

# 6.8 Tower Facade Articulation Evolution

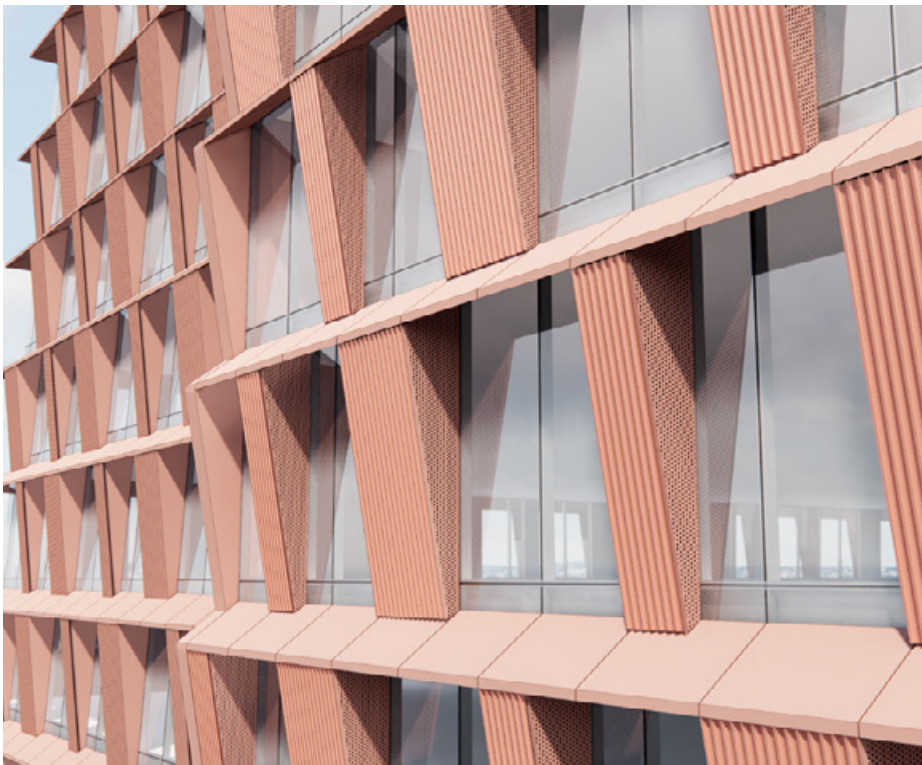
## Tower Facade Articulation Evolution (December 2023 Planning Application)

As part of the design process, the evolution of the facade design for the December 2023 planning application was influenced by considerations of ventilation, solidity, and thermal performance. The target was to create a facade that not only integrates natural ventilation but also comprises solid passive shading elements to enhance the thermal performance of the overall facade.

A vertical area of louvres, the 'Breathing Spines' was introduced on each elevation to allow airflow for the air handling units (AHUs). This helped to divide the facade up into the four quadrants whilst emphasising verticality and visually achieving a more slender tower.

Different materials and geometries were studied for the facade modules to reflect the concept for a robust, solid and sculptural facade.

Conversations with LBC planning officers in pre-December 2023 planning application workshops were fundamental to the development of the facade module design up to the December 2023 planning application submission. Further design evolution of the facade articulation in conjunction with LBC planning officers, and following the decision to change the massing, is described overleaf.



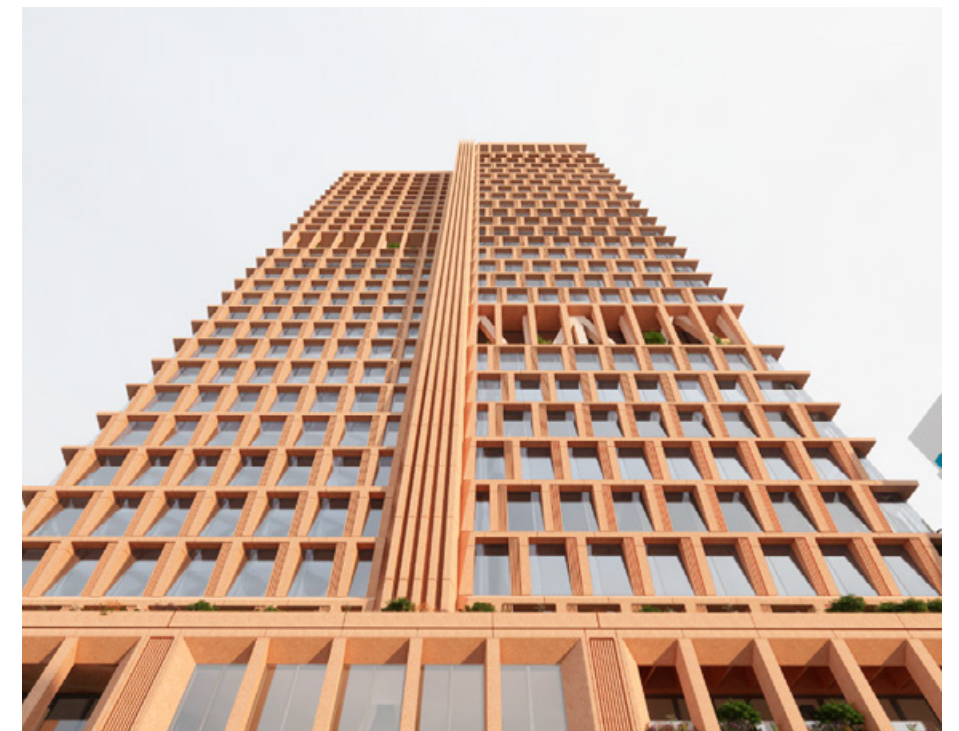
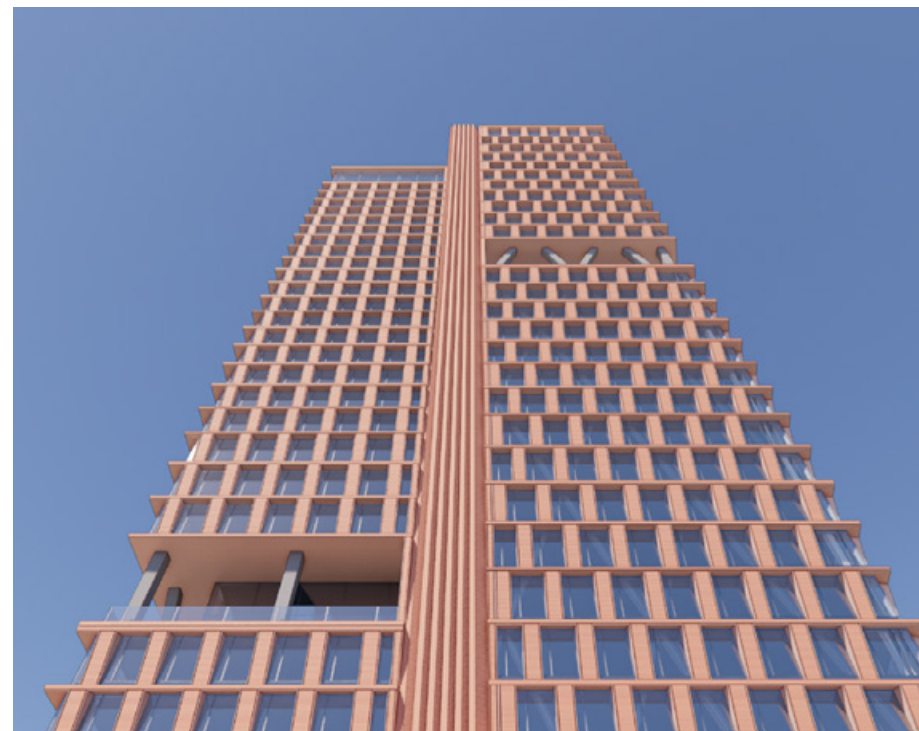
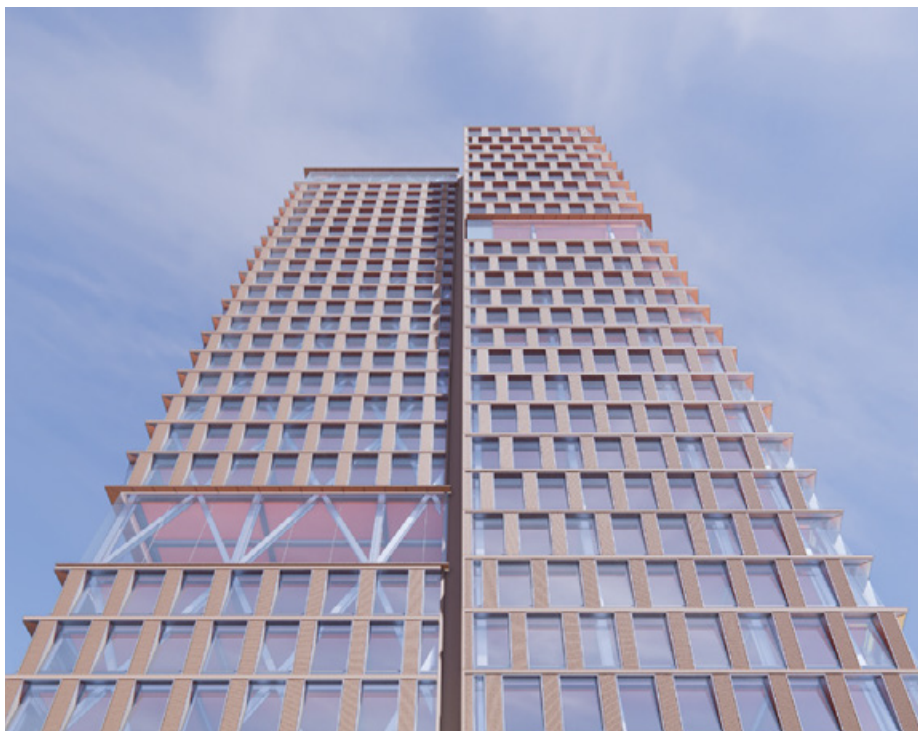
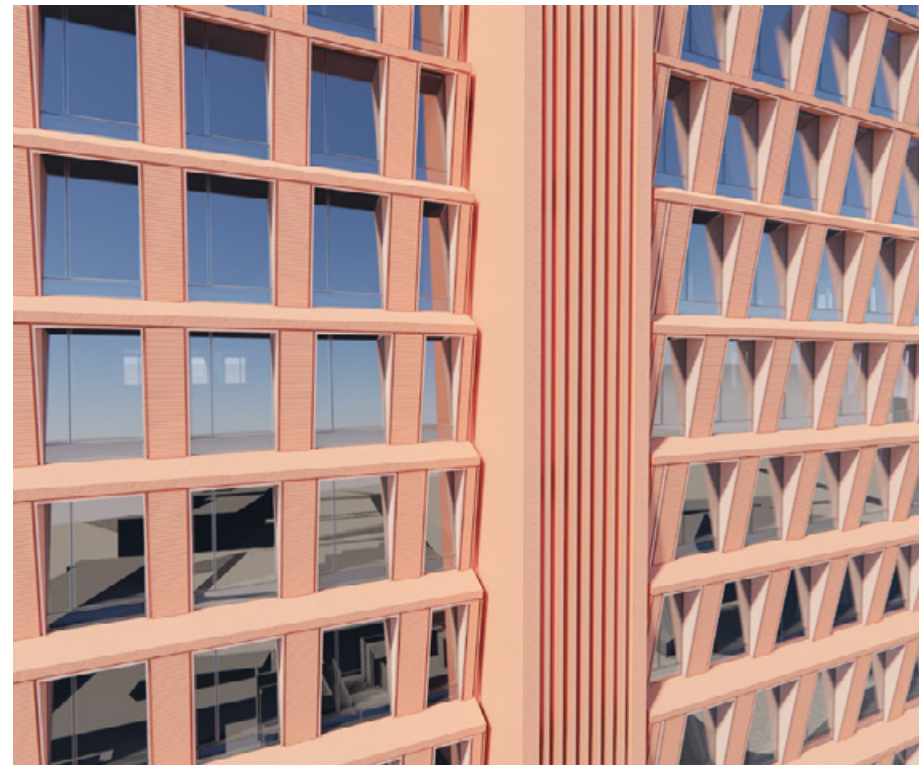
### 1. Varying Facade Module Sizes

The solid panels shift and had varying dimensions with articulation on the front and perforations on the metal sides. Where the sloped and vertical facades meet there is a zig zag edge, this was to follow the facade but was later changed to a linear spine edge for a simpler cap and transition between facades.

### 2. More Regular Facade Rhythm

The exploration of various facade materials and patterns led to more regular module sizes and increased solidity in the design. The emphasis on a regular pattern enhanced uniformity and cohesion within the facade and additionally, the strategic pursuit of greater solidity.





### 3. Straight and Staggered Facade Pattern

In order to emphasize the contrast between the two towers on each elevation, modifications were made to the pattern. The facade was designed to align with the bracing strategy, which resulted in one half of each elevation having a repeating facade pattern and the other half displaying a staggered pattern. This move helped further emphasise the visual contrast between each tower quadrant and allowed for a more distinctive appearance.

### 4. Breathing Spines Added

The stacked AHUs arranged centrally on each elevation were expressed as a spine throughout the tower contributing to a distinctive feature that enhances the slim profile of the two split elevations. Following consultation with LBC planning officers the spines were pushed out to further exaggerate the division between the quadrants. At this point a glazed spandrel panel was replaced with a thicker horizontal element that was also developed with significant input from the LBC planning officers.

### 5. Natural Ventilation and a More Sculptural Facade Module

By incorporating natural ventilation into the primary facade, the necessity for operable windows in the glazed panel was eliminated, and the solid panel was utilized to facilitate air circulation. Changing the facade from a design with continuous horizontal panels and instead having the main facade interlocking both vertical and horizontal elements felt more three-dimensional. The 'mini-breathing spines' in the facade module reflected their function as areas through which natural ventilation is possible internally.



### Tower Facade Articulation Evolution (Post-December 2023 - The Proposed Development)

Following the decision to change the massing after the December 2023 planning application submission, the opportunity was taken to develop a calmer, more ordered and more contextual approach to the tower facade module design and overall facade articulation.

The key considerations of ventilation, solidity and thermal performance are retained from the December 2023 planning application scheme, and have been enhanced where possible through further development. With a focus on these aspects of the design throughout the post-application design process, the opportunity to further evolve the articulation has facilitated a well performing facade that retains a sculptural, solid form.

The 'Breathing Spines' have also been retained from the December 2023 planning application scheme, but are now set-in rather than pushed-out to help emphasize better the vertical division in the elevations and reinforce the four quadrant massing concept. The facade articulation has been developed to respond to this set-back condition, enhancing the return back, and connection to, the 'Breathing Spines'. This is described in more detail overleaf.

Following the decision to revise the massing, the introduction of softening and filleting the towers' corners has enhanced the tower's articulation, reinforcing the reading of its four distinct quadrants. The fillets soften both external and inner corners, inviting a seamless visual flow around the building and emphasizing its cohesive, all-sided presence. While the facade cladding is smoothly curved, the glazing around the corners is faceted. The faceted glazing simplifies the facade curtain wall. Vertical cladding elements obscure the transitions between glazing planes, reinforcing the tower's sculptural mass while maintaining design clarity. The filleted corners to the massing maintain a refined silhouette, visually reducing the tower's width and heightening its sense of verticality.



### 6. Planning Facade Module applied to Rectangular Massing

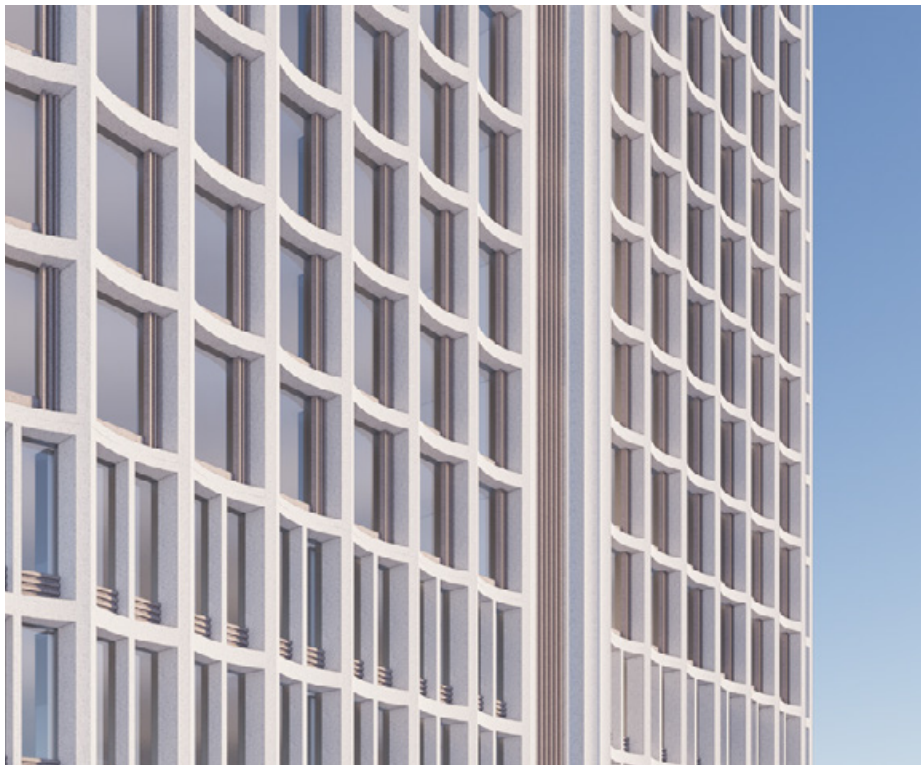
The facade developed for the December 2023 planning application was initially applied to the revised massing, in order to begin to understand some of the opportunities and challenges associated with the more regular form. The advantage of the rectangular form in enabling a stacked, regular rhythm across the elevation is evident, allowing for a calmer and more ordered fenestration. The form change also highlighted the chance to look at a more dynamic facade and paler colour concurrently, to link better to context.



### 7. Facade Sketching on Rectangular Massing

A range of facade module designs were developed and tested in elevations and townscape views to reflect the verticality and solidity in the revised massing. Multiple module designs were sketched, with a focus on expressing more sculpturality and verticality. A consideration to reflect the lab-enabled programme on the lower tower levels was also explored through using additional mullions, creating a visual banding to differentiate those levels.





### 8. Scallops

A scalloped, gridded facade articulation was developed, as a way of balancing an emphasis on verticality with the calming, ordered appearance of a regular horizontal banding. The gridded approach helped reinforce an ordered fenestration and the regular verticals helped navigate the rounded corners of the developing massing proposals, slimming the perception of the bulk. Differing tones in the materiality were also tested to explore adding depth in the facade articulation.

### 9. More Solidity and Horizontal Banding

Through conversations with LBC planning officers, it was decided a thicker horizontal banding was preferable in creating a calmer, more ordered facade design, with the ambition this allowed the building to sit more comfortably in its townscape context. It also allowed the facade to perform better in terms of access to daylight and solar gain. However, it did reduce the vertical emphasis in the facade design which resulted in issues resolving the terrace and amenity levels in the tower

### 10. Skeletal Vertical Articulation with Integrated Natural Ventilation

A more articulated facade module design was subsequently developed to address the issues around verticality in the facade. In splitting up the horizontal banding, the scale of the horizontal is broken down to the scale of the individual window, providing a richness and modulation to the tower articulation. The unbroken verticals helped integrate the tower terrace levels into the wider facade design and enhanced the more elegant form.



# 6.9 Breathing Spines Evolution

## From December 2023 Planning Application to the 2024 Proposed Development

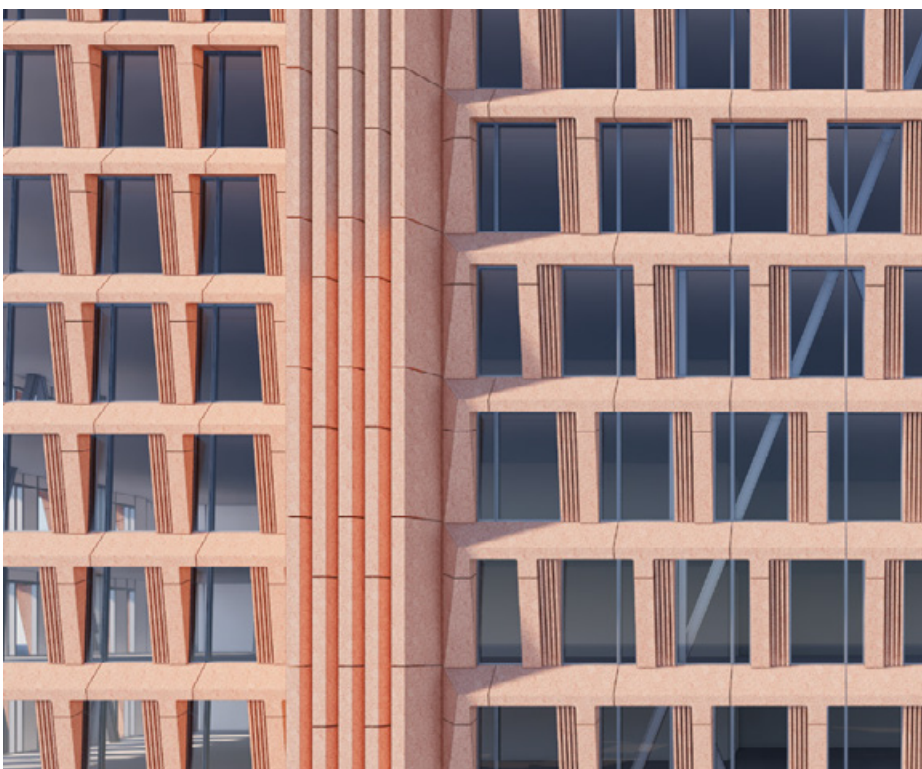
Following the proposed massing change, the decision to set the spines back allowed for a more considered and detailed look at the design and articulation of the spines, central to each tower elevation.

Key concepts and considerations of the breathing spines’ development was to continue to underscore the reading of the tower as four distinct quadrants. To do so, various studies were conducted which looked both at the visual aspect of the spine but also the technical requirements of allowing airflow to the AHU rooms.

From the bold vertical lines of the December 2023 planning application proposal, it was studied if the cladding could be condensed into one vertical monolithic element in the centre of the spine with louvres on either side. The visibility of the louvres compared to the December 2023 planning application proposal presented challenges, as the technical requirements of the louvres could not be overridden by its desired visual appearance. There was also a subtle curvature to the monolithic central element which, in opposition to the four tower quadrant, suggested to link the tower quadrants back together. It was decided with LBC, that other options should be explored.

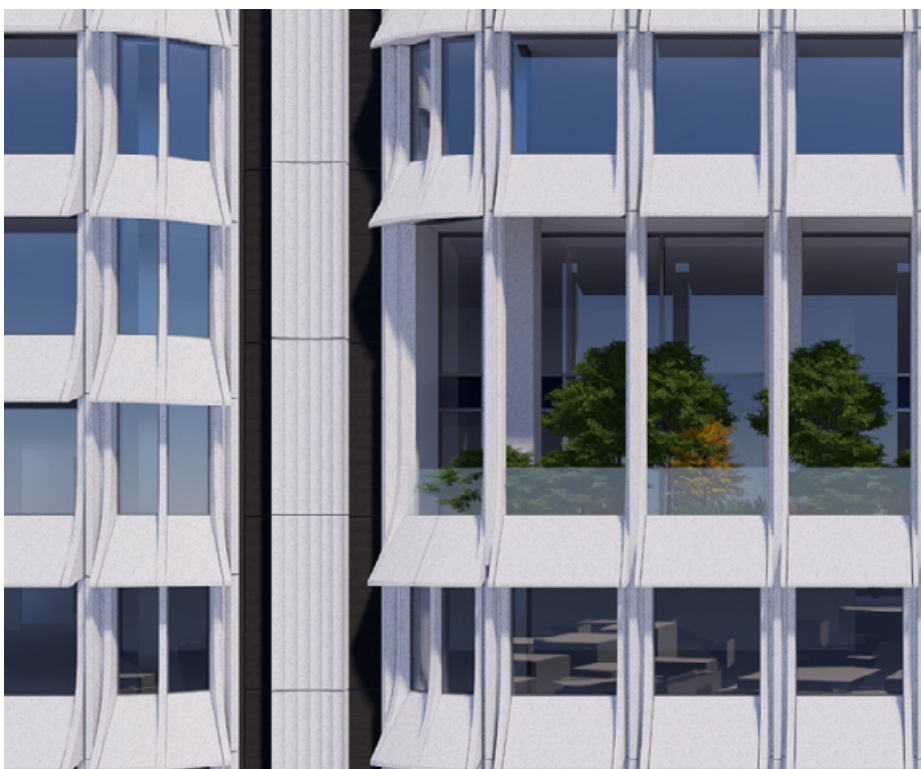
The resulting studies covered a wide range of approaches, including changing the colour of the cladding of the spine, and creating a porous cladding. Ultimately, it was decided that bold vertical lines, not so dissimilar from the December 2023 planning application proposal, was the best approach to reinforce the concept of the towers and to meet the technical requirements of the spine. The visibility of the louvres from the point of view of an external observer were also limited, as desired.

Attention was then given to the facade modules on either side of the spine, looking at how the facade grid of 3m could meld with the breathing spine. A vertical element added to the middle of the glazed panel was seen as a promising way to turn the corner from the typical facade module back to the spine. The depth of this return and the exact size of the modules and vertical cladding elements was also studied extensively.



### 1. December 2023 Planning Application Proposal

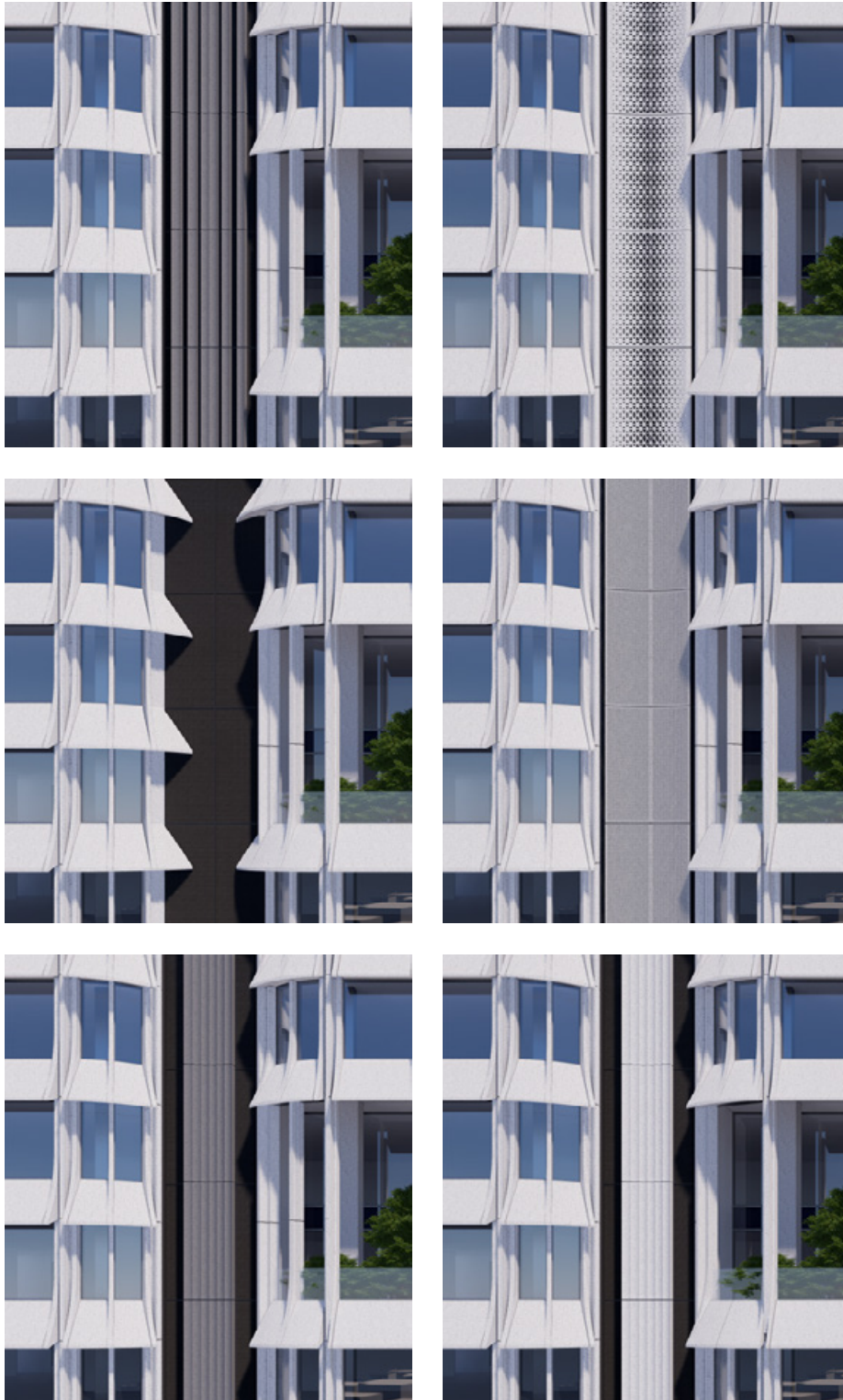
In the December 2023 planning application, the pushed out “Breathing Spine” massing necessitated a bold and robust approach to its design and articulation. The five large, monolithic fins per spine helped create a strong, vertical division in each elevation with an articulation that reflected the solidity of the wider approach to the facade. The same materiality and colour also helped create a cohesive language across the facade design.



### 2. Dark Louvre Background / Monolithic Central Element

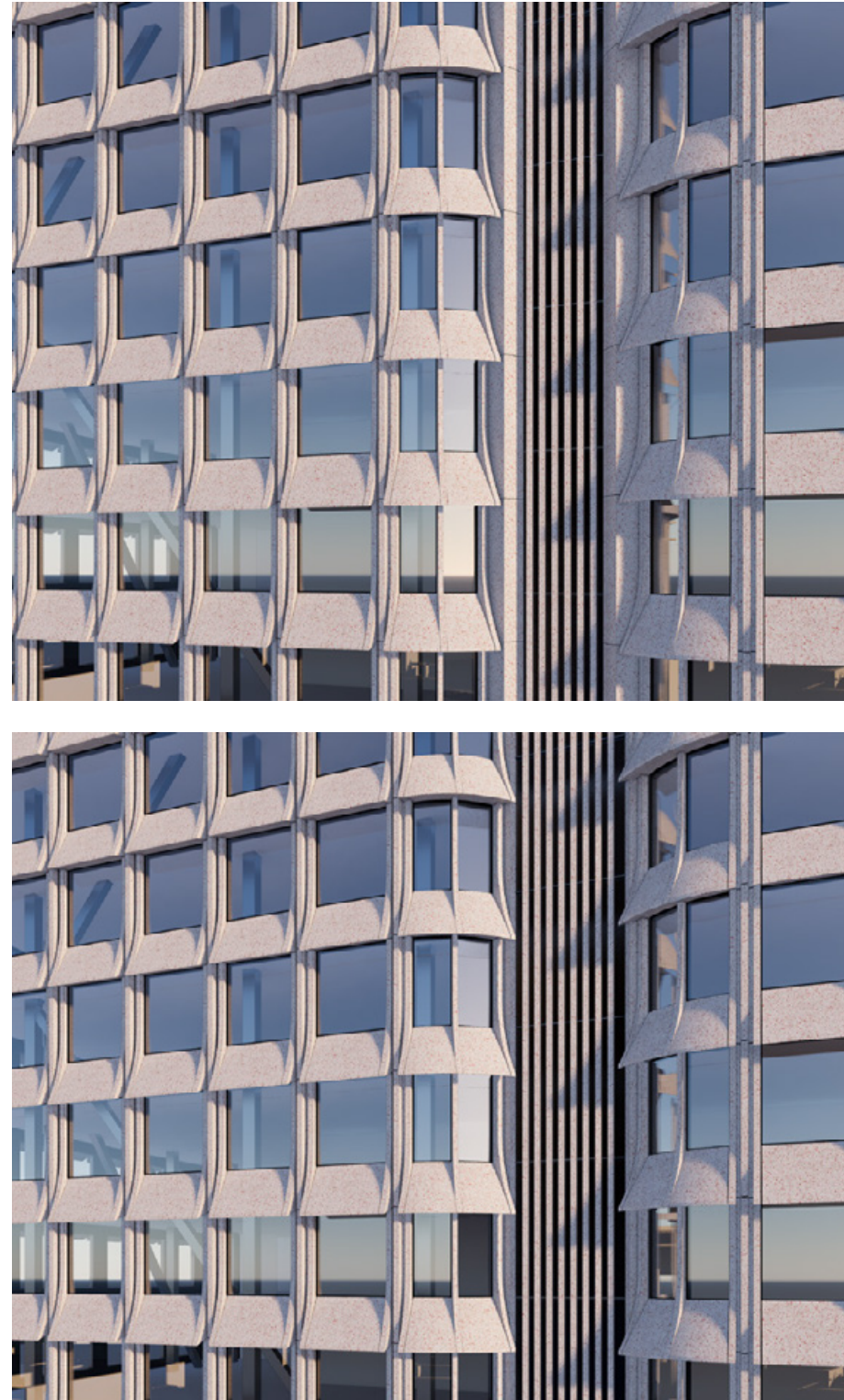
Following the change in massing and the decision to setback the spines, there was an opportunity to reconsider how the articulation of the “Breathing Spines” could exaggerate the vertical division in each elevation and further enhance the four quadrants concept. A strong contrast between the dark background at the spine and the lighter facade colour of the tower helped reinforce the division graphically, with the lighter monolithic element adding a sense of solidity, and the fluting emphasizing verticality.





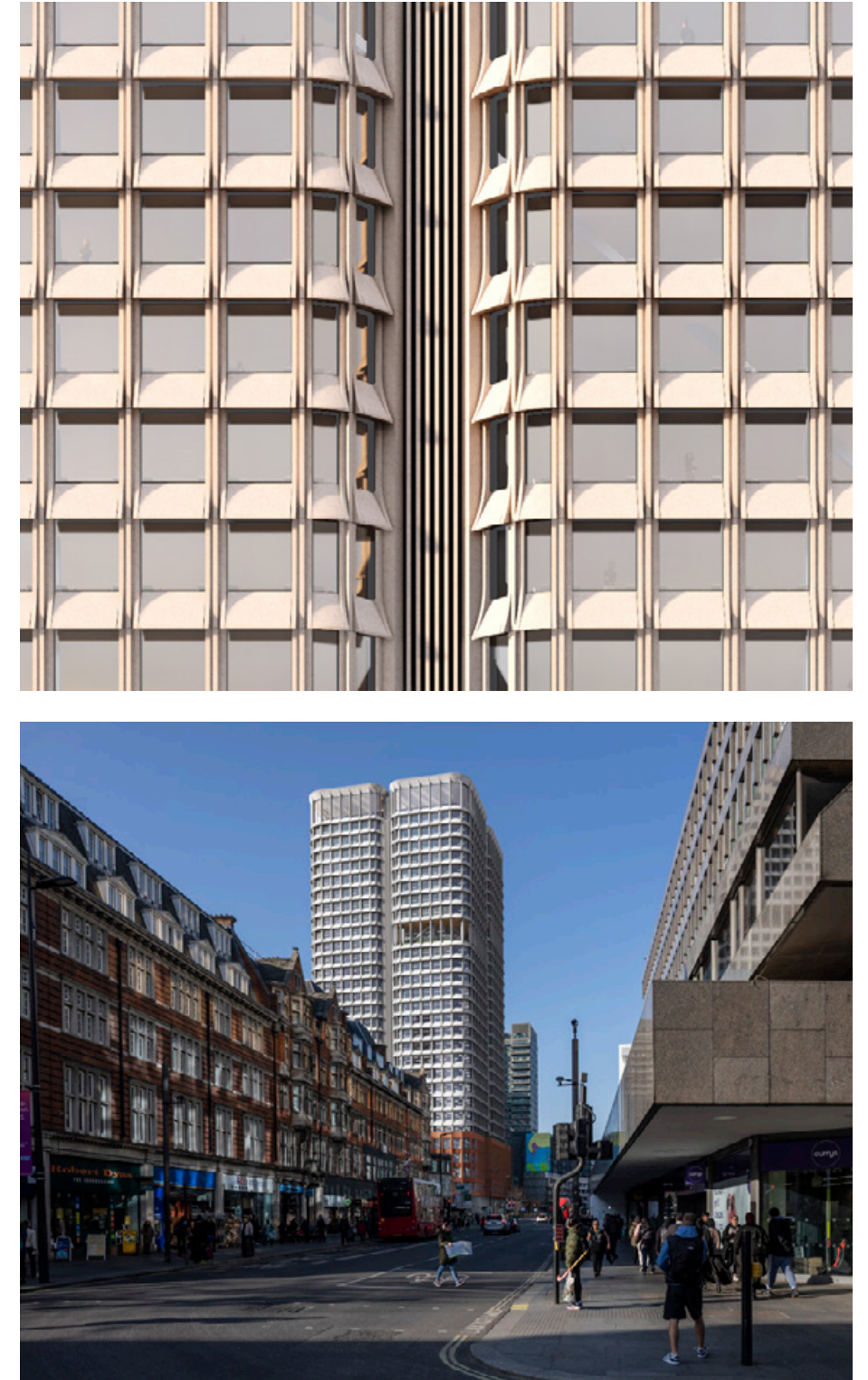
### 3. Testing Approaches to Articulation

A greater understanding of the performance and air-handling requirements of the spines, allowed for the design development of the “Breathing Spine” facade treatment. Options were tested that considered a change in colour to further express the vertical graphic division in the elevations. Perforated GRC elements were studied as a way of adding a richness of detail whilst retaining a consistent approach to the light coloured GRC materiality. The depth the solid elements are set-off the technical louvres was also studied.



### 4. Refining the Edge Condition

Vertical fins, matching the wider tower GRC, were proposed, chosen to reinforce a sense of verticality in the design and increase the free-area and therefore improve the air-flow performance of the louvres themselves. This improved performance allowed for the possibility of exploring a narrower spine. The thickness of the wedge-shaped GRC elements framing the spine on each side were studied to discover how best to enhance the rounded reveal of the spine, and resolve the connection to the typical tower facade.



### 5. Proposed “Breathing Spine” Articulation

The proposed design for the “Breathing Spines” builds on the design evolution process, further refining the depth and proportions of the wedge-shaped framing elements and the profile of the GRC fins themselves. The articulation of the return of the typical tower facade back into the “Breathing Spine” was also developed to add more solidity and a richness of detail in the intermediate mullions to better express the tower facade wrapping back and into the spine and reflecting the four quadrant concept.



# 6.10 Double-Height Terraces Evolution

## Double-Height Terraces Evolution (December 2023 Planning Application)

The amenity spaces for the Proposed Development are envisioned as double height areas distributed across the tower and acting as a canvas for a variety of different functions. It provides the opportunity to create break out spaces for the office floors, where informal meetings, lunches, and temporary work can occur and encourage social interaction.

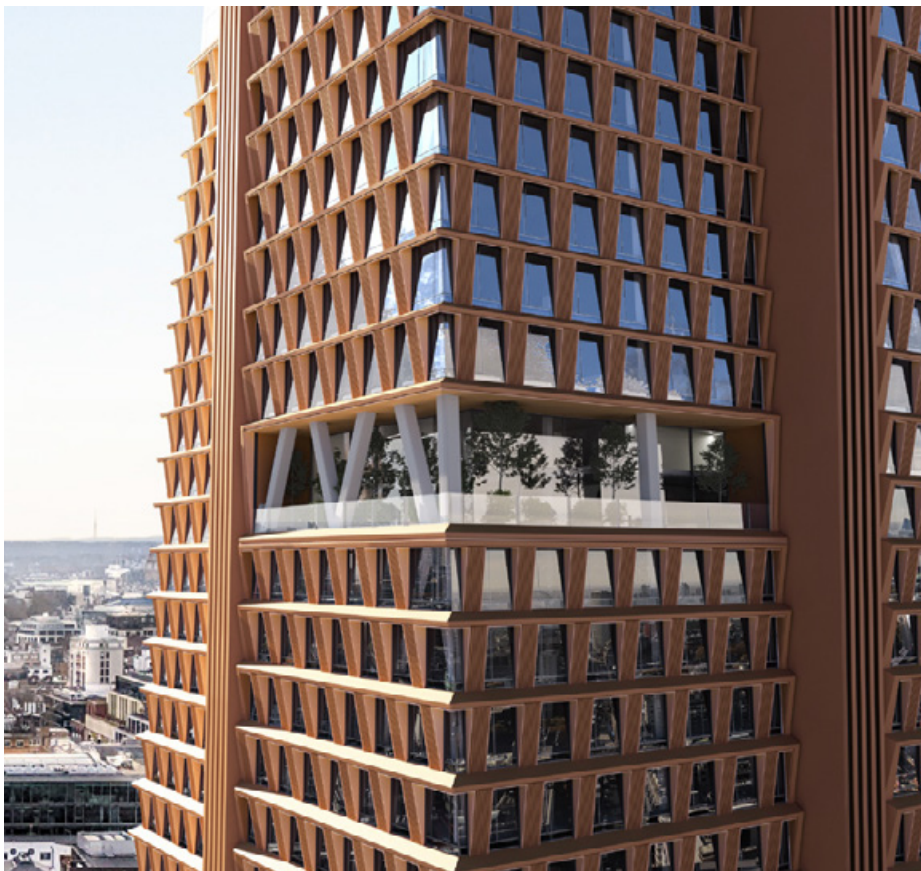
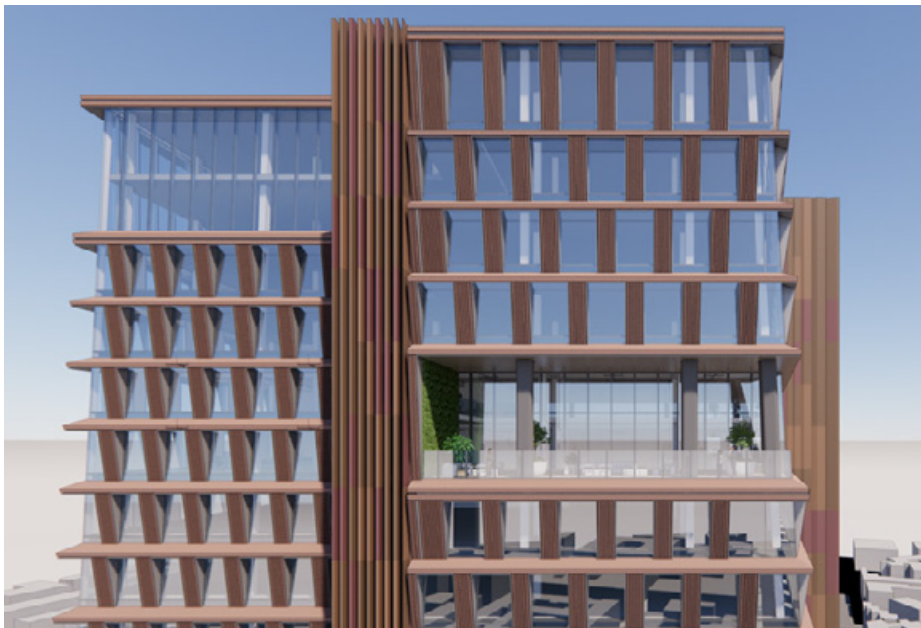
The spaces also create the possibility to inter-connect floors with stairs and give tenants that have multiple floors the opportunity to have visual and physical connections within their own areas.

Amenity spaces are strategically placed across the building, taking advantage of key views and maximising exposure to natural daylight.

These areas were distinguished by a clear glazed facade type which differed from the typical tower facade elements. The amenity facades have in the design process been pushed back to create terraces, spaces for greenery and social outdoor interaction. By adding double-height amenity facade elements, the tower now has a coherent expression and frames the view of the city from the inside.

The revised massing provided an opportunity to refine these spaces further. Terraces were deepened, transforming narrow maintenance zones and planters into more expansive, usable exterior spaces.

The terrace design incorporates thickened vertical GRC elements for structural support and features transparent balustrades that showcase planting behind them. Warm tones in the textured soffits and substantial spandrel panels enhance the terraces' appearance, particularly when viewed from the street, highlighting these spaces as distinctive features of the tower. A play between single- and double-height areas adds diversity and spatial interest, emphasizing their role as focal points in the overall facade articulation.



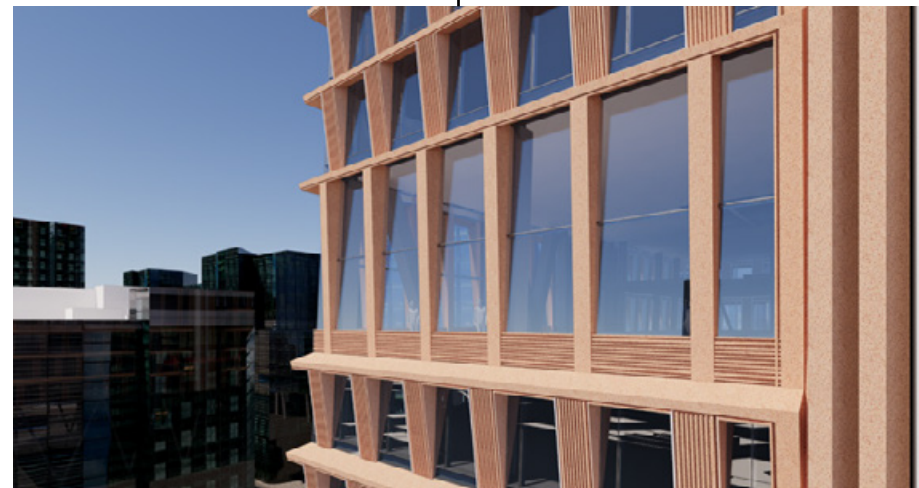
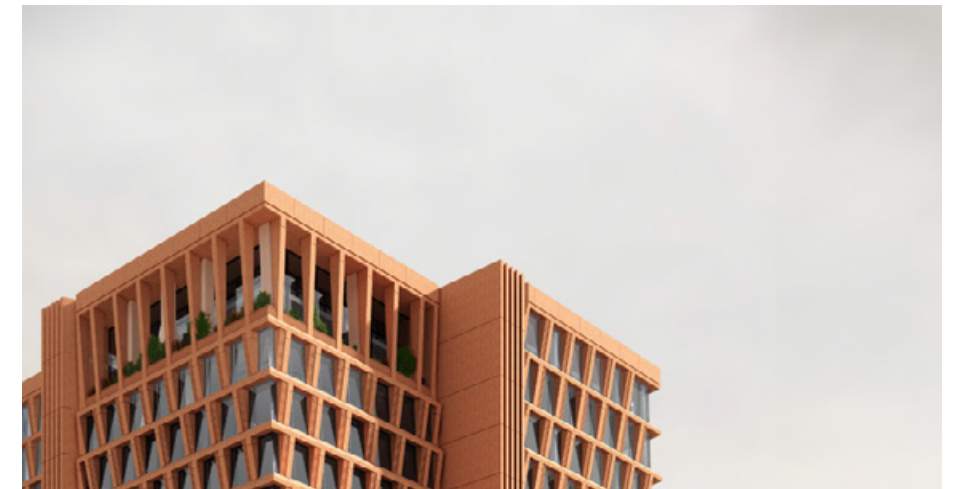
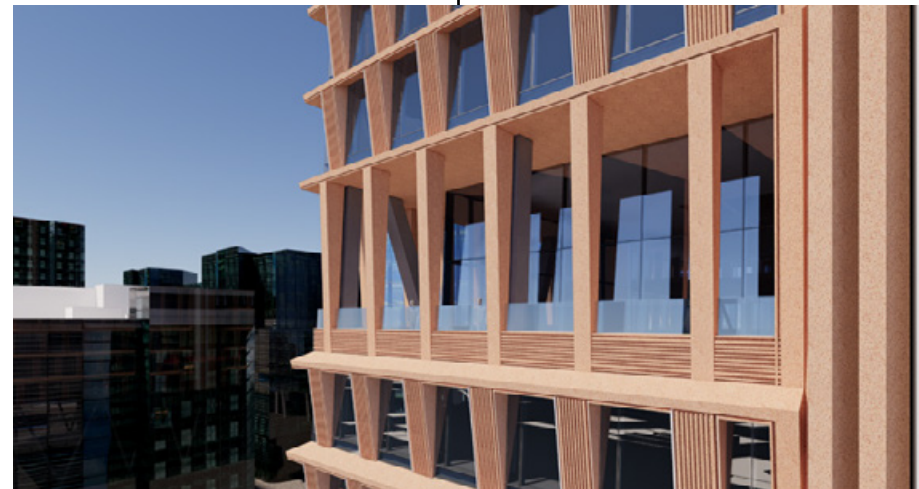
### 1. All Glass Double-Height Amenity Facades

Initially, very open and glass dominant amenity spaces were used to give a visual gap in the facade, without solid divisions and solar shading. The location and heights of these spaces were studied to ensure they were located sensibly up the tower at lift transfer floors to ensure maximum tenant usage whilst also located strategically to respond to key datums and landmarks in the immediate context

### 2. Relation with Breathing Spines and the Creation of Terraces

With the introduction of the spines the double-height amenity spaces were adjusted and different terrace options were explored. Conversations with LBC planning officers highlighted the importance of providing some depth to the facade in these areas. The resulting shadow created helped reinforce the connected vertical neighbourhood massing concept





### 3. Studies on a More Solid Double-Height Amenity Facade

Following conversations with LBC planning officers, it was agreed a more consistent facade approach was required, to help integrate these spaces with the rest of the tower facades. Studies were undertaken in collaboration with LBC planning officers focused on; breaking up and experimenting with solidity, extending the main facade at amenity locations, and creating more subtle plays of light and shadow in these specific areas of the facade.

### 4. Adding Variations of Planters and Greenery

Following a decision on facade articulation, the depth of double-height amenity spaces was studied. A planted edge was proposed to bring greening up the building - a decision driven in part through feedback received during the extensive co-design process - and creating a solid planter edge to further increase the solidity in the facade in these areas.

### 5. Coherent and Consistent Facade Expression

The resultant architecture was seen as coherent and composed - the double-height amenity facades providing interest and contextual responses to the proposal whilst being integrated within the wider design language of the tower facade.



Verticals in typical facade modules running through double-height terraces help integrate workplace amenities into facade



### 6. Continuous Vertical Expression

Despite the massing change, the approach to integrate the double-height terrace spaces into the wider typical facade design was maintained. This was made easier whereby the calmer, more ordered, stacked fenestration, allowed the verticals to pass in front of the terraces. Additionally, the terraces were made deeper, creating usable, inhabitable exterior space where before, in the December 2023 planning application scheme, there was only a planter and a narrow maintenance access (see opposite).

### 7. Thicker Vertical Elements

As the typical tower facade design developed, the terrace facade followed suit. The vertical elements were thickened up in response to the structural requirements for double-height, unsupported GRC elements and indicative joints and module sizes were explored. The materiality and appearance of the balustrade was also studied to be as transparent as possible, to best celebrate the planting set behind it.

### 8. Textured Soffit, Spandrel and Play with Single- & Double-Height Spaces

Following further development in line with the proposed typical module design, the articulated verticals now run uninterrupted in front of the external terrace space, helping integrate the double-height amenity into the wider facade. Additional solidity was added at the spandrel panel for a more substantial appearance, with warmth and materiality added to the soffit - key to the appearance of the terrace from Ground Level. A play of single- and double-height spaces also give the terraces interest and a spatial diversity.



**Double-Height Terraces Evolution**  
**(Post-December 2023 - The Proposed Development)**

The change in massing provided the opportunity to take another look at the double-height amenity spaces expressed on the facade, and consider ways in which these spaces could be improved.

The significant change from the December 2023 planning application scheme is the enlargement of external spaces, creating an additional three terraces where previously there were only green edges and an access route for maintenance and watering of the planter as illustrated in the adjacent illustrative views.

The detail and expression of these terrace spaces was also developed. The concept of a singular material applied across the terrace space is maintained and enhanced with the addition of the solid, fluted GRC spandrel band at the setback glass line. Where the facade materiality alters, at the soffit, the change is subtle but the warmth in the colour and tone is visible especially when viewed from the street level, highlighting these special moments in the tower.



Illustrative view - Dec. '23 scheme - planted terrace with maintenance access



Illustrative view - Proposed Development - indicative, inhabited planted terrace



# 6.11 Tower Crown Evolution

## Tower Crown Evolution (December 2023 Planning Application)

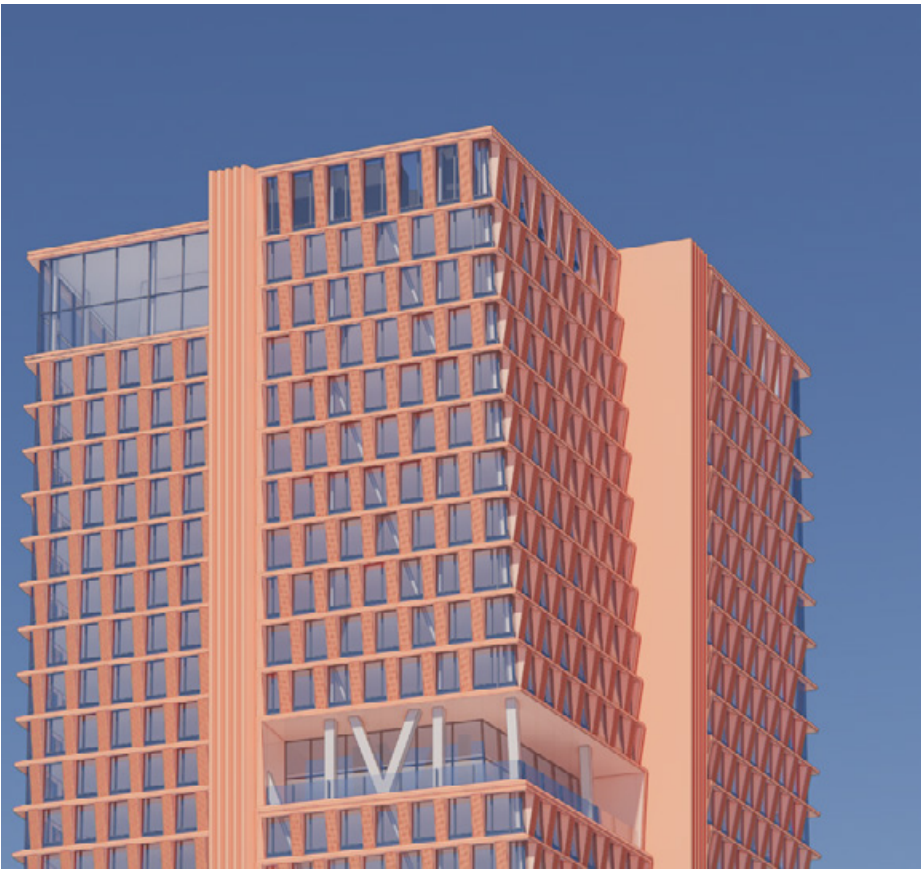
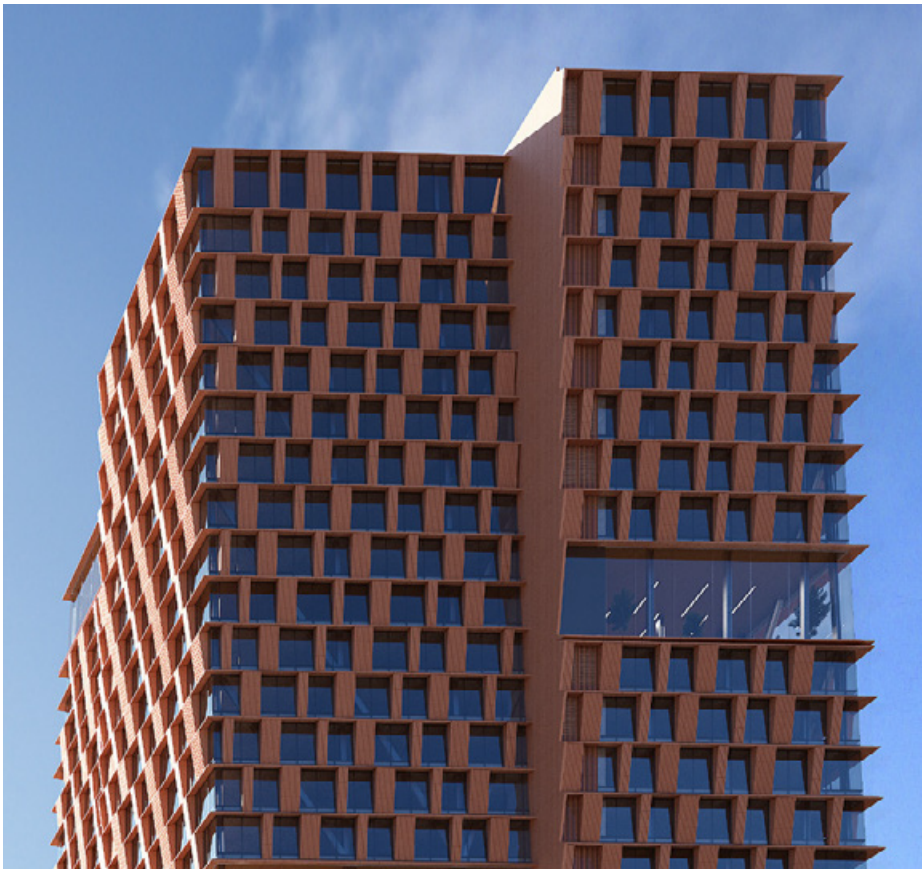
The solidity required by the facade concept necessitates a robust and deliberate conclusion to the tower form that provides a clear silhouette in the far views whilst also reinforcing the four tower quadrant massing concept in articulation and materiality.

Both technical and aesthetic criteria have had an influence on the development of this area of the proposals.

A thinner edge was initially considered, retaining the thickness of the horizontal facade elements at the crown and keeping the articulation consistent with lower levels. However, the introduction of a thicker edge was ultimately favoured, highlighting the conclusion of the tower and reflecting the solidity of the typical facade. This thicker edge ties the roof into the tower’s broader architectural language, creating a strong and unified expression.

The top two floors, primarily containing technical spaces, introduced unique design challenges. Extensive studies, including workshops with LBC planning officers, explored facade variations, height adjustments of the quadrants, and responses to long-distance views. While these studies provided valuable insights, early concepts resulted in an unresolved and cluttered silhouette due to technical requirements, lift overruns, and the visibility of inner quadrant faces.

To resolve this, the four quadrants were rationalized to the same height, and a thick horizontal element was introduced to calm the silhouette and create a cohesive, solid roofline. This same edge detail was echoed at podium level, visually tying the tower together from base to crown. The more simplified massing enabled the exploration of a double-height glazed expression at the crown, offering a calm and consistent approach to the tower’s top. This feature balances sensitivity to the building’s singular prominence in its context with an added sense of drama.



### 1. A Thin Edge

Other than a slightly higher floor-to-floor height, there was no change to the facade module and crown articulation. The thickness of the horizontal element in the facade is repeated at the top that given no significance to the massing of the roof.

### 2. Introduction of a Thicker Edge

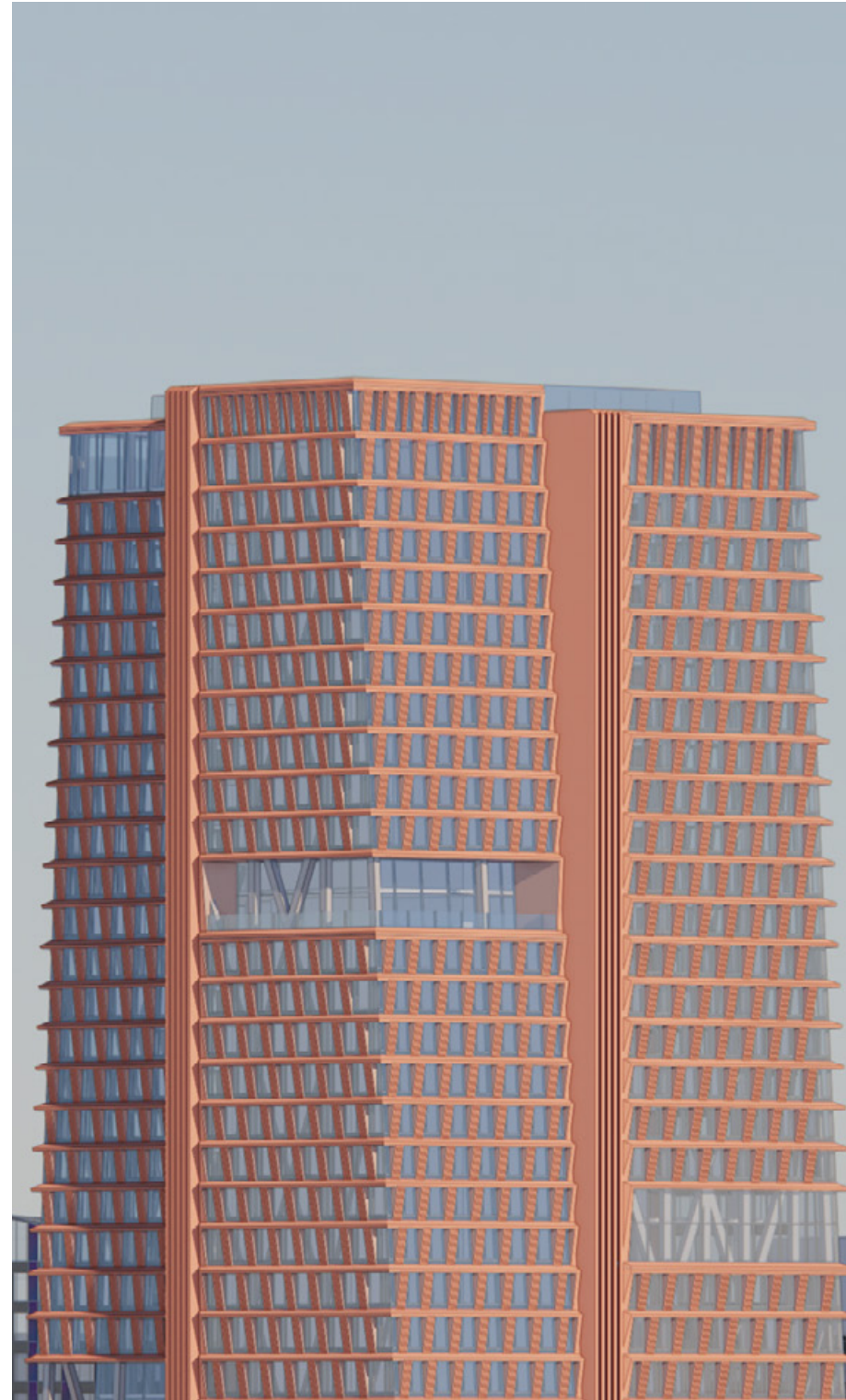
With the new facade expression a thicker edge around amenities and crown was used to highlight the conclusion to the tower and reflect the solidity of the typical tower facade.





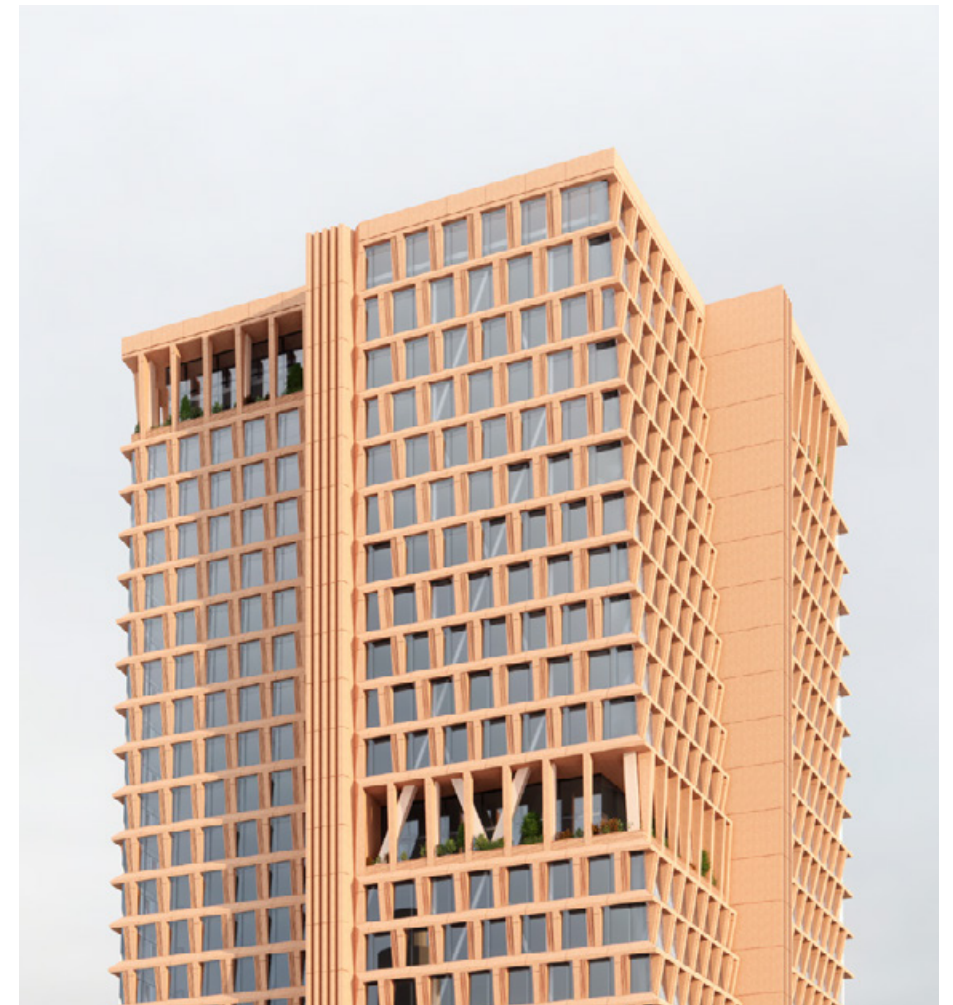
### 3. Various Technical Facades

The top two floors have a majority of technical spaces and therefore have special design parameters. Many studies were undertaken during workshops with LBC planning officers looking at both altered facade expressions and varying the heights of the four quadrants.



### 4. Long Distance Views Studied

Variations in the height of the four quadrants as well as the facade treatment was studied extensively in collaboration with LBC planning officers. Further understanding of technical requirements for plant areas on the roof, lift overruns and the visibility of the inner faces of the quadrants resulted in an unresolved and cluttered silhouette to the proposals



### 5. Thick Solid Edge

In order to resolve the silhouette and massing, a thick horizontal element was introduced and the four quadrants rationalised to be the same height. Additionally, rationalising the height of the two top floors minimised complexity and resulted in a calmer, more coherent approach. The enhanced solid edge was re-used at podium level, tying the building together from top to bottom

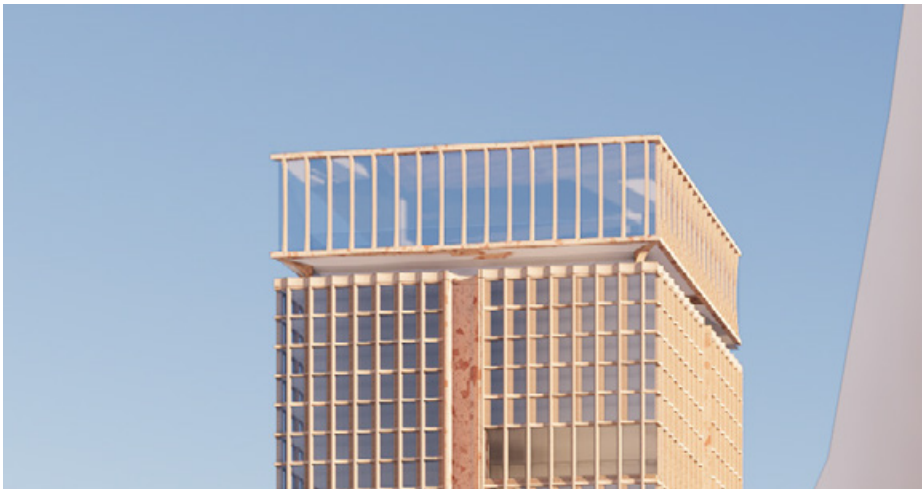
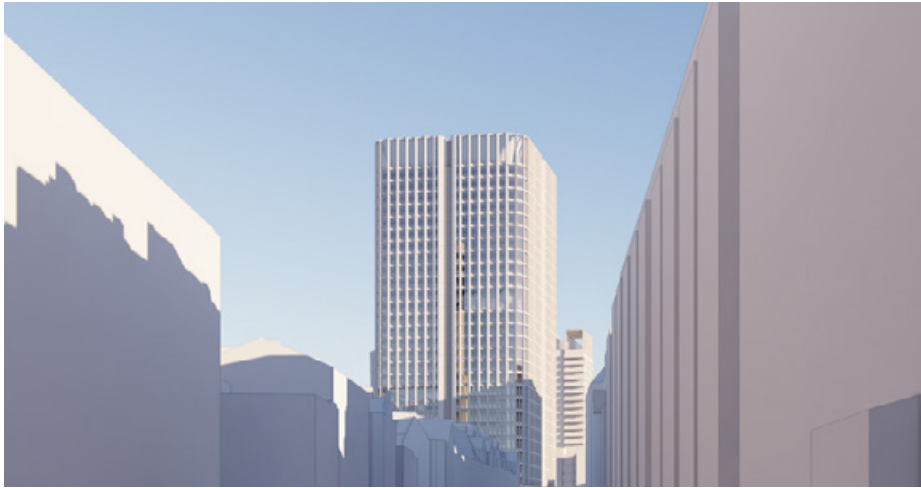


**Tower Crown Evolution  
(Post-December 2023 - The Proposed Development)**

Following the proposed massing change, a double-height glazed top was explored. Ultimately, it was decided that this move architecturally connected the four tower quadrants, which was not a desired effect.

Further refinements included rounding the crown's corners to align with the broader massing concept and setting back the Breathing Spines at the top. These adjustments enhanced the vertical separation between quadrants and added dynamism to the skyline, particularly when viewed from street level. Additionally, the Level 31 rooftop slab was set back, relocating plant and machinery into the core, which allowed for a complete double-height ring of tenant-accessible space at Level 30 and further articulated parapet detailing.

Parapet designs evolved to balance elegance with robustness, integrating ventilation requirements while maintaining the sculptural and solid character of the facade. Structural refinements also removed internal tie beams, creating a cleaner appearance for the sloping soffit. A warm, textured finish was introduced to the soffit, harmonizing with the tones of the external terrace soffits below and further unifying the architectural language of the tower.



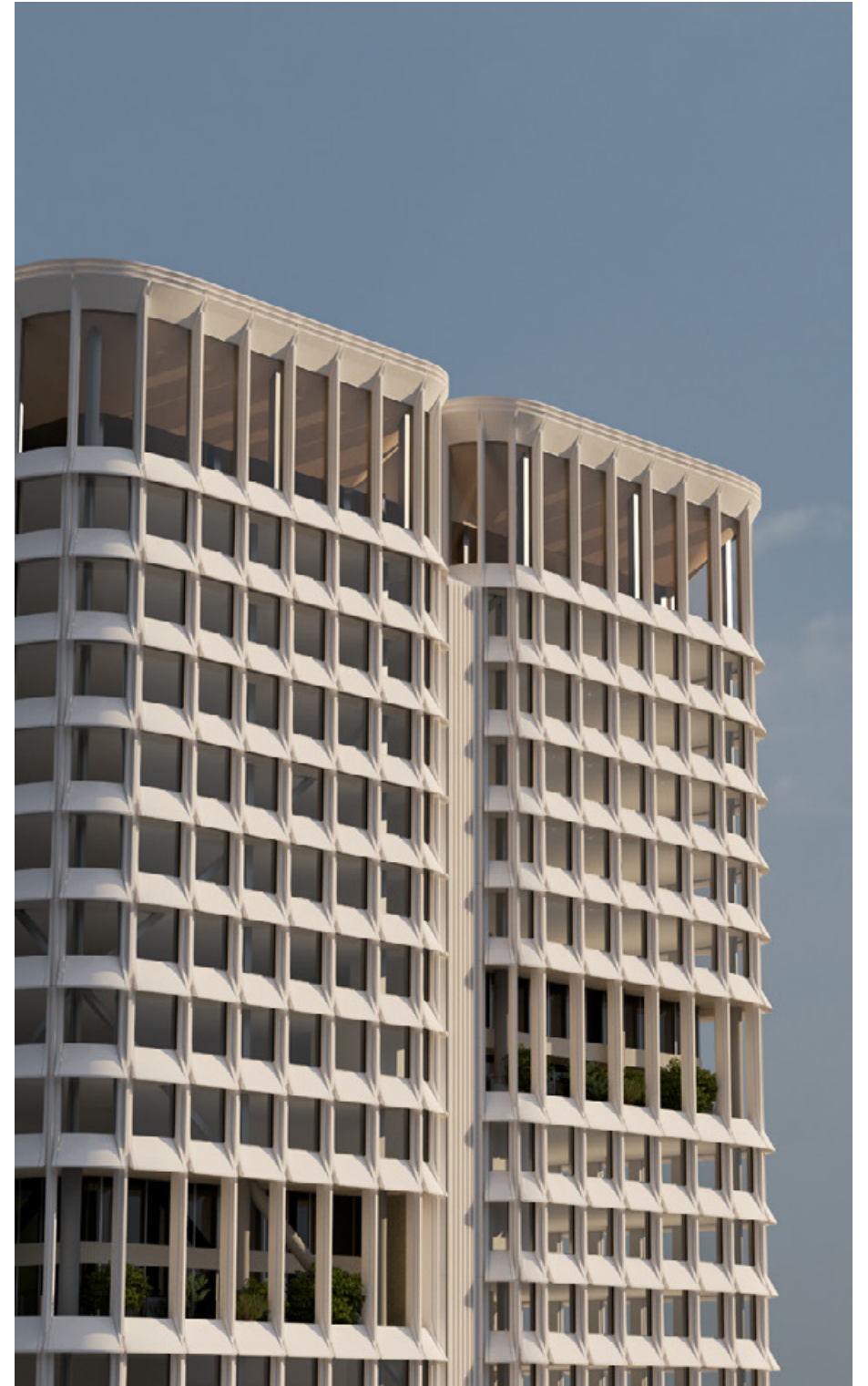
**6. A Double-Height Glazed Top**

The change to the more regular massing lessened the dynamism and energy inherent in the angular form of the December 2023 planning app. scheme, but it did allow for a more consistent approach to the building's top. A double-height glazed expression at the crown was explored to provide a calm, clear conclusion to the simplified volume. The crown could address all four elevations equally, sensitive to its situation as a singularly tall building in its context, whilst still providing an element of drama in the facade at the top.

**7. Studying Facade Articulation and Further Setbacks at the Spines**

The corners were rounded at the crown to match the wider massing concept development and integrating the typical tower facade details were studied. Additionally, further setbacks of the spine at the crown were explored to visually separate the four quadrants further and enhance the concept of the vertical division in the elevations at the top of the building. Pushing back the spines helped add a more dynamic form on the skyline, especially when viewed from street level, and enhance the rounded corners.





#### 8. Setting Back the L31 Rooftop Slab and Studying Parapet Articulation

In order to achieve a uniform double-height appearance to the crown across all four elevations, the Level 31 rooftop slab was set back and the plant and machinery were moved into the core. This ensured potential tenant access to the full ring of double-height space at Level 30. More distinctive approaches to the parapet detail were subsequently considered, following an understanding of the ventilation requirements for the equipment on the Level 31 roof.

#### 9. Further Parapet Articulation

A calmer, more ordered design was developed for the parapet, maintaining the ventilation requirements whilst integrating better with the wider typical tower facade design. The thickness and articulation of the parapet was developed to find a balance between an elegant top to the building and reflecting the robustness, solidity and sculptural character of the rest of the tower.

#### 10. Structural Development and a Warm, Textured Soffit

Further evolution of the structure allowed for the removal of the internal tie beams back from the facade columns to the setback level 31 rooftop slab, allowing for a cleaner appearance to the sloping soffit. The indicative warm colour of that soffit was added to create a better link and consistent architectural language with the warmer tones of the soffits of the external double-height terraces in the tower below.