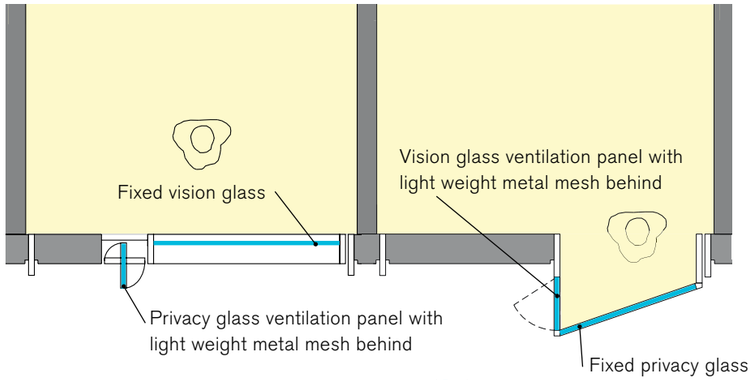
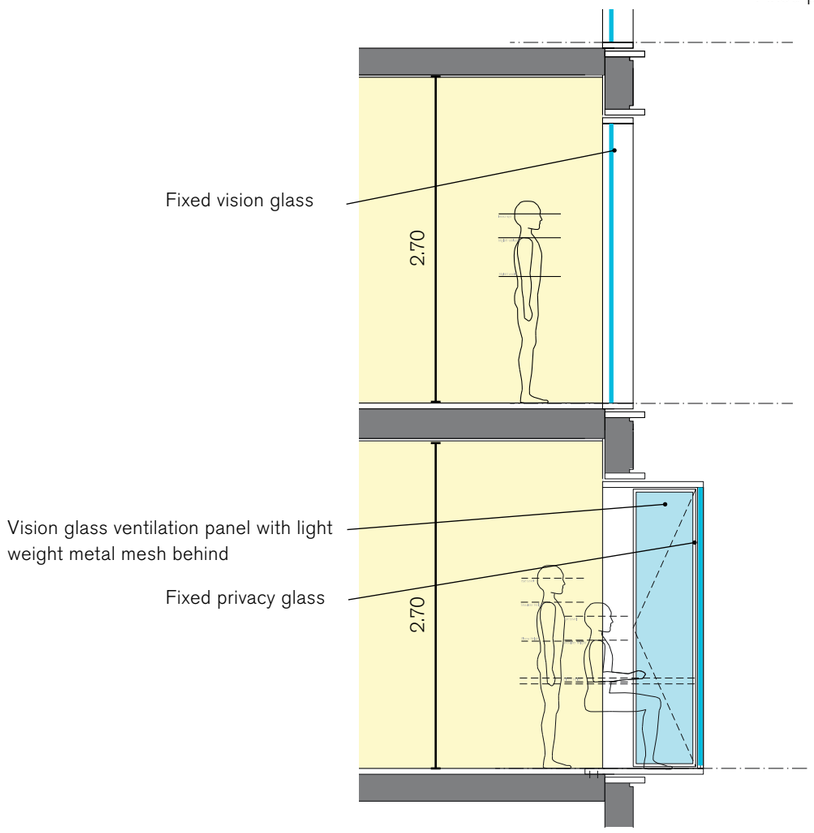
Courtyard Facade
Many of the courtyard facade bays are articulated to direct views down the length of the courtyard and to offer a greater sense of space to the student by adopting a facade similar in nature to those used on the North. Saw tooth bay windows are sized to allow a student to stand or work in the bay and enjoy a sense of space that accompanies a longer distance view in otherwise close confines. Not all studios will have bay windows - the uppermost studios that overlook the courtyard are similar in form to those on the East and West facades and have restricted vision glazing components to limit solar gain.



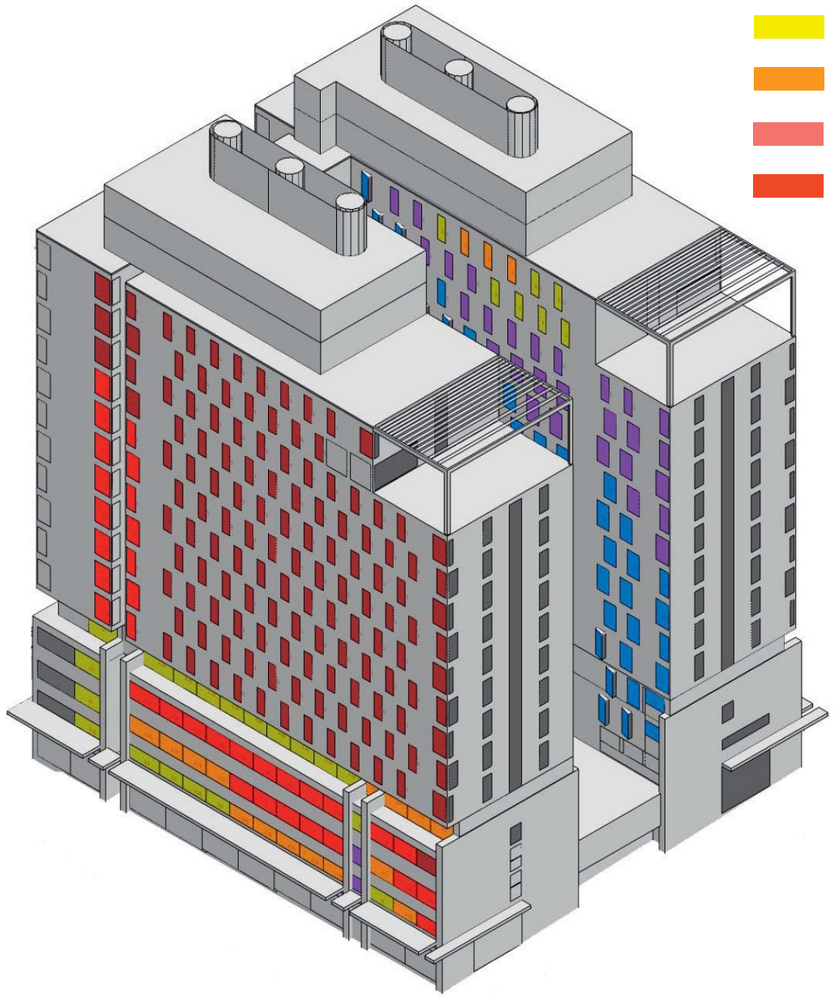


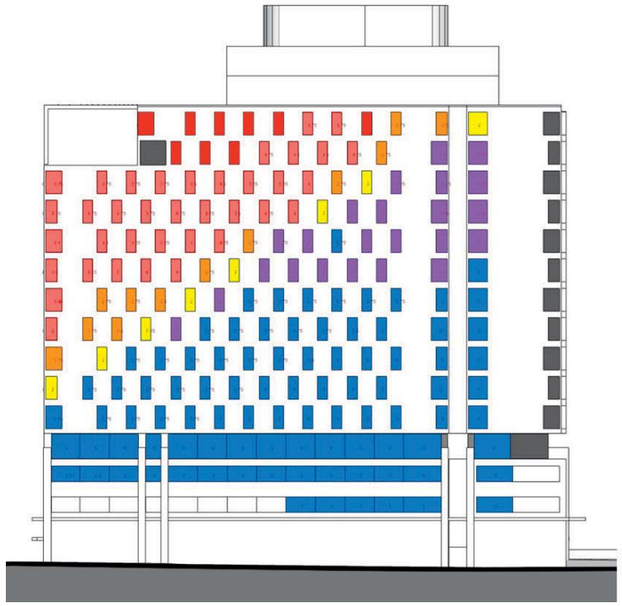
Solar Access

A simplified block model of the proposal has been analysed to assess the number of student accommodations that receive two hours solar access between 08:00 and 17:00 in mid-winter. We anticipate that 42% of bedrooms will meet this criteria.

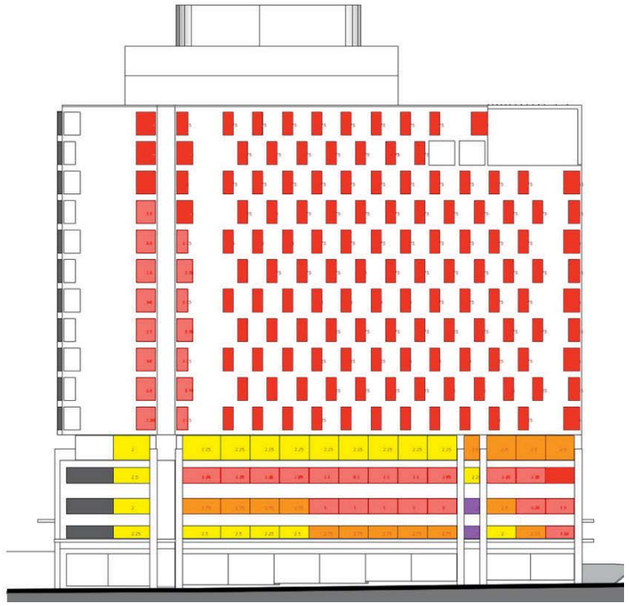
Direct sun in June 21st between 8am -5pm :

- < 1 h
- 1- 1.8 h
- 2- 2.3 h
- 2.5- 2.8 h
- 3- 3.8 h
- >4 h

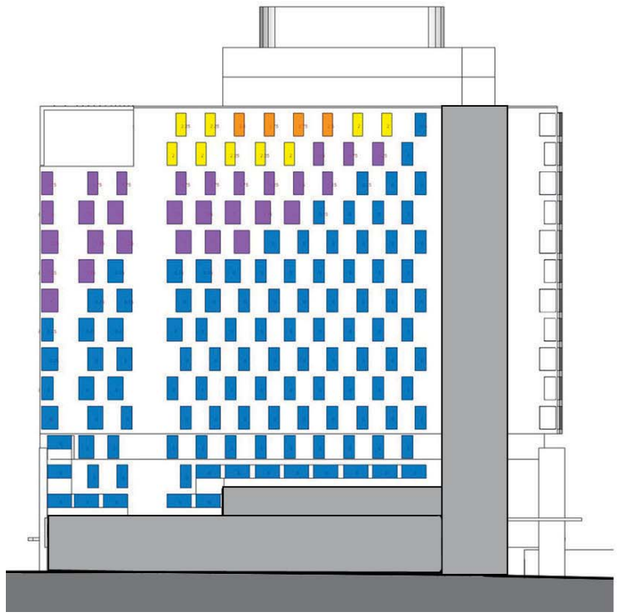




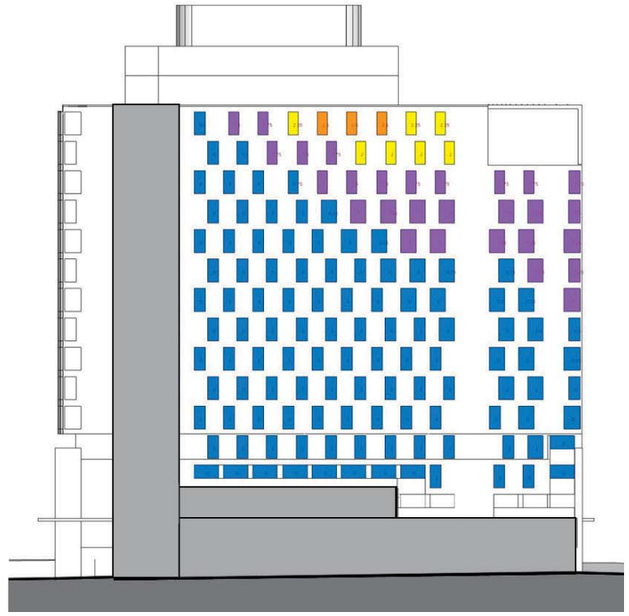
External Elevation - East Facade



External Elevation - West Facade



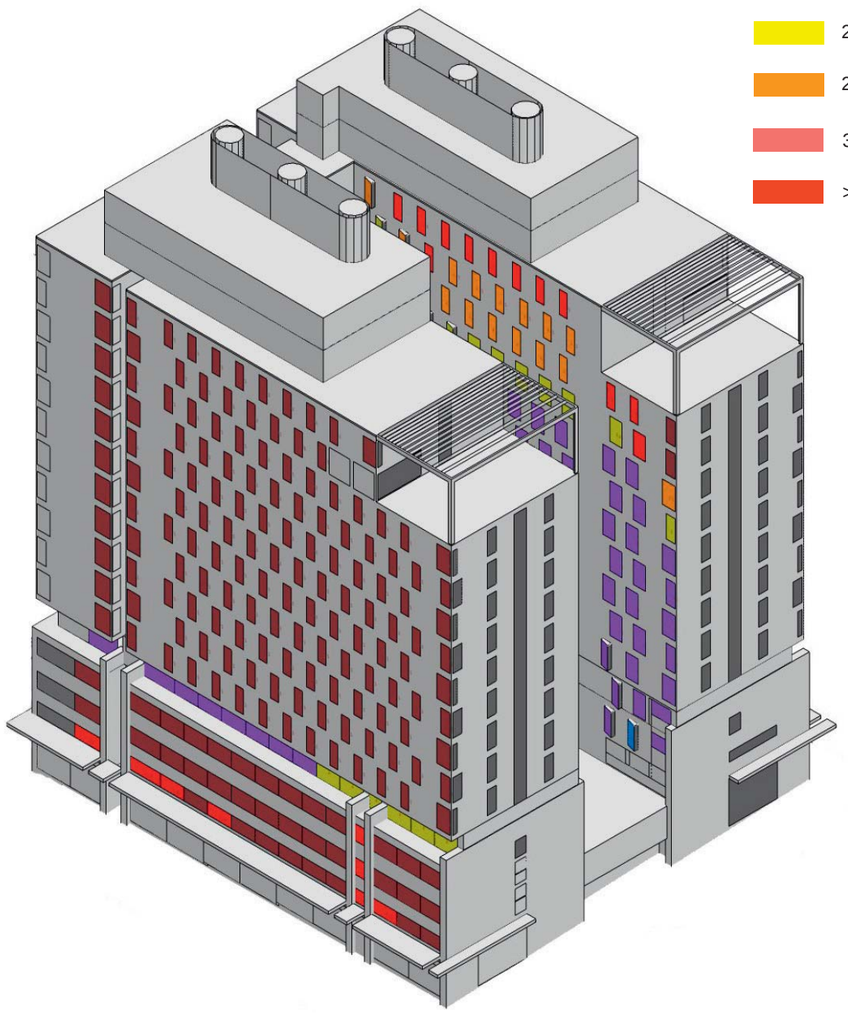
Internal Elevation - East Facade



Internal Elevation - West Facade

Solar Access

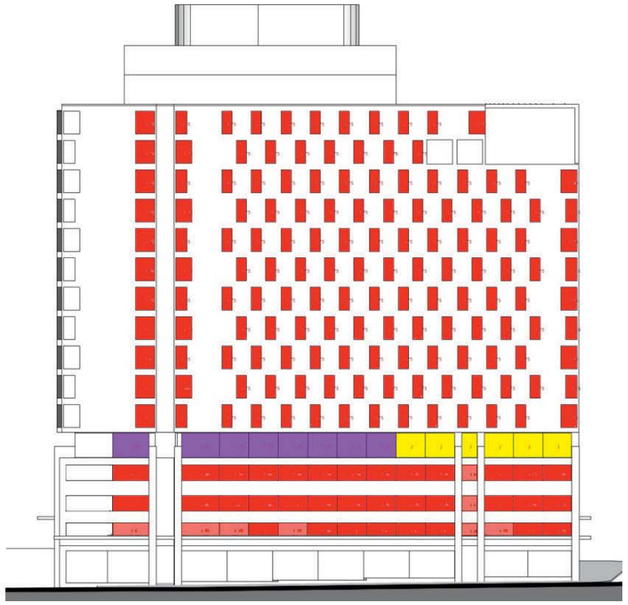
A simplified block model of the proposal has been analysed to assess the number of student accommodations that receive two hours solar access between 08:00 and 17:00 at the beginning of winter. We anticipate that 64% of bedrooms will meet this criteria.



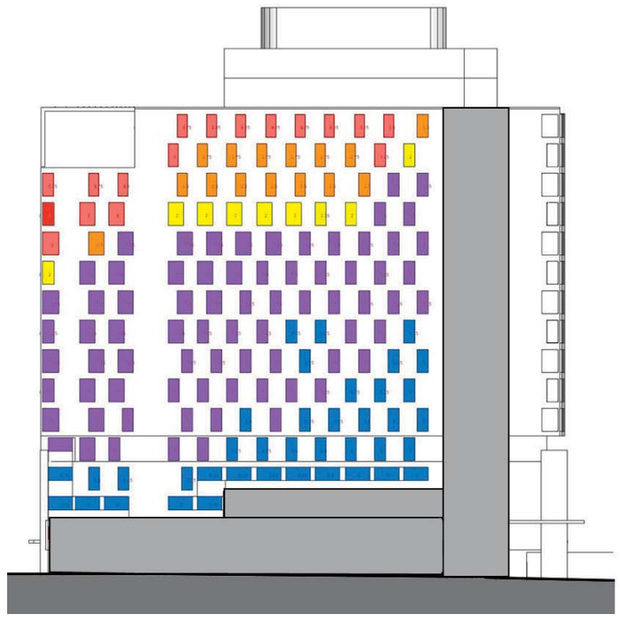
Direct sun in March 21st between 8am -5pm :

- < 1 h
- 1- 1.8 h
- 2- 2.3 h
- 2.5- 2.8 h
- 3- 3.8 h
- >4 h

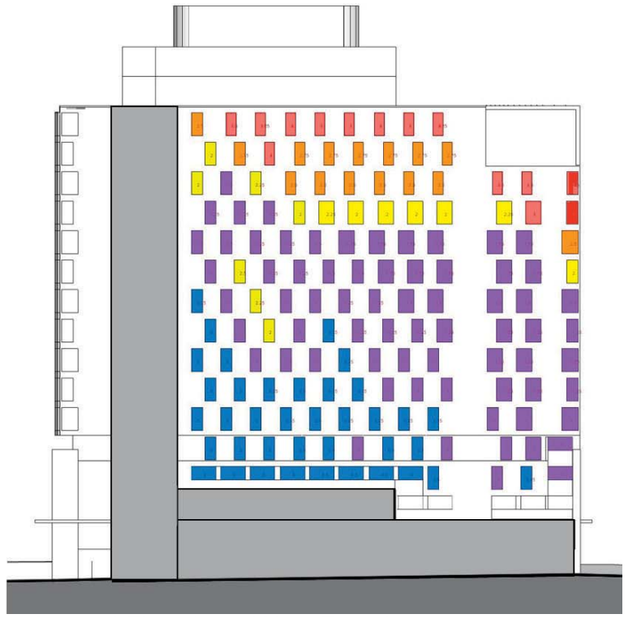
External Elevation - East Facade



External Elevation - West Facade

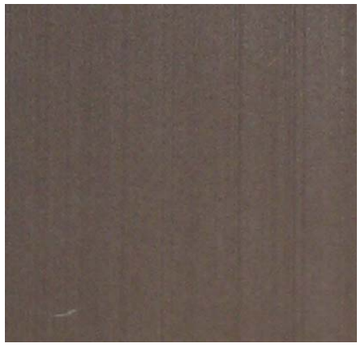


Internal Elevation - East Facade

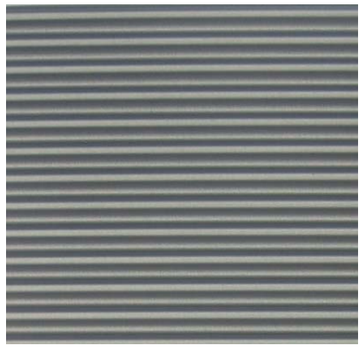


Internal Elevation - West Facade

Lower Levels
The lower levels will be finished in a palette of materials that is inspired by the heritage buildings located to the North of the site at the junction of Broadway and Abercrombie Street and those located immediately opposite on the other side of Abercrombie Street. This proposal will follow the strategy proposed for Block 4N. Below the city datum line the range of materials will include sandstone, granite, terracotta, metal finished in copper brown and dark grey paint, clear and tinted vision glass to shop fronts and studios and copper brown back painted glass to spandrels.



Upper Levels
The upper levels in keeping with the strategy adopted on Block 4N will employ a range of more contemporary material finishes above the recessed floor at the city datum. Dark grey/black metal cladding is proposed to the slab edge and inter module walls. The picture frame mullion/transom to each studio will be a silver/metallic finish as will fixed infill panels and operable ventilation panels. The ventilation panel will feature a ribbed finish to differentiate it from its fixed counterpart.



Energy Usage
Solar Power
Temperature - 27
Humidity - 40
Local Time - 16
ELLE

Design Excellence

6

Introduction
Foster + Partners is an international studio for architecture, planning, engineering and design led by its founder and chairman, Lord Foster, together with chief executive, Mouzhan Majidi 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.

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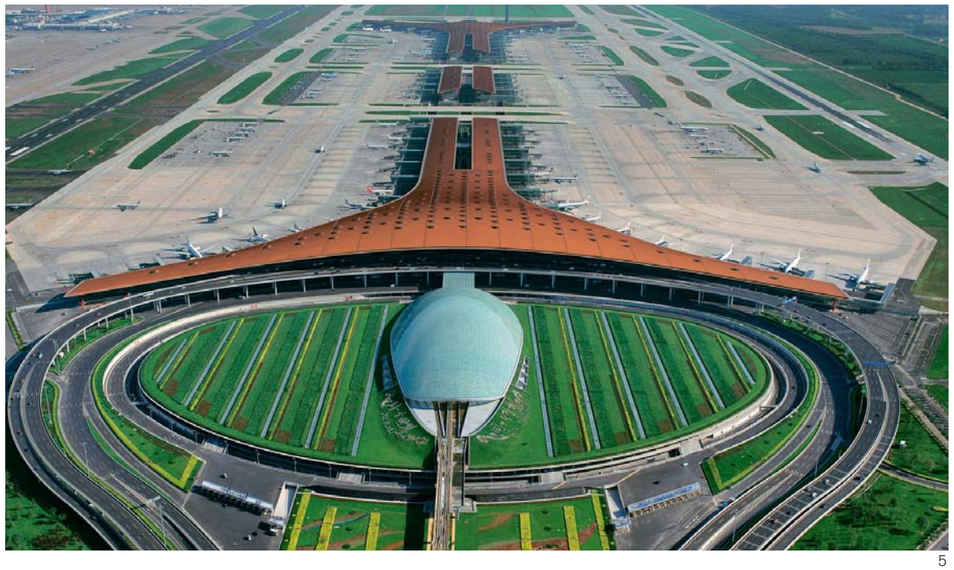
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1. Swiss Re Headquarters at 30 St Mary Axe, London, UK
2. The New German Parliament at the Reichstag, Berlin, Germany
3. Hearst Headquarters Tower, New York, USA
4. Hongkong Shanghai Bank, Hong Kong.
5. Beijing Airport, China.

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.

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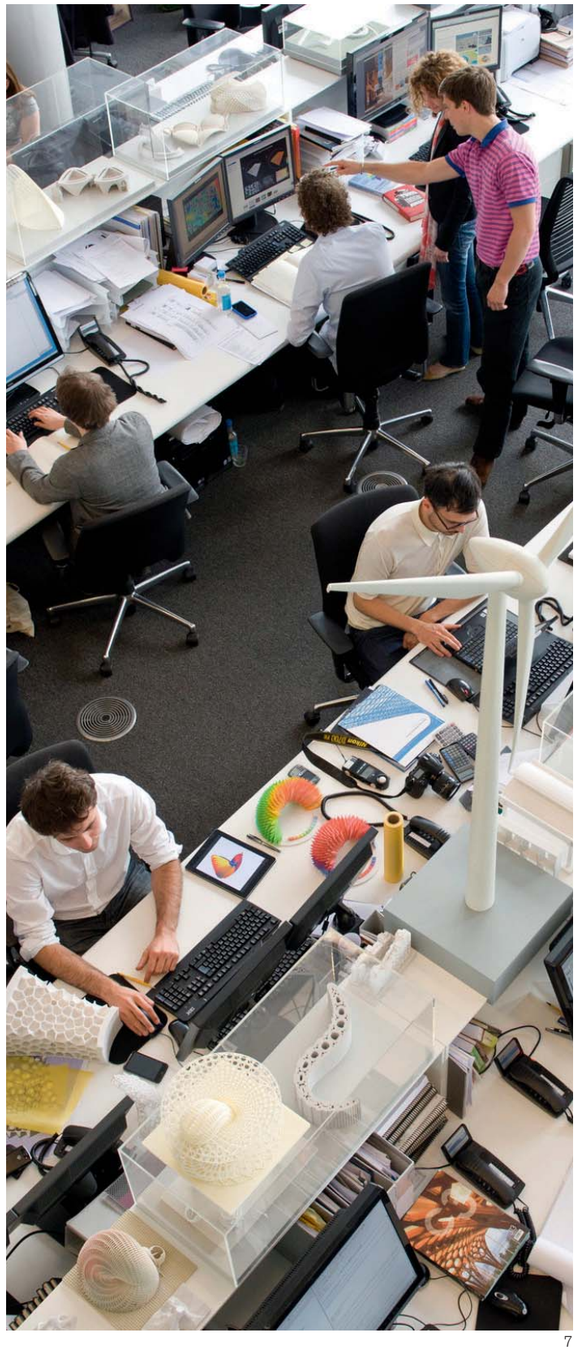

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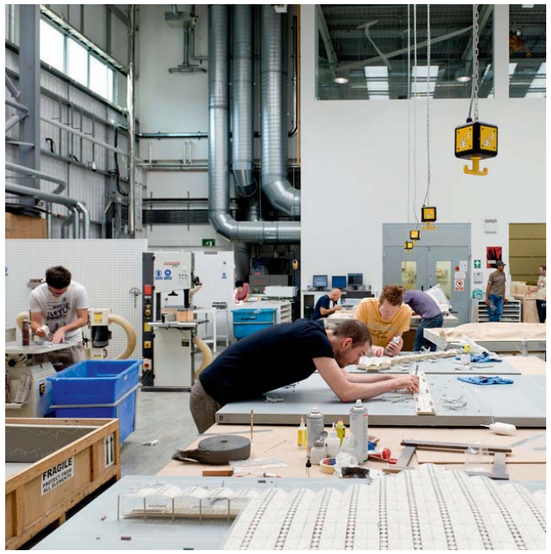

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6-10. Foster + Partners design studio, London, UK
11. Regent Place, Sydney, Australia
12. Deutsche Bank Place, Sydney, Australia

Principle 1 – Context

Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area. Responding to context involves identifying the desirable elements of a location's character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area

The context for Block 4S student housing is a location of mixed heritage and contemporary architectural character.

Design Proposal Principles

Proposal for Block 4S is a mixed use building that incorporates two slab (block) tower student accommodation wings with retail facilities at ground floor.
The facades at street level are activated with either retail or student shared/communal space (main entrance)
A recessed 'neck' floor articulates a podium that relates to adjacent built forms.
A pedestrian through link is proposed north of Block 4S where the main entrance is located. A plaza is located at the Abercrombie Street side of the through link adjacent to street level retail at the North West corner.
The proposals identity and entry are clearly expressed.
The proposal contributes to the character of this CBD edge mixed-use precinct.
Communal ground floor student shared spaces are visible from the main entrance and North pedestrian through link and adds to the character of the precinct.

SEPP 65 Compliance description

Appropriate building type for Mixed Use Zoning
General scale and massing similar to adjacent buildings
Building responds to main street frontages
Architectural form and design establishes building identity within its context

Comments

Lower podium height articulated by recessed neck floor is proposed to relate to envelopes in concept master plan North and South of the Block 4S site.
Through site links reinforce existing pedestrian routes and create a clear entry identity for the proposed development.

Principle 2 – Scale

Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area

Design Proposal Principles

Proposal is of a similar bulk and height to adjacent buildings in concept master plan.

SEPP 65 Compliance description

Height proposed to be in character with the concept master plan.

Podium articulated by recessed 'neck' floor is similar in scale to adjacent low rise buildings in the proposed buildings to the North.

Scale of proposed envelope steps to the south to 14 stories creating a transitional form to the adjacent Southern building block.

Comments

15 storeys proposed Student Accommodation
Four storeys of podium are articulated below a recessed floor of which one storey is retail and three storeys are student residences on the Abercrombie/West elevation. There are three storeys of podium on the Central Park Avenue elevation.

Three storeys of roof top plant.
The overall effective height of the proposal (excluding roof top plant) is16 storeys.

Principle 3 – Built Form

Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provided internal amenity and outlook.

Design Proposal Principles

The proposed built form is appropriate for student accommodation
The proposals setbacks and articulated massing is consistent with the concept master plan
The proposal complies with the building depth appropriate for the building use
Retail spaces are created at ground level to maximise activation of adjacent public realm
Measures are detailed to ensure privacy is maintained where apartment windows are adjoining common student spaces.
Adequate building separation

SEPP 65 Compliance description

Building depth <18m
Studio units are arranged along both sides of a naturally ventilated central corridor
Central corridor has daylight access
The massing and facades are articulated to break down scale and create building identity, while improving internal amenity.
Facades are articulated to respond to the studio orientation and privacy and sun access requirements
Massing offers studios either district views or views over central courtyard space.
The proposal ensures12m separation between facades of habitable spaces and to facades of adjoining buildings

Comments

12m façade separation maintained

Principle 4 – Density

Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

Design Proposal Principles

The proposal for Block B4S student accommodation is an appropriate density for the locality
The proposed density responds to the brief and market demand
Proposal utilises existing infrastructure and transport
Proposal utilises the concept master plan services infrastructure as part of the concept master plan overall ESD approach.

SEPP 65 Compliance description

High density development in a central location offers the opportunity to take advantage of good existing and proposed infrastructure and transport.
The proposal contributes to the CBD's need for more affordable student accommodation
Proposed student community facilities and retail incorporated to the ground floor areas will activate the adjacent public realm and help create a sustainable community/local neighbourhood.
The proposal is a proportionate response to local developments in the immediate context, and the surrounding educational institutions.

Comments

Proposed density is appropriate in the context of the evolving neighbourhood and the existing/proposed infrastructure and transport.

Contributes to the need for student accommodation in the CBD

Principle 5 – Resource, Energy and Water Efficiency

Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction. Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water

Design Proposal Principles

Appropriate solar orientation
Water efficiency
Efficient / flexible planning
Efficient use of materials
Energy efficient design

SEPP 65 Compliance description

Optimised building orientation within constraints of concept masterplan

Connection to the Central Park recycled water treatment plant provides wastewater treatment and a supply of recycled water which will be utilised for non-potable uses such as sanitary flushing.

The domestic hot water demand is provided through the connection to the Central Park central thermal plant.

The principal inter-floor stair is located adjacent to the lounge areas to encourage students to use stairs rather than lifts and promote energy savings

Modular studio design allows flexibility and the potential for adaptive reuse to meet future demands

Natural lighting and ventilation is achieved in all units and common spaces to reduce energy use

Comments

The alignment of site boundaries affects proposal orientation.

The plot is a CBD infill site and basement excavation will be required to accommodate precinct plant facilities.

X % of studios face due North, East and West.

Principle 6 – Landscape

Good Design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by coordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character. Landscape design should optimise useability, privacy and social opportunity, equitable access and respect for neighbour' amenity, and provide for practical establishment and long term management.

Design Proposal Principles

Deep soil landscape is proposed
External open space provided

SEPP 65 Compliance description

Target 25 to 30% of site area as communal open space

A minimum 25% of open space to be a deep soil landscape zone. CHECK

Public landscaping and planting is proposed as part of the overall landscape strategy to enhance streetscape amenity.

Comments

Roof top terrace areas are provided at levels 01 and 13 and total Xm2. These areas represent an X% of the total site area. This outdoor space is supplemented by Xm2 of communal indoor space provided at ground floor, lounges distributed every two levels throughout the atrium and at level 13. All these communal spaces are naturally lit and ventilated.

A plaza space is provided at the Abercrombie Street end of the through link located North of Block 4S.

This proposal is located on a CBD infill site with bulk excavation proposed for to accommodate a basement CTP plant that will serve this building and the wider Centra Park precinct.

Roof top soft landscaping provided at levels 01 and 13 are planned to minimise building run off.

Principle 7 – Amenity

Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and services areas, outlook and ease of access for all age groups and degrees of mobility.

Design Proposal Principles

Efficient usable unit design
Natural light and ventilation
Visual and acoustic privacy
Accessibility
Solar access
Good apartment amenity
Open space provisions

SEPP 65 Compliance description

A mix of apartment configurations is achieved in the proposal including multi-share apartments

Optimise number of naturally ventilated studios

Optimise number of naturally ventilated kitchens

Consider acoustic privacy between studios

Ensure that there is barrier free access to a minimum 20% of dwellings

Ensure there are no South facing single aspect studios

Ensure that single aspect apartments are <8m deep

Ensure that kitchenettes are <8m from windows

Provide a 2.7m minimum ceiling to habitable areas

Configure layout to optimise the number of units that receive a minimum of two hours of sun light between 9am-3pm in mid winter

Provide adequate individual storage for student affordable housing

Comments

Refer to page X for description of units mix

Studio sizes have been arrived at in response to the need to provide affordable student housing

Direct exhaust extraction is provided to all kitchens

Natural ventilation of studio units is promoted by utilising naturally ventilated access corridors WSP TO ADVISE

X% of apartments (BEDROOMS?) will receive a minimum of two hours sunlight between 9am and 3pm in mid-winter.

Accessible communal open space is provided at level 00, level 03 and every second level in the atrium. Lounge areas are also located at level 13 adjacent to the roof terraces. For reasons of student safety individual student balconies are not provided

Individual storage areas provided are suited to student accommodation requirements for affordable housing. Apartment storage shortfalls shall be provided in the basement to meet the requirements for general furniture storage.

Principle 8 – Safety and Security

Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

Design Proposal Principles

Entrance to be secure and private
Clear distinction to be made between private and public spaces
Maximise casual surveillance by exposure of entrances and frontages

SEPP 65 Compliance description

Main entrance physically and visually secure
Single point of controlled public access for student accommodation
Secure lighting at night and CTV camera surveillance provided
Casual surveillance from reception desk located in close proximity to entrance

Principle 9 – Social Dimensions

Good design responds to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community.

Design Proposal Principles

Product based on Market research and demand
A range of dwelling options to offer affordable accommodation
Accessible units to suit a range of demographic types

SEPP 65 Compliance description

Total X Units

X Standard Studios (X%)
X Studio Longs (X%)
X Delux Studio (X%)
X 6 Bed Multi Bed (X%)
X 3 Bed Multi Bed (X%)

Principle 10 – Aesthetics

Quality aesthetics require the appropriate composition of building elements, textures, materials and colour and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

Design Proposal Principles

Design within character of context
Create a distinctive building identity

SEPP 65 Compliance description

Use of pattern, texture, form and colour to produce a design aesthetic that reflects the quality of student accommodation provided.
Articulation of podium base and upper tower residential building mass
Articulation of Architectural Elements such as glazed stairwells, glazed common rooms, lift cores, slab edges and façade materials and articulation .
Articulation of detailed elements such as louvers, privacy screens and building articulation elements at roof tops and entry areas.
Articulation of Terraces and Balconies incorporating sun shading elements.
Create an identifiable addition to the residential precinct of CUB site.

Appendix