

Wednesday, 1 June 2016

## **ARCHITECTURAL DESIGN STATEMENT**

### **FOR A PROPOSED RESIDENTIAL BUILDING AT 32-36 LETHBRIDGE ST, PENRITH, NSW, 2194**

#### **Introduction:**

The project is a proposed residential flat building development located on Lethbridge St, within close proximity to Penrith High School and Nepean Hospital. The site lies between surrounding housing of low scale densities and new residential developments of medium scale densities.

#### **1.0 Site and Context:**

The unique nature of the site evokes a response that must satisfy both the current and future density of the precinct. An assessment of the context which directly impacts the proposed design is identified below:

-The Nepean Hospital: To the east of the site, the hospital site is characterised by diversity of height, density, building footprints and sectional profiles. The growth over the years appears to follow an organic and random pattern of development within the grand rectilinear site.

-Low-density Residential: In contrast to the adjacent Hospital, the neighbouring Residential lots sprawl out to the east of the site in a regular orthogonal urban grid. The majority of these lots contain single low-density housing located on long rectangular lots with the short boundary addressing the street. Scattered throughout the low-density housing are some medium-density villa and townhouse developments which are generally consist of central 'gun-barrel' driveways with terraces on either side.

-Short term to future growth pattern: We note the urban fabric is changing from a low-density to an urban high-density with recent legislative amendments in the Penrith LGA. To clarify, the change in scale is from a one or two storey single dwelling per lot to a 5-6 storey residential development; 15 times the density of the existing residential neighbourhood.

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## **2.0 Building Form, Aesthetics, Scale and Density**

As a direct Response to the ADG setback controls the building is placed within the setbacks and centred on the site. Applying the controls of the ADG and similarly the Council DCP to this site which is a regular rectangular shape with the long boundary facing the street and North we note that the allowable building envelope is very deep for a residential flat building. The proportion of the lot allows 6m Setbacks to all boundaries however other controls within the ADG attempt to thin the building out so that high quality amenity can be achieved for the units and common areas.

Our response to the ADG controls is to maximise the extents of the allowable building envelope and hollow out the centre of the building with an atrium. The result is an outcome which allows cross ventilation to all common areas and all south facing units. The cross ventilation achieved over the total project exceeds the minimum requirements by 16%. The solar access achieved over the total project exceeds the minimum requirement by 7%.

The building footprint maximises the perimeter of external facade which avoids the need for snorkel units.

Accordingly, we have explored other solutions, resulting in an atrium building with maximised the facade perimeter and created an interesting atrium space. We are proposing a geometrically clear, well illuminated and well ventilated atrium, a foyer or light well open to the sky. In addition the atrium creates a high quality entry area for the residents. It is important to say that there are no bedrooms or living rooms facing the atrium, just the entries of the units. Further to this, high windows in the bathrooms of some units access the atrium to achieve cross ventilation and allow the building as a whole to breathe.

Alternate siting options were explored post suggestions of the Urban Design Review Panel Meeting. The UDRP advised that the atrium space was compromising the quality of the common areas and the ability for soft landscaping opportunities. We have considered the request raised and explored the siting options as shown below. The siting option explored thinner building forms (no atrium) and T shaped Footprints. The options explored and as recommended by the UDRP were tested, compared with the current proposal and ultimately discarded for the following reasons:

1. The alternate T shaped forms with reduced side setbacks to the boundaries increased the amount of overshadowing to the common areas. Further to this if the side setbacks were not reduced and a T shape was implemented the additional C.O.S rendered would ultimately suffer the same fate due to the northern orientation of the lot.
2. The thinner and compressed building forms resulted in too many south facing single aspect units and poor unit layout configurations.
3. Please refer to the DA20 plans which identifies additional issues and reasons why each alternate option once tested was ultimately discarded and that the current proposed option is the best design outcome for the site and neighbouring context.

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The facades of the building define a hierarchy for the site - the northern facade facing Lethbridge St is primary and the facades looking to the side setbacks maintain a secondary role. However both facades pursue rationality, clarity, proportion and rhythm which results in a simple elegance (values frequently lost).

## 2.1 Materiality of the Facades:

The key materials are a combination of brick and black profiles (slab edges, louvres and windows), accordingly and provide support to the ideas explained previously.

Solar protection to large glazing elements is gained on the Northern Elevation with balconies (a solar study has been completed). Sun and Privacy control is achieved on the Eastern and Western Facades(side Boundary facing) through operable sliding louvres.

## 2.2 Ground Floor Terraces facing Southern Boundary

Ground Floor Terraces facing south have an increased setback from the boundary. Although the UDRP requested a 6m setback for the ground floor, the proposal provides a 5m setback which

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deem acceptable considering that the UDRP did not consider that the site was in a dip and local contours of the properties to the immediate south of the property are higher than the natural ground level directly below the terraces. Please refer Section 2 DA13.

### **2.3 Entry: Gardened Side Entry Vs Central Narrow Corridor.**

The proposed entry to the building is through a wide landscaped and animated common area linked to an open air and luminous Atrium space which contains the lift lobby. The entry procession suggested by the UDRP is to enter the building through a long, narrow and deep central corridor to access a lift lobby. The central entry idea as suggested by the UDRP is deemed to be undesirable in comparison to the calibre of the side entry sequence proposed on this project.

### **2.4 Direct Street Entries for Street Facing Ground Floor Units:**

The two ground floor units facing the street will have direct access to the street via a gate in the courtyard fence.

### **2.5 Vehicle Driveway**

The vehicle driveway is located underneath the building so that the landscaping opportunities are maximised. The driveway is located on the opposite side of the building to the pedestrian entry so that the clash between people and cars at street level is minimised.

## **3.0 Sustainability**

The Apartment Design Guide 2015 aims *to deliver improved sustainability through better traffic and transport solutions, greater building adaptability and robustness, improved energy efficiency and water sensitive urban design*. The proposed development aims to exceed the minimum standards of the ADG 2015 wherever possible in order to maximise sustainability of the development.

Consideration has been given to the increased apartment areas throughout the development to facilitate future sustainable growth of Sydney's outer suburbs. The apartments have been designed with optimal efficiency in mind so that every square metre is purposeful and delivers unparalleled efficiency.

Bicycle parking has been located on the basement 1 to promote the use of active transport to the Penrith area in lieu of vehicle use. (See Principle 6 for details). The development also features landscape areas in accordance with the requirements of the ADG 2015 design criteria. (See Principle 5 for details).

Louvres on the side setbacks and awnings - balconies- will reduce the energy use in summer months by protecting north and west-facing apartments to passively control the internal conditions of the apartments. A solar study demonstrates that louvres are not needed on the north balconies on summer due to the balconies.

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#### **4.0 Landscape & Common Open Space (C.O.S).**

The proposal includes a generous and open common area on the Western side of the site. The following items have been considered in determining the most appropriate location of the main C.O.S.

- Desire to avoid a skinny, narrow and overshadowed common area along the rear setback or to the southern rear of the Head of a T shaped Residential Flat Building.
- The site is constrained by Overland flow. As a result of the overland flow flooding issue swales are required along the eastern and southern Boundaries at 5m and 4m respectively. A 1m wide swale is also required to the Western Boundary.
- The western side of the site receives more solar access then the eastern side as the position of North is at an angle to the street frontage.

Therefore the logical location for the common area is on the western side of the site as it will receive the more solar access then the eastern or southern sides.

The proportion of the common area is embellished by **widening the side setback at ground level to 9 metres**. The proportions and design of the space have been carefully considered to take into account the slope of the land falling to the rear and undercroft of the building. The result is a Clever use of terracing both the natural ground level and the concrete slab over the basement carpark so that the space is articulated up into numerous zones in a combination of well connected open and covered areas suitable for multiple uses for the full depth of the side setback. The advantage of the common open area on ground located with the side setback means solar access can never be built out by neighbouring development. Some direct sunlight will always penetrate the full extent of the C.O.S.

The side Setback C.O.S has a strong connection to the entry, atrium space and lift lobby on ground. This promotes activation of the common areas and social interaction between residents. The atrium space on ground has been intentionally left minimal with a lone tree and seating bench so that the residents living on site can make it their own. The atrium space will be suitable for a variety of uses including meetings, gatherings, outdoor fitness equipment, herb gardens, vegetable gardens to name a few possible uses.

The atrium is covered with a polycarbonate roof sheeting above however is open on all sides at high level so that the building can breathe whilst controlling climatic conditions within the atrium and circulation corridors to apartments.

The Basement Carpark has been setback from the street 2m which is suitable for large trees and deep soil landscaping. The basement carpark is extremely compact and centred underneath the building so that significant and far superior landscaping opportunities and deep soil planting have been achieved.

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## **5.0 Amenity**

Penrith Progression 2015 identifies walking & cycling as a "Shaping Element" to make Penrith an Active City (2.7). The site located to about 0,8km west of the Penrith CBD and adjacent to the Nepean Hospital precinct. Bicycle Parking has been positioned in a convenient location on basement 1 to promote active transport in and around the Penrith CBD. The side facades have been 'screened' by way of louvres that provide sufficient visual screening. This design consideration is intended to improve the amenity of the internal living areas of the apartments. Louvres also provide sun shading to improve the internal environment of each apartment, exceeding minimum standards with regards to BASIX compliance.

## **6.0 Safety**

Secure entry into the building has been located along Lethbridge St. Intercom access & CCTV provides a single point of secure entry. There is a gate that provide access to the Communal Open Area and the foyer of the building. Access for visitors is via intercom security access with CCTV surveillance.

## **7.0 Housing diversity and social interaction**

Residential areas of Penrith have traditionally included a mix of detached housing (3br+) with a scattering of villa developments closer to the Penrith CBD (2br+). With the recent rezoning to R4 High-Density Residential throughout the LGA, the proposed development aligns itself to the existing demographic while providing increase density to respond to the demands of the growing outer suburban ring of Western Sydney.

The development features a mix of 1br, 2br & 3Br apartments (mainly 2br) which also responds to current market demands in the area. Located in Western Sydney, apartments prices are considerably lower than inner city equivalents which facilitates affordability by default. Social interaction between residents of the development is enriched by the design of an open atrium area and landscaped common area.

## **Summary**

The proposed design responds to the site context with full consideration of the design criteria stated in the Apartment Design Guide 2015. The aspects of the design listed above respond directly to those listed in to Schedule 1 of SEPP 65 - 2015.

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