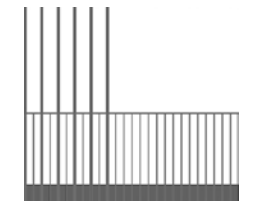


METAL & GLAZED IN WALL PANELS SYSTEM



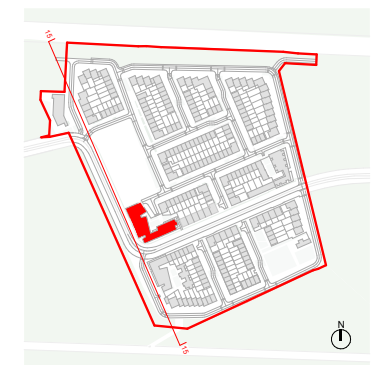
BALCONIES AND LOUVERS

PAINTED MILD STEEL



FRONT GARDEN & BINS STORE

BRICKS & PAINTED MILD STEEL BALUSTRADE



SITE 4 - MATERIALITY - APARTMENT BLOCK F - WEST ELEVATION
1:100

REFERENCES



ARTICULATED VOLUMES

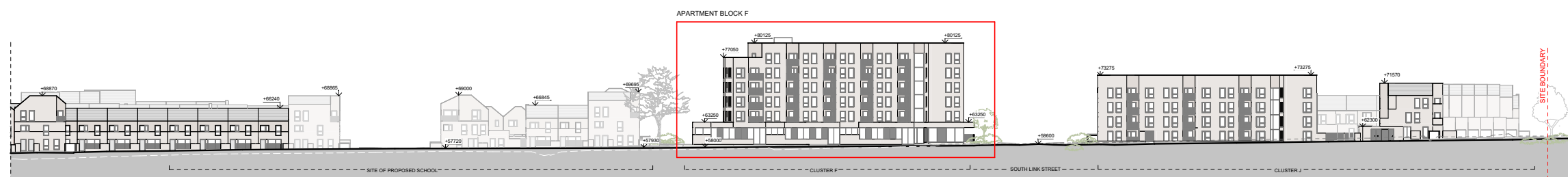
BALCONY & WINDOWS

BALCONY

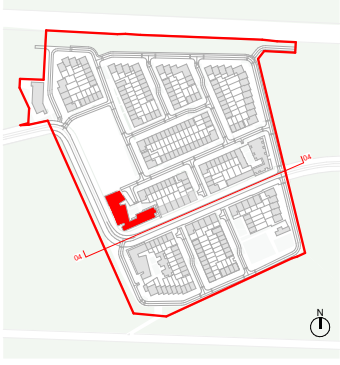
SCREENS

WINTER GARDEN

INSIDE/OUTSIDE CONNECTION



PROPOSED SITE SECTION 15 - 1:500



3.08.4 Durability, Material Quality, Efficiency and MMC:

The design response has considered the delivery of long term robustness and durability, efficiency and the delivery of value for money, as key considerations in the SDCC Brief, through:

- Creating an overall scheme that is visually appealing, high-quality, and robust, with a long lifespan and minimal maintenance requirements
- Prioritising buildability, deliverability, value for money, durability, development and funding mechanisms, and the potential for off-site construction, volumetric design, and modular systems
- Designing to avoid complex or unpredictable supply chains, focusing on access, longevity, robustness, durability (with a design life of 30 years for non-structural and 60 years for structural elements), and minimizing the need for active management
- Incorporating Modern Methods of Construction (MMC) to accelerate delivery, enhance construction quality, and ensure efficient resource use
- Achieving economy through innovative design and strategic allocation of the budget to areas where it will have the most impact, rather than reducing fabric quality.

This focus on improve buildability and facilitating compatibility with off-site construction and Modern Methods of Construction (MMC), driving significant cost benefits and greater project certainty, includes the following practical measures implemented to date:

- Enhanced standardisation and reduction of unnecessary variation across all dwelling types
- Strict control over dimensions, including the rationalisation of cross-wall and block depth dimensions (to co-ordinated brickwork/ blockwork dimensions), to optimize consistency, improve efficiency (especially for precast concrete frames), and ensure seamless alignment at junctions between adjoining elements
- Consideration of bathroom types to ensure the optimal suitability of pod bathrooms for various dwelling types
- Control and rationalisation of stair dimensions and heights/ lifts between landings
- A controlled palette of appropriate window types and sizes
- Consistent approach to the placement and enclosure of heat pumps and mechanical equipment within houses and apartments.

3.08.5 Sustainability Strategy - Net Zero Energy Building (NZEB):

The sustainability strategy and approach applied is:

- Integration of sustainability across all aspects, including passive siting, orientation, landscape, ecology, long-term maintenance requirements, materiality, durability, life expectancy, detailing
- Ensuring long-term robustness and adherence to NZEB standards while minimizing life-cycle costs
- Reduced energy demand through renewable sources (avoidance of use of fossil fuels)
- Meeting 2050 Zero Carbon (operational) standards, achieving a BER target A rating and exceeding Building Regulations TGD Part L where viable
- Adopting a whole life-cycle carbon (WLC) approach from concept stage, with Lifecycle Cost Calculations, material selection to reduce reduction of embodied carbon
- M&E Systems and Services Strategy: The design focuses on five core themes: (i) Due Diligence (ii) Occupant-Centered Design (iii) Collaboration for integrated solutions (iv) Standardisation, Durability, and Flexibility over the project's lifespan (v) Sustainability
- Refer also 3.08.4 above.