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1 May 2017

Design Verification Statement
Residential Development, 16 Chapman Street, Werrington
Multi-Unit sites E, F and I; South Werrington Urban Village

Introduction

This statement is provided pursuant to the requirements of Clause 50 of the Environmental Planning and Assessment Regulation 2000. It verifies that I, Tony Owen an architect registered under the Architects Act 1921, designed the building subject to this statement (referred to as 16 Chapman Street, Werrington) and that I am of the opinion the building satisfies the design quality principles of Schedule 1 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development (SEPP 65), and is consistent with the objectives in Parts 3 and 4 of the Apartment Design Guide as discussed below.

The 9 Design Quality Principles of Schedule 1 SEPP 65

Principle 1: Context and Neighbourhood Character

The site, located at 16 Chapman Street, Werrington forms part of the South Werrington Urban Village. The proposal consists broadly of 2 sites known as Site E+F and Site I, respectively. Site E+F has an area of 22,524m2 and Site I has an area of 11,164m2. These sites are located in the approved South Werrington master plan. This master plan allows for the development of the site as a mixed use zone containing detached housing 5 apartments and employment areas.

12.8.2.3 Desired Future Character
Multi Dwelling Housing: *Development closer to the railway station is proposed to be medium density consistent with metropolitan planning policies and Council's Sustainability Blueprint for New Urban Areas. Development in the form of townhouses and apartments is proposed with a strong built edge to the street and a preference for dwellings that address the streets. This type of development will transition to the general residential area.*

Site
This application relates to multi-unit sites E,F and I as indicated on the site location plan attached. Sites E and F are combined with the provision of a shared through site link between them. The site is currently semi-rural land with no significant structures. According to the DCP master plan the surrounding areas will be developed as detached housing, medium density housing and other multi-dwelling developments. The site is close to Werrington Station and adjoins Wollemi College, Kurambee School and is close the the University of Western Sydney campus.

This site is a full block with 4 street frontages. It is bounded to the east by the road which is the extension of Lander Street which is to be 20m in width. It is bounded by the proposed 24m wide east/west Link Road to the south. The east and west roads will be 18m in width. The site has a combined area of 22,524m2. It is proposed that this site is to be subdivided

into 4 separate lots. Each lot will be a self-contained development with its own parking access ramp and communal open space.

Site I is located to the east of the extension of Lander Street. This site has 3 road frontages It is bounded to the north by the drainage reserve and the east west Link Road and a proposed north south road to the east. The site has an area of 11,164m2. It is proposed that this site is to be subdivided into 2 separate lots. Each lot will be a self-contained development with its own parking access ramp and communal open space.

Principle 2: Built Form and Scale

Design Strategy
We have designed these sites according to the principles set out in the master plan and the ADG and according to best urban planning practice. Given the size of the lots it is possible to achieve all of the requirements of the DCP master plan including minimum block sizes, setbacks etc. The site has a 20m height control. This allows for a 5 storey development. There is no FSR control for the site.

Site Planning Principles

In principle, the buildings have been designed

Building Envelopes
The sites are divided into blocks with a maximum habitable width of approximately 18m. These envelopes are aligned to reinforce the street grid and define internal public and communal space. The envelopes are typically 'H Shaped'. They are divided into thirds with 1/3 being 12m deep and 2/3 being 18m deep. This breaks up the facades as well as providing wider mid-block plazas or 'commons'. The buildings are designated Building 'A' through 'H'.

Orientation and Communal Space
All of the buildings are oriented north south. This ensures that the east and west facing long facades will achieve min 2 hours of solar compliance. In addition, this configuration creates a series of north south facing courtyards. These courtyard, or 'commons' will contain a mix of open lawn areas for active recreation and more intensely landscaped areas with shade trees for passive recreation. These spaces will have no buildings to the north. This configuration maximises solar aspect to these courtyards. The 'H-shaped' building envelopes creates larger mid-block 'commons'. A large publicly accessible 'through site link' has been created running east-west through the site. A larger central green space is located aling this link in the middle of the site. This space is accessible to the public, the smaller spaces to the north and south are communal open spaces accessible to residents only.

Setbacks
The DCP requires a principle road setback of 3m. We have designed the master plan to achieve these controls. We have provided a front setback of 3m to all frontages. In some areas a 6m setback is achieved and in many cases the setback exceeds 3m. This results in a general 4 storey massing with the 5th storey setback.

Building separation.
In all cases the MP meets the requirements of the ADG. As such all buildings have a minimum separation of 12m. This is increase to 16m-18m in many areas to create larger communal plazas or 'commons'. In general, the separation at L4 increases to 18m, however this is slightly reduced in some cases between habitable to non-habitable spaces. These separations ensure privacy between buildings. In addition the general 4 storey street wall creates communal courtyards of proportion a suitable for a human scale.

Proportion
The building envelopes are generally 72m long for site E+F, however the central buildings are shorter to allow for the larger central green space.

In all cases the envelopes are modulated with recesses to reduce the apparent length. The envelopes are typically 'H Shaped'. They are divided into thirds with 1/3 being 12m deep and 2/3 being 18m deep. This breaks up the facades as well as providing wider mid-block plazas. A different approach is taken with the perimeter facades on site E+F. In this case the building length is divided in thirds by the provision of deep recessed zones. Similarly the tops floor is recessed approx. 3m to reduce bulk. This level is divided into 2 halves by a break in the middle to further reduce bulk.

Circulation, Access and Servicing
The master plan is based on a clear legible access system. Wherever possible buildings have addresses to street fronts. A through site link is located running east west on both sites. This link will provide a public pedestrian link as well as restricted access for emergency vehicles. This provides public access to the main east-west central common on each site.

The concept creates a series of north-south lineal communal open spaces between each building. A north-south access path is located on either side of each green space to provide access to every ground floor unit. This there is an extensive system of pathways for the residents. These pathways are restricted to residents for safety and security. Each lot has its own car park entry ramp which is generally located on the northern and southern street frontages within the central landscape zones.

Waste Management
We note there are 6 basement ramps within the development. It is our preference that waste not be collected from the basement as this creates excessively long ramps and as there are a large number of them, it will unnecessarily impact communal space. Waste collection occurs at ground level in 6 waste holding and collection rooms which are accessed directly off the main streets. They contain turn-tables to ensure frontal loading. This solution was resolved through consultation with council waste staff. These areas will be contained within the buildings and not impact the communal space. This ensures that a waste truck can operate wholly within the site in a forward direction.

Passive surveillance and security
This sequence of public and communal access paths and linkages creates a simple and legible access system. All of these routes are viewed from units above. This also provides a high level of passive surveillance which along with a suitable lighting and safety will ensure a safe and secure environment.

Principle 3: Density
The Sepp allows for an FSR of 2.5:1. The proposal achieves an FSR of approximately 2:1. The area is well served by schools, universities and public transport to absorb this level of development.

Principle 4: Sustainability
The design of the apartments has been influenced by the principles of passive solar design to maximise natural ventilation. The core design ensures a high proportion of corner units and through units resulting in a high proportion of north facing units and natural ventilation to minimise energy use. The design incorporates deep balcony overhangs and louvres to maximise solar protection and minimise energy use. The common lobbies are all naturally ventilated.

The design has been based on active and passive sustainable principles including the following:

- The north south orientation of buildings to maximise solar amenity to units as well as communal open spaces

- The use of building overhangs to shade windows and balconies to minimise energy use
- The harvesting or rainwater for use in the irrigation of the extensive landscaped areas
- The use of external screening devices to provide sun shading to minimise energy use.
- The use of sustainable building products

Principle 5: Landscape

The design concept creates a hierarchy of communal and public spaces along a legible system of access paths. There is a hierarchy of larger central 'common' spaces as well as more passive linear spaces. Due to the site layout, this pattern has evolved a linear character. We have taken this linear character as the basis of the design character. The rectilinear geometry of the buildings is reflected in a break-up of the landscaped areas according to function and location. This has resulted in a 'mondrian'-like character. This patterning will be reinforced by planter bays, low walls, lines of trees and shrubs as well as pathways, fences and ramps. This geometry is ultimately reflected in the building facades to create a cohesive and striking architectural character.

Principle 6: Amenity

The proposal will result in high standards of amenity for the future occupants of the building. All apartments have lift access from the basement parking areas and lobbies ensuring all units are fully accessible. The apartments have been designed according to SEPP 65 design guidelines as follows:

Site E+ F

1) Solar and Daylight Access

Performance Criteria: 70% of apartments in a building to receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter.

Performance: The buildings are compliant as 73% of apartment living rooms or (374 of 516 units) would receive direct sun penetration for a minimum 2 hours per day between 9 am and 3pm. In addition, each individual building complies with 70% solar amenity. See solar diagrams.

Performance Criteria: A maximum of 15% of apartments in a building receive no sunlight between 9am and 3pm at mid-winter.

Performance: The building is compliant as XXX% of the units will not receive direct sunlight in winter.

Performance Criteria: A window should be visible from all habitable rooms.

Performance: The building is compliant as a window is visible from all habitable rooms.

2) Natural Ventilation

Performance Criteria: 60% of units should be naturally cross ventilated. The rear of single aspect unit kitchens/open plan layouts to be maximum of 8m from glazing.

Performance: The buildings are compliant as 67% or (358 of 534) units are naturally cross ventilated

Performance Criteria: The area of window openings should be at least 5% of floor area served.

Performance: The building is compliant as area of window openings is greater than 5% of floor area served.

3) Ceiling heights

Performance Criteria: The minimum ceiling height for habitable areas is 2700mm.

Performance: The building is compliant as all units have 2700mm ceilings in habitable areas

4) Apartment Size and Layout

Performance Criteria: Apartments are required to have the following minimum internal areas: Studio 35sqm/1 Bedroom 50sqm/ 2 Bedroom 70sqm / 3 Bedrooms 90sqm.

Performance: The building is compliant as all units have the minimum required internal areas according to SEPP 65.

5) Apartment Depth

Performance Criteria: Preferred maximum internal building depth should be 18m. Habitable room depths are limited to a maximum of 2.5 X the ceiling height. In open plan layout (where the living, dinning and kitchen are combined) the maximum habitable room depth is 8m from a window.

Performance: The buildings are not compliant as in some buildings the maximum depth of through units exceeds 18m, however, as all of the amenity criteria of the ADG are achieved, the objectives of this standard are achieved.

Performance Criteria: Preferred maximum unit depth is approx. 8m.

The building is generally compliant as the large majority of units have a maximum unit depth is approx. 8m.

6) Private Open Space and Balconies

Performance Criteria: All apartments are required to have primary balconies as follows: Studios 4sqm; 1 Bedroom 8sqm; 2Bedroom 10sqm; 3 Bedroom 12sqm.

Performance: The building is compliant as all apartment balconies have the minimum required size.

Performance Criteria: The minimum depth of balconies is 2m for studios,1 bed, 2 bed and 2.4m for 3 bed.

Performance: The building is compliant as all apartment balconies have the minimum required depth.

8) Common Circulation and Spaces

Performance Criteria: The maximum number of apartments off a circulation core on a single level is eight.

Proposed Design Performance: The buildings are compliant as the maximum number of apartments off a circulation core on a single level is seven.

9) Storage

Performance Criteria: The minimum requirements for storage are as following: Studio 4sqm/ 1 Bedroom 6sqm/ 2 Bedroom 8sqm/ 3 Bedroom 10sqm. And at least 50% of the required storage is to be located within the apartment.

Performance: All units have a minimum storage size and are compliant as they have the capability of providing the storage requirement with at least 50% of storage within the unit and 50% within the basement.

10) Ground Floor and Lobbies

Performance Criteria: Direct Access should be provided for ground floor apartments.

Performance: The building is compliant as direct Access is provided for ground floor apartments.

Performance Criteria: Retail or home office should be located along ground floor frontages.

Performance: The building is compliant as retail is located along ground floor frontages.

Site I

1) Solar and Daylight Access

Performance Criteria: 70% of apartments in a building to receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter.

Performance: The buildings are compliant as 83% of apartment living rooms or (184 of 221 units) would receive direct sun penetration for a minimum 2 hours per day between 9 am and 3pm. In addition, each individual building complies with 70% solar amenity. See solar diagrams.

Performance Criteria: A maximum of 15% of apartments in a building receive no sunlight between 9am and 3pm at mid-winter.

Performance: The building is compliant as XXX% of the units will not receive direct sunlight in winter.

Performance Criteria: A window should be visible from all habitable rooms.

Performance: The building is compliant as a window is visible from all habitable rooms.

2) Natural Ventilation

Performance Criteria: 60% of units should be naturally cross ventilated. The rear of single aspect unit kitchens/open plan layouts to be maximum of 8m from glazing.

Performance: The buildings are compliant as 67% or (147 of 221) units are naturally cross ventilated

Performance Criteria: The area of window openings should be at least 5% of floor area served.

Performance: The building is compliant as area of window openings is greater than 5% of floor area served.

3) Ceiling heights

Performance Criteria: The minimum ceiling height for habitable areas is 2700mm.

Performance: The building is compliant as all units have 2700mm ceilings in habitable areas

4) Apartment Size and Layout

Performance Criteria: Apartments are required to have the following minimum internal areas: Studio 35sqm/1 Bedroom 50sqm/ 2 Bedroom 70sqm / 3 Bedrooms 90sqm.

Performance: The building is compliant as all units have the minimum required internal areas according to SEPP 65.

7) Apartment Depth

Performance Criteria: Preferred maximum internal building depth should be 18m. Habitable room depths are limited to a maximum of 2.5 X the ceiling height. In open plan layout (where the living, dinning and kitchen are combined) the maximum habitable room depth is 8m from a window.

Performance: The buildings are not compliant as in some buildings the maximum depth of through units exceeds 18m, however, as all of the amenity criteria of the ADG are achieved, the objectives of this standard are achieved.

Performance Criteria: Preferred maximum unit depth is approx. 8m.

The building is generally compliant as the large majority of units have a maximum unit depth is approx. 8m.

8) Private Open Space and Balconies

Performance Criteria: All apartments are required to have primary balconies as follows: Studios 4sqm; 1 Bedroom 8sqm; 2Bedroom 10sqm; 3 Bedroom 12sqm.

Performance: The building is compliant as all apartment balconies have the minimum required size.

Performance Criteria: The minimum depth of balconies is 2m for studios,1 bed, 2 bed and 2.4m for 3 bed.

Performance: The building is compliant as all apartment balconies have the minimum required depth.

4) Common Circulation and Spaces

Performance Criteria: The maximum number of apartments off a circulation core on a single level is eight.

Proposed Design Performance: The buildings are compliant as the maximum number of apartments off a circulation core on a single level is seven.

5) Storage

Performance Criteria: The minimum requirements for storage are as following: Studio 4sqm/ 1 Bedroom 6sqm/ 2 Bedroom 8sqm/ 3 Bedroom 10sqm. And at least 50% of the required storage is to be located within the apartment.

Performance: All units have a minimum storage size and are compliant as they have the capability of providing the storage requirement with at least 50% of storage within the unit and 50% within the basement.

6) Ground Floor and Lobbies

Performance Criteria: Direct Access should be provided for ground floor apartments.

Performance: The building is compliant as direct Access is provided for ground floor apartments.

Performance Criteria: Retail or home office should be located along ground floor frontages.

Performance: The building is compliant as retail is located along ground floor frontages.

Principle 7: Safety

This sequence of public and communal access paths and linkages creates a simple and legible access system. All of these routes are viewed from units above. This also provides a high level of passive surveillance which along with a suitable lighting and safety will ensure a safe and secure environment.

A variety of security measures have been incorporated into the design of the apartment building. The main entry space is overlooked by the units above. The basement carpark is secure providing security for residents and visitors arriving by car. There is also good passive surveillance provided by the street front units and for the approach to main apartment entry lobby areas.

Principle 8: Social Dimensions

The proposal will provide an increase in the residential housing available in Werrington, consistent with the redevelopment of the area during its transition from rural and low rise housing uses to a high quality medium density residential area. The buildings will contain 750 high quality apartments that are generous in size with generous open private and public spaces that will enrich the quality of the dwelling product currently available in the area. The proposal includes a suitable and diverse mix of unit types.

All apartments are generous in size and include 1, 2 & 3 bedroom apartments. These will serve to provide accommodation for a wide mix of occupants including large families and retirees.

All units have generous storage provisions both inside and outside of the apartment with a dedicated storage space located at basement level.

The site is located close to public transport near Werrington Station and a range of community facilities and services.

Principle 9: Aesthetics

We have sought to design a series of contemporary buildings according to environmental and sustainable principles. Whilst it is early in the design stage we have proposed facades which demonstrate these principles including the following:

- The use of variety through the variation of facades throughout the development. This will be achieved by different treatments and modulation as well as varying the colours to differentiate different precincts within the development.
- The use of wide balconies to maximise private open space, views and solar amenity.
- The use of external screens to provide shading and privacy to minimise energy use as well as articulate the facades.
- The use of colour to enliven facades and differentiate buildings.
- The strong use of recesses and protrusions to modulate the facades and minimise bulk and scale.
- The use of ground floor fencing to provide privacy and articulate and define public space.
- The use of setbacks to create a human scale and well-proportioned public spaces.
- The use of durable and varied materials

Ultimately, the architectural character arose from the landscaped pattern. The linear nature of the master plan resulted in a ‘mondrian’-like composition. This was then reflected in the break-up of the facades. This guides the modulation of recesses and protrusions to modulate the facades creating an active and attractive streetscape and minimise bulk and scale.

The result is a progressive design of a high quality which will enrich the area and provide a bench mark for the community.

Tony Owen
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