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Sutherland Shire LEP 2013 - Submission

Council Ref: LP/03/252376

Our Ref: 2012-2013-0034

Client: Mr Curt Stainer

Site: 2-14 Station Street, Engadine

Date: Friday, April 26, 2013

Table of Contents

Figures

1 Executive Summary

This is a formal submission under section 57(3) of the *Environmental Planning and Assessment Act* 1979 (the Act). No request is made under section 57(5) of the Act.

It is submitted that the amendments of the Draft LEP 2013, as sought by this submission, are minor and required to better meet the Sydney Regional, Sub-regional and draft LEP 2013 aims and objectives. Thissubmission does not trigger any need for further public consultation under section 57 of the Act as there are no additional environmental or amenity impacts arising from the amendments sought.

Council should proceed under section 58 of the Act and seek determination that further community consultation is not required under section 58(3) of the Act, consequential to adoption of this submission in the final Council resolution to make the LEP 2013.

This submission supports the B3 zone for Engadine Town Centre but seeks that an increased HOB (30m) and FSR (3:1) be assigned to the subject site, consistent with other centres zoned B3, to achieve job and dwelling targets with consistent with good town planning and urban design practice. Please refer to Part 6 of this submission "Comparision to other B3 Town Centres".

Having proper regard for the subject site's prominent corner "gateway" location, its proximity (unmatched accessibility to public and private transport), its physical ability to support higher height and density with no adverse amenity impacts upon neighbours or public domain, and ability to full comply with SEPP 65 and the RFDC this submission should be supported.

A key strategy is to improve the use of public transport in Sydney by placing the highest buildings with the highest densities within 200m of heavy railway stations.

This site is within 5m of the Engadine Railway Station's entry with lift and subway access.

The site has immediate access to the Princes Highway and the bus interchange on its door step as well as being located with a Town Centre serviced by a wide range of retail and commercial services within short walking distances. It is within 100m walking distance of the Royal National Park, open space fields and the Town Square.

There are no equivalent sites in the Sutherland Shire that are located within walking distance and accessibility to all these facilities and attributes.

This site due to its commercial neighbour (south-west), topography and orientation, even at HOB and FSR well in excess of what this submission proposes, will not have any adverse privacy, overshadowing, loss of views or other amenity impacts upon its neighbours. This submission only seeks a modest increase but Council may having considered this submission allow more significant increased density and height without any additional impacts.

The existing large commercial building to the south-west of the site has a greater impact upon residential RFB further south-west and the bulk of the overshadowing

will fall upon the Princes Highway (see Part 9 of this submission "Shadow Analysis").

At the HOB 30m and FSR 3:1 as proposed by this submission, development of the site is easily capable of full compliance with SEPP 65 and the RFDC. Block modeling incorporated in this submission assume a block edge outcome and a maximum 18m building depth to reinforce the corner and gateway nature of the site.

Zone B3 is identified by the exhibited material as:

> "The B3 Commercial Core zone applies to the larger town centres, including Sutherland, Miranda, Caringbah, Cronulla, and Menai town centres and the Southgate Shopping Centre. This zone provides for extensive commercial and high-density residential development, in proximity to public transport.

The B3 zone is fundamentally different from B2 Local Centres and increased HOB and FSR for Engadine's Commercial Core is appropriate.

Engadine is well placed to assist Sutherland Shire Council in meeting job and dwelling targets and this site is the most accessible site in Engadine, if not one of the most accessible in the Sutherland Shire.

Engadine is not proposed to be a B2 zone. B2 zones are proposed to be held to a maximum HOB of 20m or FSR 2:1 by the Draft LEP. Whilst the Draft LEP proposes a height of 25m, it then proposes an FSR of 2:1 at HOB 25m. The 2:1 maximum FSR is adopted by the Draft LEP for the lower intensity and density B2 zones. All other B3 zones adopt a wider range (higher) HOB and (higher) FSR as detailed by the analysis in this submission. Engadine should be treated the same as other B3 zones where sites support higher FSR.

There is a fundamental problem between the HOB 25m and the FSR 2:1 proposed. This is inconsistent with the larger range of higher HOB and FSR applied in other B3 zones. Engadine and specifically the subject site should be treated in a similar manner to the other B3 zones in terms of providing a range of HOB and FSR varying the built form outcomes. Council should prpmote higher HOB and FSR where sites can deliver higher levels of accessibility and good amenity outcomes for neighbours and occupants.

In basic terms, there has been little thought put towards the identification of appropriate key corner and gateway sites and the application of HOB and FSR consistent with the creation of strong corner site buildings defining the entries and exits to Engadine's Commercial Centre, a well accepted urban design principle.

Further, little thought has been given in the Draft LEP to sites that can deliver higher HOB and FSR with better amenity outcomes and high accessibility to public transport, such as the subject site.

Engadine has been effectively "off the radar". Carringbah, Cronulla and Sutherland, have proper published centre strategies, where as Engadine does not, yet the draft LEP B3 zone is to be applied. This is unfortunate as Engadine Town Centre needs a more detailed strategic vision taking account of site specific constraints and benefits.

The subject site is a prominent corner gateway site. It has a historically strong presence being at the entry to Engadine Railway Station and Station Street defining the main public transport entry for commuters utlising heavy rail and bus interchange facilities immediately adjoining the site on the boundary of the SP2 zones to the east.

It is this submissions opinion that the sites at No.2 to No.14 Station Street, Engadine inclusive, held in single ownership, should be:

- Zoned B3 consistent with the draft exhibited LEP.
- HOB 30m (U) reinforcing this important "corner and gateway" site within 5m of the entry to Engadine Railway Station and Station Street.
- FSR 3:1 (V) reinforcing an appropriate relationship between HOB & FSR consistent with other B3 zones (see Comparision to other B3 Town Centres) to ensure that this corner is reinforced by a strong block edge building addressing the entry to Engadine Railway Station and Station Street defining the main public transport entry for commuters utlising heavy rail and bus interchange facilities immediately adjoining the site on the boundary of the SP2 zones to the east.

The Draft LEP provides numerous examples within other B3 town centres where the HOB and FSR are equivalent to or larger than that sought by this submission.

The owners are only seeking HOB 30m as this will permit more sustainable development by compliance with the 25m effective height requirements for building provisions within the National Construction Code (previously known as the Building Code of Australia) and better achieve SEPP 65 and RFDC outcomes. Once a building exceeds 25m effective height under the BCA (NCC), measured from the top most habitable floor level to the exit level at the footpath, the next step required to make development economically viable is HOB 40m and FSR 4:1.

2 Locality

Engadine has been classified as a village in the South Subregion of Sydney, under the Metropolitan Strategy, see Figure 1 - Locality (Source: NSW Metropolitan South Subregional Strategy).

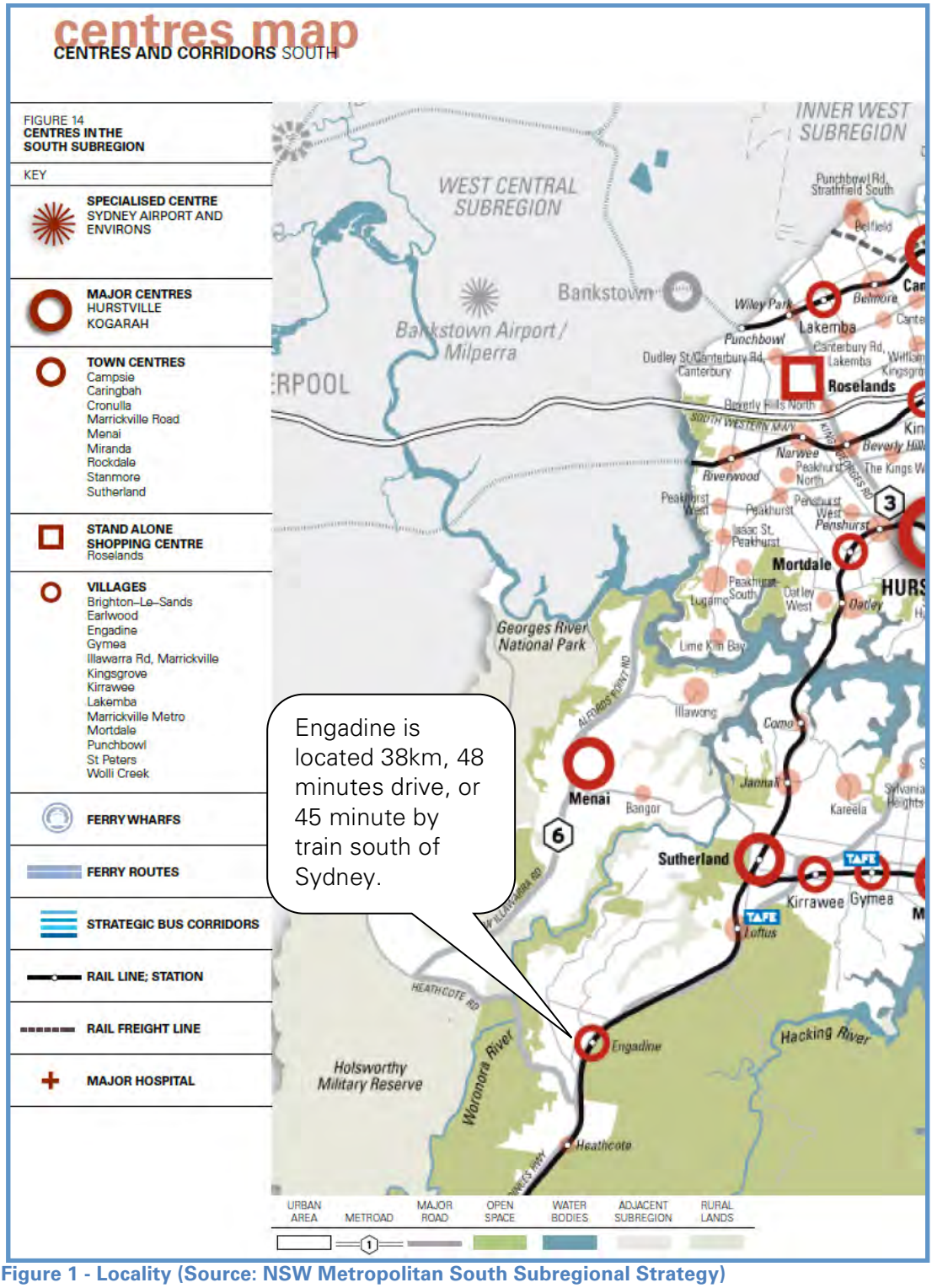

Figure 1 - Locality (Source: NSW Metropolitan South Subregional Strategy)

3 The Site

The site is No.2 to No.14 Station Street, Engadine as outline in red in Figure 2 - The Site No.2 to No.14 Station Street, Engadine.

The site is the nexus and important focal point of heavy rail access at the Princes Highway (Railway Parade) and Station Street. The site is at the crest of the hill with extensive views available from any moderately elevated position.

Figure 2 - The Site No.2 to No.14 Station Street, Engadine

3.1 Site Ownership

The site is owned by Sydney William Stainer and Dianne Stainer as joint owners.

Ownership patterns are a relevant strategic planning consideration as fragmented ownership is an impediment to urban renewal.

The site is consolidated under single ownership by the Stainer family. There are no consolidation impediments to the development of the site. The owners wish to retain and expand a long standing family business at the site upon redevelopment which has and will continue to provide employment for 6 staff and more with expansion.

3.2 Real Property Description

The site consists of 3 lots with a total site area of 1,255m^2:

1. Lot 3 in DP23060 – Area 335m^2
2. Lot 4 in DP23060 – Area 335m^2
3. Lot 5 in DP23060 - – Area 585m^2

The site RL vary from 184.75 (east corner) to RL188.25 (west corner), a 3.5m cross fall west to east. The frontage to Station Street has a fall of 1.43m towards the Princes Highway (Railway Parade). The frontage to the Princes Highway as a fall of 1m towards Station Street.

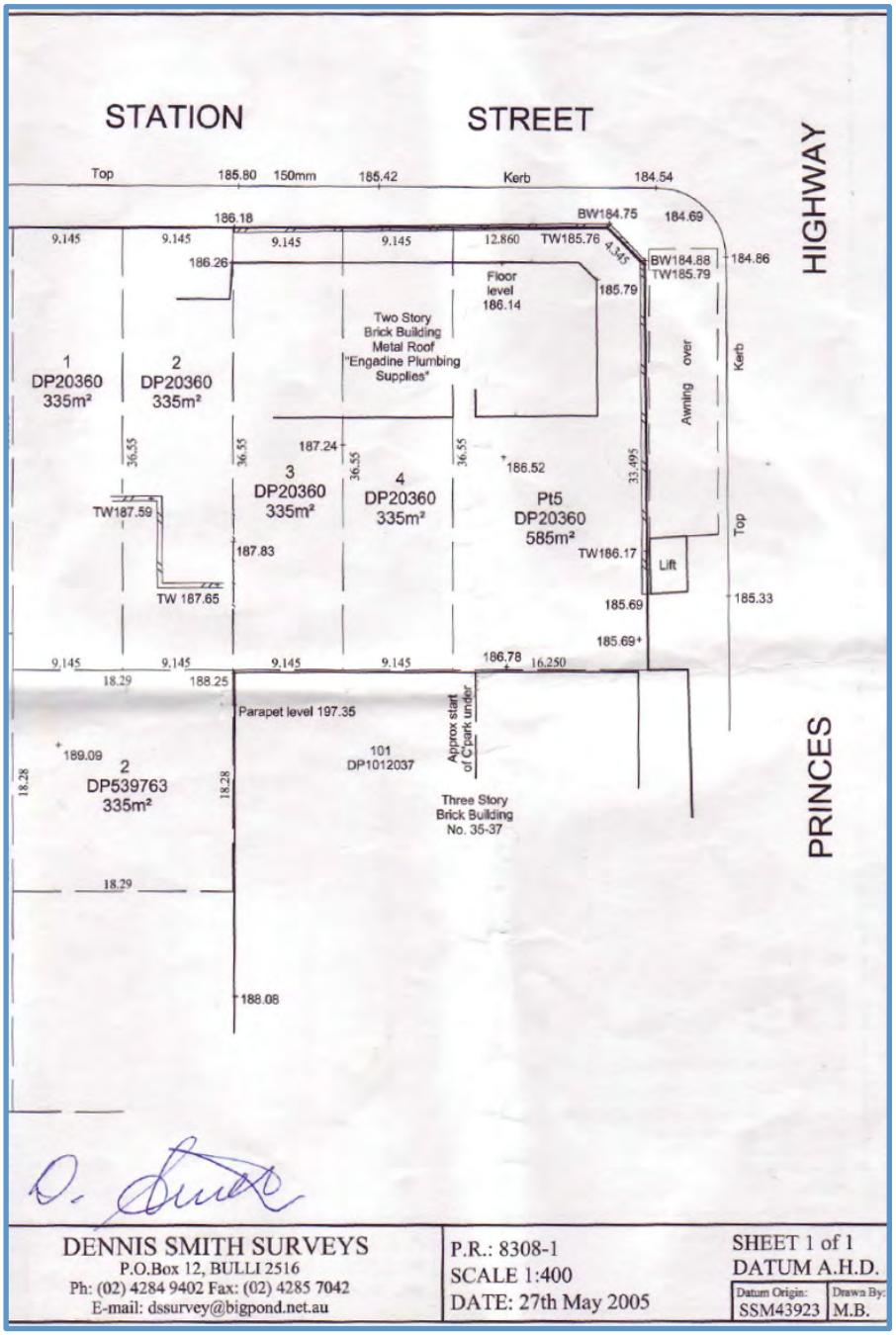

Figure 3 - Extract of Survey 27 May 2005

4 Engadine Town Centre

Engadine Town Centre is a great example of the activation of a village[1] by fine grain smaller shops and commercial premises within a generally inviting and well connected pedestrian environment.

It is nevertheless clear, through the exhibition of the Draft LEP, that the classification of Engadine as a village is challenged by virtue of the proposed B3 "Commercial Core" zoning.

This submission supports the proposed B3 zone. Engadine's Town Centre, serviced by the 4 major supermarkets chains, a new Community Centre and recent medium density development including RFB and a new aged care facility (under construction) cannot be reasonably classified as a village.

Council is correct to seek to deliver job and dwelling targets through the promotion of the urban renewal of Engadine Town Centre as a Commercial Core.

Engadine is characterised by 2 large, inward looking, supermarket based shopping mall buildings (malls) sitting around the centre. The malls provide excellent parking in addition to the on-street parking in the Old Princes Highway, Caldara Avenue and Station Street. The malls promote fully compliant disabled pedestrian access to the fine grain smaller business environment of the main streets (Old Princes Highway and Station Street).

Council's large open hardstand parking to the Coles Supermarket in the western precinct of the Town Centre provides additional parking.

The juxtaposition of the two retail forms (malls and fine grain narrow shop fronts) demonstrates that they can work together, in an economic sense, to make a centre more vital, subject that accessibility and amenity are cleverly designed and controlled, for both vehicles and pedestrians.

Nevertheless, the large blank (inactivated-"mean") walls of the large lots, coarse grain malls, with scant active street frontage in numerous locations, but for their limited entries, still result in dead, inactive, areas of streetscapes within Engadine.

The highly activated Old Princes Highway and Station Street footpaths, therefore remain the most important elements of the Town Centre.

The clever placement of the new community centre, town square and the relocation of the RSL war memorial within the same space, together with public parking and a new aged care facility now under construction, all contribute to the further activation of the public domain in Engadine, which has become the new vibrant town centre for Engadine.

Whilst it is observed that daytime activation is excellent, the lack of residential occupation, at sufficient density within the Town Centre, means that Engadine is not well activated of an evening.

[1] Engadine is defined as a Village in the South Subregion of Sydney under the NSW Government's Metropolitan Sub-Regional Strategy.

The introduction of shop top RFB housing above 1 or 2 storey retail and commercial uses (keeping fine grained and smaller strata occupancies at footpath level) will improve the activation of the Engadine Town Centre of evenings with the inherent CPTED benefits that follow from casual observation and such activation at street level and from new residential RFBs.

Field observations and mapping of grain size has demonstrated that some larger land holdings have successfully delivered fine grain results through the provision of small foot print strata retail premises at street level and strata commercial premises on their first floors. Unfortunately, with limited residential above they don't contribute to evening activation of the Engadine Town Centre. Night observations demonstrate that Engadine Town Centre is effectively dead once the malls close. Small restaurants rely upon demand created from the low-density areas around the town centre which then results in increase car use as the primary method of access.

The best outcome is to provide more residential development close to Engadine Railway Station and the bus interchange in Station Street, in new 7-9 storey mixed use developments. Fine grain commercial and retail spaces that are affordable are necessary to retain small business. To some extent, commercial and retail spaces can subsidised by uplifted yields in the residential components above.

FSR 2:1 presents little incentive to urban renewal within the Engadine Town Centre. The Council's Housing Strategy acknowledges few development have occurred in the Engadine Town Centre but proposes no change to FSR 2:1. Height is important but yields are very important, the yield that FSR creates must reflect the increased height and provide urban renewal incentives.

Pedestrian observations have demonstrated that the location of through site links within and from the malls are important. The links between Engadine Station, car parking (provided by the shopping mall developments and Council free parking) and the town centre activate the pedestrian environs. Sutherland Shire Council's choice to retain the Old Princes Highway, as a shared vehicle-pedestrian zone, rather than convert it to a pedestrian mall has delivered a vibrant result.

However, the footpath awnings are not contigious. Pedestrian amenity can be improved by new developments ensuring that contigious awnings service the full length of Station Street from the Railways Station to the intersection with the Old Princes Highway. This should be a specific DCP provision.

Accessibility to the fine grain core is primarily obtained from parking at the periphery via arcades and malls - through site links. The provision of higher density residential in the core of Engadine, serviced by a wide range of commercial and retails service as well as community services, is a desirable outcome that will reduce car use and promote better use of public transport.

4.1 Housing Strategy

Sutherland Shire Housing Strategy 2031 dated December 2012 articulates, as relevant to Engadine, that:

- Fewer multi-unit residential developments have occurred in Engadine centre than any other centre in the Shire.
- There has been an increase in single person households in Engadine. Engadine also showed an increase in families to 2011, as young families established themselves in the area.

This submission will not repeat the Housing Strategy's detailed observations but it purports that 2:1 cannot be achieved at current HOB. It is agreed that HOB should increase but a blanket 25m in Area 1 does not recognize the attributes of the subject site and additional HOB and FSR can be provided without any adverse impacts. On other sites HOB 25m will result in unsatisfactory overshadowing, this is especially the case having modeled 25m envelops at a 2m podium setback (see Solar Analysis).

The Strategy states that:

> "The centre has been the subject of an urban design and building shadow study, resulting in a building envelope plan which will inform a Development Control Plan."

The exhibited material does not provide the building shadow study. Our shadow modeling has demonstrated that higher heights are achievable for the subject site (HOB 30m at FSR 3:1) with no adverse amenity impacts (See: Part 9 Solar Analysis)

FSR to 3:1 (V) will not result in any additional overshadowing upon residential neighbours. The bulk of the overshadowing between 9am and 3pm falls upon the Roof of the existing 12m high commercial building to the south west and the Princes Highway.

This submission provides an urban design concept and shadow study demonstrating that the site is easily capable of 30m HOB and 3:1 FSR and can easily deliver SEPP 65 and RFDC amenity outcomes, whilst making a positive contribution to job and dwelling targets as a gateway site.

In the context of the housing strategy, the site;

1. is within the core commercial area (Area 1: Zone B3 (Centre zone transfer) and we agree with the strategy, that it can be more intensively developed.
2. is within 5m of the underpass access to the railway station, is the closest site to Engadine Railway Station, a unique site, it has arguably the highest levels of DDA compliant accessibility to public transport in the Sutherland Shire at its front door,
3. is capable of compliance with SEPP 65 and the RFDC at HOB 30m and 3:1 FSR with high levels of articulation, solar access and cross ventilation through a narrow envelop depth as promoted by the Council.

4. should be block edge development presenting a strong definition of this gateway corner site (i.e. DCP provisions should not set upper levels back 2m as proposed by the housing strategy on this croner).
5. is capable of providing "one or two storeys of retail and commercial use, with upper levels of residential flats" (we have modeled 4m floor to floor for the ground and first floor levels).
6. will not whether at HOB 25m or 30m or FSR at 2:1 or 3:1 create any adverse overshadowing due to context, topography and orientation (See Shadow Analysis).
7. will reinforce Station Street as a core shopping area and defined this prominent gateway corner.
8. will achieve narrow (18m maximum) building forms (as modeled).
9. will maintain unfettered solar access to the footpaths suitable for outdoor dining.
10. will maintain a frontage supporting the functionality of the bus interchange in Station Street and the No Parking (pickup) zone on the Princes Highway.
11. maintain and improve pedestrian accessibility (note the site is not identified for the provision of any through site links but DA designs will consider the potential for through site links to the Council carpark off Nolan Place.
12. can provide a more appropriate gateway block edge urban form reinforcing the entry to Engadine at Engadine Railway Station and Station Street.
13. will activate the street frontage at the ground floor level through commercial/retail uses to enliven the street and give passive surveillance to the public area as well as provide better CPTED outcomes as a result of natural surveillance by higher density residential casual observation above.

It is noted that the Housing Strategy does not address the internal amenity benefits and the incentives to urban renewal that will result from increased HOB in terms of the views that may be attained.

In the case of the subject site the views that will be attained as the result of the site's relationship with the Royal National Park are unique to the Engadine Town Centre. For this reason the site can sustain additional HOB and FSR and this should be encouraged for the purposes of delivering better internal amenity outcomes in terms of views.

Figure 4 - Engadine Centre Map 1 Housing Strategy – 800m Radius of Engadine Station

4.2 Station Street's Character

Station Street is run down. It is clear that strategic planning must provide appropriate incentives to retain the smaller fine grain shops at street level whilst providing for increased mixed use residential and commercial above.

The Housing Strategy politely states:

> "Engadine is a centre with a large residential catchment but limited development has occurred in recent years."

Station Street is chacterised by:

- An ill-defined entry from the Princes Highway (Railway Parade) to Station Street. (The entry to Station Street at the Princes Highway should be well defined by the tallest and strongest built form in Engadine) given its juxtaposition to the Princes Highway and Engadine Railway Station. It is a gateway site deserving of prominent urban form and density.
- Two large bus stops servicing the eastern and western ends of Station Street. The eastern bus stop in front of No.2 to No.14 Station Street services train departures and arrivals as well as adjoining suburbs.
- No driveway crossings with the exception of the entry/exit to the McDonald's carpark opposite No.2-No.14 Station Street and the exit from Engadine Tavern Drive-through Bottle-shop. Urban renewal should seek to eliminate all crossings within Station Street to improve the pedestrian environment.

- All commercial premises with the exception of Council's Youth Centre at No.16-18 Station Street, Engadine are serviced by rear lane or rear access.
- Built form is predominantly 1 & 2 Storey retail with commercial and limited residential above.
- A frontage typology that can be reasonably classified as Neutral or Dull. Station Street's frontages, facades and fenestration are run-down and only concerted urban renewal effort will result in an attractive and more activated streetscape.
- There is no shared zone or appropriate threshold treatment at the Princes Highway. A narrowed carriageway is provided with angled parking from the Old Princes Highway to Caldara Avenue promoting footpath café and restaurant uses.
- Street trees are very constrained and limited in numbers.
- Light poles are in a consistent theme and a noticeable element.
- Awnings are not contiguous thus pedestrians are exposed to the weather walking between the Railway Station and the buildings and parking in and around the Town Centre. Any new DCP should address the requirement for contiguous awnings to footpaths in Station Street, Caldarra Avenue and the Old Princes Highway.

5 Exhibited Draft LEP

The Draft LEP's effects are best summaried by the following extracts.

Engadine

Table 1: Engadine	Engadine is a centre with a large residential catchment. Very limited development has occurred in the centre in recent years. The area provides an ideal opportunity for young families to find suitable homes at more affordable prices. There is strong demand for villas from an ageing population. Under the current zoning there is little opportunity for further development of flats in Engadine. More opportunities need to be provided for smaller households in order for the ageing population to downsize. Opportunities exist to increase the area zoned for flats and improve the design of ground floor flats for a more adaptable form of housing.	
	Area 1 Area zoned as Urban Centre	**Area 2** Part of block bounded by Boronia Avenue, Old Princes Highway, and Waratah Road
		
Proposal	Retain Urban Centre zone Increase residential component to 80%. Increase height	Allow 100% residential flats within existing Urban Centre zone. Increase height
Est. Additional Capacity	67 additional dwellings	138 additional dwellings
Height	**25m (7-8st)** (currently 3st)	**20m (6st)** (currently 3st)
Density	**FSR 2:1** (unchanged)	**FSR 2:1** (unchanged)

5.1 Draft Zone

The Draft Zone is B3 Commercial Centre.

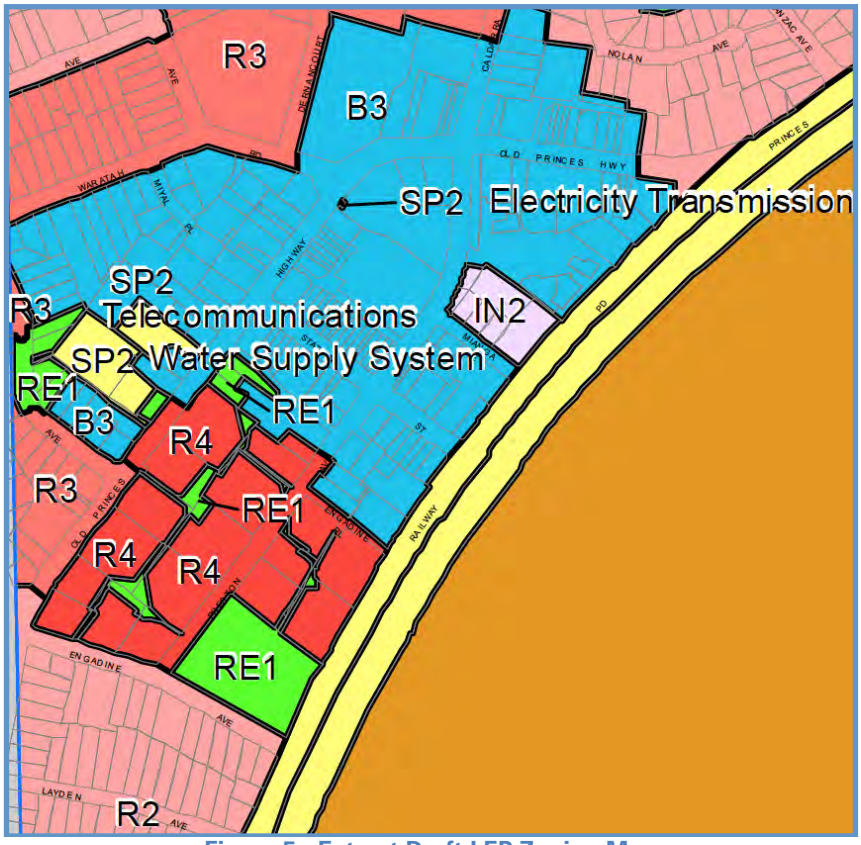

Figure 5 - Extract Draft LEP Zoning Map

5.2 Draft HOB

The Draft HOB is 25m.

Figure 6 - Draft LEP HOB

5.3 Draft FSR

The Draft FSR is 2:1

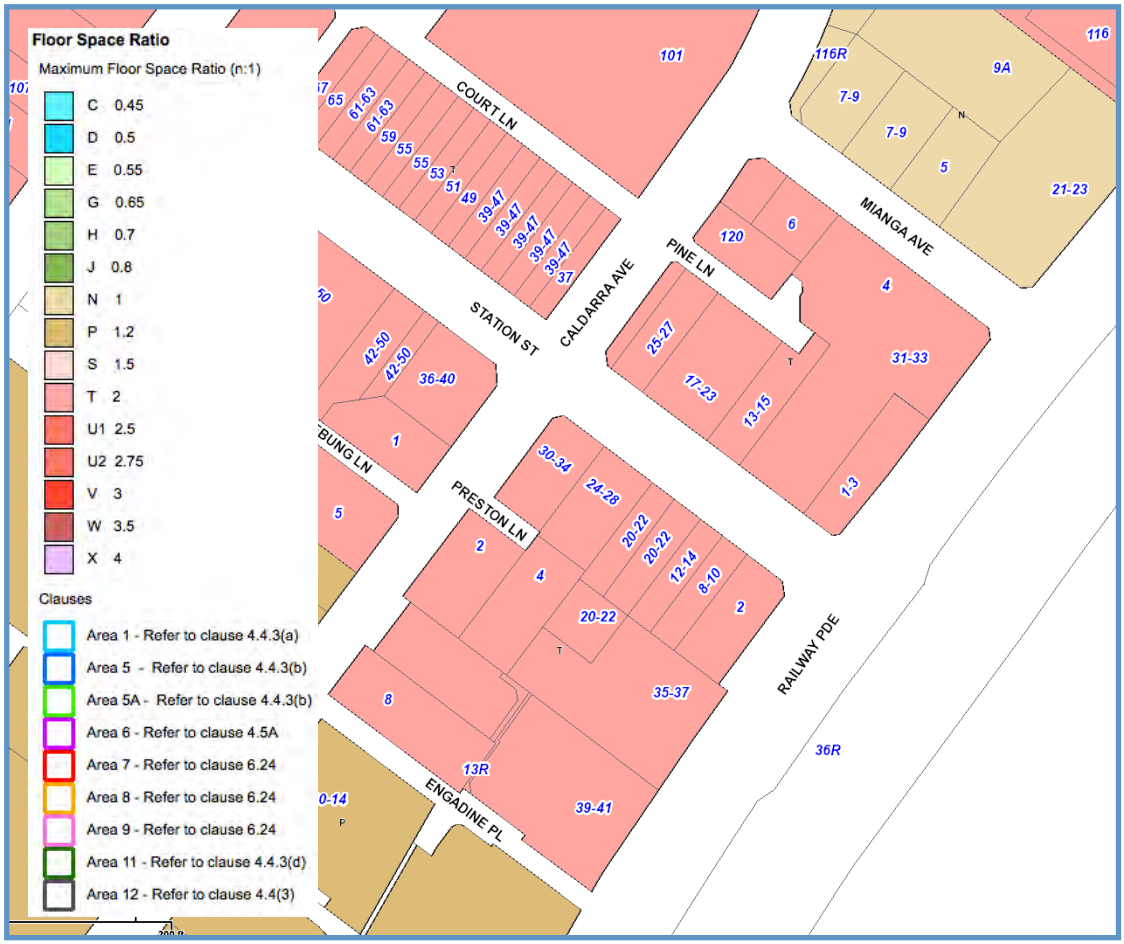

Figure 7 - Draft LEP FSR

Taking a fair but constructively critical approach to the draft LEP in this context increasing height without increasing FSR consistent with other proposed B3 zones will not encourage urban renewal and proper investment in quality urban design outcomes.

The one size fits all draft LEP HOB 25m and FSR 2:1 for the B3 zone does not acknowledge the specific potential of particular sites, including the need to provide some interesting diversity and reinforce the gateway entry points with stronger taller buildings, especially corner sites.

This is also relevant in the context of the identification of specific sites that can provide higher density outcomes with high accessibility and better amenity outcomes for neighbours and future occupants.

6 Comparision to other B3 Town Centres

The following table presents a summary of the HOB and FSR proposed across the Sutherland Shire's town centres by the Draft LEP.

What this demonstrates is, having regard to the ratio of HOB to FSR applied as well as maximums proposed that the Draft LEP, the Draft LEP is inconsistent in its application of HOB and FSR to Engadine.

Further, the Draft LEP sees every site in Engadine as the same. Sameness will not create a rich matrix of varied built form outcomes or leverage topography, orientation, accessibility, social and urban benefits that a more site specific approach will achieve.

It is clear, having regard to accepted urban design principals applied across not only the Sutherland Shire, but also many other town centres subject to changes under the Standard Instrument LEP process, that key urban planning features are:

- The identification and promotion of "Gateway" sites.
- Higher buildings and higher density closes to railway stations and classified roads.
- Higher buildings and higher density on corner sites with the encouragement of strong built forms to defined and reinforce these corner sites.
- Higher and high density buildings in locations where due to neighbouring land use, topography, orientation, separation by roads, rail and reserves there will be no adverse amenity impacts upon neighbours and better environmental outcomes for future occupants.
- A range of heights and FSR that break up the urban form with different building forms having regard to specific site attributes.

The HOB and FSR applied in other centres demonstrate these principles have been adopted to a greater extent than for Engadine. A blanket HOB and FSR approach has been taken without regard to specific site attributes within Engadine Town Centre Area 1 and Area 2.

The Draft LEP presents an opportunity to achieve better outcomes in Engadine, more consistent with those that the Draft LEP supports in other centres.

Town Centre (B3) or Local Centre (B2)	Zone	Max HOB	Max FSR	Observations
Cronulla	B3	30m	3.0:1	The majority of the sites capable of supporting residential growth are within close proximity to the centre and with direct links to the railway station have been given 30m HOB and 3:1 FSR. The ratio of HOB 30m to FSR 3:1 is appropriate.
Caringbah	B3	40m	3.5:1	The majority of the sites have been

				given a HOB 25m and FSR 3:1. This is the correct and most appropriate ratio of HOB to FSR. Key sites very close to the railway station and bus interchange areas have been given higher HOB 40m and FSR 3.5:1. This centre exhibits a sensible approach in the identification sites that should be subject to increased HOB and FSR.
Miranda	B3	30m	3.5:1	The majority of the centre is dominated by Westfield but again key sites has been identified for 30m of HOB and 3.5:1 FSR.
Gymea	B2	20m	2:1	Gymea demonstrates a ratio between HOB (20m) and FSR (2:1) for the B2 zone. Applying this ratio to other centres that proposes 25m it is clear that an FSR of 2:1 is too low in other centres that can support an additional HOB. FSR 2:1 is appropriate for a village.
Kirrawee	B2	20m	2:1	Kirrawee demonstrates the appropriate ratio for a village HOB 20m to FSR 2:1, reinforcing that the B2 zones are treated as a local rather than commercial core town centre. Applying this ratio to other centres that proposes HOB 25m (T) it is clear that an FSR (T) of 2:1 is too low in other centres that can support increased HOB.
Sutherland	B3	40m	4:1	Sutherland has been afforded HOB and FSR outcomes more commensurate with a Major Centre. HOB 40m with a 4:1 demonstrate a general trend adopted by the Draft LEP i.e. 10m = 1:1, thus 20m = 2:1, 30m = 3:1 and in Sutherland's case 40m = 4:1.
Jannali	B2	20m	2:1	Jannali demonstrates consistent with Gymea and Kirrawee that the appropriate built form outcomes are well represented by HOB 20m and FSR 2:1. This reinforces that if HOB is increased above 20m that FSR should also increase as a ratio.
Engadine	B3	25m	2:1	Engadine is an anomaly inconsistent with the other centres proposed to be zoned B3 whilst it has been given a HOB that is predominanty 25m (T) less than other maximums in the B3 Zone, its maximum FSR is 2:1 is low

				and akin to a Village rather than befitting of a Commercial Core.
Heathcote	B2	13m	2:1	Heathcote is a small village not a town centre. This village has create furture potential and incentive for new development at this time should be kept low allowing further HOB and FSR at a later date.

7 Proposed Yields

The site has a total area of 1,255m^2. This submission proposes an FSR is 3:1. Total GFA would be 3,765m^2.

The commercial Ground floor may occupy 1,000m^2 with no landscape area requirements proposed by the Draft LEP, leaving 2,765m^2 GFA for residential above.

As block modeled in figures in this submission the Floor Area inside the external walls is 8,800m^2. So we are clear the bulk as block modeled, an envelop, is not the bulk that that would be finally achieved at the FSR 3:1 as proposed by this submission.

Allowing up to 8 residential Storeys, GFA per level would equate to (2,765m^2 / 8 = 345m^2). This equates, at an average unit size of 80m^2, in approximately 35 units.

Allowing for the definition of GFA in the Standard Instrument LEP one might add 5% to include external walls and vertical circulation. Thus the final foot print above the podium level may be reasonably calculated at 363m^2.

Allowing 5% for the definition of GFA in the Standard Instrument LEP, NBA above podium would be (2,765 x 1.05) = 2,903m^2.

Reducing these calculuation back to the block modeling in this report, a HOB 30m and FSR 3:1 compliant building would only occupy approximately 40% of the envelop volume as block modeled.

This demonstrates that applying an FSR of 3:1 to the HOB 30m will promote a well articulated and SEPP 65/RFDC compliant built form outcome consistent with the relationship between HOB and FSR for other B3 zones in the Sutherland Shire.

In simple terms the yields proposed are not excessive in the context of a B3 zone and allow for excellent setbacks and articulation.

8 Accessibility

This part of the submission reinforces the site's proximity to Engadine Railway Station and the Princes Highway as well as bus services, all available from the door steps of the subject site.

8.1 Railway

Engadine railway station is located on the CityRail Illawarra line. It consists of two side platforms with an overhead footbridge, the station building and ticket office is located on the *up* (city bound) platform.

A subway connects the station with the western side of the adjacent Princes Highway. The station was extensively upgraded in 2006 with the provision of extended shelters and passenger lifts between the platforms and the overhead footbridge providing DDA compliant access for people with disabilities to both

platforms. A further lift is located on the foot adjoining the subject site providing disabled access to the pedestrian subway.

The subject site has arguably the best direct access of any site in the Sutherland Shire to a railway station from within a town centre given the near level topography of Station Street and the 2006 upgrading of disabled access, located within 5m of the subject site.

Depending upon the train service offered, it take approximately 45 minutes from Engadine Station to Central Station, 33 minutes to the airport connection at Wolli Creek, 23 Minutes to Hurstville and 8 minute to Sutherland. Direct access to Bondi Junction without changing services takes 59 minutes. Services are provided at 22-25 minute service intervals.

8.2 Buses

Veolia Transport runs four routes via Engadine station's bus interchange in front of the subject site:

- 991 - between Sutherland and Heathcote
- 992 - to Miranda
- 993 – to Woronora Heights
- 996 - to Heathcote East

Future residents of the subject site have high frequency public bus services at their front door.

8.3 Taxi

Station Street is serviced by the only permanent taxi rack in Engadine. The Taxi Rank is 60m west of the subject site.

8.4 Vehicular Access

The site is services by driveway access from the Princes Highway. There is significant potential for negotiated rear access to the site from Preston Lane servicing Council's youth centre and private carparks south-west and to the rear of the site.

The site is 1.4km from the intersection of the Heathcote Road providing access to the M5 and M7 motorways west and direct connection to Wollongong and the south coast.

Vehicular access to the Royal National Park is available at Farnell Avenue 3.7km north on the Princes Highway and at McKell Avenue 8.8km south on the Princes Highway. The Royal National Park provides a wide range of recreational activities.

9 Solar Analysis

The following solar analysis demonstrates that increasing the HOB to 30m (U) and FSR to 3:1 (V) will not result in any additional overshadowing upon residential neighbours. The bulk of the overshadowing between 9am and 3pm falls upon the Roof of the existing 12m high commercial building to the south west and the Princes Highway.

There is no overshadowing of Station Street between sunrise and 3:40pm mid-winter and between 3:40pm and sunset the only shadows only fall upon the road.

This block modeling, which creates a bulk with an FSR of approximtely 8:1, has been based upon a block edge development envelop reinforcing the corner site and a maximum 18m depth consistent with SEPP 65 and the RFDC design requirements.

The extent of shadowing modeled would be extreme as such impacts will never generated by a real development complying with a 3:1 FSR. A FSR 3:1 complying development would only occupy approximately 40% of the volume modeled below.

In reality, at an FSR of 3:1 as proposed, the shadowing impacts would be significantly less than demonstrated by the block modeling below.

The modeling below in the context of the existing commercial building's impacts and setting aside the potential impacts of a HOB 25m as proposed by the Draft LEP, are considered negligible. In fact there will be no additional shadowing of any neighbours from 10am mid-winter (See Figure 9 - Mid-Winter 10am Shadow at 30m HOB).

Therefore, whether at HOB 30m FSR 3:1 or even higher HOB and FSR, the site does not create any significantly different outcomes in terms of overshadowing. Overshadowing is negligible due to site orientation, the existing 12m neighbouring commercial building and its juxtaposition to the Princes Highway south and south-east of the site.

The site is not constrained in terms of HOB and FSR in the context of overshadowing impacts and could easily sustained even more HOB and FSR than this submission seeks, with no adverse amenity impacts.

In terms of the sites ability to improve the microclimate and solar performance within the development as SEPP 65 and the RFDC require, the envelop modeled demonstrates that orientation maximizes north facing walls. The southern wing receives both eastern and western sun other than for the reentrant internal corner. This issue can be adequately addressed through clever architectural design in compliance with the proposed 3:1 FSR under SEPP 65 and the RFDC.

The most solar deprived areas of the site will be commercial occupancies at the ground and possibly if demand exists 1st floor levels.

9.1 9am 20 June Shadow

The 9am shadow falls predominantly upon the roofs of the existing 3 storey (12m) commercial development south west of the site and the roof of the RFB further south west fronting the Princes Highway.

In the short to medium term it is unlikely that the 3 storey commercial building will not be redeveloped and it has been shown at its existing HOB, not at the 25m HOB proposed by the LEP. Even at 12m HOB the existing commercial building at 9am overshadows the north-eastern elevation of the RFB toits south-west. At 9am the HOB 30m as proposed by this submission will have not impact upon openings in the north-east elevation of any adjoining RFB.

Figure 8 - Mid-winter 9am Shadow at 30m HOB

9.2 10am 20 June Shadow

The 10am shadow analysis has been included to demonstrate that by 10am, the site at HOB 30m, would not have any shadowing impacts upon the RFB south-west of the site.

By 10am mid-winter the shadow from a 30m element (southern wing) of the site at a zero lot boundary setback, would fall upon the concrete roof of the existing 3 storey commercial building to its south-west.

Again it must be reinforced that a zero lot boundary setback in this location is highly unlikely at FSR 3:1 and a SEPP 65 – RFDC separation outcomes will provide setbacks details at the DA stage.

Figure 9 - Mid-Winter 10am Shadow at 30m HOB

9.3 12 Noon 20 June Shadow

The corner of the site is orientated to the east and the noon shadow can be seen to fall from the corner directly south across the Princes Highway. At noon midwinter, the western extent of the shadow falls across a small portion of the roof of the adjoining 3 storey (12m) commercial building and then across the Princes Highway.

It can also been seen that the impediment to solar access to the RFB further south-west is the existing 3 storey commercial building.

The increase in HOB from 25m to 30m as proposed by this submission has no adverse environmental or amenity impacts.

Figure 10 - Mid-Winter Noon Shadow at 30m HOB

9.5 3pm 20 June Shadow

At 3pm the difference between a 25m and 30m HOB shadow are insignificant. The shadow falls to the south-east across the Princes Highway with no adverse environmental or amenity impacts noting that the structures within the Railway Station also overshadow the main platform.

Figure 11 – Mid-Winter 3pm Shadow at 30m HOB

9.6 9am 20 June – Station Street Footpath

Figure 12 - Station Street Shadow 9am

9.7 10am 20 June – Station Street Footpath

Figure 13 - Station Street Shadow 10am

9.8 11am 20 June – Station Street Footpath

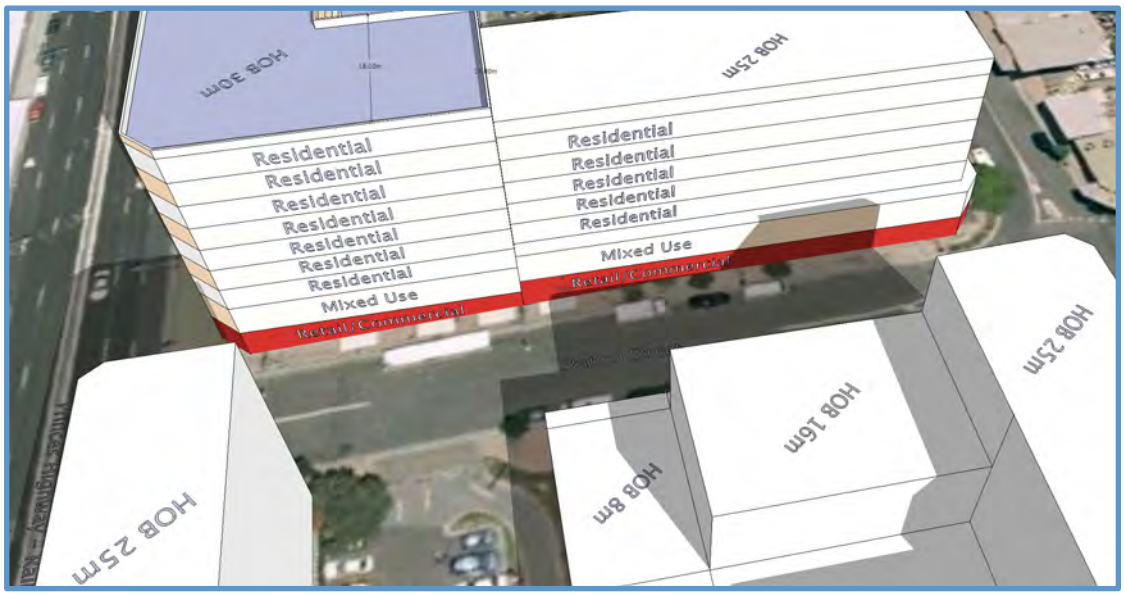

Figure 14 - Station Street Shadow 11am

9.9 12 Noon 20 June – Station Street Footpath

Figure 15 - Station Street Shadow 12 Noon

9.10 Summary of Solar Analysis

The subject site at HOB 30m and FSR 3:1 will not have any adverse overshadowing impacts as it's juxtaposition to neighbours, existing land uses and the Princess Highway (where the majority of shadowing will occur). It will have no impact upon any residential premises.

Applying HOB 25m to the northern side of Station Street as shown in the Station Street Footpath analysis (clause 9.6 to 9.9 above) demonstrates that at HOB 25m buildings would cast shadows upon the north facing elevations and footpaths in Station Street in mid winter. That is buildings opposite the subject site.

Council's stated strategic objective that the LEP should seek to preserve solar access to Station Street's north facing footpaths will not be achievable at HOB 25m with 2m setbacks as proposed. It must be acknowledged however, that the block modeling provided and the bulk demonstrated at HOB 25m will not result in the extent of over shadowing demonstrated, as any development will be further constrained by FSR.

Ultimately detailed design modeling would demonstrate low levels of shadowing but careful design is still required at the DA stage to ensure that the objective of providing solar access to north facing footpaths is achieved by building proposed on the northern side of Station Street by increased setbacks to the street alignment.

Simply, the subject site can sustain HOB 30m and FSR 3:1 whereas any increase in HOB and FSR along the northern side of Station Street will result in overshadowing of the north facing elevations and footpaths.

10 SEPP 65 and RFDC

The site will easily comply with SEPP 65 and RFDC requirements, due to the site orientation, topographical position, separation provided by Station Street.

The Station Street frontage is north-east facing. The Princes Highway Units whilst facing south-east have rear north-west aspects for solar access and are sheltered from traffic noise.

The modeled envelop, with a maximum 18m depth demonstrates that the building would be very well articulated within the envelop at an FSR of 3:1. A complying 3:1 FSR would only fill 40% of the volume of this modeled envelop and less if the ground floor commercial occupied 100% of the foot print with a podium common open space area.

The modeling has adopted 4m floor to floor for two levels of commercial/retail and 3m floor to floor for residential levels allowing 9 levels with a 1m parapet. This demonstrates that internal amenity in terms of ceiling heights are easily achievable in creating a maximum9 storey building. The requirements of the Building Code of Australia will necessitate two vertical cores which will also improve RFDC outcomes.

There also exists great potential for roof top common open space area(s) taking advantage of the amenity provided by views that will extend from the Blue Mountains to Sydney, to the Pacific Ocean and south over the Royal National Park. All units above level 3 will enjoy panoramic views and views from the top level will be spectacular adding to the amenity outcomes for future occupants. The 1m parapet as modeled will provide adequate balustrading for such as design if necessary.

The HOB 30m allows a BCA effective height of 25m delivering a more sustainable development with more passive and less active systems required. As such it will provide sustainable housing in social and environmental terms, a long-term asset to its neighbourhood. The site at HOB 30m and FSR 3:1 can achieve urban planning policies for its regional and in a local local context, better built form and aesthetics addressing a prominant corner, streetscape and the public space it will define.

The site can better satisfy the increasing demand, the changing social and demographic profile of the community, and the needs of the widest range of people from childhood to old age, including those with disabilities (specifically identified by the Council's Housing Strategy).

The site can maximise amenity, safety and security for the benefit of its occupants and the wider community with its activation of the footpaths, new awnings and better natural surveillance.

The site can minimise the consumption of energy from non-renewable resources, to conserve the environment and to reduce greenhouse gas emissions through full compliance with both SEPP 65 and BASIX. The single biggest contribution to greenhouse gas reduction being is juxtaposition to Engadine Railway Station,bus services and commercial and retail services promoting low car use.

11 Conclusion

This submission support the proposed B3 Commercial Core Zone for the Engadine Town Centre including the subject site.

The subject site can easily sustain HOB of 30m and and FSR of 3:1 with no adverse environmental impacts, better amenity outcomes whilst achieving job and dwelling targets together with the highest levels of accessibility to public transport.

The analysis of the relationship between HOB and FSR in the Draft LEP demonstrates a logic, i.e. (HOB 10m = FSR 1:1).

Maximum heights and FSR can be summarized as;

- Local Centre HOB 20m = FSR 2:1,
- Commercial Core HOB 30m = FSR 3:1
- Sutherland Town Centre 40m = 4:1.

Key sites in Engadine, including the subject site, should be targeted for HOB 30m and FSR 3:1.

The following Draft LEP objectives as relevant are specifically achieved by this submission:

- Clause 1.2(2), (a), (b), (c), (e), (f), and (j)
- Landuse Table Zone B3 all objectives.

The specific site attributes that support this submission are;

- 5m from disabled access entry to Engadine Railway Station
- frontage to bus interchange serving Engadine Railway Station
- accessibility to taxi rank and Princes Highway
- prominent gateway corner site deserving of a strong urban form outcome
- no neighbouring residential buildings over looked or overshadowed
- easy compliance with SEPP 65 and RFDC available
- consistent with HOB to FSR ratios for similar sites in other B3 zones
- excellent CPTED outcomes

These are compelling strategic planning arguments for creating more residential units on this site, but the most compelling is the sites juxtaposition to Engadine Railway Station and its ability to maximize public transport usage with no amenity impacts upon anyone and to create high levels of internal amenity.