

7.2

Residential Cladding

7.2.1 Residential Design Overview
Architectural Vision

The residential facade design has been carefully considered and refined to allow flexibility, while maximising daylighting, views, and comfort for the occupants. The cladding elements reinforce the city-scale and local-scale expression of the buildings to form a contextually appropriate and holistic design. All details of the design aim to maintain the architectural vision of creating a family of buildings.

The following pages illustrate the various elements that make up the facade design for the Stamford Buidling and Paris Building.

Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.



Right:
Indicative visualisation
of the Stamford
Building cladding

7.2.1 Residential Design Overview
Architectural Vision

This chapter illustrates how the massing strategy has evolved to maximise the opportunities of this significant Site. The external envelope design reinforces the overall architectural vision whilst also adapting to the internal layouts and spatial requirements.

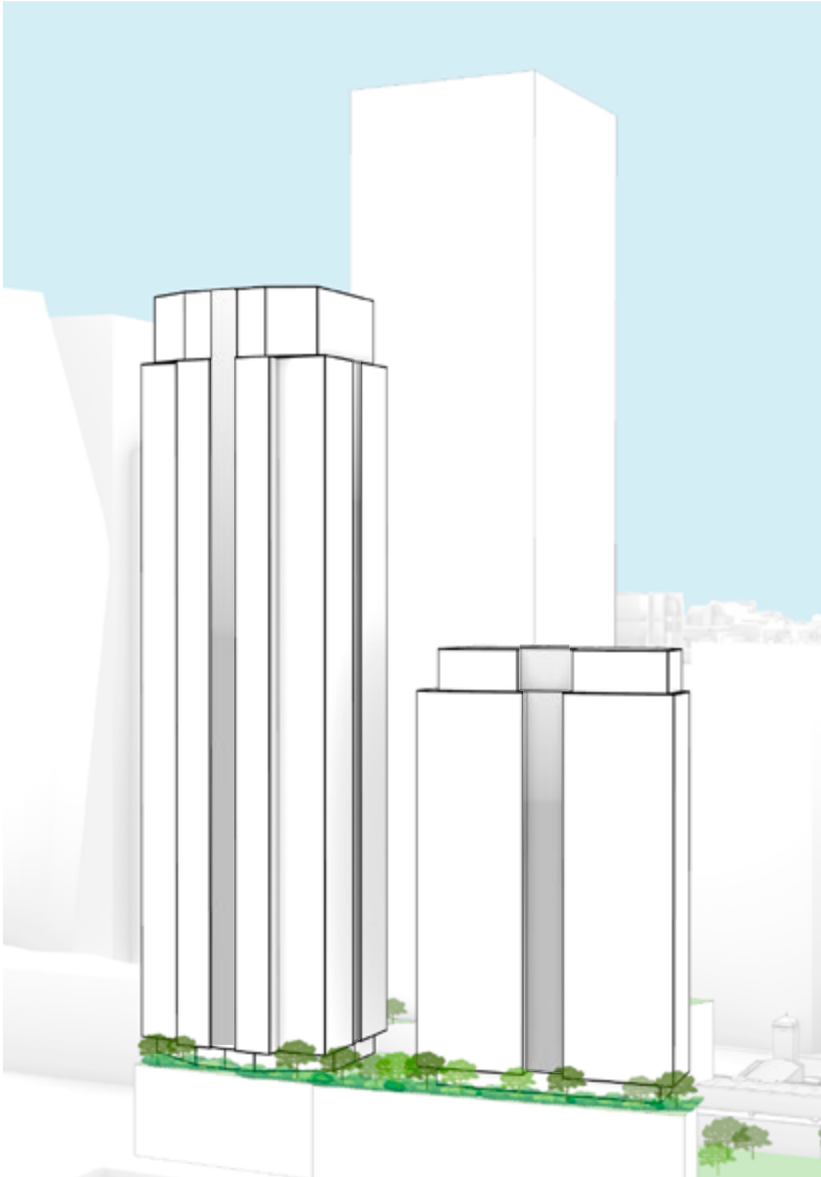
The external envelope has been refined to both reinforce the overall architectural vision and also respond to the spatial requirements of the internal apartment layouts.

The following diagrams highlight how a clear hierarchy was developed to create a cluster of buildings that all work together as a family to enhance the area.

The residential character of the buildings is further reinforced through the texturing of the facades, and the contrast between the recessive and more dominant features on the buildings. The contrast in the materials highlights the tones and textures that have been drawn from the site context.

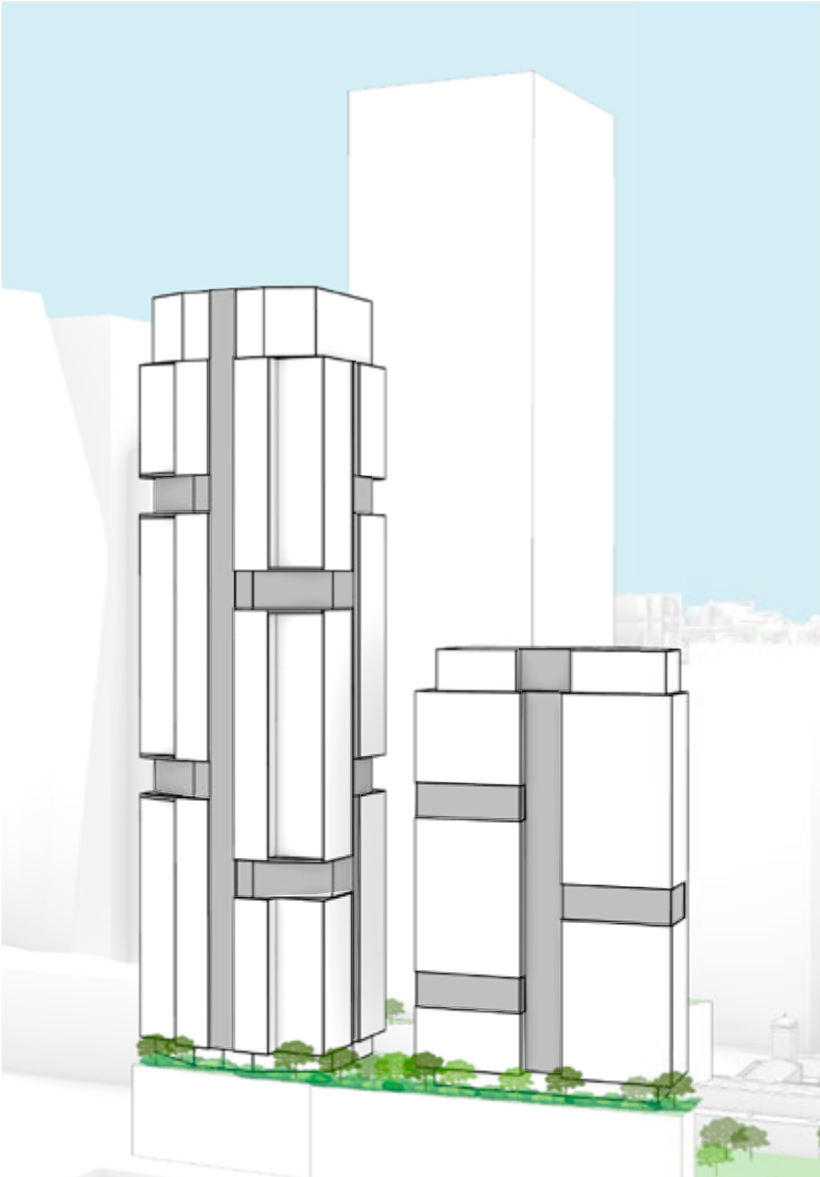
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Simple Massing Relationship



The building footprints relate to their position on the site, while the massing is broken up by vertical recesses dividing them into quarters. This provides efficient floor plates that can accommodate rational apartment layouts.

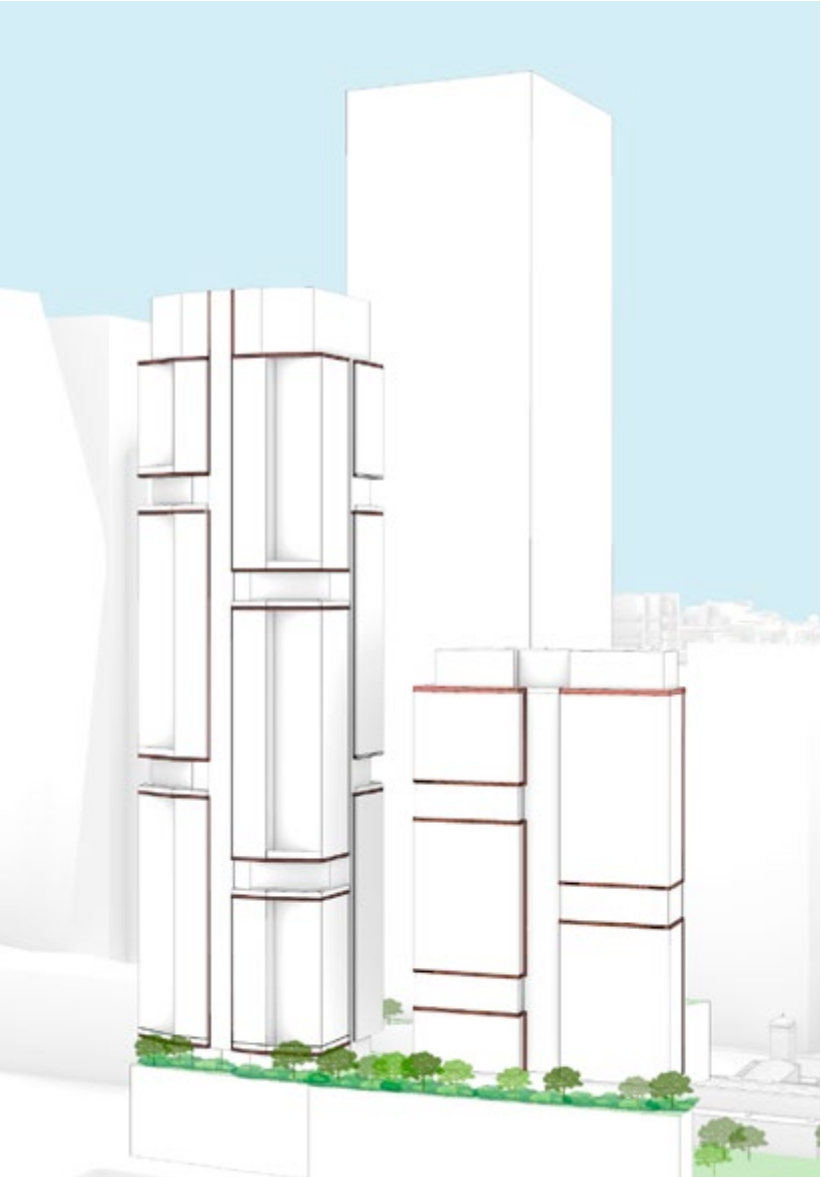
Vertical and Horizontal Recesses



The combination of the central recesses and a stepped building footprint maximises the number of dual aspect apartments whilst also balancing the proportions of the buildings. The horizontal breaks further divide the massing into vertical communities (bustles). These break levels act as a transition zone between different cladding grids responding to changing floorplate typologies.

7.2.1 Residential Design Overview
Architectural Vision

Framed Massing



Each bustle is framed with a profiled metal expression which clearly expresses the building hierarchy at a city scale. The vertical recesses wrap into the horizontal breaks, creating a void in the massing and contribute to creating a visual language that allows all buildings to be read as a family.

Horizontal Spandrel and Balustrade Datum Expression



Profiled slab edge spandrels with a profiled capping element at the 1.1m high balustrade datum emphasise the horizontal expression between the floors. This creates bands of secondary expressions that are colored and textured to match the materiality of the site. The horizontal articulation helps to define the difference between the residential and office building typologies.

Fine Vertical Profiled Cladding

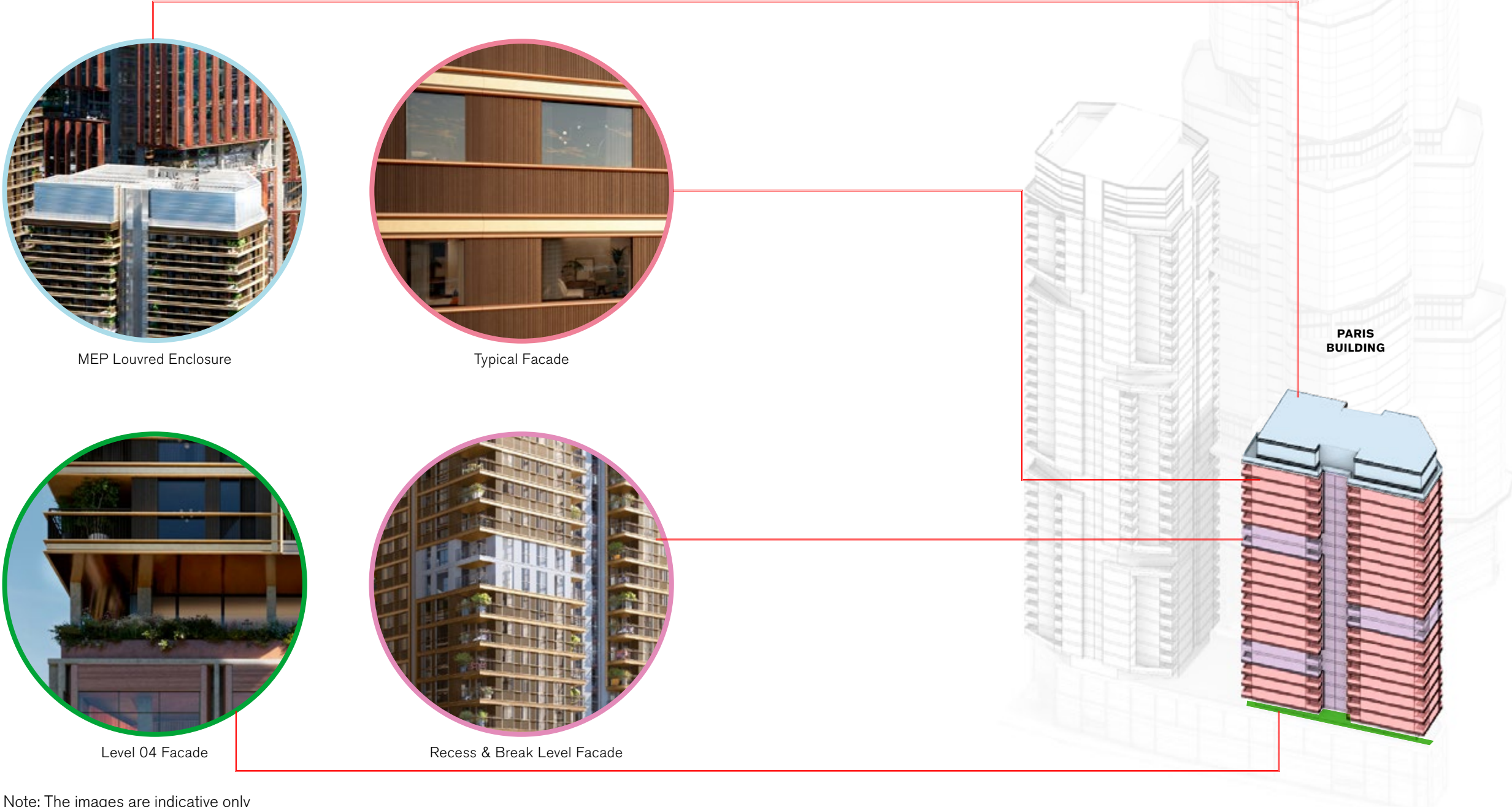


The main solid cladding panels all feature a fine ribbed profile to the solid elements in a dark recessive tone which matches with the glass tones and allows both elements to read recessively as one element. This further amplifies the horizontal expressions of the bustles.

7.2.1 Residential Design Overview
Facade Types - Paris Building

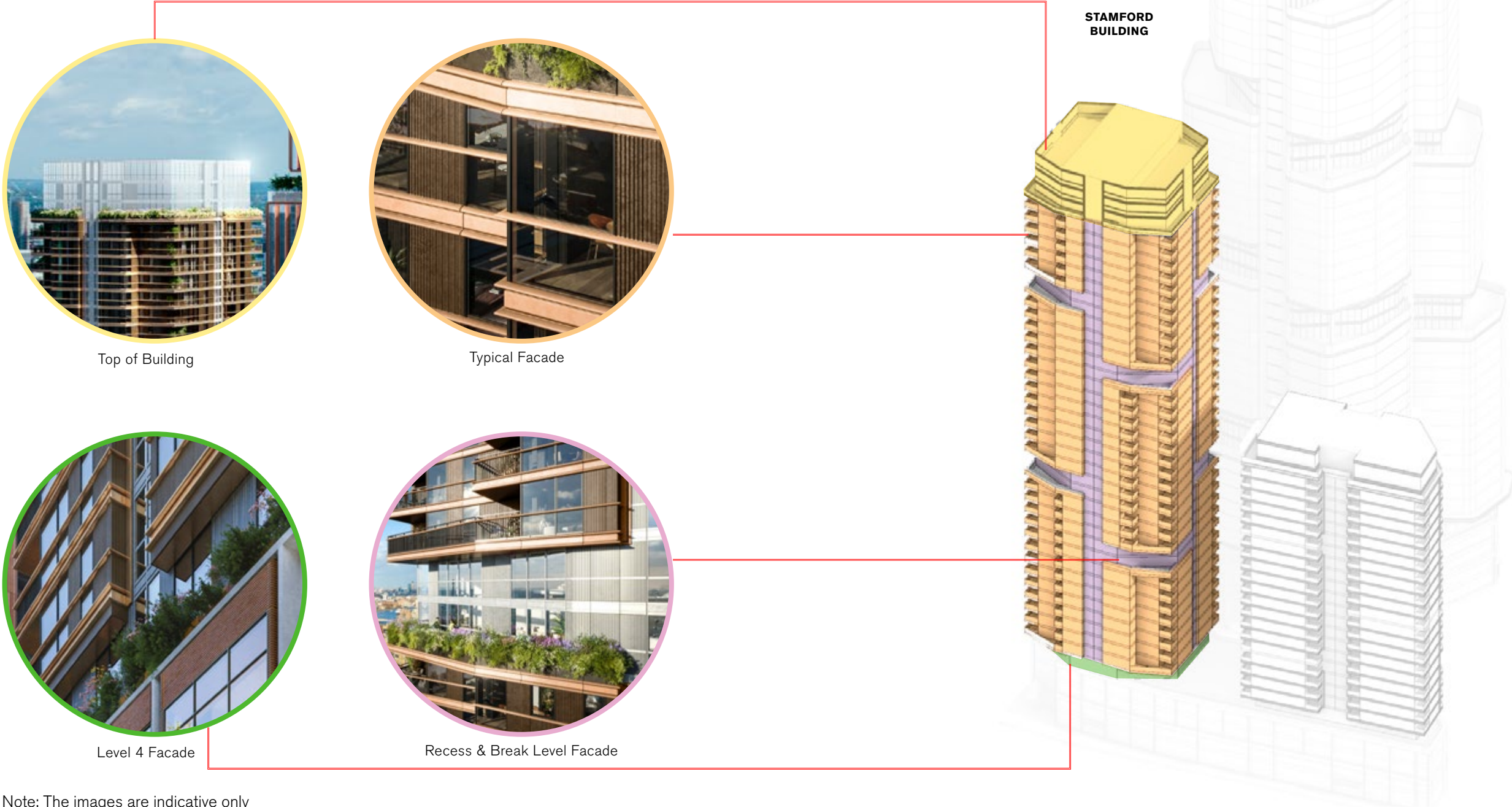
The same architectural vision has been applied to both the Stamford and Paris Buildings, only adjusting proportions where necessary to reflect the different building massing, creating a family of buildings that match each other in architectural expression and quality.

Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.



Note: The images are indicative only

7.2.1 Residential Design Overview
Facade Types - Stamford Building



Note: The images are indicative only

7.2.2 Residential Facade Materials

Indicative Material Palette

Material Context
Both residential buildings will use materials related to their context, helping to further integrate the buildings as part of Southwark's character and identity.

Drawing inspiration from the immediate site context, tones were extracted from the local context to give a general material and colour palette. Refinement of the tones came from identifying the key contextual buildings and testing material samples that matched the context's palette. The vary tones between the Residential Buildings aim to work together to unify the family of buildings into the Site.

While the residential buildings have different massing and scales, the façade detailing approach remains consistent between the two. This ensures both buildings maintain high levels of quality with neither lacking in standard. Slight variations in colour and texture allow both buildings to maintain their own identity whilst responding well to the Site. The cluster can be perceived as a family of buildings emerging from the colours of the immediate context and the wider range of the area.

Material Criteria
The proposed materiality for Stamford and Paris Buildings have been developed following pre-app consultation with LBS. Material selection has been carried out based on the following criteria:

- Reinforce the architectural vision.
- Emphasise the hierarchy of facade design.
- Transparency of residential lobbies at ground floor allowing visual connection to Paris Garden.
- Maximise views from residential apartments.
- Appropriate scale of elements to reinforce distant views with suitable detailing and surface treatment revealed when approaching the buildings.
- Complement materiality of surrounding buildings and the local architectural character.
- Ensure a positive contribution to the skyline and wider cityscape.
- Ensure high levels of internal comfort and overall facade performance.
- Minimise requirement for maintenance and replacement of materials.

In conjunction with the above criteria, further work has been carried out with facade contractors and material specialists in developing the glazing, material specifications, sizes and finishes for the facade.

Inspiration drawn from the immediate site context consisting of varying buff and London red brick tones.

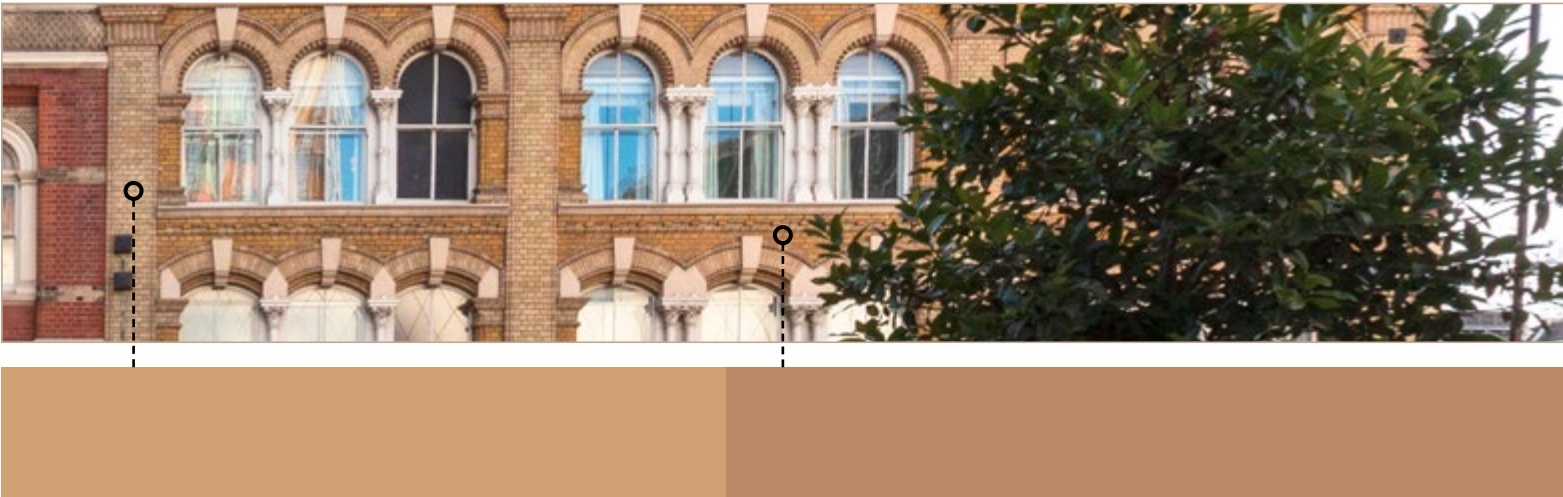
Bottom Left:
Site Plan

Top Right:
Photograph - aerial of the Site.

Bottom Right:
Primary colour palette extracted from the immediate context materiality



Stamford Street - Immediate Site Context Materiality



01 - Paris - Primary Horizontal

02 -Stamford - Primary Horizontal

Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.

7.2.2 Residential Facade Materials

Indicative Material Palette

Material Finishes
Stamford and Paris buildings are given individual primary horizontal expression colours that originate from the local context. The colours allow each building to have its own identity but with close contextual ties, still read together as a pair.

The primary horizontal expression is the most prominent feature of the facade with a metallic finish to further accentuate it. This expression is further enhanced via the more recessive primary metal facade panels that are carefully matching the glazing and solid panel tones.

The duplexes and the recesses break up the massing with a tonally different facade colour and differing reflectivity, providing a clear definition to the building form. The tops of the buildings have reflective light tops that introduce a gradient to the sky.

While the office tower expresses the verticals, the two residential buildings, which are smaller in scale express the horizontal elements. Unified by building breaks and recesses and similar material qualities all three buildings read as a family.

The glazing and metallic materials discussed here will be tested to ensure the composition of materials meet the overall visual intent and performance requirements.

Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.



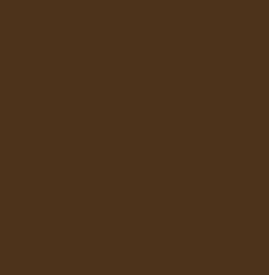
Cladding panels to be vertical profiled aluminium panels of varying complementary colours.



01 - Paris
Primary Horizontal



02 -Stamford
Primary Horizontal



03 -Stamford and Paris
Primary Facade Tone -
Dark Bronze



04 - Stamford and Paris
Secondary Facade Tone
(In recess and duplexes)
- Mid Grey



Paris Cladding



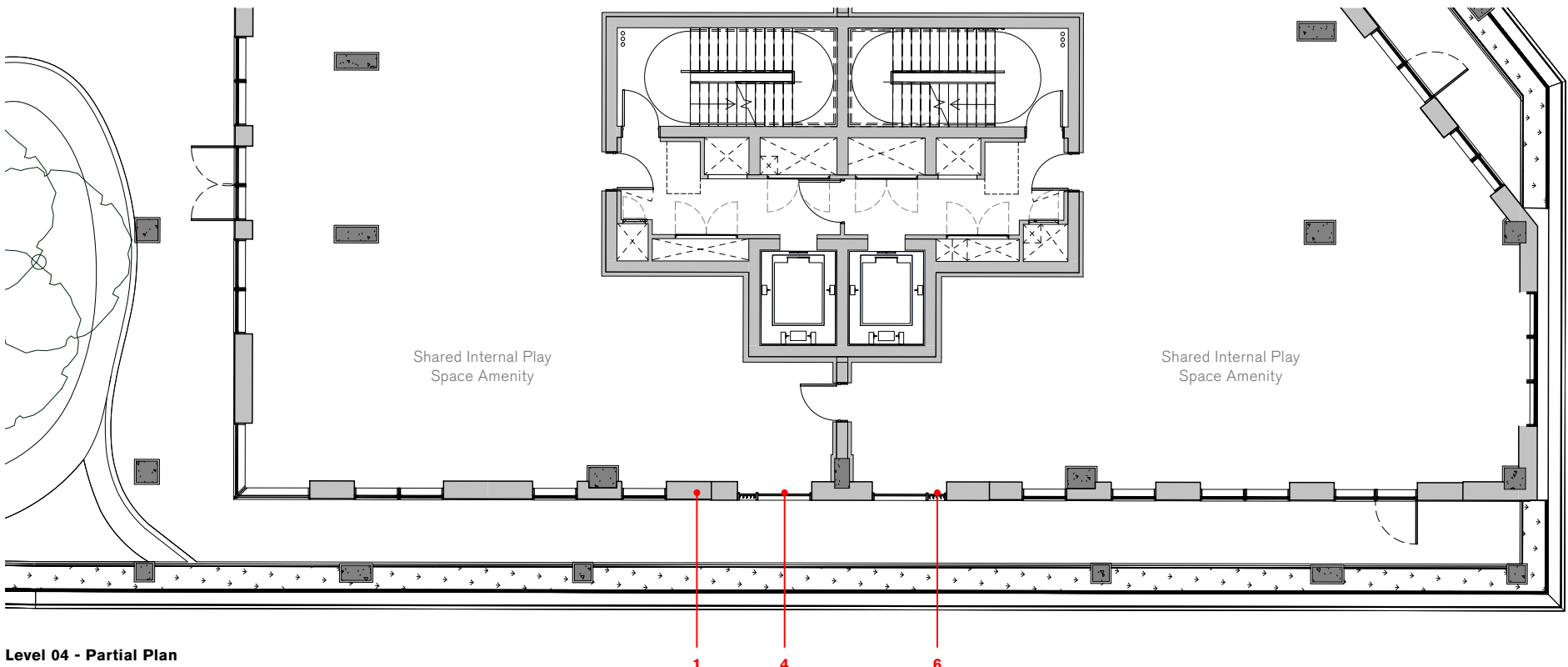
Stamford Cladding

7.2.3 Paris Building Facade Design
Level 04

Paris Building Level 04 forms the base of the Residential Building acting as the connecting piece to the Podium levels. This transition level is recessed from the primary massing outline to allow the building to be lifted above the Podium, providing a clear separation of uses.

This level accommodates an internalised, accessible play space surrounded by a landscaped terrace that incorporates outdoor seating and play areas, accessible to residents of both buildings. Large glazed doors provide an internal / external feel to the spaces allowing for views out to the landscaping.

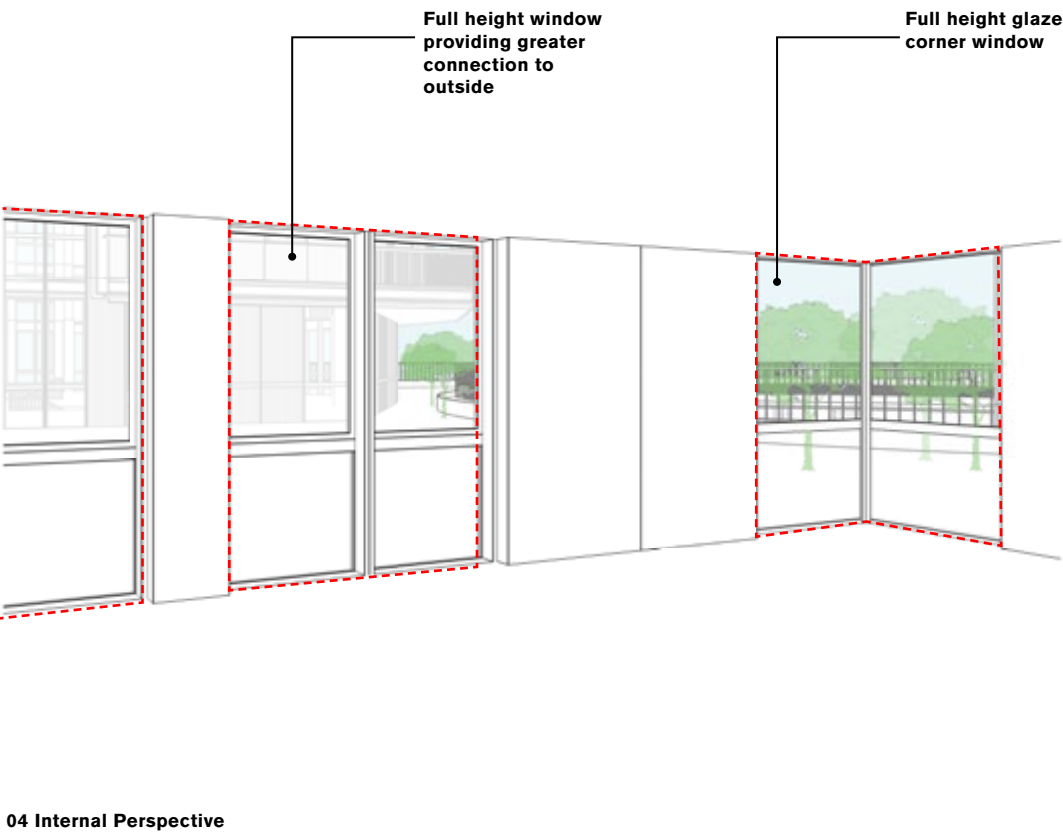
Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.



7.2.3 Paris Building Facade Design
Level 04



- Facade Element Key**
- 1. Profiled aluminium solid panel
 - 2. Openable window with profiled aluminium solid sill
 - 3. Fixed window with profiled aluminium solid sill
 - 4. Full height glazed panel with openable window
 - 5. Private amenity spaces with full height glazed swing door to access balcony.
 - 6. Ventilation panel
 - 7. Profiled horizontal metal spandrel
 - 8. Profiled horizontal 1.1m metal expression.



- Notes:**
- Great relationship between external and internal spaces.
 - Access around main edges of Paris level 04.
 - Green spaces and planters provide clear break in building typology .
 - Generous openings.
 - Structures, internal partitions and cladding system aligned.
 - Main design concepts expressed in both parts of building but both with their own identity.

7.2.3 Paris Building Facade Design
Typical Residential Level

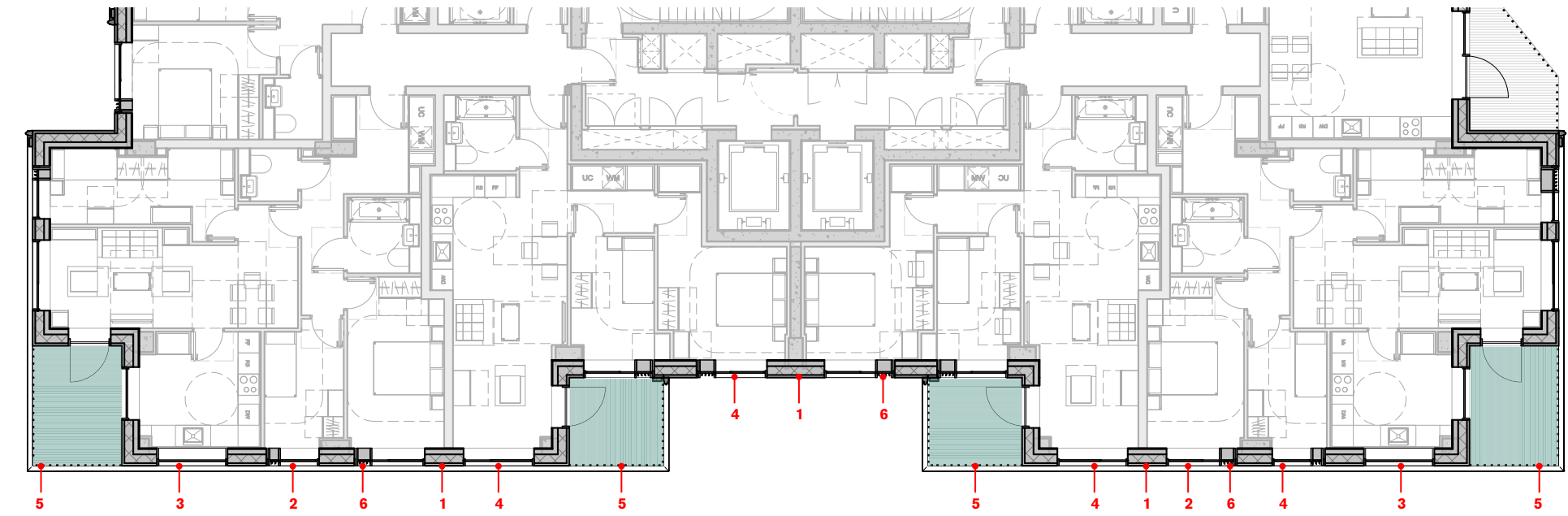
The typical Paris Building facades have been developed to respond to the proportions of individual residential units and articulated to express the residential nature of the building.

The cladding adapts to the site constraints. Acoustically attenuated vent panels have been applied to the bedroom spaces to allow for natural ventilation to the bedrooms whilst minimising exposure to excess noise.

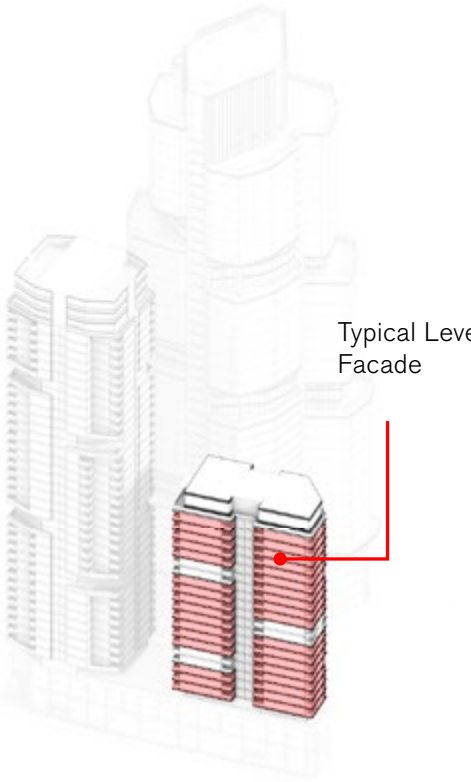
The glazed openings in the lower part of the building are larger, providing more daylight where the daylighting levels are typically lower. More solid panels are introduced towards the top to prevent overheating where the solar gain is highest. Generous full height glazing panels have been provided to all living spaces enhancing the natural daylight to these areas.

All living spaces benefit from being dual aspect and outdoor amenity space is provided to each apartment with access via full height glazed doors.

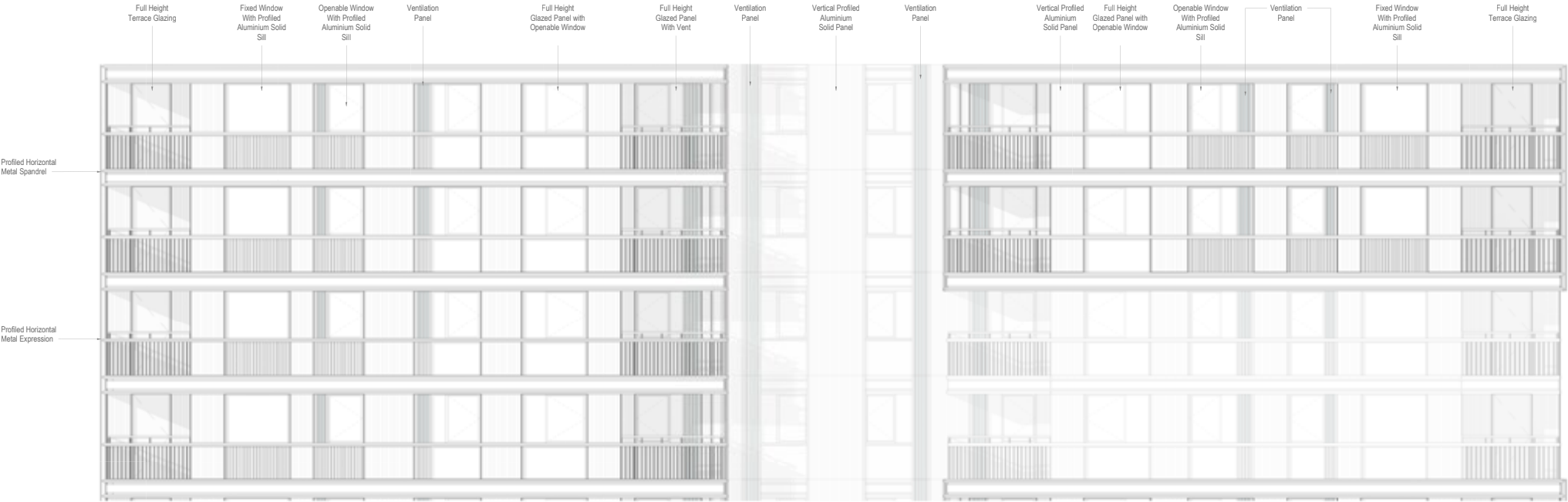
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Typical Level - Partial Plan
Private Amenity Space



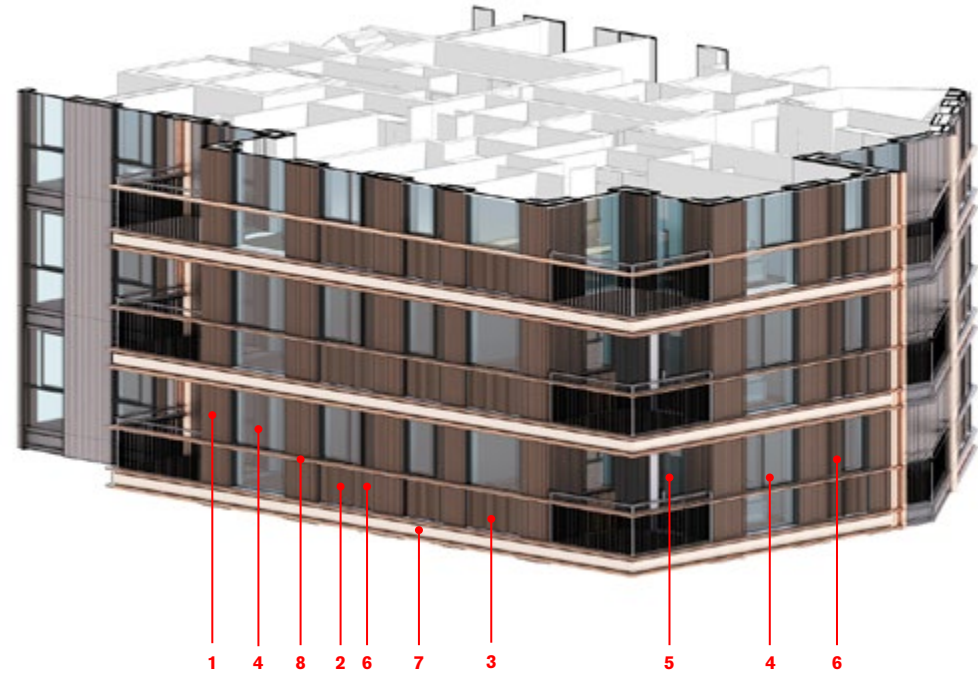
Facade Key



Partial West Elevation - Typical Levels

Typical Level - Partial Elevation

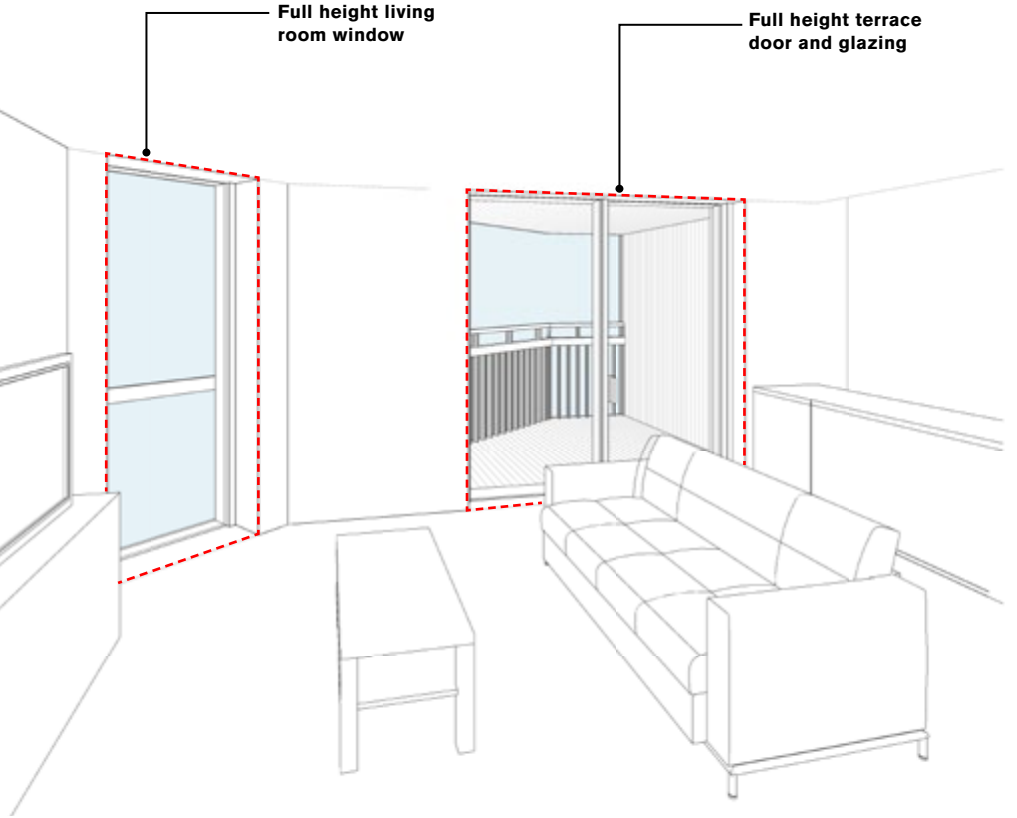
7.2.3 Paris Building Facade Design
Typical Residential Level



Cut-away Axo - Typical Level Paris

Facade Element Key

- 1. Profiled aluminium solid panel
- 2. Openable window with profiled aluminium solid sill
- 3. Fixed window with profiled aluminium solid sill
- 4. Full height glazed panel with openable window
- 5. Private amenity spaces with full height glazed swing door to access balcony.
- 6. Ventilation panel
- 7. Profiled horizontal metal spandrel
- 8. Profiled horizontal 1.1m metal expression.



Internal Perspective Paris

Notes:

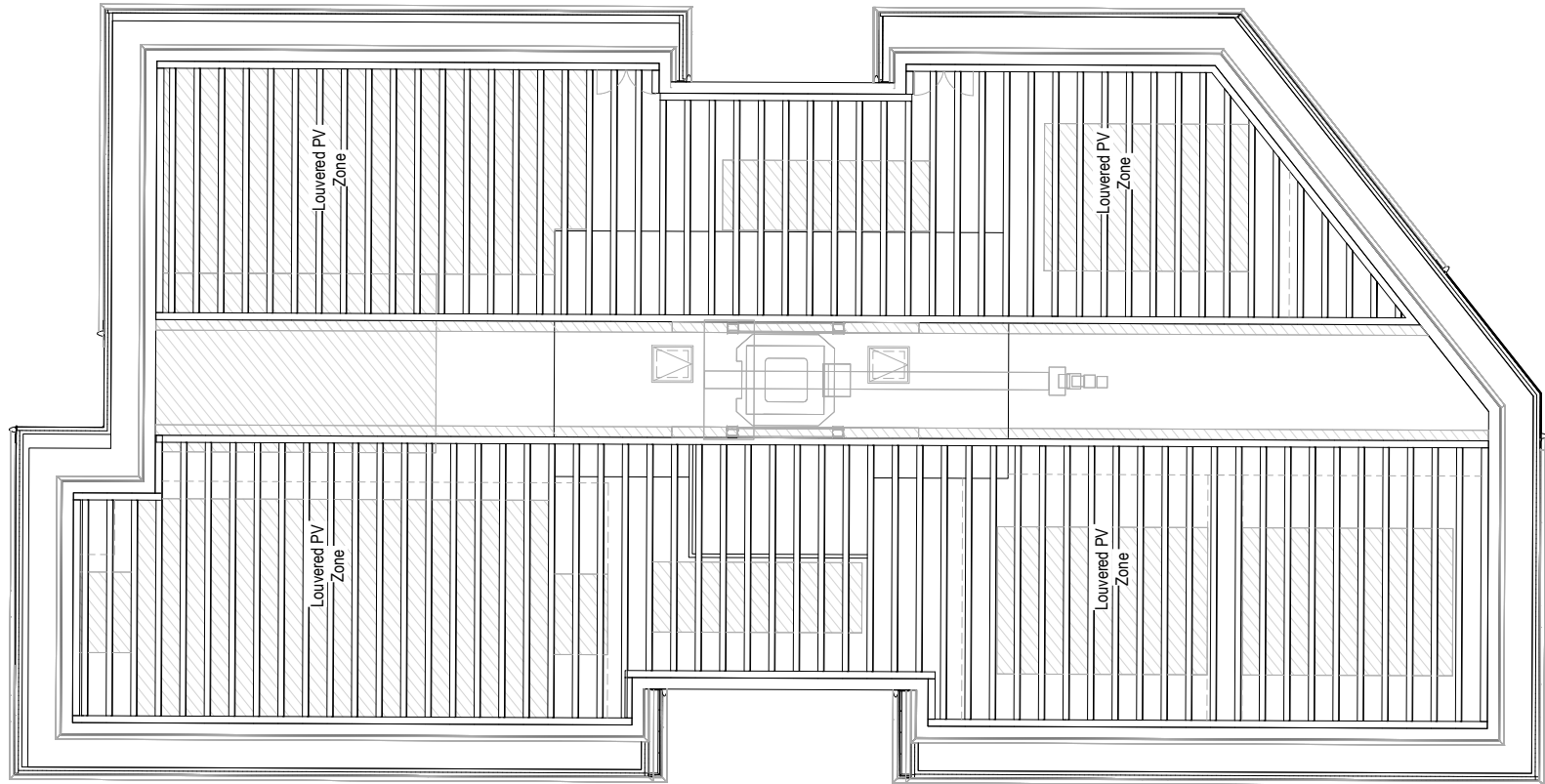
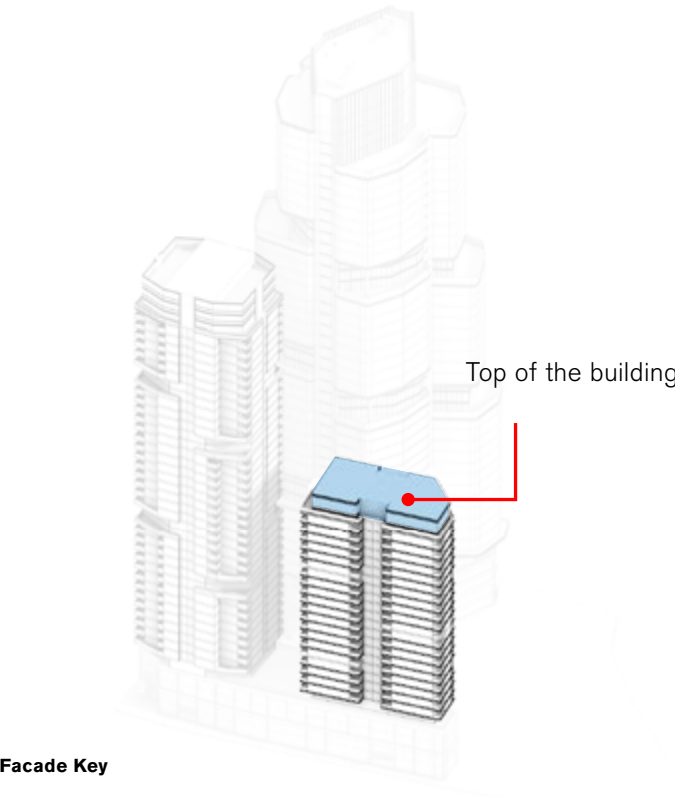
- Full height windows designed around views and living spaces.
- Generous openings.
- Structures, internal partitions and cladding system aligned.
- Facade responding to internal layouts, comfort requirements and sunlight/daylight requirements.

7.2.3 Paris Building Facade Design
Top of Building

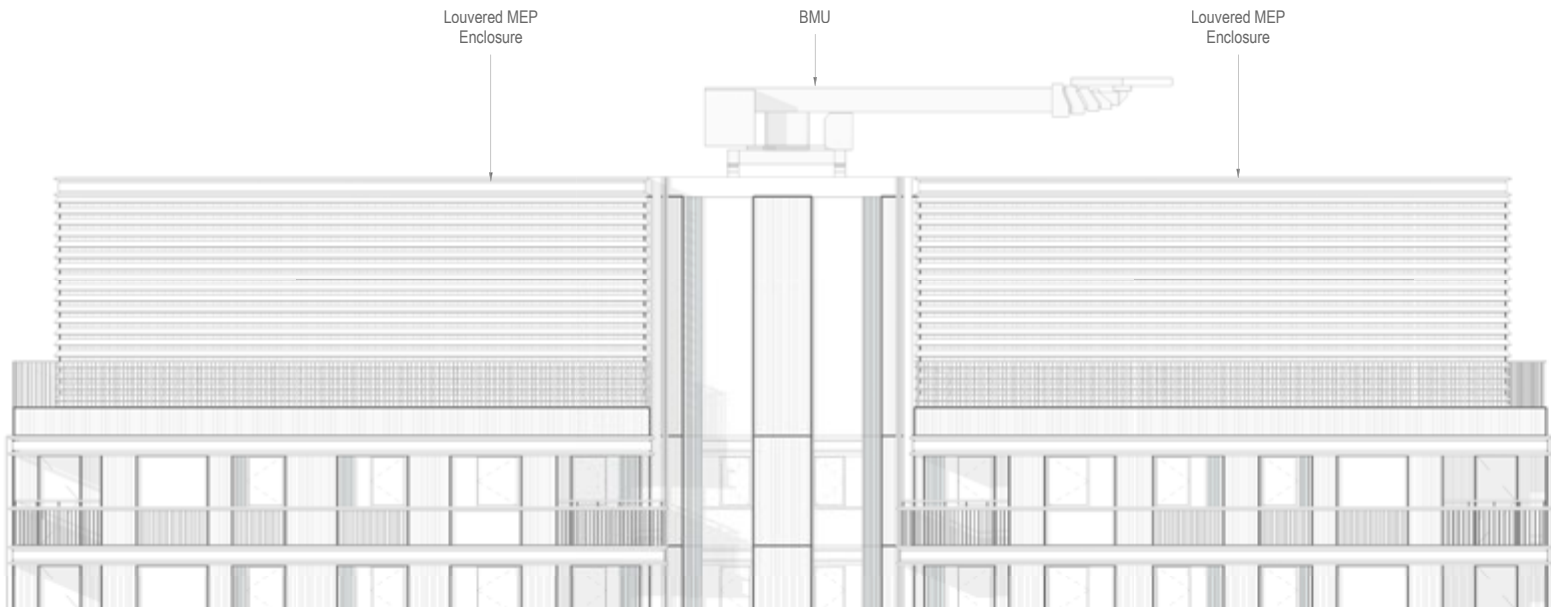
A similar architectural language has been utilised for all 3 tower tops by continuing the recessed massing elements into the top of the buildings. The top of the Paris Building consists of a metal louvred MEP enclosure creating an elegant finish to the top of the building whilst screening the MEP/plant that resides on the Paris Building roof top. This reduces the visual impact from the higher levels of the Stamford Tower and Office Tower.

The articulation, recessed geometry and choice of lighter materials ties the three tower tops together, reinforcing the design and creating a family of buildings.

Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.



Roof Plan



Top of Building - Partial Elevation

7.2.3 Paris Building Facade Design
Family of Buildings - Top of Buildings



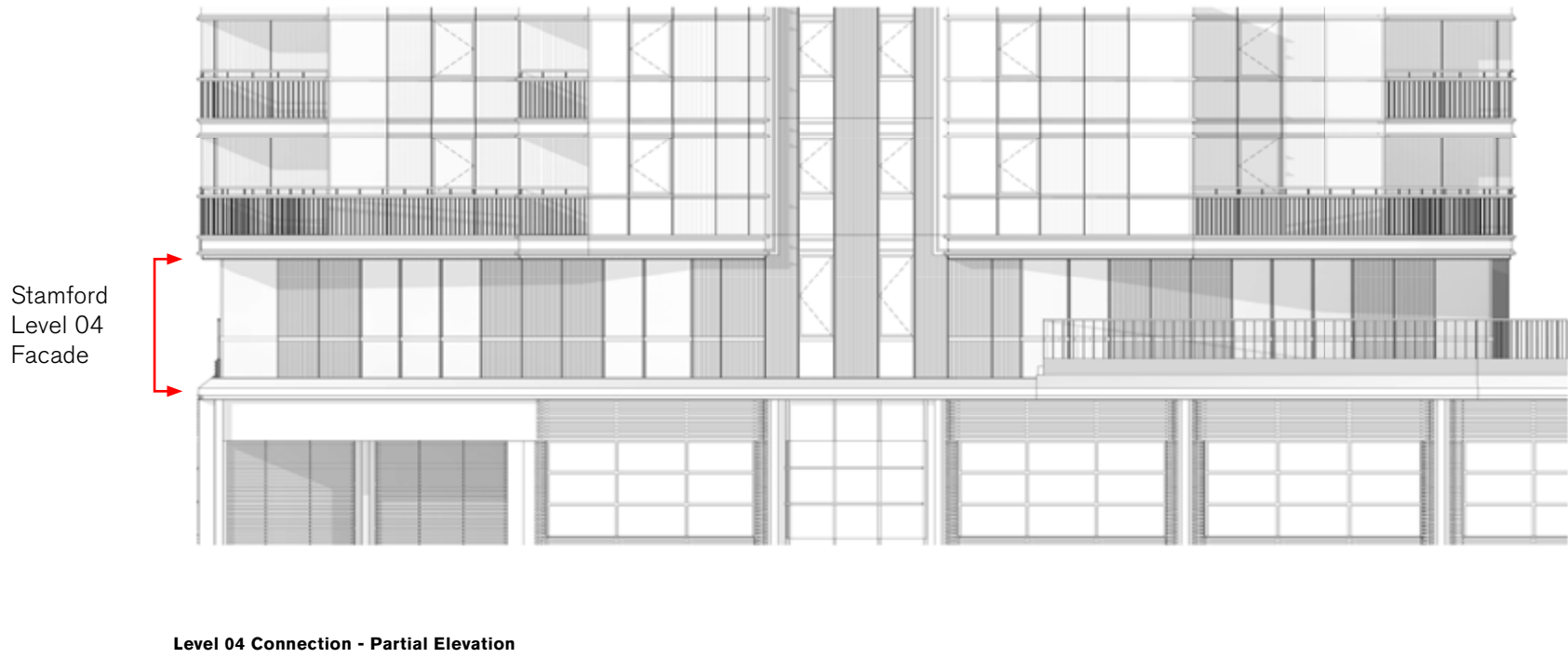
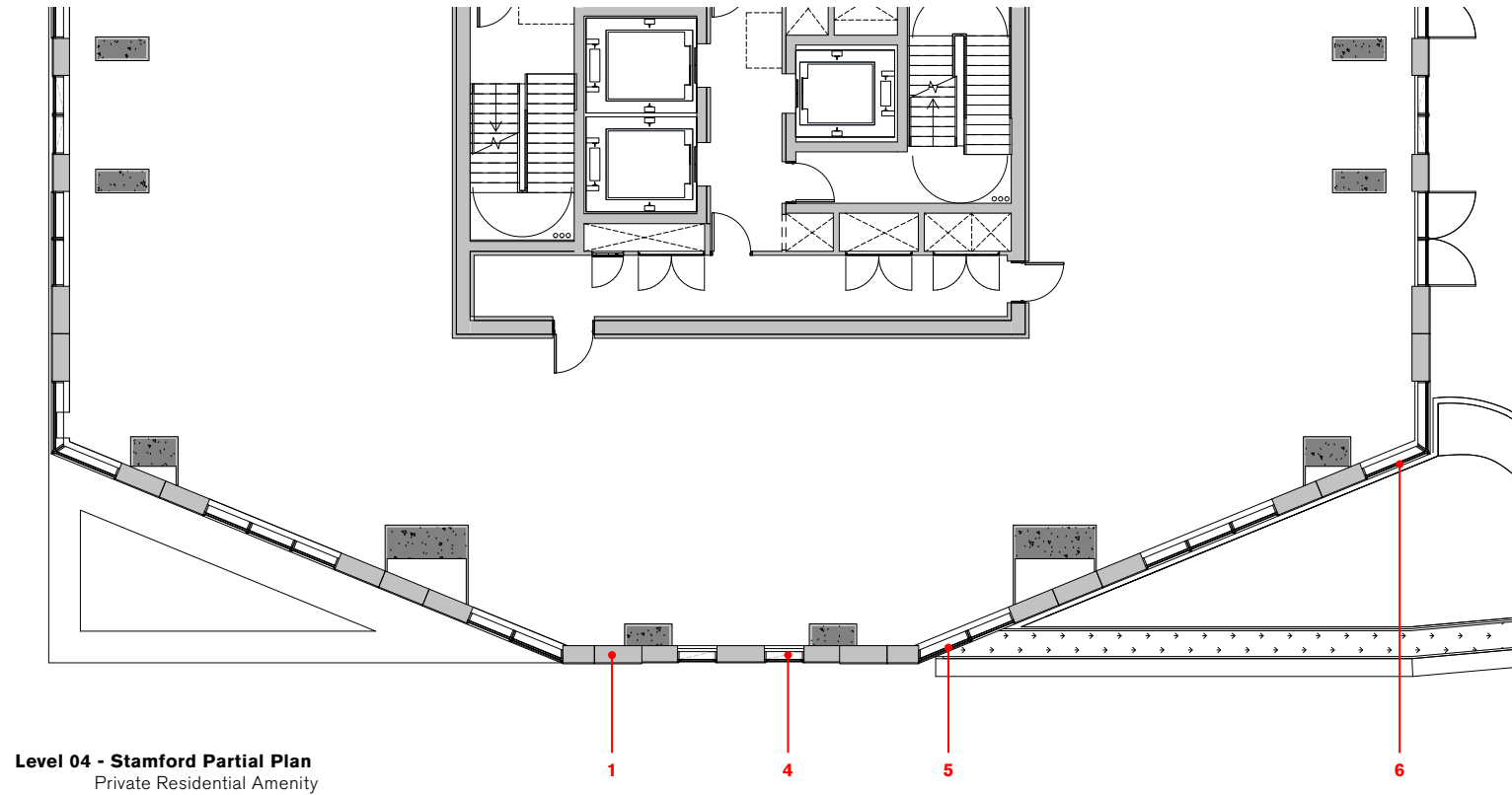
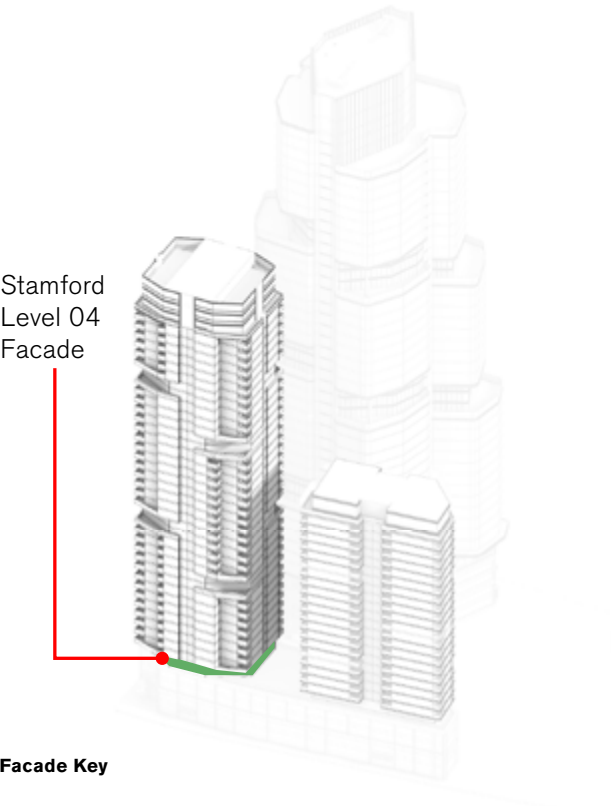
Complimentary architectural language

7.2.4 Stamford Building Facade Design
Level 04

Stamford Building Level 04 forms the base of the tower massing connecting it to the Podium levels. Much like the Paris Building the cladding outline of Level 04 is set back from the main facade line. For Stamford it follows the facade line of the duplex levels, located higher in the building, thus reading as a secondary element to the primary tower massing.

This transition space under Stamford accommodates private residential amenity for the Stamford Building residents. The space is surrounded by a landscaped terrace incorporating shared playspace to the south and gardens to the east. Large doors allow the space to open up to the landscaped terraces.

Final details of materials, colours and facades remain subject to detailed design and are anticipated to be subject to a planning condition.

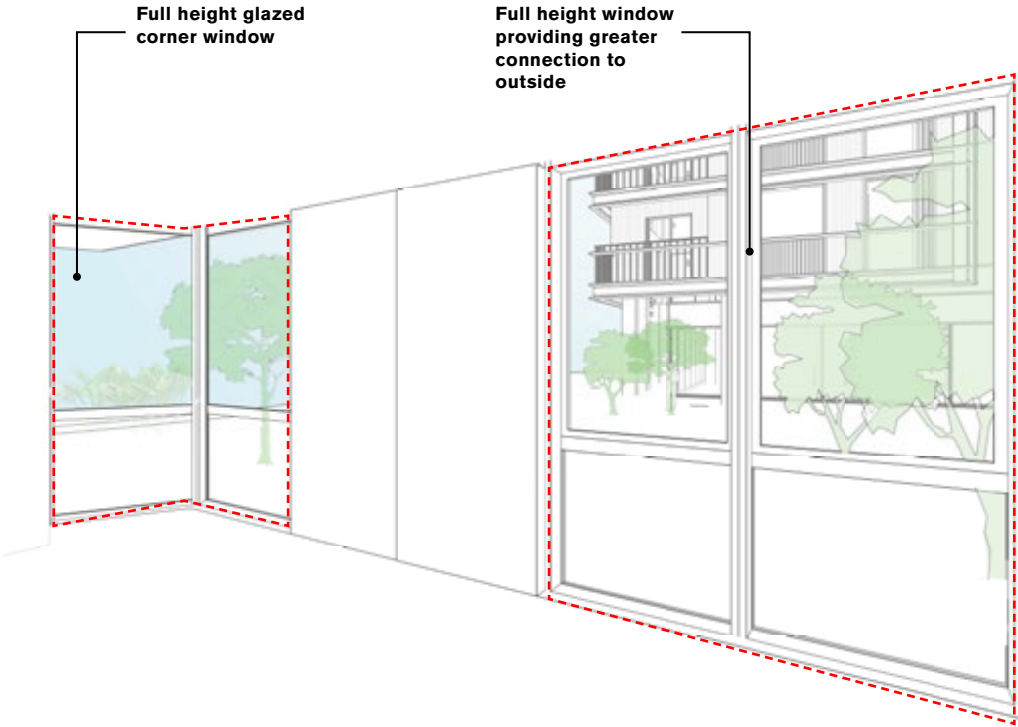


7.2.4 Stamford Building Facade Design
Level 04



Facade Element Key

- 1. Profiled aluminium solid panel
- 2. Openable window with profiled aluminium solid sill
- 3. Fixed window with profiled aluminium solid sill
- 4. Full height glazed panel with openable window
- 5. Fixed full height glazed panel
- 6. Fixed full height glazed corner panel
- 7. Private amenity spaces with full height glazed sliding door to access balcony
- 8. Profiled horizontal metal spandrel
- 9. Profiled horizontal 1.1m metal expression



Level 04 Interior Perspective

Notes:

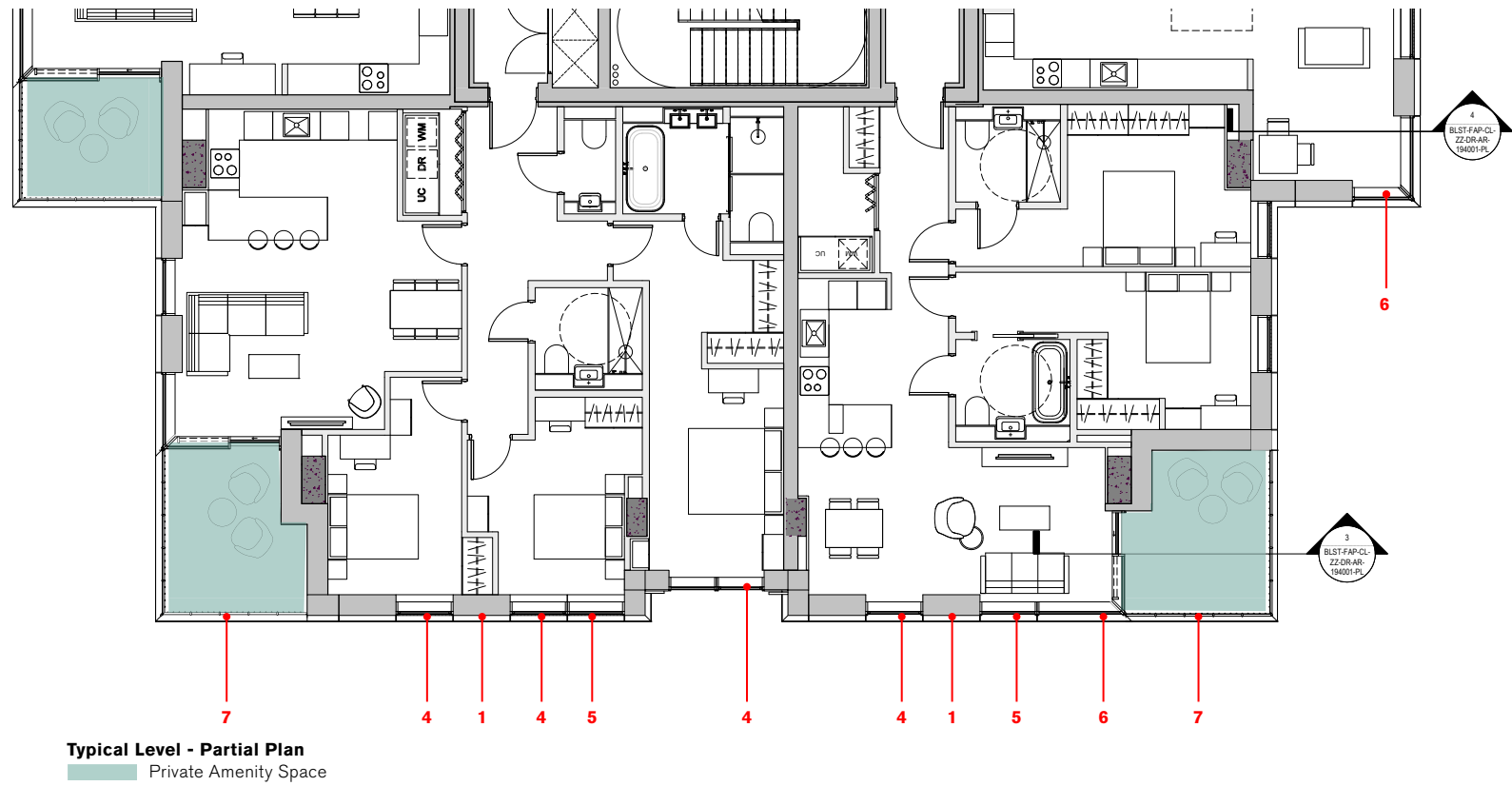
- Facade alignment with primary building recesses to provide podium level base to the tower.
- Large sliding doors to create excellent interconnectivity between internal and external spaces.
- Direct access to outdoor green space with high volume of planted areas.
- Adaptable layout and floorplan for a variety of uses.
- Structures, internal partitions and cladding system aligned.

7.2.4 Stamford Building Facade Design
Typical Residential Level

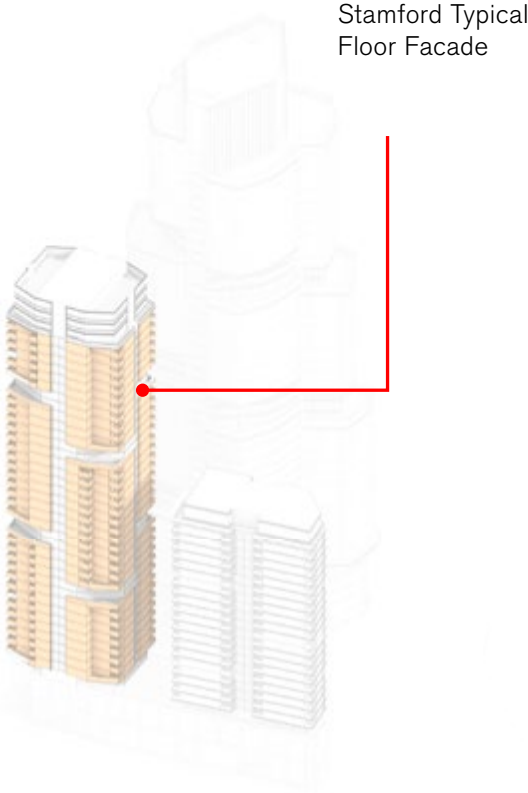
The typical Stamford Building facades have been developed alongside the Paris Building facades to maintain a similar language between the buildings. The cladding divisions on each elevation adapt to express the residential accommodation within.

The private residential amenity spaces are identified by balconies with sliding full height doors. Most living spaces benefit from full height glazed corners, adding quality and character. The glazed corners maximise views to the immediate context and specific London landmarks.

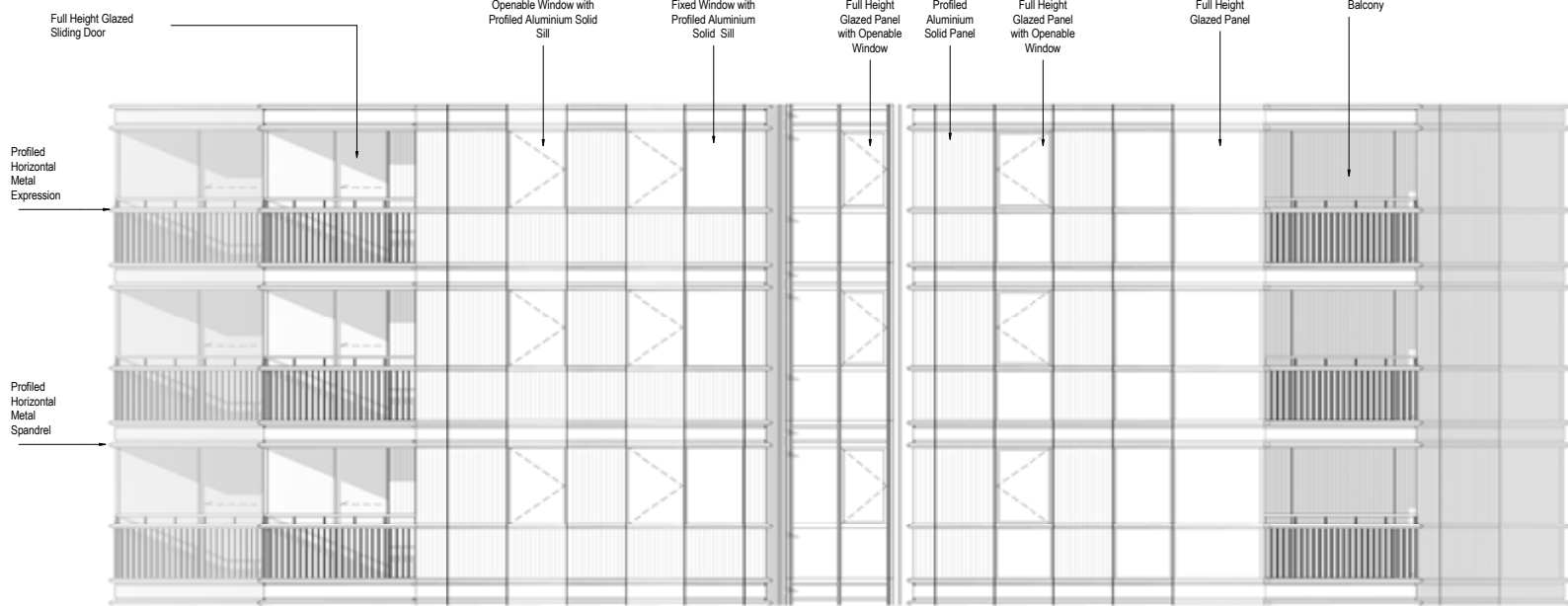
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Typical Level - Partial Plan
Private Amenity Space

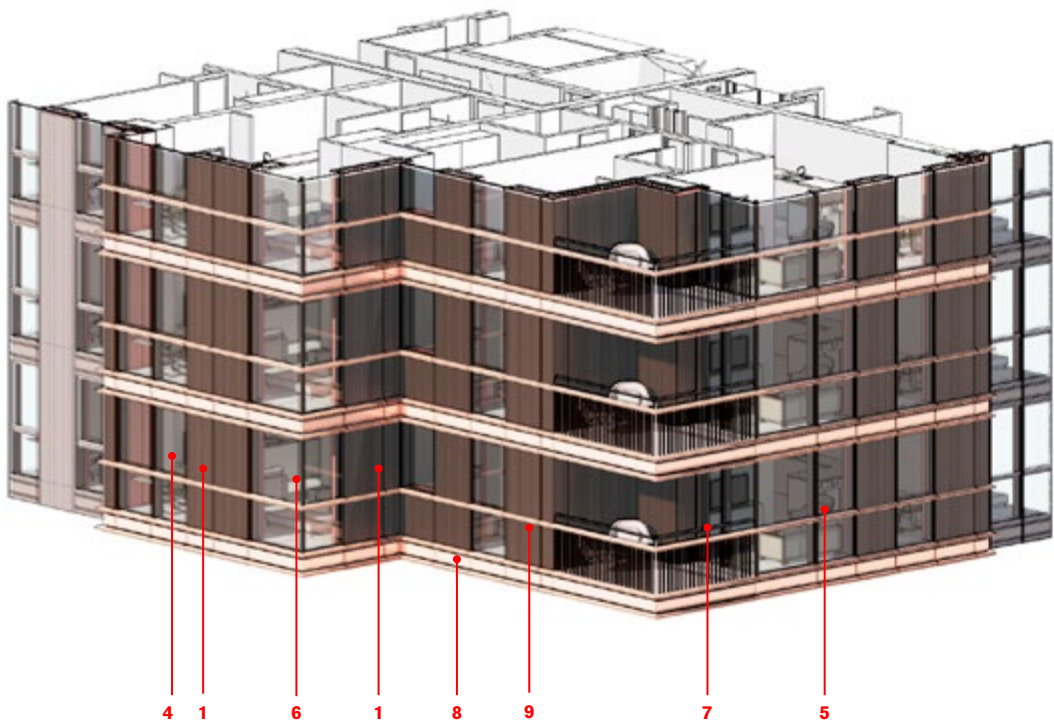


Facade Key



Typical Level - Partial Elevation

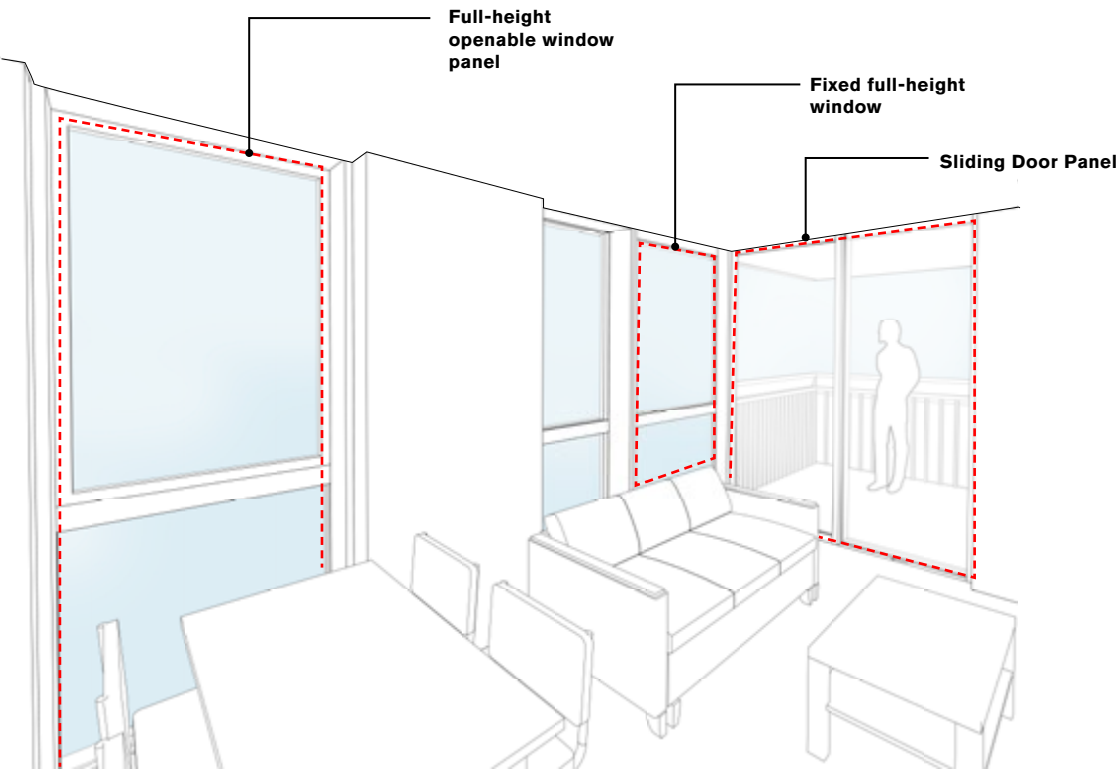
7.2.4 Stamford Building Facade Design
Typical Residential Level



Cut-away Axo - Typical Level Stamford

Facade Element Key

1. Profilled aluminium solid panel
2. Openable window with profilled aluminium solid sill
3. Fixed window with profilled aluminium solid sill
4. Full height glazed panel with openable window
5. Fixed full height glazed panel
6. Fixed full height glazed corner panel
7. Private amenity spaces with full height glazed sliding door to access balcony
8. Profilled horizontal metal spandrel
9. Profilled horizontal 1.1m metal expression



Internal Perspective Stamford

Notes:

- Strong visual connection to external spaces with generous openings.
- Glazed corner windows provide high quality views out and increase daylighting to maximise the dual aspect nature of the apartments.
- Full height glazed panels with inward opening windows set at 1.1m high to improve safety.
- Structures, internal partitions and cladding system aligned.
- Facade responding to internal layouts, comfort requirements, and sunlight/daylight requirements.

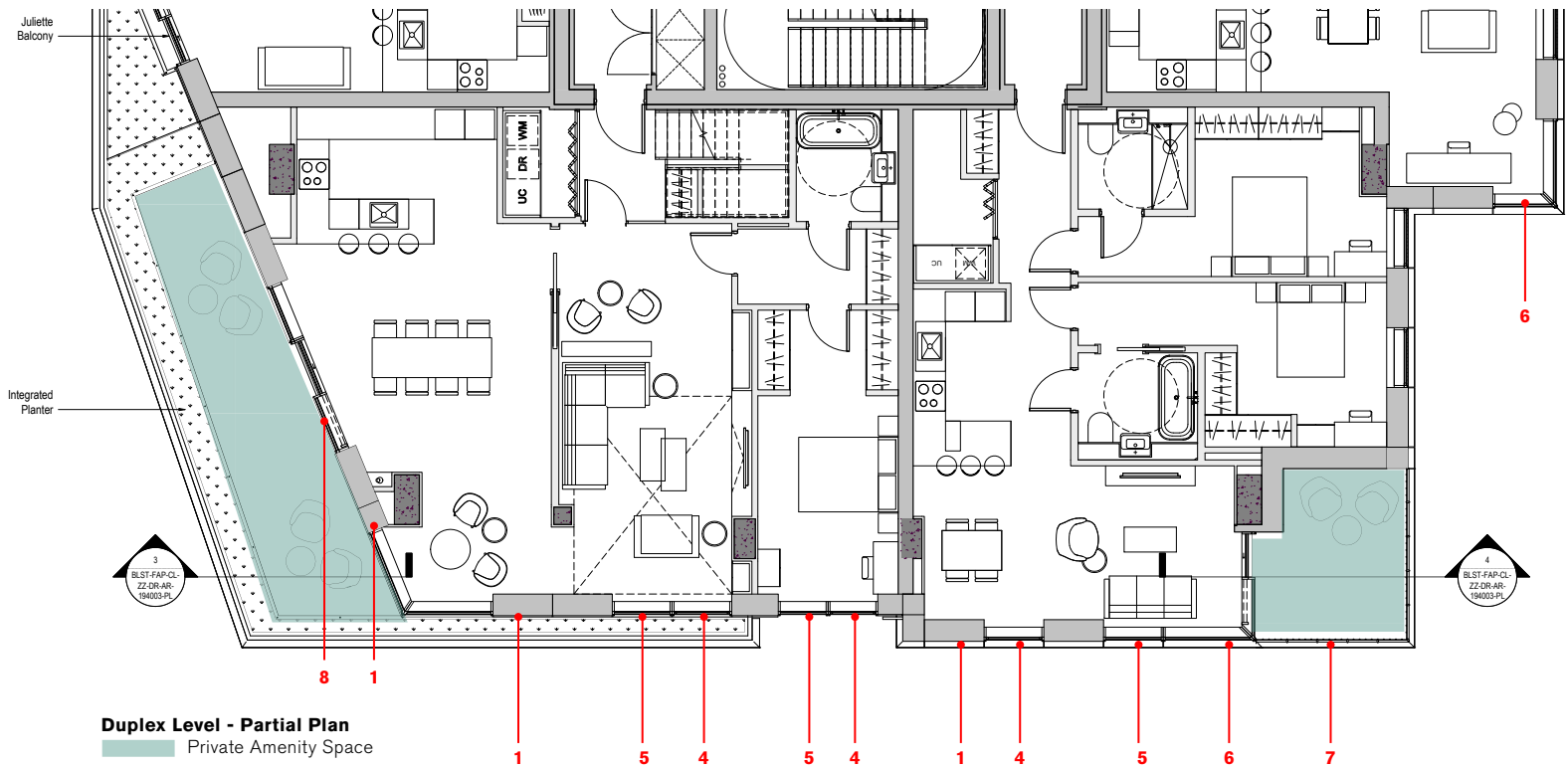
7.2.4 Stamford Building Facade Design
Typical Duplex Level

At the duplex levels, the facade line is recessed from the main facade creating double height breaks in the elevations. This divides up the vertical expression of the building, creating slender proportioned facades.

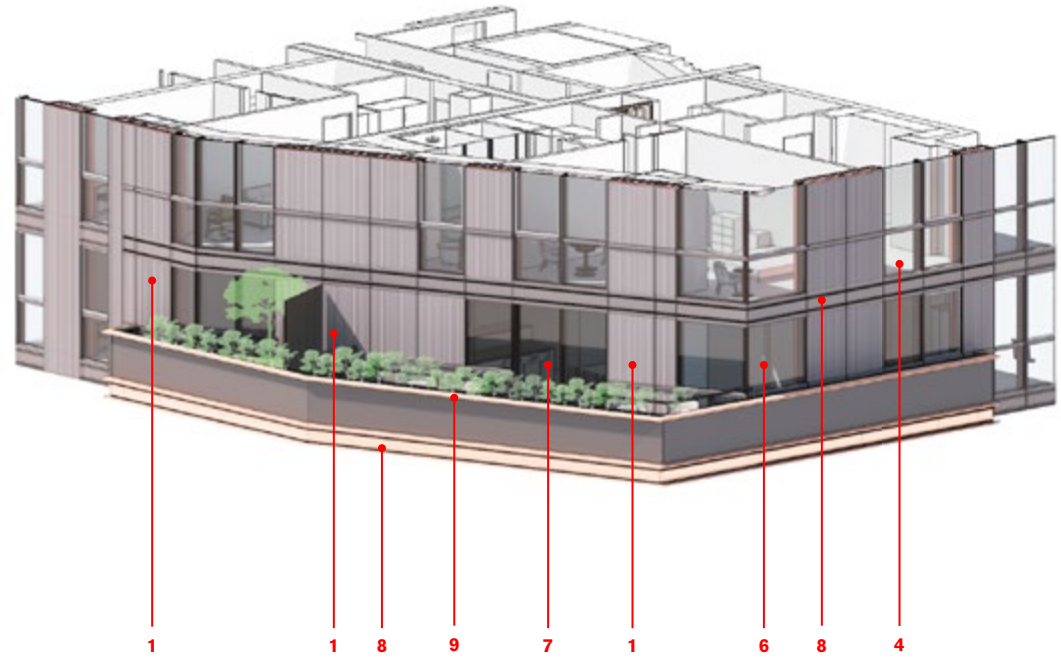
The breaks consist of lighter materials and with more glazing with the intent for the facade to contrast with the textured cladding of the building. On the lower duplex level, the terrace space is outlined by a wrap around built in planter.

Refer to the Chapter 8 Landscape, for further information regarding the integrated planting strategy.

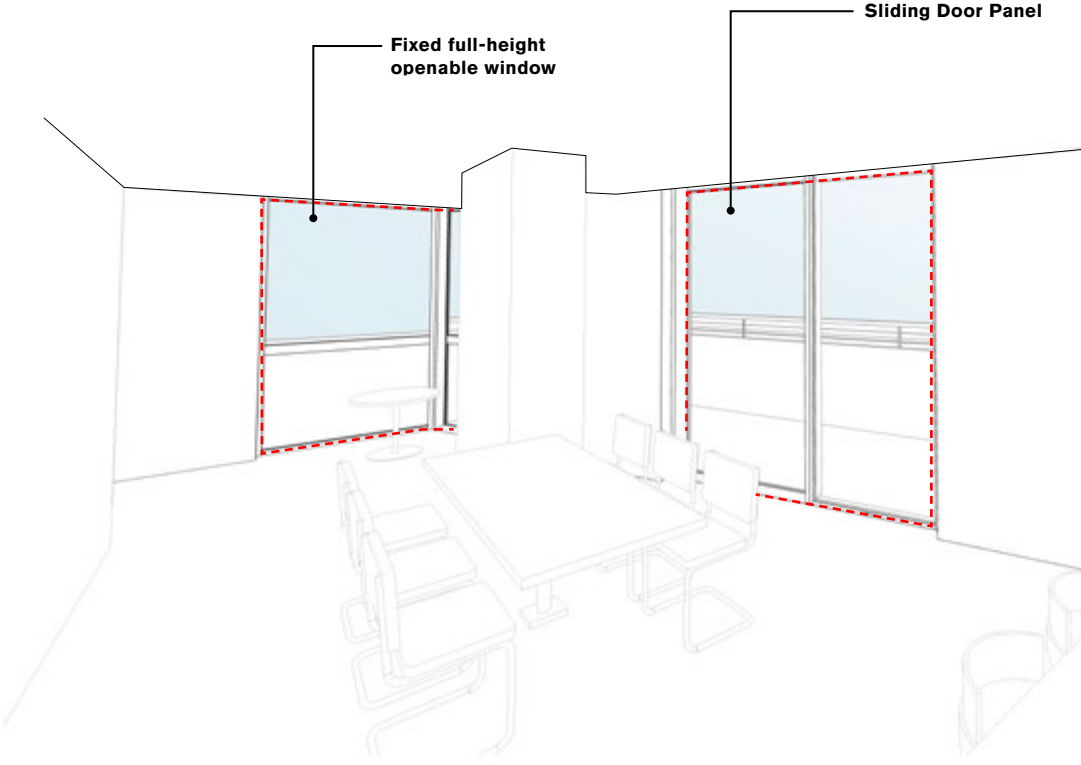
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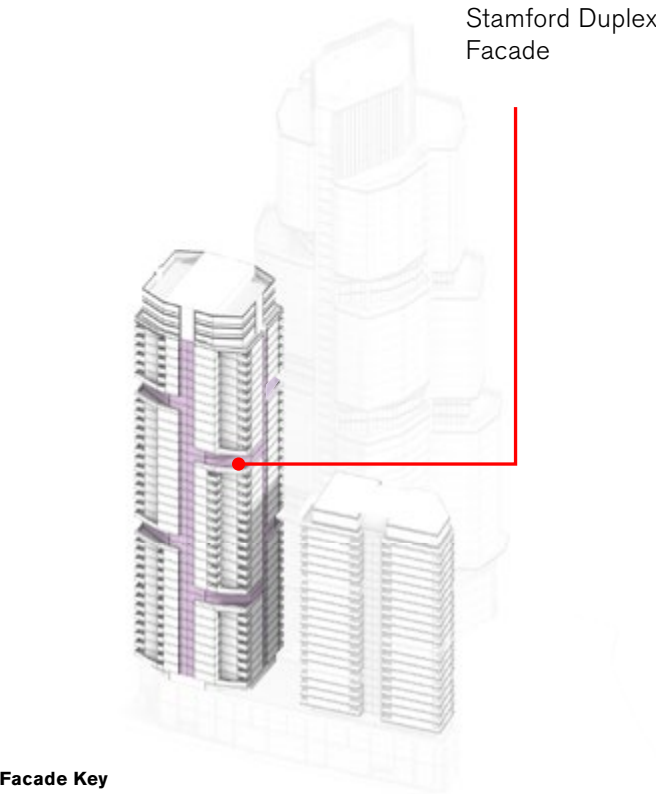
Duplex Level - Partial Plan
Private Amenity Space



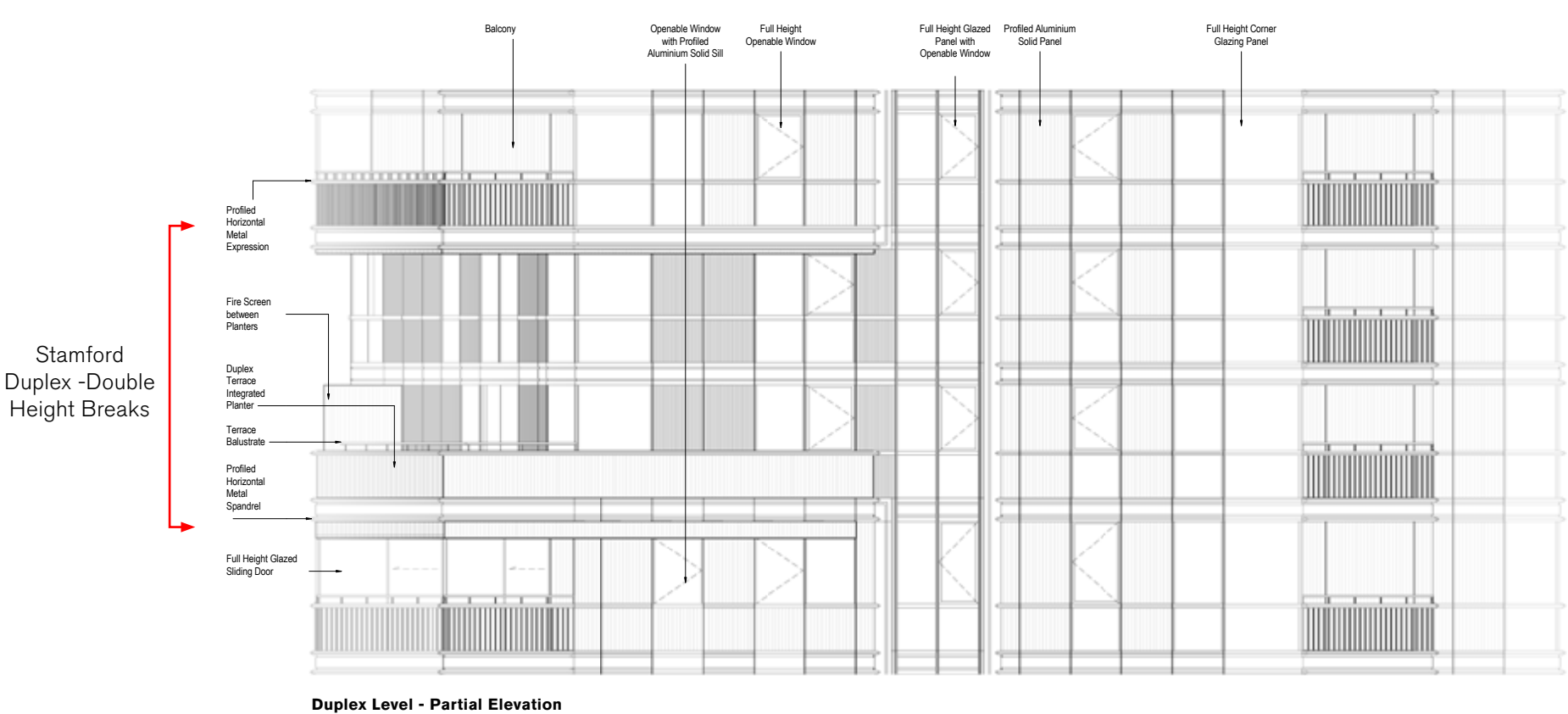
Cut-away Axo - Stamford Building Typical Duplex Level



Internal Perspective



Facade Key



Duplex Level - Partial Elevation

Facade Element Key

1. Profiled aluminium solid panel
2. Openable window with profiled aluminium solid sill
3. Fixed window with profiled aluminium solid sill
4. Full height glazed panel with openable window
5. Fixed full height glazed panel
6. Fixed full height glazed corner panel
7. Private amenity spaces with full height glazed sliding door to access balcony
8. Profiled horizontal metal spandrel
9. Profiled horizontal 1.1m metal expression

Notes:

- Corner windows to living spaces.
- Large outdoor terrace spaces with integrated planters to improve access to outdoor amenity space and plants.
- Generous openings for increased interconnectivity between inside and out.
- Structures, internal partitions and cladding system aligned.
- Facade responding to internal layouts, comfort requirements, and sunlight/daylight requirements.
- Privacy screen between terrace planters to improve privacy until plants have matured.

7.2.4 Stamford Building Facade Design

Top of Building

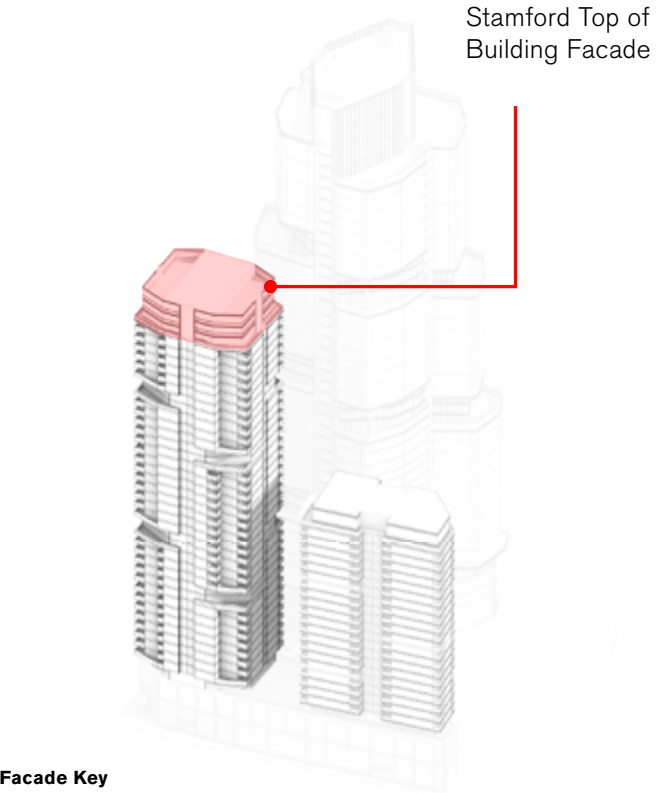
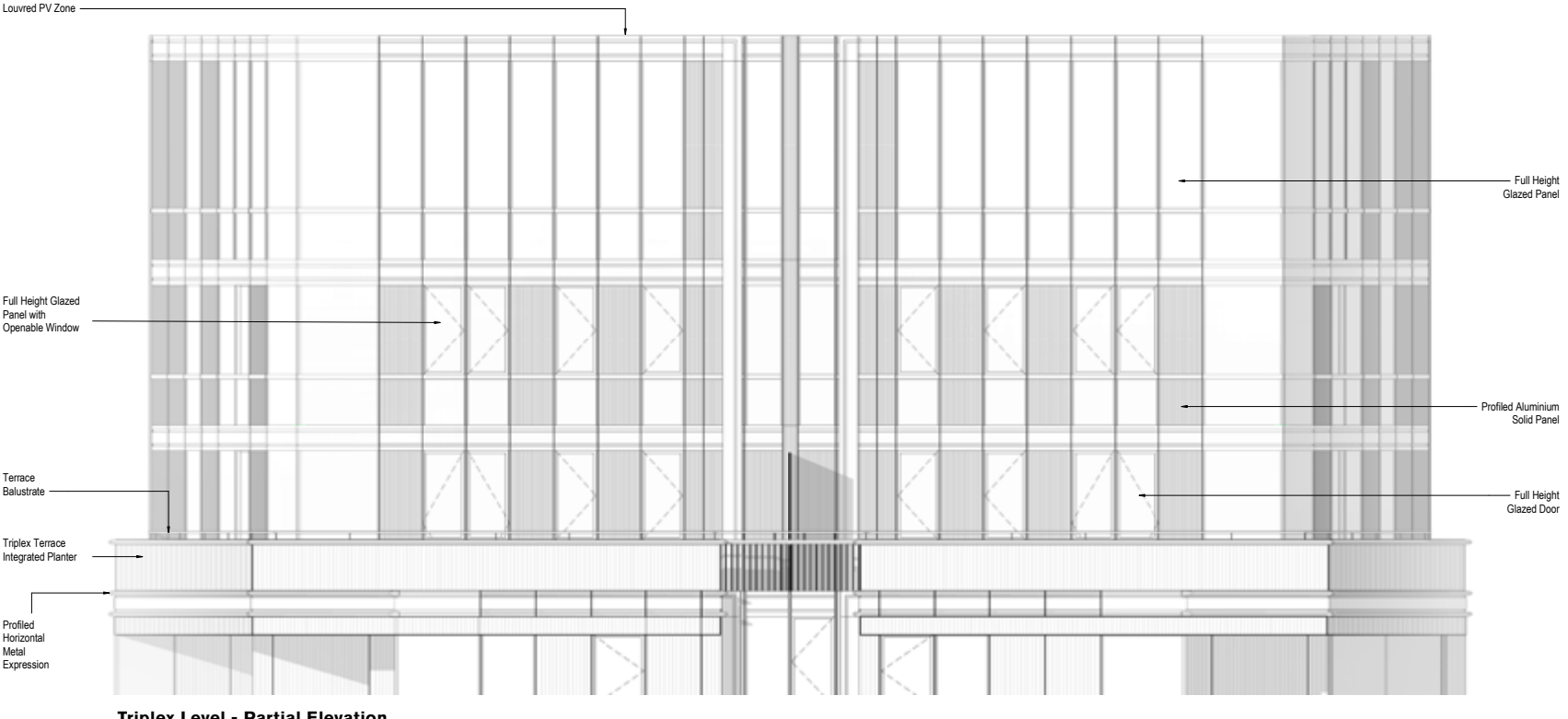
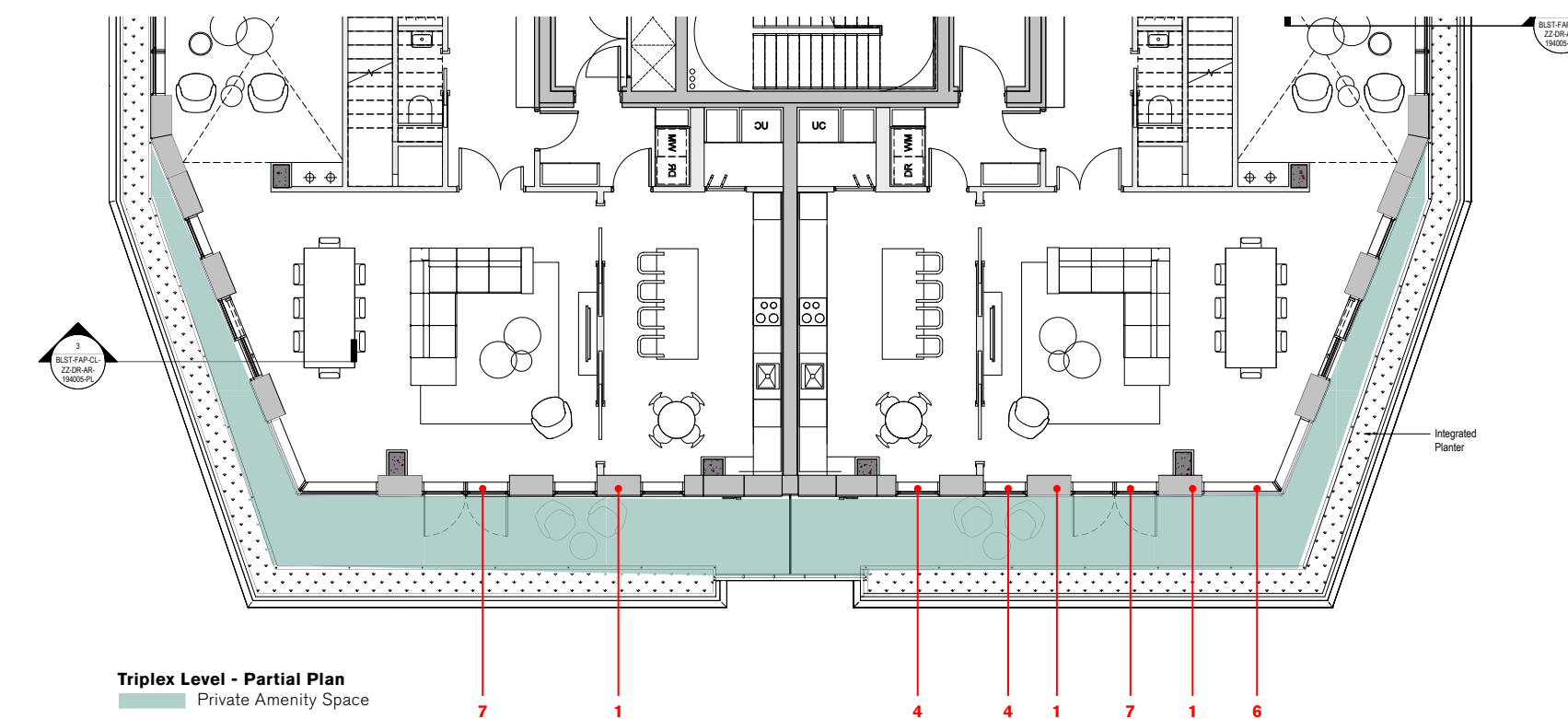
The top of the building sets back from the main façade and continues the language of the duplex levels and recesses of the building, while aiming to maximise transparency for views out.

The height of the lift overruns at the top of the building has been carefully coordinated to sit within the triplex apartment typology while also incorporating the building maintenance unit (BMU) and plant areas at the top of the building. At the lower level of the triplex apartments, the terrace space is animated by an integrated wrap-around planter.

The upper level terrace incorporates a highly glazed facade to help blend the top of the building in the sky. A louvred roof is provided to the top of the building that incorporates PV panels.

Refer to the Landscape Chapter for further information regarding the integrated planting strategy.

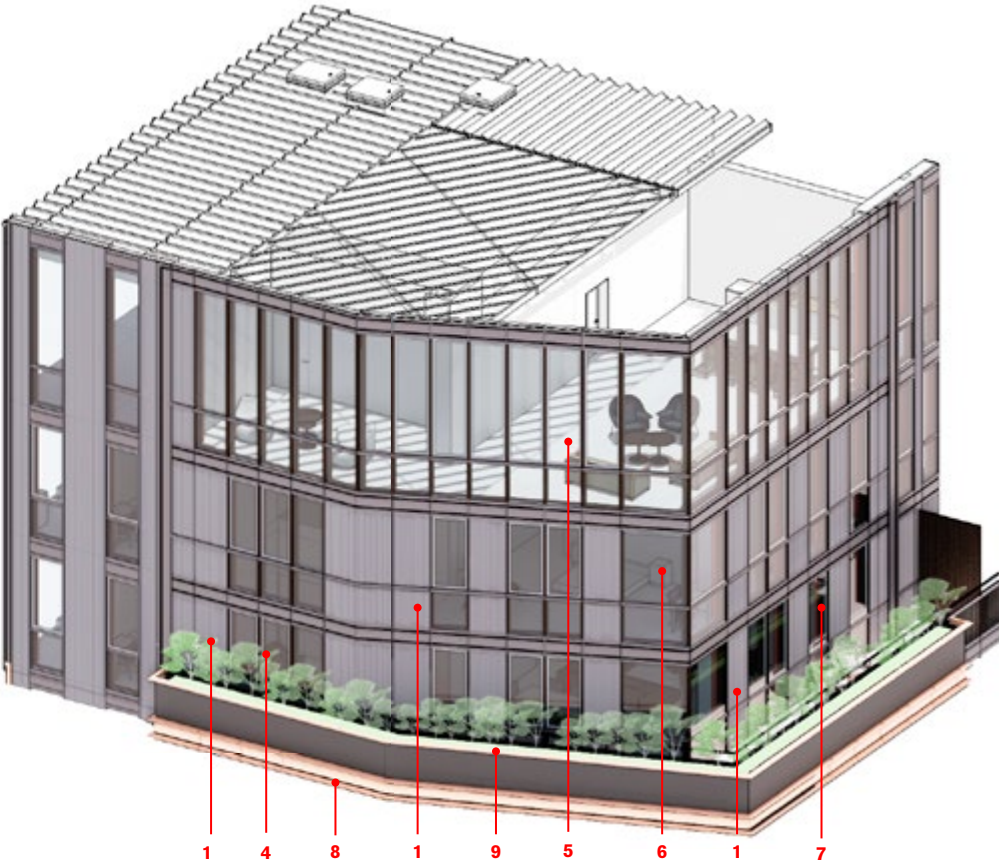
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Facade Key

7.2.4 Stamford Building Facade Design

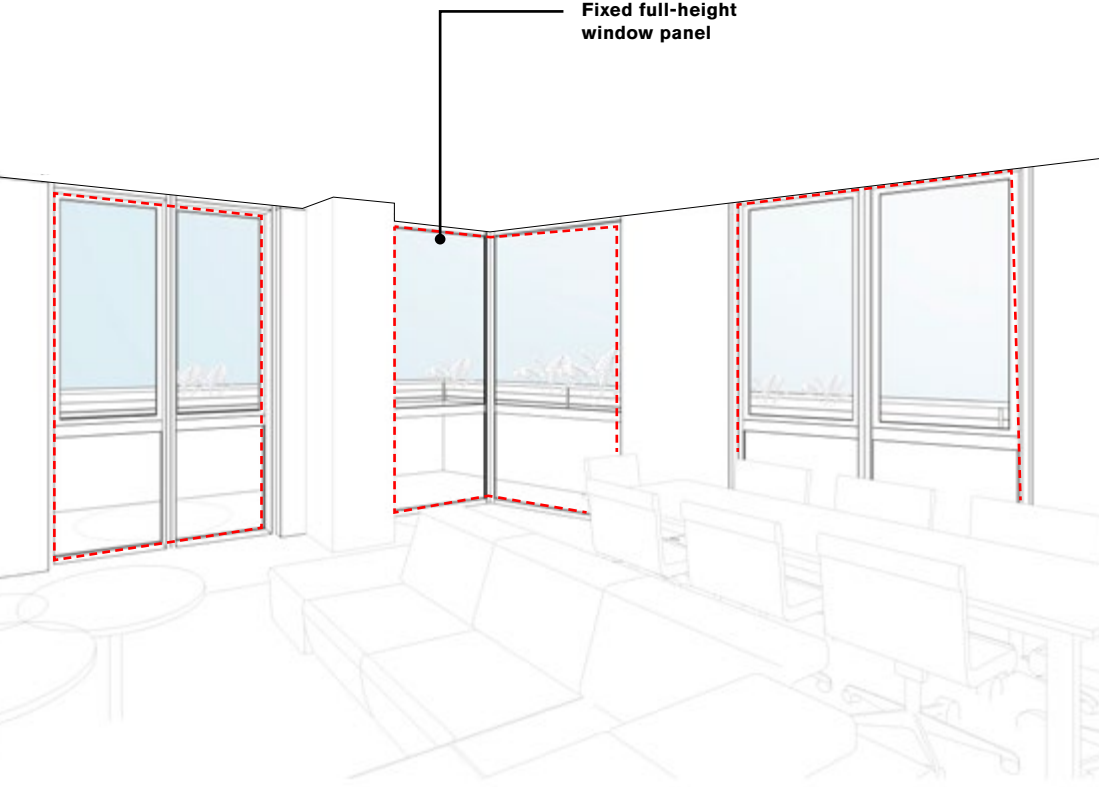
Top of Building



Cut-away Axo - Stamford Tower Top of Building

Facade Element Key

- 1. Profiled aluminium solid panel
- 2. Openable window with profiled aluminium solid sill
- 3. Fixed window with profiled aluminium solid sill
- 4. Full height glazed panel with openable window
- 5. Fixed full height glazed panel
- 6. Fixed full height glazed corner panel
- 7. Private amenity spaces with full height glazed sliding door to access balcony
- 8. Profiled horizontal metal spandrel
- 9. Profiled horizontal 1.1m metal expression



Internal Perspective

Notes:

- All tower tops to relate to one another creating a family of buildings.
- Lighter massing approach towards all tops.
- Increased glazed top level to create a lighter feel that merges with sky .
- Plant areas and BMU hidden between terrace spaces.
- Living space level of apartments provide indoor and external amenity space with wrap around planters to increase level of green space.
- Large opening windows to provide inter connectivity between inside and out.

7.2.5 Residential Facade Design Drivers
Facade Design Drivers and Requirements

The following performance drivers have all contributed to the development of the facade design. Many of these drivers compete against each other, therefore requiring a fine balance between all whilst ensuring a high quality of design throughout.

Thermal Performance
New targets for Part L, require a reduced U-value in certain areas. Notably in glazing where the comparative target is now 1.2.

This has had a direct impact on the design of the residential facades as the percentage of glazed areas is much less than would have been possible under previous requirement. Glazing position has been carefully studied to maximise its use. In addition to less glazing, additional insulation will need to be provided in the solid areas to offset U-values in glazed areas to meet the new requirements.

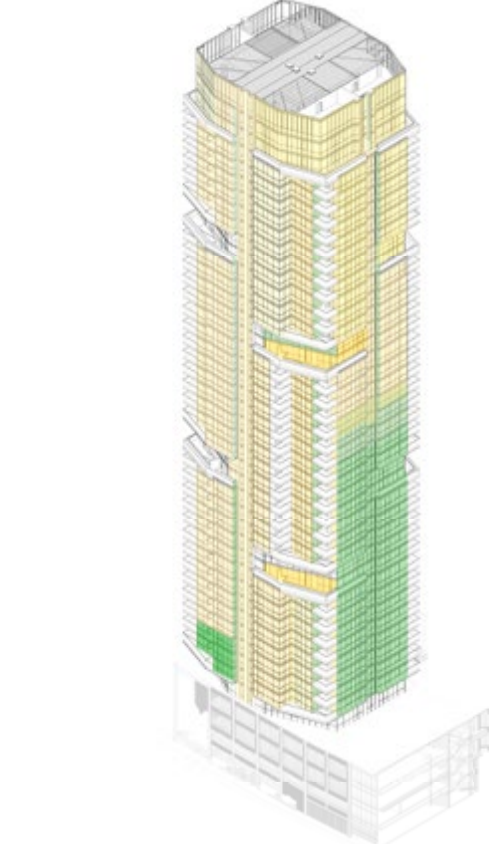
Table with 4 columns: Component, AD L 2013, AD L 2021, AD L 2021 (Notional building). Rows include Roofs, Wall, Glazing, Curtain walling, and Default U-value. Includes small diagrams of window and wall sections.

The table above, produced by ARUP, outlines the building regulation changes in thermal performance for residential buildings over the last 10 years.

Solar Performance
The Building Regulations, Part O requires the facade to be designed to limit unwanted solar gains during the summer. For this is to be achieved the solar gain on the buildings has been analysed and the window to wall ratio adjusted accordingly to reduce solar gain inside apartments.

Solar analysis was carried out on all the buildings. The design cleverly introduces more solid areas where the site constraints require it, adapting to the overall site aiming to provide comfort for the end users. Cleverly reducing the glazing area for the building is achieved without having an impact on day lighting for the apartments and without affecting key views out of the building.

The glazing proportions and size of openable areas of the facades have been designed to reduce solar gain and enhance natural ventilation. Mechanical systems have been designed to provide enhanced ventilation rates and internal heat gains have been minimised.



Example - Solar Analysis interpreted from Arup analysis.

Daylighting & Views
New daylighting requirements for each room will need to be achieved. Overshading of surrounding buildings has a particular impact on this. Larger windows provide better views and daylight which needs to be balanced with overheating and thermal performance.

As the design has progressed, daylight levels on multiple levels have been tested to understand how the apartments perform. This has informed several iterations of unit layouts to find the best solution for sunlight daylight levels.

As a result, living areas, where daylight is generally considered more important, have been located in the areas of greater daylight availability (typically on the corners of the building to also provide a dual aspect room). Balconies have been reshaped in order to minimise overshading caused to the windows below.

A fine balance has been deduced between the amount of glazing we can provide for the apartments without causing overheating issues. This is also represented in the elevations showing more solid sills higher up the building where the day lighting results are much better.



Example daylight analysis from daylighting consultant

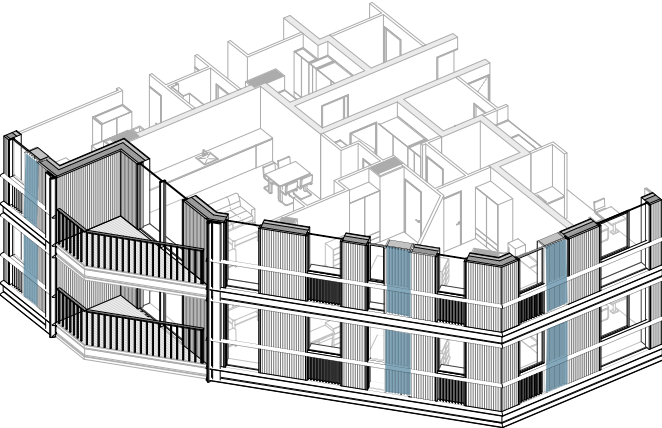
7.2.5 Residential Facade Design Drivers
Facade Design Drivers and Requirements

Ventilation
Part O of the Building Regulations, introduced in June 2021, sets regulatory standards for control of overheating in new residential buildings through limiting solar gains and providing means to remove heat from indoor spaces. The design requirements for ventilation are set out with the need for all the apartments to achieve compliance with the requirements of TM59 and Part O.

The ventilation strategies for both residential buildings allow for inward opening windows in all rooms. All the windows have been sized to meet the correct purge ventilation requirements but cross checked against solar gain and thermal requirements to optimise the building performance. Each window has an opening restricter for safety and no window sill is less than 1100mm from the floor.

Ventilation in both buildings is supplemented by mechanical MVHR systems to enhance the comfort for users. Where it is unavoidable to rely on closed windows to achieve environmental noise standards, there must be a suitable alternative means of ventilation which is sufficient to adequately control excess heat in the summer months.

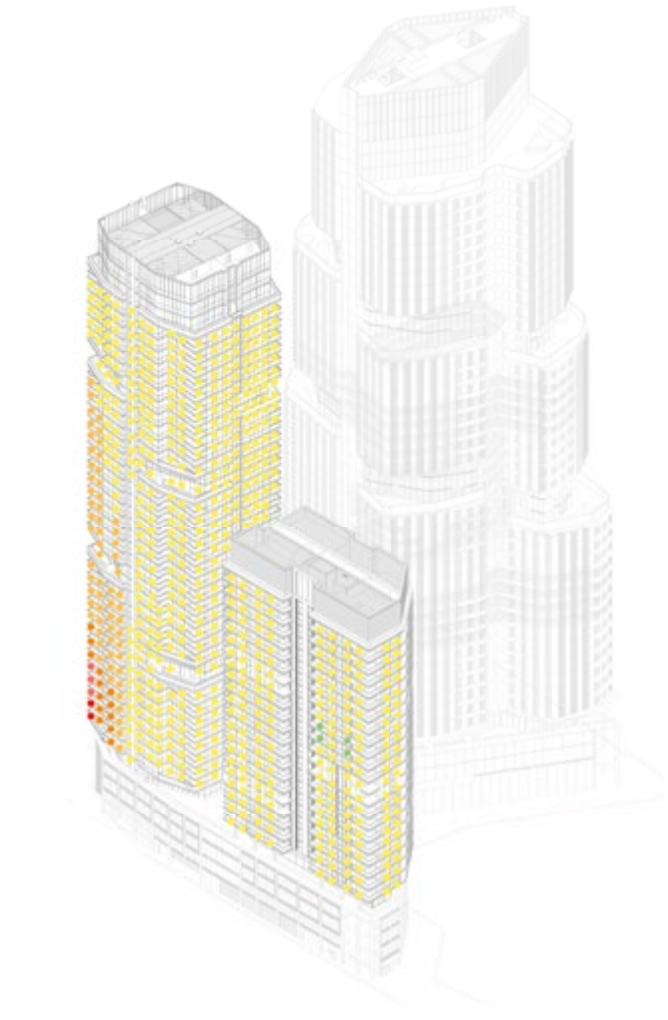
For the Paris Building we are using a natural ventilation strategy. The natural ventilation strategy provides comfortable internal conditions without comprising the acoustic quality of the space. This is done by providing acoustically attenuated vents that allow the users to keep the windows closed but still receive sufficient amounts of natural ventilation. Noise analysis (right) was used to assess the location of attenuated vents.



Paris South East facade full height acoustic vents.

Acoustic requirements
Site analysis testing was carried out to assess the noise levels to all building facades. This has informed the design of the facades to mitigate the impact of noise on internal spaces. Blackfriars Road has much higher noise levels as a result the Paris Building has been strategically located away from this allowing for the use of a natural ventilation strategy to be employed.

Acoustically attenuated vents provide natural ventilation to cool the apartments whilst mitigating the noise pollution. A series of analysis throughout the design process has optimised the design in regards to thermal, acoustic, ventilation and overheating.



Example - Acoustic diagram interpreted from Arup analysis.

Embodied carbon and operational carbon
From the outset of the project, sustainability has been a main driver for the design development. The facade is designed to achieve a high performance, minimise the operational carbon and respond to the different conditions associated with orientation and climate.

Build-ability
Due to the scale differences between the two residential buildings, different construction methods will be used to safety and build-ability reasons. Stamford facade is expected to be built with a unitised system while Paris facade is expected to be a rainscreen system.



7.2.6 Residential Facade Design Elevations

West Elevation



7.2.6 Residential Facade Design Elevations

North Elevation



