6.0
DESIGN EVOLUTION

Photograph - 1:250 physical model (December 2023 planning application) looking along Hampstead Road - teal overlay

Photograph - 1:250 physical model of Proposed Development

6.0 Design Evolution

This chapter summarises the evolution of the architectural and technical design of Euston Tower throughout the design process including following the submission of the planning application in December 2023.

This chapter is divided into sections.

Each section describes firstly:

> *the design evolution that resulted in the scheme submitted in the December 2023 planning application,*

then secondly:

> *the design evolution from the December 2023 planning application to the Proposed Development immediately afterwards.*

before moving onto the next section.

The chapter is organised whereby the first sections present the overall massing changes that occured through the development of the design (sections 6.3 - 6.7). Subsequent sections zoom-in on the evolution of specific areas and key aspects of the architecture, and describe in detail that design development process.

During the pre-application process, the Proposed Development has been subject to extensive consultation with LB Camden as well as with other bodies such as the Greater London Authority (GLA), Transport for London (TfL) and Historic England (HE). This is true of both the December 2023 planning application and the subsequent process post-submission, culminating in the Proposed Development.

In addition, the Proposed Development has been presented at three Design Review Panels, a Strategic Panel, Development Management Forum and a Developers' Briefing.

We have welcomed the opportunity for expert commentary on the emerging proposals for Euston Tower and we have worked to address the feedback outlined in these forums. The multiple opportunities for consultation have been crucial in shaping the Proposed Development in a collaborative and informed manner.

A more detailed summary of the outcomes of specific meetings and workshops is found in Chapter 11: Pre-application Summary.

6.1 Towers Precedent Study

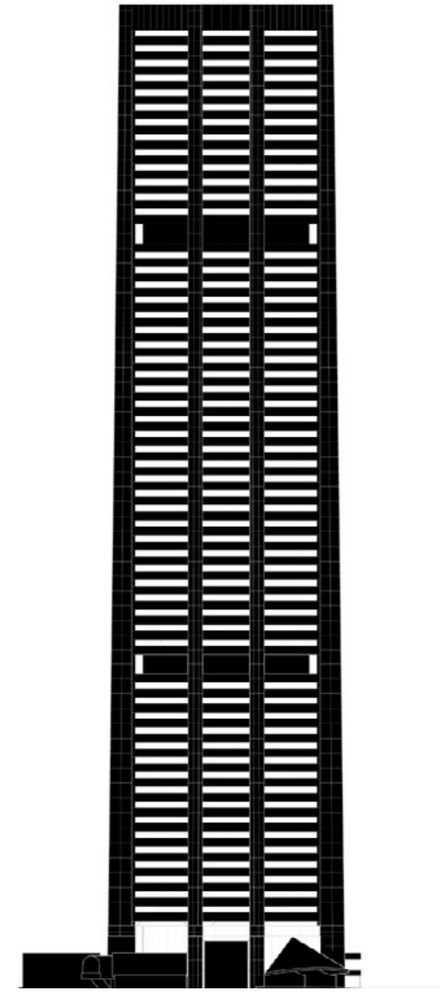
An understanding of tower typologies; how they work, proportions, solidity, architectural language and characteristics, was crucial in developing design proposals.

Given the limited range of tall buildings in the borough, the design team have considered Camden references alongside reference projects from further afield to understand how other designs have dealt with some of the challenges and opportunities related to designing tall buildings. These insights have informed the Design Team's approach to the proposals for Euston Tower, learning key lessons from exemplar buildings across the UK and the world.

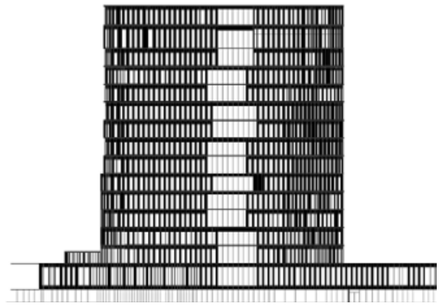
The diagram opposite represents a section of a wider precedent analysis piece in which lessons were learned regarding tall buildings, especially under the following headings:

- Verticality
- Massing strategy & resolution
- Responses to the city skyline, the local townscape and the public realm

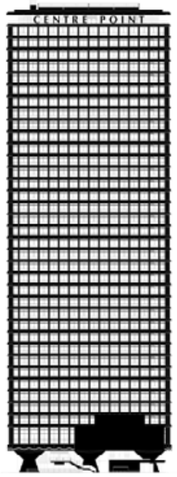
Though we cannot fully separate the massing characteristics from aspects of facade treatment as well as the unique sites and contexts (environmental, cultural, programmatic), the study was influential in highlighting the relevant successes (and challenges) that have subsequently informed the design development of Euston Tower.



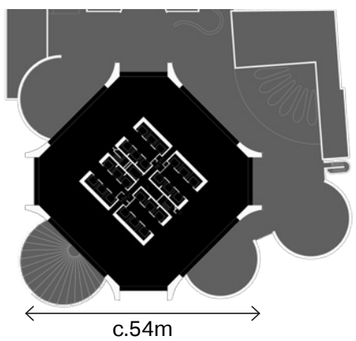
25 Martin Place, Sydney
Height: 228m

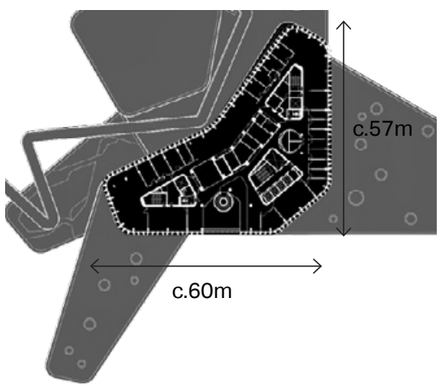


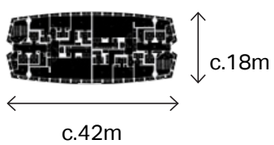
Maersk Tower, Copenhagen
Height: 75m



Centre Point, London
Height: 117m

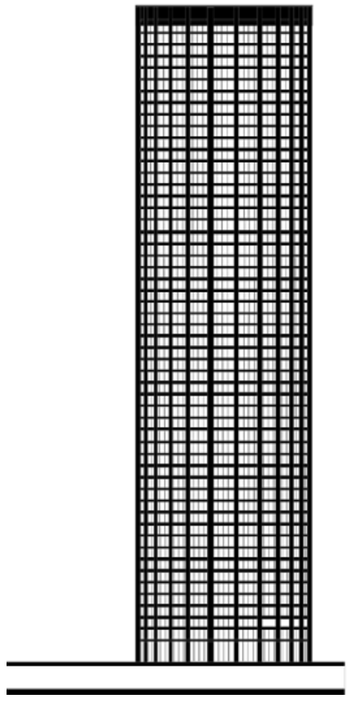




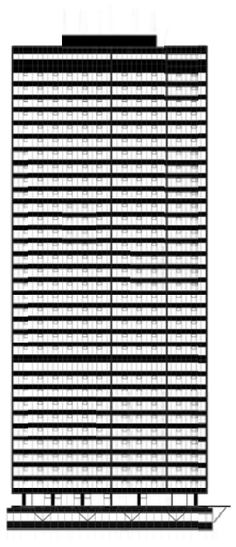


Solid Facade

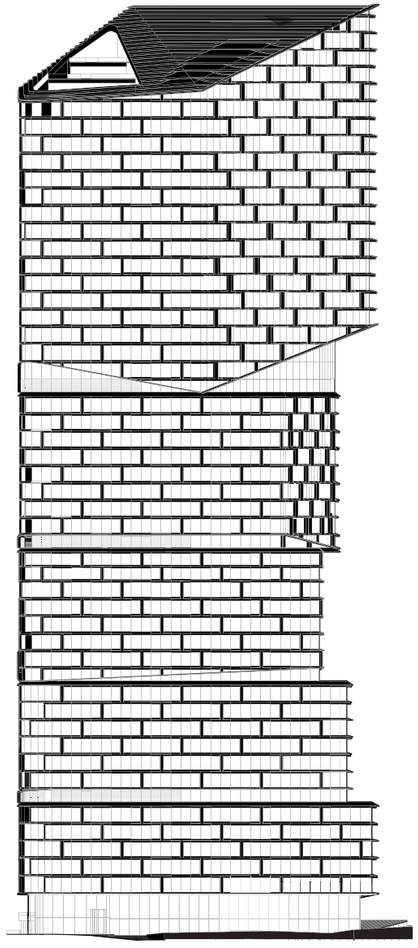
Diagram - Precedent study on towers in elevation and plan



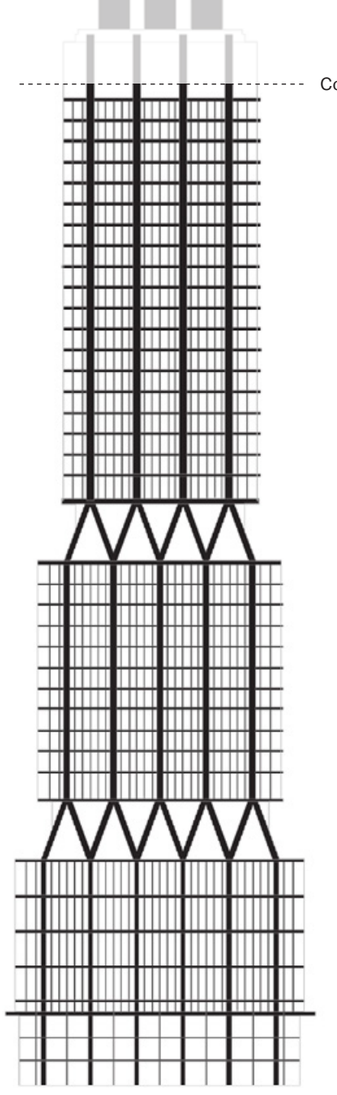
Australia Square, Sydney
Height: 170m



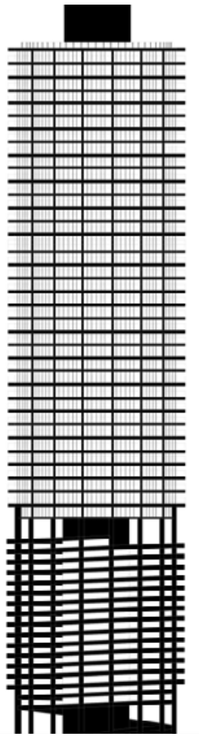
Existing Euston Tower
Height: 125m



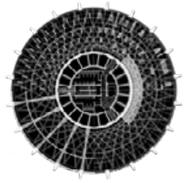
Quay Quarter Tower, Sydney
Height: 216m

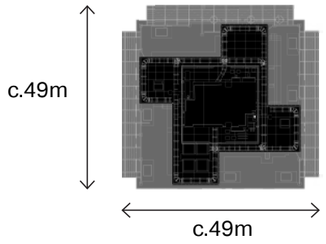


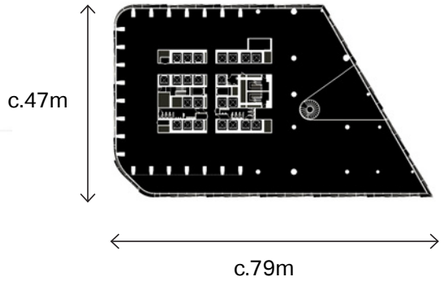
425 Park Avenue, New York
Height: 262m

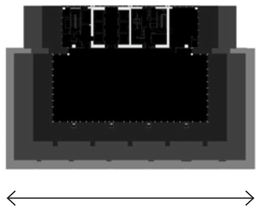


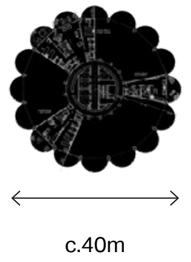
Marina City, Chicago
Height: 179m











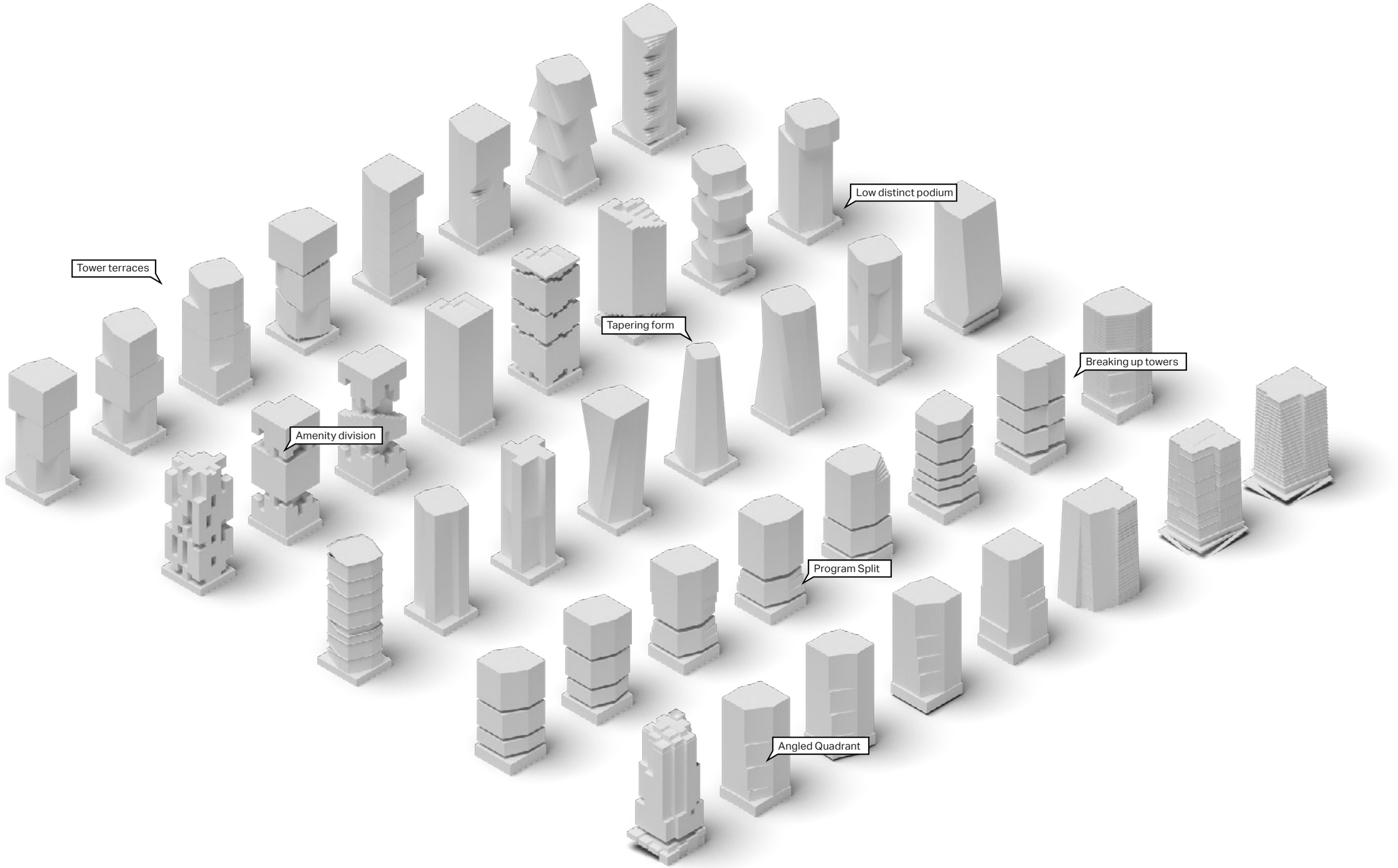
Glazed / Open Facade

6.2 Initial Massing Studies

This page highlights some of the initial studies surrounding massing on the site, including some of 3XN's early conceptual approaches.

These studies suggested that the site could accommodate a building of significant scale, commensurate with its prominence on the Euston Road / Hampstead Road junction.

Images - Initial massing explorations


Tower terraces
Low distinct podium
Tapering form
Breaking up towers
Amenity division
Program Split
Angled Quadrant

6.3 Massing Concept Development

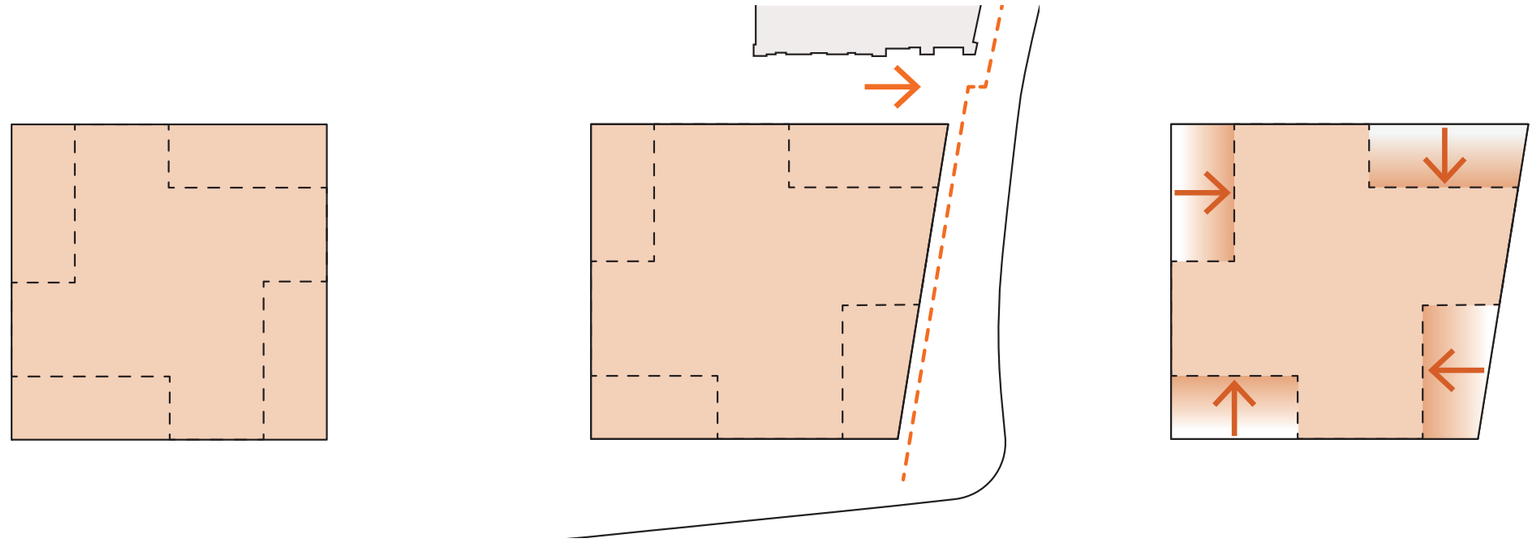
Massing Concept Development
(December 2023 Planning Application)

The four quadrants approach to the tower massing was inspired by the pinwheel floorplate shape of the existing Euston Tower. Expanding the floorplate from the pinwheel shape increases usability and future flexibility of programme for tower levels by ensuring that the floor plate is more connected.

Angling the expanded tower floor plate towards the east provided a continuity in the streetscape experience along Hampstead Road and added additional space around the busy intersection of Hampstead Road and Euston Road.

Pushing in the four quadrants at the upper levels provided a vertical separation of each side of the tower so that each face was split into two. This separation gave the tower a verticality which could be appreciated from long range views and also up close as a passerby.

The four quadrant concept was most clearly understood by a series of explorative cast plaster models as shown on the opposite page.



Expand to Square

Align to Hampstead Rd

Push in Four Quadrants

Diagrams - Conceptual massing diagrams in plan for the December 2023 planning application









Photographs - Physical models of initial massing and articulation explorations

Massing Concept Development
(Post-December 2023 - The Proposed Development)

Following continued engagement with planning and design officers at London Borough of Camden, as well as further conversations with statutory consultees such as Historic England and the Greater London Authority, significant changes to the massing have been made, intended to simplify the form and create the opportunity for a calmer, and more ordered facade design.

The fundamental massing concepts remain largely the same, and the total height of the Proposed Development remains the same as the December 2023 planning application scheme. However, the massing change provided the opportunity to express more clearly those conceptual approaches, as illustrated in the adjacent diagrams.

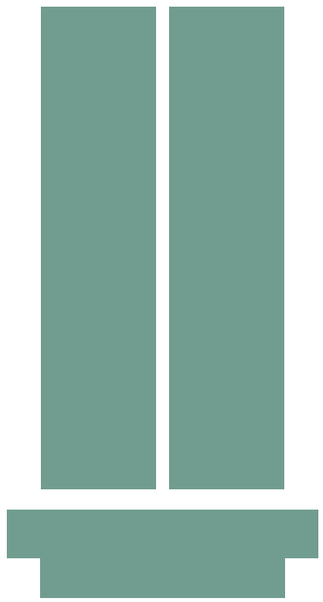
The Proposed Development is now rectangular in plan, allowing the facade to be more ordered and relate better to the surrounding built environment. The plan allowed for all sloped faces on the elevations to be removed.

The concept of splitting up of the elevations centrally on the facade is retained. However, the vertical separation is achieved through setting back the facade rather than pushing it out, helping better accentuate the division between the tower quadrants.

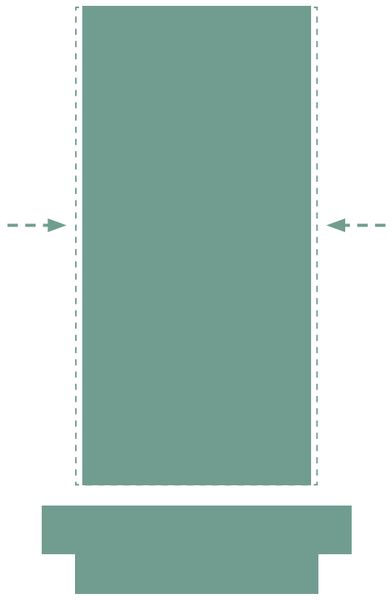
A focus on the perception of slenderness, particularly in townscape views, resulted in rounding the corners, reducing the perceived width of the tower, especially when viewed obliquely.

The podium is now two levels taller and proportionally it sits better as the base for the tower. It allows for a clearer identity at the Ground Level and a more assured form, that helps it relate to the surrounding context.

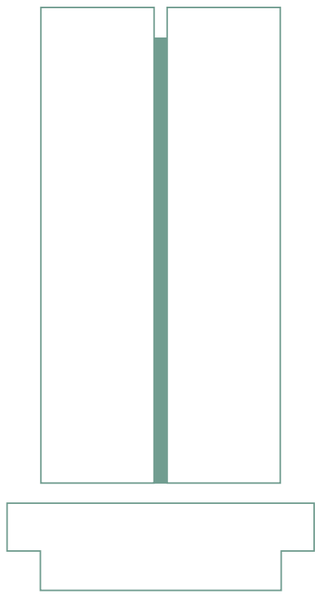
The following pages outline the design evolution process and the steps taken in realising the design for the Proposed Development, expanding on the above points in more detail.



4 Slender, Connected Tower Quadrants



Rounded Corners Narrow Perceived Width



Set-In Spines Emphasise Four Quadrants

Photograph - Work-in-progress design evolution massing model

6.4 Tower Massing Evolution

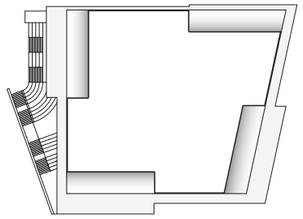
Tower Massing Evolution
(December 2023 Planning Application)

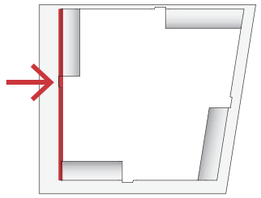
The four quadrants concept has been central to the idea of challenging the conventional tower typology.

The development of the massing over the design process has been ongoing as various analyses of skyline, local and strategic views and LVMF viewing corridors and the appreciation of local landmarks have been undertaken.

All of the adjustments during this development have been driven by the four quadrants massing approach, following the concept of creating a tower that responds to its context and location with a distinctive form that is consistent from each direction whilst remaining coherent and recognisable on the skyline.

This spread details the evolution of the tower massing in 2023, culminating in the December 2023 planning application. The spread overleaf details the evolution of the tower massing following the submission of the December 2023 planning application to the design of the Proposed Development.



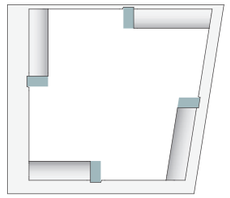


1. February 2022 - Initial Massing

The initial tower massing reflected the four quadrants concept and as such seeked to provide a distinctive form that was coherent and recognisable across all elevations. Double-height amenity cuts in the facade were identified at this point and studied in terms of quantity and location on the four quadrant massing

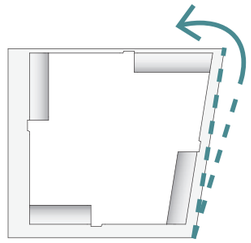
2. LVMF Analysis

The podium and tower massing were reduced by approximately 2.8m from the west side of the development due to interference with a LVMF viewing corridor from Parliament Hill that is framed by the existing Euston Tower and the BT Tower. This brought a significant reduction in massing that resulted in a more slender volume that reflected better the proportions of other lower tower buildings in its context



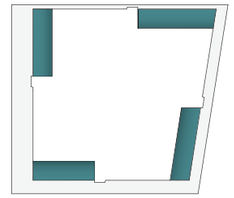
3. “Breathing Spines” Introduced

The Proposed Development’s MEP strategy required a considerable amount of louvres to support the amount of air required for the building’s systems. Breathing Spines were introduced at the junction of each quadrant, and massing adjusted accordingly, making this element both functional and consistent with the overall architectural concept.



4. The Eastern Quadrant

Discussions with LB Camden officers resulted in the angle of the eastern quadrant changing from 12^{O} to 9^{O} - this change ensured that the proposal followed better the fanning facade lines along Hampstead Road, created a more slender form within the townscape (especially when viewed along Tottenham Court Road), and created more public realm space at its base in the north-east corner of the site.



5. Amenity Expression

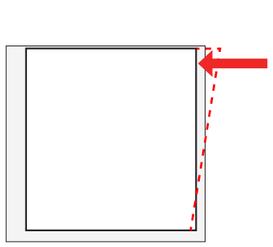
A series of two-storey ‘cuts’ were added throughout each of the quadrants of these buildings providing space for valuable amenity such as external terraces and winter gardens. These cuts also help further reduce the massing, creating a series of stacked boxes that allow the building to function as a ‘vertical connected neighbourhood’ to complement the character of Regent’s Place and by adding double high amenity facade elements, the tower has a coherent expression.

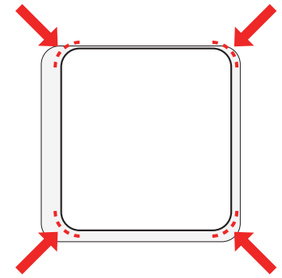
Tower Massing Evolution
(Post-December 2023 - The Proposed Development)

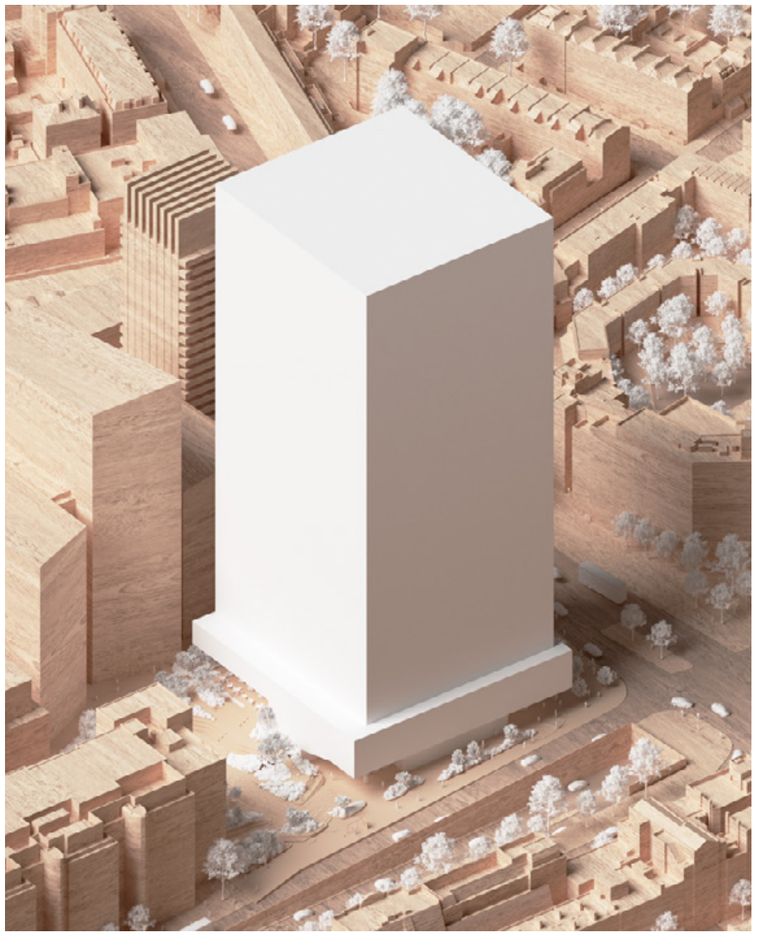
Following the December 2023 planning application, further consultation with local stakeholders and the planning authority provided opportunities to further progress the form and massing of the Proposed Development.

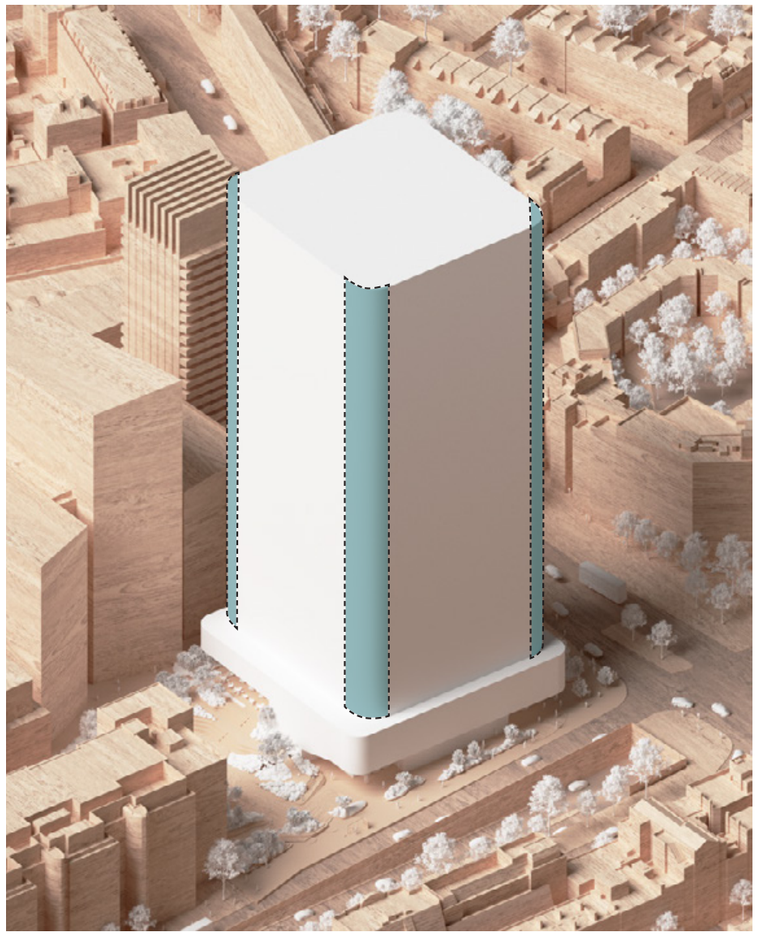
Working with planning and design officers at the London Borough of Camden, the form was simplified and rationalised with the ambition of reducing the perception of bulk and massing within the townscape, and developing a calmer, more ordered approach to the architecture.

This spread details the evolution of the tower massing, following the submission of the December 2023 planning application, to the design of the Proposed Development.







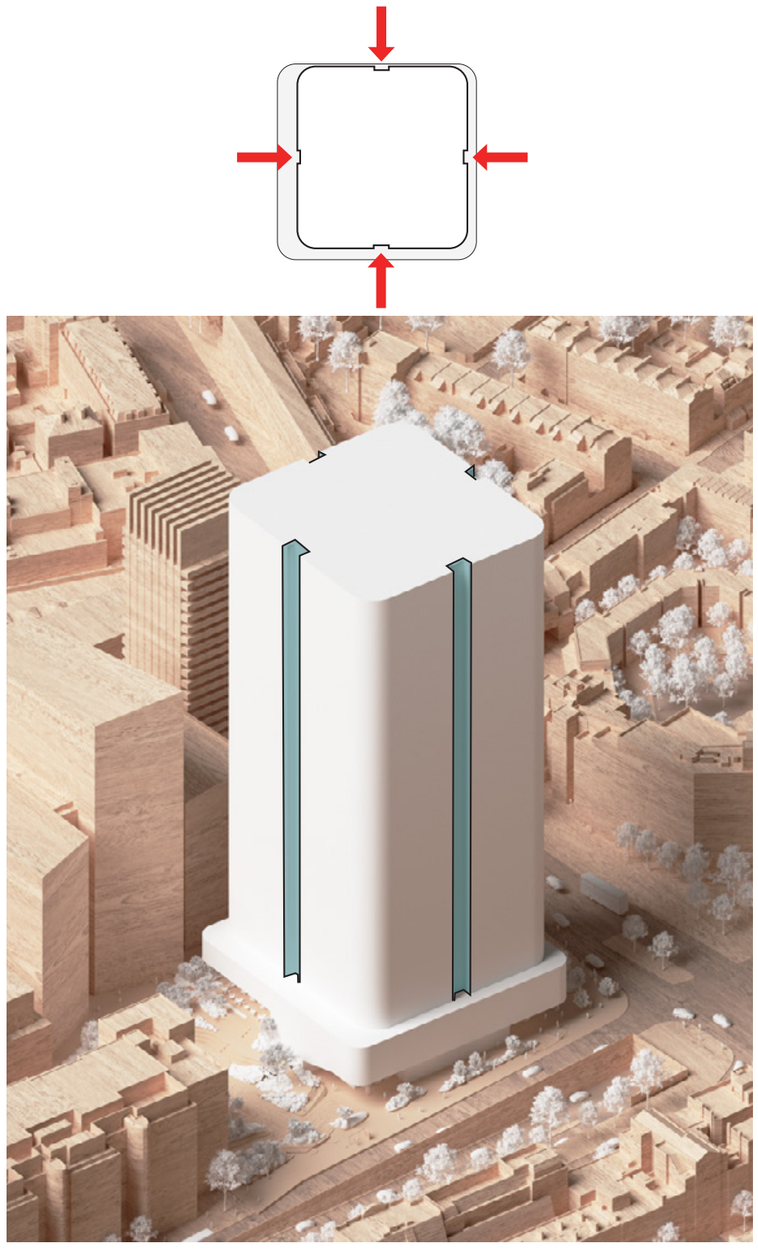


6. A Less Complex and More Ordered Massing

The building massing was simplified; a rectangle in plan, and extruded to the height of the proposals submitted in the December 2023 planning application. The uniform extrusion helped give the proposed tower a calm, organised appearance on the skyline and provides a clear relationship to the regular extruded forms of tall buildings in the immediate context. Cutting the form back at the north-east helped make the proposed tower appear more slender, particularly when viewed from along Tottenham Court Road.

7. Rounding the Corners

In order to further reduce the perception of bulk and massing, the corners were faceted to create a rounded form. This resulted in the visual width being significantly reduced, especially when the proposals are viewed on the angle. The softer appearance has also helped establish a clearer identity for the proposed tower and reinforced it as a building that addresses all four elevations.

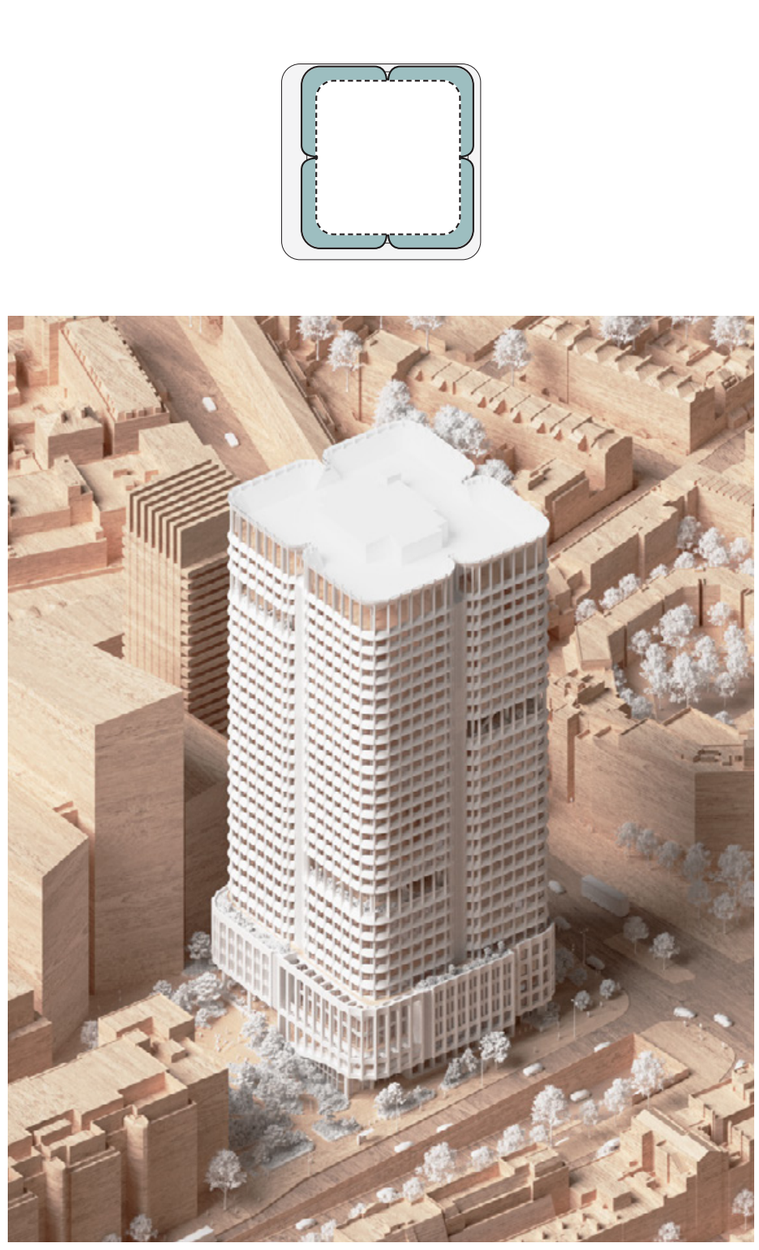


8. Inset “Breathing Spines”

Rethinking and integrating the four quadrant concept into the developing form, the Breathing Spines were set in to help define a split in the centre of each face. The Breathing Spines help reinforce verticality in the massing and create the appearance of two, slender, connected towers per elevation. The central division supports a consistent treatment to each face, and the concept of a 360° tower. The proposed tower addresses all cardinal directions equally, respecting its situation as a uniquely tall tower in its context.

9. Rounded “Breathing Spines”

The four quadrant concept was further supported through rounding the corners at the Breathing Spines, thereby reinforcing the idea of each elevation being made up of two, slender, connected towers. The softer edges to the setback spine help make consistent the formal architectural expression and, therefore, a more coherent shape to the proposed tower.



10. A Consistent 360° crown

The Breathing Spines were further set back at the top, helping define a more articulated crown to the proposed tower. The rooftop plant was setback to allow for a consistent double-height condition to be applied to all four elevations equally. This consistent treatment further reinforces the concept of a 360° tower that addresses all four directions and responds to its unique situation as a tall tower in this part of the borough.

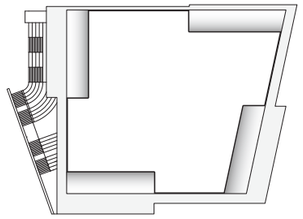
6.5 Podium Massing Evolution

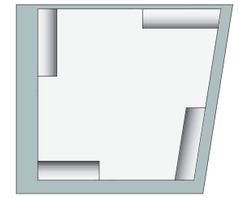
Podium Massing Evolution
(December 2023 Planning Application)

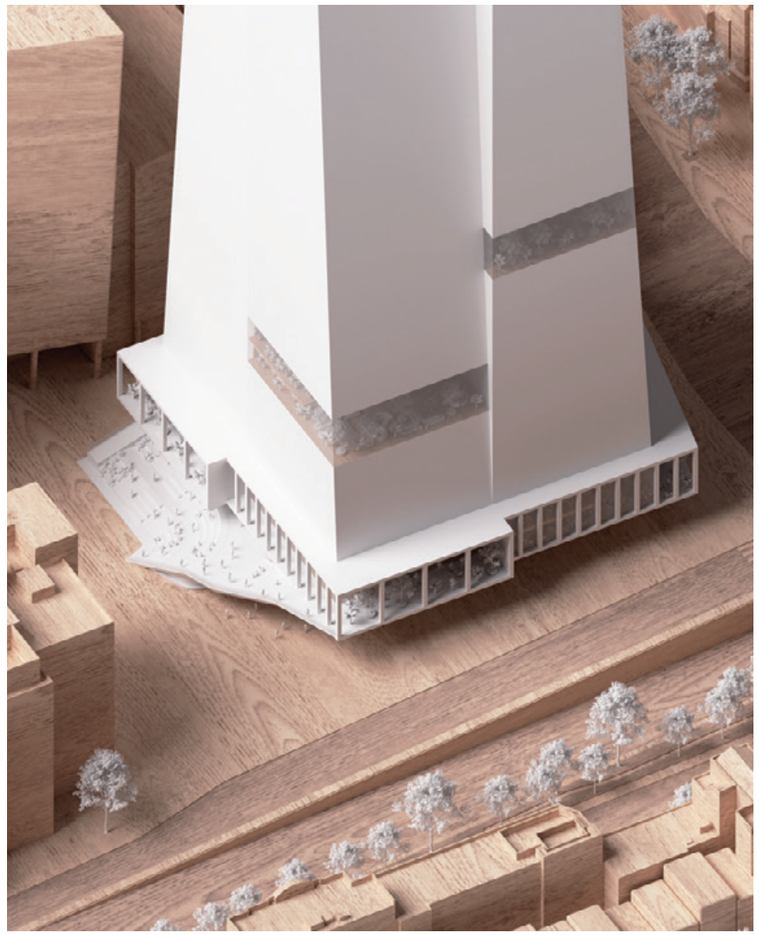
The manner by which the tower element lands and connects with the ground plane is fundamental to the conceptual approach and, as such, a focus on creating an inviting, welcoming, open and accessible podium and surrounding public realm and landscape has been key in the massing evolution of the podium and landscape.

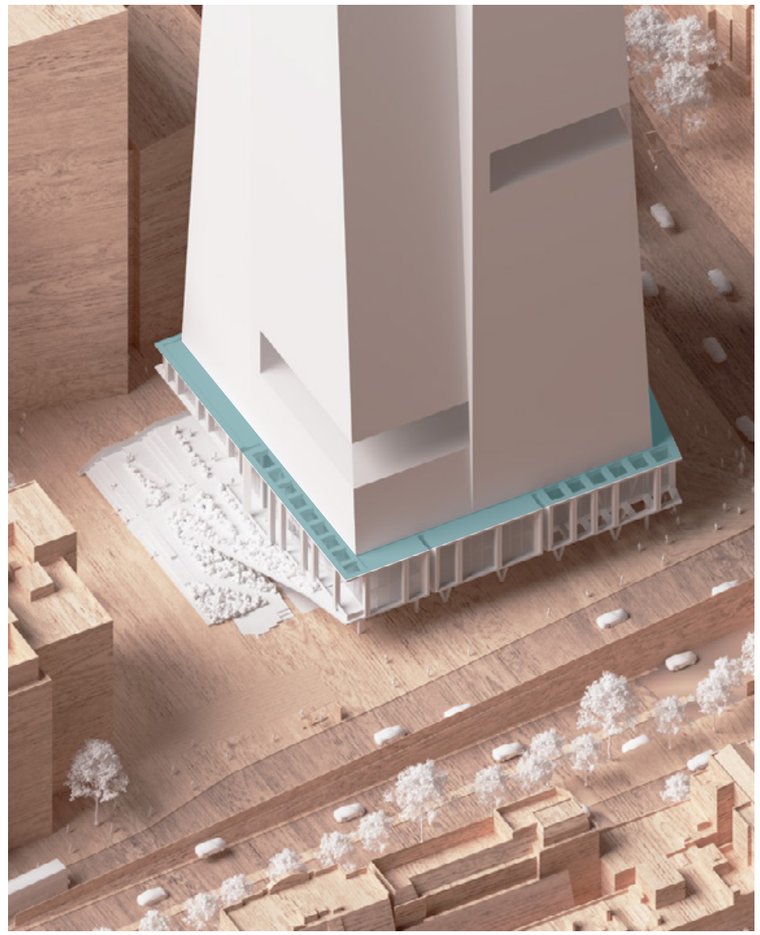
The development of the podium massing has been sensitive to a number of key constraints, including balancing the requirement to limit oversailing in the public realm with a responsibility to improve the wind and microclimate conditions on- and off-site, to create a more comfortable environment for pedestrians, cyclists and life around the building.

This spread and the spread overleaf detail the evolution of the podium massing in 2023, culminating in the December 2023 planning application. The subsequent two spreads detail the evolution of the podium massing following the submission of the December 2023 planning application, to the design of the Proposed Development.







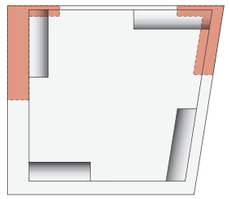


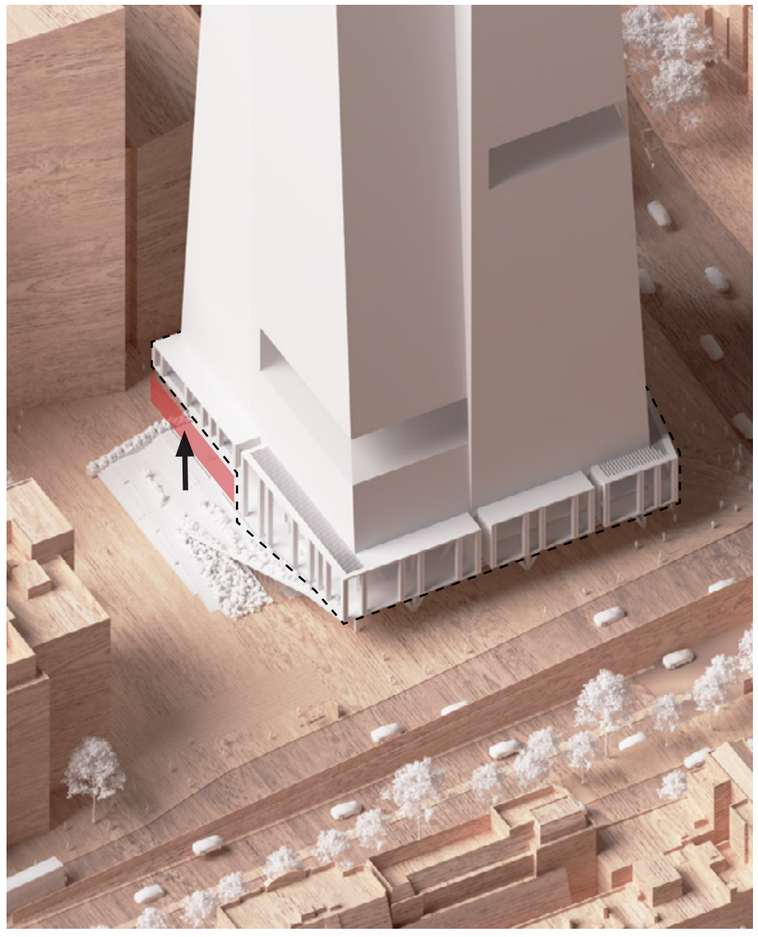
1. February 2022 - Stage 01

The Stage 01 tower massing had an angled east facade face and was made up of four two-level boxes which push and pull relative to one another. The purpose of this massing was to mitigate wind, to relate to the neighbouring buildings along Hampstead Road and to provide a more generous public space at the corner intersection at Ground Level. The pinwheel shape helped break down the massing of the podium into four distinct areas to reflect the quadrants of the tower above

2. Simplifying Podium Massing and Reducing Overhangs

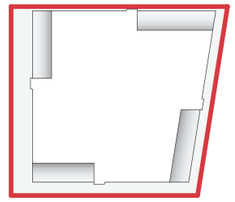
The push and pull massing boxes were simplified to represent a more consolidated and distinct podium shape. Through pushing areas of the podium massing back, the oversailing of the public realm was reduced in collaboration with LBC. However, this had a negative effect on the podium's mitigating effects on the wind conditions so initial studies were undertaken to integrate wind baffles into the podium facade on the south-east and west

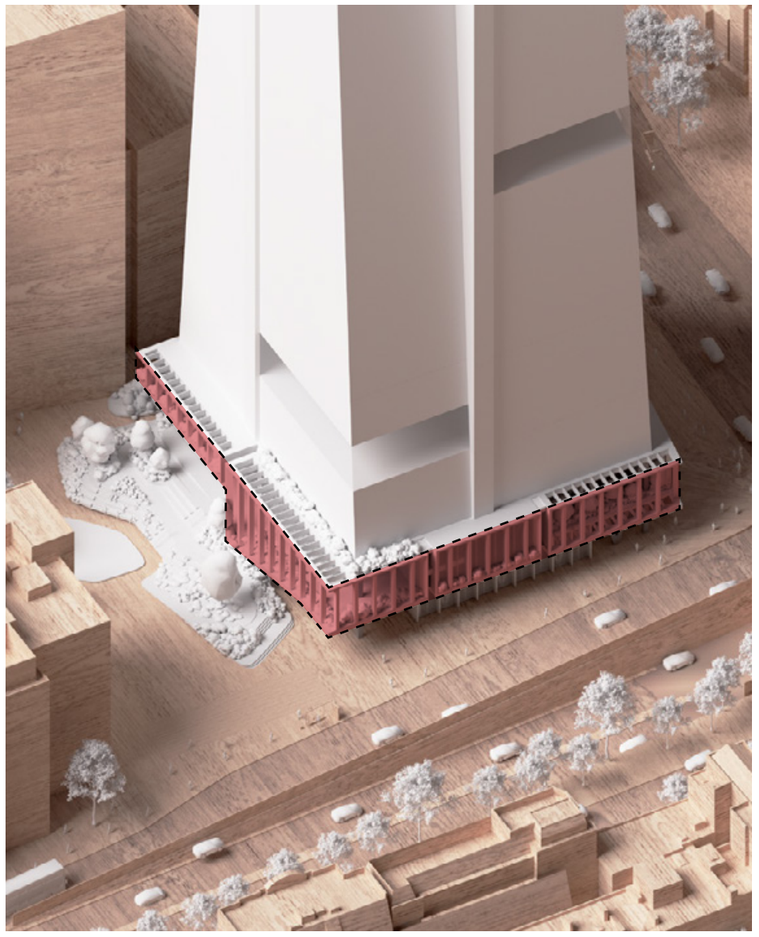




3. Push up Areas of Podium to Highlight Entrances

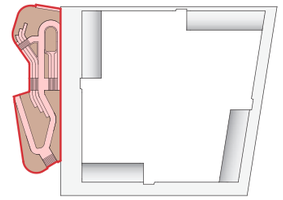
The north-west and north-east podium massing boxes were lifted up as an architectural gesture, highlighting key entry points and encouraging access from Regent's Place Plaza and Hampstead Road to reflect the concept of creating an inviting and welcoming series of permeable public podium spaces. Wind baffles are further developed to reflect the ongoing wind tunnel and CFD analysis undertaken to improve microclimatic conditions on the site.

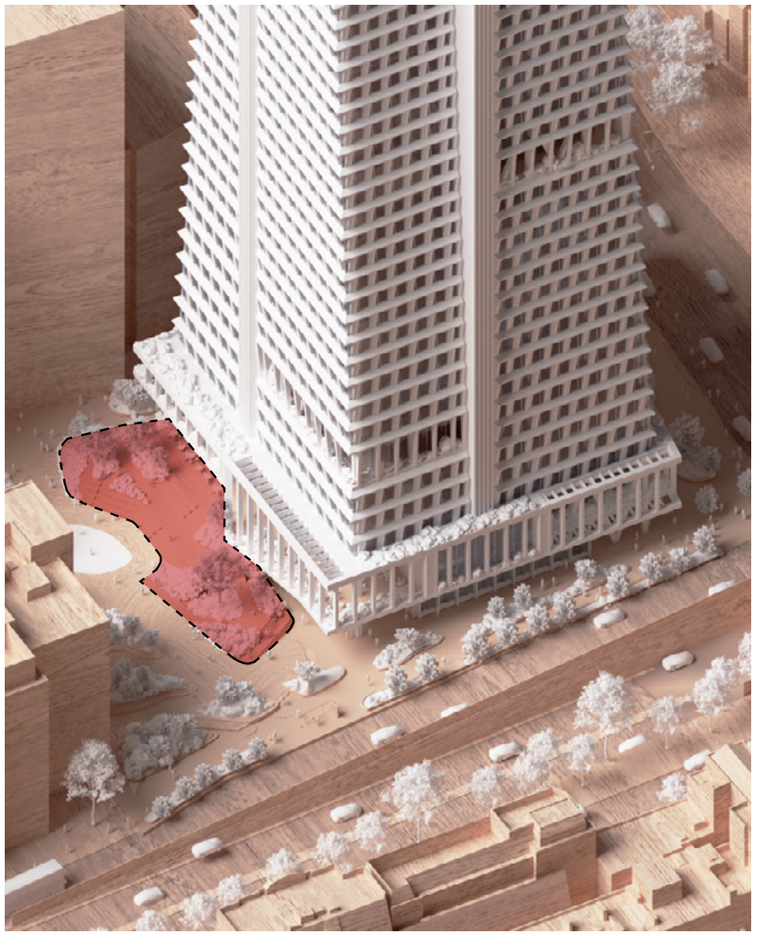




4. New Regular Facade Expression

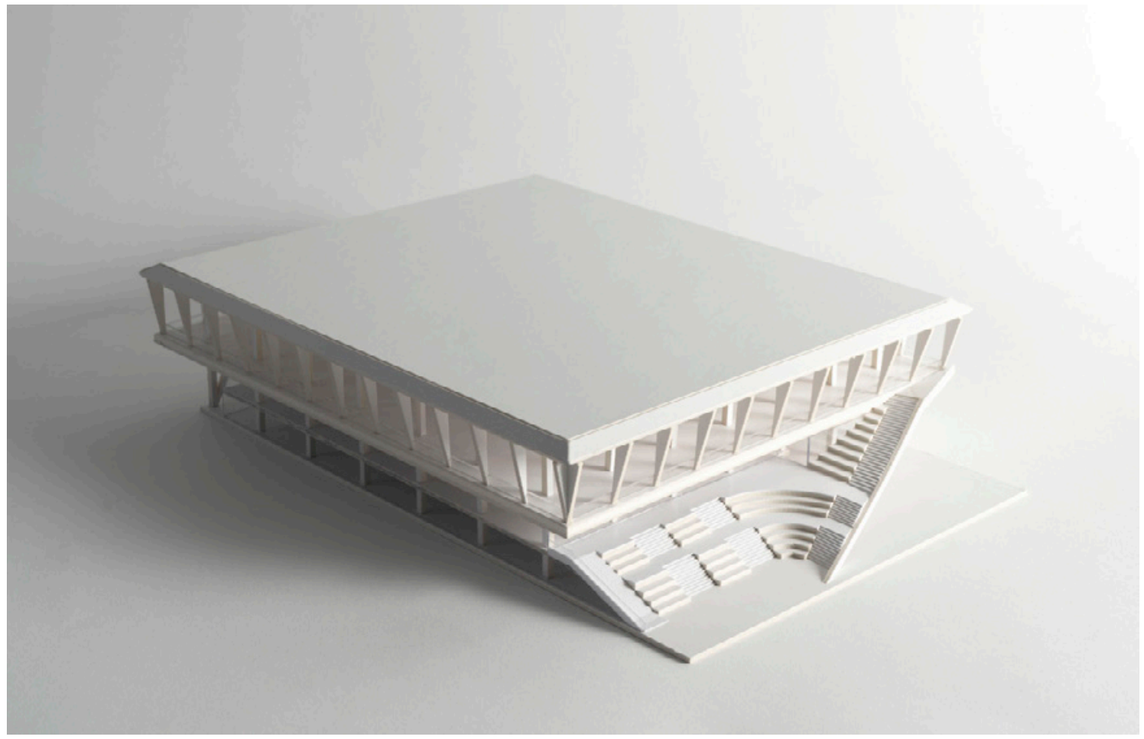
The podium facade expression was simplified into a series of vertical elements with a 3m spacing and introduced gaps between the podium boxes which represented a miniature version of the tower breathing spines. This rationalisation was achieved through a series of significant workshops with LBC planning officers. This collaboration also resulted in movement in the ground floor facade, pushing entrance areas in to provide additional shelter at thresholds whilst simultaneously pushing areas out elsewhere to reduce areas of oversailing in the public realm further

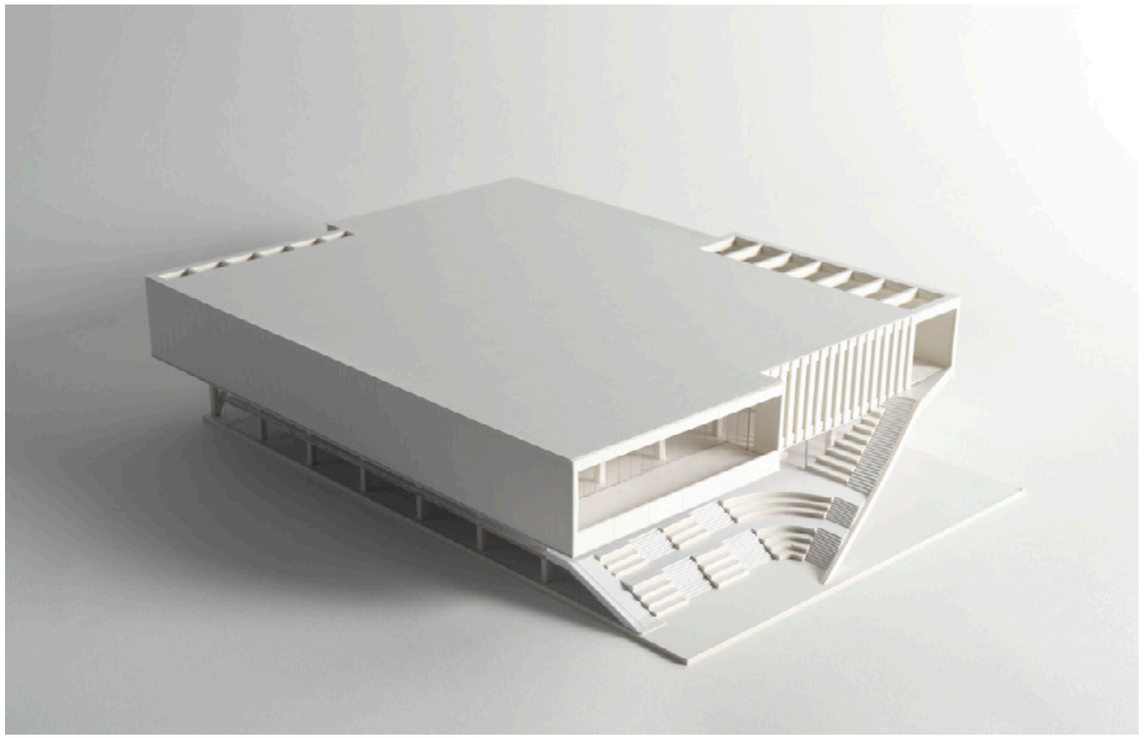


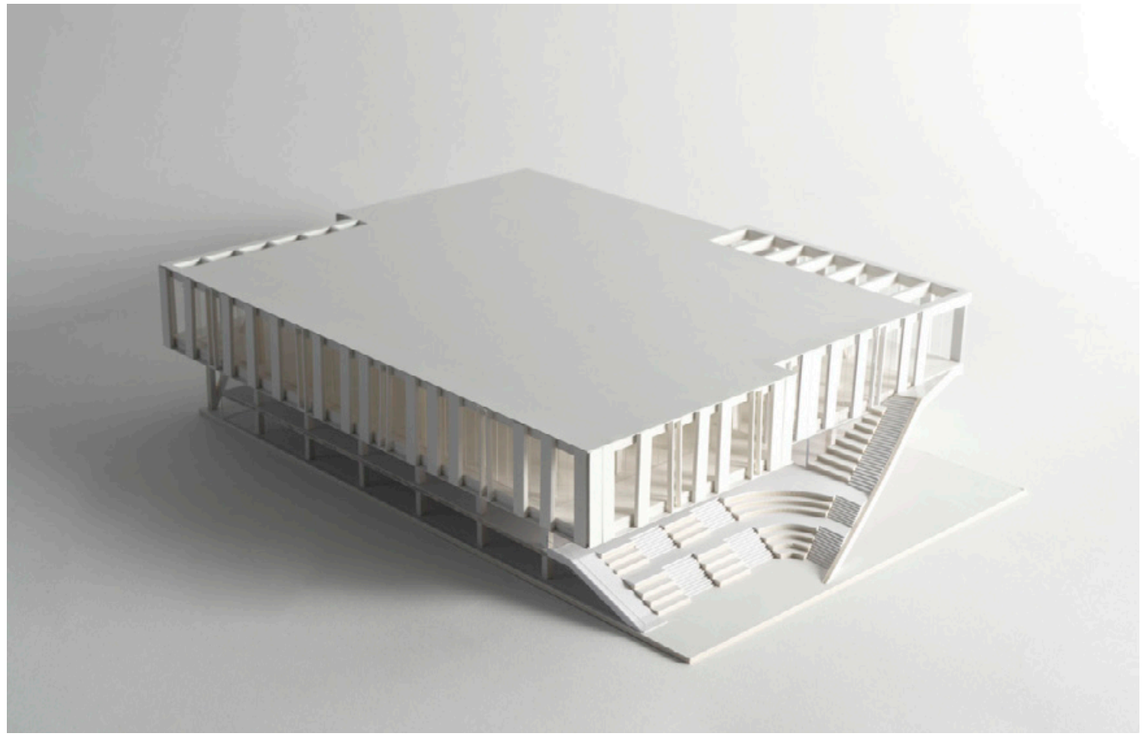


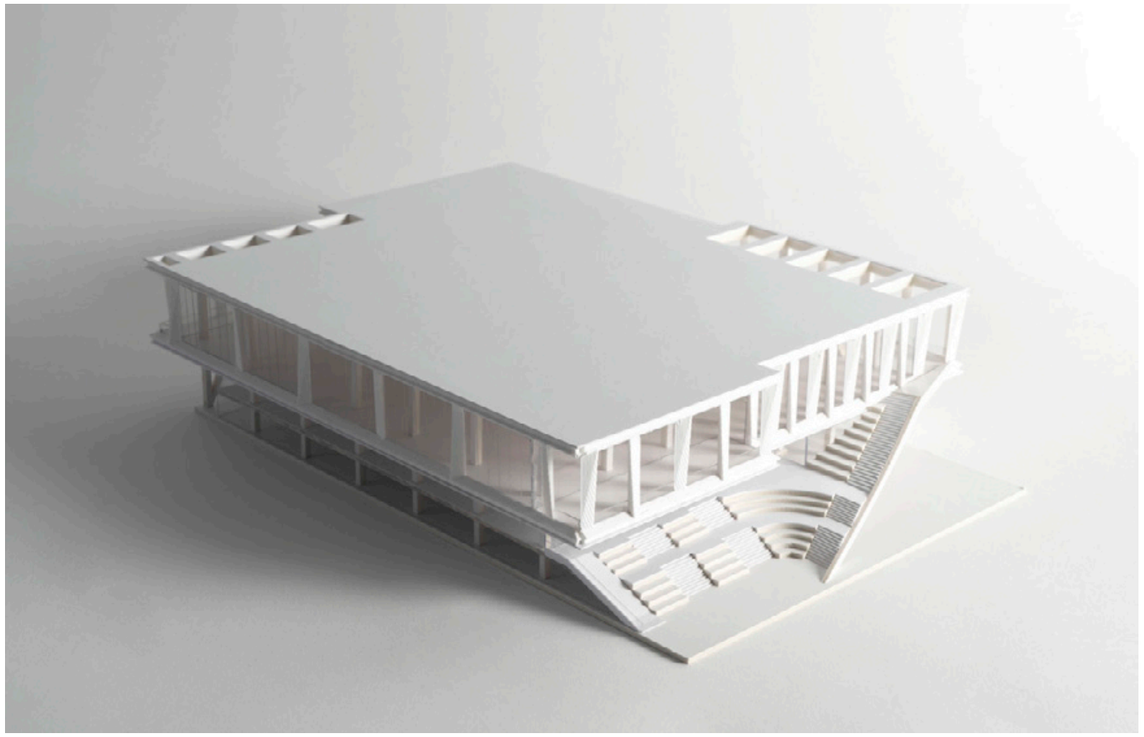
5. Development of Exterior Stair

A terraced landscape designed in conjunction with the Proposed Development public realm design concepts is developed for an active connection with Regent's Place Plaza. This planted green route provides access to the Level 01 cafe terrace and has been significantly influenced through both the co-design and LBC pre-application workshops with the ambition of creating a fully accessible, engaging and immersive green landscape that encourages entry and access through the public podium

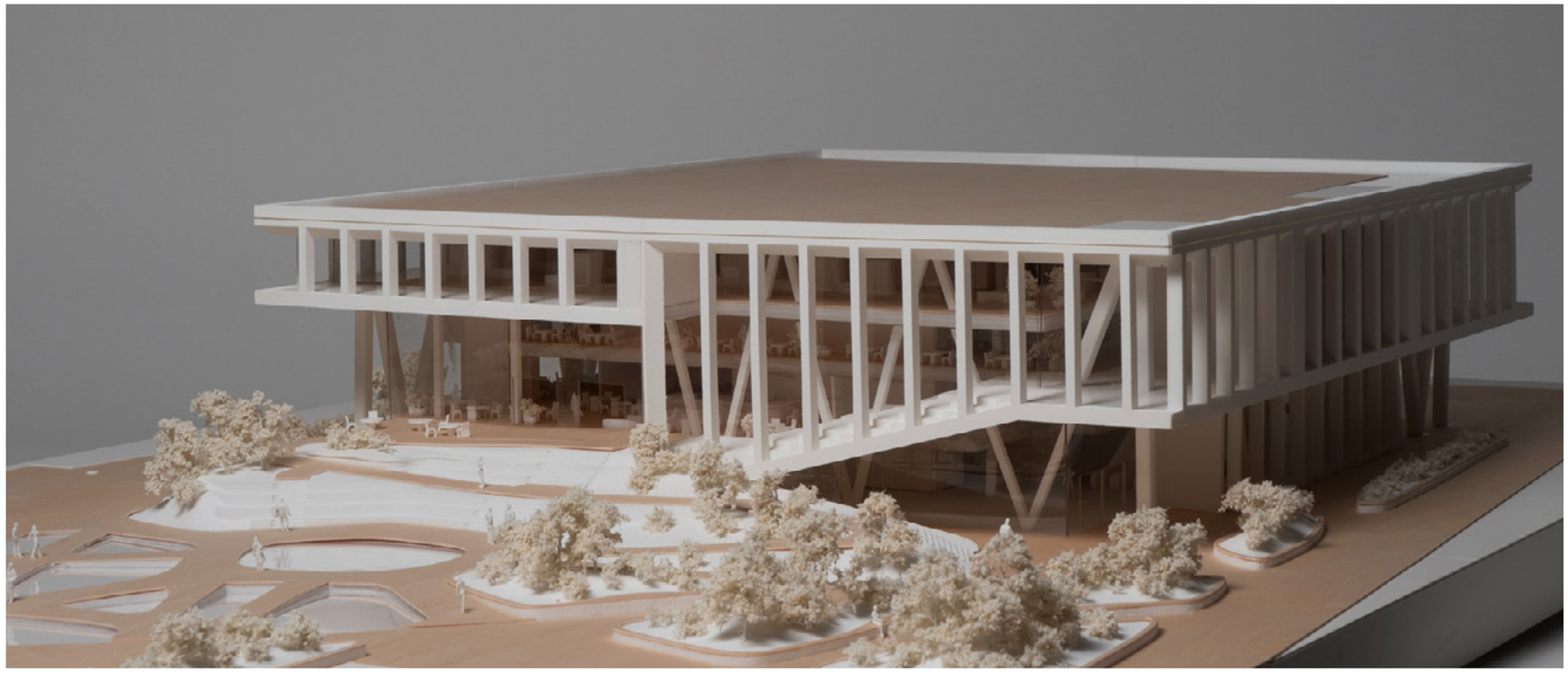








Photographs - Physical models of differing podium design approaches



Photograph - Detailed physical model of podium (December 2023 planning application)

Podium Massing Evolution
(December 2023 Planning Application)

A significant focus was given to how the lower levels of the building connect with the public realm on all four sides of the building. This focus gave rise to adjustments throughout the design process which include the location of entrances, relationship of the ground floor glass line to pavement, extent to which the podium levels overhang public space and the ease of access from various sides of the podium to multiple levels of interior programming.

The design adjustments were made with careful scrutiny of the relationship of elements of the proposed podium massing to adjacent buildings and continual conversation about what design moves best serve the local community at both the ground and upper levels of the podium.

Initial podium designs featured a single box massing for the upper levels of the podium. This design evolved into a series of four floating boxes for the upper levels with a push and pull of their front faces so that the boxes stood apart from one another. The proposed design for the December 2023 planning application version of the podium featured a massing where the upper floor boxes are aligned on their front faces and lifted up on the northeast corner at Hampstead Road and on the north-west corner facing Regent's Place Plaza. In addition, the ground floor glass was pushed in strategically at entrances along both Euston Road and Hampstead Road.

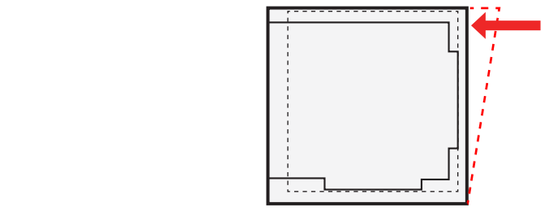
This spread illustrates how the major developments in the design evolution for the December 2023 planning application came together into a coherent design. The next two spreads detail the evolution of the podium massing following the submission of the December 2023 planning application, to the design of the Proposed Development.

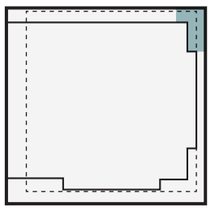
Podium Massing Evolution
(Post-December 2023 - The Proposed Development)

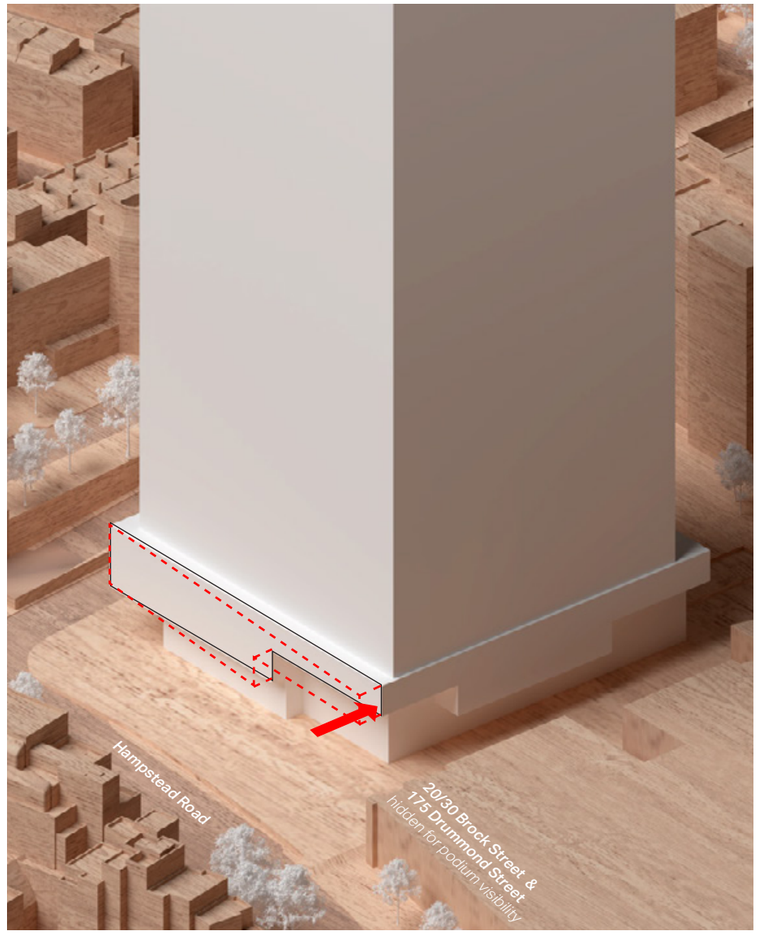
The decision to simplify the form of the tower after the December 2023 planning application presented an opportunity to also rationalise the podium massing and ensure a link in the form of both elements of the architecture.

Working with planning and design officers at the London Borough of Camden, the form was simplified in line with the tower massing, with the ambition of reducing the mass and oversailing, and creating a more coherent experience of the architecture at Ground Level.

This spread details the evolution of the podium massing, following the submission of the December 2023 planning application, to the design of the Proposed Development.





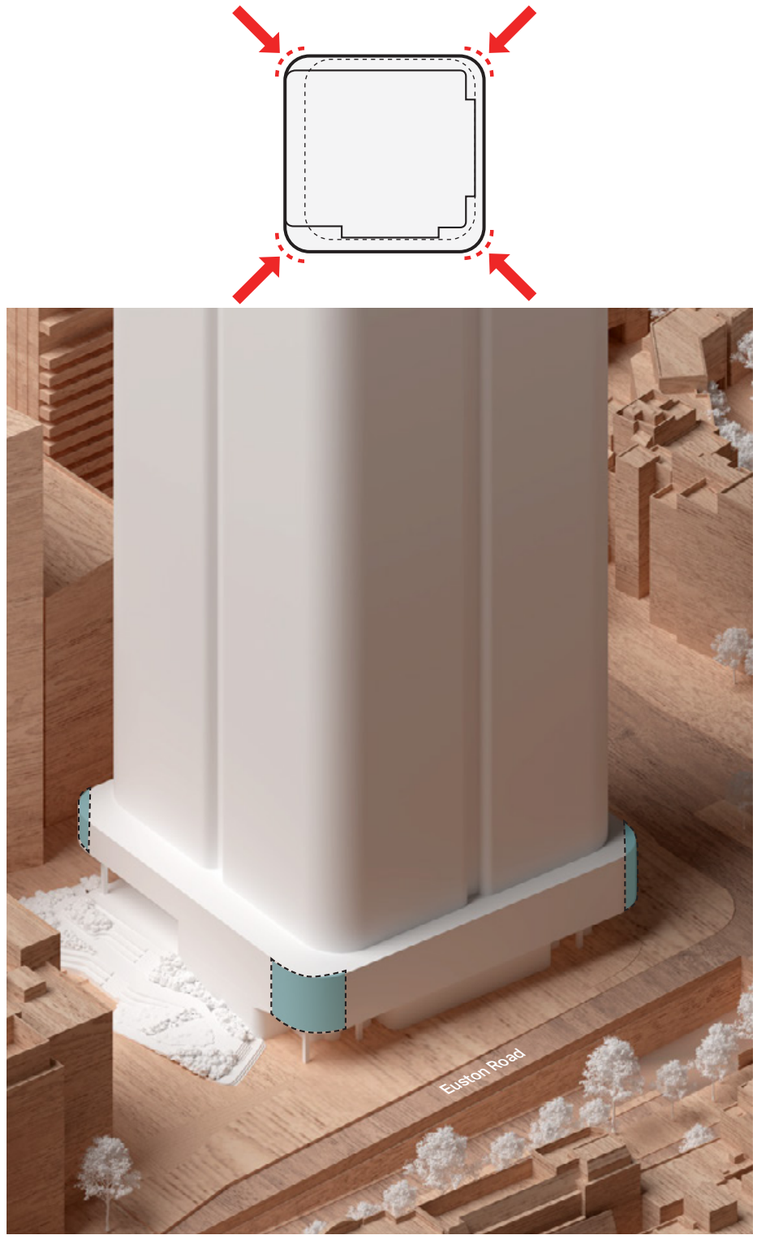


6. Cutback to NE to align with Tower Massing Change

The initial massing change to the podium was to setback the NE corner to align with the change in massing in the tower, removing the alignment to the facade lines along Hampstead Road in favour of increased public open space at this point.

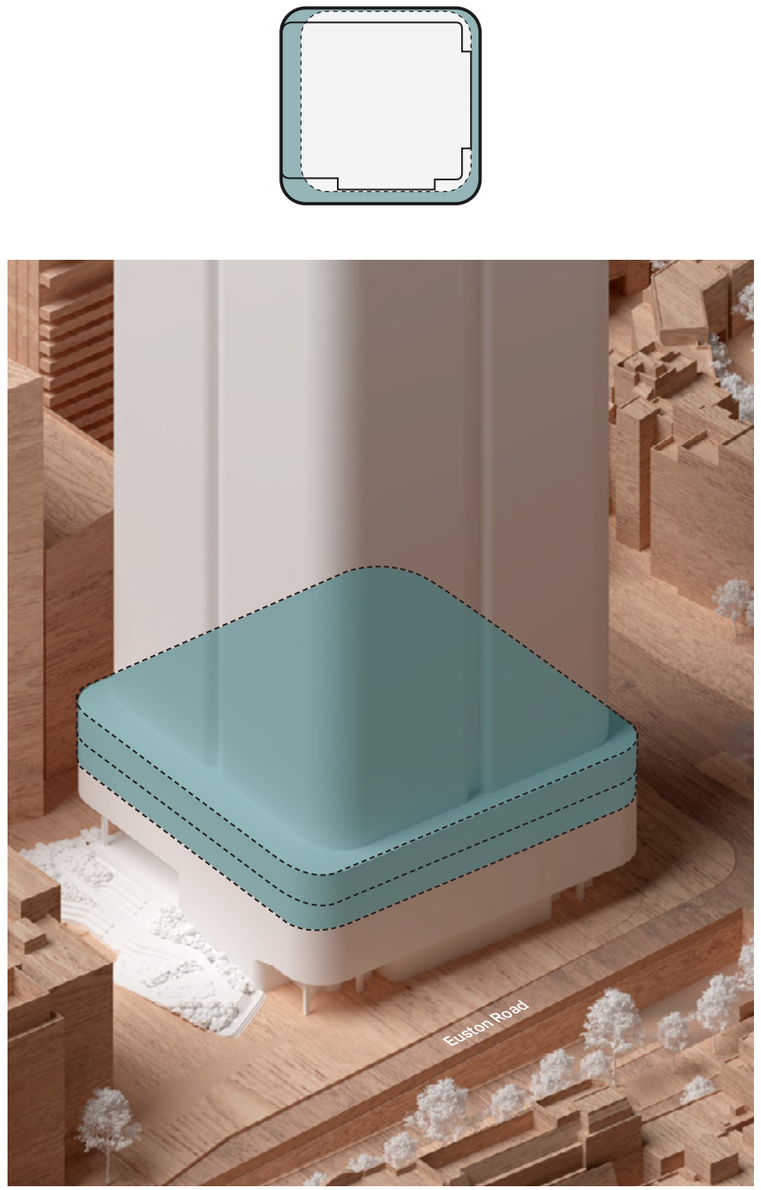
7. NE Soffit Dropped

After further consideration of the scale and massing of the podium in the townscape at the north-east corner, the decision was made to lower the soffit under the triple height space to create a more human-scaled experience to the entrance to Brock Street. This also had the effect of calming down the Hampstead Road elevation, in line with the more rational and ordered massing of the tower.



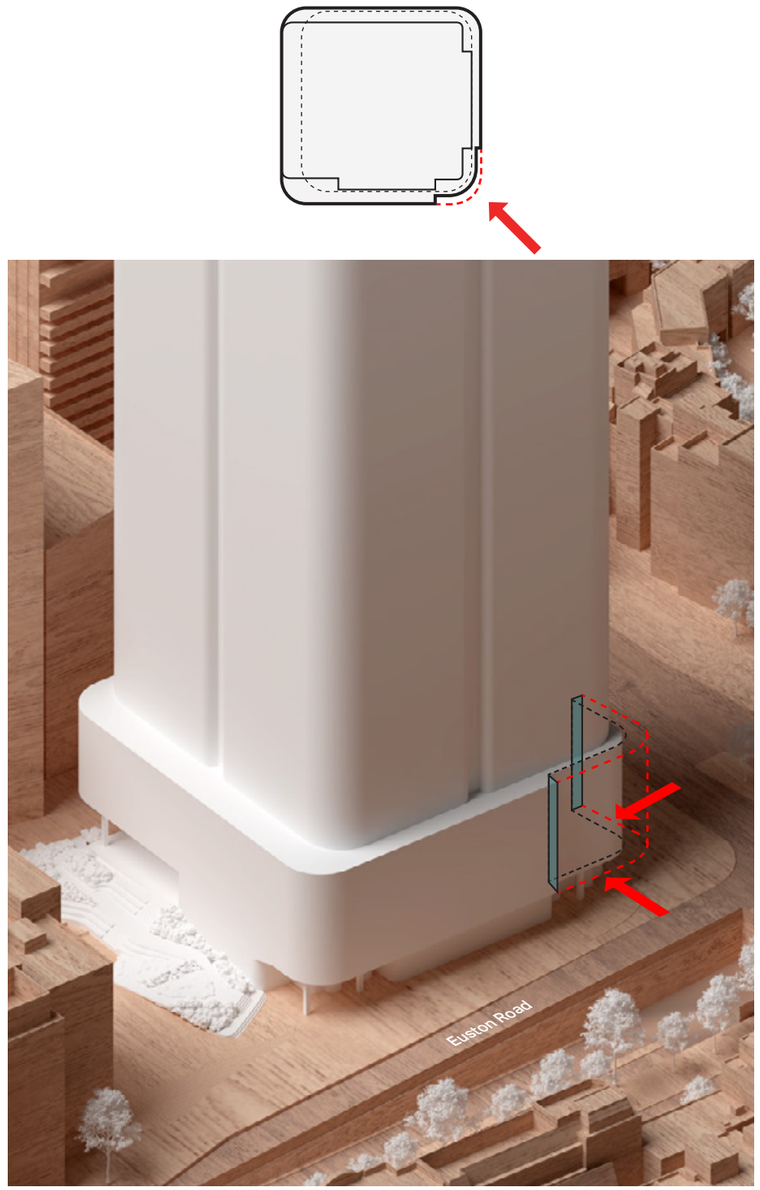
8. Rounded Corners

The corners of the podium were rounded to align with the formal language of the tower, maintaining a connection between the two in the approach to the massing. Softening the massing at the corners increases the amount of open space in the public realm, as well as reducing the perception of the bulk and massing at the edges. This was particularly effective at the Euston Road-Hampstead Road junction, and the Hampstead Road-Brock Street junction, in providing more open public space around higher-traffic areas.



9. Increased Massing by Two Levels

Responding to feedback received at the August 2024 Design Review Panel, and ongoing communication with the planning officers at LBC, additional massing in the podium was studied to better situate it in the townscape and improve proportions. Having considered multiple options for additional massing, the decision was made to raise the height of the podium by two levels, giving the tower mass a more solid and substantial base upon which to stand.



10. Setback to the Euston Road Junction at the South-East Corner

Addressing its situation on a key crossroads, and following testing in the wind tunnel, the massing at the south-east corner was pushed back to reduce the oversailing at the junction and offer a gesture in the architecture particularly in the approach from Tottenham Court Road and Warren Street station.

Podium Massing Evolution
(Post-December 2023 - The Proposed Development)

The approach of using the architecture to create a formal gesture, connecting the podium with the public realm, was seen as a successful aspect of the December 2023 planning application. This concept was therefore retained and developed, with a focus on creating more human-scaled spaces within the taller proportion of the taller podium massing.

Lessons learnt from the local context, specifically in relation to the character of the buildings down Tottenham Court Road, were instrumental in defining the approach to the architectural language and articulation which is outlined in more detail in sections 6.13 - 6.15.

Photograph - Podium detail from 1:250 model

Photograph - Podium detail from 1:250 model