

Hill Thalís A+UP

Glenfield Affordable Housing Project – Proposed Lot 12 SSDA Design Report

Prepared for DPIE

SSDA Issue – April 1st 2026

Hill Thalís Architecture + Urban Projects

Committed to architecture and
the city in the public interest.



Visualisation by Doug & Wolf (2026)

Acknowledgement of Country

The design team acknowledges the traditional custodians of the land, seas and skies on which we live and work, and that Cabrogal land was never ceded. We pay respect to Elders and knowledge holders, and seek to honour and learn from the rich, continuous culture and practice that is generously shared with us.

This scene is believed to depict an Indigenous family camping on the grounds of Glenfield House on the Throsby Estate. Records indicate that during the c.1816 conflicts families from several clans, including the Cabrogal, were able to take refuge on Throsby's Glenfield estate. This included Gogy and Nighgingull with their families, Budbury (son of Pemulwuy), Young Bundle and others.



Earle, A. (1826). *'A native family of New South Wales sitting down on an English settlers farm'*.

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Consultant Team

Hill Thalís acknowledges the consultant team, who are integral to the development of this proposed building.

WSP
Connecting with Country
TTW Engineering
Civil Engineering, Structural Engineering
MRA Consulting
Waste
SCT Consulting
Traffic
Sturt Noble
Landscape Architects
Credwell
BCA and Access
MBM
Quantity Surveyor
JHA Consulting
ESD, Electrical, Mechanical, Hydraulic, Fire, Acoustics, Vertical Transport
Peterson Bushfire
Bushfire
GLN Planning
Planner

Section 1

Introduction

As part of the NSW Government's commitment to increasing the supply of affordable housing, Landcom has a commitment to deliver affordable housing on all projects – 10% in metro locations and 20% in regional locations. As part of this commitment, Landcom intend to deliver 120 affordable housing dwellings within the north east of Landcom's Glenfield Release Area (Glenfield West Precinct).

Section 1

Introduction

Description of the Project

The development is located on proposed Lot 12 in pre-allocated plan number (PPN) Deposited Plan (DP) 1319177 which sits within Lot 2 in DP 12293342, Roy Watts Road, Glenfield.

This application seeks consent for an eight storey in-fill affordable housing development consisting of:

- Site preparation and excavation works;
- Construction of an 8 storey residential flat building, accommodating:
 - 120 affordable housing units consisting of:
 - 52 x 1 bed units
 - 56 x 2 bed units
 - 12 x 3 bed units
 - Basement car park accommodating 61 spaces;
- Indoor and outdoor communal open space;
- Associated landscaping; and
- Connections to new lead-in infrastructure

The proposed development is being lodged with the Department of Planning, Housing and Infrastructure as State Significant Development pursuant to Schedule 1 Clause 26 of the State Environmental Planning Policy (Planning Systems) 2021.

Site Background

The Site is located within the Glenfield to Macarthur Urban Renewal Corridor and forms part of the Glenfield Precinct. The Glenfield Precinct was rezoned on 16 July 2021 by (the then) Department of Planning, Industry and Environment.

Landcom submitted a Concept Development Application (CDA) (Ref: 85/2025/DA-CD) over the north-eastern part of the Landcom Glenfield Project Area which included:

- Concept approval for the general arrangement of future roads, defining future development lots and land to be dedicated as open space and drainage, stormwater treatment works and the allocation of a maximum FSR to each future development lot.
- Stage 1 DA works, to be delivered in stages, including earthworks, construction and dedication of roads, installation of services, tree removal, treatment of stormwater, subdivision to create six development lots and 2 residue lots.

This CDA was approved by the Sydney Western City Planning Panel on 26 November 2025. It creates proposed Lot 12 which this Proposal is located on and allocates a maximum FSR to the Site along with building envelope controls.

Section 1

Relevant SEARS

5. Design Quality

Demonstrate how the development will achieve:

- design excellence in accordance with any applicable EPI provisions.
- good design in accordance with the seven objectives for good design in Better Placed.

Demonstrate that the development:

- where required by an EPI or concept approval, or where proposed, has been subject to a competitive design process, carried out in accordance with an endorsed brief and Design Excellence Strategy; or
- in all other instances, has been reviewed by the State Design Review Panel (SDRP) where required under the NSW SDRP: Guidelines for
- Project Teams.

Recommendations of the jury and Design Integrity Panel (where a competitive design process has been held) or the SDRP are to be addressed prior to lodgement.

Supporting Documentation

Design Review Report (where the project has been reviewed by the SDRP) – Refer Section 4

6. Built Form and Urban Design

Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality. Where relevant explain and illustrate the application of any bonuses under an EPI.

If relevant, provide an assessment of the development against:

- the design principles for seniors housing set out in Schedule 8 of State Environmental Planning Policy (Housing) 2021 (Housing SEPP) and the Seniors Housing Design Guide.
- the design principles for residential apartment development set out in Schedule 9 of the Housing SEPP and the Apartment Design Guide (ADG). This should include a table which demonstrates how each dwelling (including affordable dwellings) performs against the ADG design criteria.

If affordable housing is proposed, provide a floorplan outlining the gross floor area and dwellings that are provided as affordable housing.

Supporting Documentation

Architectural Drawings

Design Report

Survey Plan

Schedule of Materials and Finishes – Refer to Architectural Drawing Set

Design Verification Statement – Refer Section 2

7. Environmental Amenity

Assess amenity impacts on the surrounding locality, including solar access, visual privacy, view loss and view sharing, as well as wind, lighting and reflectivity impacts. A high level of environmental amenity for any surrounding residential or other sensitive land uses must be demonstrated.

Provide a solar access analysis of the overshadowing impacts of the development within the site, on surrounding properties and public spaces (during winter solstice) at hourly intervals between 9am and 3pm, comparing the proposed development, existing situation and where applicable, a development with no bonuses applied.

Supporting Documentation

Shadow Diagrams – Refer to Architectural Drawing Set

Chapter 4 Housing SEPP Assessment (ADG) – Refer Section 2 and 3

Section 1

Strategic Alignment

The Glenfield Affordable Housing proposal is aligned with a suite of Strategic Planning documents and directions. This diagram depicts the strategic framework, which sits within the Landcom Glenfield Release Area Planning Proposal (for further information, refer to associated documents prepared by GLN).

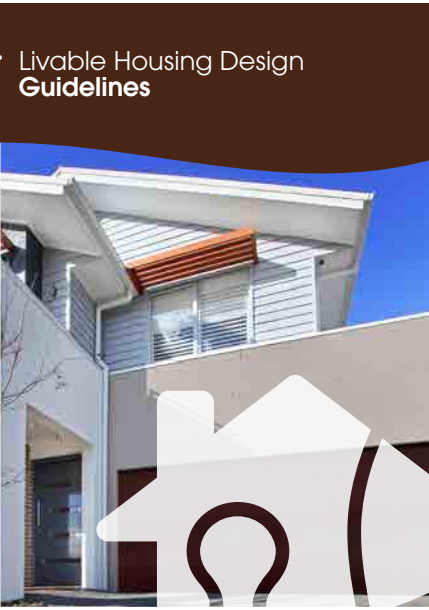
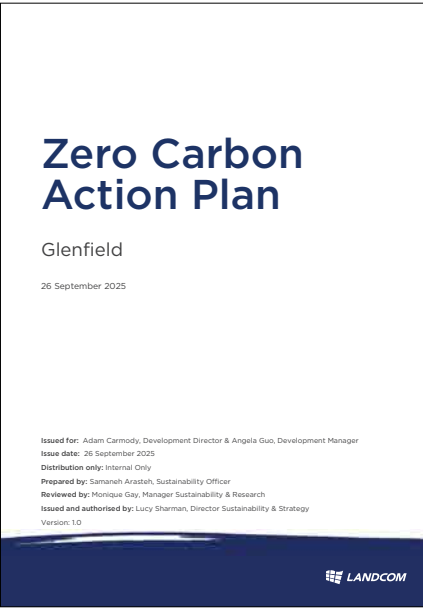
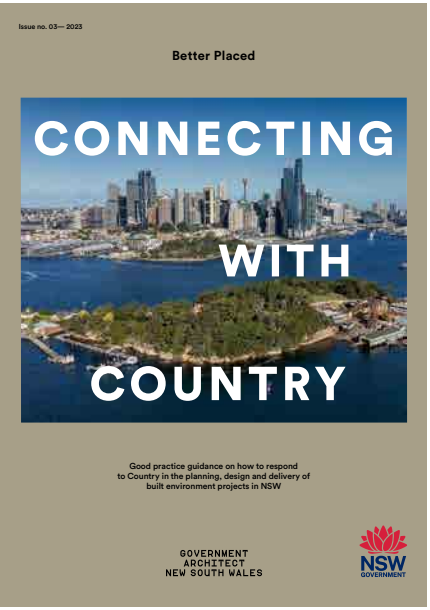
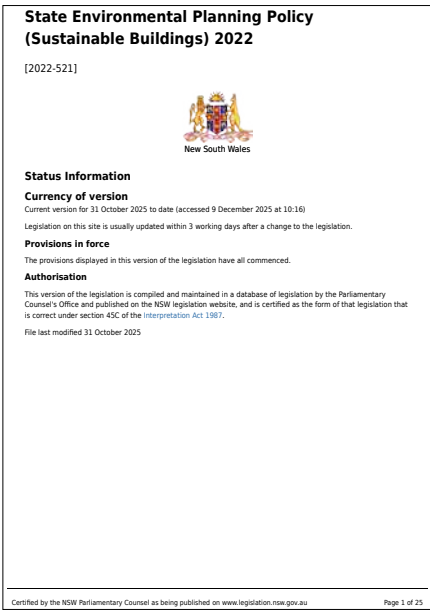


Responding to and implementing key policies for new projects.

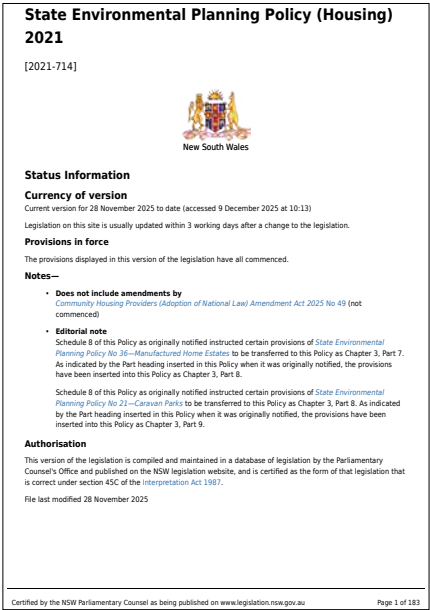


Apartment Design Guide
Tools for improving the design of residential apartment development

Setting conditions to support Design Quality, Housing Diversity and Equitability.



Anticipating and supporting Design Quality, Diversity and Sustainability in future development.



Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

Landcom is seeking approval for this project as State Significant Development from the Department of Planning, Housing and Infrastructure. The development is permissible with consent under Campbelltown LEP 2015 with the use of the building for affordable housing permitted under State Environmental Planning Policy (Housing) 2021.

This section sets out the response to the design principles detailed in Schedule 9 that are required to be considered under clause 147(1)(a) of the Housing SEPP.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

1 Context and neighbourhood character

- (1) Good design responds and contributes to its context, which is the key natural and built features of an area, their relationship and the character they create when combined and also includes social, economic, health and environmental conditions.*
- (2) Responding to context involves identifying the desirable elements of an area’s existing or future character.*
- (3) Well designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.*
- (4) Consideration of local context is important for all sites, including sites in the following areas—*
- (a) established areas,*
 - (b) areas undergoing change,*
 - (c) areas identified for change.*

Response

An ideally located site.

Located on Cabrogal Country, this 3,436m2 site sits within the new Landcom estate to be developed on the western side of Glenfield. The broader area encompasses the retained Hurlstone Park Agricultural School, other schools to the west and will ultimately be surrounded by a new mixed use neighbourhood connected by a new street system.

The major interchange of Glenfield Railway Station is located approximately 360 metres to the south. This provides direct access to Campbelltown to the south, Sydney airport and the city centre to the east, Liverpool and Parramatta to the north, and the future extension to Bradfield to the west. Local bus services connect to the eastern side of the station.

Identified as Lot 12 in pre-allocated plan number 1319177, the site is bounded to the south by the widened Roy Watts Road reservation, to the east by the new Water (Badu) Street, and to the west by a new lane. There will be a future 8-hectare creek corridor park one hundred metres to the north, and new parks opposite the station one block to the south.

New Glenfield Neighbourhood Context

The existing housing within Glenfield on the eastern side of the train line is generally comprised of low-density residential, with a row of shops along the street addressing the station. The area has schools and parks.

Similarly to the surrounding suburbs, the Glenfield Precinct is part of the ribbon development along the railway line between Liverpool and Campbelltown/Macarthur, with suburban subdivisions slowly supplanting remnant native vegetation.

The western side of the train line has long been reserved for special purpose schools and does not have a public street system. This affordable housing project will be the first built form development submitted for approval, being within the north-eastern corner that was approved for a Concept Development Application (85/2025/DA-CD) by the Western City Planning Panel on 26 November 2025. The balance of the larger 108-hectare site, excluding the existing schools, is within the Planning Proposal currently being considered by the Department of Planning, Housing and Infrastructure.

Connection to Country and Heritage Context

The area’s heritage context was investigated during the preparation of the Planning Proposal. There are no heritage issues or constraints pertaining to this part of the site.

A Connection to Country process was developed as part of this SSDA, led by Michael and Sian Hromek from WSP. The team had a walk on Country, and they consulted with local elders. Their advice has been incorporated into the site planning, landscape and art strategy.

Connection to Country and Heritage Context

The area’s heritage context was investigated during the preparation of the Planning Proposal. There are no heritage issues or constraints pertaining to this part of the site.

A Connection to Country process was developed as part of this SSDA, led by Michael and Sian Hromek from WSP. The design has been prepared with the First Nations inputs provided by WSP in their report Aboriginal Design Principles. The report followed a walk on country and meetings with Elders. Their advice has been incorporated into the site planning, landscape and art strategy.

The design indicates areas an opportunities for integration of indigenous artworks into the communal areas of the project. These works could be located prominently and could have a visible presence to the adjoining public spaces and within to residents and visitors.

The landscape design will also strongly feature endemic planting. There are further opportunities for naming, artwork integration and project identification set out in the WSP report.

Strategic Context

This Landcom project is to deliver 120 apartments that will be 100% Affordable Housing, with a minimum of 20% universal housing. Delivery will be via a State Significant Development Application (SSDA) pathway.

A Positive Street Presence

The design has a purposeful relationship to each of its public frontages, allied to orientation and passive environmental design principles. The buildings 8 storey height sets the precedent for what will become the dominant street-wall scale in this new part of Glenfield.

The most visible and public frontage is to Roy Watts Road to the south, which will be visible across the school grounds and from the south. This facade has a larger scale, with two symmetrical wings flanking a free-standing lift and lobby core.

To Water Avenue (Badu) the facade is more understated, being a classic street wall type that will match that of its future neighbours. Composed horizontals and banks of vertical balconies give the building a calm presence.

To the lane side to the west, the building is less monolithic, expressed as a pair of slender wings separated by gardens. This approach is sensitive to both orientation and the terrace house scale that will be developed on the other side of the lane. Overall, the design responds to its site conditions, appropriately addressing the Road, Avenue and lane frontages.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

2 Built form and scale

(1) Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

(2) Good design also achieves an appropriate built form for a site and the building’s purpose in terms of the following—

(a) building alignments and proportions,

(b) building type,

(c) building articulation,

(d) the manipulation of building elements.

(3) Appropriate built form—

(a) defines the public domain, and

(b) contributes to the character of streetscapes and parks, including their views and vistas, and

(c) provides internal amenity and outlook.

Response

Site Planning

For projects of this type and scale, the site plan is crucial. Given that this may be the first site to develop in this new Landcom estate, the proposal can set a positive precedent for future development. The design has been considered in relation to the NSW Apartment Design Guide, and the site-specific urban plan and Design Guidelines prepared by Hill Thalís approved under the Concept DA.

The scale and setbacks are tailored to the particular site conditions, and to each boundary:

- There is a 3 metre deep soil landscape setback on all three public frontages. This will allow the site’s landscape to augment the generous planting in the bounding streets and lanes.
- The 120 apartments are effectively organised as two buildings that share a common wall on the Water Avenue façade, and are united by a sequence of connecting communal, landscape and support spaces at ground and first floor.
- Half of the apartments are accessed from the southern core which faces Roy Watts Road. This entry has a soaring scale, with partially open galleries connecting 8 or 9 apartments per level in an L-layout
- The northern wing’s entry is a double height space to Water Avenue, that opens to the central garden and first floor landscape terrace. This wing has 8 or 9 apartments per level in a T-configuration, most accessed from an open gallery. The wing of the T has open parking at ground floor, and a communal roof terrace on Level 7.
- The buildings are generally 8 storeys in height, except on the northern wing which has a communal roof terrace on part of the topmost storey
- Most apartments are oriented to north, the others oriented east to Water Avenue or as cross through apartments which are open to the west. There are no single orientation apartments facing south.
- Generous deep soil gardens separate the wings of the northern and southern apartment buildings. These garden areas exceed the 18 metre separation in the ADG and will provide a green outlook and landscape resource for all residents to enjoy. Along the northern site boundary there is a continuous 9 metre deep soil landscape area.

The apartments gain outlook and daylight from all orientations. The well-dimensioned setbacks and central communal gardens will allow trees to grow in deep soil, with extensive planting to provide a calming green outlook for all to enjoy.

An Open Ground Plane

The design adopts an unusually open configuration at ground floor, due to the combination of the entries, the communal circulation and facilities, garden areas and open parking arrangement.

Residents and visitors will be able to see and walk from;

- the Roy Watts Road entry through to the northern site boundary, across 2 open car parks (via pedestrian only zones) and 2 communal gardens.
- the Water Avenue frontage, through the entry and across either of the two landscape gardens or the open sided car park.

This transparency across the site will be seen by passing pedestrians, adding interest and surveillance.

The ground floor has the double height building entries, extensive communal facilities, accessible pathways, services, gardens and some open parking. For residents there is a large communal room at the northern end and flexible bike parking and common areas under the southern wing.

Building Organisation

The site planning rationally organises the 2 wings, which are both served by a pair of lifts and escape stairs. The communal corridors are either open galleries or naturally lit and ventilated by fixed open louvres at the ends.

The ground and first floor have a different arrangement of accommodation. The six ground level apartments all have direct street addresses as well as a second entry to give access to communal circulation and facilities. Four of these apartments are two storey, with courtyards accessed at each end of the ground floor living spaces and bedrooms above.

There is a total of 120 apartments, with a mix of 52 one-bedroom; 56 two-bedroom; and 12 three-bedroom apartments.

The open air but covered galleries provide communal circulation to both buildings and ensure that many apartments are cross ventilated.

Each of these apartment buildings sit on top of an open air or semi-basement car park, accessed directly off the lane. In addition to the communal areas and on-site parking, the ground floor contains waste areas, building services and storage spaces for the future Community Housing Provider’s (CHP) use.

Building Scale and Urban Presence

The design brings a confident scale and urban presence, which can serve as an exemplar for the Landcom site and broader western Sydney. The design has a carefully modulated surface articulation. There is a considered response to sloping topography and an emphasis on landscape throughout.

The facades on almost all sides have balconies or courtyards to provide suitable articulation, amenity, and weather protection. Particular attention has been paid to mitigating heat to the northern and western facades, using a combination of balconies, screens and window hoods, supplemented by shading from landscape in deep soil. The architectural expression is of well-scaled horizontal and vertical elements. The well-proportioned apartment balconies provide rhythm through both material and form. These moves combine consideration of modelling, environmental control, outlook and privacy.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

3 Density

- (1) Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.*
- (2) Appropriate densities are consistent with the area’s existing or projected population.*
- (3) Appropriate densities are sustained by the following—*
 - (a) existing or proposed infrastructure,*
 - (b) public transport,*
 - (c) access to jobs,*
 - (d) community facilities,*
 - (e) the environment.*

Response

Density Appropriate to Context

The proposed development complies with the approved floor space ratio control under the Concept DA of 3.14:1, achieving 2.80:1.

This development has a total of 120 apartments in a variety of configurations. The project adds to the area’s housing stock, with a range of affordable dwellings suitable for singles, couples or family groups, and continues Landcom’s commitment under the Housing Accord to deliver 1,800 affordable dwellings by 2029.

The site will be particularly attractive to those interested in taking advantage of Glenfield’s superior rail services, and the wider area’s ovals, reserves, bushland, waterways, nearby town centres, schools, and employment opportunities.

The individual apartment plans are tailored to the particular site conditions, cognisant of orientation and urban situation.

Therefore, the proposed development provides an appropriate type of accommodation that can be a model for the LGA’s future housing development. The purposeful site planning, setbacks, extensive landscape areas and the high levels of amenity throughout demonstrate that the project is well tailored to the site and location.

Density promoting housing choice

A mix of plans are proposed, with diverse architectural characters and qualities. The 120 new dwellings offer a range of sizes and internal arrangements, tailored to specific site conditions.

All ground floor dwellings have direct access to private courtyards/gardens, and their own sheltered entry porches.

All apartment sizes exceed those in the ADG, and some apartments have more generous, or multiple balconies.

Therefore, the proposed development provides a mix of accommodation to support the needs of a future population. The high levels of amenity achieved demonstrate that the project is appropriate.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

4 Sustainability

(1) Good design combines positive environmental, social and economic outcomes.

(2) Good sustainable design includes—

(a) use of natural cross ventilation and sunlight for the amenity and liveability of residents, and

(b) passive thermal design for ventilation, heating and cooling, which reduces reliance on technology and operation costs.

(3) Good sustainable design also includes the following—

(a) recycling and reuse of materials and waste,

(b) use of sustainable materials,

(c) deep soil zones for groundwater recharge and vegetation.

Response

BASIX

The project is fully compliant with BASIX. The roofs will have solar collectors and water tanks are provided for retention and irrigation.

Green Star

The project aligns with the Landcom-targeted 4-star Green Star Building rating. Following the meeting with the State Design Review Panel, a 5-star commitment was explored, but deemed cost prohibitive for an affordable housing funding model.

Waste Management

Effective management of operational waste is achieved via the provision of dedicated and appropriately sized waste storage areas at ground floor of each apartment wing, located near the cores for convenience.

Waste storage areas allow for separate waste streams for general waste, recycling, green waste, and bulk storage. Access to these areas has been designed to be safe for occupants, building managers, and waste collection contractors. The bins can be readily transported to holding areas on the lane frontage (waste transport routes shown on the plans). The waste strategy has been discussed and approved by consultants in consultation with Campbelltown City Council.

Building Fabric

The building envelope will be comprised of responsibly manufactured products including prefinished metal facade panels and fibre cement sheet, both mounted on lightweight insulated frames. The ground and some of the first floor of the apartment buildings will be face brickwork. Concrete structural elements will be exposed.

Pollutants entering the building will be minimised, and a high level of fresh air will be provided to ensure levels of indoor pollutants are maintained at acceptable levels.

Compact Living and Urban Renewal

The development of this site promotes compact town planning principles and is consistent with a raft of planning objectives.

Sunlight and daylight

The substantial majority of apartments receive controlled solar access to living areas and their various balconies and terraces. All windows and sliding doors have projecting hoods and wide balcony overhangs. Winter sun will penetrate deep into many apartment plans, with a considered depth to facade ratio. The setbacks and screen planting provide privacy to the neighbours on the north, east and west.

Care has been taken to minimise overlooking of the extensive school grounds to the south.

The site planning and building design maximise the benefits of passive solar design to all dwellings, as measured on the shortest day of the year;

- 96 of 120 dwellings (80%) exceed the 2 hours mid-winter sun between 8.30am and 3.00pm – well in excess of the 70% ADG requirement. The remaining 24 apartments typically receive sunlight between 8.30am to 10.30am, and before that many receive sun from sunrise, so are considered acceptable.
- 5% of apartments receive full mid-winter sun for the entire day between 8.30am–3.00pm.
- There are no single orientation south apartments.
- Only 6 dwellings (5%) located on the lower floors do not receive any direct mid-winter sun. This remains the same whether analysing the window of 9am–3.00pm or extending it to 8.30am–3.00pm. This is well below the 15% allowed under the ADG.
- All dwellings have private outdoor space that is open to the sun, and provided with a green outlook.

Projecting eaves, hoods and balconies, in addition to vertical louvres and articulations in the facade ensure that there remains adequate protection from the summer sun. Particular attention has been given to western sun given the current and projected climatic conditions of Western Sydney.

Passive cross ventilation

75% of apartments are naturally cross ventilated. The remaining 25% of apartments will use mechanically assisted cross-ventilation above the breezeway galleries to bring the total number of cross ventilated apartments up to 100%. The building depth is much less than the 18m maximum set out in the ADG.

Most dwellings can be cooled via passive means through their open cross sections and corner positions, which can be assisted with air movement by ceiling fans, boosted if desired by air conditioning.

Passive sun control

Sun control, in the form of inset balconies, roof and awning overhangs, deep reveals, external screens, the planting and the like is provided to living area and habitable room windows which have west, east or north orientation.

Minimising energy usage

Through the detailed design, energy use is also be reduced by;

- All kitchens are within 8 metres of operable windows, and a good percentage are on the façade with openable windows;
- The careful selection of elements such as low energy bulbs to common areas, motion sensor lighting and the like;
- All lobbies and common stairs on all levels are open air, with excellent natural light and ventilation;
- The roofs are fully insulated, and 20% of the roof area is covered with solar collectors – well in excess of BASIX minima;
- The gardens and associated planting aid the creation of a suitable micro-climate, especially in the courtyards that allow for trees to grow to maturity.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

5 Landscape

- (1) Good design recognises that landscape and buildings operate together as an integrated and sustainable system, resulting in development with good amenity.*
- (2) A positive image and contextual fit of well designed development is achieved by contributing to the landscape character of the streetscape and neighbourhood.*
- (3) Good landscape design enhances the development’s environmental performance by retaining positive natural features that contribute to the following—*
- (a) the local context,*
 - (b) co-ordinating water and soil management,*
 - (c) solar access,*
 - (d) micro-climate,*
 - (e) tree canopy,*
 - (f) habitat values,*
 - (g) preserving green networks.*
- (4) Good landscape design optimises the following—*
- (a) usability,*
 - (b) privacy and opportunities for social interaction,*
 - (c) equitable access,*
 - (d) respect for neighbours’ amenity.*
- (5) Good landscape design provides for practical establishment and long term management.*

Response

Landscape Design

The site was previously part of the school’s extensive farmlands, with a few eucalypts, which have all now been cleared prior to the design of the building. This proposal has 614m2 deep soil planting which equates to 18% of the site area. The ADG only stipulates 7% deep soil landscape area for a site of this size.

The deep soil is provided around the front, side and rear boundaries, to allow the planting of larger trees. The northern and centrally located courtyards have continuous planting, with deep soil to allow the sustainable growth of perimeter planting, to the benefit of both future residents and neighbours.

The concept landscape design has been carried out by a qualified landscape architect. The design takes advantage of the site conditions and features large communal courtyard gardens, perimeter landscape and courtyard gardens for the ground level apartments.

The plant selections have been discussed with Aboriginal elders as part of the Connections to Country discussions during the preparation of the DA. The landscape planting schedule will be almost exclusively endemic species to the area.

Communal Open Spaces

The central and northern courtyards act as the primary outlook for many of the apartments. They are both readily accessible for all residents as they are connected by compliant ramps and stairs. The private courtyards of the double height apartments open to the generous communal open spaces.

- The landscaped courtyards are open to the car parks and connected by common stairs to the apartments’ access galleries above.
- The upper levels have generous, roofed access galleries as part of the communal circulation system, with ample opportunities for residents to personalise these generous spaces with their own planting.
- There are shared communal landscape spaces at both level 1 and 7 on the northern building, highly visible and easily accessed by residents.
- A 3 metre wide landscape setback is provided along all public frontages.

The combination of these varied communal spaces will give future residents multiple opportunities to enjoy landscape spaces within the site. There are many extraordinary landscape spaces publicly available within easy walk of the site.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

6 Amenity
<i>(1) Good design positively influences internal and external amenity for residents and neighbours.</i>
<i>(2) Good amenity contributes to positive living environments and resident well-being.</i>
<i>(3) Good amenity combines the following—</i>
<i>(a) appropriate room dimensions and shapes,</i>
<i>(b) access to sunlight,</i>
<i>(c) natural ventilation,</i>
<i>(d) outlook,</i>
<i>(e) visual and acoustic privacy,</i>
<i>(f) storage,</i>
<i>(g) indoor and outdoor space,</i>
<i>(h) efficient layouts and service areas,</i>
<i>(i) ease of access for all age groups and degrees of mobility.</i>

Response
Well-planned Arrangement with High Amenity
The building form accommodates many dwellings with corner or cross flow ventilation. The combination of site planning, planting, window design, orientation and solar controls also maximise cooling in summer and heating in winter. The distribution and apartment planning are all efficient, minimising corridor space and maximising habitable areas that open out to outdoor areas.
Gallery Access from Cores
A fundamental characteristic of the project is the generosity of the communal gardens and circulation. This both individualises the apartment entries and ensures much better environmental performance for the apartments. The access galleries are spatially dramatic, with screened shelter from the elements while being open to light and air.
Well-Planned Apartments
All apartments are carefully planned to maximise useable area, amenity, storage and a sense of space. Every living room and bedroom in every dwelling complies with ADG minima. All apartment areas satisfy the ADG.
Appropriate Private Open Spaces
All dwellings have generous private outdoor spaces and are located to take advantage of sun and outlook. All balconies meet the ADG sizes as a minimum, and a number of dwellings have more spacious private outdoor spaces. Additionally, the communal circulation spaces are configured as generous galleries and gardens, with additional potential for use, planting and socialisation.
Balcony Design
All balconies are of inset rather than projecting form, making them more useable for longer periods of the day and year. This also allows multiple rooms to open to balconies and allows a more complex play of light and outlook within the apartments. The balconies have solid spandrels to ensure privacy, noise protection and a coordinated architectural presentation.
Privacy Between Dwellings
The provision of outdoor spaces has been arranged to ensure that each dwelling has ample privacy, both within the site and to neighbours. Careful consideration has been given to the dimensions of the courtyard gardens, as building separation well exceeds ADG minima of 18 metres.
All courtyard spaces are planted, with planting that will further assist privacy and microclimate.

Ceiling Heights
In conformity with SEPP Housing and the ADG, 3.15 metre floor to floor heights are provided in order to achieve 2.7 metre high ceilings as a minimum in all living and bedroom spaces.
Servicing and Car Parking Provision
Bike parking is conveniently located in a secure area within the car park. Services and metering are compactly located with the car parking, which is located directly under the building footprint.
Garbage Rooms
Garbage rooms are conveniently located at grade near the entries. The bin rooms are all sized by a waste consultant.
Storage
All dwellings have adequate, ADG-compliant built in storage, and many apartments have considerably more storage than the ADG benchmarks.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

7 Safety
<i>(1) Good design optimises safety and security within the development and the public domain.</i>
<i>(2) Good design provides for quality public and private spaces that are clearly defined and fit for the intended purpose.</i>
<i>(3) Opportunities to maximise passive surveillance of public and communal areas promote safety.</i>
<i>(4) 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.</i>

Response
Security within the site Safety and security to both the streets and within the site can be provided by passive surveillance from all apartments and terrace houses. The site perimeter is defined and the street entries and side gates will have self-closing security gates with intercom. The car parks are wholly within the secure area. Internally the clear and transparent circulation pathways and prominently-placed stairs provide the conditions for a safe and secure environment. Access and safety All communal areas, the gardens, the access galleries, the basements are all accessible. Access and BCA assessments have been carried out, and their recommendations incorporated into the submitted SSDA design.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

8 Housing diversity and social interaction

- (1) Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.*
- (2) Well designed residential apartment development responds to social context by providing housing and facilities to suit the existing and future social mix.*
- (3) Good design involves practical and flexible features, including—*
 - (a) different types of communal spaces for a broad range of people, and*
 - (b) opportunities for social interaction among residents.*

Response

Affordable Housing

As part of the NSW Government’s commitment to increasing the supply of affordable housing, Landcom has pledged to deliver 1,800 affordable rental housing dwellings by 2029 under the Housing Accord subject to securing funding the viability of these projects. As part of this commitment, Landcom are providing this initial stage of 120 affordable housing dwellings in the Glenfield West Precinct.

This is a major contribution to boosting housing diversity and social inclusion in an area that is becoming more expensive.

Street Presence and Neighbourhood Interaction

Glenfield has a number of existing services, which can be augmented as the western side of the railway develops. As the estate takes shape, the area will be suited to active residents who like to walk and cycle, and who would appreciate the proximity to the regional amenities.

There are building entries, common areas and 6 ground floor apartments to provide interest and interaction at street level. This presents an interplay and street activation for residents, visitors and passing pedestrians. All service functions are confined to the lane side.

Housing Diversity

The scheme has 14 different apartment configurations, from 1 to 3 bedroom apartments in various configurations. The apartments subject to the ADG range in area from 50m2 to 96m2. This provides excellent diversity and choice to support the community, and tailor to a range of housing needs and desires.

This includes 4 x 2 storey, 2 bedroom dwellings, accessed directly from the street, which form part of the of the residential flat building.

Adaptable Housing

The scheme includes 12 adaptable apartments. Each of these dwellings has an accessible parking space, connected by an accessible path. In addition, all apartments are Silver Level. All apartments have wheelchair access to their front doors. All communal spaces at all levels can be visited by those less able. Paths are all at compliant grades, or more gentle wherever possible.

Communal facilities

The site planning is distinguished by central gardens, entry promenades, open foyers, lifts, site facilities, and generous courtyards, all ensuring a sense of community for the future inhabitants.

Circulation areas, including stairs and landings, are clearly denoted and have outlook to the garden spaces, and multiple oblique views between the upper levels down to the gardens at ground and first floor levels, and beyond to the wider site and future parklands beyond.

The open and semi-basement parking areas are daylit and open to the courtyards. They have garbage rooms, stores, EV charging, service areas and bikes conveniently distributed. The escape stairs are integrated and give additional access to the car park levels.

Communal Gardens

The project has exceptionally generous, well-designed communal gardens, which allow for casual socialisation and personalisation.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

9 Aesthetics

(1) Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure.

(2) Good design uses a variety of materials, colours and textures.

(3) The visual appearance of well designed residential apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Response

Integration of Connection to Country Design Principles

A Connection to Country process was undertaken during the design phase. This has influenced the predominantly endemic plant palette. The presence of First Nations design and colour will be present throughout the communal spaces, from the street entries, through the ground floor shared paths and spaces, to the lobbies and on all floors and roof terrace (represented in the red /ochre colour on the elevations).

The WSP Connecting with Country report identifies opportunities to integrate indigenous values including through art, the design of gathering spaces, water management, landscape and material use. Whilst some of these features have been integrated into the design and contribute to the distinctive character of the building, other features may be explored further in the next stage of design.

This approach may include the engagement of local Aboriginal artist/s who can work on murals, screens, wall and ceiling panels, the roof terrace and landscape areas to give the building a distinctive character that can become a source of pride and identity for future residents.

Contemporary Housing in Glenfield

The scheme develops its architectural character from its location and associations; the façades' serene horizontal lines, balconies, galleries, hoods and eaves show that the environmental design are the generators of the architectural expression.

The character is understated, reinterpreting well-understood architectural elements to form a controlled contemporary design, with an emphasis on economy of means. This will give all the more emphasis to the accent provided by the Connection to Country inputs in the common areas and entries. In particular the lift tower on the southern façade has the promise of being a major element in the new Glenfield.

A controlled palette of materials

The project uses the following range of materials in a rational and coordinated design.

- To the primary public frontages, the project creates a coherent 8 storey scale with a generous landscape foreground. A continuous 3m landscape setback is maintained, consistent with the overall site consent.
- The visible elements of the ground floor and some party walls are in a combination of concrete blades and infill brick. The ground floor will be made of robust materials in dialogue with landscape walls that establish a direct relationship to the adjoining street via gated garden courtyards and landscape features.
- within the open car park levels, the structure will be exposed concrete
- Above the double height inset base, vertically ribbed metal cladding of various scales will serve to balance the horizontality of the elevation. Balcony inset walls are expressed with coloured panels, to create a play between the dominant and recessive front-facing wall planes when moving along the streets, further enlivening the elevation

- a subtle range of colours will be used on the fibre cement sheeting within the balconies
- a large metal roof caps the design, serving as a model for the area as it inevitably increases in density over time

The facades will be complemented by the vegetation, which uses a palette of endemic plants to relate to the local environment.

A rigorous architectural expression

The aesthetic qualities of the project develop from the calibrated site planning and building envelopes. The massing and scale, the gallery access, the thresholds to the street and courtyards have all been carefully developed architecturally.

Environmental performance coupled with amenity

The architectural and landscape character express in a positive way the environmental and amenity objectives embodied throughout the design. For example, the balconies are designed to provide amenity with privacy, and have a rhythmic presence in the elevations. These are supplemented by the larger gathering spaces provided in the communal gardens.

A continuous 3m deep soil landscape setback is maintained on all public frontages, consistent with the overall site consent.

A model apartment type

The site planning, form and scale of the facades create a model for urban housing for western Sydney. The design is a refined model for such types and can help set the direction for other new buildings in the vicinity. The three-dimensional design provides appropriate modulation and the detail is resolved in a confident contemporary way.

Section 2

SEPP (Housing) 2021 Schedule 9 Design Principles

Summary of Design Quality Features

The site is ideal for high quality apartments.

The site is within easy walk of a range of transport and local facilities, and therefore is ideally located for urban consolidation.

The project provides a positive presence to its street frontage, and car parking, escapes and services are discretely located.

The scheme provides much-needed Affordable Housing for the community, thus boosting housing diversity and social inclusion.

The project has a distinctive architectural character and scale that will be an appropriate addition to Glenfield.

Connection to Country has been fully integrated into the design, adding distinctiveness to the communal areas and wayfinding.

The extensive landscaped spaces provided, which include generous areas of deep soil planting, are of equal benefit to future residents and adjoining residents.

The communal courtyard gardens offer environmental qualities, amenity and potential sociability for the future residents.

The communal upper terraces have an exceptional generosity and character, and will offer residents and their visitors outlook to the surrounding landscape.

Continuous landscaped setbacks to each frontage have been carefully considered.

Environmentally Sustainable Design (ESD) has been holistically incorporated into many aspects of the project.

The project will create a high-quality residential environment for future residents, offering a range of generous and well-planned apartments with character and high amenity.

The proposal satisfactorily considers the privacy and interface with neighbouring properties.

The project has a diversity of apartment sizes, types and configurations.

The resolution of urban, architectural, environmental and social design considerations demonstrates that the proposal is an appropriate fit to its site and context.

The project limits overshadowing of neighbours in mid-winter.

The design to the street frontages considers both public and private views and is appropriate to its location.

The site’s redevelopment provides contemporary residential accommodation, incorporating the principles of adaptability and accessibility, to increase the housing choices available in the Campbelltown City Council area.

The design sets a positive model for the development of this strategic site on the western side of Glenfield.

Given the qualities of the proposal and the high level of compliance with all SEPP (Housing Design) Design Principles, very good amenity well above ADG requirements is provided.

Section 2

SEPP (Housing) 2021 Design Verification Statement

Design Verification Statement – Lot 12, Roy Watts Road, Glenfield – State Significant Development Application

State Environmental Planning Policy (Housing) 2021

Design of Residential Flat Development

Project:	Affordable Apartment Building, Lot 12, Roy Watts Road, Glenfield
Consent Authority	State Significant Development Application to DPHI
Architect	Philip Thalís, Registered Architect

In accordance with Section 29 of the Environmental Planning and Assessment Regulation 2021 requirements;

- As the nominated qualified designer, I verify that I led the design, prepared the SEPP (Housing) 2021 Design Principles Statement and reviewed all drawings for the Development Application which seeks consent for 120 apartments in a new 8 storey building with landscaped courtyards.
- The accompanying Design Statement explains how the development addressed the SEPP Housing 2021
 - (i) the design principles for residential apartment development, and
 - (ii) the objectives in Parts 3 and 4 of the Apartment Design Guide.

Yours Faithfully,



Philip Thalís LFRAIA

Registered Architect – NSW ARB Registration Number #6780

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Section 3

ADG Part 3 and 4 Compliance Table

The proposed design for the Glenfield Affordable Housing on Roy Watts Road will achieve a high quality architectural, landscape and urban design resolution. The project will create a fine residential environment for future residents, with very good amenity and environmental performance well above ADG requirements.

The following section outlines the project's response to Part 3 and Part 4 of the Apartment Design Guide.

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
3		SITING THE DEVELOPMENT		-
	3A	SITE ANALYSIS		-
	3A-1	Site Analysis illustrates that design decisions have been based upon the opportunities and constraints of the site.	Extensive Context and Site Analysis submitted as part of SSDA. <i>Refer Architectural Drawing Set for site analysis.</i>	Complies
	3B	ORIENTATION		-
	3B-1	Building types and layouts respond to the streetscape and site while optimising solar access within the development	The building addresses the primary street frontages of Roy Watts Road to the south (existing), and Water ('Badu') Avenue to the east (new). A third elevation addresses a service lane to the west (new). The southern elevation along Roy Watts Road faces Hurlstone Agricultural High School. The building presents a two-storey inset base along the primary street frontages, activated by ground floor apartments, common rooms, and the primary entry lobbies to the building. A 3m wide landscape setback to all streets allows for a planting to supplement the generous street landscape. The landscape is placed at the heart of the site, with the proposal including both a central and northern outdoor common area that connect to the western laneway. These landscape spaces are further linked through sight lines, visual permeability, and material/surface treatments that assist in wayfinding, linking the street to the landscape beyond. Solar access has been optimised through the use of internal courtyards, narrow building sections, predominantly north/east facing and dual-aspect apartments, and stepping the building mass down towards the north to allow additional solar penetration.	Complies
	3B-2	Overshadowing of neighbouring properties is minimised during mid-winter	The site planning minimises overshadowing of neighbouring properties, even during mid-winter. The mid-winter shadow diagrams included within the architectural drawing set show that Hurlstone Agricultural High School to the south receives some overshadowing in the early to mid-morning but has no problem receiving excess of 2hrs of mid-winter sun throughout the rest of the day. These shadow diagram also show that minimal overshadowing will occur to the proposed surrounding apartment buildings and terraces that currently do not exist on site. <i>Refer Architectural Drawing Set for Shadow Diagrams.</i>	Complies
	3C	PUBLIC DOMAIN INTERFACE		-

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	3C-1	Transition between private and public domain is achieved without compromising safety and security	There is clear definition of entry and address on both Water ('Badu') Avenue and Roy Watts Road. Entry lobbies are generous and two storeys in scale, paired with perforated screening to enhance transition between public and private space. 6 ground floor apartments have elevated front courtyards and front fences that address the street. Each of these sit behind perimeter landscaping within the building setback. 4 dedicated common areas connected to the street further enhance street activation and surveillance. Excellent surveillance of adjoining areas. High levels of visual permeability through building lobbies into lift vestibules, car parking, and common spaces beyond. Security line of fencing around perimeter of building, restricting access within building to residents only.	Complies
	3C-2	Amenity of the public domain is retained and enhanced	A continuous landscape zone wraps the building on all street frontages. This ties into the proposed swale on Water ('Badu') Street and extends the avenue of existing trees on Roy Watts Road. The surrounding public domain is currently unformed, but the proposal makes space for all proposed kerbs, landscaping, paths, and has been coordinated with the precinct team in relation to street planting, furniture, etc.	Complies
3D	COMMUNAL AND OPEN SPACE			-
	3D-1	An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping Design criteria: 1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) 2. 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)	Future residents are provided with a variety of communal landscape spaces for their use and enjoyment; - Extensive communal gardens and WSUD on the ground floor level, including central tree filled courtyard, and northern communal space adjacent to primary common room, all accessible by ramps. - Podium level communal spaces that overlook the central courtyard and connect to the northern entry lobby. - A roof garden atop the northern building accessed from level 7 that includes cooking facilities and undercover seating. - Visual connections to communal space from the street, entry lobbies, basement parking, and apartment balconies. Due to its excellent site planning this proposal provides a deep soil landscape area of 18% of the total site area. The ADG only stipulates a 7% deep soil landscape area. The rooftop communal open space exceeds a minimum of 50% direct sunlight to its principal usable part for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter). This is balanced with appropriate shading devices for continued use during the summer months. <i>Refer Architectural Drawing Set for Shadow Diagrams.</i>	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	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 within the site totals 29% of the site area. Activities that have been allowed for include play, gathering, recreation, outlook/visual enjoyment, sitting, food preparation, and relaxation. In addition to the communal landscape areas, private courtyards adjoin communal landscape around the site perimeter. The combination of these varied communal spaces will give future residents multiple opportunities to enjoy landscape spaces within the site. In addition, there will be many public landscape spaces available within walking distance of the site.	Complies
	3D-3	Communal open space is designed to maximise safety	The communal open spaces are designed to maximise safety. The arrangement of balconies overlooking all communal spaces allows for passive surveillance. Communal open spaces are located within the security line of the building.	Complies
	3D-4	Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood	N/A	N/A
	3E	DEEP SOIL ZONES		-
	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 Design criteria: 1. Deep soil zones are to meet the following minimum requirements: • minimum 6m dimension (>1500m²) • 7% of site area	The design intent of allowing a highly interconnected ground floor plan has resulted in 614 m2 of deep soil planting area (18% of site area). These deep soil areas calculation only include areas with a minimum width of 6m. The perimeter deep soil zones extend around the majority of the building perimeter, with some areas excluded from the above calculation as they are slightly below 3m in width. In effect, the entire perimeter allows for deep soil planting, and the landscape proposal is for extensive tree coverage and planting in these areas. Internal deep soil zones allow for much larger trees, with the proposal being that the central courtyard is filled with tall shade tolerant natives, and the northern WSUD landscape is filled with Water Gums and Banksias etc.	Complies
	3F	VISUAL PRIVACY		-

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	3F-1	Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy Design criteria: 1. 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: • up to 25m (5-8 storeys): • Habitable rooms and balconies - 9m • Non-habitable rooms 4.5m Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2) Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties	The proposal is well away from other proposed neighbouring buildings to the east. Water ('Badu') Avenue is a wide street (building to building approx. 28m), with its proposed central swale further improving privacy through landscaping measures. To the west, the opposite terraces have their private open space protected by an external garage, which results in the actual building to building separation being closer to 22m. The proposal abuts the property boundary to the north along Water Avenue which provides for a continuous street wall once the adjoining development is delivered. Behind this, the building is setback 9m from the boundary along its northern elevation. This results in a continuous street frontage when viewed from Water ('Badu') Avenue, while allowing for the 18m building to building setback required by the ADG between habitable rooms. The apartment buildings are 8 storeys in height, in which case an 18 metre overall building separation applies. The proposal exceeds this dimension.	Complies
	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	The site planning ensures full compliance with this objective. See comments on building separation above. The courtyards have multiple scales of planting, further guaranteeing a green outlook as well as privacy.	Complies
	3G	PEDESTRIAN ACCESS AND ENTRIES		-
	3G-1	Building entries and pedestrian access connects to and addresses the public domain	The major residential entries to existing Roy Watts Road and the new Water ('Badu') Avenue are clearly denoted. A civic scaled colonnade, selective colour usage, and artworks that connect to Country are deployed along all elevations engaging with the public domain to signify both entry and common areas. Residents access the stairs and lift lobbies from clear pathways directly from the street. There are other secure secondary exits.	Complies
	3G-2	Access, entries and pathways are accessible and easy to identify	The communal pathways and entrances are clearly legible, due to the site planning, landscape integration and architectural articulation.	Complies
	3G-3	Large sites provide pedestrian links for access to streets and connection to destinations	Through site connections will be provided for residents, but various security lines mean these same paths are not accessible to the public.	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	3H	VEHICLE ACCESS		-
	3H-1	Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	Two separate vehicle entry/exit points are provided on site, both off the western laneway. These two-way driveways have been designed with input from SCT Consulting (traffic engineers) to achieve safety, minimise conflicts between pedestrians and to comply with relevant standards regarding gradient, clearances and sightlines.	Complies
	3J	BICYCLE AND CAR PARKING		-
	3J-1	Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas Design criteria 1. 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, 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	N/A However, car and bike parking, adaptable spaces, are provided to the Affordable Housing requirements in the SEPP Housing.	Complies
	3J-2	Parking and facilities are provided for other modes of transport	34 secure bike parking spaces have been provided. This exceeds the 24 spaces required by the DCP. Glenfield train station and multiple bus stops are located at the end of Roy Watts Road on Station Street.	Complies
	3J-3	Car park design and access is safe and secure	Car parking has been designed with input from SCT Consulting (traffic engineers), to comply with relevant standards.	Complies
	3J-4	Visual and environmental impacts of underground car parking are minimised	One-third of the car parking is in a semi-basement under the southern section of the proposal. This is fully integrated under the building footprint, while accessing light and ventilation.	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	3J-5	Visual and environmental impacts of on-grade car parking are minimised	The on-grade car parking is visually screened from the primary street frontages of Water ('Badu') Avenue and Roy Watts Road. Access is discretely organised from the western lane, where building services and a security line (perforated roller door) minimise the visual impact of the on-grade parking. The northern on-grade carpark is open on its northern and southern elevations, allowing for ventilation, light, and overland flows. The benefits of this design include: • Limited excavation • Easy and accessible access to shared building lobbies. • Interconnection between the two carparks • At grade escapes • Reduced mechanical system requirements • Parking areas open to adjacent communal landscape areas and common rooms, allowing opportunities for play and alternate use. • Increased space for deep soil to facilitate a central grove of large trees.	Complies
	3J-6	Visual and environmental impacts of above ground enclosed car parking are minimised	Of the above ground car parking, only the southern portions are partially enclosed. These areas are separated from the street by both communal and residential program. Access to the parking from the southern lobby allows for views through the entire site, connecting multiple communal landscape areas both physically and visually.	Complies
4		DESIGNING THE BUILDING		-
	4A	SOLAR AND DAYLIGHT ACCESS		-

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4A-1	To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space Design criteria 1. 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 2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter 3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	The solar testing has been carried out taking account of future buildings built to their maximum height. The subdivision is rotated slightly off north, resulting in an eastern elevation that quickly receives glancing sunlight in the morning. As a result, between 9.00am-3.00pm in mid-winter, only 64% (77 of 120) of apartments receive at least 2 hours of mid-winter sun, result-ing in a 6% non-compliance with the ADG. However, if this window is extended by only 30 minutes, from 8.30am-3.00pm, then 80% (96 of 120) of apartments receive at least 2 hours of mid-winter sun, exceeding ADG requirements by 10%. The site planning and building design maximise the benefits of passive solar design to all dwellings, as measured on the shortest day of the year; • The substantial majority of apartments receive controlled solar access to living areas and their various balconies and courtyards. Windows and sliding doors have projecting hoods and wide balcony overhangs. Winter sun will penetrate deep into many apartment plans because of consideration of the depth to facade ratio. Setbacks and courtyards provide privacy both between residents on site, and in adjoining properties. The site planning and building design maximise the benefits of passive solar design to all dwellings, within the constraints of the lot, as measured on the shortest day of the year; • 96 of 120 dwellings (80%) exceed the 2 hours mid-winter sun be-tween 8.30am and 3.00pm – well in excess of the 70% ADG requirement. The remaining 24 apartments typically receive sunlight between 8.30am to 10.30am, and before that many receive sun from sunrise, so are considered acceptable. • 5% of apartments receive full mid-winter sun for the entire day between 8.30am-3.00pm. • There are no single orientation south apartments • All dwellings have private outdoor space that is open to the sun, and provided with a green outlook. • Projecting eaves, hoods and balconies, in addition to vertical louvres and articulations in the facade ensure that there remains adequate protection from the summer sun. Particular attention has been given to western sun given the current and projected climatic conditions of Western Sydney. 6 dwellings (5%) located on the lower floors of the proposal, do not receive any direct mid-winter sun. This remains the same whether analysing the window of 9am-3.00pm or extending it to 8.30am-3.00pm.	Complies
	4A-2	Daylight access is maximised where sunlight is limited	In apartments where access to sunlight is limited, certain design moves have been deployed to maximize light including providing dual aspect, visual connection to shared landscape amenity, multiple private outdoor options, and where possible, splitting apartments over two levels such that upper levels receive sun if lower levels are unable to.	Complies
	4A-3	Design incorporates shading and glare control, particularly for warmer months	Inset balconies, eaves, hoods, screen planting, glazing specifications and external landscape will allow all apartments to control solar access.	Complies
	4B	NATURAL VENTILATION		-

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4B-1	All habitable rooms are naturally ventilated	All habitable rooms are naturally ventilated, and many living rooms receive light and ventilation from two sides.	Complies
	4B-2	The layout and design of single aspect apartments maximises natural ventilation	All single orientation apartments face north or east, with inset balconies to allow a greater extent of perimeter with more ventilation options.	Complies
	4B-3	The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents Design criteria 1. 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 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	75% of apartments are naturally cross ventilated. The remaining 25% of apartments will use mechanically assisted cross-ventilation to bring the totally number of cross ventilated apartments up to 100%. The building depth is much less that the 18m maximum set out in the ADG.	Complies
	4C	CEILING HEIGHTS		-
	4C-1	Ceiling height achieves sufficient natural ventilation and daylight access Design criteria 1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are: - Habitable rooms - 2.7m - Non-habitable - 2.4m - For 2 storey apartments - 2.7m for main living area floor, 2.4m for second floor, where its area does not exceed 50% of the apartment area - Attic spaces - 1.8m at edge of room with a 30 degree minimum ceiling slope - If located in mixed used areas 3.3m for ground and first floor to promote future flexibility of use These minimums do not preclude higher ceilings if desired	3.15m floor to floor heights are provided throughout to achieve 2.7m ceiling heights in all habitable rooms. The proposal includes (4) two-storey apartments located on the ground floor adjoining Water Avenue. The main living levels step up the site, with varying ceiling heights between 2.7m-3.6m. The second floor has ceiling heights of 2.7m. On both of these levels ADG minimums are exceeded. <i>Refer Architectural Drawing Set for sections.</i>	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4C-2	Ceiling height increases the sense of space in apartments and provides for well proportioned rooms	Ground floor two-storey apartments make use of topographical changes to provide ceiling heights of varying dimensions.	
	4C-3	Ceiling heights contribute to the flexibility of building use over the life of the building	Only residential accommodation is proposed. 3.15 metre floor to floor heights are provided throughout to achieve 2.7 metre ceiling heights in all habitable rooms.	
	4D	APARTMENT SIZE AND LAYOUT		-
	4D-1	The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity Design criteria 1. Apartments are required to have the following minimum internal areas: • Studio - 35m2 • 1 bedroom - 50m2 • 2 bedroom - 70m2 • 3 bedroom - 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 2. 2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms	All apartments are carefully planned to maximise useable space and a sense of openness. Furniture layouts are shown throughout. Every room complies with or exceeds ADG minimum width and area requirements All apartment sizes meet or exceed ADG requirements. The larger 2 and 3 bed apartments are suitable for families. 16% of two-bedroom apartments (Qty: 9) also exceed the family friendly minimum internal area (77m2). As evident on the architectural drawings, all habitable rooms have a window in an external wall no less than 10% of the floor area. <i>Refer Architectural Drawing Set for apartment plans and elevations.</i>	Complies
	4D-2	Environmental performance of the apartment is maximised. Design criteria 1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	There are no apartments where the habitable depth of the room from a window exceeds 8m. Many living rooms are placed on corners with 2 orientations. There are also many cross through living rooms.	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4D-3	Apartment layouts are designed to accommodate a variety of household activities and needs Design criteria 1. Master bedrooms have a minimum area of 10m2 and other bedrooms 9m2 (excluding wardrobe space) 2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space) 3. Living rooms or combined living/dining rooms have a minimum width of: • 3.6m for studio and 1 bedroom apartments • 4m for 2 and 3 bedroom apartments 4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	Variety of apartment types and sizes provided, including ground floor courtyard apartments, and 'Family-Friendly Apartments'. Apartment diversity has been provided in response to both Affordable Housing provider input and current/projected demographic make-up of the LGA. All bedrooms equal or exceed the minimum areas All bedrooms equal or exceed the minimum dimensions All living rooms equal or exceed the minimum dimensions <i>Refer Architectural Drawing Set for apartment plans.</i>	Complies
	4E	PRIVATE OPEN SPACES AND BALCONIES		-
	4E-1	Apartments provide appropriately sized private open space and balconies to enhance residential amenity Design criteria 1. All apartments are required to have primary balconies as follows: • Studio apartments 4m2 • 1 bedroom apartments 8m2 + 2m deep • 2 bedroom apartments 10m2 + 2m deep • 3+ bedroom apartments 12m2 + 2.4m deep The minimum balcony depth to be counted as contributing to the balcony area is 1m 2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m2 and a minimum depth of 3m	All balconies meet or exceed ADG areas. All balconies, courtyards and terraces open from the major habitable rooms. All balconies meet or exceed ADG areas and dimensions. Some apartments have extended balconies. Ground level apartments on Roy Watts Road have courtyards exceeding 15m2, with a depth over 3m. in addition to these courtyards, balconies are provided off bedrooms. Ground floor two-storey apartments on Water Avenue have a primary and secondary courtyard. The primary courtyards exceed the minimum depth of 3m, but have a minimum area of 13m2. This is supplemented by a second-ary Courtyard of 7m2, bringing the total area of private outdoor space for these apartments up to ~20m2. <i>Refer Architectural Drawing Set for apartment plans.</i>	Complies
	4E-2	Primary private open space and balconies are appropriately located to enhance liveability for residents		Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4E-3	Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building	The design of gardens, balconies and terraces is integral to the form and character of the scheme.	Complies
	4E-4	Private open space and balcony design maximises safety	All balconies and terraces have balustrades that comply with the NCC.	Complies
	4F	COMMON CIRCULATION SPACES		-
	4F-1	Common circulation spaces achieve good amenity and properly service the number of apartments Design criteria 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	All common lobbies are covered but open air, with ground floor lobbies being additionally generous in size and height, with multiple visual connections to landscape. In addition to this, the podium level of the northern building is directly connected to the street entrance off Water ('Badu') Avenue to increase permeability and improve amenity. The separate core/building lobbies are connected via accessible pathways at ground level through the central communal courtyard. 2 lifts are provided in each core; the northern core services 56 apartments, and the southern core services 58 apartments. Common corridors are open air for some portions of the length, with access to natural light provided in all instances. The design does not have a conventional closed core, with several galleries being either entirely open, or at minimum, partially open. The number of apartments off a circulation core on a single level varies between 4-9 apartments. Although the ADG criteria is exceeded in 8 of 14 instances with 9 apartments accessed from a lift, this slight increase is in no way excessive for an affordable housing project. The slight increase of units per a lift does not adversely affect the amenity of these common circulation spaces, primarily open air galleries, maintaining compliance with this objective. A Vertical Transport Engineer has been engaged and supports this building configuration.	Complies
	4F-2	Common circulation spaces promote safety and provide for social interaction between residents	The Common circulation spaces are open and characterful, a distinctive part of the site planning. Generous in dimension and connected to the gardens, with opportunities to be personalised by the residents. Wayfinding is easily understood and integrated into the built form by means of artworks, material, and colour.	Complies
	4G	STORAGE		-

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4G-1	Adequate, well designed storage is provided in each apartment Design criteria 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: • Studio apartments 4m3 • 1 bedroom apartments 6m3 • 2 bedroom apartments 8m3 • 3+ bedroom apartments 10m3 At least 50% of the required storage is to be located within the apartment	The proposed units meet the storage requirements as outlined in the ADG. <i>Refer Architectural Drawing Set for apartment plans indicating total storage area and locations.</i>	Complies
	4G-2	Additional storage is conveniently located, accessible and nominated for individual apartments	Where required additional storage is provided within the carparks conveniently located near the lift cores, easily accessible from all units via the lift cores. <i>Refer Architectural Drawing Set for storage locations.</i>	Complies
	4H	ACOUSTIC PRIVACY		-
	4H-1	Noise transfer is minimised through the siting of buildings and building layout	Setbacks are provided on all street sides, with only a portion of the building meeting the boundary along the northern elevation. For all on-site instances, separation distances meet or exceed ADG minimum. All interior separations are to NCC requirements	Complies
	4H-2	Noise impacts are mitigated within apartments through layout and acoustic treatments	The internal planning of apartments allows for acoustic separation between bedrooms and living rooms in all instances. No bedrooms are located on the gallery access, and nearly all bedrooms avoid sharing a wall with a common corridor.	Complies
	4J	NOISE AND POLLUTION		-
	4J-1	In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings	N/A	N/A
	4J-2	Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission	An acoustic engineer has provided input to the SSDA, and a façade engineer will be consulted regarding the glazing specification during the detailed design stage.	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4K	APARTMENT MIX		-
	4K-1	A range of apartment types and sizes is provided to cater for different household types now and into the future	A mix of 1B, 2B and 3B units is provided within the proposal. Apartment types range from single storey to two storey with the inclusion of adaptable units. <i>Refer Architectural Drawing Set for schedule of apartment mix.</i>	Complies
	4K-2	The apartment mix is distributed to suitable locations within the building	1B and 2B units are spread throughout the proposal, across all levels and wings. Alternating 2B and 1B units appear at the upper floors of the southern wing to create diversity in arrangement. 3B units are primarily located along the southern wing, spread across all building levels.	Complies
	4L	GROUND FLOOR APARTMENTS		-
	4L-1	Street frontage activity is maximised where ground floor apartments are located	The (6) ground level apartments all have direct street addresses as well as a second entry to give access to communal circulation and facilities. Four of these apartments are two storey, with courtyards accessed at each end of the ground floor living spaces and bedrooms above. The ground floor units are abutted by double height building entries and extensive communal facilities, including community rooms and bicycle parking. This combination of uses contributes to an active street frontage.	Complies
	4L-2	Street frontage activity is maximised where ground floor apartments are located	The (6) ground floor apartments all have generous private courtyards, and dual front/rear aspect. All ground floor apartments have external access to the street, and internal accessible access to the internal communal open space. Sightlines, level changes, fencing, and planting are all used to create secure and defensible spaces for each ground floor apartment.	Complies
	4M	FACADES		-
	4M-1	Building facades provide visual interest along the street while respecting the character of the local area	The building design creates an exemplar in the area, with massing that responds to changes in topography, lower storeys that activate the street through both common and private programming, visual interest through colour and artworks that connect with Country, and a sense of depth, with both lobbies connecting through to landscape area beyond.	Complies
	4M-2	Building functions are expressed by the facade	Each apartment can be clearly identified on the facades. The character of the communal spaces is more continuous, and differentiated from the language, colour, and scale of the apartments.	Complies
	4N	ROOF DESIGN		-
	4N-1	Roof treatments are integrated into the building design and positively respond to the street	The roofs are concrete flat roofs to allow for maintenance and building services (i.e. HVAC), with central portions built up with low pitched metal roofs, with solar collectors as required.	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4N-2	Opportunities to use roof space for residential accommodation and open space are maximised	The podium level makes use of the roof space over the ground floor parking as both communal gathering space, and shared landscape areas. The roof space of the northern building is accessible from level 7 and has been designed as communal open space for all residents.	Complies
	4N-3	Roof design incorporates sustainability features	The roofs have solar collectors to 20% of the area.	Complies
	4O	LANDSCAPE DESIGN		-
	4O-1	Landscape design is viable and sustainable	<i>Refer Landscape Drawing Set.</i>	Complies
	4O-2	Landscape design contributes to the streetscape and amenity	<i>Refer Landscape Drawing Set.</i>	Complies
	4P	PLANTING STRUCTURES		-
	4P-1	Appropriate soil profiles are provided	<i>Refer Landscape Drawing Set.</i>	Complies
	4P-2	Plant growth is optimised with appropriate selection and maintenance	<i>Refer Landscape Drawing Set.</i>	Complies
	4P-3	Planting on structures contributes to the quality and amenity of communal and public open spaces	<i>Refer Landscape Drawing Set.</i>	Complies
	4Q	UNIVERSAL DESIGN		-
	4Q-1	Universal design features are included in apartment design to promote flexible housing for all community members	All common areas and dwelling entries are fully accessible. Accessible car spaces are identified on the ground floor plan, located convenient to the lifts. Adaptable plus silver level apartments are accommodated within the proposal.	Complies
	4Q-2	A variety of apartments with adaptable designs are provided	12 adaptable units are provided within the proposal. <i>Refer Architectural Drawing Set for adaptable unit types.</i>	Complies
	4Q-3	Apartment layouts are flexible and accommodate a range of lifestyle needs	The unit mix, different types, and apartment layouts supports flexible living and varied life style needs. <i>Refer Architectural Drawing Set for adaptable unit types.</i>	Complies
	4R	ADAPTIVE REUSE		-

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4R-1	New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place	N/A	N/A
	4R-2	Adapted buildings provide residential amenity while not precluding future adaptive reuse	N/A	N/A
	4S	MIXED USE		
	4S-1	Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	Ground floor apartments and common areas address the streets.	Complies
	4S-2	Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	Achieved by the considered site planning, and typological arrangement.	Complies
	4T	AWNINGS AND SIGNAGE		-
	4T-1	Awnings are well located and complement and integrate with the building design	The entry to each apartment is protected from the weather, typically by building elements above, whether awnings or otherwise.	Complies
	4T-2	Signage responds to the context and desired streetscape character	Yes - subject to future detailed design.	Complies
	4U	ENERGY EFFICIENCY		-
	4U-1	Development incorporates passive environmental design	The building is orientated north/east for solar access, and shaded appropriately to avoid solar gain during the hotter months of the year. Narrow building sections dominate, with 75% of apartments being naturally cross ventilated, and the remaining apartments being cross ventilated with mechanical assistance. In addition, the project has been developed with the input of an ESD consultant at all stages. is currently exceeding the minimum credit requirements to achieve a 4-star Green Star rating. The building is currently exceeding the minimum credit requirements to achieve a 4-star Green Star rating.	Complies
	4U-2	Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	Thermal mass in the floors (concrete), exposed to northern heat gains, is typical. Overhangs and shading manage this heat gain depending on the time of year. Insulation will be deployed intelligently and as required by BASIX. HVAC plant is consolidated on the roof.	Complies
	4U-3	Adequate natural ventilation minimises the need for mechanical ventilation	The proposal exceeds ADG minima for cross ventilation. 75% of apartments have natural cross ventilation.	Complies

Section 3

ADG Part 3 and 4 Compliance Table

Part #	Objective #	Objective Description	Response	Compliance
	4V	WATER MANAGEMENT AND CONSERVATION		-
	4V-1	Potable water use is minimised	Retention tanks provided following hydraulic engineer’s design	Complies
	4V-2	Urban stormwater is treated on site before being discharged to receiving waters	Urban stormwater is managed at a precinct wide scale. However, the proposal includes several additional strategies to reduce the amount of stormwater discharge and reuse it on-site where possible. WSUD has been integrated into the design, with landscape, civil, and architecture coming together to manage a series of ephemeral water landscapes, connecting several of the communal areas, and then overflowing to the Water (‘Badu’) Avenue swale. Rainwater harvesting will also occur on-site. Storage tanks and water quality devices are to hydraulic engineer’s design.	Complies
	4V-3	Flood management systems are integrated into site design	N/A	N/A
	4W	WASTE MANAGEMENT		-
	4W-1	Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Waste storage areas are consolidated within the building envelope on the ground floor level. Temporary screened storage bays for collection will be provided adjacent to the western lane as requested by Council. <i>Refer to Waste Report for details.</i>	
	4W-2	Domestic waste is minimised by providing safe and convenient source separation and recycling	Waste storage areas provided. <i>Refer to Waste Report for details.</i>	
	4X	BUILDING MAINTENANCE		-
	4X-1	Building design detail provides protection from weathering	Robust materials are proposed externally. The façade design uses a limited palette of materials that have been selected for their durability. Awnings are provided over several windows, particularly on the south side of the building. of terraces and balconies will be on pedestals.	
	4X-2	Systems and access enable ease of maintenance	Considered in the design, to be further developed through Safe Design of Structures	
	4X-3	Material selection reduces ongoing maintenance costs	The main materials and elements of the design are; • Concrete slabs and frame. • Perforated metal mesh at ground level in front of communal areas (opportunities for integrating First Nations Art) • Prefinished metal facade panels on primary facades • Painted CFC on balconies • Face brickwork on the lower 2 floors and communal walkways • Accent use of paint and colour on ceilings, soffits and walks to assist in wayfinding (opportunities for integrating First Nations Art)	

Section 4

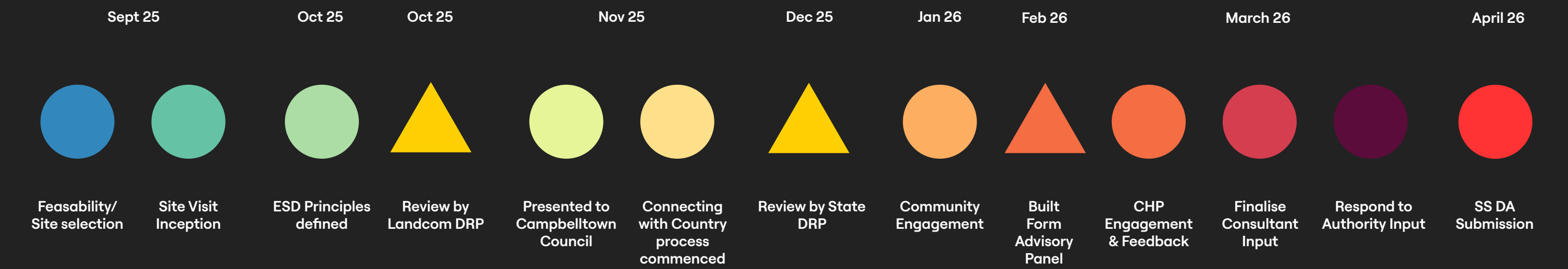
Design Review Panel Feedback

The following section outlines the project's response to feedback recieved from the State Design Review Panel.

The project has also attended a Landcom Design Review Panel and Landcom Built Form Advisory Panel with feedback from both outlined wihtin this section.

Section 4

Design Review Panel Process



Section 4

Landcom Design Review Panel Overview

Panel Feedback

The Design Review Panel (DRP) commended this design and comprehensive presentation for thoughtful, a very clear and exciting building within the architect’s own masterplan.

The panel expressed strong support for the scheme and encouraged its adoption as a benchmark for future developments in terms of:

layering of views with green outlooks for all

lean, clever low tech design with clear, ordered layout

memorable entry foyers with view lines to the central greenspace

minimal excavation, airy careful carparking and ramp layout

daylight access to every apartment

natural ventilation and shaded openness

carefully retained and consolidated deep soil

decision to keep rubbish trucks off the site

ground floor units offering housing variety

avoiding pressurised stairs.

generous gallery walkways designed to foster social interaction without having bedrooms adjacent

and in general deals with the particular challenges of Western Sydney .

Design Changes

The following design changes were implemented based on advice from the Landcom design review panel.

Increased the space around lift lobies to allow circulation and sense of welcome.

Explored the sectional quality of ground floor apartments to improve connection to streetscape.

Developed wayfinding strategies between the southern tower and level 7 rooftop garden.

Incorporated shading elements to the eastern and western facades to response to climatic conditions of Western Sydney.

Focus of central courtyard altered to be one of outlook with native tree plantings rather than inhabitation.

Increased capacity for rainwater collection and use on site.

Deepening consideration of a Connection with Country within the proposal.

Landscape concept developed across all levels where common space is proposed (i.e. Ground, podium, and level 7).

Consideration of materiality and cost while developing the character on building.

Section 4

State Design Review Panel Overview

Panel Feedback

The State Design Review Panel (SDRP) commended the proposals engagement with Country, its commitment to provide 100% endemic tree and plant species, to delivery 100% affordable housing, and the generous deep soil areas that provide opportunities for WSUD.

The panel expressed strong support for the scheme and gave the following advice:

- Further develop the proposals Connection with Country .
- Improve site circulation and amenity, with a focus on the parking areas and at grade common programming.
- Activating street frontages through public programming that promotes visibility, safety, and connection.
- Integrate landscape design to mitigate Western Sydney’s Urban heat and promote biophilic design.
- Further develop the proposals passive design strategies, with the balance between winter solar access and summer heat protection being critical.
- Consider the ‘Healthy Higher Density Living for Families with Children’ Guide.
- Consider more ambitious ESD targets

Design Changes

The following design changes were implemented based on advice from the State design review panel. Further detail can be found on the following pages.

- Materiality of common areas explored as a means of wayfinding in addition to surface for CwC narratives.
- Circulation through carparking shifted east to separate it from parking areas and provide connection into common areas of both northern and southern buildings.
- bike storage areas centralised and increased in scale as a result of shifting fire tank to basement.
- Service program removed from Water Ave to further activate the street facade.
- southern and eastern entry lobbies developed to provide sense of arrival and security.
- development of passive design strategies including an increase in the total number of cross ventilated apartment, and screens for summer shading on western elevations.
- ‘Healthy Higher Density Living for Families with Children’ Guide reviewed, and ‘Family Friendly’ apartments provided.
- 5-Star Green Star targets considered and where possible incorporated into the design.
- Additional WSUD elements incorporated into site strategy.
- Further development of building elevations and materiality.
- Further development of apartment types.

Section 4

Landcom Built Form Advisory Panel Overview

Panel Feedback

- Structural engineering feedback aiming to increase cost efficiencies by exploring particular wall systems and modern methods of construction.
- Mechanical engineering feedback aiming to increase cost efficiencies.
- Consider increasing bike storage facilities.
- Consider heat retention of selected cladding materials.
- Procurement strategy is key to delivering the project ontime.
- Consider value engineering landscape design and materials.

Design Changes

- Many of the considerations raised in the Built Form Advisory Panel such as structural systems will be addressed during the detailed design stage.
- Relocation of air conditioning units from the roof to individual balconies.
- Inclusion of ceiling fans to all bedrooms and living rooms in all units.

Section 4

State Design Review Panel Responses

Topic	Number	Actions	Response
CONNECTING WITH COUNTRY		Walk on Country and engagement with the local Aboriginal community have identified specific advice that requires a response appropriate and sensitive to the cultural, ecological, and historical context of this place. The themes and opportunities identified through the consultation process have the potential to inform a richer and more place responsive design.	-
	1	Continue to work with the local Elders and Knowledge holders to ensure Country initiatives are embedded in the design in meaningful ways.	The SSDA has designated extensive areas as having Connecting with Country design potential. These are shown in an ochre colour throughout the communal spaces on ground and first floors (including double height spaces), and on the roof terrace. There is scope to incorporate First Nations artwork and design into pavements, wall surfaces, screens and ceilings. <i>Refer to Connecting to Country: Aboriginal Design Principles Report by WSP</i>
	2	Explore opportunities for the project to heal Country and further support caring for water, use of language, endemic landscape restoration, protection and the reconnection to broader natural systems (trees, fauna, wildlife habitat, water).	<i>Refer to Connecting to Country: Aboriginal Design Principles Report by WSP</i>
	3	Establish Indigenous Cultural Intellectual Property (ICIP) protocols that cover all phases of the project to ensure appropriate protection of cultural knowledge and attribution.	The landscape design will have predominantly endemic species, which accord with Connecting With Country principles and consultation. <i>Refer to Connecting to Country: Aboriginal Design Principles Report by WSP</i> <i>Landcom’s Innovate Reconciliation Action Plan 2024-2026 includes actions and deliverables for the adoption and implementation of an ICIP protocol. Continual engagement with the Connecting with Country consultant for the project has ensured that information collected from Indigenous stakeholders for the project is appropriately referenced and accurately reflected in the documentation.</i>
	4	Refer to the Connecting with Country framework and case studies on the GANSW website for more information and guidance.	This project has benefitted from the guidance of our Connecting with Country consultant, WSP. WSP has led many of the actions listed in the “Starting with Country” project formation table in the GANSW Connecting with Country Framework. This has included a walk on Country with local knowledge holder Ebony Walker, engagement with Elders Aunty Thelmaree Rudd and Uncle Paul Webb, and the development of an “Aboriginal Design Principles” report by WSP. Hill Thalís has actioned the “Imagining with Country” items listed within the GANSW Connecting with Country Framework, and continues to incorporate the design basics, opportunities, and considerations learnt into the proposal.
SITE STRATEGY		The current mix of on-grade parking and a half-basement is leading to concerns around circulation, safety, amenity, and equitable access. Further development is needed to show that the scheme can deliver high-quality shared spaces for residents.	-
	5	Rationalise the lower basement layout and consider shifting parking further east to open-up communal space area and improve circulation.	Circulation between communal spaces was improved by shifting the primary path between north and south lobbies eastwards. This was achieved by; reducing the total number of parking spaces through adjustments in the apartment mix; adjusting the location of the accessible parking to an equal split between both buildings; redesigning the southern building’s entry lobby; relocating common/service areas; and expanding the lower basement eastwards. This has better connected the two lobbies. This route has been further enhanced by the relocation of an enlarged communal bike parking area.

Section 4

State Design Review Panel Responses

Topic	Number	Actions	Response
	6	Explore opportunities to co-programme parking areas for ancillary uses, such as sheltered play or weather-protected communal zones.	The northern parking area identified as the prime location for co-programming for ancillary use is to the west of the northern buildings lift core (due to its proximity to the common room and primary communal open space along the northern boundary). To increase the success of co-programming this space several design adjustments have been made, including; expanding the proposed area of permeable paving to cover all of the northern parking; reducing the number of parking spots to the east of the ramp to the southern basement; increasing the areas of paved pathway; locating all northern building accessible parking spots within this zone; and adding a landscape strip to connect the central and northern courtyards. In addition to these strategies, it is also proposed that the ceiling and floors be coloured/textured differently to signify different use. The potential co-programming of these spaces will depend on the Community Housing Provider that Landcom has recently nominated
	7	Confirm bike storage is adequate and easy to access.	Based on Campbelltown Council DCP, the traffic consultant for the project, SCT Consulting, has indicated that a minimum of 24 bike spaces is required. We have increased the number of spaces from 32 to 34. In addition to this we have centralised bike storage in a single location and provided an area for bike maintenance.
	8A	Optimise coordination of pedestrian, cycle, vehicular and service access to ensure safe, logical and efficient movement throughout the site by: Revisiting the waste and shared operational facilities and relocating them to better align with vehicle access from the west laneway	Bulk storage and general waste rooms have been combined into single locations for both the northern and southern buildings. Waste rooms have been rationalised internally to allow better access to each bin type. Advice was sought from Campbelltown Council on the proposed waste management strategy and was strongly supported (Ebony Mindzas, 21/11/2025). This support was in part due to the adjacency of the communal waste rooms to the shared lift cores, making disposal of waste easy for all residents. In balancing parking and pedestrian movements, it is our belief that this remains the best location for waste rooms. There is level access from the Waste Rooms to the dedicated waste collection bays, which have been located along the western lane frontage.
	8B	Exploring opportunities to relocate the on-grade services tank into the basement to improve ground-level activation and usability	The 60-kL water tank has been relocated to the basement as suggested, in addition to being placed along the western boundary. This shift moves all services off the primary and secondary road frontages and replaces them with common rooms (program to be determined by the Community Housing Provider). Ground level activation has been maximised by; all lobbies/entries addressing main street frontages; 6 ground floor residences with entries off the surrounding streets; several common areas opening directly onto Water Avenue; visual permeability, common areas providing sightlines to the communal courtyards beyond; and split communal areas between both buildings to foster movement between both cores.
	8C	Resolving pedestrian to vehicle conflicts between communal areas and adjacent carparking, particularly where children may be playing	The primary circulation path through the central courtyard between both buildings has been shifted east. In doing this, this axis is now located to one end of each parking area, rather than centred within them. This minimises possible vehicular/ pedestrian conflicts and rather provides an armature that more generously resolves the communal spaces and circulation.

Section 4

State Design Review Panel Responses

Topic	Number	Actions	Response
	8D	Minimising blank walls along Water Avenue and activating the public domain interface to create a lively, pedestrian-friendly frontage.	As mentioned in the response to 8b, blank walls along Water Avenue, have been reduced through the relocation of the fire tank to the basement. In its place is a large communal bike store with a screened facade to the street, allowing light and views through the site, improving the public interface, wayfinding and the ambiance of the communal spaces. In addition to programmatic activation of the façade, it is proposed that all common areas be screened with a coloured/ textured mesh to allow visual permeability, ventilation, and potentially artistic expression through murals or other artworks that can be part of the Connecting with Country strategy. <i>Refer to Connecting to Country: Aboriginal Design Principles Report by WSP</i>
	9	Ensure direct, equitable access and legible wayfinding to communal open space from circulation routes, entries, lobbies and the southern building to eliminate segregation.	Equitable access between communal open spaces, entries, lobbies, and common rooms is provided via accessible circulation routes throughout the proposal. • Access from ‘Badu’ Avenue (Water Avenue) to the lobby of the northern building is via a 1:20 path. • Access from Roy Watts Road to the lobby of the southern building is via a 1:20 path. • Access between lobbies is via the circulation route passing through the central courtyard, which includes a series of 1:20 paths, 1:14 ramp, and 1:10 step ramps. This route also connects the ground floor common rooms and allows access between buildings to the rooftop communal space of the northern building. It is proposed that wayfinding is further enhanced by selective colour treatments along circulation routes. This could include the painting of the floor, soffit/ceiling, and lift cores of primary circulation routes. Investigations into the use of Dharug language, narratives, and references to flora/fauna are also underway to help differentiate buildings and give them each their own identity. <i>Refer Architectural Drawing Set for ground floor design and layout.</i>
	10	Strengthen ground-floor building entries to promote visibility, safety and connection to shared spaces and the street.	The ground-floor entry off Water Avenue promotes visibility from the street through materiality and architectural consideration of both section and plan to extend sightlines deep into the building from the street. This is achieved by a permeable mesh/screen extending along the street frontage between the structural columns to form a security line. Not only is this surface an opportunity for artworks that reference Country, but also allows for visual connections between the street and lift lobby, letter boxes, northern carpark, and podium level communal space above. The ground-floor entry off Roy Watts Road has been adjusted in response to items 5 and 8. As a result of these adjustments the southern lift lobby has shifted east. This move has allowed differentiation between the primary and secondary entrance; shifted the entry closer to the likely direction of foot traffic (i.e. Glenfield station); provided space for letter boxes; and provided space for informal gathering/waiting next to a garden. Similarly to the entrance off ‘Badu’ Avenue, visibility has been promoted through materiality and architectural consideration of both section and plan to extend sightlines deep into the lot from the street. Ground-floor apartment entries have all been adjusted to face the street and be visible from the footpath. Additional communal programming has been added to the ground-floor along Water Avenue. This includes an enlarged and centralised bike storage room, bike maintenance facilities, and a potential managers office. This program further activates the street frontage, allows visual permeability to the southern carpark and promotes natural surveillance.

Section 4

State Design Review Panel Responses

Topic	Number	Actions	Response
	11	Improve quality of experience and equity for residents and visitors by ensuring an accessible path of travel is provided to all dwellings.	An accessible path of travel is provided to all dwellings. For ground-floor apartments this is provided from the central courtyard/carpark side rather than the street. The access consultant (Credwell) has confirmed these access points as compliant.
LANDSCAPE STRATEGY		The quality and integration of landscape in this proposal is critical to mitigating Western Sydney’s urban heat, improving comfort through cooling, greenery, and shade, and strengthening connection to Country. The design benefits from generous deep soil zones (28%), which provides significant opportunities to further enhance canopy cover, support broader ecological functions, and embed effective stormwater management and WSUD solutions into the scheme.	-
	12	Consider setting ambitious tree canopy targets. Refer to Greener Neighbourhoods Guide, which recommends minimum 35% tree canopy cover for apartment developments of this scale and 70% for new street trees.	The Sturt Noble landscape design currently provides for greater than 35% (approximately 39%) tree canopy cover to the project site area. Sturt Noble are not engaged in the public domain works adjoining this site. For public domain tree canopy outcomes please refer Hill Thalís response outline in point 13 here below.
	13	Prioritise retention of significant endemic trees, particularly along Roy Watts Road and Water Avenue where canopy cover will provide shade, cooling, and greening benefits for publicly accessible space.	While this item is beyond the scope of the Affordable Housing project team, Hill Thalís is working on the larger Glenfield development and is strongly advocating for the retention of as many existing trees as possible.
	14	Many of the currently proposed species require 4–6 hours of sunlight, review the species selection to ensure suitability for shaded communal open space areas, and ensure this is guided by the local Aboriginal Knowledge holders.	The most consistently shaded planted areas of this project are the deep soil at ground and ledge planter boxes of the central garden courtyard. The vision is to utilise this environment by planting a semi open layered canopy effectively mimicking sheltered gully conditions that you could find along the nearby Georges River. Ultimately achieving mature tree canopies up to the full height of the central void. Contributing to the local ecology as sheltered habitat and providing a layered green outlook to residents. The protection from wind, reduced hours of full harsh sun and the vertical nature of the space will encourage open vertical growth to fill the space evenly but not too densely, allowing visual depth and air movement. A combination of local and regionally significant hardy species has been selected to this end. All proposed species selections have been reviewed and guided by local Aboriginal Knowledge holders in conjunction with WSP.
	15	Demonstrate that the commitment to use endemic tree species and planting can achieve healthy growth despite limited mid-winter solar access to communal open spaces.	All species have been selected for the proposed location based on knowledge of their natural requirements and tolerances and in consideration of prior proven performance.
	16A	Enhance the quality of the central courtyard and communal open spaces to promote connection to Country and biophilic design. Consider additional landscape mounding at ground level communal open space to compliment the natural topography fall, ensuring green landscape is visible from through-carparking areas and shared lobby entries.	The ‘ground’ level planting species will range from 100mm up to approx. 1500mm. Planting will always be visible from multiple aspects at ground. Additionally, it is intended at the western end of the central courtyard to mound the garden area at 1:5 to create a planted mound topography. While at the eastern end the planting area is graded to a planted stormwater detention area specifically to contribute WSUD benefit and visual interest to the site.

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State Design Review Panel Responses

Topic	Number	Actions	Response
	16B	Demonstrate the viability of over-structure landscaping at level 1 and rooftop communal open space, including set downs for trees, planters and appropriate soil depth volume.	All proposed soil depths and volumed are designed to meet CoS and ADG minimum requirements and above.
ARCHITECTURE		Western Sydney’s increasingly hot climate creates significant challenges for residential design, achieving the right balance between winter solar access and summer heat protection is a critical consideration. Continue refining passive building design strategies to optimise residential amenity and comfort, through both summer and winter.	-
	17A	The proposal does not achieve compliance with the ADG requirement for 70% solar access to apartments. The proposed alternative solution to shift the assessment period to 8:30 am to 3:00 pm indicates an 89% compliance rate within that time frame. Whilst this approach is supported in principle as potentially meeting the Objective of the ADG it must be accompanied by: Providing detailed technical drawings and robust evidence to demonstrate that the alternative solution performs as intended	The updated A8.000 architectural drawing series illustrates which apartments receive mid-winter solar access between 8.30am-3.00pm at 30min/1 hour intervals. This has been summarised in the compliance tables supplied on A8.301, which demonstrates that between 9.00am-3.00pm 64% of apartments receive at least 2 hours of solar access, and if the period of assessment is shifted to 8.30am-3.00pm, 80% of apartments receive at least 2 hours of solar access. The location of these apartments is illustrated on A8.300. Further analysis of the A8.400 series has shown that in both scenarios approximately 50% of all apartments receive more than 3 hours of solar access in mid-winter.
	17B	A stronger focus on maximising naturally cross-ventilated apartments to support passive cooling	We have increased the percentage of naturally cross ventilated apartments from 69% to 75%. This exceeds the 60% required by the ADG. The remaining 25% of apartments can use mechanically assisted cross-ventilation to bring the totally number of cross ventilated apartments up to 100%.
	17C	Integrating solar protection and shading to western façades, including providing operable shading elements to enhance resident control and comfort	Operable screens have been incorporated into west-facing balconies and facades.
	17D	Designing balconies and sun-shading devices that block high-angle summer sun while allowing low-angle winter sun to penetrate living spaces. Given the site’s proximity to Hurlstone Agricultural School and its location within a precinct planned as a premier regional sporting and educational destination the proposal must demonstrate inclusivity and respond to the anticipated demographic diversity. Although future stages of the precinct are expected to deliver family-friendly apartments and diverse dwelling types, this initial development should proactively address the needs and set a strong precedent.	High-angle summer/winter sun, or midday sun, is mediated by the balcony depth of the north facing facades. Of these facades, there are two typical balcony sections, with summer and winter sun angles shown below. As is illustrated below, the balcony depths of 2850/3575mm allow winter sun into the adjoining living space while excluding the high angle summer sun.

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State Design Review Panel Responses

Topic	Number	Actions	Response
	18A	Provide family-friendly apartments by increasing the three-bedroom dwelling mix to better align with the future needs of the precinct. Consider reconfiguring three-bedroom apartments to include an additional bathroom and / or water closet as the internal area can accommodate this. This will increase inclusivity, function and usability.	Within the Campbelltown LGA in 2021, one and two-bedroom dwellings represented only 2% and 12% respectively (profile.id – Campbelltown City, 2026). There is a misalignment between the predominant housing stock of three bedrooms (43%) and four-bedroom dwellings (29%) compared with household sizes – single (20%) and two person households (28%). The Economic Impact Assessment (Atlas, 2025) for the Glenfield Masterplan Project provides the following analysis in relation to demographic trends to 2041 for the Campbelltown LGA: • By 2041, the Campbelltown LGA is expected to comprise ~82,180 households. This is expected to be led by the growth in lone person households (+6,250 households), couple with children households (+5,870 households) and couple-only households (+5,740 households). • By 2041, lone person and couple-only households are expected to grow in representation and account for 43% collectively in 2041. • By 2041 the catchment area is projected to accommodate a growing downsizer population. Residents aged 60 years and above could represent the largest increase in resident age cohorts anticipated to account for 23% of residents in the LGA by 2041. • Regarding the dwelling profile, separate houses dominate the Campbelltown LGA, with apartments representing around 2.5% of dwellings. • For the Campbelltown LGA, the growth in household income levels remain below the Greater Sydney benchmark. Housing diversity and more affordable housing options will assist with meeting the needs of a broader demographic cohort. Based on this demographic analysis, it is considered that the proposed apartment mix of 43% x 1-bedroom, 47% x 2-bedroom and 10% x 3-bedroom units is considered appropriate for the proposed affordable housing development. The three-bedroom apartments have all been adjusted to include an additional water closet.
	18B	Refer to The Healthy Higher Density Living for Families with Children Guide which provides reference for family friendly apartments.	This proposal is for 100% affordable housing, between 7-8 storeys, and is located within walking distance of a major transportation hub, burgeoning commercial centres, educational institutions, and various public parks/recreation facilities. Reference has been made to the 'Healthy Higher Density Living for Families with Children Guide' demonstrating consideration of the Building Scale Design in the following ways: • Building Configuration: • 1.1.4: All three-bedroom apartments have outlook to Roy Watts Road, where the majority of existing tree canopy exists, as well as the existing playing fields and adjoining school. All apartments will have outlook onto proposed green infrastructure, including a central 'woodland' courtyard, perimeter 3m deep-soil landscape buffer, northern communal space, and planted roofs/podiums. The bedrooms of these family apartments overlook the adjacent school. • 1.1.7: The proposed communal areas have both visual and physical access to adjacent outdoor spaces. This includes a ground floor communal room in the northern building that opens to the northern courtyard, and a rooftop cooking area that connects to the rooftop gardens. • 1.1.9: Best practice standards have been implemented regarding Environmentally Sustainable Design, with the project integrating Landcom's Climate & Community Resilience Plan; Mitigating urban heat island effect; being fully electric (no gas infrastructure); allocating 20% of the roof area to PV system (10-20% of building usage supplied via on-site generation); EV parking infrastructure provided in all carpark levels; designed to meet 4-star Greenstar criteria; Rainwater harvesting to be implemented for the irrigation of all landscape areas; 'Water Positive' strategies to be implemented on-site, including landscape areas for infiltration, and collection volumes that exceed the minimum BASIX requirements; enhanced local biodiversity through biophilic design strategies; and ample natural light and ventilation to all apartments. • 1.1.10: Waste storage and handling meet the expectations of Campbelltown Council, with centralised waste rooms located at the ground-level of each building, adjacent to lift cores.

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State Design Review Panel Responses

Topic	Number	Actions	Response
			- Family-friendly Apartments: 1.2.1: 16% of two-bedroom apartments (Qty: 9) exceed the family friendly minimum internal area. All two- and three-bedroom apartments exceed ADG minimum internal areas. 1.2.2: All two- and three-bedroom living rooms include a 2m x 3m flexible play space visible from the kitchen. 1.2.3: All family friendly apartments allow for two single beds and have a minimum bedroom size of 11m2. 1.2.4: All laundry facilities in family friendly apartments, and 3-bedroom apartments, have ample bench space (i.e. >1.2m). In most of these apartments, a separate laundry room has been provided, anticipating everyday routines. 1.2.5: All family friendly and 3-bedroom apartments provide 20% more storage than the minimum set by the ADG. 1.2.9: A column and slab structural system is proposed, with most internal walls of apartments being non-loadbearing. This allows for flexibility over time should program and use change. - Playable Outdoor Space - A multipurpose play space consisting of natural elements such as Sandstone block, hardwood and planting is located at the west end of the ground level communal landscape. Providing tactile surfaces, climbing and passive recreational opportunities. - Flexible Community Rooms: 1.4.1: The proposed primary communal room located on the ground floor adjacent to the northern lift lobby is 79m2, exceeding the 50m2 minimum. In addition to this communal space, communal bike storage/repair facilities (82m2), and smaller room (20m2) are also proposed on the ground floor. 1.4.2: as outlined in the prior point, communal room of various sizes are proposed. Depending on the input of a CHP, these spaces could develop in many positive directions. 1.4.3: Direct access, both visual and physical, is provided from the flexible communal room to adjoining communal outdoor green space along the northern boundary. 1.4.4: A small kitchenette has been integrated into the flexible communal room. 1.4.5: There is ample space for the inclusion of storage within the main flexible communal room. This will be resolved once the function of the room has more input from a CHP. 1.4.6: Both entries to the communal room are via covered walkways. The west facing entry to the communal room is provided with a canopy cover extending 2.5m beyond the wall line to encourage indoor-outdoor connection. 1.4.7: A shared accessible toilet adjacent to the communal room, and accessible from outside, has been provided. - Social Circulation Zones: 1.5.1: All common corridors exceed 1.55m width, with the typical dimension being 1.8m. lobbies are generously sized, typically 2.4m wide, with access to natural light and ventilation. 1.5.2: CPTED features such as passive surveillance, natural and artificial lighting, as well as access control have been designed into both building lobbies. Both lobbies are designed as semi-public spaces, in which residents can casually observe both the security line and beyond to the street, as well as into the internal communal spaces. All of these spaces are enclosed by a mesh/screen perimeter wall that also serves as a surface for artwork or colour (both to connect with Country and also offer a sense of ownership of the space). One likely program that could be the target of theft is the bike storage/maintenance area. to respond to any concerns around this, the space has been designed to be visually transparent, with screens at either end of the space allows surveillance both from the street, and the carpark. There is also a level change on the street elevation to further hinder access from outside the security line. Ground floor apartments have taken a similar approach to differentiating public and private territory, stepping up from the street prior to the arrival at an entry door. Spatial hierarchies have also been intentionally developed, with thresholds, sectional changes, and colour/materiality deployed to signify change in public to private space. 1.5.3: The southern lift lobbies include provision for seating overlooking Roy Watts Rd on each level. In addition to this, a raised garden is located on the ground-floor, with its edge serving as an informal seat to foster socialisation. In the northern building, nooks have been provided opposite the entry doors to the one-bedroom apartments. The intent of these is to serve as a space each apartment can 'claim', linger, and potentially socialise in while overlooking the communal spaces below. 1.5.4: Colour will be deployed to assist in wayfinding throughout the building. In addition to this, surfaces will be dedicated to Country, with first-nations artists to add layers upon the building to link to place and foster a sense of belonging.

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State Design Review Panel Responses

Topic	Number	Actions	Response
	18C	Further develop the apartment layouts, for example review the location of laundry spaces on balconies.	Apartment planning has been advanced, with no washing machines or electric dryers located on balconies. <i>Refer Architectural Drawing Set.</i>
	19A	Further develop parking areas to feel public and welcoming. Provide: 3D diagrams and sections to illustrate sightlines and views across the on-grade carpark.	3d views show sightlines within the scheme and from the public streets. <i>Refer Architectural Drawing Set.</i>
	19B	Look for opportunities to further embed Country initiatives in this and ensure it is guided by local Aboriginal Knowledge holders and Aboriginal community in continued co-design engagement, for example, through public art on ceilings, or soffit details.	The DA drawings indicate the communal areas that can potentially integrate Connecting With Country designs. <i>Refer Architectural Drawing Set.</i>
	20	The proposal shows a minimum 3.15m floor to floor, which may present challenges in complying with NCC servicing requirements. Revisit this to ensure the development accommodates building amenity and reflects best practice industry standards.	Early testing was done during design development to determine the greatest floor-to-floor height achievable for this proposal. The building height limit of 28m was one control, but given this is an affordable housing project, the more pressing constraint was keeping the building under an effective height of 25m. In staying under 25m, enhanced fire safety measures required by the NCC/BCA are avoided, saving substantial upfront, and ongoing costs. Given our NCC/BCA consultant determined that this height needed to be measured from the FFL of the basement carpark, the maximum floor-to-floor height possible is 3150mm (which gives a 150mm buffer below a 25m effective height). This proposal assumes exposed concrete ceilings, with visible services and bulkheads. For an affordable housing project, this reduces cost, but it also minimises the need for drop ceilings and reduces the challenges alluded to in this SDRP comment. Our office has achieved compliance with floor-to-floor heights less than that being proposed for this project.
	21	After the session, the following advice (item 21) was provided: Investigate the potential for some communal open space provision at roof level for the southern building while maintaining the extent of PVs proposed. This can be achieved for example by locally raising the PVs to create a shaded terrace.	To provide access to a rooftop communal space on the southern building, the lift overrun would exceed the building height limit of 28m. Further to this, there is the potential that the buildings effective height could be interpreted as exceeding 25m (see response to item 20). While more equitable access to rooftop communal spaces would be desirable, the constraints of this project make it unviable.
SUSTAINABILITY AND CLIMATE CHANGE		Demonstrate how the project will achieve the proposed ESD performance targets and initiatives to reduce climate change impacts.	-
	22	Demonstrate on plans the location and quantum of rooftop solar panel provision to support renewable energy initiatives.	The proposal has allocated approximately 240 m2 of rooftop area to be dedicated to solar. This equates to 20% of the rooftop area and meets minimum requirements for this type of development. The proposed roof form allows for the expansion of this system.

Section 4

State Design Review Panel Responses

Topic	Number	Actions	Response
	23	Consider a more ambitious target such as a 5-star green star commitment, as a demonstration of design excellence.	The project has been designed to achieve a strong Green Star outcome aligned with AH’s brief and value-for-money principles. The consultant team, together with Landcom and Hill Thalís explored the possibility of a more ambitious 5-star Green Star commitment, but the cost implications of several of the credits required to do this made the move from a 4-star to 5-star target extremely difficult given the financial constraints of the funding modal associated with this affordable housing scheme While the proposal does not achieve the 35 point target to achieve a 5-star rating, it greatly exceeds the minimum 15 point target required to reach the 4-star rating (currently achieving a 28 point target).
	24	Support active transport and reduced car use, demonstrating accessible location of bike storage.	Bike storage has been expanded and made more prominent and readily accessible. Cross reference with response to item 7.
	25A	Demonstrate onsite water capture and recycling to reduce water use, and incorporate landscape into these systems, such as through WSUD, rainwater tank collection, re-use, and natural irrigation. Further show: Water connection to Country	Sturt Noble have included graded WSUD stormwater detention areas to the central courtyard and northern communal courtyard at ground level. These are permeable ephemeral catchments intended to detain meaningful volumes of stormwater to ground soak. With connected overtopping from the central to northern courtyard. However, it is noted these WSUD areas are not required to achieve compliance and are provided in addition to the Campbelltown DCP requirements.
	25B	How a connected deep soil network will support long-term tree health, and climate resilience.	In conjunction with appropriate species selection these areas greatly increase the general rate and periods of naturally held ground water. Greatly increasing planting viability and reducing water and maintenance requirements.
	26	Illustrate how the project will contribute to NSW’s Net Zero emissions goal by 2050. Refer to Net Zero Plan Stage 1: 2020-2030 and the Embodied Emissions Technical Note for further information.	Embodied emissions will be included within the BASIX assessment as currently required by the 2050 Net Zero plan. Greenstar compliance with the Net Zero plan will be achieved through consideration of the structural system i.e. material reduction through design optimisation, and the use of lower-carbon materials. Through ongoing coordination between architectural and structural teams (and services) optimisation of the structural scheme was explored through strategies such as; aligning vertical elements through the building, minimising in-ground structures and excavation where possible, avoiding unnecessary or heavily loaded cantilevers, rationalising slab set-downs, optimising slab penetrations and PT layouts, and locating heavier loads (such as plant or landscaping) over vertical structural elements. Low carbon materials for the structural system, including low-carbon concrete and low-carbon reinforcement, have been considered during the design stages, and are able to be incorporated during construction to meet conformance requirements.

Section 4

State Design Review Panel Responses

(Graphic Comparison)



Ground floor plan presented at SDRP

- 5 Parking rationalised and basement parking extended eastwards to open up communal areas and improve circulation.
- 7 Bike storage centralised and increased. Fire tank moved to basement to allow further street activation along Water Ave.
- 8a Waste collection centralised for ease of resident use. Additional space added for bin tugs & washing facilities.
- 8b Fire water tank relocated to basement to enhance street activation through communal programming (bike storage).
- 8c Primary circulation between buildings shifted east to reduce pedestrian/vehicular conflicts through redesign on southern lobby.



Updated ground floor plan as submitted for SSDA

- 8d Elevation adjusted to have zero blank walls along Water Ave. Proposed transparent CwC screening between street & communal programming.
- 9 Equitable access and way-finding through common spaces enhanced through proposed use of colour.
- 10 Main entries moved for greater street prominence. Both entries change to generous double height spaces. Additional balconies added to first floor along Water Ave for increased surveillance. Southern entry redesigned.

Section 5

GANSW Better Placed 2.6.1 Design Objectives

Better Placed is a policy for our collective aspirations, needs and expectations in designing NSW. It is about enhancing all aspects of our urban environments, to create better places, spaces and buildings, and thereby better cities, towns and suburbs. To achieve this, good design needs to be at the centre of all development processes from the project definition to concept design and through to construction and maintenance.

The following section outlines the project's response to the seven distinct design objectives outlined in the GANSW document, Better Placed.

Section 5

GANSW Better Placed 2.6.1 Design Objectives

Objective 01

Better fit – contextual, local and of its place

Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, and communal aspirations. It also contributes to evolving character and setting.

Response

This project is set within an ambitious Master Plan for an expansive new urban area immediately on the western side of Glenfield Station, one of the best-connected stations in the Sydney network. The proposal will become the first building built in the area, and therefore it is important that it sets the standard for urban presence, street definition, landscape and amenity.

The area’s heritage context was investigated during the preparation of the Planning Proposal. There are no heritage issues or constraints pertaining to this part of the site.

A Connection to Country process was developed as part of this SSDA, led by Michael and Sian Hromek from WSP. The team has participated in a walk on country and consulted with local elders. Their advice has been incorporated into the site planning, landscape and art strategy.

The design has a purposeful relationship to each of its public frontages, allied to orientation and passive environmental design principles.

Objective 02

Better performance – sustainable, adaptable and durable

Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.

Response

The design is based on passive environmental design principles and well exceeds the minima in the ADG. Landcom have set a Green Star target of 4-stars, which the scheme surpasses.

The substantial majority of apartments receive controlled solar access to living areas and their various balconies and terraces. All windows and sliding doors have projecting hoods and wide balcony overhangs. Winter sun will penetrate deep into many apartment plans, having a considered depth to facade ratio. The setbacks and screen planting provide privacy to the neighbours on the north, east and west.

Most dwellings can be cooled via passive means through their open cross sections and corner positions, which can be assisted with air movement by ceiling fans, boosted if desired by air conditioning in the few apartments receiving a NatHERS score of less than 7.5. Where required, units will be supplemented by mechanical ventilation ensuring all units have equitable access to fresh air.

The deep soil is provided around the front, side and rear boundaries, to allow the planting of larger trees. The northern and centrally located courtyards have continuous planting, with deep soil to allow the sustainable growth of perimeter planting, to the benefit of both future residents and neighbours. The site planning rationally organises the 2 wings, which are each served by a pair of lifts and escape stairs. The communal corridors are either open galleries, or naturally lit and ventilated by fixed open louvres at the ends.

Objective 03

Better for community – inclusive, connected and diverse

The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.

Response

The building provides 120 affordable apartments in perpetuity, which will be managed by a Community Housing Provider (CHP) appointed by Landcom. The design seeks to provide a high level of community space, in the form of extensive gardens, a roof terrace, meeting rooms and shared amenities, bike parking and accessways. This is a major contribution to boosting housing diversity and social inclusion in an area that is becoming more expensive.

The site planning is distinguished by central gardens, entry promenades, open foyers, lifts, site facilities, and generous courtyards that ensure a sense of community for the future inhabitants. Circulation areas, including stairs and landings, are clearly denoted and have outlook to garden spaces, and multiple oblique views between the upper levels down to the gardens at ground and first floor levels.

Section 5

GANSW Better Placed 2.6.1 Design Objectives

Objective 04

Better for people – safe, comfortable and liveable

The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.

Response

The scheme has 21 different apartment configurations, from 1 to 3-bedroom apartments in various configurations. The apartments subject to the ADG range in area from 50m2 to 96m2. This provides excellent diversity and choice to support the community, and tailor to a range of housing needs and desires.

This is inclusive of 4 x 2 storey, 2 bedroom dwellings, accessed directly from the street, which form part of the of the residential flat building.

The scheme also includes 12 adaptable apartments. Each of these dwellings has an accessible parking space, connected by an accessible path of travel that joins all communal facilities.

The apartments gain outlook and daylight from all orientations. The well-dimensioned setbacks and central communal gardens will allow trees to grow in deep soil, with extensive planting to provide a calming green outlook for all to enjoy.

Objective 05

Better working – functional, efficient and fit for purpose

Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to changes over time. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.

Response

The building form accommodates many dwellings with corner or cross flow ventilation. The combination of site planning, planting, window design, orientation and solar controls maximises cooling in summer and heating in winter. The distribution and apartment planning are efficient, minimising corridor space and maximising habitable areas that open out to outdoor areas.

All apartments are carefully planned to maximise useable area, amenity, storage and a sense of space. Every living room and bedroom in every dwelling complies with ADG minima. All apartment areas satisfy the ADG.

All balconies are of inset rather than projecting form, making them more useable for longer periods of the day and year. This also allows for multiple rooms to open to balconies and a more complex play of light and outlook within the apartments. The balconies have solid spandrels to ensure privacy, noise protection and a coordinated architectural presentation.

Rather than the now-normal excavated basements, the open and semi-basement parking areas are daylit and open to the courtyards. This creates a more pleasant environment, and gives considerable energy savings.

Objective 06

Better value – creating and adding value

Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.

Response

The site planning rationally organises the 2 wings, which are each served by a pair of lifts and escape stairs. The communal corridors are either open galleries, or naturally lit and ventilated by fixed open louvres at the ends.

The character is understated, reinterpreting well-understood architectural elements to form a controlled contemporary design, with an emphasis on economy of means.

As affordable housing, the apartment sizes are closer to ADG minima yet have a generosity through efficient planning and carefully-worked relationship to private balconies and communal gardens.

Section 5

GANSW Better Placed 2.6.1 Design Objectives

Objective 07

Better look and feel – engaging, inviting and attractive

The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.

Response

The scheme develops its architectural character from its location and associations; the façades’ serene horizontal lines, balconies, galleries, hoods and eaves show that the environmental design are the generators of the architectural expression.

The aesthetic qualities of the project develop from the calibrated site planning and urban form. The massing and scale, the gallery access, the thresholds to the street and courtyards all are carefully developed architecturally.

Conclusion

In summary:

The site is ideal for high quality apartments, as it is within an easy walk of a range of transport and future services.

The site planning, form and scale of the facades create a model for urban housing for western Sydney. The design is a refined model for such types and can help set the direction for other new buildings in the vicinity.

The scheme provides much-needed Affordable Housing for the community, thus boosting housing diversity and social inclusion.

In its design, the project embodies Connecting to Country principles.

Environmentally Sustainable Design (ESD) has been holistically incorporated into many aspects of the project.

The project will create a high-quality residential environment for future residents, offering a range of generous and well-planned apartments with character and high amenity.

The three-dimensional design provides appropriate modulation and the detail is resolved in a confident contemporary way.

The resolution of urban, architectural, environmental and social design considerations demonstrates that the proposal is an appropriate fit to its site and context.

Hill Thalís A+UP