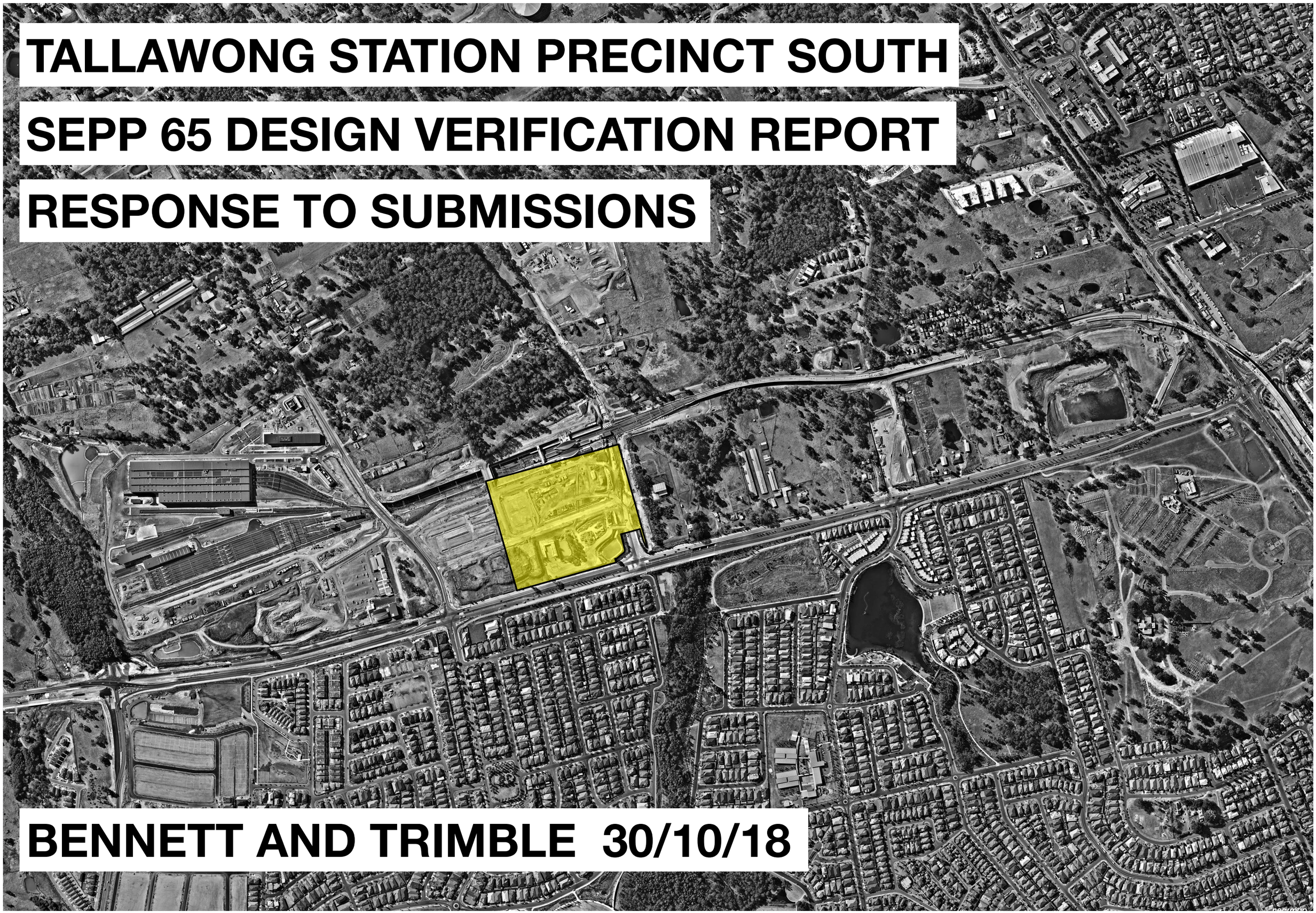
TALLAWONG STATION PRECINCT SOUTH

SEPP 65 DESIGN VERIFICATION REPORT

RESPONSE TO SUBMISSIONS



BENNETT AND TRIMBLE 30/10/18

INTRODUCTION

1.1 The Purpose

This report responds to the relevant SEPP 65 Design Quality Principles and the Design Criteria contained within the Apartment Design Guide (ADG). The report should be read in conjunction with the Urban Design Report submitted with this application.

1.2 Application of the Controls

The concept proposal has been prepared at the scale of a masterplan. The proposal has been designed to comply with the relevant SEPP 65 Design Quality Principles and Design Criteria contained within the Apartment Design Guide (ADG) that are relevant and applicable to a proposal of this scale.

1.3 Methodology

This report sets out compliance with Part 3 Siting the Development which are the relevant controls applicable at the scale of a masterplan. It is not applicable to set out compliance with Part 4 Designing the Building at this stage as the buildings are not designed in detail. Full compliance with the ADG including Part 4 Designing the Building would need to be demonstrated when each site or building is developed in greater detail for approval.

As part of our process, a number of sites were selected within the concept proposal as sample sites for additional ADG testing. The buildings on these sites were developed with schematic floor plans with apartment plans and core locations to test for ADG compliance for:

- solar and daylight access
- natural cross ventilation
- apartment size, layout and mix
- core configuration and egress.

The sites and buildings selected as sample sites are representative of the different types of developments proposed across the site. The compliance of these sample sites demonstrates that ADG compliance would be possible to achieve when each site or building is developed in greater detail for approval. It also demonstrates that the urban scale siting of the concept proposal has been carefully considered. The analysis of these sample sites has been included as an appendix to this report.

1.4 Design Verification

I, Matthew Bennett, of Bennett and Trimble, verify that I contributed to the design of this concept proposal, and that the relevant design quality principles set out in Part 2 of SEPP No. 65 - Design Quality of Residential Flat Development for are achieved at the scale of a masterplan for Tallawong Station Precinct South.

Signature:

Name: Matthew Bennett

Registration: #8538

2. SEPP 65 COMPLIANCE ANALYSIS

2.1 Design Criteria

The following section outlines ADG recommendations, how each of the minimum standards of the ADG ("design criteria") are applied to the proposed concept proposal, and how each of the standards are achieved in relation to the design objectives of the ADG. The concept plan has been designed to comply with the sections of the ADG relevant at a scale of a masterplan.

2.2 Site and Building Configuration

The concept proposal for Tallawong Station Precinct South development has been designed to create an active and walkable neighbourhood with the Metro station at its core. It will contain a broad range of higher density housing, a public park and a series of mixed-use facilities within 300 metres of the new station.

The proposed street pattern is rationalised and extended through the development to create a clear and legible urban grid. A network of pedestrian and cycleways is then introduced to complement and extend this urban grid with a series of through-site links dividing the developable areas into smaller blocks to create a more permeable and pedestrian friendly urban environment. The proposed pedestrian and cycle network will provide direct links between the residential areas, the town centre, the metro and adjoining neighbourhoods such as The Ponds.

A series of open spaces including a public park, plazas, landscaped zones, and communal open spaces are distributed throughout the site to create a connected open space network that will provide amenity to residents, visitors and employees. These spaces will differ in scale and character and will support a wide variety of uses.

Higher density housing is accommodated in buildings ranging from 2 storeys to 8 storeys to provide a variety of urban scales within the development. Taller buildings have been strategically located to alleviate overshadowing to public spaces and to concentrate density with the amenity provided by the proposed landscaped areas and the views towards the Second Ponds Creek Riparian Corridor.

Within this built form, a range of housing types are proposed including maisonettes and two storey terraces to the lower levels of developments, and a range of apartment types on the upper levels to accommodate and foster a diverse community. Building forms are designed to optimise access to daylight, natural ventilation, privacy and appropriate building separation.

Mixed Use facilities such as retail, childcare, work hub and community spaces are proposed for the ground and first floor areas adjoining the metro station and the public park to activate the town centre.

Site Area and Yield Estimate

Site 1
Total Site Area: 7.8 hectares
Total Apartment Yield Estimate: 1097 dwellings

PART 3 Siting the Development

Objective	Design Criteria	Compliance	Comment
3A-1			
Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context		✓	Site analysis plans provided in Urban Design Report.
3B-1			
Building types and layouts respond to the streetscape and site while optimising solar access within the development		✓	Varying building heights and scales are proposed to create a variety of housing typologies and layouts. Lower scale buildings have been located to respond to street scale and provide solar access to the taller buildings within the block. Additionally, building, separation and setbacks have been calibrated to optimise solar access within the development.
3B-2			
Overshadowing of neighbouring properties is minimised during mid winter		✓	Building masses have been arranged to minimise solar impact on neighbouring properties in mid winter.
3C-1			
Transition between private and public domain is achieved without compromising safety and security		✓	The concept proposal has been planned with commercial and retail uses nominated for the ground floors of the sites adjacent to the Metro station and public park. Ground floor maisonettes and terrace type housing have been nominated at ground level for the remaining sites with direct street access via private gardens with appropriate screening.
3C-2			
Amenity of the public domain is retained and enhanced		✓	The existing site has been extensively cleared as part of Sydney Metro development. Public access is not available on the existing site. The amenity of the public domain will be enhanced by the concept proposal.

PART 3 Siting the Development

Objective	Design Criteria	Compliance	Comment
3D-1			
An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	Communal open space has a minimum area equal to 25% of the site	✓	Communal open space has been allocated across each site at the detail of a masterplan to provide a minimum communal open space equal to 25% of the site area. Refer to the Communal Open Space drawing and calculations within the Urban Design Report.
	Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓	Communal open space has been located across each site to maximise direct sunlight to communal open space to meet the ADG objective. Refer to the Communal Open Space drawing and calculations within the Urban Design Report.
3D-2			
Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting		✓	Communal open space has been located to respond to the conditions of each site including solar access and privacy/screening for the adjacent apartments and a complimentary relationship to the open space network. The spaces have been designed to be large enough to accommodate a range of activities.
3D-3			
Communal open space is designed to maximise safety		✓	Communal open spaces are proposed on the ground floors of sites within courtyards where passive surveillance from the surrounding apartments and ground floor maisonettes is available. Communal open spaces are also proposed on the roofs of buildings where access will be provided through each building.
3D-4			
Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood		✓	The concept proposal is for a site that has been cleared as part of the Sydney Metro development. The proposal has been designed to respond to the existing context including the surrounding street pattern, the Metro station, commuter carparks and the existing low-density neighbourhood of The Ponds. The public park and pedestrian/cycle network have been carefully considered to maximise their relationship to the Metro station, streets and existing and proposed built context.

PART 3 Siting the Development

Objective	Design Criteria	Compliance	Comment
3E-1			
Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality	Deep soil zones are to meet the following minimum requirements: Site Area: greater than 1,500m^2 Min Dimension: 6m Deep Soil Zone: 7% of site	✓	Deep soil zones have been located across each site based on the guideline of minimum 7% of the site area and with a minimum 6m dimension for sites larger than 1,500m^2. Refer to the Communal Open Space drawing and calculations and the Basement Services and Deep Soil Plans within the Urban Design Report.
3F-1			
Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy	Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: Building Height: up to 12m (4 storeys) -between habitable rooms and Balconies: 12m -between habitable and non-habitable rooms: 9m -non-habitable rooms: 6m up to 25m (8storeys) -between habitable rooms and Balconies: 18m -between habitable and non-habitable rooms: 12m -non-habitable rooms: 9m up to 25m (8storeys)	✓	The massing, placement and heights of buildings in the concept proposal has been designed to comply with the required setbacks. Refer to the Building Separation Plan with the Urban Design Report.
3F-2			
Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space		✓	Sites and buildings within the concept proposal have been designed as building envelopes. Privacy, outlook, and views have been considered at the scale relevant to a masterplan. The sites and buildings would be considered and designed in greater detail and tested for compliance in future project stages.

PART 3 Siting the Development			
Objective	**Design Criteria**	**Compliance**	**Comment**
3G-1			
Building entries and pedestrian access connects to and addresses the public domain		✓	Buildings within the concept proposal have been designed as building envelopes. Building entries and pedestrian access has been nominated for each site and building to address the public domain. Refer to relevent drawing within the Urban Design Report.
3G-2			
Access, entries and pathways are accessible and easy to identify		✓	The concept proposal has been designed at the scale of a masterplan. Locations for building and site entries have been nominated in locations that would be logical and easy to identify with a street address. Compliance with accessibility requirements will be tested when the sites are developed in greater detail in future stages.
3G-3			
Large sites provide pedestrian links for access to streets and connection to destinations		✓	A network of pedestrian and cycleways has been designed to complement the street grid with a series of through-site links dividing the developable areas into smaller blocks to create a more permeable and pedestrian friendly urban environment and linking key destinations such as the Metro station, public park and surrounding residential areas.
3H-1			
Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes		✓	Vehicle access points numbers are limited across the site, with entrances located to minimise conflicts between pedestrians and cyclists and to not interrupt proposed streetscapes. Vehicle access points are located in sites less optimal for residential or commercial use and in locations that do not disrupt the urban pattern of terrace rows, maisonettes or retail activity to the street.

PART 3 Siting the Development

Objective	Design Criteria	Compliance	Comment
3J-1			
Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	For development in the following locations: on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre the minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less The car parking needs for a development must be provided off street	✓	The concept proposal is in close proximity to the proposed metro station so the carparking rates have been calculated using the rate of 1.04 spaces per dwelling. This aligns with the minimum car parking requirements for residents across each site set out in the Guide to Traffic Generating Developments: Metropolitan Sub Regional Centre. Basement car parking is provided on each site and is allowed for within basement area calculations. Refer to SCT Consulting Traffic and Transport Impact Assessment for more detail.
3J-2			
Parking and facilities are provided for other modes of transport		✓	Bicycle parking has been calculated using a rate of 1.1 spaces per dwelling. This aligns with the minimum car parking requirements for residents and visitors across each site set out in the Guide to Traffic Generating Developments: Metropolitan Regional Centre (CBD). Basement cycle parking has been allowed for within basement area calculations.
3J-3			
Car park design and access is safe and secure		-	Compliance with this clause accessibility requirements will be tested when the sites are developed in greater detail in future stages.

PART 3 Siting the Development			
Objective	**Design Criteria**	**Compliance**	**Comment**
3J-4			
Visual and environmental impacts of underground car parking are minimised		✓	Vehicle access points numbers are limited across the site, with entrances located to minimise conflicts between pedestrians and cyclists and to not interrupt the proposed streetscapes. Vehicle access points are located in sites less optimal for residential or commercial use and locations that do not disrupt the urban pattern of terrace rows, maisonettes or retail activity to the street. The visual impact of underground parking would be considered and designed in greater detail to comply with this control when the sites are developed in greater detail in future stages.
3J-5			
Visual and environmental impacts of on-grade car parking are minimised		✓	On-grade parking is provided as street parking only. No on-grade parking spaces are proposed within sites.
3J-6			
Visual and environmental impacts of above ground enclosed car parking are minimised		✓	Above ground enclosed car parking is not proposed within sites.

2.1. SEPP 65 Design Quality Principles

Principle 1: Context and neighbourhood character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or future character. Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

Statement of Compliance

The Tallawong Station Precinct is located north of Schofields Road within the suburb of Rouse Hill, approximately 33kms north-west of Sydney CBD. The Precinct is part of the North West Priority Growth Area which is intended to provide substantial land release areas for homes and jobs in Sydney's northwest. The Precinct provides the opportunity for transit oriented development located adjacent to the Sydney Metro Northwest rail line and in close proximity to the Rouse Hill Strategic Centre. The new train line will provide housing in the corridor with excellent access to employment in the Global Economic Corridor.

The site is bounded by Schofields Road to the south, the new rail line to the north, Cudgegong Road to the east and future commuter car parks to the west (currently under construction). To the south of the site is The Ponds residential release area. The Rouse Hill Town Centre is located east of the site, across Windsor Road. To the west is the Sydney Metro Trains Operations Control Centre and Train Stabling Facility (currently under construction) while the Second Ponds Creek Corridor is located to the east (see Figure 3). The Tallawong Station Town Centre extends beyond the subject site and north of the rail corridor. This area is subject to a number of development applications for commercial and residential uses. The 1000 space commuter car park for Tallawong Station is currently under construction and is located immediately west and partially within the subject site.

The concept proposal is for a site that has been cleared as part of the Sydney Metro development.

The concept proposal for Tallawong Station Precinct South development has been designed to create an active and walkable neighbourhood with the Metro station at its core. It will contain a broad range of higher density housing, a 3,411 square metre public park and a series of mixed-use facilities within 300 metres of the new station.

The proposal has been designed to respond to the existing context including the existing and proposed surrounding street pattern, the Metro station, commuter carparks and the existing low-density neighbourhood of The Ponds to the south. The proposed street pattern is rationalised and extended through the development to create a clear and legible urban grid. A network of pedestrian and cycleways is then introduced to complement and extend this urban grid with a series of through-site links dividing the developable areas into smaller blocks to create a more permeable and pedestrian friendly urban environment. The proposed pedestrian and cycle network will provide direct links between the residential areas, the town centre, the metro, adjoining neighbourhoods such as The Ponds to the south, and the Second Ponds Creek landscape corridor to the east.

Principle 2: Built form and scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings. Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Statement of Compliance

Built form ranges in scale from 2 storeys to 8 storeys to provide a variety of urban scales within the development. Built form is aligned to the edges of a permeable grid of sites to create a legible and clear high-density urban development with a well defined public realm.

Setbacks are varied in response to context, typology and amenity. There are no or limited setbacks to buildings within the areas adjacent to the Metro station or the public park with commercial and retail programs located at the ground level. This will focus pedestrian activation to the street and create an energetic mixed-use town centre development. Buildings are setback two to three metres on sites not adjacent to the Metro station to increase distance between buildings and to accommodate private gardens for ground floor maisonettes and terrace type housing. These streets will provide a more relaxed urban character.

The variety in building heights and the large number of smaller urban block sites will foster diverse building typologies and a wide range of architectural responses in buildings to create a diverse and interesting neighbourhood with the careful consideration of massing, materials, fenestration and buildings scale.

Lower building heights are located to create an appropriate scale and character to streets and pedestrian links and to allow solar access to larger buildings. The massing of buildings to the southern sites have been designed to avoid the perception of the proposed development as a wall of buildings to Schofields Road and The Ponds.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Statement of Compliance

All apartments and residents will benefit from a high level of amenity resulting in a density appropriate to the site and its context. The proposed development:

- is located in direct proximity to the new Sydney Metro and is connected to other places and job centres in the Northwest and broader Sydney via an outstanding and expanding transport network
- provides homes for our city's growing population in one the most appropriate locations where the impact of development is best controlled and generates more positive economic, social and environmental impacts than in other locations
- attains critical mass to provide local services and daily destinations within walking distance of every dwelling and accessible to others living in surrounding suburbs
- offers easy access to a rich and diverse open spaces' experience within and in close proximity to the site
- follow an ecologically and socially sustainable approach to development ensuring the density creates a strong local economy and inclusive community, and is appropriate for the infrastructure and the environment

1. Outstanding Transport Connectivity to key places and job centres in Sydney

The proposed development seeks to capitalise on the investment from all Australians in the new metro system that will connect Tallawong to Chatswood in 2019. All buildings in this Concept Proposal are between 50 and 350 metres from the station entrance. The Metro will connect the future residents to all station precincts along the Sydney Metro Northwest within 40 minutes. Highly reliable and with trains every 4 minutes during the peak, Metro means a new generation of world-class fast, safe and reliable trains easily connecting Metro customers to where they want to go.

FROM TALLAWONG STATION
2019 ONWARDS:
- 2 minutes to Rouse Hill Station
- 9 minutes to Norwest Station
- 13 minutes to Castle Hill
- 22 minutes to Epping Station
- 26 minutes to Macquarie University Station
- 37 minutes to Chatswood
- 57 minutes to Wynyard (via Chatswood)

The second phase of Sydney Metro connecting Chatswood to Bankstown is due to be open in 2024 and will compress the geography even further, putting the proposed development within 50 minutes of Martin Place

FROM TALLAWONG STATION
2024 ONWARDS:
- 41 minutes to Crows Nest Station
- 43 minutes to Victoria Cross Station (North Sydney)
- 46 minutes to Barangaroo Station
- 48 minutes to Martin Place Station
- 50 minutes to Pitt Street Station
- 52 minutes to Central Station
- 54 minutes to Waterloo Station
- 59 minutes to Sydenham Station

The first tranche of the Tallawong development will be delivered at the earliest in 2022. This is only two years before the second phase of Sydney Metro connects Tallawong Station to the Sydney CBD, Central and the Bankstown line. Along this alignment residents will have the opportunity to work at many of the key job centres in Sydney, including:
- Rouse Hill
- Bella Vista / Norwest Business Park
- Castle Hill
- Macquarie University and Macquarie Park
- Chatswood
- St Leonards / Crows Nest
- North Sydney
- Sydney CBD

All these centres along the Sydney Metro Northwest and City & Southwest alignment combined provide a significant proportion of the jobs in the Sydney Metropolitan Area.

Complemented with future bus connections to other key job centres and daily destinations, residents will be able to heavily rely on active and public transport modes, saving them time and money, reducing their environmental impact, and helping them benefit from an active lifestyle that is less dependent on the individual car to get around.

These two phases of Sydney Metro are only the beginning of an expanding high capacity turn-up-and-go system that will put Sydney at the same level of connectivity as other metropolis around the globe. In the Greater Sydney Services and Infrastructure Plan as part of their Future Transport 2056 initiative, Transport for NSW outlines the

planned new connections between the three cities identified by the Greater Sydney Commission in its strategic and district plans.

Particularly relevant to Tallawong Station are the connections expanding west and South to Schofields and then Marden Park, St Marys and the future Badgerys Creek Airport and the connection connecting Norwest with Parramatta. Both will enable residents in the proposed development to be even better located, within a short Metro trip from most places in Sydney.
https://future.transport.nsw.gov.au/wp-content/uploads/2018/plans/Greater_Sydney_Services_Infrastructure_Plan.pdf
page 90

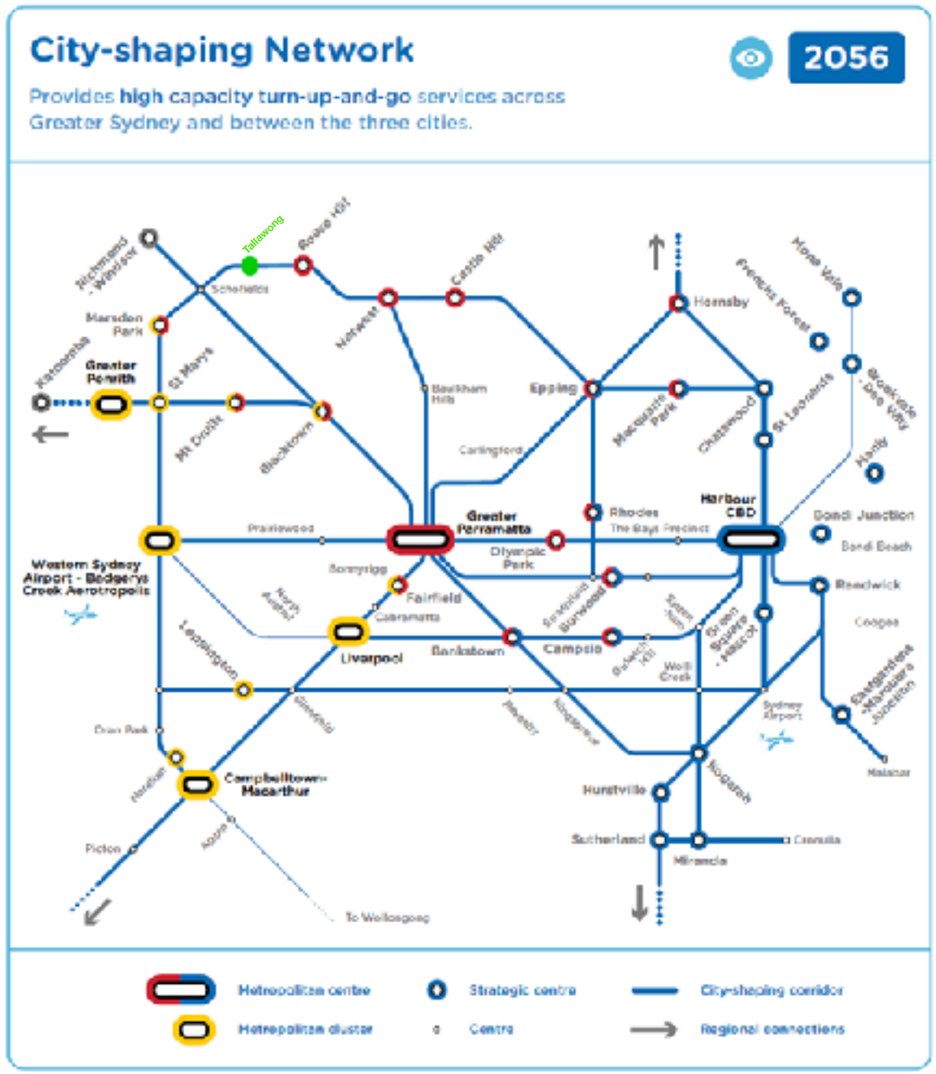


Figure 38: 2056 Greater Sydney city-shaping network vision

2. Daily destinations within walking distances of every apartment and the surrounding communities

The proposed development provides a critical mass of density to activate and encourage the development of a vibrant, culturally diverse, multi-use precinct. This critical mass will enable the provision of shops, cafes, restaurant, work spaces and a smart work hub, child care centres, and flexible and community spaces.

These uses will help residents cater for their daily needs without travelling too far or using the car, but also provide opportunities to work more locally. These uses will also help create a local economy and foster a sense of community.

3. Easy access to a rich and diverse existing and future open spaces' experiences within and in close proximity to the site

There are 21 existing public open spaces and sport and recreation facilities within a 5km radius of the site. This includes several parks, sports fields and passive open space and green corridors along Creek lines. To the South and the West, the proposed development is within 200 metres of the Second Ponds Creek corridor that connects to existing parks and playing fields in the Ponds, less than 1 km away and to the North will connect to future sports fields and the Rouse Hill Regional Park. The future 4ha Cudgegong Reserve to the north of the town centre will be less than 450 metres away from the site via the future main street that will link the northern and southern part of the Town Centre through its core.

The Concept Proposal includes a series of additional open spaces and links, including a public park, two public plazas and generous landscaped through-site links. The Concept Proposal also proposes a variety of private communal open spaces, including generous courtyards and rooftop terraces.

The Concept Proposal provides a diversity of urban spaces and experiences and a high level of permeability through the site. The town park will have different spaces catering for different needs: a northern plaza with café-restaurant and interactive water feature, northern upper lawn, steps, and lower garden. The two plazas provide additional recreational opportunities. One in the retail and commercial core of the development connects the commuter car park to the town park, and the another one along the through site link from the Schofields/ Cudgegong intersection to the station, has a stronger residential character, focused on local social interaction. The main street on the western edge of the park benefits from strong retail, commercial and community activation and connects through a pedestrian bridge across the metro corridor to the northern part of the main street. The network of residential streets and pedestrian through site links provide a more relaxed and contemplative atmosphere with extensive landscaping and a generous tree canopy, while allowing freedom of movement and strong connectivity.

Streets will have well-defined street crossings and some will have shared paths for walking and cycling. An overall simple street and public domain grid will encourage walkability throughout the site, provide direct and easy access to the new metro station, and enable easy wayfinding.

4. A sustainable approach to development and city making

The proposed development provides homes for our city's growing population in one the most appropriate locations where the impact of development can be best controlled and generate more positive economic, social and environmental impacts than in other locations.

Environmental impacts are reduced compared any other form of development in areas further away from the station through strong transport mode shift to active and public transport, reduction of car usage, ecologically sustainable building methods and materials to reduce the need for energy and water, an efficient use of resources as high density living enables a more efficient use of resources and spaces.

Social and lifestyle benefits such as time saving and improved social interactions are also increased compared to locations further away from centres. The provision of affordable and diverse housing further ensure the creation of an inclusive community.

Throughout its preparation, the Concept Proposal followed an ecologically and socially sustainable approach to development ensuring the density creates a strong local economy and inclusive community, and is appropriate for the infrastructure and the environment.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

Statement of Compliance

Passive design initiatives have sought to reduce energy use and increase thermal comfort through building orientation, utilisation of natural cross ventilation and use of natural lighting. Across the precinct, street trees have been identified to provide shading and reduce microclimate impacts and urban heat island effect. These benefits have been amplified with the use of high albedo and natural materials, external shading and vegetated roof terraces. Deep soil zones have been identified and Water Sensitive Urban Design measures provided for ground water recharge and to reduce surface flows. Street layout has been designed for pedestrian connectivity and delivers active transport corridors for an inclusive and connected community with regional public transport links. The town centre provides a central, multipurpose community space for all generations and abilities, and a mixed use hub for retail, commercial and community services.

The concept proposal is designed at the scale of a masterplan and the proposed buildings are not designed in detail. Statements of compliance in terms of Sustainability for natural cross ventilation and solar access will be provided for review as each site and building is developed in greater detail for approval.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood. Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management.

Statement of Compliance

The proposal incorporates the landscape in all levels of the design process. Examples of how this has been achieved within the proposal include:

- Enhancing the public domain through the use of high quality soft and hard materials ensuring pedestrian connection throughout the site in particular the Tallawong Station and links to The Ponds.

- Connecting the public domain to the wider community, in particular ensuring pedestrian and bike routes link into wider networks.
- Ensuring plant species selections are appropriate for the site and extending green links into and throughout the site.
- Providing adequate space for street tree planting to ensure long term growth and development of trees provide a high quality street level experience while also contributing to heat island mitigation.
- The development of a high quality City Park designed to activate surrounding commercial frontages to ensure a bustling city centre while catering for future and current public amenity and needs.
- Integrated stormwater management utilising WSUD principles to provide a sustainable landscape and lower maintenance requirements.
- Providing a balance between private and public spaces, with opportunities for unobtrusive passive surveillance to ensure a safe and clean environment.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being. Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

Statement of Compliance

The proposal has been designed to create a walkable and active town centre development with good access to a range of parklands, open space, commercial and retail facilities and the Metro station. High quality pedestrian links through the site allow for finer grain pedestrian connections within the area.

At the urban scale, building massing, scale and setbacks have been proposed that provide good solar access, and opportunities for natural cross ventilation or apartments within the development. Sites have been planned to address the perimeter of each block to overlook streets, public spaces and pedestrian links that extend through the site. Many buildings have views of landscaped areas including streets, courtyards and public areas. Views to the surrounding context including the Second Ponds Creek have been maximised where possible.

Communal open spaces and deep soil zone have been proposed within the interior of each block to provide landscaped areas for residents, to allow tree canopies to be formed within each block, to create screening within courtyards to reduce overlooking between residents, and to help create areas of different characters and amenity supporting a range of uses.

The development contributes to the general public amenity at ground floor level through the activation of frontages via retail and commercial facilities, lobby spaces, residential access through private gardens and balcony orientation .

The concept proposal is designed at the scale of a masterplan and the proposed buildings are not designed in detail. Statements of compliance in terms of amenity such as storage, efficiency and service areas will be provided for review as each site and building is developed in greater detail for approval.

Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety. A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

Statement of Compliance

The precinct layout, urban and landscape design have adopted good CPTED principles and practices. This is noticeable in the passive surveillance that has been provided by maintaining good sight lines throughout the site. The street and pedestrian network layout is legible and provides direct routes to destination points.

The central park design takes advantage of the topography, proximity to the metro station and the surrounding buildings to provide a central meeting place that will attract large numbers of people and will receive good passive surveillance from numerous vantages points making it a safe place to recreate.

The high quality streetscape and landscape design complements the scale of the development and provides high amenity which will encourage people to frequent the outdoor spaces. Street frontages in the form of commercial and retail accommodation at ground level around the central park and metro station areas help create a vibrant and activated public domain.

The varying heights of buildings create a variety of urban scale with height strategically located to alleviate overshadowing and concentrate density around amenity. The spacing of trees in the streets, parks and plazas allows for public lighting which will be enhanced by any spill over lighting from the adjoining buildings, creating a safe night time environment. The planting design allows for good surveillance by using predominantly low growing plants in the public domain and trees with singular, tall clean trunks allowing views through the site.

Principle 8: Housing diversity and social interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets. Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

Statement of Compliance

Landcom has a clear mandate to focus housing supply, affordability and diversity. Through the disposal of the land, Landcom is encouraging developers to propose solutions and demonstrate their ability to deliver housing affordability, diversity and innovation to provide greater housing choice that meets the needs of the local community now and into the future. To this effect Landcom has prepared a Landcom Housing Affordability and Diversity policy that is publicly available.

The Concept Proposal provides a gross floor area of approximately 93,000m2 with an indicative yield of around 1,100 dwellings and around 9,000m2 of retail, commercial and community spaces. Within this yield there will be a requirement to provide a minimum 5% of rental Affordable Housing managed or owned by a Community Housing Provider. Potential purchasers will be encouraged to deliver and/or enhance the targets and outcomes set out in the Landcom Housing Affordability and Diversity policy.

Regarding apartment mix, the Concept Proposal has an indicative mix of

- 30% one bedroom apartments with a minimum size of 50 m^2 mainly to cater for households that are increasingly characterised by single-person households
- 55% two bedroom apartments with a minimum size of 70m^2 mainly to cater for households that characterised by a couple with or without children, families planning to grow their family or couple where children have left
- 15% three bedroom apartments with a minimum size of 90m^2 mainly to cater for households that are likely to be a couple with children .

This is an indicative mix and there is flexibility at detail stage to adapt the mix and size of apartments.

Regarding ownership and tenancy, developers will be encouraged to consider different proportions and types of ownership and tenancy mix.

Part of the products could include:

- lower cost market housing for rent or purchase such as compact apartments of various bedroom configurations with high quality design merit and shared spaces - aiming for less than current typical market prices
- housing that uses other design innovation resulting in products which include decoupled/optional car parking and are suited to essential service workers, young ‘city makers’ early in their careers looking for ‘starter homes’, families with children and downsizers /seniors

- new generation boarding houses with high quality shared spaces, for a co-living lifestyle, potentially targeted to young and elder tenants
- moderately priced housing that is affordable to purchase for households earning up to $150,000 or 190% of the median income
- rental properties with long term tenures and optional extensions in place, including build-to-rent products
- student housing
- retirement housing
- rent-to-buy, where tenants are progressively eligible to buy the dwelling they are renting
- and housing that promotes innovation in other ways across type, tenure, construction methodology or other mechanisms that make it more attainable to a diversity of income groups.

In terms of dwelling typology, one of the key consideration in the preparation of the Concept Proposal was to provide a variety of products and building types. The Concept Proposal includes and can accommodate two-level terrace-type apartments on the ground floor of many of the residential buildings. The four levels buildings in the concept could be designed as manor homes or “intermediate housing” – as seen in Europe – where two-level dwellings are superposed and have independent access and outdoor spaces, resulting in having some of the qualities of a stand-alone house while providing for a greater density.

As outlined before, the Concept Proposal provides numerous and a rich variety of opportunities for social interaction, whether it is in the private communal areas (lobbies, courtyards and rooftop terraces), or in the generous public spaces (park, plazas, streets with wide footpaths, through-site links), or in and around the active uses such as shops, offices, work spaces, smart-work hub, childcare centres, and flexible community spaces.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures. The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Statement of Compliance

The concept proposal is designed to provide a diverse range of urban forms, scales and characters. A range of smaller buildings on a series fine grain urban blocks will foster a wide range of architectural responses to avoid the uniformity and singular aesthetic of many current developments. The concept proposal is designed at the urban scale of a masterplan and the proposed buildings are not designed in detail. Statements of compliance in terms of Aesthetics will be provided for review as each site and building is developed in greater detail for approval. Design Quality Guidelines have been prepared and can be read in conjunction with these report. These Guidelines include the following principles:

Building Design and Articulation:

- Buildings should be designed to be sympathetic yet distinct to neighbouring buildings to create a diverse and interesting neighbourhood and to avoid the singular aesthetic of many current developments.
- The aesthetics and composition of the proposed buildings are to be considered in relation to the surrounding buildings and context.
- Encourage a range of architectural solutions and building designs to create a diverse and interesting neighbourhood with careful consideration of massing, materials, fenestration and building scale.
- Provide a range of building heights from 2 to 8 storeys to avoid uniformity, create a variety of urban scales across the development and to accommodate a range of housing typologies.
- Smaller sites should be created to encourage a wide range of smaller buildings and architectural responses.
- Buildings should be carefully articulated to reduce the perceived bulk of the building including the articulation of ground floor programs such as terrace-type housing, maisonettes, retail and commercial uses.
- Upper levels of the building should also be articulated such as setting back top floor apartments from the predominant facade and incorporating lift overruns and plant spaces within the design and consideration of landscaped roof terraces and associated structures.
- The design of balconies and windows should provide amenity and privacy to residents and be used to provide articulation to the modelling of facades through depth, pattern, shadow and scale.
- Buildings should be provided with external screening to balconies and windows to provide shading and privacy to residents and to further articulate the mass of the building.

Material Selection and Detailing:

- Successful urban environments are tactile as much as spatial. For Tallawong this involves the careful selection and integration of materials to create a range of buildings with their own distinctive character, scale and typology.
- The proposed materials should be utilised for structure cladding and screening.
- Materials should be robust to create a long lasting and low maintenance environment with a preference for natural materials such as clay and terracotta bricks, off-form concrete, stone and metal screening.
- Material should be selected with an understanding of the effects of weathering to ensure a high quality finish that endures for the life of the building.

- Materials should be selected for their low embodied energy and potential for future re-use or recycling.
- Materials should not be highly reflective to avoid glare and the transference of heat.
- The colours of materials should be those that are found naturally and sympathetic to the existing semi-rural and emerging character of the area.
- Materials to be selected to give a variety of visual and tactile social experiences in streets and public spaces.
- Street walls should be articulated through colour, texture and materiality to provide scale and street definition and pedestrian interest.

APPENDIX i

SAMPLE SITES TESTED FOR ADG COMPLIANCE

SAMPLE SITE SELECTION & METHOLOGOY

Sample Sites

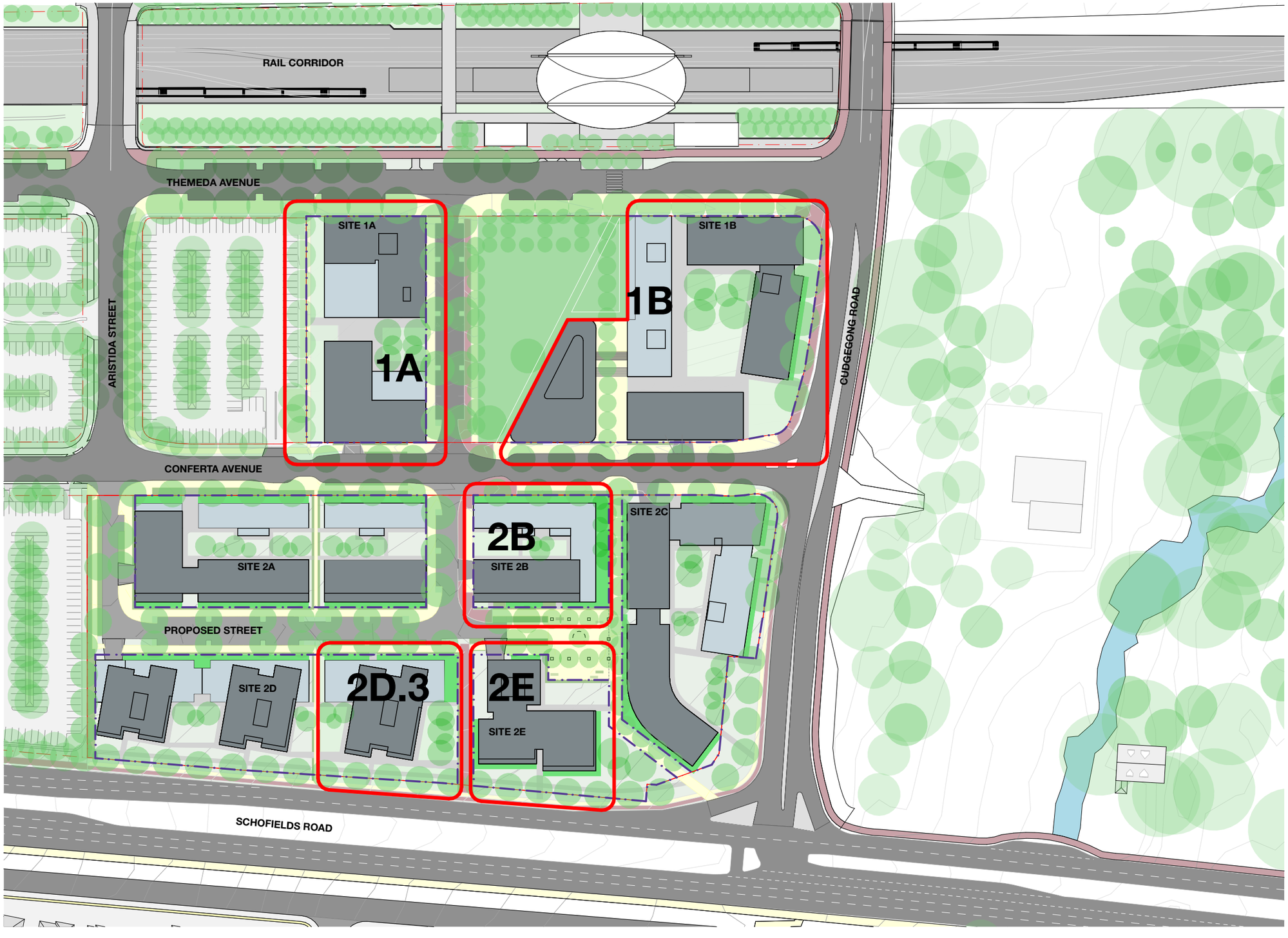
The following sites have been selected within the concept proposal as sample sites for additional ADG testing. The buildings on sites were developed with schematic floor plans with apartment plans and core locations on each level to test for ADG compliance for:

- solar and daylight access
- natural cross ventilation
- apartment size, layout and mix
- core configuration and egress.

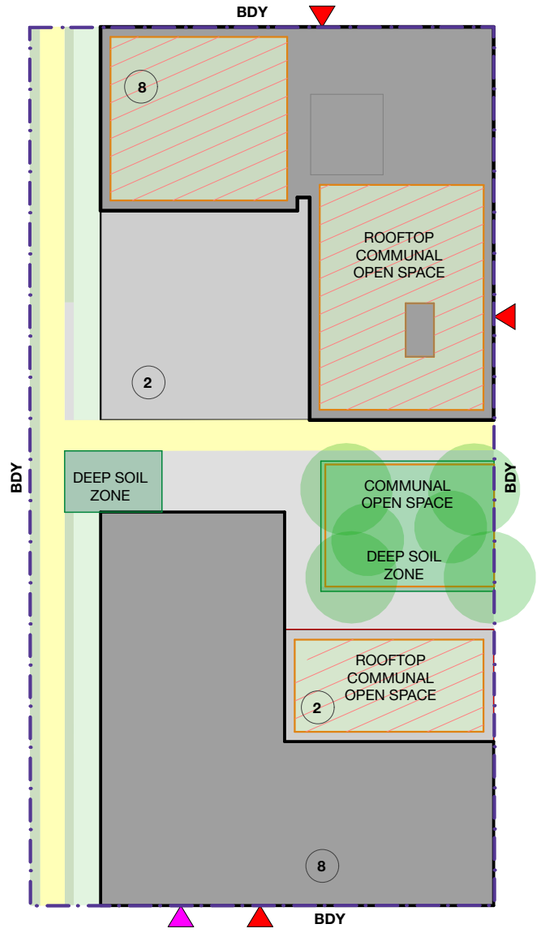
The compliance of these sample sites demonstrates that ADG compliance would be possible to achieve when each site or building is developed in greater detail for approval. It also demonstrates that the urban scale siting of the concept proposal has been carefully considered.

Site Selection Methodology

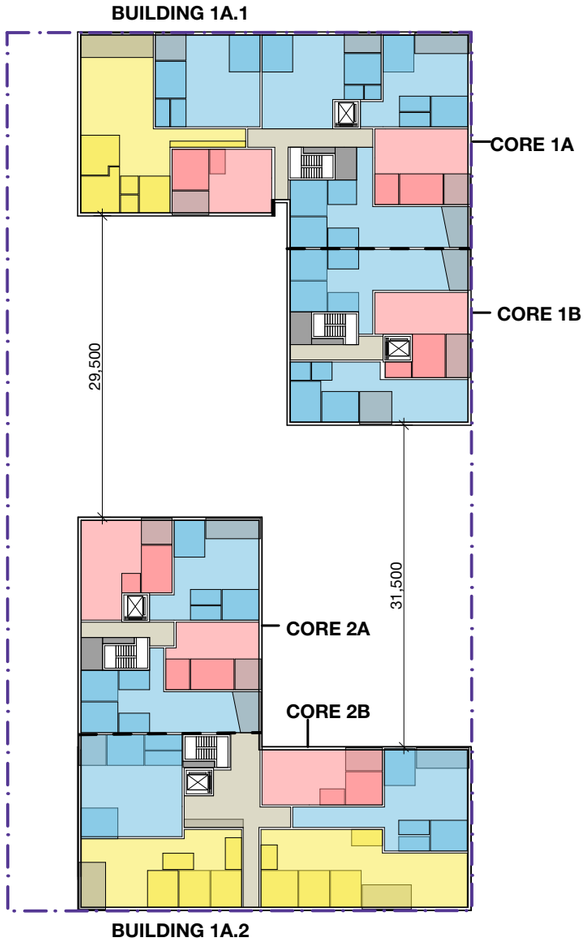
The following five sites were selected as sample sites to test ADG compliance. Sites 1A, 1B and 2E were selected as they are non typical sites. Sites 2B and the eastern block of 2D were selected as comparable to sites 2A and 2D.



SAMPLE SITE 1A - ADG COMPLIANCE



SITE PLAN



TYPICAL LEVEL

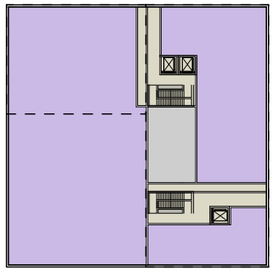
LEGEND

- DEEP SOIL
- GROUND FLOOR PRIVATE GARDEN
- COMMUNAL OPEN SPACE
- COMMUNAL OPEN SPACE RECEIVING >2H SUN (21ST JUNE 9AM-3PM)
- INDICATIVE BOUNDARY
- BLANK WALL
- CORE SEPARATION
- LOBBY ENTRANCE
- GROUND FLOOR APARTMENT ENTRANCE
- VEHICLE ENTRANCE

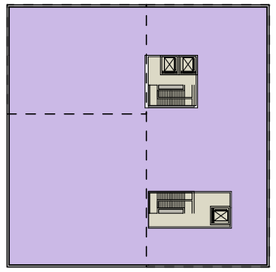
ADG COMPLIANCE TABLE

Objective	Design Criteria	Compliance	Comment
3D-1	**Communal Open Space** Communal open space has a minimum area equal to 25% of the site. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓	Site area: 3,879sqm Communal open space: 986sqm Communal open space: 25% of site area Area of communal open space receiving min 2h direct sunlight: 883sqm (23% of site area)
3E-1	**Deep Soil Zones** Deep soil zones are to meet the following minimum requirements: Site Area: greater than 1,500m^2 Min Dimension: 6m. Deep Soil Zone: 7% of site	✓	Site Area: 3,879sqm Deep soil: 273sqm Deep soil % of site area: 7%
3F-1	**Building Height** up to 12m (4 storeys) -between habitable rooms and Balconies: 12m -between habitable and non-habitable rooms: 9m -non-habitable rooms: 6m up to 25m (8 storeys) -between habitable rooms and Balconies: 18m -between habitable and non-habitable rooms: 12m -non-habitable rooms: 9m	✓	Refer to building separation plan in urban design report.
4A-1	**Solar and Daylight Access** Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	✓	Refer to compliance table on following page.
4B-3	**Natural Cross Ventilation** At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓	Refer to compliance table on following page.
4C-1	**Ceiling Heights** Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms: 2.7m Non-habitable: 2.4m	✓	Building heights are based on a 3.1m floor to floor allowance for residential levels (above second level)
4D-1	**Apartment Sizes** Apartments are required to have the following minimum internal areas: Studio: 35m^2 1 Bed: 50m^2 2 Bed: 70m^2 3 Bed: 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each	✓	Apartment sizes comply with the sizes given in the ADG.
4D-2	**Apartment Layout** Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	✓	Refer to floor plans on this page and the following page.
4E-1	**Balconies** All apartments are required to have primary balconies as follows: Studio: 4m^2 1 bed: 8m^2 (min 2m depth) 2 bed: 10m^2 (min 2m depth). 3+ bed: 12m^2 (min 2.4m depth) The minimum balcony depth to be counted as contributing to the balcony area is 1m	✓	Refer to floor plans on this page and the following page.
4F-1	**Circulation Core** The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	✓	Apartments off circulation core: core 1a = 7 core 1b = 3 core 2a = 4 core 2b = 5 Apartments sharing single lift core 1a = 42 apts / 1 lift core 1b = 18 apts / 1 lift core 2a = 24 apts / 1 lift core 2b = 30 apts / 1 liftT
4K-1	**Range of Apartments** A range of apartment types and sizes is provided to cater for different household types now and into the future	✓	A range of apartments types and sizes have been provided.

SAMPLE SITE 1A - ADG COMPLIANCE



GROUND FLOOR



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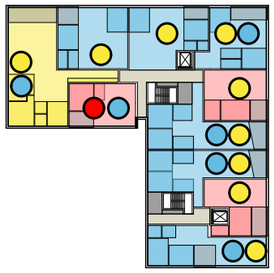

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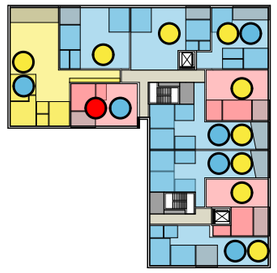

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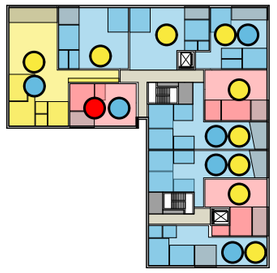

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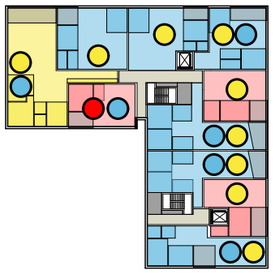

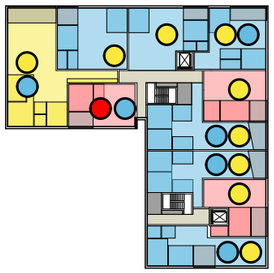

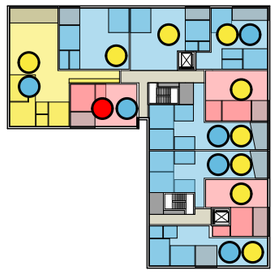

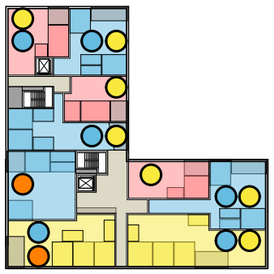

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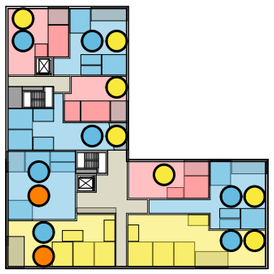

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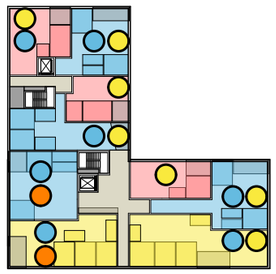
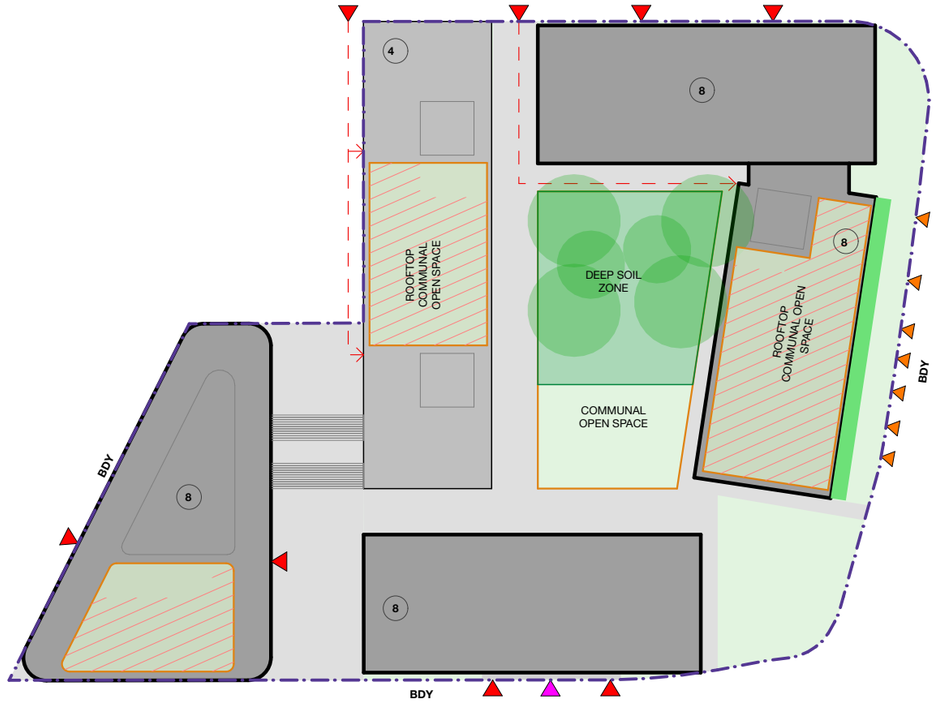


LEVEL 7

	APARTMENT MIX		
	NUMBER OF 1 BED APARTMENTS	36	31.5%
	NUMBER OF 2 BED APARTMENTS	60	52.6%
	NUMBER OF 3 BED APARTMENTS	18	15.8%
	TOTAL NUMBER OF APARTMENTS	114	
	LOBBY		
	NON RESIDENTAIL		
	SERVICING		

	SOLAR AND DAYLIGHT ACCESS			COMPLIES
	NUMBER OF APARTMENTS RECEIVING TWO OR MORE HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	92	80.7%	YES
	NUMBER OF APARTMENTS RECEIVING LESS THAN TWO HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	16	14%	YES
	NUMBER OF APARTMENTS RECEIVING NO DIRECT SUNLIGHT TWO BETWEEN 9AM AND 3PM, JUNE 21	6	5.3%	YES
	NATURAL CROSS VENTILATION			
	NUMBER OF APARTMENTS THAT ARE NATURALLY CROSS VENTILATED	72	63.2%	YES

SAMPLE SITE 1B - ADG COMPLIANCE



SITE PLAN

LEGEND

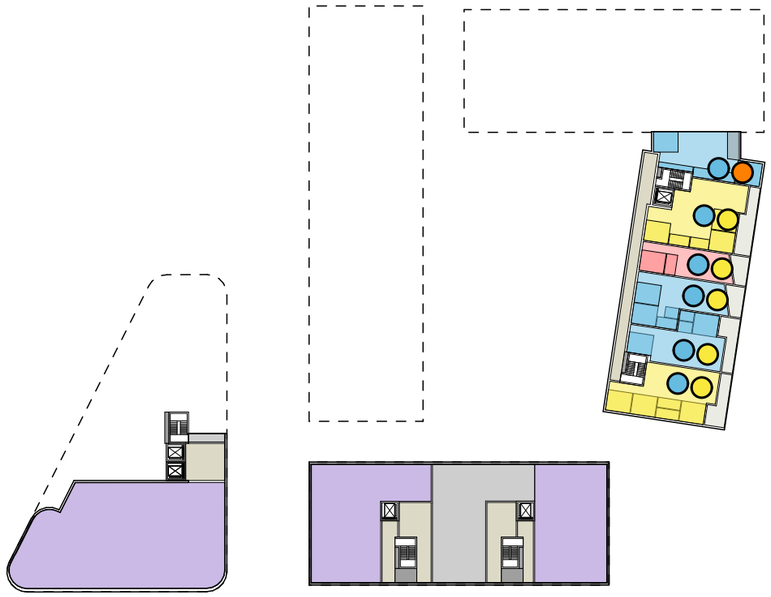
- DEEP SOIL
- GROUND FLOOR PRIVATE GARDEN
- COMMUNAL OPEN SPACE
- COMMUNAL OPEN SPACE RECEIVING >2H SUN (21ST JUNE 9AM-3PM)
- INDICATIVE BOUNDARY
- BLANK WALL
- CORE SEPARATION
- LOBBY ENTRANCE
- GROUND FLOOR APARTMENT ENTRANCE
- VEHICLE ENTRANCE

TYPICAL PLAN

ADG COMPLIANCE TABLE

Objective	Design Criteria	Compliance	Comment
3D-1	**Communal Open Space** Communal open space has a minimum area equal to 25% of the site. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓	Site area: 7,443sqm Communal open space: 1,994sqm Communal open space: 26.8% of site area Area of communal open space receiving min 2h direct sunlight: 1063sqm (14.3% of site area)
3E-1	**Deep Soil Zones** Deep soil zones are to meet the following minimum requirements: Site Area: greater than 1,500m² Min Dimension: 6m. Deep Soil Zone: 7% of site	✓	Site area: 7,994sqm Deep soil: 523sqm Deep soil % of site area: 7%
3F-1	**Building Height** up to 12m (4 storeys) -between habitable rooms and Balconies: 12m -between habitable and non-habitable rooms: 9m -non-habitable rooms: 6m up to 25m (8 storeys) -between habitable rooms and Balconies: 18m -between habitable and non-habitable rooms: 12m -non-habitable rooms: 9m	✓	Refer to building separation plan in urban design report.
4A-1	**Solar and Daylight Access** Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	✓	Refer to compliance table on following page.
4B-3	**Natural Cross Ventilation** At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓	Refer to compliance table on following page.
4C-1	**Ceiling Heights** Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms: 2.7m Non-habitable: 2.4m	✓	Building heights are based on a 3.1m floor to floor allowance for residential levels (above second level)
4D-1	**Apartment Sizes** Apartments are required to have the following minimum internal areas: Studio: 35m². 1 Bed: 50m². 2 Bed: 70m². 3 Bed: 90m² The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each	✓	Apartment sizes comply with the sizes given in the ADG.
4D-2	**Apartment Layout** Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	✓	Refer to floor plans on this page and the following pages.
4E-1	**Balconies** All apartments are required to have primary balconies as follows: Studio: 4m² 1 bed: 8m² (min 2m depth) 2 bed: 10m² (min 2m depth). 3+ bed: 12m² (min 2.4m depth) The minimum balcony depth to be counted as contributing to the balcony area is 1m	✓	Refer to floor plans on this page and the following pages.
4F-1	**Circulation Core** The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	✓ (with minor non-compliance)	Apartments off circulation core: apts off circulation core: core 1a = 9* core 2a = 4 core 2b = 5 core 3a = 4 core 3b = 5 core 3c = 5 core 4a = 4 core 4b = 4 Apartments sharing single lift core 1a = 54 apts / 2 lift = 30 core 2a = 8 apts / 1 lift = 8 core 2b = 10 apts / 1 lift = 10 core 3a = 28 apts / 1 lift = 28 core 3b = 36 apts / 1 lift = 36 core 3c = 40 apts / 1 lift = 40 core 4a = 36 apts / 1 lift = 36 core 4b = 36 apts / 1 lift = 36
4K-1	**Range of Apartments** A range of apartment types and sizes is provided to cater for different household types now and into the future	✓	A range of apartments types and sizes have been provided.

SAMPLE SITE 1B - ADG COMPLIANCE



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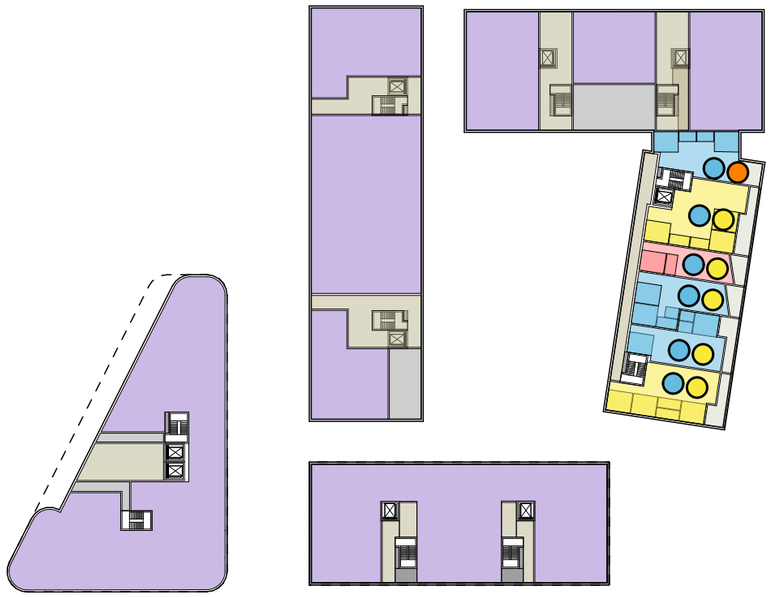
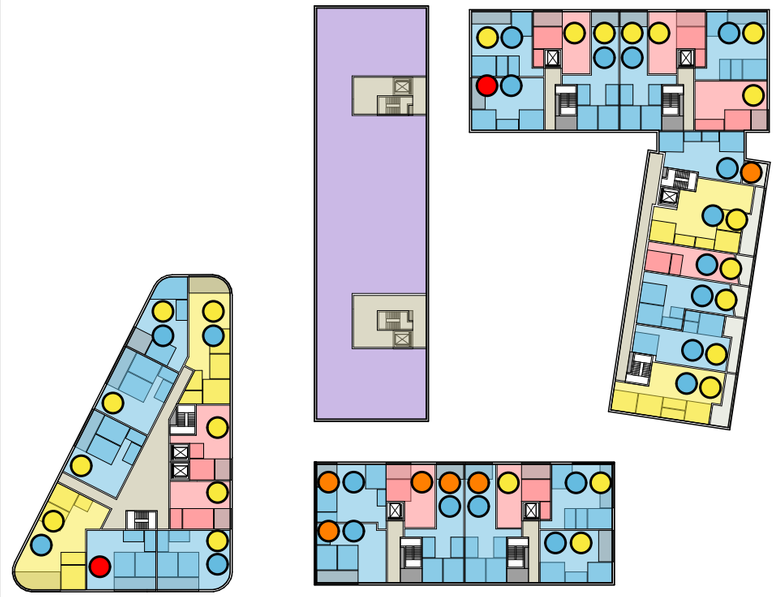
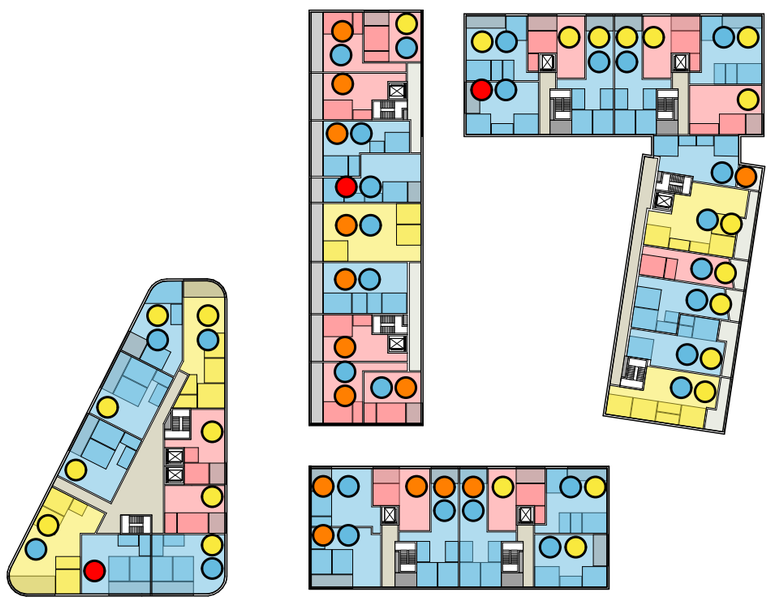


GROUND FLOOR



LEVEL 1



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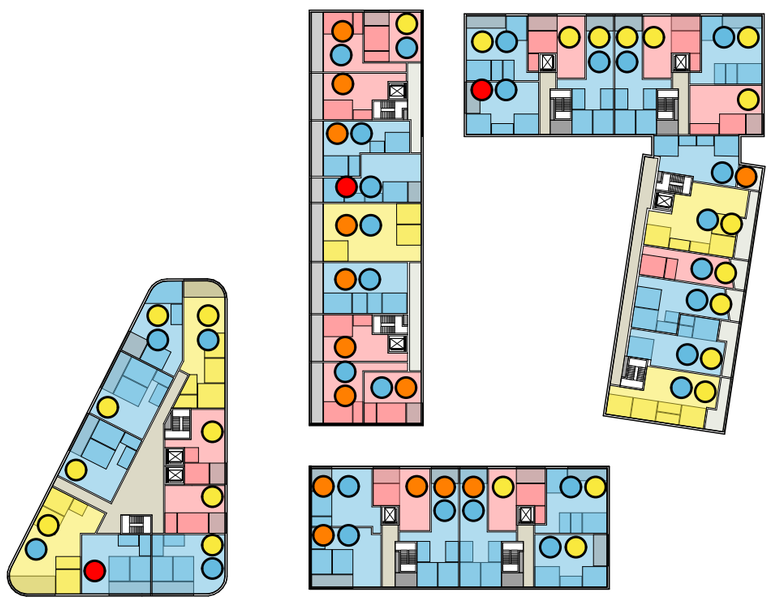

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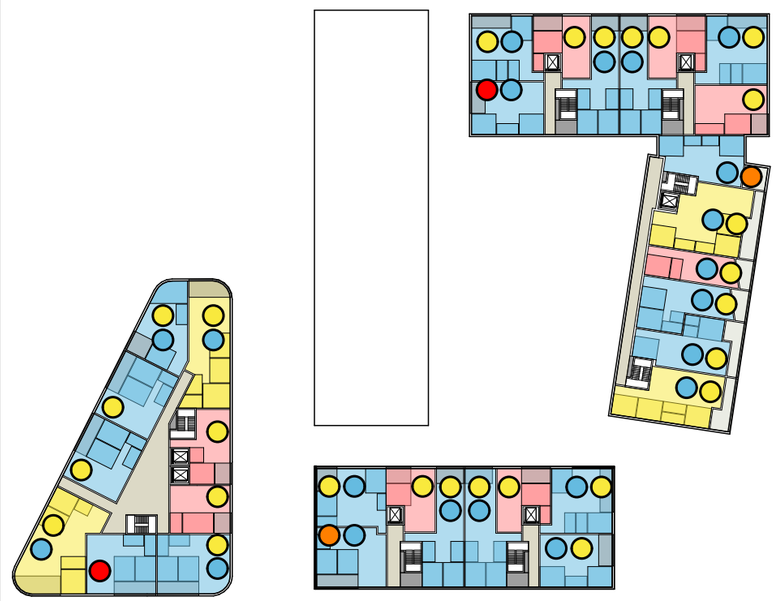
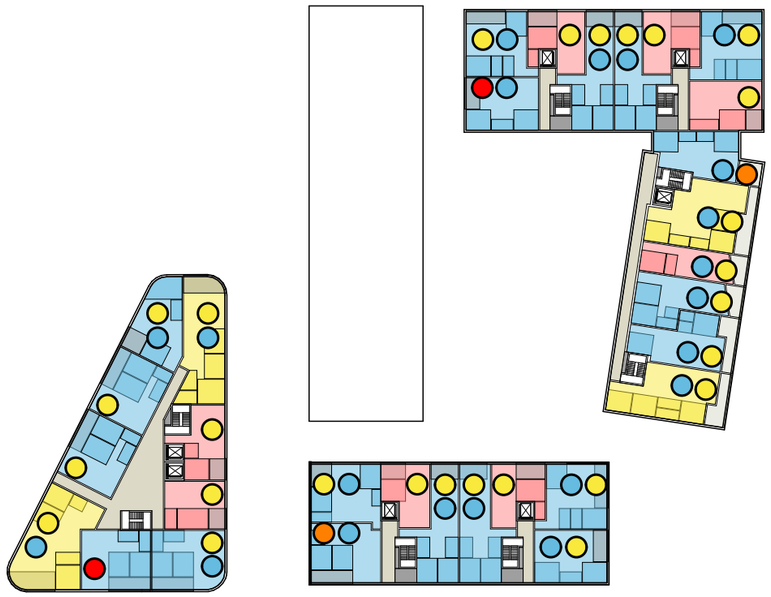
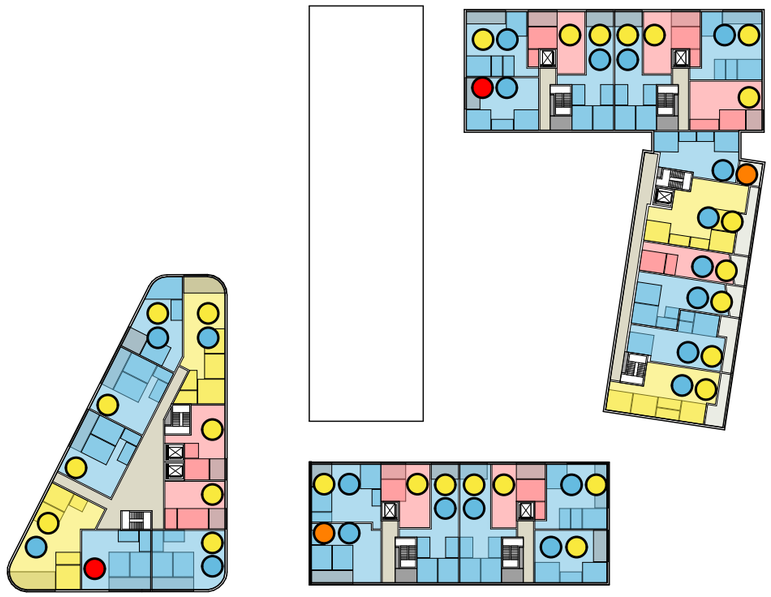


LEVEL 4

SAMPLE SITE 1B - ADG COMPLIANCE



LEVEL 5



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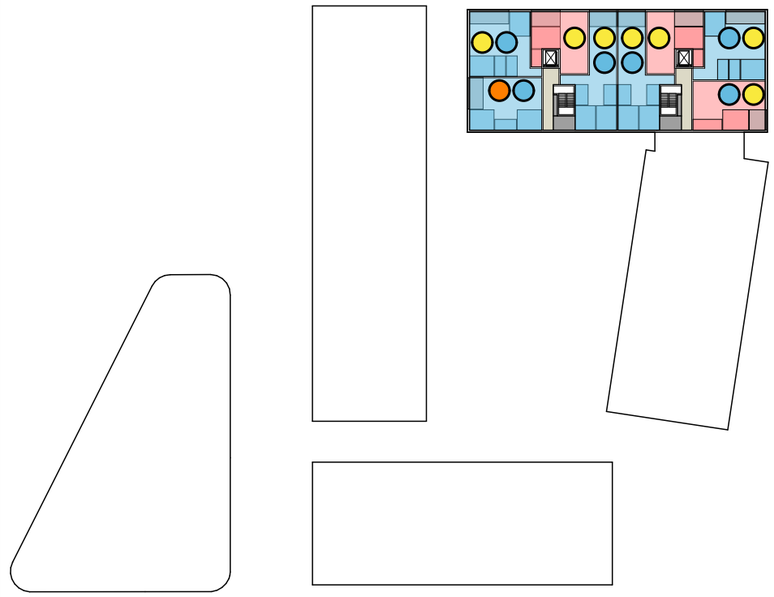
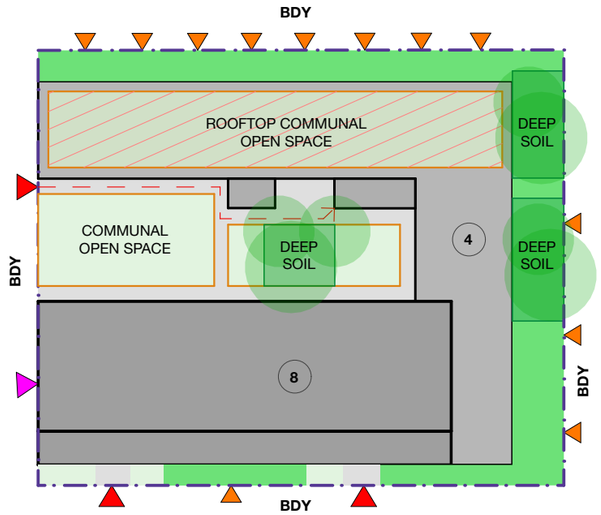


LEVEL 7

	APARTMENT MIX		
	NUMBER OF 1 BED APARTMENTS	65	28.7%
	NUMBER OF 2 BED APARTMENTS	131	57.9%
	NUMBER OF 3 BED APARTMENTS	30	13.3%
	TOTAL NUMBER OF APARTMENTS	226	
	LOBBY		
	NON RESIDENTIAL		
	SERVICING		

	SOLAR AND DAYLIGHT ACCESS			COMPLIES
	NUMBER OF APARTMENTS RECEIVING TWO OR MORE HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	169	74.8%	YES
	NUMBER OF APARTMENTS RECEIVING LESS THAN TWO HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	44	19.6%	YES
	NUMBER OF APARTMENTS RECEIVING NO DIRECT SUNLIGHT TWO BETWEEN 9AM AND 3PM, JUNE 21	13	5.7%	YES
	NATURAL CROSS VENTILATION			
	NUMBER OF APARTMENTS THAT ARE NATURALLY CROSS VENTILATED	160	70.8%	YES

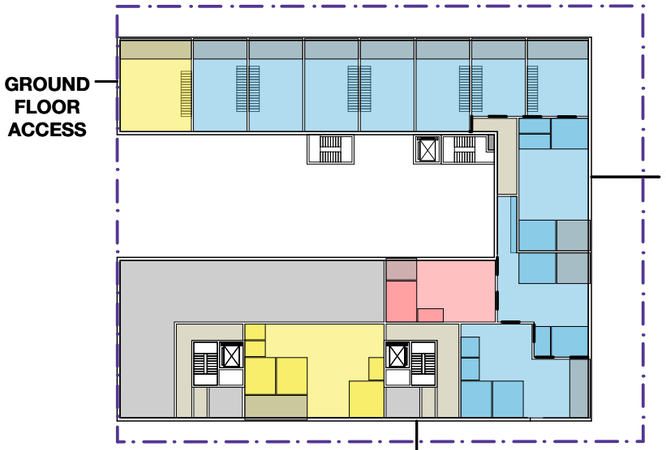
SAMPLE SITE 2B - ADG COMPLIANCE



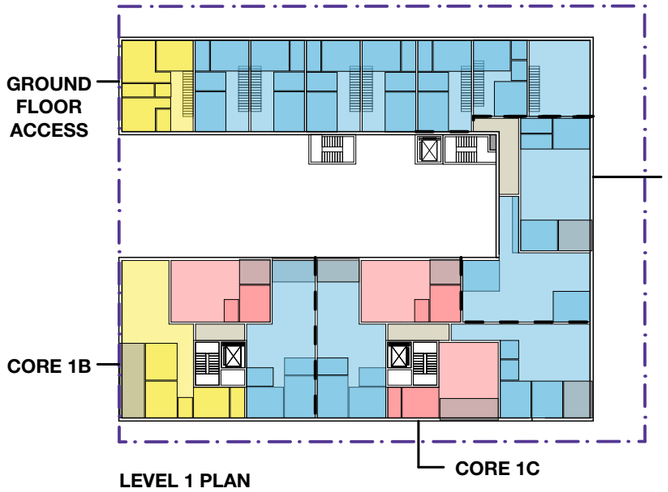
SITE PLAN

LEGEND

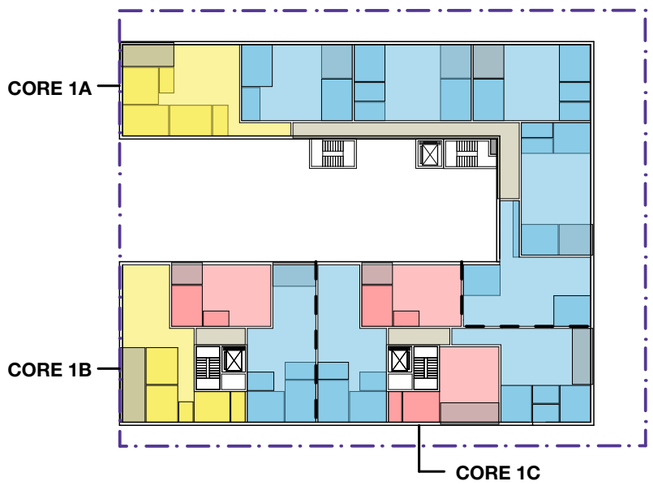
- DEEP SOIL
- GROUND FLOOR PRIVATE GARDEN
- COMMUNAL OPEN SPACE
- COMMUNAL OPEN SPACE RECEIVING >2H SUN (21ST JUNE 9AM-3PM)
- INDICATIVE BOUNDARY
- BLANK WALL
- CORE SEPARATION
- LOBBY ENTRANCE
- GROUND FLOOR APARTMENT ENTRANCE
- VEHICLE ENTRANCE



GROUND FLOOR PLAN



LEVEL 1 PLAN

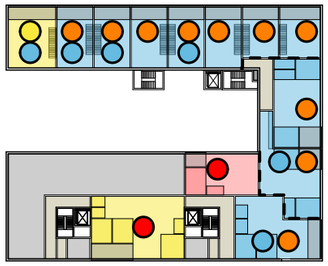


TYPICAL PLAN MID-LEVEL PLAN

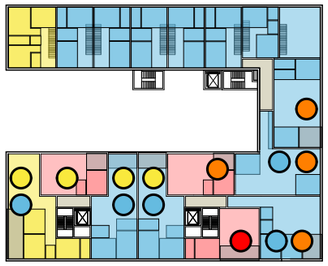
ADG COMPLIANCE TABLE

Objective	Design Criteria	Compliance	Comment
3D-1	**Communal Open Space** Communal open space has a minimum area equal to 25% of the site. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓	Site area: 2,189sqm Communal open space: 590sqm Communal open space: 27% of site area Area of communal open space receiving min 2h direct sunlight: 334sqm (15% of site area)
3E-1	**Deep Soil Zones** Deep soil zones are to meet the following minimum requirements: Site Area: greater than 1,500m^2 Min Dimension: 6m. Deep Soil Zone: 7% of site	✓	Site area: 2,189sqm Deep soil: 154sqm Deep soil % of site area: 7%
3F-1	**Building Height** up to 12m (4 storeys) -between habitable rooms and Balconies: 12m -between habitable and non-habitable rooms: 9m -non-habitable rooms: 6m up to 25m (8 storeys) -between habitable rooms and Balconies: 18m -between habitable and non-habitable rooms: 12m -non-habitable rooms: 9m	✓	Refer to building separation plan in urban design report.
4A-1	**Solar and Daylight Access** Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	✓	Refer to compliance table on following page.
4B-3	**Natural Cross Ventilation** At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓	Refer to compliance table on following page.
4C-1	**Ceiling Heights** Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms: 2.7m Non-habitable: 2.4m	✓	Building heights are based on a 3.1m floor to floor allowance for residential levels (above second level)
4D-1	**Apartment Sizes** Apartments are required to have the following minimum internal areas: Studio: 35m^2. 1 Bed: 50m^2. 2 Bed: 70m^2. 3 Bed: 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each	✓	Apartment sizes comply with the sizes given in the ADG.
4D-2	**Apartment Layout** Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	✓	Refer to floor plans on this page and the following page.
4E-1	**Balconies** All apartments are required to have primary balconies as follows: Studio: 4m^2 1 bed: 8m^2 (min 2m depth) 2 bed: 10m^2 (min 2m depth). 3+ bed: 12m^2 (min 2.4m depth) The minimum balcony depth to be counted as contributing to the balcony area is 1m	✓	Refer to floor plans on this page and the following page.
4F-1	**Circulation Core** The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	✓	Apartments off circulation core: apts off circulation core: core 1a = 6 core 1b = 7 Apartments sharing single lift core 1a = 16 apts / 1 lift core 1b = 22 apts / 1 lift core 1c = 28 apts / 1 lift
4K-1	**Range of Apartments** A range of apartment types and sizes is provided to cater for different household types now and into the future	✓	A range of apartments types and sizes have been provided.

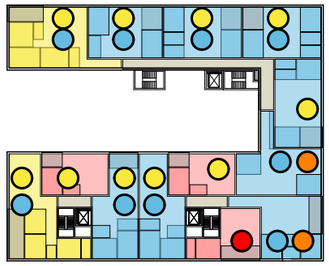
SAMPLE SITE 2B - ADG COMPLIANCE



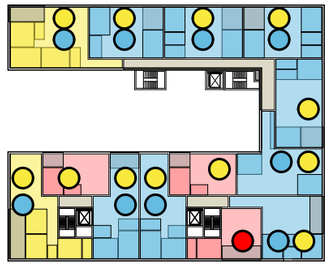
GROUND FLOOR



LEVEL 1



LEVEL 2



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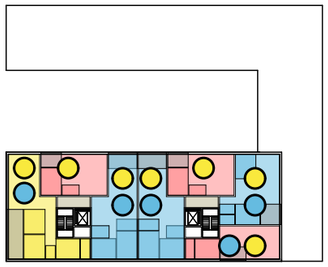

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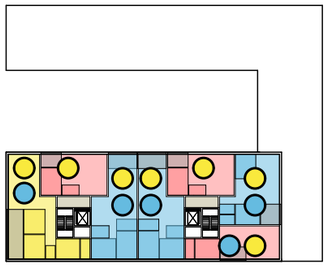

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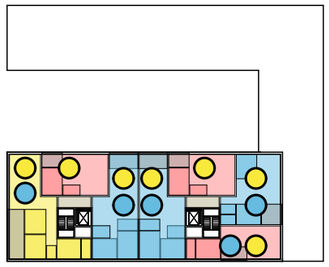
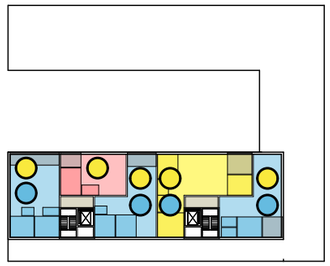


LEVEL 6



LEVEL 7

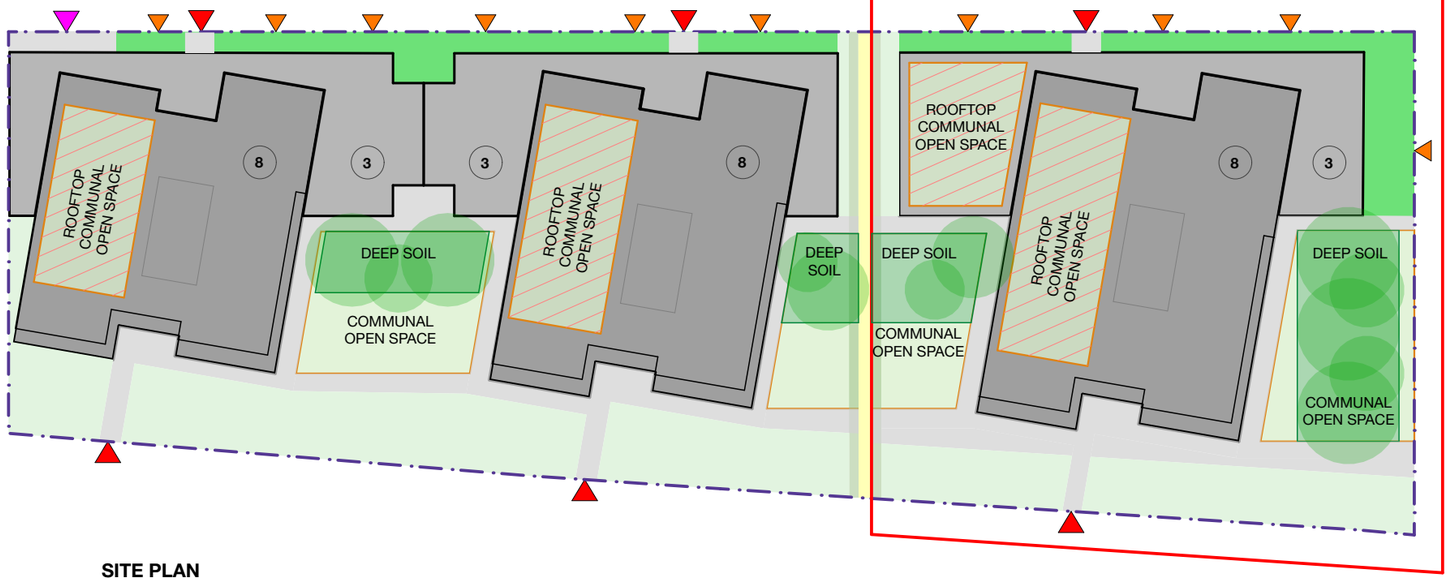
	APARTMENT MIX		
	NUMBER OF 1 BED APARTMENTS	20	27.0%
	NUMBER OF 2 BED APARTMENTS	43	58.1%
	NUMBER OF 3 BED APARTMENTS	11	14.8%
	TOTAL NUMBER OF APARTMENTS	74	
	NON RESIDENTAIL		
	SERVICING		

	SOLAR AND DAYLIGHT ACCESS			COMPLIES
	NUMBER OF APARTMENTS RECEIVING TWO OR MORE HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	53	71.6%	YES
	NUMBER OF APARTMENTS RECEIVING LESS THAN TWO HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	16	21.6%	YES
	NUMBER OF APARTMENTS RECEIVING NO DIRECT SUNLIGHT TWO BETWEEN 9AM AND 3PM, JUNE 21	5	6.7%	YES
	NATURAL CROSS VENTILATION			
	NUMBER OF APARTMENTS THAT ARE NATURALLY CROSS VENTILATED	48	64.9%	YES

SAMPLE SITE 2D.3 - ADG COMPLIANCE

SITE 2D

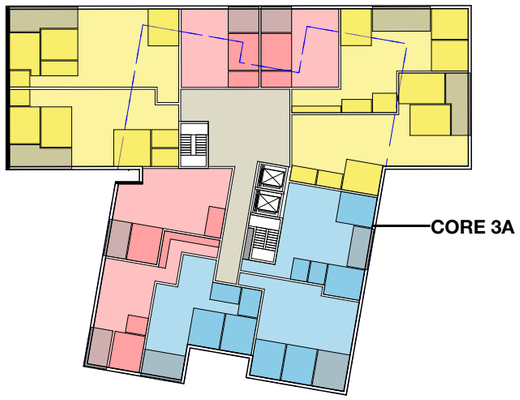
BUILDING 2D.3



SITE PLAN

LEGEND

- DEEP SOIL
- GROUND FLOOR PRIVATE GARDEN
- COMMUNAL OPEN SPACE
- COMMUNAL OPEN SPACE RECEIVING >2H SUN (21ST JUNE 9AM-3PM)
- INDICATIVE BOUNDARY
- BLANK WALL
- CORE SEPARATION
- LOBBY ENTRANCE
- GROUND FLOOR APARTMENT ENTRANCE
- VEHICLE ENTRANCE



BUILDING 2D.3 TYPICAL MID-LEVEL PLAN

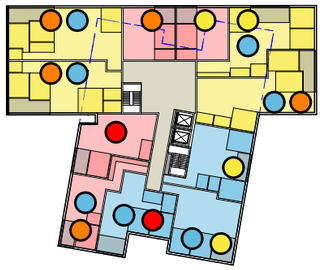
BUILDING 2D.3 TYPICAL UPPER LEVEL PLAN

ADG COMPLIANCE TABLE

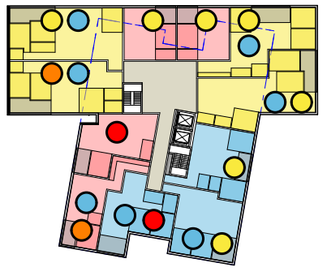
Objective	Design Criteria	Compliance	Comment
3D-1	**Communal Open Space** Communal open space has a minimum area equal to 25% of the site. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓	Site area: 6,114sqm Communal open space: 1,592sqm Communal open space: 26% of site area Area of communal open space receiving min 2h direct sunlight: 760sqm (13% of site area)
3E-1	**Deep Soil Zones** Deep soil zones are to meet the following minimum requirements: Site Area: greater than 1,500m^2 Min Dimension: 6m. Deep Soil Zone: 7% of site	✓	Site area: 6,114sqm Deep soil: 520qm Deep soil % of site area: 8.5%
3F-1	**Building Height** up to 12m (4 storeys) -between habitable rooms and Balconies: 12m -between habitable and non-habitable rooms: 9m -non-habitable rooms: 6m up to 25m (8 storeys) -between habitable rooms and Balconies: 18m -between habitable and non-habitable rooms: 12m -non-habitable rooms: 9m	✓	Refer to building separation plan in urban design report.
4A-1	**Solar and Daylight Access** Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	✓	Refer to compliance table on following page.
4B-3	**Natural Cross Ventilation** At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓	Refer to compliance table on following page.
4C-1	**Ceiling Heights** Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms: 2.7m Non-habitable: 2.4m	✓	Building heights are based on a 3.1m floor to floor allowance for residential levels (above second level)
4D-1	**Apartment Sizes** Apartments are required to have the following minimum internal areas: Studio: 35m^2 1 Bed: 50m^2 2 Bed: 70m^2 3 Bed: 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each	✓	Apartment sizes comply with the sizes given in the ADG.
4D-2	**Apartment Layout** Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	✓	Refer to floor plans on this page and the following page.
4E-1	**Balconies** All apartments are required to have primary balconies as follows: Studio: 4m^2 1 bed: 8m^2 (min 2m depth) 2 bed: 10m^2 (min 2m depth). 3+ bed: 12m^2 (min 2.4m depth) The minimum balcony depth to be counted as contributing to the balcony area is 1m	✓	Refer to floor plans on this page and the following page.
4F-1	**Circulation Core** The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	✓ (with minor non-compliance)	Apartments off circulation core: apts off circulation core: core 3a = 9-11 Apartments sharing single lift core 3a = 75 apts / 2 lifts = 38
4K-1	**Range of Apartments** A range of apartment types and sizes is provided to cater for different household types now and into the future	✓	A range of apartments types and sizes have been provided.

SAMPLE SITE 2D.3 - ADG COMPLIANCE

GROUND FLOOR



LEVEL 1



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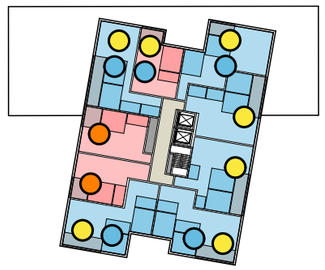

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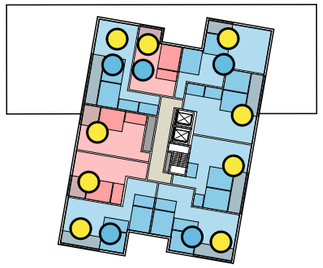
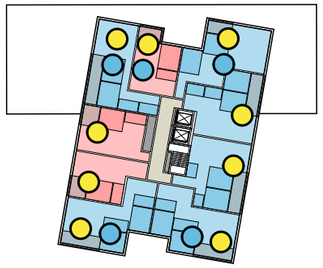
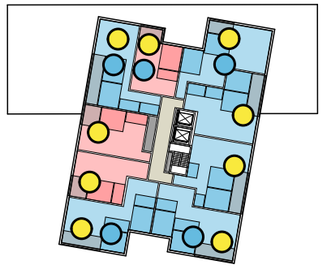


LEVEL 4



LEVEL 5



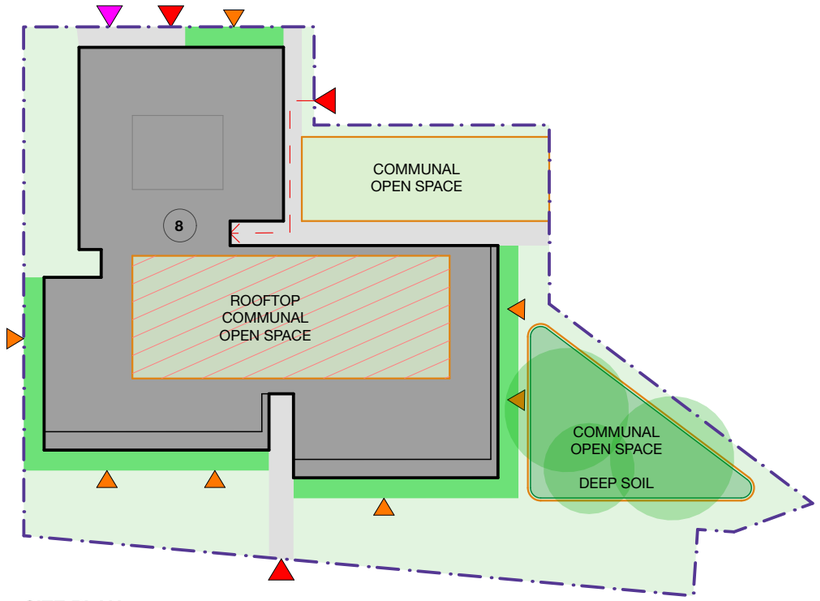
LEVEL 6

LEVEL 7

	APARTMENT MIX		
	NUMBER OF 1 BED APARTMENTS	23	30.1%
	NUMBER OF 2 BED APARTMENTS	39	52%
	NUMBER OF 3 BED APARTMENTS	13	17.3%
	TOTAL NUMBER OF APARTMENTS	75	
	NON RESIDENTAIL		
	SERVICING		

	SOLAR AND DAYLIGHT ACCESS			COMPLIES
	NUMBER OF APARTMENTS RECEIVING TWO OR MORE HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	55	73.3%	YES
	NUMBER OF APARTMENTS RECEIVING LESS THAN TWO HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	14	18.6%	YES
	NUMBER OF APARTMENTS RECEIVING NO DIRECT SUNLIGHT TWO BETWEEN 9AM AND 3PM, JUNE 21	6	8%	YES
	NATURAL CROSS VENTILATION			
	NUMBER OF APARTMENTS THAT ARE NATURALLY CROSS VENTILATED	46	61.3%	YES

SAMPLE SITE 2E - ADG COMPLIANCE



SITE PLAN

LEGEND

- DEEP SOIL
- GROUND FLOOR PRIVATE GARDEN
- COMMUNAL OPEN SPACE
- COMMUNAL OPEN SPACE RECEIVING >2H SUN (21ST JUNE 9AM-3PM)
- INDICATIVE BOUNDARY
- BLANK WALL
- CORE SEPARATION
- LOBBY ENTRANCE
- GROUND FLOOR APARTMENT ENTRANCE
- VEHICLE ENTRANCE

TYPICAL GROUND FLOOR PLAN

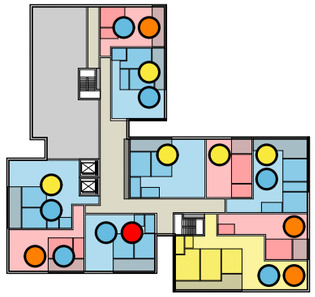
BUILDING 2E.1

TYPICAL UPPER FLOOR PLAN

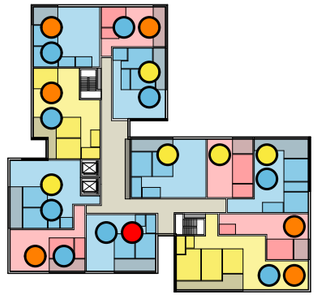
ADG COMPLIANCE TABLE

Objective	Design Criteria	Compliance	Comment
3D-1	**Communal Open Space** Communal open space has a minimum area equal to 25% of the site. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter)	✓	Site area: 2,849sqm Communal open space: 792sqm Communal open space: 27% of site area Area of communal open space receiving min 2h direct sunlight: 379sqm (13% of site area)
3E-1	**Deep Soil Zones** Deep soil zones are to meet the following minimum requirements: Site Area: greater than 1,500m^2 Min Dimension: 6m. Deep Soil Zone: 7% of site	✓	Site area: 2,849sqm Deep soil: 220sqm Deep soil % of site area: 7.7%
3F-1	**Building Height** up to 12m (4 storeys) -between habitable rooms and Balconies: 12m -between habitable and non-habitable rooms: 9m -non-habitable rooms: 6m up to 25m (8 storeys) -between habitable rooms and Balconies: 18m -between habitable and non-habitable rooms: 12m -non-habitable rooms: 9m	✓	Refer to building separation plan in urban design report.
4A-1	**Solar and Daylight Access** Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	✓	Refer to compliance table on following page.
4B-3	**Natural Cross Ventilation** At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	✓	Refer to compliance table on following page.
4C-1	**Ceiling Heights** Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable rooms: 2.7m Non-habitable: 2.4m	✓	Building heights are based on a 3.1m floor to floor allowance for residential levels (above second level)
4D-1	**Apartment Sizes** Apartments are required to have the following minimum internal areas: Studio: 35m^2. 1 Bed: 50m^2. 2 Bed: 70m^2. 3 Bed: 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each	✓	Apartment sizes comply with the sizes given in the ADG.
4D-2	**Apartment Layout** Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	✓	Refer to floor plans on this page and the following page.
4E-1	**Balconies** All apartments are required to have primary balconies as follows: Studio: 4m^2 1 bed: 8m^2 (min 2m depth) 2 bed: 10m^2 (min 2m depth). 3+ bed: 12m^2 (min 2.4m depth) The minimum balcony depth to be counted as contributing to the balcony area is 1m	✓	Refer to floor plans on this page and the following page.
4F-1	**Circulation Core** The maximum number of apartments off a circulation core on a single level is eight For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	✓ (with minor non-compliance)	Apartments off circulation core: apts off circulation core: core 1 = 12 Apartments sharing single lift core 1a = 94 apts / 2 lifts = 47
4K-1	**Range of Apartments** A range of apartment types and sizes is provided to cater for different household types now and into the future	✓	A range of apartments types and sizes have been provided.

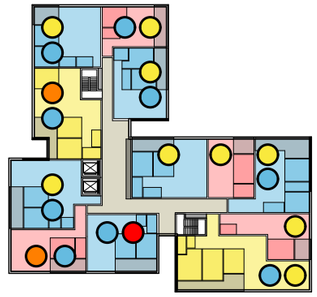
SAMPLE SITE 2E - ADG COMPLIANCE



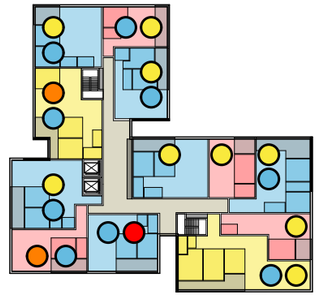
GROUND FLOOR



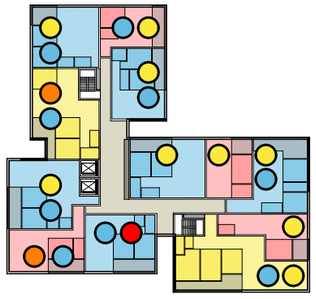
LEVEL 1



LEVEL 2



LEVEL 3



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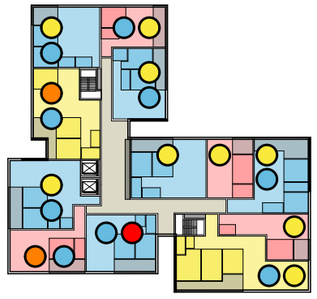
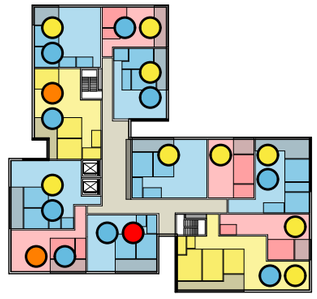
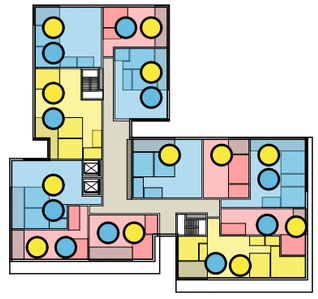


LEVEL 5



LEVEL 6



LEVEL 7

	APARTMENT MIX		
	NUMBER OF 1 BED APARTMENTS	33	35%
	NUMBER OF 2 BED APARTMENTS	46	49%
	NUMBER OF 3 BED APARTMENTS	15	16%
	TOTAL NUMBER OF APARTMENTS	94	
	NON RESIDENTAIL		
	SERVICING		

	SOLAR AND DAYLIGHT ACCESS			COMPLIES
	NUMBER OF APARTMENTS RECEIVING TWO OR MORE HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	67	71.3%	YES
	NUMBER OF APARTMENTS RECEIVING LESS THAN TWO HOURS OF SUNLIGHT BETWEEN 9AM AND 3PM, JUNE 21	19	20.2%	YES
	NUMBER OF APARTMENTS RECEIVING NO DIRECT SUNLIGHT TWO BETWEEN 9AM AND 3PM, JUNE 21	8	8.5%	YES
	NATURAL CROSS VENTILATION			
	NUMBER OF APARTMENTS THAT ARE NATURALLY CROSS VENTILATED	70	74.5%	YES