

This chapter details the process the design underwent in order to achieve design excellence.

**Introduction**

In order to achieve the highest standard of architectural, urban and landscape design the development of the proposed Block 4N has undergone an extensive, collaborative design process involving the whole Design Team and the Client. This chapter highlights the various design stages and iterations the project underwent prior to seeking permission and explains the thinking behind the concept and why we believe design excellence has been achieved. Furthermore it provides an insight into the design processes of Foster+Partners.

**Foster + Partners**

Foster + Partners is an international studio for architecture, planning, engineering and design led by its founder and chairman, Lord Foster, and two heads of design, Spencer de Grey and David Nelson. The practice's work ranges in scale from the largest single building on the planet, Beijing International airport, to its smallest commission, a range of door furniture. The scope of its work includes master plans for cities, the design of buildings, interior and product design. There is also a strong interest in city planning and the infrastructure of communication. Projects can be found on six continents throughout the world: Europe, North and South America, Africa, Asia and Australasia.

The studio has established an international reputation with buildings such as Swiss Re's London Headquarters, Hearst Headquarters in New York, Deutsche Bank Place and Regent Place in Sydney, Millau Viaduct in France, the new German Parliament in the Reichstag, Berlin, The Great Court for the British Museum, Headquarters' for HSBC in Hong Kong and London, Commerzbank Headquarters in Frankfurt and the Metro Bilbao. Current work includes the Zayed National Museum in Abu Dhabi; the Hermitage Plaza community development in Paris; Queen

Alia International Airport in Jordan and Al Haramain High Speed railway stations in Saudi Arabia.

The central concern of the practice is design excellence and a belief that the quality of our surroundings has a direct influence on the quality of our lives. Achieved through active collaboration with clients and specialists, this is allied to an acknowledgement that architecture is generated by the needs of people - both material and spiritual. Management of cost and time is an important discipline and many of the practice's award-winning projects have resulted from demanding commercial circumstances. A wide range of supporting skills underpins the work of the practice allowing seamless creative integrated solutions.

**Practice Philosophy**

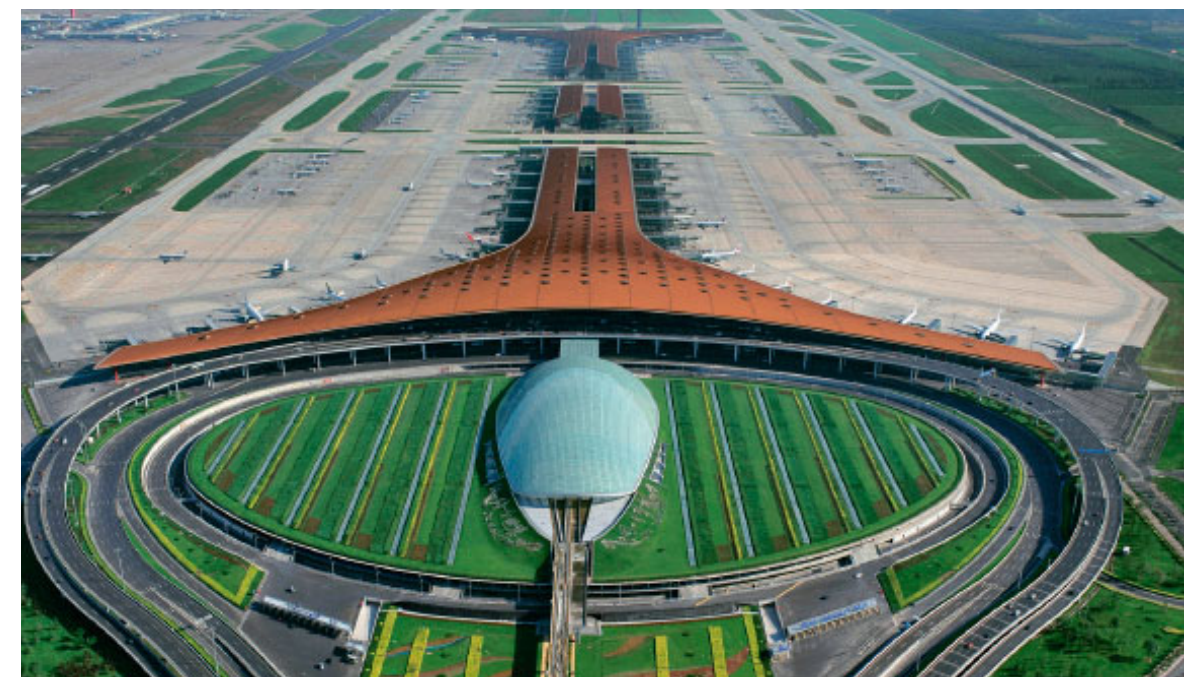
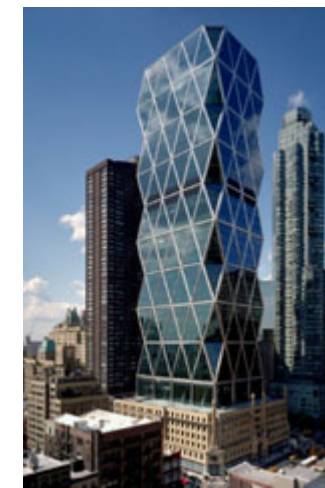
Foster + Partners has always been guided by a belief that the quality of our surroundings has a direct influence on the quality of our lives, whether that is in the workplace, at home or in the public realm. Allied to that is an acknowledgement that architecture is generated by the needs of people - both material and spiritual - and a concern for the physical context and the culture and climate of place. Excellence of design and its successful execution are central to our approach.

We believe the best architecture comes from a synthesis of all the elements that separately comprise and inform the character of a building; the structure that holds it up; the services that allow it to function; its ecology; the quality of natural light; the symbolism of the form; the relationship of the building to the skyline or the streetscape; the way one moves through or around it; and ultimately its ability to lift the spirits.

This holistic approach is coupled with a strong commitment to those who commission and use our buildings. A

high degree of personal service, together with respect for the precious resources of cost and time, characterises our client relationships.

The scale, diversity and global reach of our projects was unimaginable 40 years ago, yet many of the issues that excited us in the early days continue to inform what we do today. Environmental awareness has always been integral to the practice's culture. We have consistently sought to devise design solutions that use renewable energy sources and reduce carbon emissions. We work in a spirit of enquiry, challenging preconceptions and testing conventions. The process of 'reinvention' distinguishes much of our work - past and present - and rests on a duty to design well and to design responsibly, whether that is at the scale of an airport or a door handle.



1. Swiss Re Headquarters at 30 St Mary Axe, London, UK  
 2. The New German Parliament at the Reichstag, Berlin, Germany  
 3. Hearst Headquarters Tower, New York, USA  
 4. Hongkong Shanghai Bank, Hong Kong.  
 5. Beijing Airport, China.

# Design Excellence

## Introduction

### The Way We Work

To undertake some of the largest and most complex projects in the world needs depth of resources. However, creativity and personal service are best nurtured by the compact group where 'small is beautiful'. The resolution of these apparently conflicting ideals is mirrored in the practice's structure.

The practice is organised into eight design groups. Each is led by a design director, supported by a deputy group leader. The design groups are not restricted by building type or geographical location, each group has a diverse cross-section of projects – large and small – around the world.

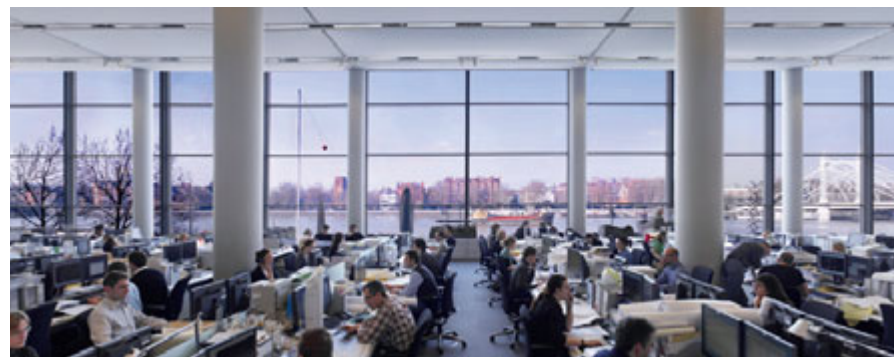
We have a strong creative team, in which structural and environmental engineers work alongside the architects from the beginning of the design process. We believe that they can learn from one another and combine their knowledge to devise fully integrated design solutions. Alongside the architects and engineers are the many specialist teams whose expertise underpins our approach. These are; project management, urban planning, industrial design, interior design and workplace consultancy.

The design of each project is reviewed regularly, both formally and informally. This process takes place under the direction of the design board, who review the design output in relation to the original brief and any changes agreed during the course of its development.

### Awards and Citations

Since its inception the practice has worked in over 75 countries, has received more than 600 awards and citations for design excellence and has won over 100 national and international competitions.

6-10. Foster + Partners design studio, London, UK  
 11. Regent Place, Sydney, Australia  
 12. Deutsche Bank Place, Sydney, Australia



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**Design Process**

The redesign of Block 4N as an independent building with a revised mixed-use scheme from the originally approved commercial scheme has evolved through several iterations, which this section seeks to document.

Starting with the revised Client Brief, Foster + Partners began to investigate how the mixed-use nature of the scheme could be grouped and arranged to be accommodated within the approved Concept Plan envelope for Block 1, whilst addressing the constraints of the plot. Together with the wider Design Team a collaborative process was initiated to develop the optimum outcome for the program and plot requirements.

Regular coordination meetings with the cross-disciplinary team were conducted by VC, interspersed with peer reviews in the F+P studio. The process also includes locating a member of the F+P project team in Sydney for a period of time to conduct the final coordination of the scheme leading up to the planning application and assist in any presentations with statutory bodies.

A series of models were produced to explore the massing and its effect upon the surrounding buildings and is illustrated on the page overleaf.

In parallel with this exercise, several plan options to explore how the design is arranged and configured are explored to include the space planning of typical floors and apartments to respond to the client brief. Solar studies were prepared to assess daylight access to apartments and overshadowing of the public realms as well as test the scheme's compliance with statutory codes.

**Constraints and Opportunities**

The initial exercise was to establish the constraints and opportunities of the plot. These include:-

- Adhere to Concept Plan Guidelines, including heights and set Solar Planes.
- Avoid further overshadowing of the Park than already approved by the Concept Plan.
- Comply with SEPP-65 and its associated separation requirements from adjacent buildings.
- Improve and add to the quality and amenity of the public domain.
- Minimise impact on view corridors .
- Achieve a maximum target of 25,930m2 GFA for the building plot as set out in the Concept Plan for Block 14N
- Be mindful of the already approved mix of uses for the Central Park Precinct in the overall Concept Plan.
- Ensure the bulk, massing and modulation of the tower architecturally responds to the neighbouring towers.
- Ensure the streetscape along Broadway and Abercrombie Street is maintained and developed alongside the new streets within the precinct.
- Respond sympathetically to the heritage buildings on the site.

Constraints for the proposed building included:-

- Provide high quality accommodation with a high standard of architectural design.
- Ensure interfaces at Ground Level between the building and public areas add to the quality of the public realm by providing an integrated urban design solution that accommodates pedestrians, cyclists and vehicles.
- Address environmental constraints such as solar access, noise, wind, privacy, reflectivity.
- Employ ESD thinking in the design process.

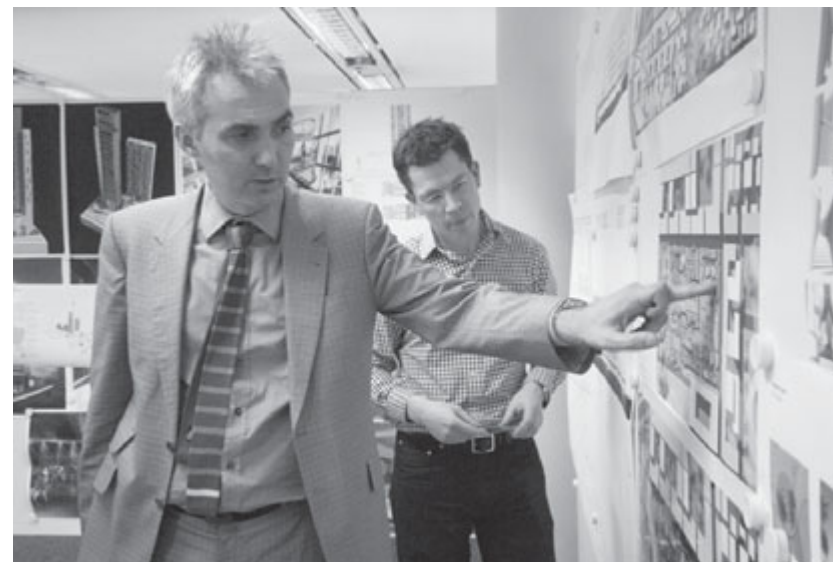
**Options**

A number of design options have been explored for Block 4N as a mixed-use scheme incorporating a hotel, childcare, commercial office and residential apartments.

Pros and Cons of each scheme were weighed against each other in order to arrive at the preferred option. The photos and images to the right and on the following pages give an overview of these iterations and the thinking process behind this evolution.

The key drivers for the massing options were:

- Respect the concept plan established envelope and minimise additional overshadowing of the park.
- SEPP65 separation distances between Block 1 and Block 4S with Block 4N.
- Maintain the street frontage as described in the Concept Plan, which requires Block B4N to remain aligned with the surrounding blocks along Broadway and not to be set back.
- Consider views onto and from surrounding blocks.
- Maximum workable floorplan depth for the apartments which also provided feasible office floorplates - see also massing studies.
- Respond to the heritage buildings on the site.
- Maintain the approved podium footprint and datum lines of approved Concept Masterplan.



Photos showing design processes at F+P

**Development of the massing**

The Concept Plan stipulates guidelines to be adhered to for the streetscape along Broadway.

The language of the proposed massing for Block 4N responds to the Concept Plan's set horizontal datums and set-back neck of the podium, as well as height and envelope restrictions. The curved corners for Block 4N and that are incorporated in Block 1 derive from the curved language of the Australian Hotel and its horizontal emphasis is continued across the façade.

The approved extra space Block 4N already responds to the rounded corners of the Australian Hotel on the junction of Broadway and Abercrombie Street, following the guidelines of the Concept Masterplan. The remaining corners of Block 4N however are straight and the building reads as a more rectilinear block. In the light of the proposed changes to Block 1, F+P explored several options for Block 4N in order to see which massing responds best to Block 1 and continues the streetscape along Broadway.



One Central Park

Block 2

Block 1

Block 8

Block 4S

**4N approved Concept Plan massing**

**Photo of Concept Plan + Latest Block 1 from pervious pages**

Massing model showing Block 4N as approved concept plan massing with linking bridges removed. Curved corner above Australian Hotel and horizontal Datums.

**Option Seen from corner of Broadway + Abercrombie St (North-West)**



**Option Seen from Abercrombie St (South-West)**



**01. Block 4N: Version 1**  
One Block, rounded corners, one massing.

**02. Block 4N: Version 2**  
One Block, no vertical articulation along Broadway, but vertical articulation along Abercrombie Street

**03. Block 4N: Version 3**  
One Block with stepped back centre part to create strong vertical emphasis on Broadway with flat facade on Abercrombie Street.

**04. Block 4N: Version 4**  
Proposed massing: curved corners link 4N to Australian Hotel and massing of proposed Block 1, with horizontality of facade continued across both blocks.

# Design Excellence

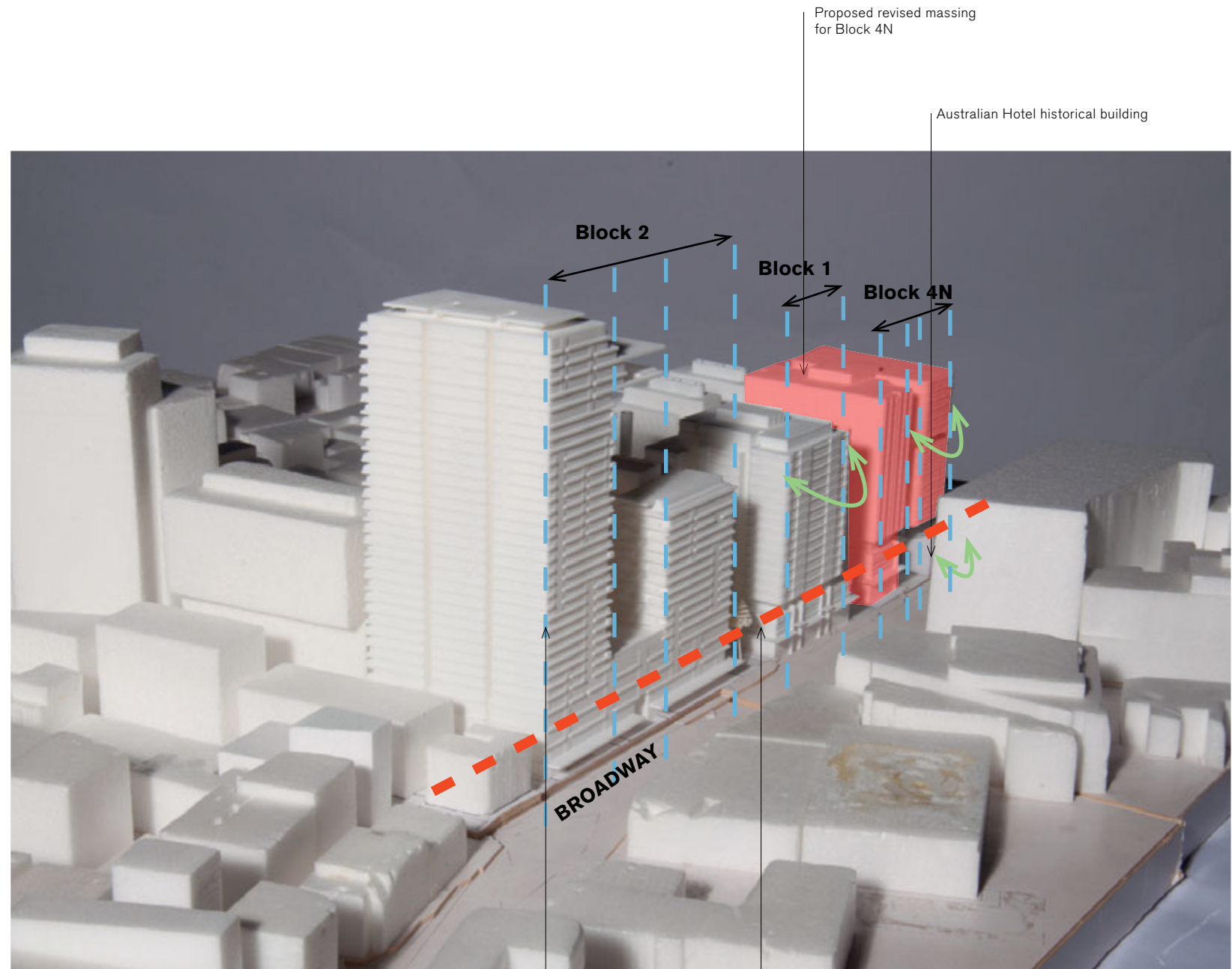
## Design Excellence: The Design Process: Block 4N

By removing the linking bridges and physically separating blocks 1 and 4N, the vertical language of Block 2 is continued along Broadway: Blocks 1 and 4N are now stand-alone blocks with a pedestrian link between them. It was found that the curved corners of Block 1 are an important element, which, if applied to Block 4N, will tie the blocks together and link back to the Australian Hotel with a common architectural language.

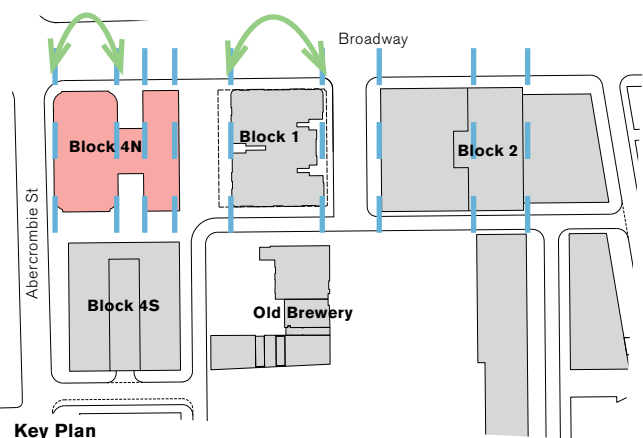
The streetscape will read as vertical blocks with a unifying horizontal language across them both, as already established by the set datum and the language of Block 1. It was found that by vertically dividing Block 4N into two elements, it continued the rhythm along Broadway of the individual blocks and allowed the various components of the building to be easily expressed while also incorporating the Heritage Buildings within the overall massing.



Australian Hotel, Broadway



Proposed Massing Model



Key Plan

Vertical streetscape

Horizontal datum line as set by Concept Masterplan

- KEY**
- - - Podium Datum line as set by Concept Masterplan
  - - - Vertical Blocks
  - ↻ Curved Massing

# Design Excellence

## The Design Process: Block 4N

### Development of the massing

With the aid of a 1:500 site model a number of different massing options (a selection of which is shown) have been explored for Block 4N, as explained previously

The photos to the right show the succession of massing options viewed from the North West with One Central Park in the distance and Block 4S to the right (south) and St Benedict's Church in the foreground.

Image 01 shows the current, revised, concept Plan MOD 8 in yellow. This illustrates the current commercial scheme proposed for the site.

The principal change to the approved massing is the removal of the link bridges between 4N and 1. This results in two standalone building blocks of accommodation.

It was established that the current footprint and form of Block 4N above the Podium, which was based on commercial uses, could be reduced considerably due to the mixed-use nature of the scheme and, as a result, the revised floor-to-ceiling heights allowing for a more compact massing of the scheme over the Heritage Building. This led to an exploration of the correct massing and volume for the building by expressing the hotel separately from the office and commercial and in the case of the latter, where the transition between uses of the residential and office is done by introducing an additional "neck" in relation to established datums set by Block 4S and 1.

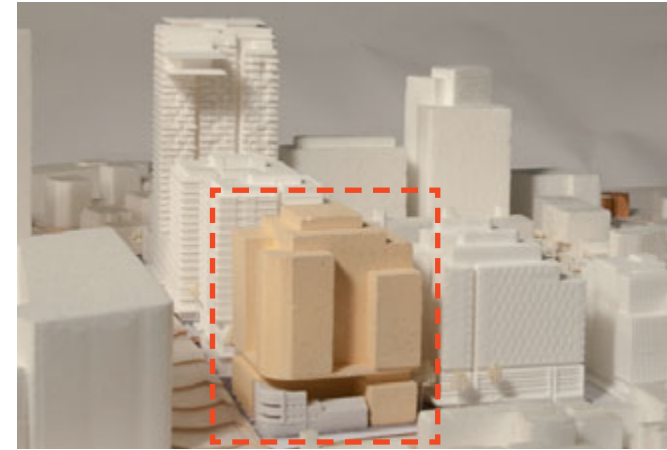
All these factors also lent itself towards a more efficient and narrower floorplate which avoided the concern of excessive

apartment depths to single aspect apartments. Combining the commercial uses with the residential element of the building has allowed for a void to be introduced at the apartment levels as the core requirements reduces, providing a landscaped amenity space for residents.

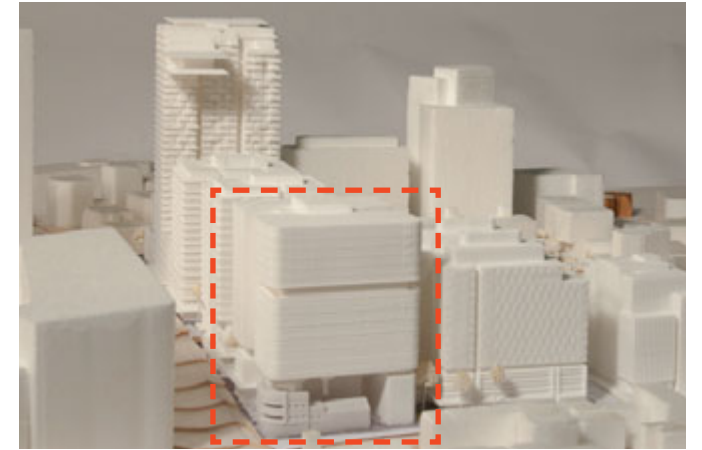
The model has also explored the overshadowing impacts on the park by Block 4N, as well as the overall impact of the massing on the surrounding buildings and environs.

Apart from the omission of the bridge link, the main development on these options occurs with the stepping back of the massing over the Heritage Buildings by 6.0 metres in plan which further assists the extent of solar access to the building's environs.

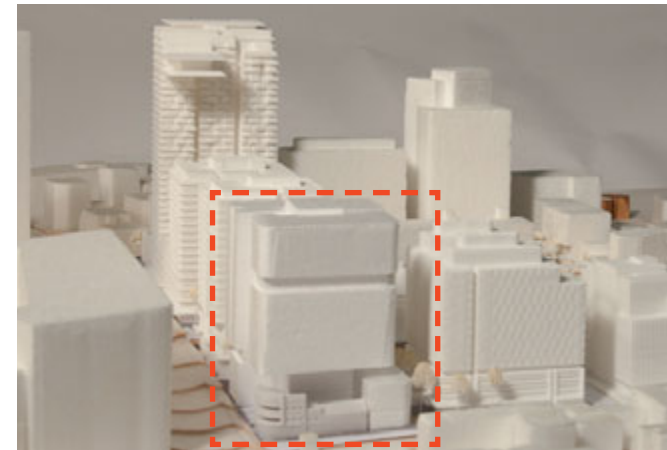
Different volumes were also explored for the enclosure over the loading bay ramp entrance which complimented the massing and datums established by the Heritage Buildings with the intention to "complete" the terrace.



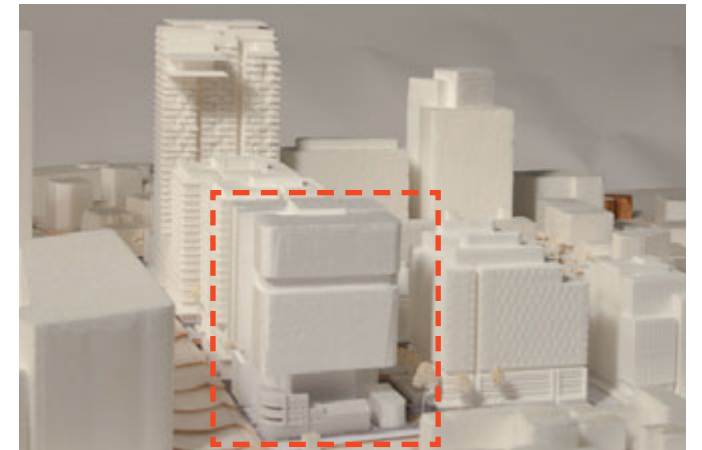
01. Existing Approved MOD 5 for Block 4N



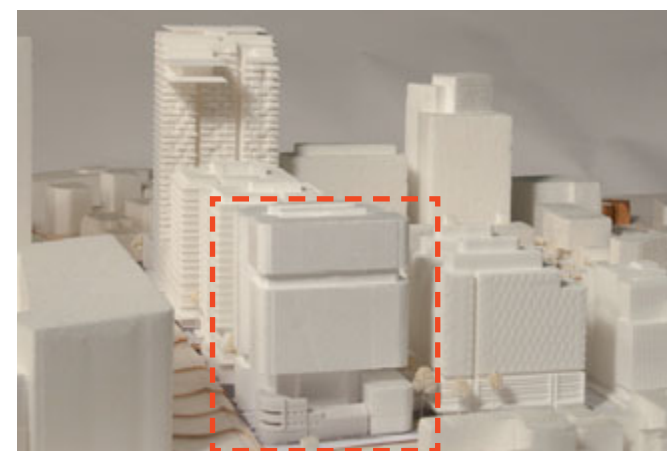
02. Block 4N: Revised massing version 01



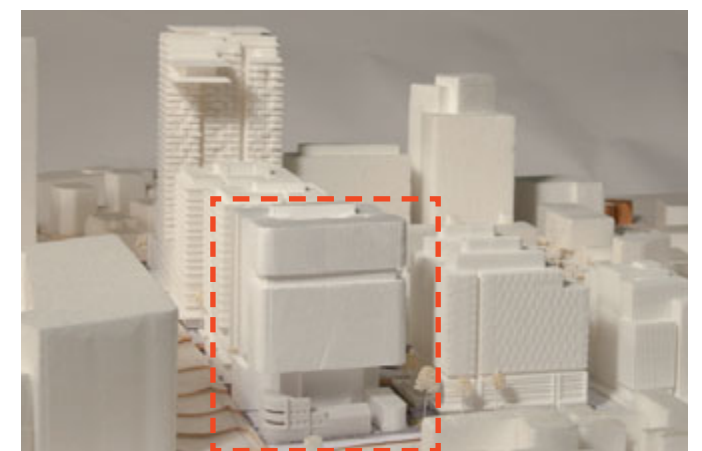
03. Block 4N: Revised massing version 03



04. Block 4N: Revised massing version 04



05. Block 4N: Revised massing version 05

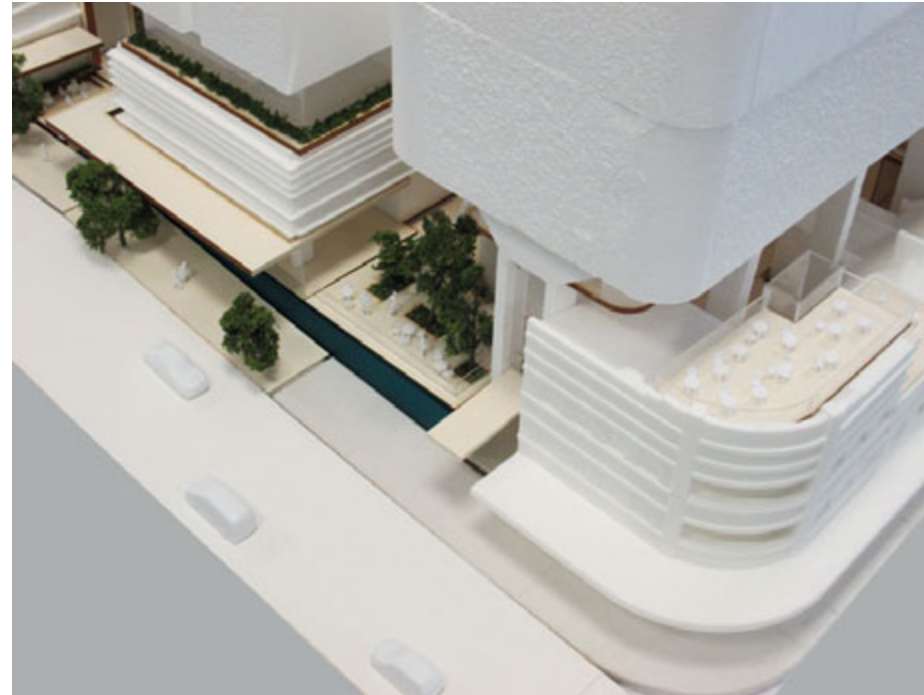


06. Block 4N: Actual massing which has been adopted version 08

**Development of the massing**

After deciding upon the preferred 1:500 block model massing with the Client, a 1:250 and 1:100 model was developed to explore the language of the building in more detail.

These larger scale models also aided in developing the external landscaping, particularly the space between Block 1 and Block 4N. They helped to better understand the levels and falls across the site and establishing the correct datums between the internal floor levels with the landscaping, particularly to the rear of the Heritage Building and the proposed heritage Courtyard.



The 1:100 model was used to develop the restaurant terrace. Option #01 looks at a wall of water, small canopy and trees on the terrace.



Option #02 looks at a larger awning along Broadway and trees on the terrace.



Option #03 looks at an alternative water feature, small canopy and perimeter planters on the terrace.



Option #04 looks at an alternative water feature, a larger awning along Broadway and perimeter planters on the terrace.

## Design Excellence

The Design Process: Model Studies



The 1:100 model was used to develop the proposed pedestrian link between Block 1 and Block 4N. It allowed the Design Team to test various options and appreciate the change in levels across the site.



The model was also used to develop the massing over the loading bay access ramp and integrate the design with the Heritage Buildings



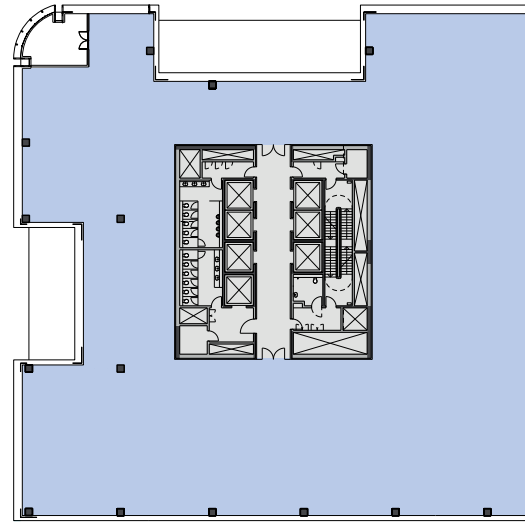
The model was also used to develop the design of the proposed restaurant terrace on Broadway

**Development of the plan**

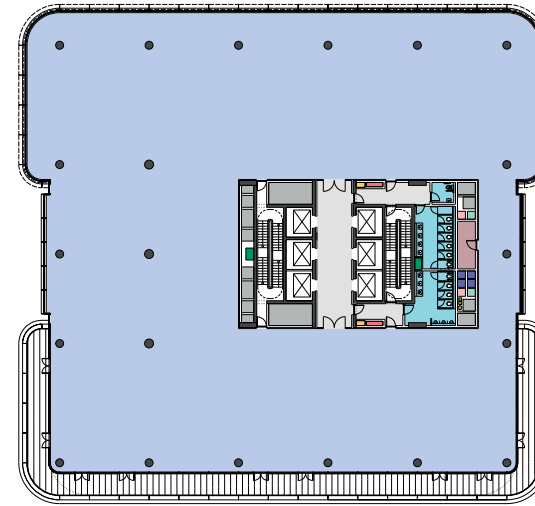
In parallel with the massing options, several residential options were explored in plan.

The team concluded that the residential apartments and the commercial office plates should maximise the views to the west and as such use the hotel as a buffer with the residential of Block 1

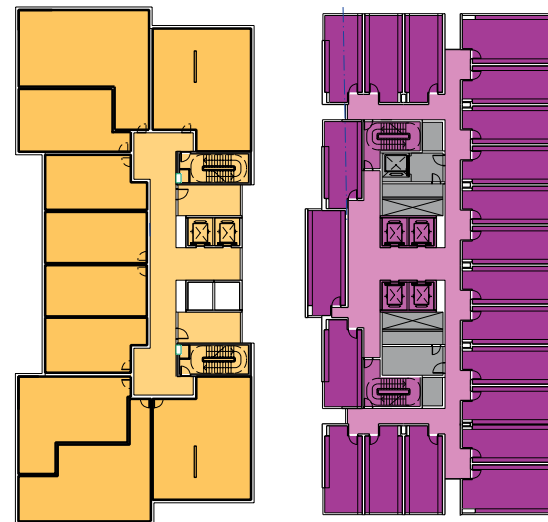
The diagrams to the right describe some of the various plan configurations that have been explored.



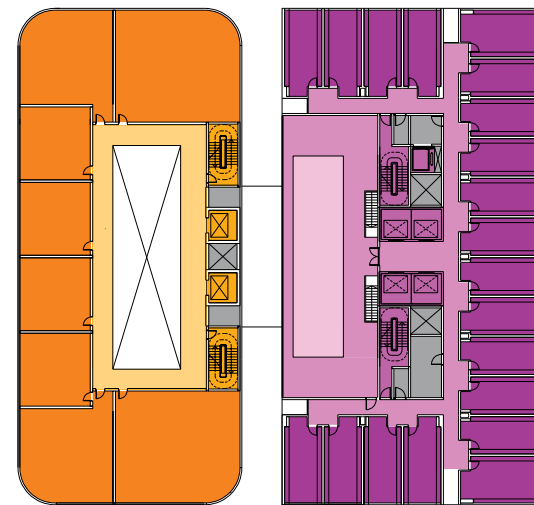
**Option 01: Office**  
Current approved S75W plan for Block 4N



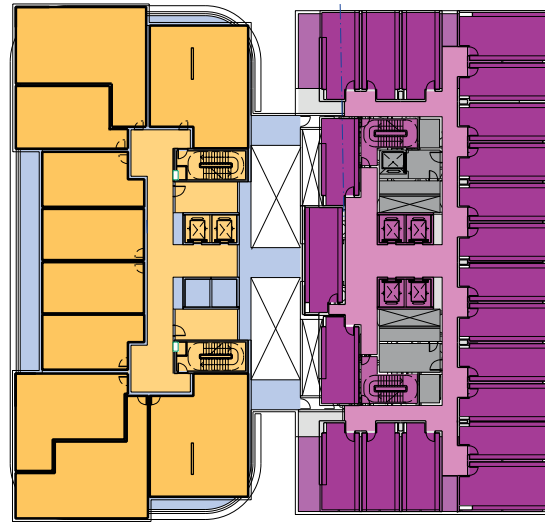
**Option 02: Revised Commercial Scheme**  
January 2014



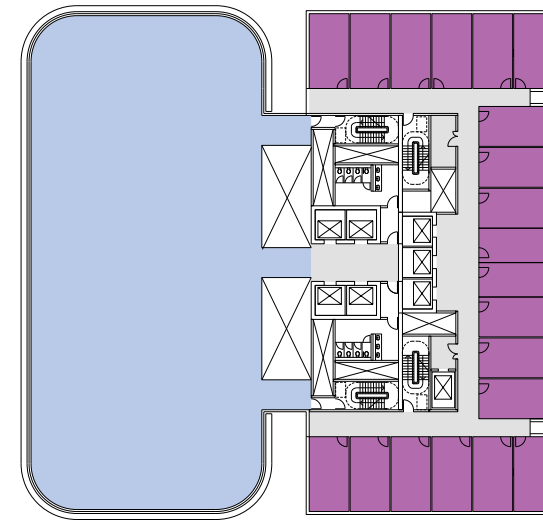
**Option 05: Hotel/Commercial/Residential Option 03**  
March 2014



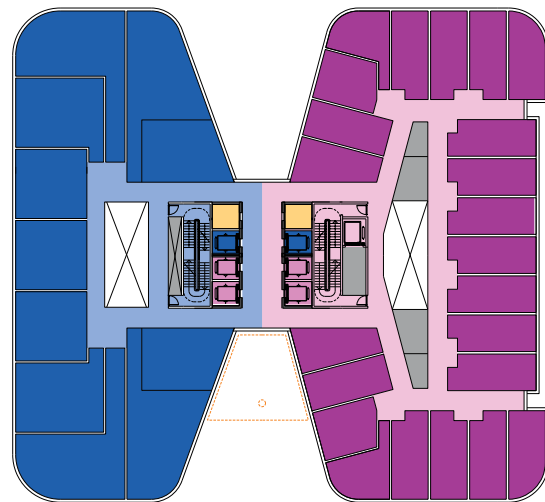
**Option 06: Hotel/Commercial/Residential Option 04**  
March 2014



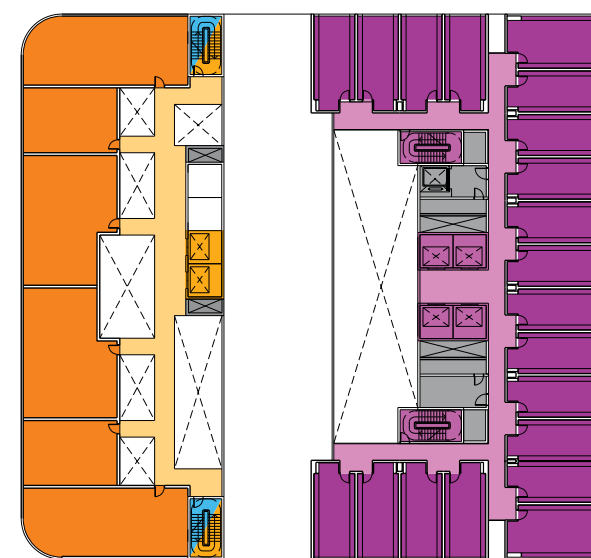
**Option 03: Hotel/Commercial Option**  
January 2014



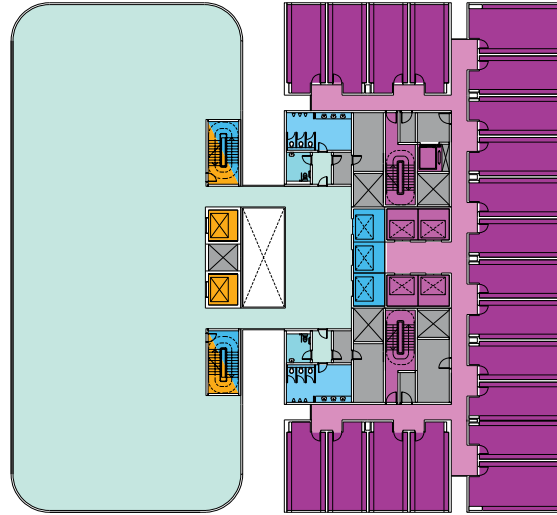
**Option 04: Hotel/Commercial Option**  
January 2014



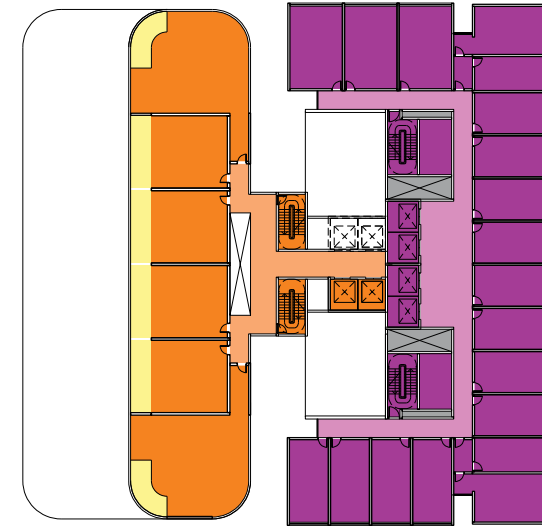
**Option 07: Hotel/Residential Option 01**  
March 2014



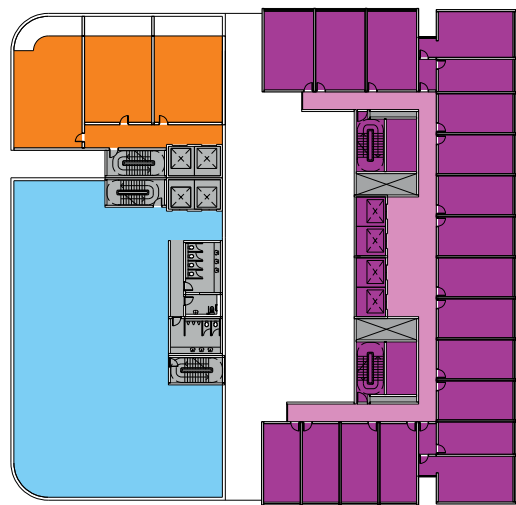
**Option 08: Hotel/Commercial/Residential Option 01**  
March 2014



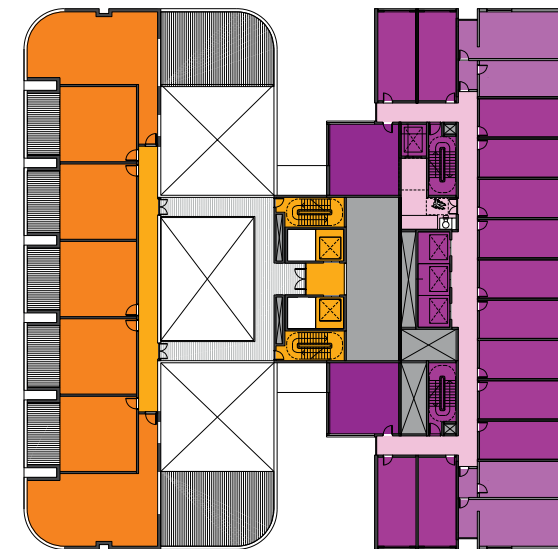
**Option 09: Hotel/Commercial/Office Option 04**  
March 2014



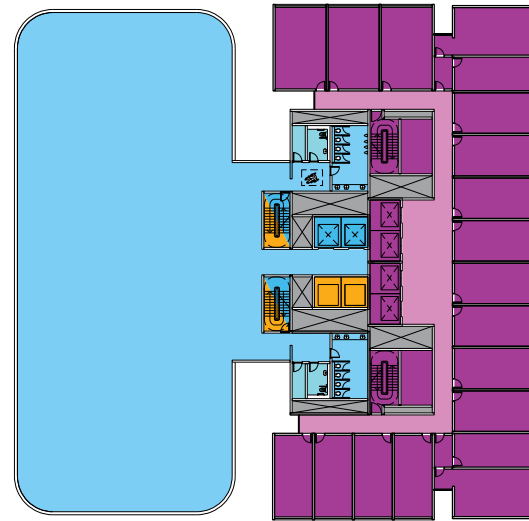
**Option 10: Hotel/Residential Option 01**  
March 2014



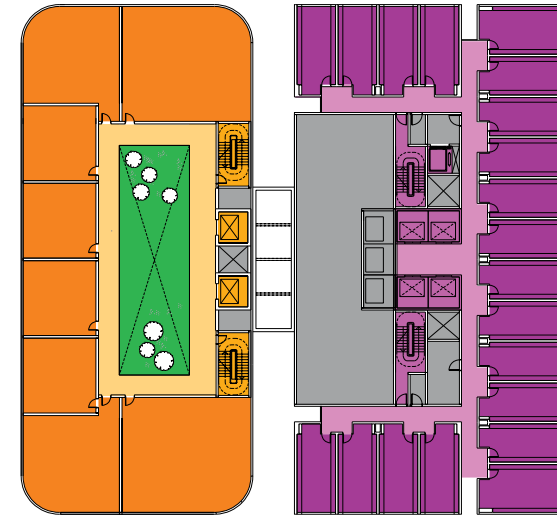
**Option 13: Hotel/Commercial/Residential Option 05**  
April 2014



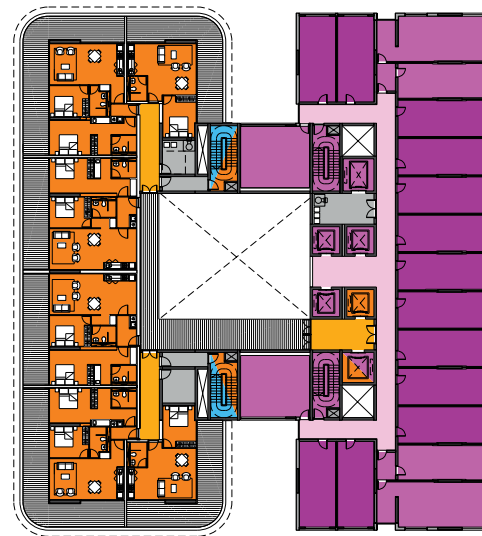
**Option 14: Hotel/Commercial/Residential Option 05**  
April 2014



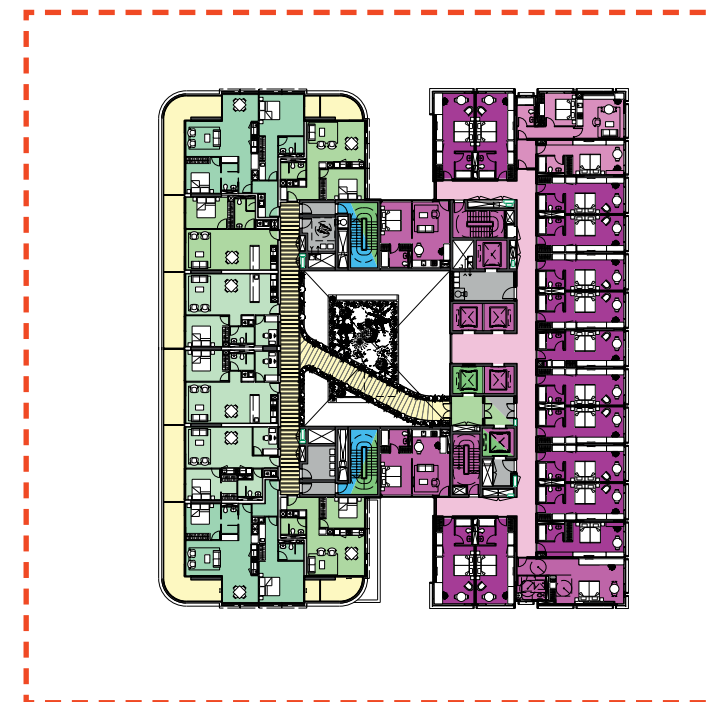
**Option 11: Office**  
March 2014



**Option 12: Hotel/ Residential Option**  
March 2014



**Option 15: Hotel/Commercial/Residential Option 06**  
August 2014



**Option 16: Current SSDA Layout**  
October 2014

