

6.2

Office Cladding

6.2.1 Office Cladding Overview

Introduction

The Office Building design aims to respond to the local context and reduce embodied and operational carbon whilst promoting high indoor environmental quality, occupant health and wellbeing. By combining three dimensional solid panels, integrated solar blinds and ventilation louvres, the proposed design responds appropriately to the project goals and sustainability aspirations established at the outset.

Developed in consultation with stakeholders, including the LBS, the facade design has been refined to reflect and enhance the local built context. It responds through material, design, and colour to both local and wider townscape heritage. The facade has been designed to relate to the residential buildings within the Proposed Development to create a family of buildings.

By integrating Sky Gardens and biophilia across the building, and providing excellent indoor air quality, daylight and views, the facade reinforces high indoor environmental qualities.

The key design and technical objectives of the Office Building facade include:

- Response to and enhancement of local Southwark context through colour, material and articulation.
- Response to townscape views.
- Buildability and prefabrication.
- Internal daylight access and solar control.
- Maximising the Sky Garden amenities.
- Enhanced views out.
- High thermal performance.
- High expected service life of facade components.
- Excellent ventilation for increased indoor air quality.
- Ease of access and maintenance.
- Sustainable material selection.

Right:
Indicative view of the Office Building from the south east.



6.2.2 Office Facade Types

Facade Types

Within the Office Building, a number of different cladding typologies will be utilised depending on the orientation of the facade, internal function and the surrounding context.

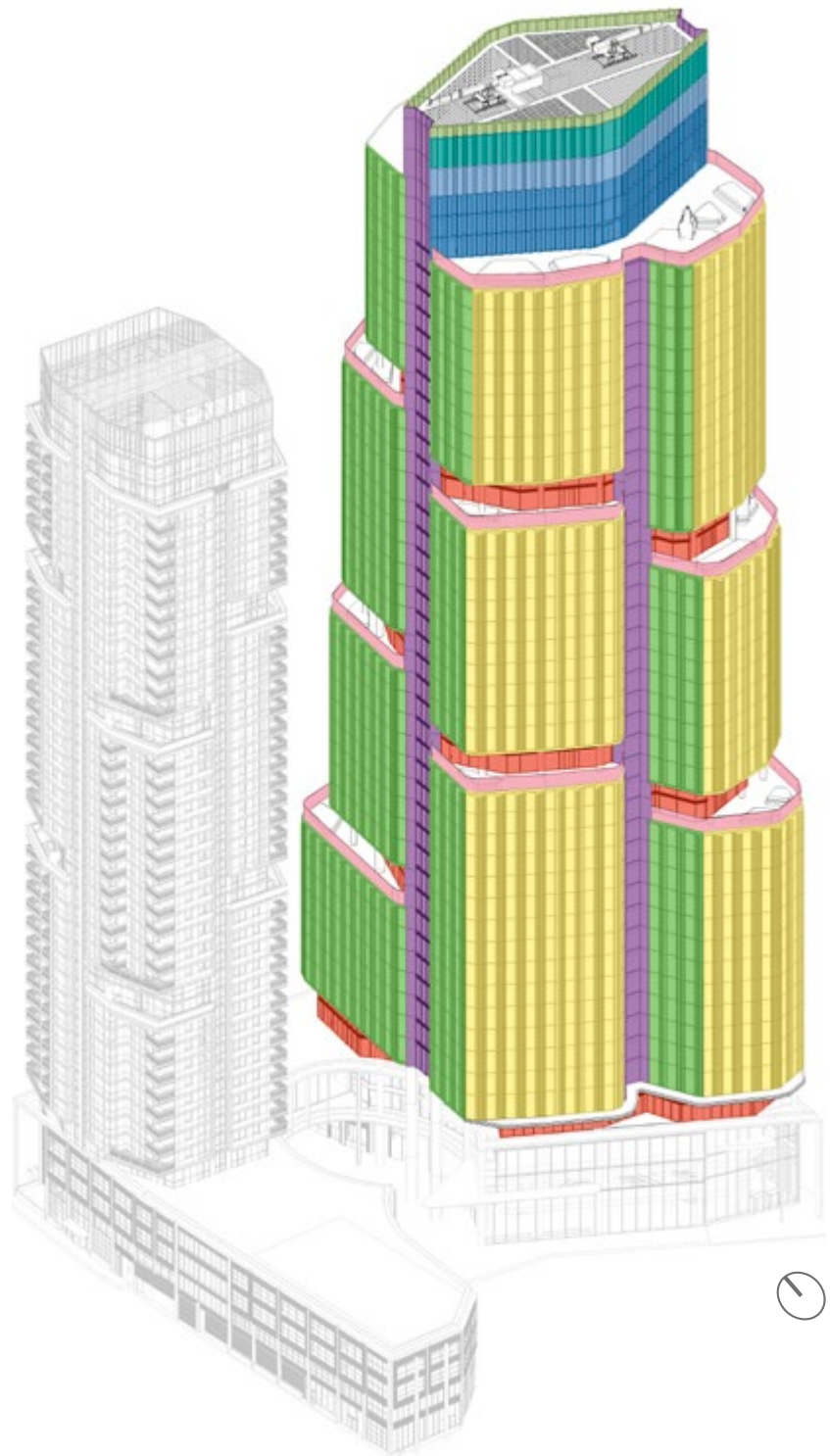
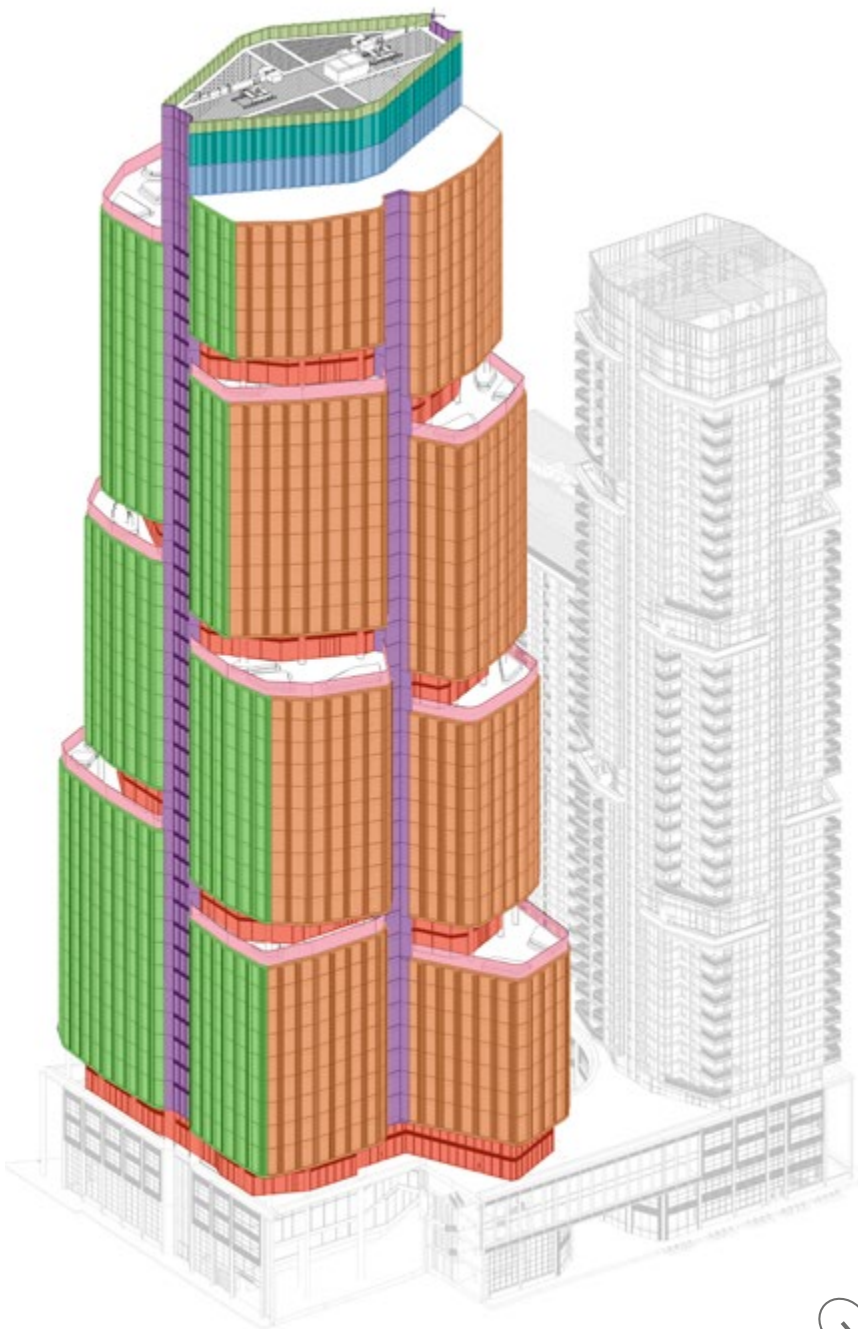
This helps the building to utilise opportunities presented by the site and its surroundings as discussed in sub-chapter 2.1.6: Site Opportunities, including views to the north and good sunlight access from the south. In addition, facade types have been designed to respond to surrounding streets as detailed in sub-chapter 2.1.3: Local Site Analysis.

Specific facades have been developed for north, east/west and south typical facades, Sky Garden and vertical slot facades, and top of building facades.

Lightweight materials reduce embodied carbon within the facade and substructure. Operational carbon is reduced through the use of efficient triple-glazing and high performance insulation.

- Key**
- South Typical Facade
 - East/ west Typical Facade
 - North Typical Facade
 - Sky Garden Facade
 - Balustrade
 - Vertical Slot Facade
 - Top of Building: Office Facade
 - Top of Building: MEP Facade (enclosed)
 - Top of Building: MEP Facade (open)
 - Top of Building: Parapet

Left:
NE Axonometric
highlighting facade types.
Right:
SW Axonometric
highlighting facade types.



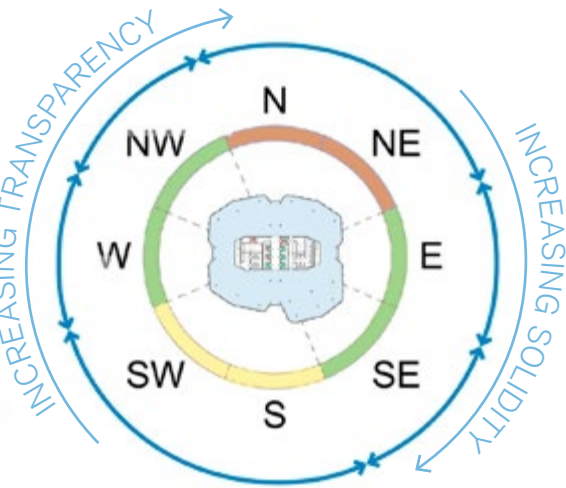
6.2.2 Office Facade Types

Facade Types

The north facade is characterised by larger areas of glazing whilst the south facade contains increased areas of solidity. This enhances the performance of the facade by limiting solar gains on the south whilst providing greater access to daylighting and views towards the north.

The effect of these variations is to reduce solar gains and operational carbon, whilst providing high quality interior spaces across all levels and optimising the views to the north of the floorplate towards the River Thames and city beyond. In addition, the solid panels contribute to the indoor air quality by discreetly housing air extract outlets within selected solid panels.

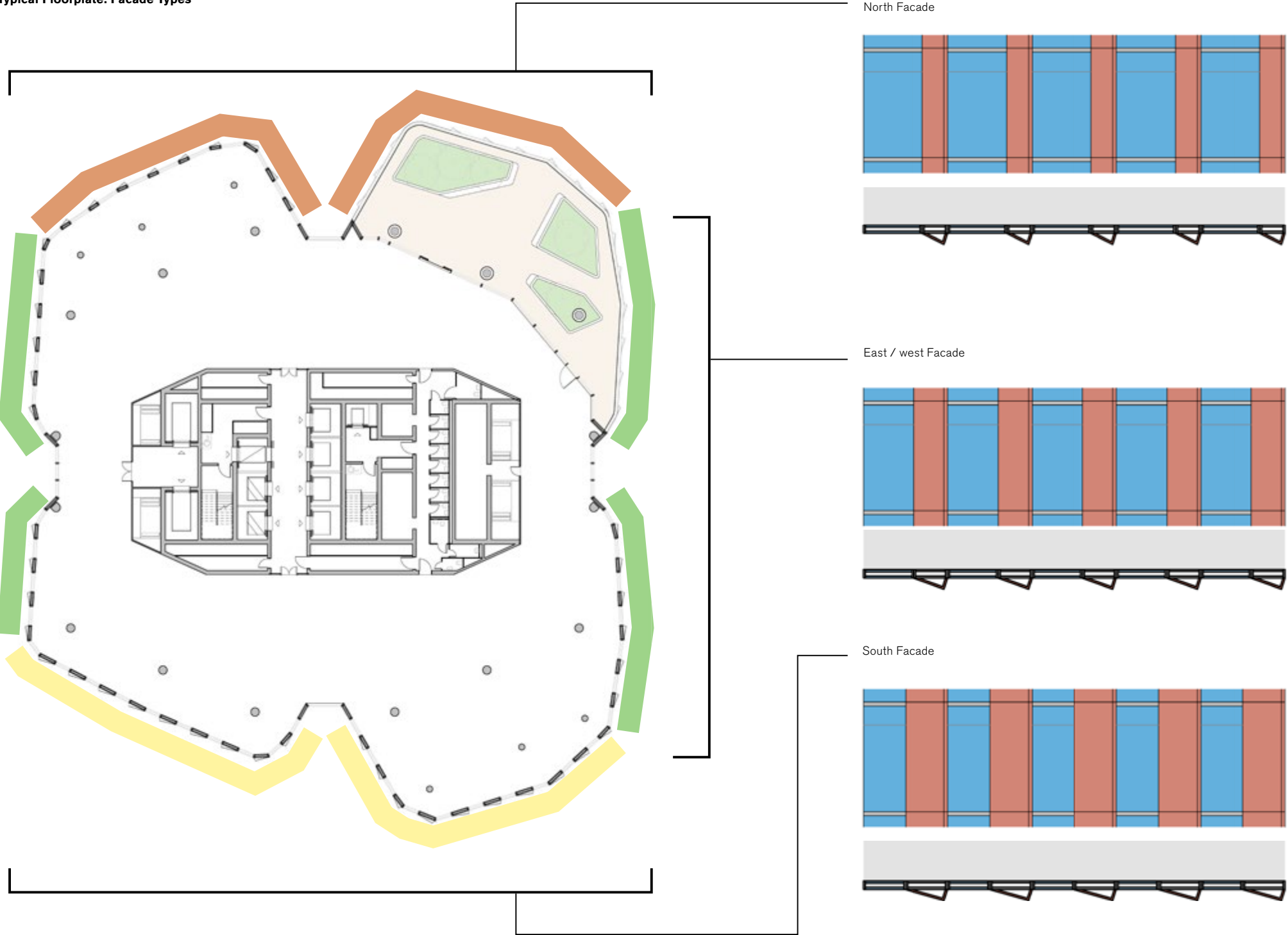
The project combines an efficiently engineered facade design with a floorplate layout that responds to daylight access. This will result in a facade and floorplate design that work together to respond to health and wellbeing, and sustainability objectives, and reflect the needs of the modern workplace.



- Key**
- South Typical Facade
 - East/ west Typical Facade
 - North Typical Facade

Above:
Floorplan highlighting
facade types.
Right:
Solid panel width varies
according to orientation.

Typical Floorplate: Facade Types



6.2.3 Office Facade Materials
Facade Materiality and Local Context

The materiality for the Office Building has been carefully considered to ensure the Proposed Development works both at a local and neighbourhood level but is also legible and distinct at a city-wide scale.

The materials and colour palette reflect those found in nearby Southwark. Brick or stone are commonly found in nearby industrial and warehouse buildings, as well as railway arches. The proposal draws on this material, colour and texture in its cladding design to reflect the local neighbourhood's culture and vitality, and respond to adjacent built heritage to enhance streetscapes.



Right:
Materials featured in the local context.

6.2.3 Office Facade Materials
Facade Materiality

From the outset of the design process, it has been intended to incorporate areas of solidity within the facade to control solar gains. Representing a synergy between two areas of design, the solidity both helps to manage solar gains and therefore contribute towards the building's sustainability strategy, whilst also allowing the facade architecture to reflect and enhance its local built context.

Aluminium has been selected as the predominant exterior finish for the facade solid panels. As a durable, corrosion-resistant material, aluminium's lightweight quality helps to minimise requirements for steel sub-structure for the facade, reducing embodied carbon within the facade package as a result.

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

Right:
Selection of material samples including varying colours and finishes of aluminium.

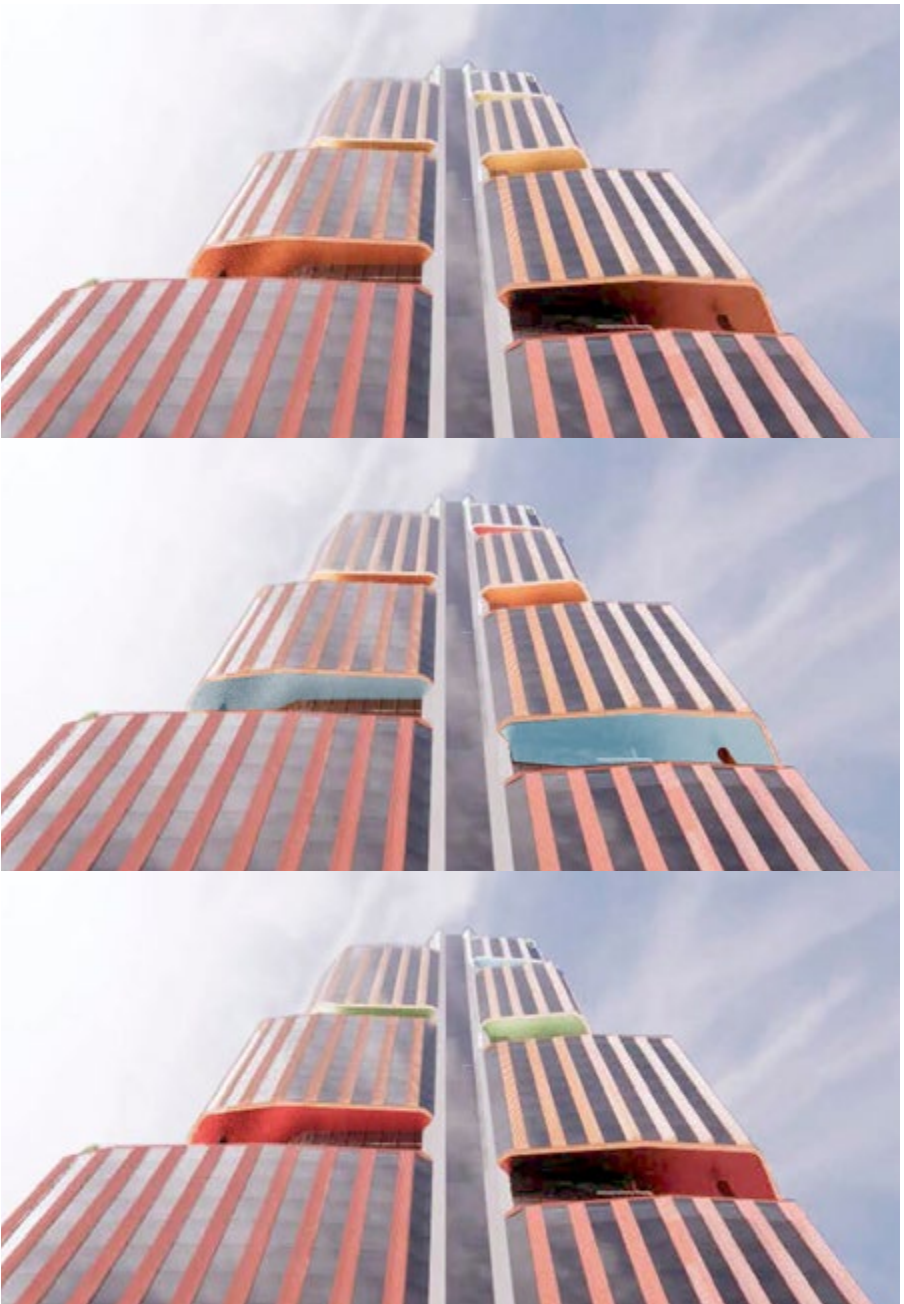


6.2.3 Office Facade Materials
Facade Materiality: Soffits

The finish of the soffits within the Office Building has been explored throughout the design process.

The soffits are located at intervals throughout the Office Building. They are positioned above the Sky Gardens' recessed glazing, and below level 06 of the Office Building. The soffits are less visible from distant views, but prominent within 'looking up' views from the nearby streets. As such, their reflective aluminium finish and colour will be refined to enliven and activate the view of the building from these streets. The soffits also aim to reflect the vegetation on the Sky Gardens.

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



Centre:
View of the Level 06
soffit on Blackfriars
Road.
Right:
Colour studies for the
Office Building soffits,
as seen in the east
looking up view.
Opposite:
Indicative nighttime view
of the Office Building
from the south east.

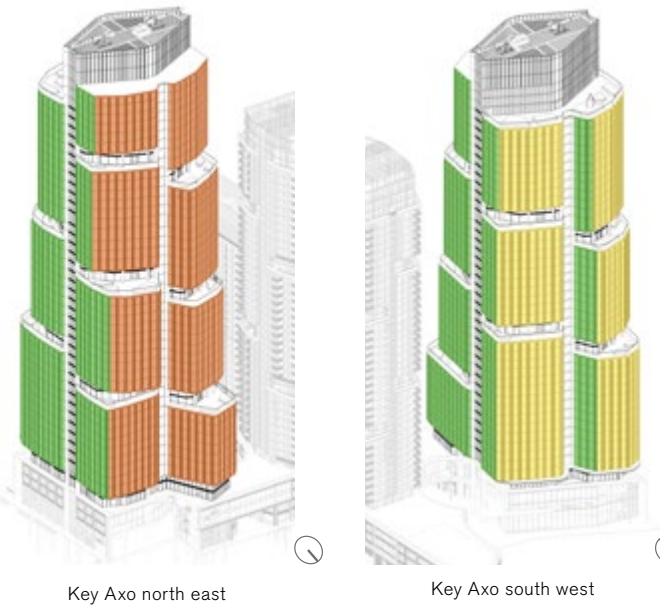
6.2.4 Office Facade Design
Typical Cladding System

The Office Building facade is characterised by triple glazing, areas of solidity, integrated solar shading and in-built air ventilation.

The full height triple glazing allows for adequate natural light to reach the interior whilst providing efficient thermal performance and integrated mechanically operated solar shading.

Triangular profiled solid panels are designed to limit solar gains to the interior by shading the facade. These insulated panels work to improve the overall thermal performance of the cladding system. Furthermore, the solid panels have been designed to allow integrated air ventilation where required.

As shown in the diagrams on this page, the width of the solid panels varies depending on the orientation of the facade.



Key

- South Typical Facade
- East/ West Typical Facade
- North Typical Facade

Centre:
Sectional perspective of South typical facade.
Right:
Sectional perspective of north typical facade.



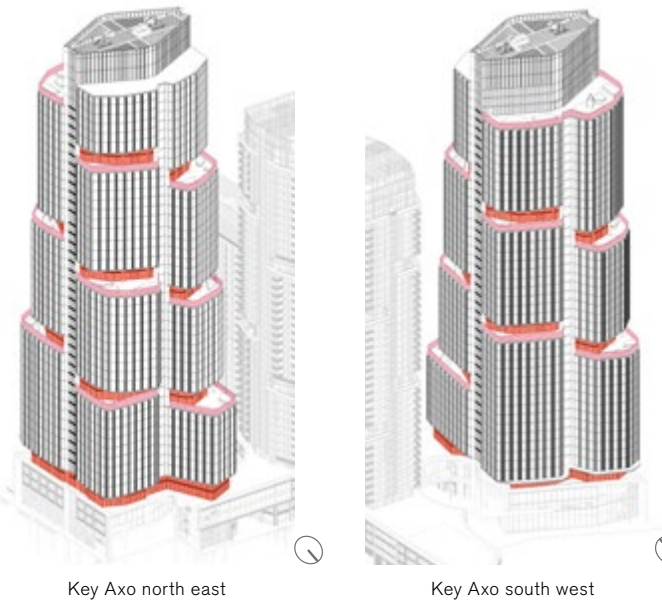
6.2.4 Office Facade Design
Sky Garden Facade Cladding System

The facades on the Sky Gardens are recessed to create the sky garden terraces. They help break down the massing of the Office Building, and their design is characterised by coloured insulated soffits and expressed structural columns clad in an insulated finish. The expressive structure helps to articulate the building in the townscape views.

Access to Sky Gardens is provided from within the tenants' demise, providing a secure, private amenity space that can be used by occupants.

The Sky Garden cladding system consists of continuous triple glazed facade modules, which provide thermal performance whilst allowing an enhanced visual connection to the Sky Gardens and views beyond. This cladding system also integrates horizontal louvres for air intake or extract. Balustrades are situated at the perimeter of the Sky Garden.

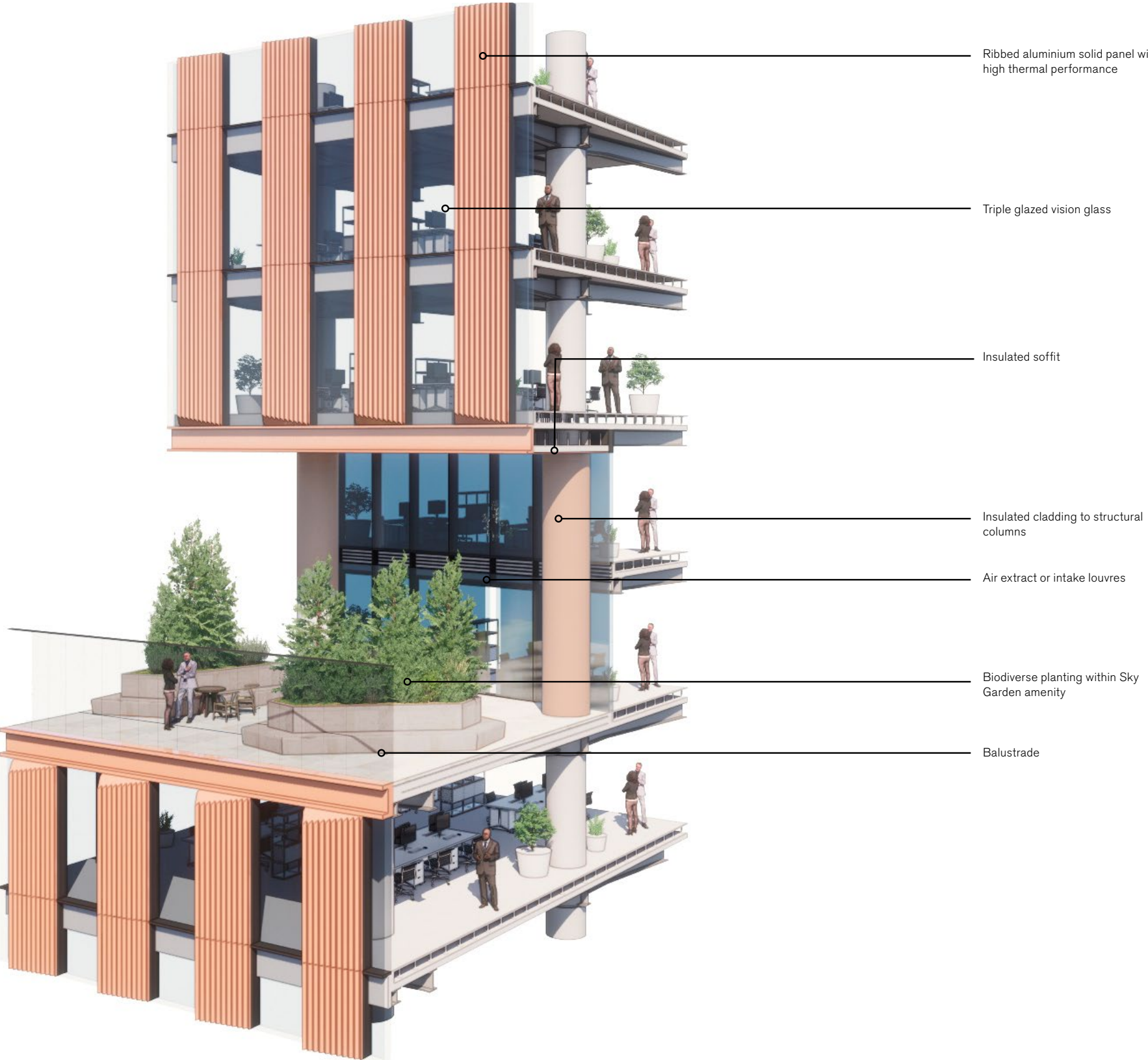
Balustrades shown are indicative with final details subject to detailed design and anticipated to be subject to a planning condition.



Key

- Sky Garden Facade
- Balustrade

Right:
Sectional perspective of the sky garden cladding system.

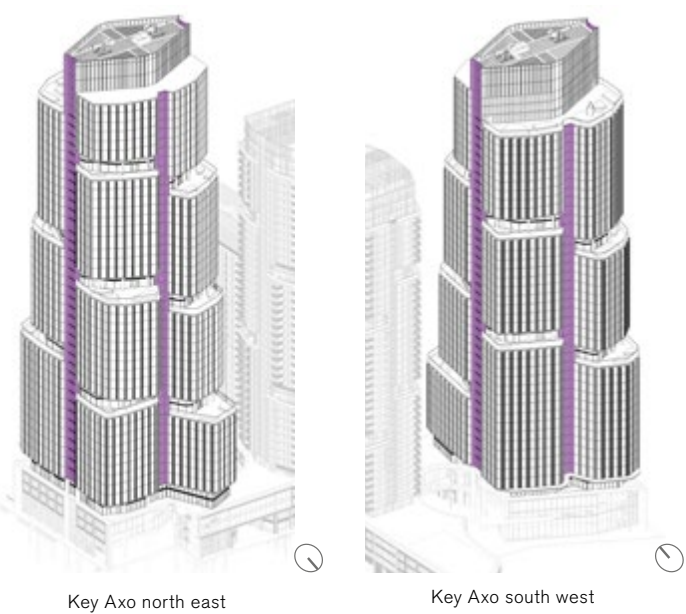


6.2.4 Office Facade Design
Vertical Slots Cladding System

The vertical slots serve a number of key functions in the Office Building technical facade design. The Mechanical, Electrical and Plumbing (MEP) design is integrated into the vertical slots: intake louvres are housed in horizontal elements between the slot columns, whilst extract louvres are housed in vertical solid panels nearby. This is illustrated in the diagram on the right of this page. To meet sustainability objectives, extract louvres are situated a suitable distance from the intake louvres.

At the centre of the vertical slots are wide triple glazed panels, which are framed by angled solid panels at either side. The vertical slot columns are angled to maximise views out and allow daylight into workspaces.

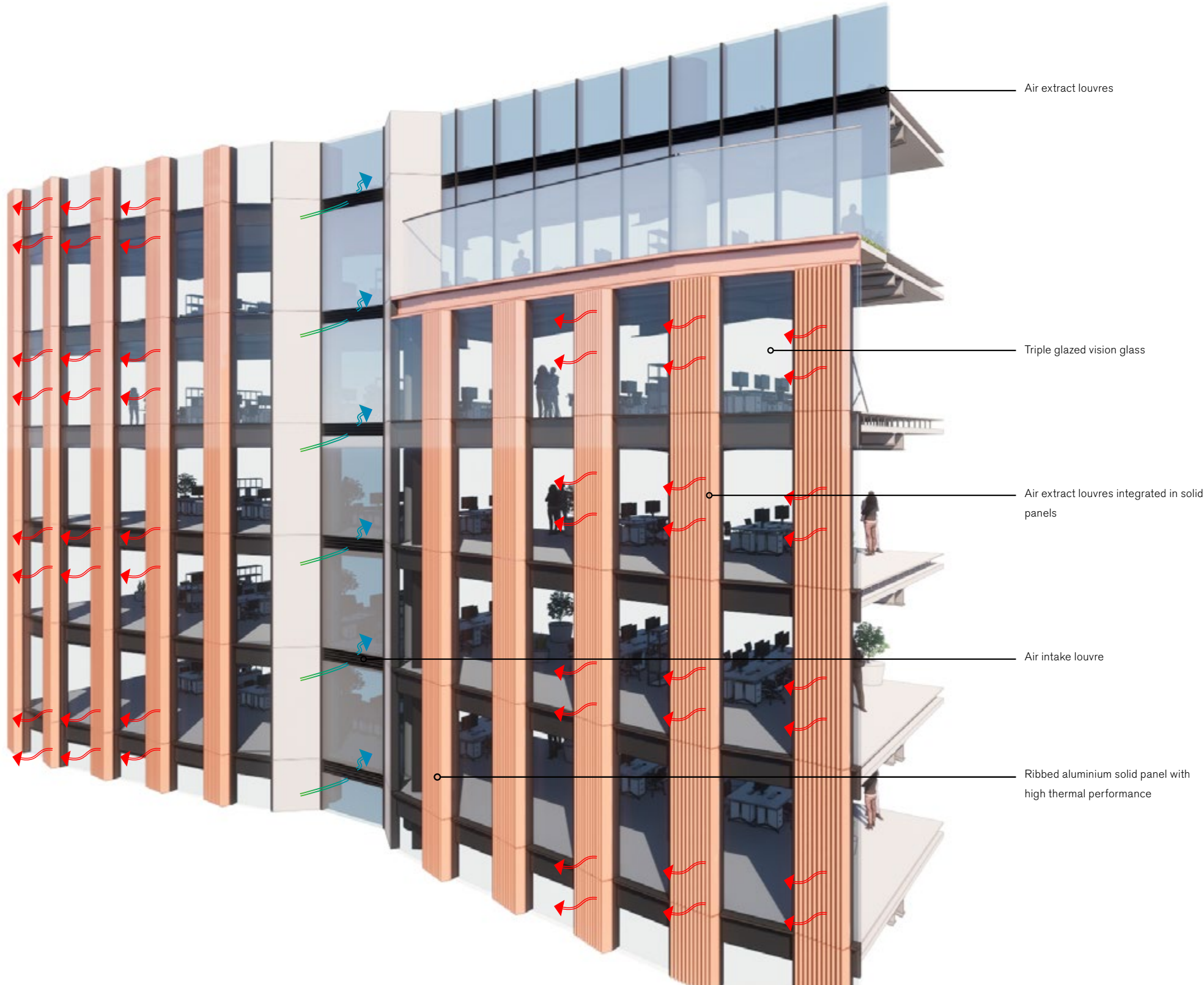
Balustrades shown are indicative with final details subject to detailed design and anticipated to be subject to a planning condition.



Key

Vertical Slot Facade

Right:
View of the vertical slot facade showing air intake and extract.

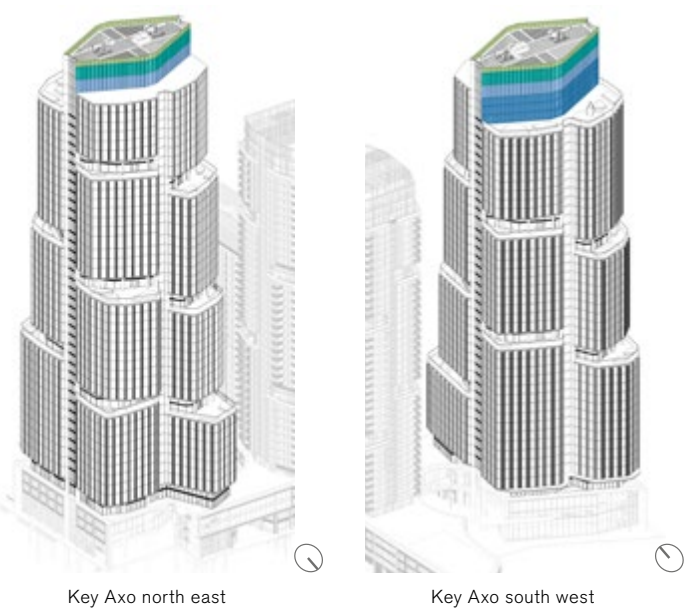


6.2.4 Office Facade Design
Top of the Office Building Cladding System

The facade design of the top of the Office Building element plays an important role in the townscape views, helping to refine the proportion of the tower and emphasise the sense of verticality. It also houses vital MEP and sustainable building systems. The detail of the facade design further responds to these two goals.

Chamfered blades conceal the vertical MEP louvres, reducing the visibility of the MEP from the east and west views. In particular, the blades reduce the visibility of the MEP systems from the Blue Bridge view in St James's Park. They allow the top to read as an uninterrupted volume reflecting the sky.

The vertical MEP louvres are integrated within the top of building facade, and play a crucial role supplying air to the systems at these levels. They will be finished in an aluminium finish. On the lower three levels of the top of the Office Building facade, vision panels provide daylight and views to office levels. Two Building Maintenance Units (BMUs) are situated at the top of the Office Building. For further information, refer to the Appendix, chapter 10.



Top of Building: Office

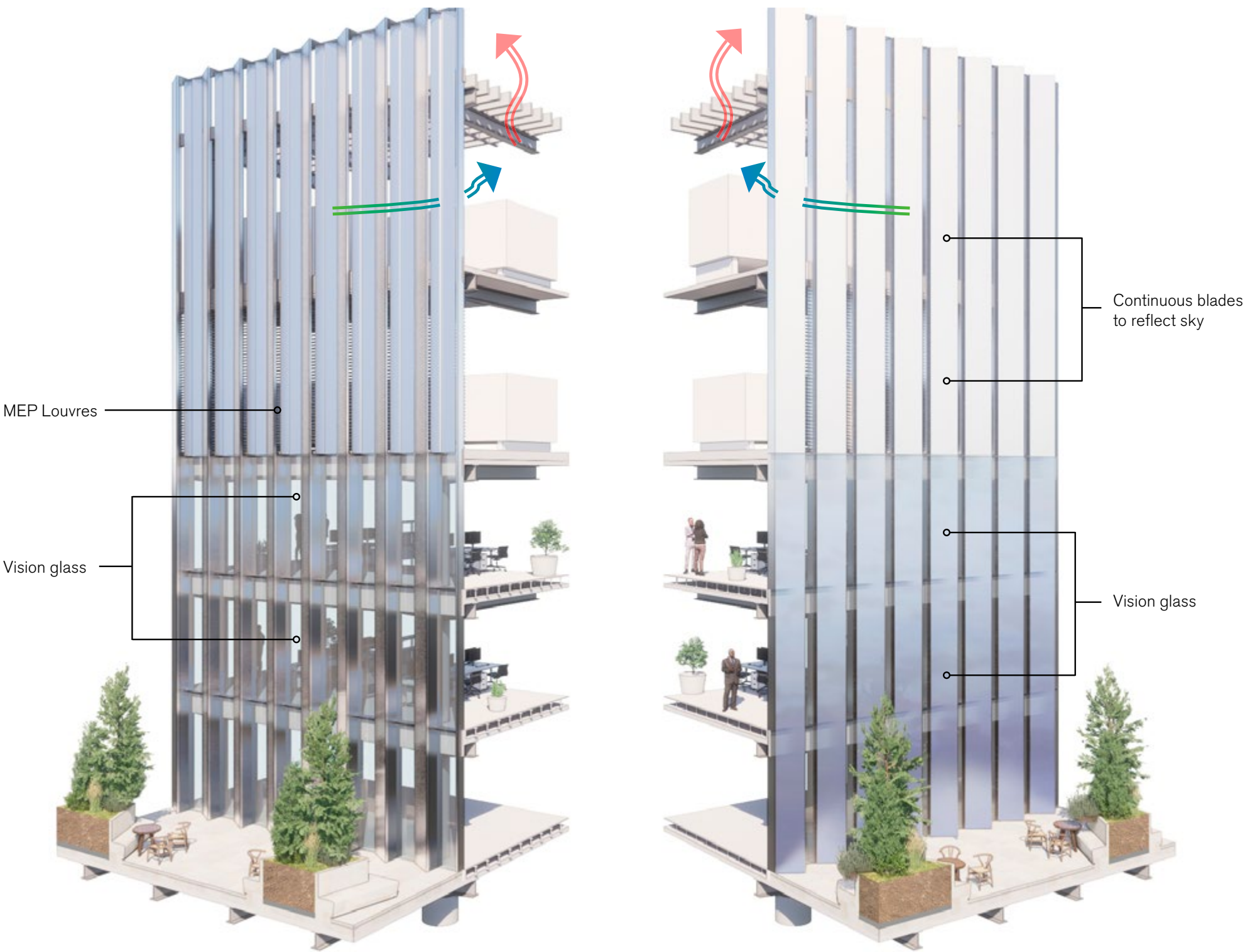
Top of Building: MEP (enclosed)

Top of Building: MEP (open)

Top of Building: Parapet

Centre:
Indicative axonometric section view of the top of building from south east.

Right:
Indicative axonometric section view of the top of building from south west.



6.2.4 Office Facade Design

Solar Radiation Analysis

The triangular profile of the solid panels helps to minimise solar heat gains, and therefore reduce cooling loads and lower operational carbon. This triangular profile design has undergone thorough analysis to determine an appropriate solution.

The solar studies shown on this page illustrate how the triangular profile helps to reduce the solar gains reaching the internal spaces. This effect is most important across the South, and upper east and west facades where solar exposure and solar gains will be the highest.

The triangular profile also contributes to the visual qualities of the Office Building facade. The three-dimensional form helps emphasise the verticality of the building, and creates play of light across the facade. This is in contrast to a typical flat glass building.

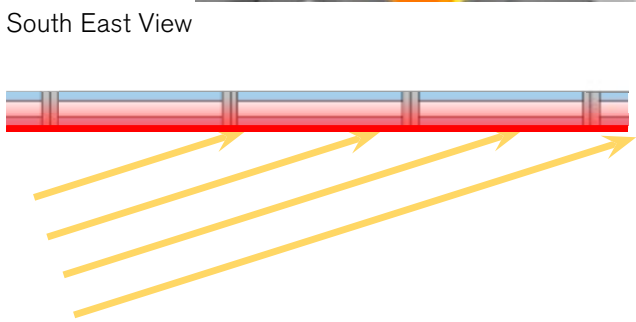
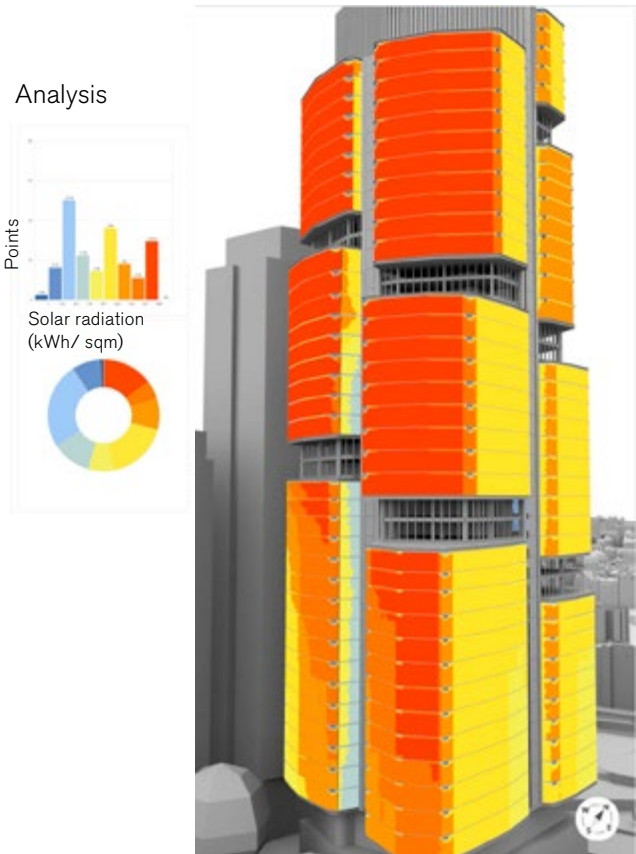
Key: Views

- Solar radiation (kWh/ sqm)
- Solar radiation > 1000
 - 1000 > Solar radiation > 600
 - 600 > Solar radiation > 250
 - 250 > Solar radiation > 125
 - 125 > Solar radiation > 1
 - 1 > Solar radiation

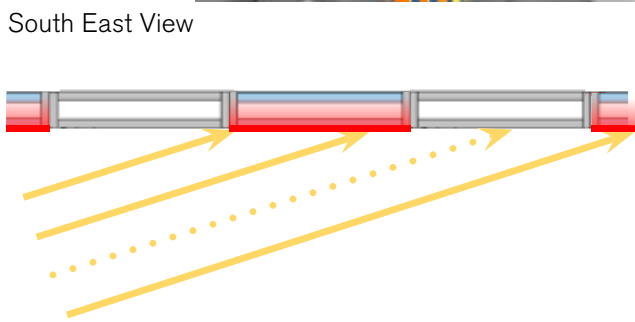
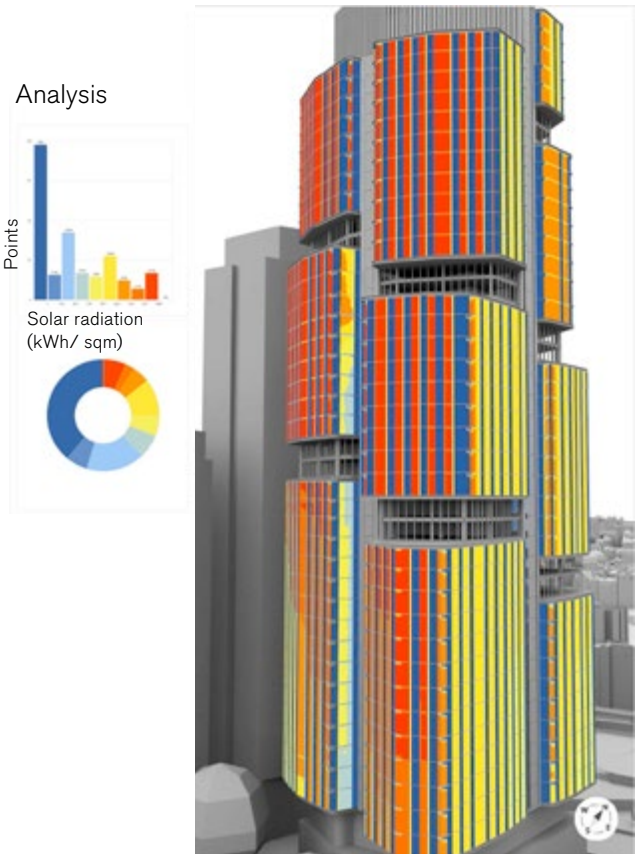
Key: plans

- Shaded glass
- Exposed to solar radiation
- Solar radiation

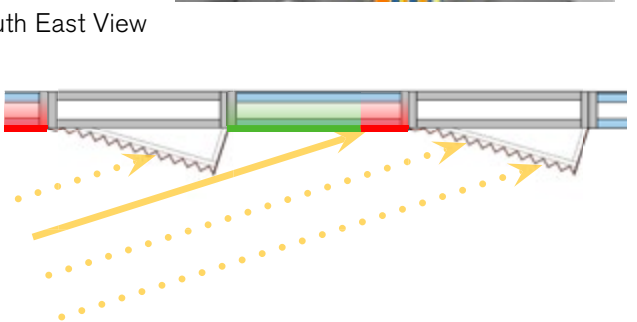
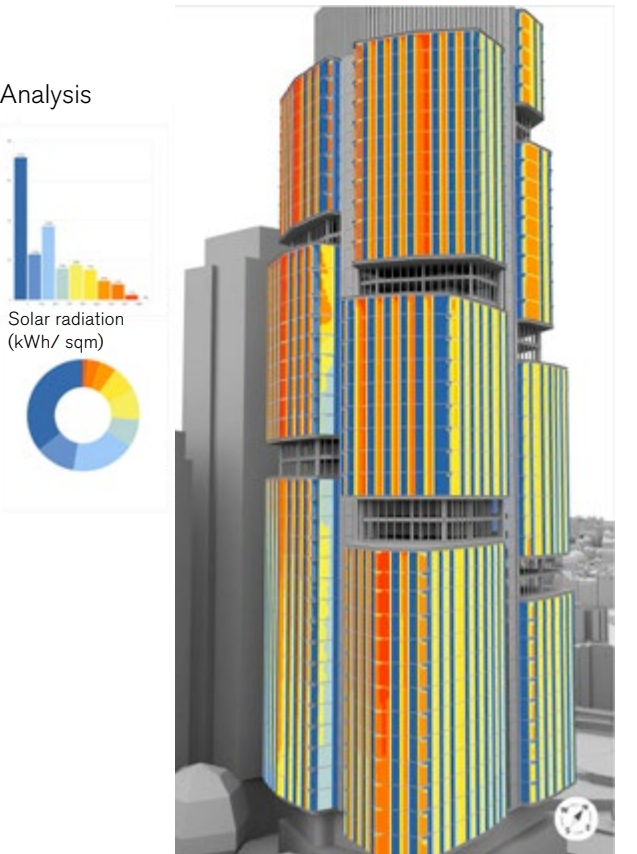
Solar Radiation: 100% Glazing



Flat Solid Panels



Profiled Solid Panels



Right:
Solar analysis of the Office Building facade showing the benefits of using solid panels.

Opposite:
Indicative aerial view of the Proposed Development from the north.





Indicative view of the top of the Office Building from the south west.

6.2.4 Office Facade Design
East Elevation



6.2.4 Office Facade Design
North Elevation



