Part 5

SCALE

5.1 Local Character

The Borough of Hillingdon covers a wide range of different areas, each with their own particular origins and character.

This range of character stretches from the Victorian development of the canal and railway corridors with their strong industrial character, through the varied development along the Uxbridge Road and into the lower density suburbs in the northern part of the borough which give way to the countryside beyond. Mingled in with this are substantial features including Heathrow airport, fragments of farmland and the hamlets which pre-existed the urban growth.

Urban Typology

Sixteen specific urban types have been found in Hillingdon including a range of residential development forms and a mix of non-residential development types.

Campus. The Hillingdon hospital site belong to the campus type. Campus developments are typically characterised by “collections” of buildings, often set within the middle of a site, and areas of open space which may include playing fields or formal landscape and their own internal network of streets. The campus type is composed of a number of buildings isolated from their surrounding context often with a variety of style and design.

Metroland. This typology can be found west of Royal Lane and refers to privately built inter-war suburban housing. Buildings tend to be detached or semi-detached with a hipped roof and more generous spacing between buildings which gives a more open feel to the street. Architectural elements tend to shed the more formal urban character of the earlier building and adopt a more relaxed feel, with asymmetrical compositions and use of materials and details that evoke a rural character although with repetition of designs and features which provide a cohesive character.

Garden City Style Estate. South of the Hospital we encounter this typology which shares characteristics with Metroland but that most likely have been developed by the public sector. Buildings are commonly grouped into terraces which often display an overall composition and symmetry.

Plot Land. This typology can be found north-east and its character is similar to Metroland but instead of having a high degree of conformity these areas were built piecemeal. This results in more detached buildings and relatively simple volumes.

Apartments. We find this typology fronting Pield Heath Road and working as a gateway to the Cul-de-Sac. The architectural form of these 4 storey buildings is modern.

Cul-de-sac. This postwar suburban development is located north of Pield Heath Road on a site that used to be grounds of the hospital. The hierarchy of roads, with one distributor road, results on lack of legibility and permeability.

Campus Type

Metroland Type

5.1 Local Character

Urban Typologies

Garden City Type

Potland Type

Royal Lane Hillingdon

Pield Heath Road Hillingdon

5.2 Mass and Form of Hospital

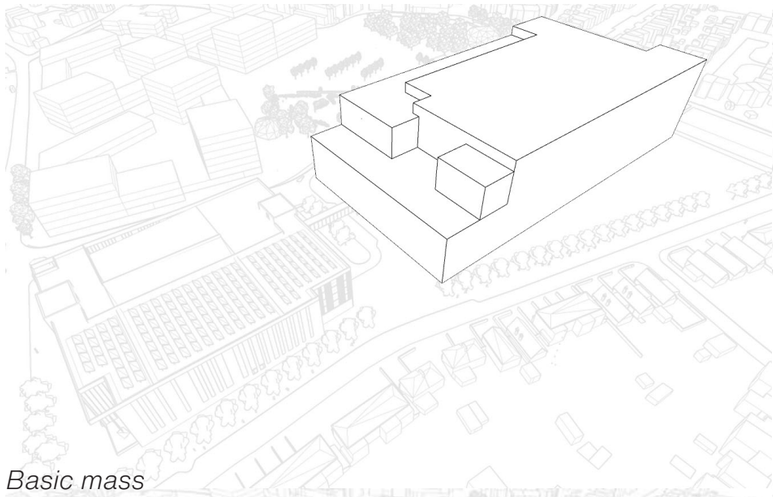
The form is intrinsically linked to the layout. A stack of “T” shaped joined wards to the west and a linear north-to-south volume to the east form the basic mass of the new hospital.

The massing has been concentrated as far into the site as the constraints of a single phase rebuild will allow.

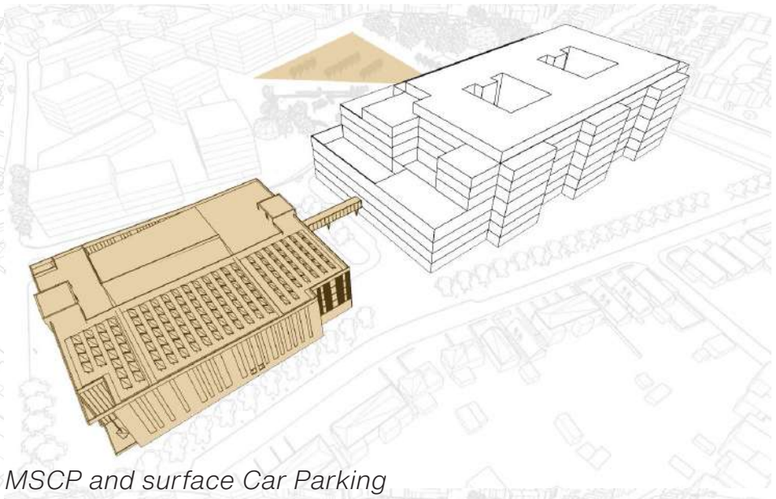
On the campus side the main entrance is in the north east corner as close as possible to Pield Heath Road and public transport. The entrance to the emergency department is located to the south in a two storey height volume protruded towards the central green spaces.

The mass of the building is further articulated with a series of roof terraces and lightwells.

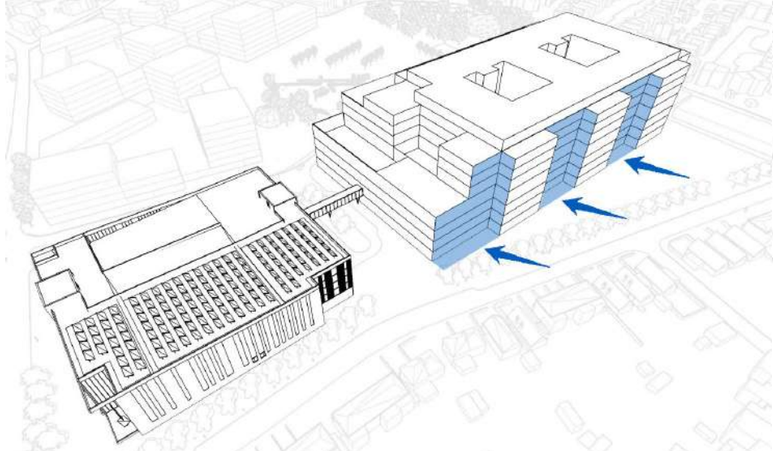
The multi-storey car park serving the hospital is located in the north-western part of the site. A wide separation gap between hospital and car park provides permeability and direct pedestrian-cycle link to / from Royal Lane and at the same time breaking the length of the western elevation.



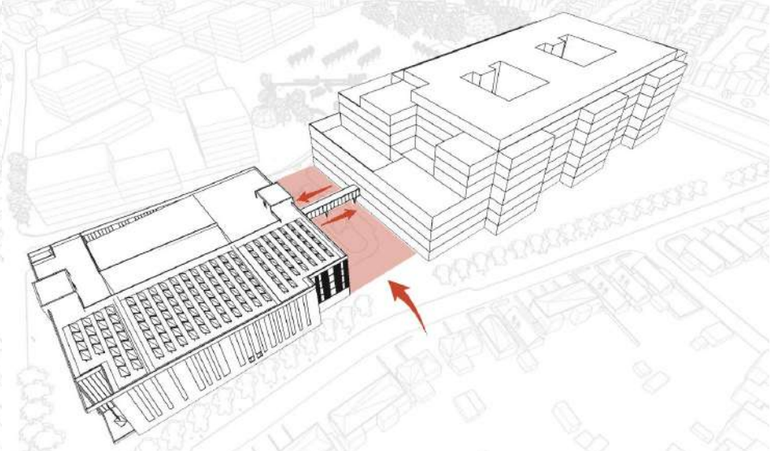
Basic mass



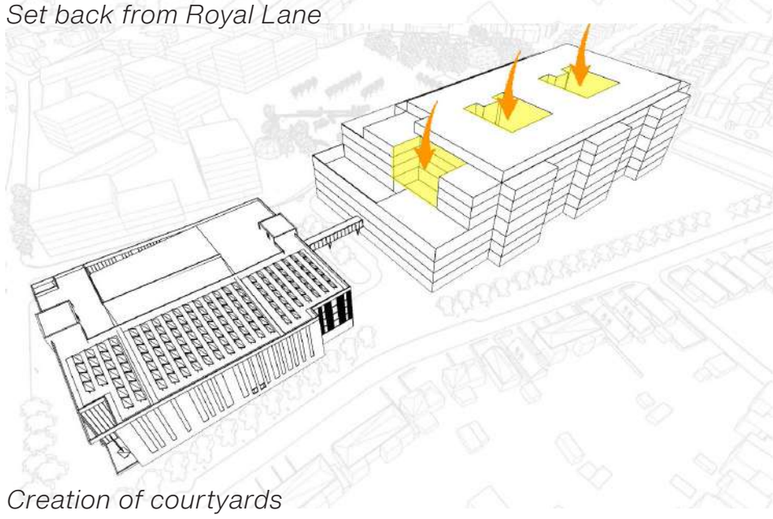
MSCP and surface Car Parking



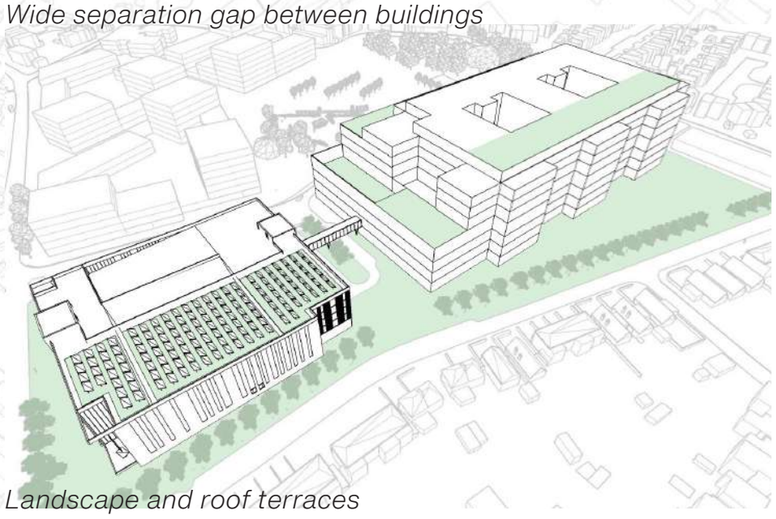
Set back from Royal Lane



Wide separation gap between buildings



Creation of courtyards



Landscape and roof terraces

5.2 Mass and Form of Hospital

Articulation techniques such as material changes, wall setbacks and accent lines, promote a more human scale throughout building with particular attention to Royal Lane. The series of sketches for the study of the façades shows the coherent approach of dividing the mass of the building into smaller volumes each with its own character and richness of textures.

Massing Study Sketches

5.3 Scale Height and Massing

The Trust's vision is to create a compact modern hospital that is functional, efficient and that sits well within its setting whilst taking advantage of the site constraints. The new hospital is concentrated into the western part of the site allowing the existing hospital to remain operational during the construction period.

The new proposed hospital building is designed to be accommodated within the maximum height level of +77.250m AOD. Accommodation is provided across eight floors above ground and one below ground, with floor to floor heights taking account of the requirements of a highly serviced building as follows. Ceiling heights internally are generally 2.7m and 3.0m

Basement Floor

Floor to Floor 4.875m. FFL 32.125m AOD

Ground Floor

Floor to Floor 4.875m. FFL 37.000m AOD

First Floor

Floor to Floor 4.875m. FFL 41.875m AOD

Second Floor

Floor to Floor 4.875m. FFL 46.750m AOD

Third Floor

Floor to Floor 6.000m. FFL 51.625m AOD

Fourth Floor

Floor to Floor 4.875m. FFL 57.625m AOD

Fifth Floor

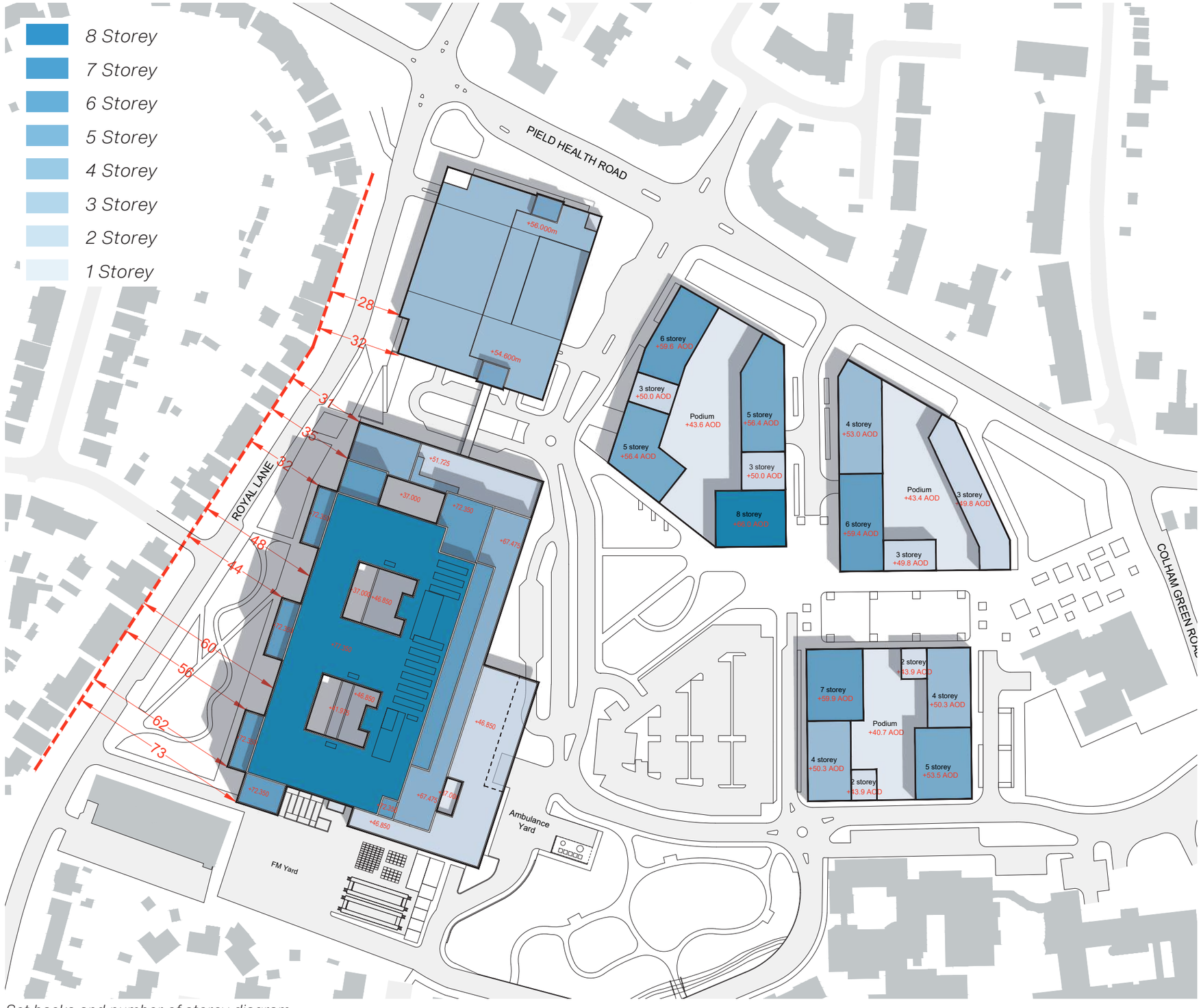
Floor to Floor 4.875m. FFL 62.500m AOD

Sixth Floor

Floor to Floor 4.875m. FFL 67.375m AOD

Seventh Floor

Clear height 5.000m. FFL 72.250m AOD



Set backs and number of storey diagram

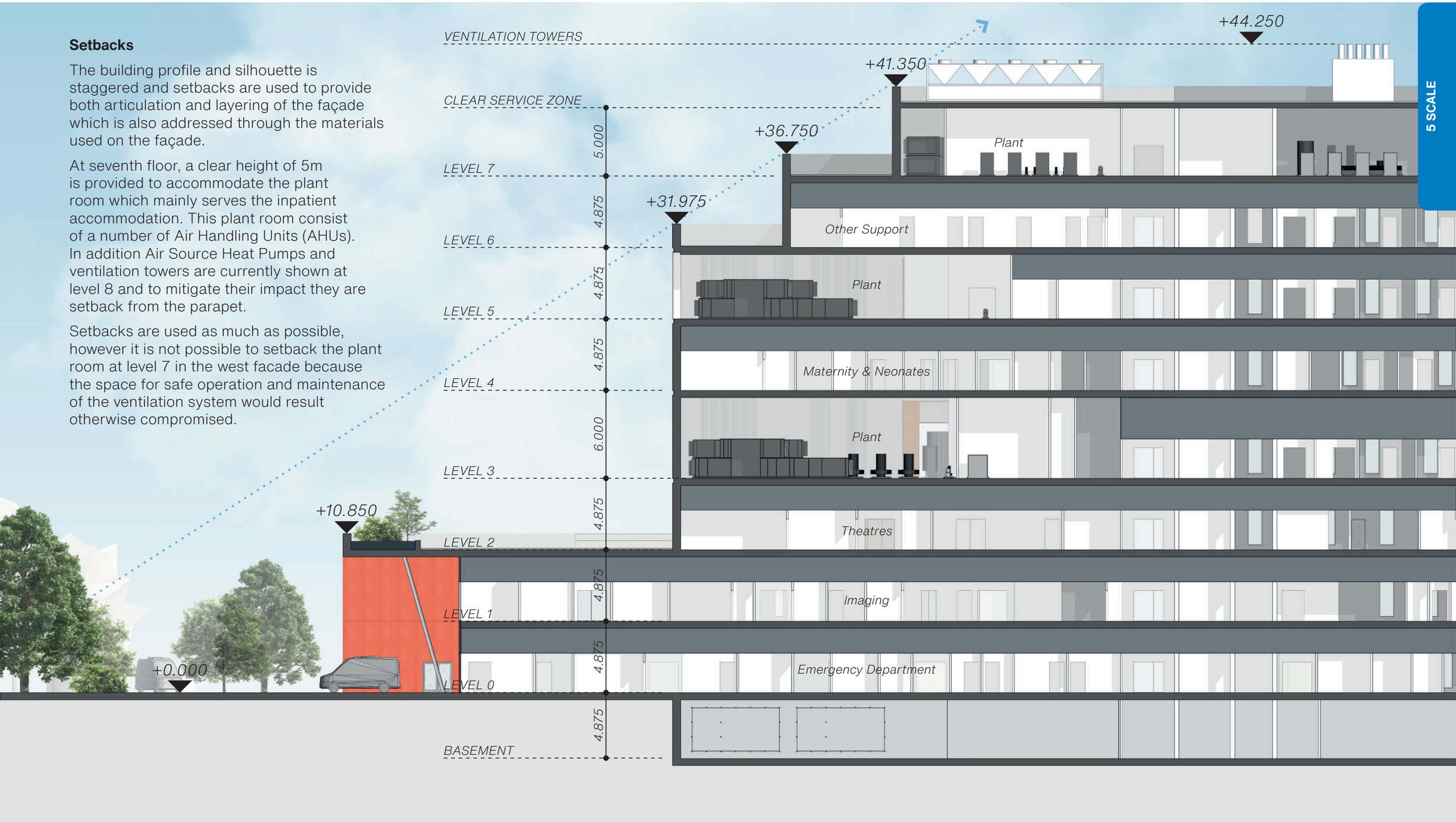
5.3 Scale Height and Massing

Setbacks

The building profile and silhouette is staggered and setbacks are used to provide both articulation and layering of the façade which is also addressed through the materials used on the façade.

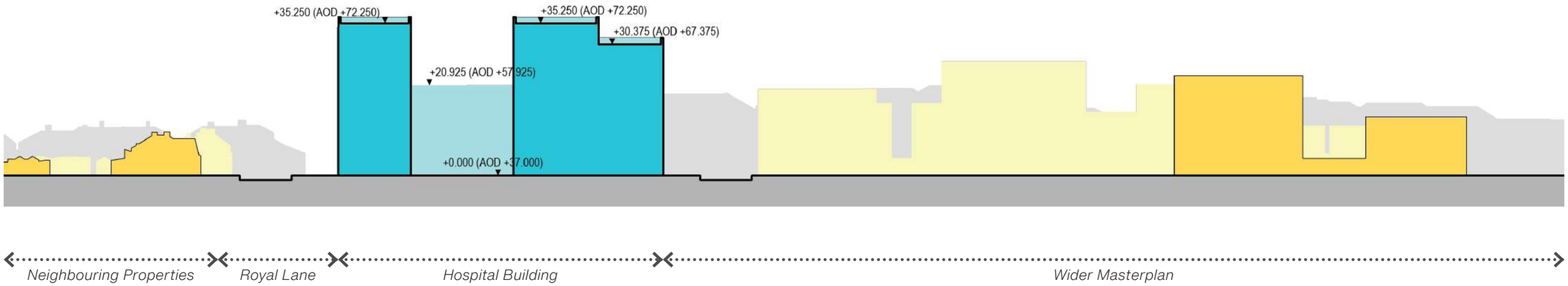
At seventh floor, a clear height of 5m is provided to accommodate the plant room which mainly serves the inpatient accommodation. This plant room consist of a number of Air Handling Units (AHUs). In addition Air Source Heat Pumps and ventilation towers are currently shown at level 8 and to mitigate their impact they are setback from the parapet.

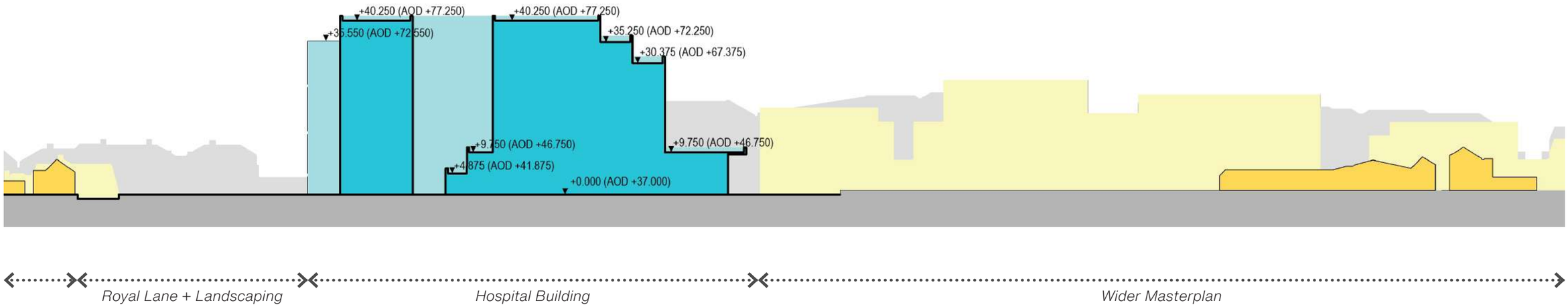
Setbacks are used as much as possible, however it is not possible to setback the plant room at level 7 in the west facade because the space for safe operation and maintenance of the ventilation system would result otherwise compromised.



Typical floor to floor heights for new hospital

5.4 Site Sections





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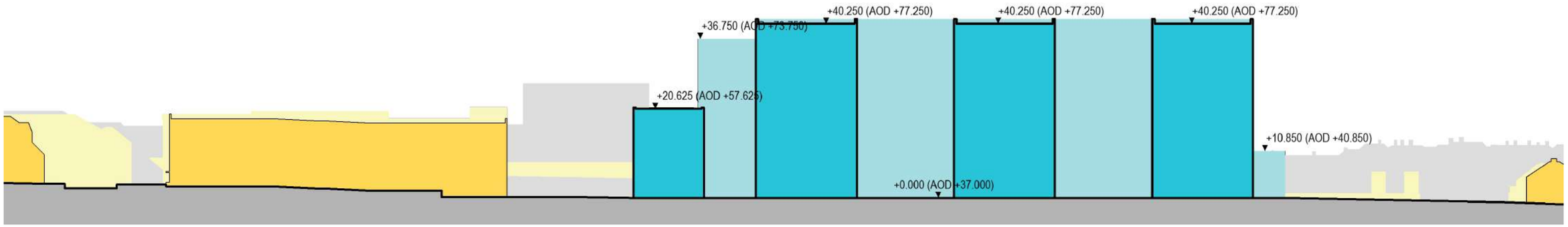


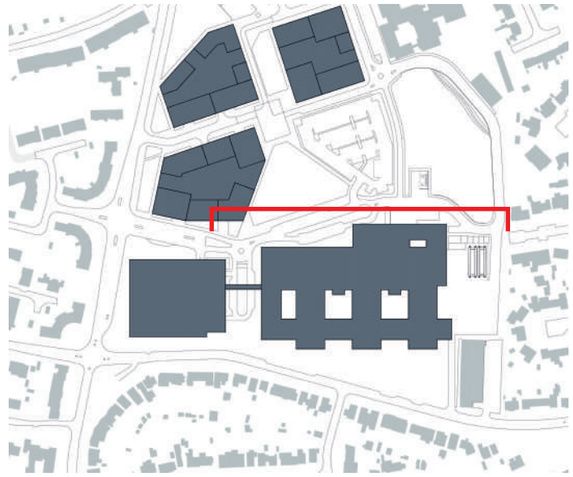
5.5 Hospital Elevations

Architectural Concrete

Brick

Clear/Spandrel Glass

Architectural Concrete



East Elevation

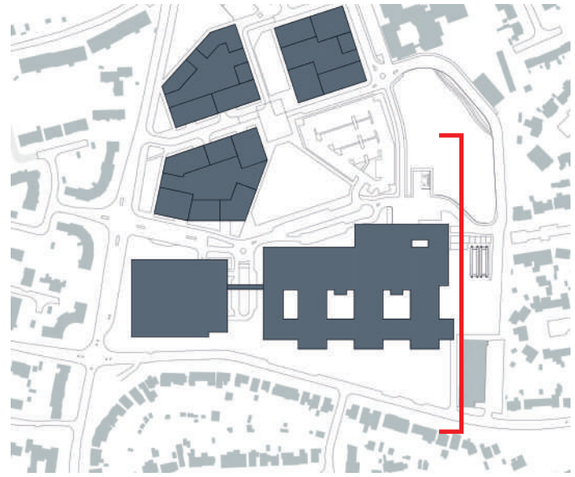
5.5 Hospital Elevations

Architectural Concrete

Brick

Clear/Spandrel Glass

Architectural Concrete



South Elevation

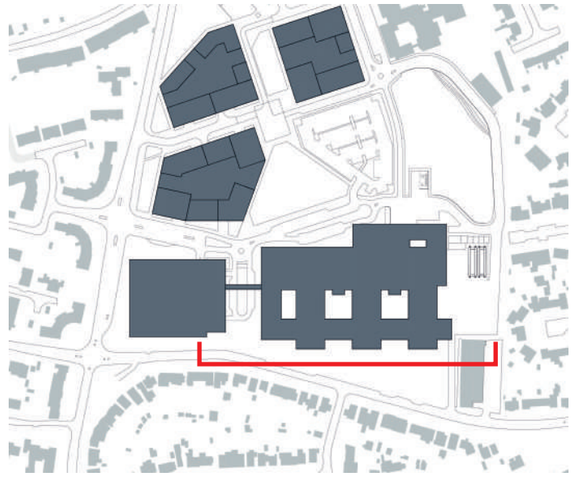
5.5 Hospital Elevations

Architectural Concrete

Brick

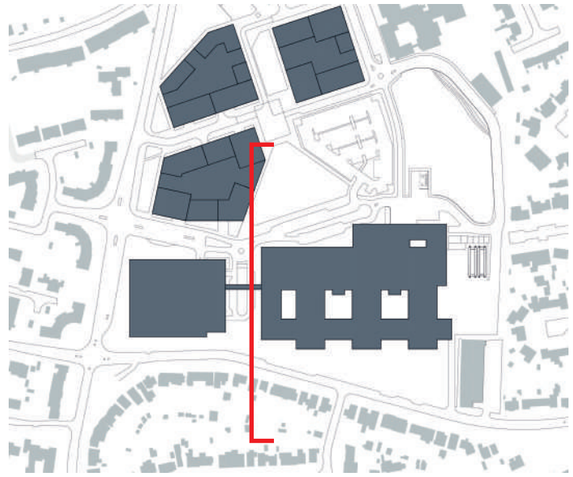
Clear/Spandrel Glass

Architectural Concrete



West Elevation

5.5 Hospital Elevations



Architectural Concrete

Brick

Clear/Spandrel Glass

Architectural Concrete

North Elevation

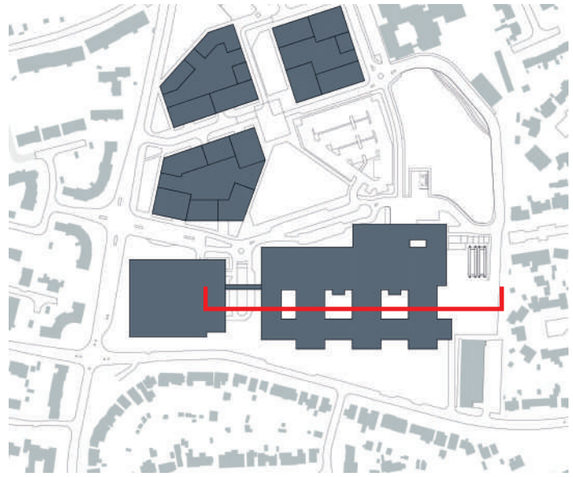
5.5 Hospital Elevations

Architectural Concrete

Brick

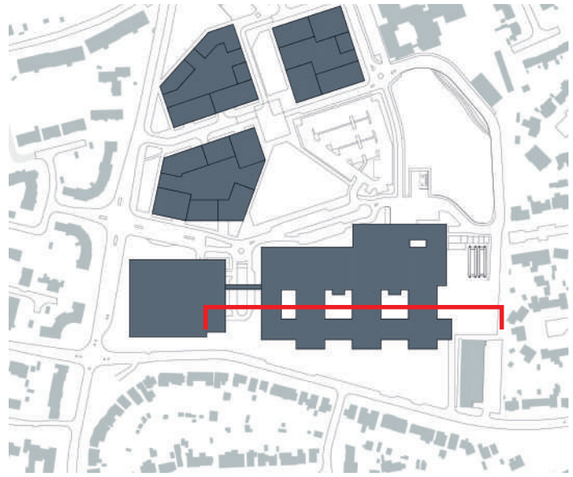
Clear/Spandrel Glass

Architectural Concrete



Internal Elevation West

5.5 Hospital Elevations



Architectural Concrete

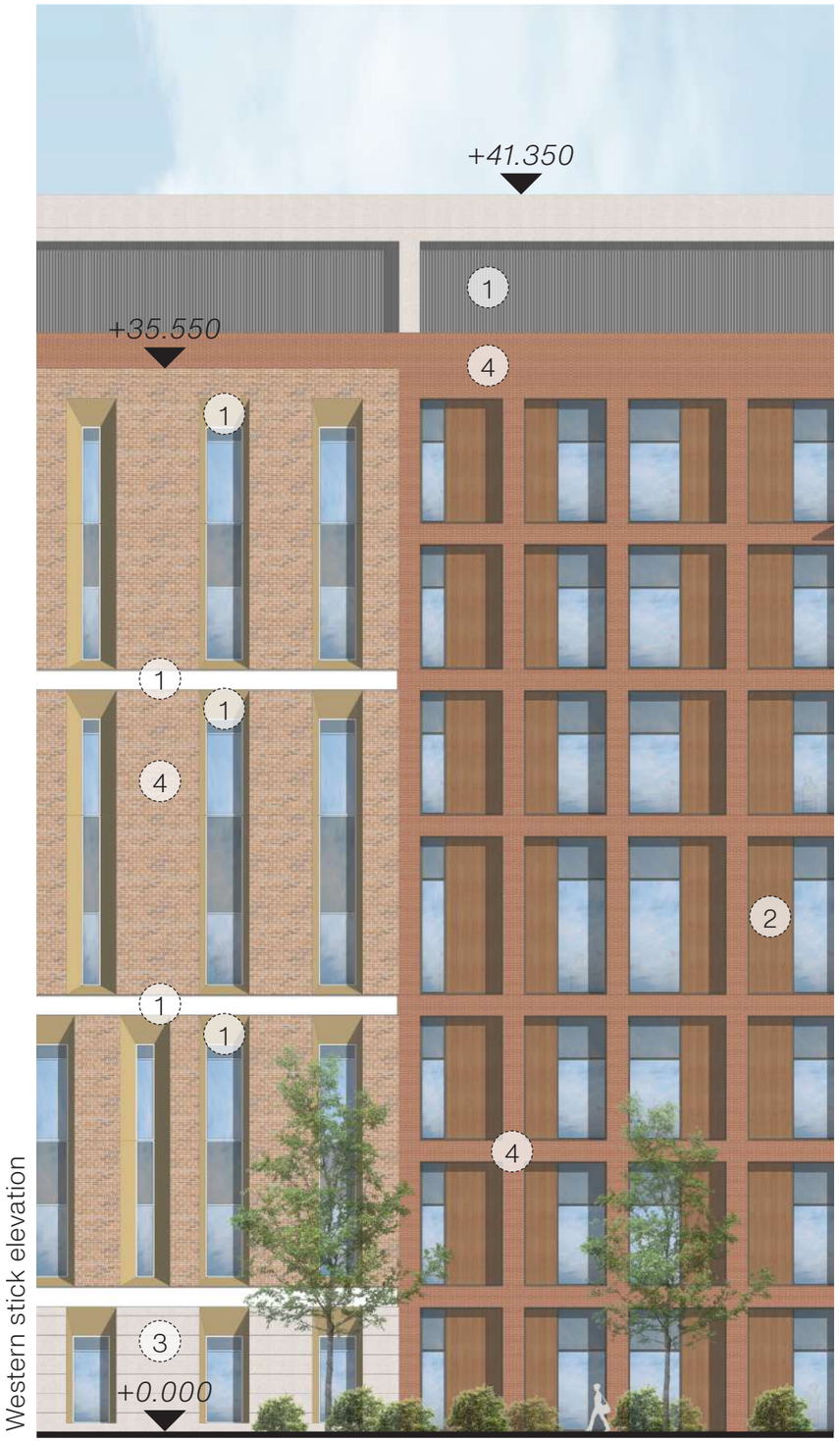
Brick

Clear/Spandrel Glass

Architectural Concrete

Internal Elevation East

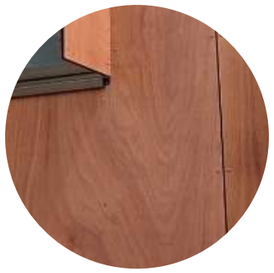
5.6 Bay Studies



Western stick elevation

Mood Board

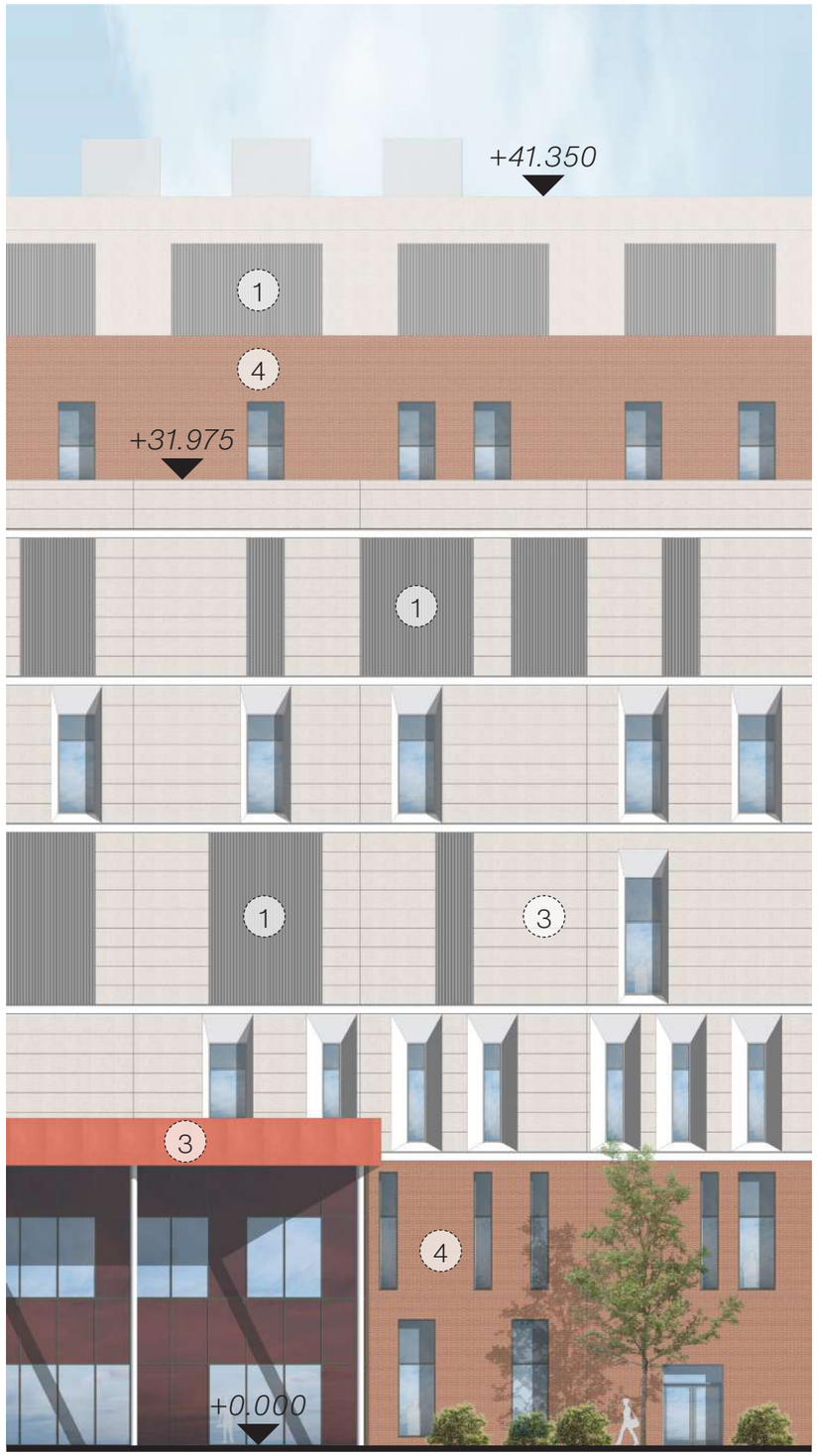
1 *- Metal*



2 *- Timber Effect Panels*

3 *- Architectural Concrete*

4 *- Brick*



Eastern stick elevation

5.7 Appearance - Design principles and materials

The new hospital will be constructed from a palette of high quality materials that will reflect the landmark status of the new building and the quality of service to be offered by the Trust. Materials selection and detailing has been carefully chosen based upon durability, sustainability, low embodied carbon and low maintenance solutions that will provide the Trust with an easily maintainable building throughout its lifespan. The materials selected create an approachable, welcoming public building located within the heart of a public realm.

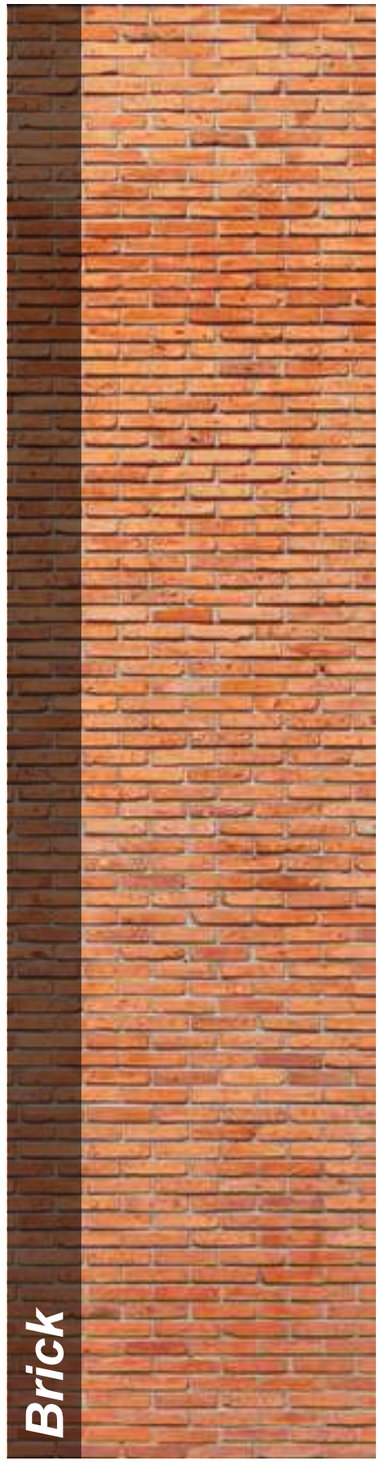
A simple palette of materials is proposed for the external envelope as indicated upon the submitted elevation drawings. The materials palette includes:

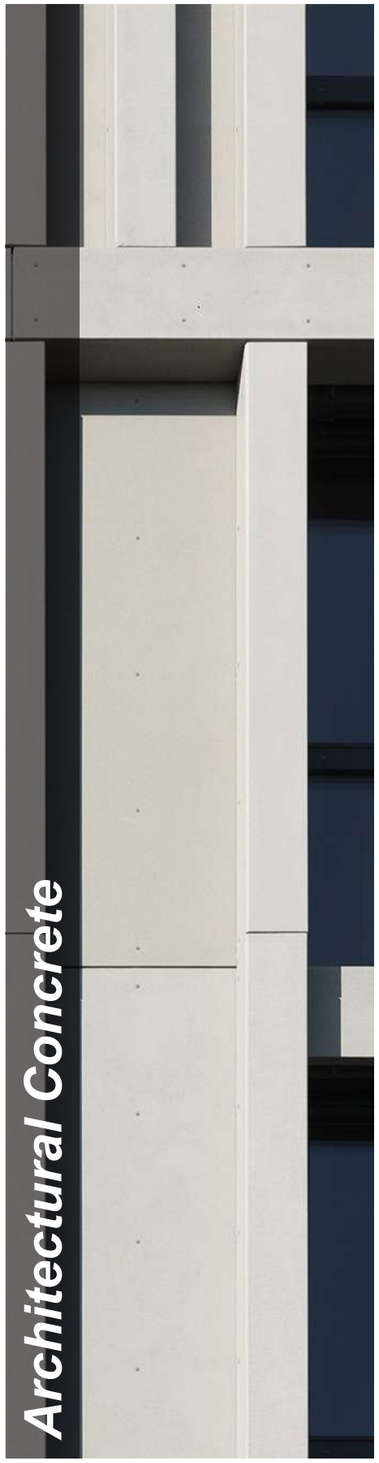
- Brick
- Architectural Concrete
- Glazing
- Metal

The façade materials are mainly organised in response to the townscape and context.

The west wing of the building, facing Royal Lane, has a unified brick facing, underlining its sculptural quality. A series of brick clad pre-cast panels form a regular expressed facade grid providing visual interest, depth and animation. The full height windows will provide extensive views out and maximise natural daylight penetration. The three western “fingers” - in contrast with the red brick wing - feature a brickwork lighter in colour and vertical slot windows with bronze metallic reveals to express the civic character of the building.

The east wing of the new hospital, which in future will face the main green park, includes a two storey brick facing podium on top of which rests a four storey element covered with a light beige architectural concrete skin which will play with the morning light and the park.





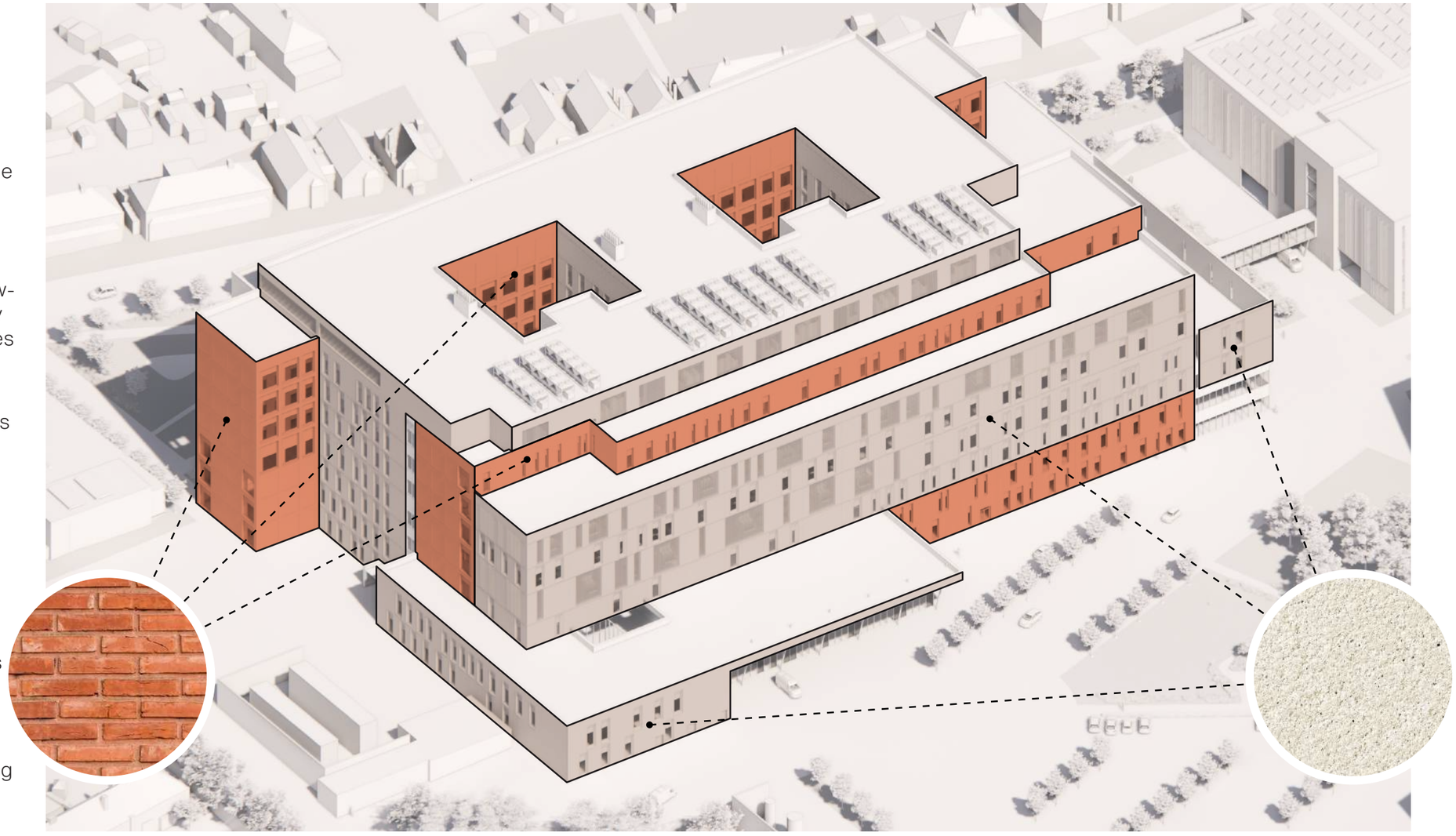
5.7 Appearance - Design principles and materials

Architectural Concrete

Sometimes known as reconstructed stone, precast concrete cladding is the dominant feature of much of today's architecture. Precast concrete cladding offer a cost-effective means of providing a robust, high-quality facade, with a great variety of durable textures, colours and patterns.

Advantages include:

- Off-site production and quality control: providing resource efficiency through low-waste production and installation, quality control and fast construction programmes not affected by weather or labour shortages.
- Skilled production and installation: Panels are produced by skilled craftsmen in purpose-built factories.
- Fast construction programmes: Manufacture takes place while the foundation and frame construction proceeds, enabling them to be delivered and installed on a just-in-time basis.
- Range of unique, aesthetic options: A wide range of finishes, textures, patterns and forms are achievable.
- Low maintenance: Concrete cladding typically requires little maintenance compared to other lighter-weight cladding solutions, providing life-cycle cost benefits.

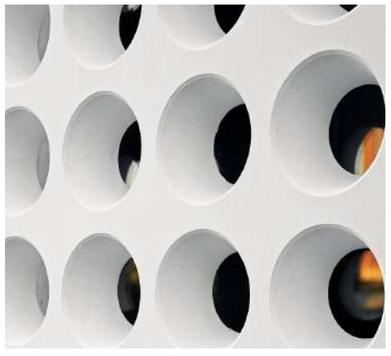


Lululemon Flagship Store / Studio One

SUNY Farmingdale / Urbahn Architects

Kaufhaus Tyrol / David Chipperfield

Source Siegenia



Lontoonkatu / Kirsi Korhonen

5.7 Appearance - Design principles and materials

Brick

The majority of the West façade is clad in brickwork creating a material connection with the surrounding buildings. Bricks have been used for building innumerable structures over many thousands of years because of their durability. The advantages of bricks are countless including:

- Resistant to high pressure and frost.
- Non-flammable and non-combustible material.
- Does not shrink or expand during fluctuation of temperature.
- Can hold heat well and release it into its surroundings.
- Reusable and recyclable.
- Require no maintenance and have a long lasting beauty.
- Available in a wide range of colours and textures.

Terracotta Hillingdon Plate

The Urban Environment House / Lahdelma & Mahlamäki Architects

16 Church Street / Keppie

5.8 Window Design

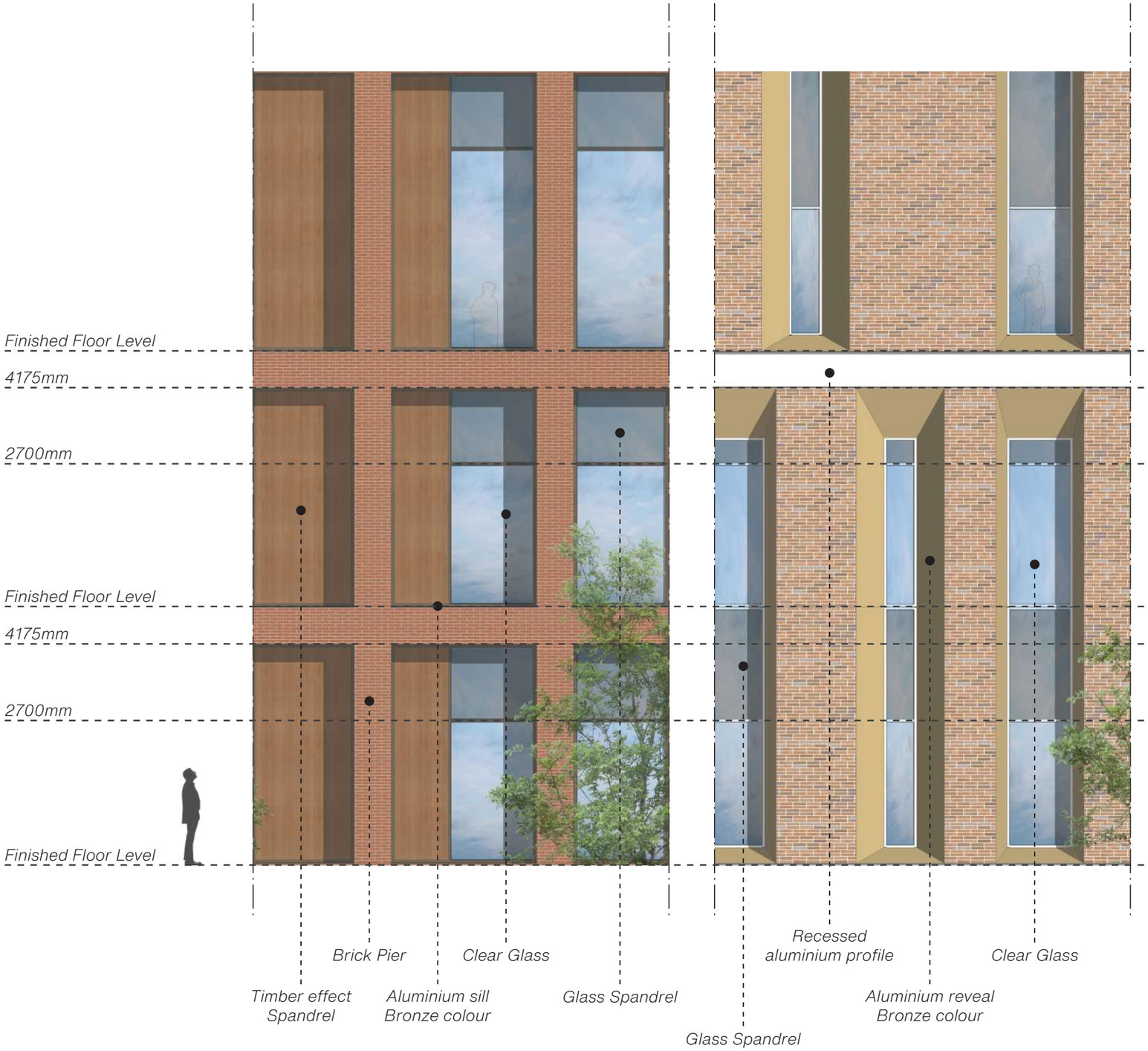
The use of glazed elements within the external envelope has been carefully considered in respect to the functionality of spaces within the building, the need to ensure and providing suitable levels of privacy as well as ensuring high quality environmental conditions within the building are achieved.

Key building entrances and public areas are clearly identifiable on the elevations by the inclusion of large glazed areas creating active frontages which change throughout the course of the day. An example of this is seen at the main entrance. The curtain walling system includes clear glass on PPC aluminium frames, incorporating spandrels with reflective finish like back painted glass to provide adequate levels of privacy where required.

Windows will be detailed into the façade materials in a variety of methods to further create articulation on the façade as noted below.

Brickwork façades

Windows installed into brickwork openings will be of vertical emphasis. Brick piers and panels frame large glass windows which are deep recessed from the face of the brickwork to add a sense of depth and rhythm. Generally these windows present brick reveals with the only exception of the slot windows in the western façade which have aluminium reveals reproducing a bronze effect.



5.8 Window Design

Architectural Concrete façades

Windows installed into architectural concrete rain-screen façades will be of vertical emphasis and deep recessed from the face of the concrete facing panels. They will have slanted external reveals to create wider sight lines and maximize daylight.

5.9 Multi-storey Car Park Elevations

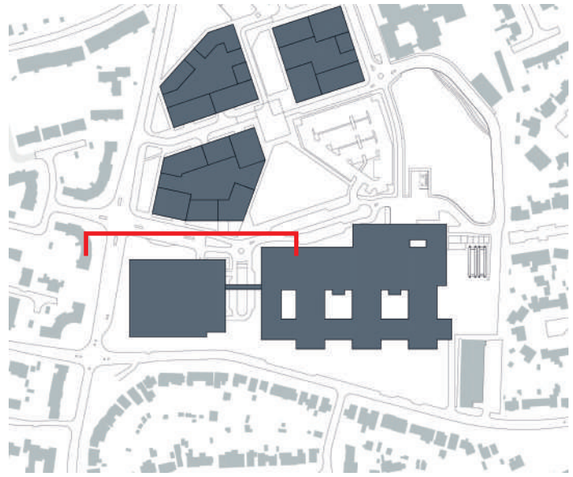
Architectural Concrete

Brick

Metal Mesh

Terracotta Extrusions

CGI - MSCP East Facade



East Elevation

5.9 Multi-storey Car Park Elevations

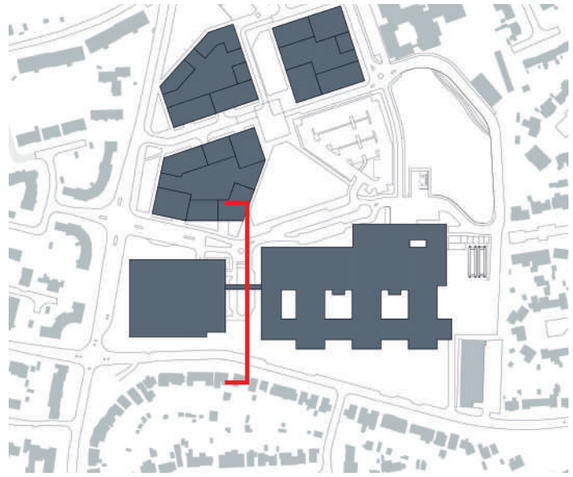
Architectural Concrete

Brick

Metal Mesh

Terracotta Extrusions

CGI - MSCP South Facade



South Elevation