# 18.5 688-692 PACIFIC HIGHWAY, CHATSWOOD - PLANNING PROPOSAL 2015/3

ATTACHMENTS: 1. ASSESSMENT REPORT WITH

**RECOMMENDATIONS PREPARED BY INGHAM** 

**PLANNING** 

RESPONSIBLE OFFICER: IAN ARNOTT – PLANNING MANAGER

AUTHOR: NONI DE CARVALHO

CITY STRATEGY LINK: 3.1.1. PLAN FOR HOUSING CHOICE

MEETING DATE: 14 DECEMBER 2015

# **Purpose of Report**

To advise Council on the assessment of the Planning Proposal 2015/3 lodged on 3 July 2015 by Aqualand Pty Ltd. The land is in the ownership of Sheng Long No.201 Property Trust.

#### Considerations

The Planning Proposal 2015/3 for 688-692 Pacific Highway Chatswood has been reviewed and assessed by the independent planning consultant Ingham Planning Pty Ltd. Ingham Planning was assisted in its review and assessment by the urban design review carried out by Kennedy and Associates. The urban design report is attached to the planning assessment report.

The assessment report with recommendations is attached for Council's information and consideration.

The Planning Proposal requests amendment of Willoughby Local Environmental Plan 2012 to allow the following to occur on the site:

- 1. Increase of the permissible building height from 18 metres to 40.2 metres.
- 2. Increase of permissible floor space ratio from 3.7:1 to 4.74:1.
- 3. Provision within the mixed use development of 530m<sup>2</sup> of office space for Chatswood Public School and 25 car spaces for school staff.

The indicative building envelope when viewed from the public road comprises a two-storey non-residential podium containing the school office space, ground floor café, residential foyer, loading and basement car parking entry/exit to Pacific Highway. Above the podium the indicative built form proposes two residential towers. The primary, and taller tower, is orientated north-south abutting the Highway and comprises 11 storeys above the podium on the northern side stepping down to 6 storeys above the podium on the southern side. The secondary, lower tower element of five storeys is orientated east-west fronting Kenneth Slessor Park.

In addition to the proposed provision of 530m² of office space /school facilities on the site, the proponent is also offering to enter into a Voluntary Planning Agreement (VPA) to provide \$150,000 towards upgrading Kenneth Slessor Park. Council Officers are in the process of obtaining a valuation of the proposed Community benefit and will report the results to Council when the final development concept has been confirmed. A formal, legally drafted VPA has not been lodged with the Planning Proposal.

# **Background**

The site has an area of 1,142m<sup>2</sup> with a frontage to Pacific Highway of 36.57 metres. It is located opposite the western end of Victoria Avenue at the busy intersection of Victoria Avenue and Pacific Highway and between Chatswood Public School on its south side and Kenneth Slessor Park on its north side.

The site is regular in shape but has noticeable slope down from its Pacific Highway frontage to its rear boundary of approximately 4.5 metres. At its rear are three attached dual occupancies that front James Street.

Current development on the site consists of a two storey office building above car parking which is separated by a shared driveway from a two to three storey residential boarding facility with a ground floor shop and car parking below.

#### Comment

The assessment report prepared by the independent planning consultant advises that there is some merit to the planning proposal. For these reasons the report is recommending an "in principle" support for the proposal by Council. This recommendation reflects the report's conclusions that subject to various changes to the design, and provision of additional information, the consultant considers that the Planning Proposal could be acceptable to proceed to the Gateway process.

| The recommended design changes require: |  |  |  |  |
|---|--|--|--|--|
|   | Increasing the setback above podium level (from Level 3) from the Pacific Highway    |  |  |  |
|   | frontage;  |  |  |  |
|   | Increasing the setback of the northern building form from the western boundary by at |  |  |  |
|   | least 3 metres from Level 1.   |  |  |  |

These design changes have an impact on the floor space achievable on the site and as such the consultant has recommended a floor space ratio of 4.6:1 (not 4.74:1 as requested).

The report notes the public benefits of the proposal being the offer of the proponent to enter into a Voluntary Planning Agreement for:

| а | Voluntary Planning Agreement for:  |
|---|--|
|   | Provision of 530m <sup>2</sup> (563m <sup>2</sup> including non-assessable floor space) on Level 1 for |
|   | Chatswood Primary School office space;   |
|   | Provision of 25 car parking spaces on Basement Level 1 for staff parking for                           |
|   | Chatswood Primary School;  |
|   | Contribution of \$150,000 towards the cost of improvements to Kenneth Slessor Park.                    |
|   |  |

Further public benefits envisaged by the proposal include:

|        | Publicly accessible space on the Ground Floor of the site;                      |
|--------|---|
| $\Box$ | Potential removal of the driveway located at the Victoria Avenue traffic lights |
|        | accessing Chatswood Public School.  |

As stated previously, Council Officers are in the process of obtaining a valuation in respect of the proposed public benefit.

In the circumstances, and noting the recess of Council over the Christmas/New Year holiday period, Council Officers considered that it was appropriate and reasonable to report the Planning Proposal to Council on the basis of the assessment advice of the independent planning consultant before resolution of the full recommendations of the assessment report. This would enable an indication to the proponent of Council's preliminary position on the proposal.

Prior to Gateway determination and exhibition a further report will be provided to Council. This report will occur following resolution of the matters raised in the recommendations of the independent planning consultant, being:

| Reduction in floor space;  |
|--|
| Increased setbacks to Pacific Highway and the western (rear) boundary; |
| Revised shadow diagrams; and   |
| Revised traffic report.  |

A separate report will also be provided to the same Council meeting in respect to a draft VPA and valuation advice regarding the proposed public benefit.

#### OFFICER'S RECOMMENDATION

#### **That Council:**

- A. Resolves, in accordance with the recommendations of Ingham Planning, as follows:
  - 1. Advise the Proponent that Council supports "in principle" an increase in building height and floor space ratio for the 688-692 Pacific Highway Chatswood as a consolidated development site, subject to modification of the proposed building envelope with respect to the provision of adequate building setbacks above podium level to Pacific Highway and for the western elevation of the lower of the two residential towers. Setbacks in these locations are to be considered having regard to the applicable setback controls in Willoughby DCP.
  - 2. That given the need to provide setbacks as outlined in 1 above, the requested maximum FSR be reduced to 4.6:1 to ensure that all floor space, including floor space for affordable housing (but excluding floor space associated with 20 additional car spaces above DCP requirements), can be accommodated within the revised building envelope.
  - 3. Submission of mid-winter shadow diagrams (22 June) at quarter hour intervals between 9am and 3pm, for the proposed building envelope, and a building envelope that accords with the current floor space ratio and building height controls.
  - 4. Provision of a revised Traffic Report assessing the increased traffic generation based on the same percentage of residential floor space for both a development scenario under the current FSR controls and the development scenario in the Planning Proposal.
  - 5. Submission of a draft Voluntary Planning Agreement addressing the provision of the public benefits, as outlined in the Planning Proposal.
  - 6. Provision of further information in relation to the feasibility of the proposal, having regard to the cost of commitments to provide the nominated pubic

benefits and the potential value adding that can be achieved from the requested additional floor space and building height.

B. Resolves that a further report on the Planning Proposal 2015/3 be brought back to Council following resolution of the recommendations of Ingham Planning with a separate report on a draft VPA.

### TOWN PLANNING ASSSESSMENT REPORT PLANNING PROPOSAL 2015/3 688-692 PACIFIC HIGHWAY CHATSWOOD



Prepared for Willoughby City Council

By INGHAM PLANNING PTY LTD Suite 19, 303 Pacific Highway, Lindfield, 2070

Job No. 15149 November 2015

# TABLE OF CONTENTS

| 1.    | PURPOSE OF REPORT   | 1  |
|-------|---|----|
| 2.    | SUMMARY OF PLANNING PROPOSAL 2015/3   | 1  |
| 3.    | DESCRIPTION OF THE SITE AND CONTEXT   | 2  |
| 4.    | EXISTING LOCAL PLANNING CONTROLS  | 3  |
| 5.    | JUSTIFICATION FOR THE PLANNING PROPOSAL   | 4  |
| 6.    | RELATIONSHIP TO STRATEGIC PLANNING FRAMEWORK  | į  |
| 7.    | RELATIONSHIP TO STATUTORY PLANNING FRAMEWORK  | 5  |
| 8.    | ENVIRONMENTAL SOCIAL AND ECONOMIC IMPACTS   | ŗ  |
| 9.    | PUBLIC BENEFIT  | 23 |
| 10.   | CONCLUSIONS & RECOMMENDATIONS   | 24 |
|       |   |    |
| APPEN | IDIX A: Description of the Site and Context   |    |
| APPEN | IDIX B: Existing Local Planning Controls  |    |
| APPEN | IDIX C: Detailed description of the Planning Proposal   |    |
| APPEN | IDIX D: Urban Design Report – 688-692 Pacific Highway Chatswood dated 13<br>November 2015 prepared by Kennedy Associates Architects |    |

#### PURPOSE OF THE REPORT

This report assesses a Planning Proposal (PP) for 2 existing properties at 688 to 692 Pacific Highway, Chatswood. The Planning Proposal (PP 2015/3) has been lodged by JBA Urban Planning Consultants (Pty Ltd) (JBA) on behalf of Sheng Long No. 201 Property Trust and seeks the support of Willoughby City Council for the PP to proceed through the gateway process.

The PP is supported by a Town Planning Report prepared by JBA, a Concept Urban Design and View Analysis Report prepared by Conrad Gargett - Ancher Montlock Woolley, a Parking and Traffic Statement prepared by Varga Planning, and a Heritage Impact Statement prepared by NBRS & Partners. The PP is also accompanied by a Voluntary Planning Agreement (VPA) Letter of Offer. This letter of offer outlines provision of public benefits that can be provided by the proponent, within a VPA.

Assessment of the Planning Proposal (PP) indicates that there is merit in supporting additional building height, to obtain an improved built form outcome, if the 2 properties are consolidated into 1 development site. The PP offers significant public benefits including provision of office space and parking for the adjoining Chatswood Public School and a contribution towards upgrading of Kenneth Slessor Park, adjoining the site to the north.

The report recommends that Council offer conditional support "in principle" to an increase in building height and floor space ratio for the site, subject to the provision of additional information and modification of the proposed building envelope, with respect to setbacks above podium level and further consideration of overshadowing and traffic generation and associated impacts. The proponent should also be directed to prepare a Draft Voluntary Planning Agreement that can be exhibited with the PP, should the PP proceed through the gateway process to public exhibition.

#### 2. SUMMARY OF PLANNING PROPOSAL 2015/3

The PP seeks to amend Willoughby Local Environmental Plan (WLEP 2012) to increase maximum building height on the site from 18m to 40m (RL 147 is proposed in the PP) and increase maximum floor space ratio (FSR) from 3.7:1 to 4.74:1, to facilitate an increase in GFA (1,186m2) from 4,225m2 to 5,411m2.

The PP is accompanied by an indicative building envelope designed to accommodate a future mixed use building with a maximum height of 40m and maximum FSR of 4.74:1. The building envelope comprises a 2 storey non-residential podium, with 2 residential tower elements. The primary tower element is orientated north-south, fronting the Pacific Highway, extending up to 11 storeys above podium, with a stepping down of built form towards the south. The secondary tower element, adjoining Kenneth Slessor Park is lower, extending up to 5 storeys above podium and orientated east-west.

The PP also offers a range of potential public benefits by way of a yet to be submitted Voluntary Planning Agreement (VPA). These benefits include office and parking facilities for Chatswood Primary School (530m2 of office floor space for school purposes and a basement car park level with 25 car spaces), and a \$150,000 contribution towards the upgrading of Kenneth Slessor Park. I have assumed that the school office space is included in the requested FSR of 4.74:1, as it is included in the proposed envelope. A detailed description of the PP is attached at **Appendix C**.

# 3. DESCRIPTION OF THE SITE AND CONTEXT

The land to which the PP relates is known as Lot 1 in DP 838366 and Lot 2 DP 626676 (SP 19329), No's 688-692 Pacific Highway, Chatswood and has a total area of 1,142m2. The site is located adjacent to the Chatswood CBD on the western side of the Pacific Highway, between Chatswood Primary School and Kenneth Slessor Park, some 260m west of Chatswood Railway Station (see Figure 1 – Location, below).



Figure 1 - Location

The site is rectangular in shape, with a frontage of 36.57m to the pacific Highway and a depth of 31.21m/31.26m. The southern portion of the site contains a 2/3 storey building with ground floor commercial/retail, first floor boarding house and basement car parking that forms a 3<sup>rd</sup> storey at the rear. The northern portion of the site adjoins Kenneth Slessor Park and contains a 2 storey commercial building with ground floor offices and also with basement car parking that forms a 3<sup>rd</sup> storey at the rear. An aerial view of the site and context is shown below at Figure 2. A detailed description of the site and context is attached at **Appendix A**.



Figure 2 – Aerial View of Site and Locality

3

#### 4. EXISTING LOCAL PLANNING CONTROLS

The site is zoned B5 Business Development under WLEP 2012. Adjoining land to the south and southwest is zoned R2 Low Density Residential. Land to the east, within the Chatswood CBD is zoned B3 Commercial Core. Land to the north, comprising Kenneth Slessor Park is zoned RE1 Public Recreation.

WLEP prescribes a maximum building height of 18m and a maximum floor space ratio (FSR) of 3.7:1 for the site. The subject land is located within an area to which Clause 6.8 Affordable Housing applies and accordingly, must include 4% of such floor space as affordable housing. The subject land does not contain a heritage item, nor is it located within a Conservation Area.

Willoughby Development Control Plan (WDCP) provides detailed development controls in relation to development within the Willoughby local government area on land to which WLEP 2012 applies. The provisions of Part E of the DCP are specifically relevant to the site and the PP.

Given that the PP relates to a conceptual building envelope, only those provisions in the DCP relating to general building form are applicable. These include matters such as frontages, density, use, height, streetscape, setback, building depth, landscaping, open space, privacy, views and vistas and solar access and overshadowing.

A detailed description of existing local planning controls applying to the site and locality is attached at **Appendix B**.

#### 5. JUSTIFICATION FOR THE PLANNING PROPOSAL

The PP does not arise from any local or state government strategic study or report, but does analyse the proposal in relation to existing planning strategies.

The proponent justifies the need for the PP on the basis of the following circumstances.

- Strategic location of the site, adjoining the high density Chatswood CBD and the nearby Chatswood Transport Interchange.
- Need for additional building height and FSR to provide a more appropriate transitioning scale of building heights in the City Centre and having regard to the site's prominent location at the Victoria Avenue entrance to the CBD.
- Suitability of the site for a higher rise mixed use building on the edge of the Chatswood CBD.
- Retention of some commercial uses at ground floor level and enhanced relationship to Kenneth Slessor Park and the adjoining bus stop.
- Significant public benefits parking and office space for Chatswood primary
   School and upgrading of Kenneth Slessor Park.

The PP offers a material public benefit and has potential to provide for an improved urban design outcome on the site. The existing modest maximum building height of 18m that applies to the site, combined with the potential to redevelop the site to a maximum FSR of 3.7:1, effectively dictates a 5 storey street wall building form comprising a 2 storey podium and 3 storeys of apartments above, extending over the great majority of the podium. A podium and tower form would be a more appropriate built form outcome for the site.

The need for increased building height is acknowledged to provide a suitable podium and tower building form, more appropriate to the site's location adjoining the Chatswood CBD. Given the public benefits offered by the proponent, including some 530m2 of assessable GFA for school use, it is also acknowledged that some increase in FSR could be justified, beyond the FSR bonus that currently exists for the site,

The PP includes an indicative building envelope, and an environmental impact and urban design analysis of the proposed building envelope. The extent of additional building height and FSR needs to be considered having regard to the site's context, extent of public benefits and the planning and environmental impacts arising from additional development density and Council's strategic planning objectives.

#### 6. RELATIONSHIP TO STRATEGIC PLANNING FRAMEWORK

The PP includes an assessment of the relationship of the PP with the strategic planning framework, including relevant legislation and regulations, State, Regional and Local strategic framework, the Chatswood Centre Plan (2008)

The PP has been prepared in accordance with the requirements set out in Section 55 of the *Environmental Planning and Assessment Act* and broadly consistent with the objectives of this Act, subject to demonstration that environmental, social and economic impacts are acceptable. This is addressed in Section 9 of this Planning Proposal Assessment Report.

The proponent has demonstrated general consistency with the relevant Section 117 Directions, the NSW State Plan 2012 and the NSW Long Term Transport Plan 2012. The PP is also generally consistent with the Metropolitan Strategy – A Plan for Growing Sydney and the associated Draft Inner North Subregional Strategy.

The provision of additional high density residential apartments adjacent to the Chatswood CBD, which is of regional significance, on a site that is within easy walking distance of high quality/frequency public transport services available from the Chatswood Bus and Rail Interchange is supportive of State and regional planning objectives.

The Willoughby City Strategy 2010-2015 provides Council's longer-term vision for the future of Willoughby LGA. The proponent has demonstrated that the PP is generally consistent with this Strategy. In particular the PP will result in new housing in an area where higher density housing is appropriate and accessible to infrastructure and services. The proposed apartments are likely to offer a high level of amenity – solar access, natural ventilation and views, provided suitable measures are implemented to mitigate noise impacts from high traffic volumes on the Pacific Highway, and where quality living amenity for residents is ensured.

2010-2015.

The Willoughby City Strategy also seeks to reduce car dependency and encourage use of public transport, walking and cycling, promote the development of Chatswood as a major corporate and retail destination, upgrade building stock and streetscapes and improve the quality of the public domain. Subject to demonstrating that an appropriate building envelope is achieved and reasonable provision is made for affordable housing, it is considered that the PP is generally consistent with the Willoughby City Strategy

The proponent has assessed the PP against the provisions of the Chatswood Centre Plan (2008). Relevant provisions include providing for city living, a hub for public transport, creating a vibrant environment, include public art and spaces and visually interesting buildings, provide safe and easy access and be a centre where residential and commercial uses complement each other.

The proponent's assessment demonstrates general consistency with the Chatswood Centre Plan. The appropriateness of the building envelope, in terms of providing a suitable building form and scale and potential for creating a visually interesting building is addressed in the section of this Assessment Report relating to urban design.

#### 7. RELATIONSHIP TO STATUTORY PLANNING FRAMEWORK

The PP includes an assessment of the relationship of the PP with the statutory planning framework, including State and Regional plans and policies and local planning instruments such as Willoughby LEP 2012 and the Willoughby DCP. The PP Report does not assess the proposed envelope against DCP controls relating to setbacks.

The proponent has demonstrated general consistency with the statutory provisions of the relevant State and Regional Environmental Plans, although consideration of SEPP 65 Design Quality of Residential Flat Development is relatively cursory with respect to building bulk, scale and setbacks. This is considered in more detail in the section of this Assessment Report dealing with urban design and built form.

The local statutory framework (Willoughby LEP 2012 and Willoughby DCP) is addressed in **Appendix B** of this Assessment Report. **Appendix B** identifies and considers existing local planning controls.

#### 8. ENVIRONMENTAL SOCIAL AND ECONOMIC IMPACTS

The PP includes an assessment of the environmental, social and economic impacts of the proposed additional building density and height.

The following is an assessment of the primary impacts that arise from the proposed building envelope, specifically in terms of increased floor space and building height and proposed siting and setbacks of the proposed built form.

6

#### (a) VEHICULAR ACCESS, TRAFFIC AND PARKING IMPACTS

The PP envisages construction of a two way vehicular driveway from the Pacific Highway, in the northeast corner of the site. This would be a positive outcome as it increases separation distance compared to the existing site access, with respect to the existing Chatswood Public School driveway and the intersection of Pacific Highway and Victoria Avenue. Potential for removal of the existing driveway to the Public School is also a positive outcome, although it is likely that this driveway will need to be retained for maintenance access to the School property.

The proposed driveway will be located relatively close to the existing bus stop/shelter, located on the footpath, fronting Kenneth Slessor Park, some 7m to the north of the proposed driveway. If there is insufficient separation between the bus stop and the proposed driveway, it may be necessary to move the bus stop further to the north. This is a matter that could be addressed at the development application stage.

With respect to car parking, the PP envisages provision of 103 car space comprising 78 car spaces for residents, visitors and retail tenancies and 25 car spaces for the Primary School Level 1 office and for teacher parking. Under the LEP definition of assessable gross floor area (GFA), 20 of these car spaces would comprise assessable GFA, which does not appear to have been included in the requested GFA of 4.74;1.

A total of 54 apartments are proposed, which are likely to comprise a mix of 1, 2 and 3 bedroom apartments. As the site is located within a Railway precinct/major public Transport Corridor, WDCP requires 1 car space for each 1 or 2 bedroom unit, 1.25 car spaces for each 3 bedroom unit and 1 visitor car space for each 4 units. On this basis, 57.5 resident car spaces and 13.5 visitor car spaces would be adequate for the apartments.

A small retail tenancy (approximately 80m2) is proposed on the ground floor, which pursuant to the DCP would require at least 3 car spaces. The adjoining café/restaurant (approximately 82m2) requires 1 car space per 75m2. If the outdoor dining area is also included, a total of 2 car spaces would be required for this use. Therefore, proposed resident/visitor/retail/café parking of 78 car spaces complies with WDCP.

The Level 1 office area of 530m2 requires 5 car spaces (1 per 110m2 of floor space), whereas 25 are proposed, which also includes Primary School teacher parking. The extent of car parking proposed for Level 1 exceeds Council's requirements, but given that the proposed 25 car spaces are intended to replace teacher parking currently provided on the Chatswood Primary School site, the additional parking is considered appropriate in the circumstances. Any amendment to the LEP for the site would require a sub-clause excluding the additional 20 car spaces from calculation of assessable GFA

As an important objective of the proposal is to enable removal of existing teacher parking within the Chatswood Primary School site, further investigation would be desirable to confirm that 25 car spaces will be adequate to enable removal of parking within the school grounds.

NSW Government – Education has by letter dated 9th November 2015, confirmed that the Department supports the proposed VPA providing the School with basement parking (25 car spaces), first level office space (around 530m2) with appropriate access directly from the School site and dedication of these facilities to the Department via a VPA for a nominal fee of \$1. The Department has agreed to meet fit-out costs and legal fees associated with transfer of ownership.

The proposal envisages an increase in density of some 28%. The proponent argues that the PP will result in much less commercial floor space on the site, which would result in a small reduction in peak traffic generation from 18.9 vehicle trips per hour to 16.1 vehicle trips per hour. There is nothing in the current planning controls that would require floor space on the site above ground floor level to be non-residential. Accordingly it is possible that peak traffic flows could increase by at least 20%. Further investigation of this potential traffic increase and associated impacts is required, based on the same percentage of residential floor space for development under the existing FSR/Height controls and the requested FSR/Height controls.

As the site fronts an Arterial Road, the views of Roads and Maritime Services (RMS) will be sought during the exhibition of the PP, if it proceeds through the Gateway process. Council's Traffic Engineer has reviewed the PP and raises no objections subject to the views of the RMS being obtained when and if the PP is formally exhibited.

#### (b) VIEWS AND OUTLOOK

Increasing building height above the existing height limit of 18m, as proposed in the PP, has potential to impact on views from middle and upper level apartments in the existing high rise apartment building to the east at No. 809 Pacific Highway, located at the northeast corner of Victoria Avenue and the Pacific Highway, due to the additional building height proposed.

The PP includes a view impact assessment with respect to potential view impacts on the residential floor levels at No. 809 Pacific Highway. 3D View loss diagrams have been included as Appendix A to the proponent's PP.

West facing apartments at 809 Pacific Highway, at least above 2<sup>nd</sup> floor level, currently enjoy expansive regional views to the west towards the Blue Mountains in the distance. Future development of the subject land 688-692 Pacific Highway in accordance with the current building height and FSR controls would allow a future building on the site to a height of 18m extending across most of the site frontage to the Pacific Highway.

Having regard to the built form permitted by the current development controls, it is reasonable that the view impact assessment be confined to the additional building height sought by the proponent. On this basis, view impacts will primarily impact on the top 6 to 7 floor levels of 809 Pacific Highway (incorrectly identified as No. 608 Pacific Highway in the JBA Planning Proposal report).

The proponent argues that view impacts arising from the requested increase in building height are mitigated by generous separation distance of more than 25m and the stepped building form, which results in a relatively slim tower form, above Level 8. The proponent also argues that a significant portion of the existing views will be retained and that reasonable view sharing is achieved, having regard to the dense urban character of the area.

8

The proponent considers that the affected views are private rather than public views and should be given less weight, having regard to the benefits of the proposal and the location of the view affected properties within a high rise CBD context. In the context of a DA that complies with building height and setback controls, such a conclusion would be justified. However, in the case of a PP which seeks to change the development rules, a stricter view impact test should be applied.

The proponent's view impact assessment indicates that those CBD apartments to the east, which would enjoy uninterrupted views above a building of complying height constructed on the subject land, would experience a relatively modest reduction in the extent of overall view. The percentage of the total view that would be obstructed is minor, although it is acknowledged that the interruption to the line of view created by the requested additional height, does increase view impact, in terms of overall view quality, beyond just the percentage of view lost. Notwithstanding this it is considered that reasonable view sharing is maintained for residential properties to the east.

Most residential properties to the west currently enjoy a view over the site, towards the Chatswood CBD skyline. The taller building envisaged for the site in the PP, will merge into this high rise CBD view and could not be considered a material adverse view or outlook impact.

The existing dual occupancies at the rear of the site have limited views towards the CBD due to their lower level and the screening effect of the existing buildings on the site and existing large trees in the rear yards of those properties. The additional building height proposed would have no greater view impact on these dual occupancies than a building of complying height constructed on the site.

### (c) OVERSHADOWING

Increasing building height above the existing height limit of 18m, as proposed in the PP, has potential to impact on mid-winter solar access to residential properties to the west and non-residential land to the east and south. The PP includes a mid-winter shadow impact assessment with respect to shadows cast over the adjoining school to the south between the hours 11am and 12 noon, comparing shadows from a complying height building (with a 3m rear setback), with those cast by the proposed building envelope, which at its northwest corner has no rear setback.

The "complying height envelope" provided does not allow for slope of the land and at the rear elevation is at least 4m higher than the current 18m maximum permitted building height. The envelope shown casts significant shadow over the adjoining school car park between 11am and 12noon, with a substantial area of the school playground to the west retaining solar access. Despite the proposed increase in building height, the stepped form of the proposed building results in only marginally greater overshadowing of the school playground between 11am and 12 noon.

A shadow impact assessment on the school before 11am and after 12 noon has not been provided. It is evident that after 12 noon there is minimal shadow cast over the playground by both a complying height building and the proposed building envelope. Prior to 11am an increasing area of the school playground is affected by shadows from the proposed building envelope and prior to 10am existing high rise buildings to the east and northeast of the school will significantly overshadow the school playground.

9

The critical times for solar access to the school playground are during recess and lunch and when the playground is used for outdoor classes and organised outdoor activity. There will be minimal to no shadow impact on these activities after 12 noon. As noted above, there is a minor increase in overshadowing between 11am and 12noon, but there is still ample area with solar access for recess activities and outdoor activities after 11am.

The PP report indicates that morning recess is at 11am and this time was therefore used as the start time for assessing shadow impacts. As noted above, existing buildings significantly impact on solar access before 10am, but this leaves a gap in the solar impact assessment between the period 10am to 10.45am, when outdoor activities could be conducted in the playground, or the possibility of recess being held earlier. The proponent should provide plans of shadow impact assessment on the school playground for 10am, 10.15am, 10.30am and 10.45am to confirm that the proposal will not significantly increase shadow impacts to the playground area at this time of day.

During the morning there is potential for some increased shadow impacts to occur over the dual occupancies located to the west of the development site, particularly the 4 properties located at No's 1, 1A, 3 and 3A James Street. This is evident in the shadow diagrams provided for 11am to 12 noon, although it is noted that the extent of increased shadow is modest.

The extent of increased shadow is likely to be greater before 11am. At 9am and before, existing high rise buildings to the east will have shadow impacts on the dual occupancy development in James Street. Shadow impact on these properties is exacerbated by the absence of any rear setback for the proposed residential tower in the northwest corner of the site. A 3m rear setback in this location would ensure minimal increase in shadowing, compared to a complying building height envelope, for the dual occupancies at the rear of the site.

The proponent should provide plans of shadow impact assessment on the James Street dual occupancies at quarter hour intervals from 9am through to 10.45am, including a shadow impact assessment for the scenario where a 3m rear setback is provided for the residential tower proposed in the northwest corner of the site.

Increased shadow impacts to the east are unlikely to impact on residential units until late afternoon. Most afternoon shadow is expected to be confined to the roadway and ground floor levels of buildings to the east and southeast However, given the significant increase in building height, mid-winter afternoon shadow diagrams for 1pm, 2pm and 3pm should be provided to confirm that there will be minimal shadow impact up to 3pm on any existing apartments to the east of the site. The "complying plan" must show the correct 18m maximum height at the rear elevation, as shadows from a 22m high rear elevation are much longer.

#### (d) AURAL AND VISUAL PRIVACY

Potential adverse impacts on residential aural and visual privacy are limited to the existing 3 dual occupancies downslope, to the rear of the development site. There is potential for overlooking of these properties from the western elevation of the proposed school office level and from the 3 westernmost apartments on Level 2 and from the north western apartment on each of Levels 3 to 6.

10

The western elevation of the Level 1 offices could be provided with high sill translucent un-openable windows to avoid any adverse aural or visual privacy impacts on the dual occupancies. The 2 west facing apartments, centrally located within Level 2 have a western setback of at least 5m, which when combined with planter boxes would preclude any material impact on the aural and visual privacy of the subject dual occupancies.

The northwest apartments on Levels 2 to 6 are proposed with a zero setback to the western rear boundary and if there are windows and/or balconies in the western elevation of these apartments, overlooking of the rear private open space of the dual occupancies would occur. However, the building envelope readily provides for ample glazing to be provided to the northern and southern elevations of these apartments. Any west facing windows could therefore, be restricted to high sill translucent glass, to maintain neighbour privacy.

Subject to a suitable design response in any future development application, satisfactory aural and visual privacy can be maintained to adjoining residential properties.

Some issue could be raised with respect to overlooking of the school playground, located to the south of the site. However, the advantages of passive surveillance of the playground outweigh any perceived concerns that children playing could be observed from the proposed development.

The proposed concept plans provide a high level of internal residential visual privacy. There will be overlooking of proposed apartments, particular balconies and any east facing rooms, from existing high rise development to the east of the site, but this is unavoidable in the context of an urbanised high density high rise CBD environment.

Apartments in the proposed development, where they have elevations fronting the Pacific Highway, particularly at lower levels, will be exposed to significant traffic noise impacts from the Pacific Highway. This situation is exacerbated by the predominantly zero setback proposed to the Pacific Highway. Typically the combination of a building setback to the Highway and use of acoustic screens and double glazing and the like, would ensure an acceptable internal acoustic amenity. These issues, including the introduction of a greater building setback to the Highway can be suitably addressed in any development application.

### (e) LAND USE

The proposal is for a mixed use development, with retail/café uses at ground floor level, first floor offices and up to 11 storeys of residential above. Non-residential uses will represent less than 15% of total floor space,

The subject land is zoned B5 Business Development, which while allowing for mixed use development in the form of shop-top housing, is primarily aimed at providing land for business purposes. This would imply that a substantial portion of floor space would be allocated to business purposes. The additional floor space sought in the PP is proposed for residential purposes, which in effect reduces the ratio of business floor space to residential floor space.

11

The planning controls do not prescribe a maximum ratio of residential to nonresidential floor space. Accordingly, in terms of the statutory controls, providing at least the ground floor level is used for retail and/or business purposes, all floor space above may be developed for shop-top housing.

As noted above, the B5 Zone allows shop-top housing, which is defined as "one or more dwellings located above ground floor retail premises or business premises." While Level 1 is proposed to be used for educational purposes (school offices and administration), the ground floor will be used for retail or business premises. Therefore, it is considered that the proposed residential component falls within the definition of shop-top housing and is therefore permissible development.

Given the location of the site on the western side of the Pacific Highway and outside the commercial core of the Chatswood CBD, there are grounds to support a modest provision of non-residential floor space on the site. The limited site area available also constrains potential for redevelopment of the site for bulky goods retailing or a motor vehicle showroom. The extent of non-residential floor space is considered reasonable in the circumstances.

#### (f) INTERFACE TO ADJOINING LAND USES, BUILT FORM & URBAN DESIGN

Council has commissioned an Urban Design Report to assess the proposed built form, within its context and consider alternative options. This Urban Design Report also considers the relationship of the proposed building envelope to adjoining properties, the Chatswood CBD and the Pacific Highway corridor.

To the east, the site adjoins the Pacific Highway and the Chatswood CBD to the east. The PP, by significantly increasing maximum building height from 18m to 40m will result in a tall building, effectively on an island site, surrounded on 3 sides by low rise buildings. The Urban Design Report prepared by Kennedy Associates Architects addresses interface issues and reaches the following conclusions.

#### **School**

- the design seeks to address the interface issues with the adjoining school through its massing
- so long as the scheme can demonstrate that it maintains an appropriate level of sunlight to the school
- the proposal does not appear to result in any significant urban design issues
- given the existing urban context there do not appear to be any Heritage issues with respect to proposed development

#### Park

- the proposed development specifically addresses and faces Western Park
- whilst providing a strong urban edge to the park, given the urban character
  of Chatswood, this is not out of character and will be unlikely to have a
  significant impact upon or be substantially detrimental to the use of or
  amenity of the park.

12

#### Houses in James Street

- the proposed development does address the issue of the interface with the houses to its South west in James Street
- the proposed development generally retains the height, bulk and scale of the existing development along this interface
- the proposed bulk of the building facing Western Park, will potentially have some impact in the houses, primarily in terms of overshadowing of rear courtyard spaces, although this is likely to be not significantly different to the impacts resulting from the double row of trees currently providing the visual interface between the dwellings and the blank wall of the existing development.
- the proposed development does not provide any additional setbacks to the boundary with the adjoining houses but, as it is largely the same as the existing wall which appears to predate the houses, this does not appear to be unacceptable

#### Pacific Highway

- the proposed development provides a street wall to the Pacific Highway, albeit one which varies in height from approximately 8.5m to 40m
- · the street wall will alter the visual character of the Pacific Highway
- the current planning controls already permit a 5 or 6 storey building along the highway that will, in itself, significantly alter the 'reading' of the highway
- the more pronounced difference will be primarily experienced when travelling from north to south as the primary way people experience of the Highway is from cars travelling along it
- the traffic lights at Fullers Road, Victoria Avenue and Albert Avenue means that vehicles are regularly stationery or travelling slowly through that section of the Chatswood and therefore there is the potential for drivers and passengers to be more aware of their immediate surroundings
- the provision of a street wall in the location of the subject site will:
- have a visual impact on the street where it will be most visible
- close the vista of sky currently available when travelling in that direction

The above interface assessment is generally supported. It is likely that the northern elevation to the Park will contain balconies above podium level. This would provide a satisfactory interface, notwithstanding a zero setback to the Park for the proposed building envelope.

Introduction of some setback to the Pacific Highway above a height of 12m to 15m would reduce potential for a canyon like effect to the Highway and be more consistent with Council's DCP, which requires a building setback to the Highway, above podium level.

Providing at least a 3m western rear boundary setback for the lower tower proposed in the northwest corner of the site would improve the interface to the dual occupancies at the rear and ensure that there is minimal increase in overshadowing.

13

The Urban Design Report, with respect to proposed building form concludes that:

- The stepped massing and form are well considered and can be supported.
- The retention of wall heights not greater than currently exists on the southern and western boundary is important and should be enforced.
- So long as it can demonstrate acceptable impacts on adjoining properties in terms of protection of existing trees and the delivery of sufficient solar access, the somewhat unique character of the site and the massing and volumes proposed in the scheme suggest that a development of the type being proposed could be supported as a stand alone development.

The Urban Design Study, accompanying the Urban Design Report, includes a site section diagram illustrating the proposal in relation to the existing LEP height controls in an east west cross section from Railway Street to the low density housing to the west of the site. This diagram is reproduced below, as **Figure 13**. It should be noted that the slope of the development site is steeper than is shown in the cross-section below and equates to at least a full storey height at the rear of the site.

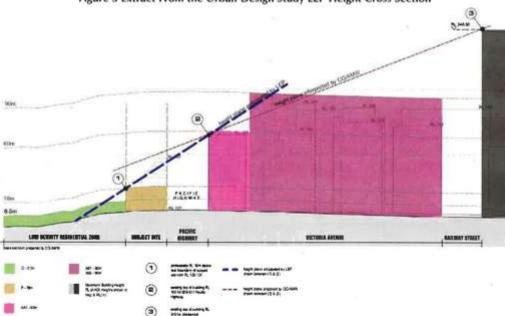


Figure 3 Extract From the Urban Design Study LEP Height Cross Section

The Urban Design Report raises the question as to "whether it is an appropriate urban strategy to permit high rise development on the western side of the Highway and whether permitting a development of this type in this location will establish a precedent that will 'open the doors' for other similar developments along the western side of the Highway." The Report also asks the question as to "whether allowing this will deliver a strategically valuable and appropriate long term urban outcome." The Urban Design Report recommends that in considering the above issues a number of key issues should be considered.

14

The Urban Design Report appropriately notes that "the previous approach of allowing the Pacific Highway to provide a natural demarcation between the CBD and its surrounds was sensible, practical and manageable" and that "along the CBD's western perimeter the Highway has not only been an effective edge to the CBD, but has given the CBD a specific and identifiable urban form."

Kennedy Associates Architects point out that "given the unique characteristics of the Chatswood CBD and the complex and obvious interface issues, the topography and urban character of the area provide, we think council need to be very careful in their assessment of this development." We would concur with this assessment and agree with Kennedy Associates Architects opinion that the PP, if supported, "will have immediately redefined the urban character of Chatswood for the entire extent of the highway between at least Freeman Road and Railway Street, and potentially much further" and that "this is the key urban design question raised by the planning proposal."

The Urban Design Report acknowledges that there is potential to support a change in the use and height of development on the western side of the Pacific Highway, provided that the Council "look at the entire strip in one single exercise and establish a new hierarchy of heights, including for the subject site." Kennedy Associates Architects consider that if this assessment is undertaken and supports increased building heights they consider that a height of 40m on the subject site is both reasonable and good urban design. They suggest that Council could invite the proponent to undertake an urban design assessment for the land on the western side of the Pacific Highway.

In recent years there have been significant increases in building heights within the Chatswood CBD, concentrated around the railway station, generally south of Help Street, south to Albert Avenue. This indicates potential to accommodate taller buildings on the western side of the Pacific Highway, between Help Street/Fullers Road and Freeman Road, without materially changing the strategy of building height transition from lower to taller buildings, from west to east. This is illustrated in Figure 3.

Land on the western side of the Pacific Highway, to the north of Fullers Road, is more distant from the railway station and most of the new tall towers that are concentrated south of Help Street. The B5 Zone also does not extend as far north as Railway Street and at Fullers Road, the Highway bends to the east, changing the corridor effect of the Highway, which exists south of Fullers Road. In our opinion the PP does not constitute a precedent for increased building height on the western side of the Pacific Highway, north of Fullers Road.

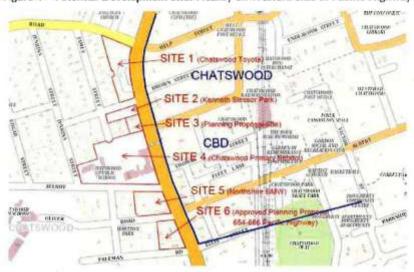
There are 6 development sites on the western side of the Pacific Highway, extending south from Fullers Road to Freeman Road, which is effectively the southwest edge of the CBD. These sites (shown in **Figure 4** on page 15), from north to south comprise Chatswood Toyota, Kenneth Slessor Park, the land that is the subject of the current Planning Proposal, Chatswood Primary School, Northside BMW and 654-666 Pacific Highway, which has been approved by way of an amendment to WLEP 2012, for mixed use development up to 36m in height, some 4m lower than is proposed for 688-692 Pacific Highway.

Chatswood Toyota and Northside BMW have recently undergone redevelopment or major refurbishment. Chatswood Primary School and Kenneth Slessor Park are unlikely to be developed with tall buildings.

15

The only site likely to be redeveloped in the foreseeable future is 654-666 Pacific Highway, which has a 36m building height limit.

Figure 4 - Potential Development Sites Nearby on Western Side of Pacific Highway



It is unlikely that the PP could be argued as creating a precedent for increases in building heights south of Freeman Road or north of Fullers Road, on the western side of the Highway. Given that there are only 6 potential development sites on the western side of the Highway, between Fullers Road and Freeman Road and that 4 of these sites are unlikely to be redeveloped with tall buildings in the foreseeable future, allowing a building height of up to 40m in a suitable building form at 688-692 Pacific Highway will not change the character of the whole corridor – it is effectively an island site.

Having regard to the recent significantly increased building heights in the Chatswood CBD, the sites proximity to the railway station and these more recent taller buildings, together with the "island" nature of the site, it is considered that the site is capable of accommodating a sensitively designed building with a building form stepping up in height to a maximum of 40m, without creating adverse urban design outcomes.

#### (g) SITE SUITABILITY, SERVICES AND INFRASTRUCTURE

The site is not subject to development hazards such as bushfire, mine subsidence or flooding. Land contamination is unlikely to be a major issue and is not impacted by the proposed increase in density and building height.

The site has a relatively steep slope, which will result in basement car parking levels appearing as additional storeys in the rear portion of the site, as viewed from the dual occupancies at the rear and from Kenneth Slessor Park. This is not substantially different from the existing situation. In order to accommodate increased development density and the basement level for Primary School teacher parking, an additional 2 basement parking levels will be required. This will entail significant additional excavation and investigation of geotechnical conditions.

16

The site is well located with respect to access to community facilities and services, including shops and public transport. All necessary urban services are available to the site and should be capable of augmentation, if required. This can be addressed in any future development Application.

#### (h) WILLOUGHBY DCP - BUILDING ENVELOPE & STREETSCAPE

The PP is accompanied by an indicative building envelope designed to accommodate a future mixed use building with a maximum height of 40m and maximum FSR of 4.74:1. The building envelope comprises a 2 storey non-residential podium, with 2 residential tower elements. The primary tower element is orientated north-south, fronting the Pacific Highway, extending up to 11 storeys above podium, with a stepping down of built form towards the south. The secondary tower element, adjoining Kenneth Slessor Park is lower, extending up to 5 storeys above podium and orientated east-west.

The chosen building envelope has been designed as a street wall building form to the Pacific Highway and Kenneth Slessor Park and a taller element to provide a height transition to the taller CBD buildings to the east. The tower is stepped down to provide a more slender form to the upper portion of the tower and ensure there is minimal overshadowing of Chatswood Public School's playground, after 11am.

Part E of the Willoughby DCP includes development controls relating to urban design, density, height, streetscape, setbacks and building depth, which are designed to establish parameters for building bulk and scale. These controls seek to achieve the following outcomes:

- Maintenance and improvement of the existing or planned scale and character of the street:
- Maintenance of solar access to the public domain including public places and footpaths;
- Buildings which are appropriate to their setting and will provide an integrated backdrop to the streetscape;
- Maintenance of the amenity of any adjoining residential land in terms of building bulk and solar access.
- Ensure views from neighbouring dwellings are not unduly compromised;
- Ensure building height does not overwhelm the public street and is compatible with the existing or planned scale of surrounding developments;
- Achieve attractive streetscapes that add visual interest, create high quality urban forms & enhance the character of the existing retail/commercial areas;
- Ensure there is adequate separation between buildings for the amenity of the development and adjoining properties;
- Provide setbacks that spatially define the street;
- Ensure the positioning of new buildings contribute to the existing or proposed streetscape character.

The parameters for building bulk and scale, as requested in the PP would enable a building with a GFA of 5,411m2 (FSR 4.74:1) with a maximum building height of 40m to be accommodated within the proposed building envelope. I have assumed this envelope includes both the required affordable housing component (4%) and school office floor space. However, this envelope has been designed without consideration of the setback controls in the Willoughby DCP, as set out in Part E1.4 of the DCP.

17

The DCP, for the most part, allows the podium element of mixed use buildings to be constructed across the whole of the site, with zero setbacks to front, side and rear boundaries, where land adjoins a commercial zone. The subject land does not adjoin a commercial zone. Where a boundary adjoins a residential boundary increased setbacks apply. Above the podium level, setbacks are required to front, side and rear boundaries.

In the case of development with a frontage to the Pacific Highway, a minimum 4m landscaped setback is required at ground level, with a 4m front setback for all levels below ground level. The proposed building envelope provides a front setback of 2m from the proposed retail tenancy and the outdoor seating area, but includes a much more generous setback adjoining the northern side of this seating area.

The proposed ground floor level and approximately 50% of the first floor level have a zero rear setback to the adjoining residential zone, whereas the DCP would require at least a 3m setback at ground floor level and 6m at first floor level for a rear boundary that backs onto residential land zoned R2 or R3. Given that existing development on the site has in part, a zero rear setback and is 3 storeys above ground level at the rear, the proposed rear setbacks for the ground and first floor levels (and the uppermost basement parking level) are considered reasonable, as built form impacts on residential land to the rear are marginally reduced, provided there is no material adverse impact on the root zones of the adjacent large trees in the rear yards of the dual occupancies.

At first floor level the proposal provides generous setbacks to the Pacific Highway to facilitate improved quality and amenity of public and semi-public space at ground level. The proposed first floor level setbacks are appropriate.

Above podium level, the Willoughby DCP requires that the 3<sup>nd</sup> storey provide a minimum 2m front setback. The proposal provides a predominantly zero front setback to the Pacific Highway frontage and is hence non-compliant. If the building envelope within 2m of the Highway frontage is limited to balconies only, satisfactory compliance would be achieved.

Proposed 3<sup>rd</sup> storey setbacks to the southern side boundary are satisfactory and comply with DCP requirements. As 2m deep balconies are proposed to the northern side boundary, it is considered reasonable to allow the building envelope to extend to the northern side boundary for the 3<sup>rd</sup> storey. A variable rear setback is proposed, which includes portions of the building

Floor levels above the 3<sup>rd</sup> storey (i.e. Levels 3 and above in the building envelope) are required to provide a minimum front setback of 7.4m. The proposed building envelope is significantly non-compliant with this front setback control. The stepping of building form suggests that some flexibility should be allowed for the front setback control, but it is difficult to support a setback reduction of the magnitude proposed, particularly given that there is no stepping back of building form for Levels 3 to 6. The building envelope should be revised to incorporate a more generous front setback.

In the case of side setbacks, above the 3<sup>rd</sup> Storey, a minimum of 3m applies, with an increase of 1.2m for each storey above the 3<sup>rd</sup> storey, applied as a total minimum side setback for all floors above the 3<sup>rd</sup> storey, where a site adjoins a residential R2, R3 or R4 zone. There are no prescribed side setbacks where a side boundary is to a zone other than R2, R3 or R4. Accordingly side setbacks would be determined on the merits.

18

The stepping of building form to provide increased southern side setbacks as building height increases is an appropriate response, as it ensures there is minimal overshadowing of the School playground after 11am, although as noted in the assessment of shadow impacts, it is preferable that the building envelope have only minimal shadow impact on the playground from 10.30am onwards.

The residential towers propose a predominantly zero side setback to the northern side boundary, which adjoins Kenneth Slessor Park. Overshadowing is not an issue in relation to setbacks to this side boundary. However, given the buildings heights proposed and the relatively small size and narrowness of Kenneth Slessor Park, floor levels above Level 4 should provide at least 2m setback to the northern face of any balconies or north facing walls.

Substantial rear setbacks are required for floor levels above the podium, where the rear boundary adjoins residential land zoned R2 or R3. The residential tower adjoining Kenneth Slessor Park and the rear boundary of the site is proposed to have a zero rear setback. The DCP would require a 7.2m rear setback for Level 2 of the tower element, increasing to more than 10m above Level 3. The proposed building envelope with respect to the secondary tower element is significantly non-compliant with this rear setback control.

Given the very limited width of the secondary tower (11m) it would have a more limited visual impact, as viewed from the residential properties at the rear, compared with a typical building width of at least 20m. Further, the balance of the development above podium level provides a very generous rear setback. Accordingly some flexibility with the DCP rear setback control is considered reasonable.

The zero rear setback, as proposed for the secondary tower, does result in increased shadow impact to the rear yards of at least two of the nearby residential properties. Provision of a 3m rear setback for Levels 2 to 6, would ensure minimal additional shadowing and ensure a reasonable extent of northeast outlook from the residential properties.

Modification of the building envelope to provide setbacks as recommended above would reduce the extent of additional floor space that could be achieved, within the envelope.

It is estimated that an FSR of between 4.5:1 and 4.6:1 would be the maximum extent of assessable GFA that could be accommodated within the building heights and overall building form proposed, if increases in front and rear setbacks to the tower components are introduced. The proponent should be requested to provide a revised building envelope in accordance with the recommended building setbacks and re-calculate potential FSR, including provision for affordable housing. Any amendment of the LEP would require exclusion of the extra 20 school car spaces from GFA calculations.

As noted in Section 4.1, the subject land is located within an area designated for the provision of affordable housing at the rate of 4% of the total residential floor space. At the current allowable FSR of 3.7:1 and assuming that non-residential floor space would occupy at least the ground and first floor levels, some 3,426m2 of residential floor space could be developed. This would yield 137m2 of affordable housing floor space. Increasing residential yield by an FSR of 1.04:1 (1,187m2), as requested, would increase affordable housing floor space by 48m2 to 185m2.

19

Affordable housing floor space must be included in the calculation of assessable gross floor area, unless it can be demonstrated that the building, with the floor space required for affordable housing (185m2) added to the building, will not cause adverse impacts on adjoining land in terms of overshadowing, privacy, bulk and scale and provided the conservation of any heritage item and its setting will be achieved.

The proponent acknowledges that the site is subject to affordable housing provisions, but does not indicate whether affordable housing is intended to be included in the proposed building envelope and requested site FSR of 4.74.1. Clearly 185m2 of affordable housing floor space added to the additional floor space requested would increase building bulk and likely increase the extent of shadows. Such floor space should be included in any increase in FSR that is supported by Council.

Council's urban design consultant is supportive of the proposed building form, massing and articulation and considers that the architectural treatment of the building as suggested in the photomontages indicates a well designed and attractive building. Council's urban design consultant is of the opinion that the proponent has overstated the urban and visual significance of the site, but in recognising that the site is effectively an "island site" acknowledges that the "stand alone" building will not have a significant impact on the urban character of the town centre.

The proposed building envelope, subject to some further consideration of setbacks above podium level to the Pacific Highway and in the northwest corner of the site, is considered to be appropriate and compatible with the streetscape.

#### (i) HERITAGE

There are no heritage items on the subject land. The site adjoins a listed local heritage item to the south, being the Chatswood Public School (Item I106 in WLEP 2012). This School opened in 1883 and the current heritage listed building on the site is the 2 storey north wing, opened 20 years later in 1903.

The proponent's heritage consultant NBRS + Partners has provided a Heritage Impact Statement (HIS) with respect to potential heritage impacts on nearby heritage items, arising from the PP. The HIS notes the following:

- The heritage significance of Chatswood Public School is identified as being
  "locally significant as a grand school building in a setting which gives
  aesthetic significance to the streetscape. It is socially significant for all the
  children who attended the school and for its association with the early
  growth of the area."
- Because of the scale the School block and the generally lower scale of adjoining development on the western side of the Highway, it is the dominant element in views from the Highway, both from the south and from the north across the whole length of the school building on the Highway.
- The proposal is in line with the evolving character of the area as a major urban agglomeration including taller development that is separated from the surviving heritage items. The potential created for development of the site does not impact on any significant views or setting of the heritage item.

20

- The proposed increase in height across the Pacific Highway creates a limited
  precedence to the containment of the main development of the Chatswood
  CBD. This is however one of the few sites where such change could be
  implemented where it would have little or no substantial adverse impact on
  the structure of the city or the setting of the adjoining heritage item.
- While the proposed changes will increase the development potential of the site it does so in a context of the substantial height controls for sites in close proximity across the pacific Highway that fall within the Chatswood CBD.
   The form adopted for a preliminary building envelope for the site tapers to the south to address the proximity to the adjoining heritage site.
- The subject site is separate to the original school block and has always been developed independently of it. The current development on the subject site does not address the school site and does not complement its character.
- The existing car parking area and playground to the north of the main school block provide a substantial visual separation between the heritage item and the proposed development site and this is reinforced by the structures associated with the overbridge which visually curtails the school's setting in many views. The degree of separation is adequate for the significance of the school building to maintain its visual prominence and its identified level of significance.
- The proposal will be higher than the substantial height of the existing school complex and adjoining landscape elements. While this will have some visual impact on views from the south and north it will not impact on the principal appreciation of the school building from directly opposite on the Pacific Highway where it is seen without the influence of other structures.
- The site was previously occupied by late 19th century development which
  was demolished for the current excavation and building. Because of the
  excavation that accompanied the construction of the existing commercial
  development it is unlikely that there are any significant archaeological
  remains on the site that would preclude the proposed development.
- The proposed design is a stand-alone contemporary multi storey building
  that does not need to relate in any aesthetic manner to the heritage item
  which exists as a free standing Edwardian building in its own setting and
  curtilage. The context is varied and consists of a wide variety of building
  types and designs which are nonetheless a cohesive part of an important
  urban context.
- A substantial visual separation will result in a situation where development
  of the subject site will not visually dominate the substantial presence of
  the Public School on the highway or views to it from public vantage points
  in the vicinity. The building already exists in a context where higher
  modern development is located in similar proximity without detracting
  from its existing visual qualities and heritage significance.
- There will be no appreciable difference to public appreciation of the heritage item as a result of the proposed development.

21

Council's heritage officer has assessed the PP and considers that "the potential impact of the proposal is generally considered to be of an acceptable nature; the potential increase in floor space and height does not significantly impact upon major views of the school building and the potential new urban development is in line with the existing typology of commercial development within the vicinity of the Local Heritage Item." The heritage officer also notes adequate building separation and appropriate tapering of the building envelope to the south assist in mitigating heritage impact.

The existing height control allows for an 18m high building to be constructed at or close to the northern side boundary of the Chatswood Public School site. Having regard to the stepped building form which locates increased building height further from the side boundary shared with the school, the separation distance to the School building provided by the bitumen sealed school parking area and the assessment provided in the proponent's HIS, I would concur with the proponent's heritage consultant that the PP will not result in any substantial adverse heritage impact on the heritage significance of the School or its setting.

#### (j) SOCIAL ISSUES INCLUDING AFFORDABLE HOUSING

The proponent considers the proposal will have a positive social impact by providing public benefits such as improvements to Kenneth Slessor Park, publically accessible space on ground floor level, provision of office space and parking for Chatswood Public School, increased housing supply accessible to services and public transport, and additional affordable housing in accordance with Council's affordable housing policy.

Kenneth Slessor Park is a valuable piece of open space adjoining the Chatswood CBD, but in its current state does not provide a high level of amenity and recreational use. This has been recognised by Council and a Master Plan outlining proposed Park improvements has been prepared and construction of these improvements has recently commenced.

Provision of \$150,000 towards the cost of Park improvements by way of the proposed VPA, is a material public benefit and positive social impact, arising from enhanced public open space, at reduced cost to Council.

Chatswood Public School is under pressure to meet growing demand for school places arising from significant medium and high density development in Chatswood. The School has limited space to accommodate additional enrolments. The VPA proposed by the proponent will enable school administration and office functions, together with off-street parking to be transferred to the proponent's site, providing increased capacity for additional classrooms on the School site, without adversely impacting on playground space. Department of Education and Communities has endorsed this proposal and a significant public benefit would occur, as well as a positive social impact arising from more children in the area having access to a conveniently located local school facility.

Increasing residential density in and adjoining the Chatswood CBD allows Council to accommodate increased population growth, with reduced pressure on "up-zoning" land in the low density residential areas of the Willoughby LGA. Such an outcome would be a positive social impact, by assisting in maintaining the existing character of low density residential areas, in line with the expectations of the great majority of residents in such residential areas.

22

The subject land is located within an area designated for the provision of affordable housing at the rate of 4% of the total residential floor space. The PP will result in a minor increase in the extent of affordable housing GFA by 47.5m2, from 137m2 to 184.5m2. Notwithstanding the minor numerical increase in affordable housing floor space, this is a positive social impact.

If the proposal is sensitively designed to minimise impacts on the residential amenity of the adjoining low density residential area, the PP is unlikely to have a material adverse social impact on residents in the locality.

There are no apparent adverse social impacts arising from the PP. It is acknowledged that there are some in the local community, who are concerned with the potential amenity effects of increased density in and around the Chatswood CBD. Perceived lifestyle impacts such as concerns about congestion and crowding could be seen as an adverse social impact. This can to a great extent be addressed by improving the urban environment, increasing the extent and quality of public space, improved management of vehicular and pedestrian traffic and upgraded service provision, particularly public transport.

I concur with the proponent's assessment that the PP has the potential to deliver significant public benefits. These benefits, if realised, will result in a material positive social impact, with minimal adverse social impact.

#### (k) ECONOMIC IMPACT

The proponent considers the proposal will have a positive economic impact by better utilisation of existing infrastructure such as transport, education and services infrastructure by increasing development potential for the site, without the need for additional infrastructure spending. I agree that these positive impacts would arise from the PP. The extent of such positive economic impacts are however, relatively modest.

The proponent argues that employment positons would be increased due to the inclusion of a retail outlet and café. This is not an outcome of the PP. Any development of the site under the current planning controls would require the provision of non-residential floor space such as retail, cafes and business premises on at least the ground floor level. The PP will not result in increased employment opportunities on the site.

The proponent is seeking increased building height and floor space so as to provide additional residential floor space. In the Traffic Report the proponent argues that there will be a significant reduction in non-residential floor space on the site, which results in reduced traffic flows. This would suggest a reduction in future employment opportunities on the site. Development of the site under the current planning controls would likely result in a predominantly residential development, with non-residential floor space confined to the ground and first floor levels at most. Accordingly the PP would result in no net change to economic impact in terms of employment.

The proponent notes that the PP will create employment opportunities during the construction phase. This would also occur if the site is re-developed in accordance the current planning controls. A larger scale development permitted by increased FSR and building height would likely result in a small increase in construction jobs on the site.

23

A larger scale development will require increased construction and fit out materials, thus increasing demand for these products. This would have a positive multiplier impact through the economy, creating additional economic activity in the building industry and supply of building products. These are important sectors of the NSW economy, particularly at a time when activity in the mining sector is subdued.

The proponent has identified positive economic impacts arising from increasing the supply of housing in the area, which would assist in mitigating increased apartment prices by better balancing supply with demand. Constrained housing supply in areas where people would like to live has increased pressure on house prices and affordability. Increasing supply as proposed would have a positive economic and social impact.

Increasing building height has potential to have adverse amenity impacts on nearby residential properties, such as reduced solar access, view loss and the like. In such circumstances affected residents often argue that reductions in property values will occur. Such an issue is not recognised as a legitimate matter in town planning assessments. Design measures can be implemented to minimise adverse amenity impacts. This may include some changes to the building envelope, such as setbacks, to minimise amenity impacts.

The PP will result in modest positive economic impacts. There are no material adverse economic impacts evident.

#### 9. PUBLIC BENEFIT

As part of the justification for a PP, the proponent is required to demonstrate public benefit arising from the proposal. The proponent has offered to enter into a Voluntary Planning Agreement (VPA) with Council to provide the following public benefits should the PP proceed.

- Provision of 530m2 of office space (563m2 including non-assessable GFA) for Chatswood Primary School on Level 1 of the future building;
- Provision of 1 basement car park level comprising 25 car spaces for staff parking for Chatswood Primary School;
- A cash contribution to Council of \$150,000 towards improvements/upgrading of Kenneth Slessor Park in accordance with Council's Master Plan for this Park

In addition to the above public benefits, the PP would enable, by virtue of increased residential floor space, there is a small increase (approximately 40m2) in affordable housing floor space. If the driveway access to Chatswood Public School can be removed, there is a further traffic flow/safety improvement arising from a reduction in the number of driveway crossings onto the Pacific Highway.

The PP seeks approval to increase FSR from 3.7:1 to 4.74:1 to yield an additional 1,186m2 of assessable GFA on the site. The provision of 530m2 of office space for the School equates to an FSR of 0.464:1, which represents a substantial portion (44.7%) of the additional FSR (1.04:1) that has been requested.

24

The balance of increased floor space, equating to an FSR of 0.536:1, developed as residential (656m2), would effectively have to fund the construction of the School office space, provision of 1 basement parking level for the School and a contribution towards upgrading of Kenneth Slessor Park.

No financial analysis has been provided to address the feasibility of meeting the costs of the proposed public benefits from the potential additional residential floor space. Net returns from an additional 656m2 of residential floor space (8x2 bedroom units) would be relatively modest, although it is also acknowledged that the requested increase in building height offers an opportunity to market higher value apartments, which would increase profitability.

While written endorsement from the NSW Department of Education and Communities supporting the proposed VPA has been received, a Draft VPA has not yet been prepared. A Draft VPA should be prepared by the proponent, prior to proceeding further through the gateway process.

Given the fundamental importance of the proposed public benefits relating to Chatswood Primary School, some degree of certainty needs to be provided that redevelopment of the site, at the requested FSR and building height is likely to be feasible in terms of providing sufficient return to fund the relatively high cost of the additional parking level and school office floor level.

Subject to the preparation of a Draft VPA and provision of a feasibility analysis, it is considered that the PP results in significant public benefit and supports the conclusion that the PP is worthy of support, at least "in principle".

#### 10. CONCLUSIONS AND RECOMMENDATIONS

The Planning Proposal (PP) for 688-692 Pacific Highway, Chatswood seeks to amend Willoughby Local Environmental Plan (WLEP 2012) to increase maximum building height on the site from 18m to 40m (RL 147) and increase maximum floor space ratio (FSR) from 3.7:1 to 4.74:1, to facilitate an increase in GFA (1,186m2) from 4,225m2 to 5,411m2.

The PP is accompanied by an indicative building envelope designed to accommodate a future mixed use building with a maximum height of 40m and maximum FSR of 4.74:1. The building envelope comprises a 2 storey non-residential podium, with 2 residential tower elements. The primary tower element is orientated north-south, fronting the Pacific Highway, extending up to 11 storeys above podium, with a stepping down of built form towards the south. The secondary tower element, adjoining Kenneth Slessor Park is lower, extending up to 5 storeys above podium and orientated east-west.

The PP also offers a range of potential public benefits by way of a yet to be submitted Draft Voluntary Planning Agreement (VPA). These benefits include office and parking facilities for Chatswood Public School (530m2 of office floor space for school purposes and a basement car park level with 25 car spaces), and a \$150,000 cash contribution towards the upgrading of Kenneth Slessor Park. The proposal would also result in a small increase in affordable housing floor space.

25

The PP has been assessed having regard to the relevant matters identified in the NSW Planning and Infrastructure publication "A Guide to preparing Planning Proposals". The assessment has considered the site and its context, planning controls, justification for the proposal, strategic and statutory planning framework, environmental, social and economic impacts and public benefit.

The assessment of the Planning Proposal (PP) indicates that there is merit in supporting additional building height, to obtain an improved built form outcome, if the 2 properties are consolidated into 1 development site. The PP offers significant potential public benefits including provision of office space and parking for the adjoining Chatswood Public School and a contribution towards upgrading of Kenneth Slessor Park, adjoining the site to the north.

#### It is recommended that Council:

- Advise the Proponent that Council supports "in principle" an increase in building
  height and floor space ratio for the 688-692 Pacific Highway, Chatswood as a
  consolidated development site, subject to modification of the proposed building
  envelope, with respect to provision of adequate building setbacks above podium
  level to the Pacific Highway and for the western elevation of the lower of the two
  residential towers. Setbacks in these locations are to be considered having regard to
  the applicable setback controls in the Willoughby DCP.
- 2. That given the need to provide setbacks as outlined in 1 above, the requested maximum FSR be reduced to 4.6:1 to ensure that all floor space, including floor space for affordable housing and proposed school office floor space (but excluding floor space associated with 20 additional car spaces above DCP requirements), can be suitably accommodated within the revised building envelope.
- 3. Submission of mid-winter shadow diagrams (22<sup>nd</sup> June) at quarter hour intervals between the hours 9am to 3pm (and allowing for the slope of the site and neighbouring land) for the proposed building envelope, and a building envelope that complies fully with the current floor space ratio and building height controls.
- Provision of a revised Traffic Report assessing the increased traffic generation based on the same percentage of residential floor space for both a development scenario under the current FSR controls and the development scenario in the Planning Proposal.
- Submission of a Draft Voluntary Planning Agreement addressing the provision of public benefits, as outlined in the Planning Proposal.
- Provision of further information in relation to the feasibility of the proposal, having regard to the cost of commitments to provide the nominated public benefits and the potential value adding that can be achieved from the requested additional floor space and building height.

Nick Juradowitch Director Ingham Planning Pty Ltd

# **APPENDIX A**

Description of the site and context

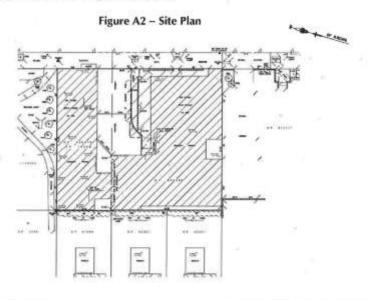
#### DESCRIPTION OF THE SITE AND CONTEXT

The land to which the PP relates is known as Lot 1 in DP 838366 and Lot 2 DP 626676 (SP 19329), No's 688-692 Pacific Highway, Chatswood and has a total area of 1,142m2. The site is located adjacent to the Chatswood CBD on the western side of the Pacific Highway, between Chatswood Primary School and Kenneth Slessor Park, some 260m west of Chatswood Railway Station (see Figure A1 – Location, below).



Figure A1 - Location

The site is generally rectangular in shape, with a frontage of 36.57m to the Pacific Highway and a depth of 31.21m/31.26m. The site has a moderate 4.5m slope to the rear, with an RL of approximately RL 107.2 at the Pacific Highway Frontage and an RL of 102.7 at the rear boundary. A site plan is shown at **Figure A2**, below.



2

The southern portion of the site (No. 688-690 Pacific Highway), adjoining Chatswood Primary School, contains a 2/3 storey building with ground floor commercial/retail, first floor boarding house and basement car parking that forms a 3rd storey at the rear. The northern portion of the site (No. 692 Pacific Highway), adjoins Kenneth Slessor Park and contains a 2 storey commercial building with ground floor offices and also with basement car parking that forms a 3rd storey at the rear. A shared driveway extends west from the Pacific Highway, between the 2 existing buildings, A view of the Pacific Highway frontage of the site, looking northwest from the Highway, is shown in **Photo A1**, below. An aerial view of the site and locality is shown at **Figure A3**.

Photo A1 - View of Site Looking Northwest from the Pacific Highway



Figure A3 - Aerial View of Site and Locality



To the west of the site, adjoining the rear boundary are 3 two storey detached dual occupancies (6 dwellings in total) fronting James Street (see **Photo A2** below). Street front garaging is provided, forward and below the dwellings and there are 2 rows of large trees extending north-south across the rear yards of these dual occupancies. Further to the west is predominantly low density residential development extending west from James Street.

Photo A2- View of Existing Dual Occupancies West of the Site at 1-5 James Street



To the east of the site, on the opposite side of the Pacific Highway, within the Chatswood CBD, is a large 12 storey apartment building with ground floor commercial/retail uses and basement parking. To the southeast and northeast of the site, within the Chatswood CBD, are high rise commercial buildings (see **Photo A3** below).

Photo A3 - View of View of Existing CBD High Rise Development East of the Site



To the north of the site is Kenneth Slessor Park (see Photo A4, below) and an existing bus stop/shelter fronting the Park. Council has recently commenced construction of improvements to this Park. A laneway, "Western Way" extends to the west from the Pacific Highway, on the northern side of this Park. Further to the north, fronting the Pacific Highway is a Toyota car dealership. To the northwest of the site is low density residential development, extending either side of James Street.



Photo A4 - View of Kenneth Slessor Park to the North of the Site

To the south of the site is Chatswood Primary School (see **Photo A5**, below). The School's car park is located alongside the southern boundary of the site and further to the south is the main 2 storey school building. To the southwest of the site is the Primary School's playground. A pedestrian bridge over the Pacific Highway is located approximately 30m south of the site, shown at left in **Photo A5**, below.



Photo A5 - View of Chatswood Primary School to the South of the Site

# **APPENDIX B**

**Existing Local Planning Controls** 

## **EXSITING LOCAL PLANNING CONTROLS**

## Willoughby Local Environmental Plan 2012 (WLEP 2012)

The site is zoned B5 Business Development under WLEP 2012. Adjoining land to the south and southwest is zoned R2 Low Density Residential. Land to the east, within the Chatswood CBD is zoned B3 Commercial Core. Land to the north, comprising Kenneth Slessor Park is zoned RE1 Public Recreation. A zoning map extract from WLEP 2012 showing the zoning of the site and the immediate locality is shown below at Figure B1.

Figure B1 - Zoning Map Extract of the Site and Locality

The B5 Zone primarily aims to provide for a mix of business, warehouse and bulky goods premises that require a large floor area. A range of other non-residential uses such as child care centres, hotels, neighbourhood shops, restaurants, cafes and vehicles sales are also permitted. Shop-top housing is the only form of residential accommodation permitted within the B5 Zone. The PP does not seek to change the existing zoning of the site. WLEP prescribes a maximum building height of 18m (Height Area P), as shown in Figure B2, below.



Figure B2 - Maximum Building Height

2

The subject land falls within Floor Space Ratio Area T1 of WLEP 2012, which prescribes a maximum floor space ratio (FSR) of 2:1, as shown in Figure B3, below. Clause 4.4(17) of WLEP 2012 relates to the subject land (Area 12 on the FSR Map) and allows an increase in FSR up to 3.7:1 if the subject land is amalgamated into 1 development site of at least 1,140m2. While Clause 4.4(17) provides for a significant increase in FSR for site amalgamation, the LEP does not provide for any additional building height above 18m for an amalgamated site.



Figure B3 - Maximum Floor Space Ratio

Clause 6.8 of WLEP 2012 relates to affordable housing and identifies land within the Willoughby LGA where residential or mixed use development must provide affordable housing floor space equivalent to 4% of proposed residential floor space. The subject land is located within an area to which Clause 6.8 applies and accordingly, must include 4% of such floor space as affordable housing.

Clause 4.4(2A) of WLEP 2012 allows affordable housing to be excluded from the assessable gross floor area for the purpose of calculating FSR, provided that the provisions of clause 4.4(2B) are satisfied. Clause 4.4(2B) prescribes that affordable housing floor space is only excluded from the calculation of FSR if the consent authority is satisfied that the building will not cause adverse impacts on adjoining land in terms of overshadowing, privacy, bulk and scale and provided the conservation of any heritage item and its setting will be achieved.

The subject land does not contain a heritage item, nor is it located within a Conservation Area. However, the site does adjoin a heritage item listed in the WLEP as Heritage Item 106 — Chatswood Public School. WLEP2012 requires an assessment of heritage impact where a proposed development adjoins a heritage item. The proponent has included a Heritage Impact Statement prepared by NBRS + Partners, with respect to Chatswood Public School, as Appendix E to the Planning Proposal.

## Willoughby Development Control Plan

Willoughby Development Control Plan (WDCP) provides detailed development controls in relation to development within the Willoughby local government area on land to which WLEP 2012 applies. The provisions of Part E of the DCP are specifically relevant to the site and the PP.

- 3

Given that the PP relates to a conceptual building envelope, only those provisions in the DCP relating to general building form are applicable. These include matters such as frontages, density, use, height, streetscape, setback, building depth, landscaping, open space, privacy, views and vistas and solar access and overshadowing.

The site has adequate frontage (in excess of 27m) and includes active uses at ground floor level and adequate vehicular access. There is potential for landscaping at ground floor level and in the form of roof and podium gardens. Suitably sized balconies for private open space can be provided within the building envelope and there is ample opportunity for building articulation.

Building depths are generally satisfactory. The DCP requires a clearly defined podium and tower element for buildings over 11m in height. The proposed building envelope does not comply with DCP requirements relating to front and rear setbacks. This is discussed in the section of this Assessment Report dealing with built form and urban design. The proponent has not provided an analysis of the building envelope against the relevant controls of the Willoughby DCP.

Part C of the DCP includes general provisions and sets out Council's requirements in relation to traffic and car parking. Traffic issues and parking requirements and proposed provision of parking are addressed in Section 9 (Environmental Social and Economic Impacts) of this Report.

**PAGE 296** 

# **APPENDIX C**

Detailed Description of the Planning Proposal

### DETAILED DESCRIPTION OF THE PLANNING PROPOSAL

The PP states that the PP seeks to amend Willoughby Local Environmental Plan 2012 to enable the increased maximum building height and Floor Space Ratio (FSR) on the site. An increase in maximum building height from 18m to 40m (RL 147) and increase in FSR from 3.7:1 to 4.74:1 is sought. Such an increase in FSR will allow assessable gross floor area (GFA) to increase from 4,225.4m2 up to a maximum of 5,413.08m2.

The PP includes a Development Concept providing an outline of how the site may be developed, if the PP is supported by Council. This Development Concept envisages a part 7 part 13 storey mixed use residential/commercial building with a total GFA of 5,411m2 comprising the following components.

- Ground floor commercial space to facilitate a neighbourhood shop and a café or restaurant, which includes an activated and open ground level space with open views to Kenneth Slessor Park;
- Commercial offices on Level 1 to be occupied by the adjoining Chatswood Primary School staff for office and administration purposes.
- An 11 storey residential tower with apartments on Levels 2-11 accommodating approximately 37 dwellings;
- A lower 5 storey secondary residential building element that addresses the Kenneth Slessor Park, accommodating approximately 17 dwellings;
- 3 levels of basement car parking levels for up to 78 vehicles for residents, visitors and retail tenants.
- An additional level of the basement car parking dedicated to Chatswood Primary School staff parking (25 car spaces).

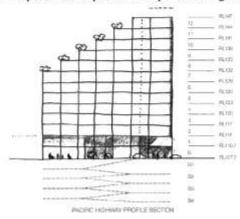
The PP describes indicative urban design and built form as "two elements comprising the primary taller building with a stepping built form and a smaller building element that adjoins Kenneth Slessor Park." Figure 19 in the PP, (reproduced below), as Figure C1 shows a photomontage view of the Development Concept, (centre of photomontage) looking south from the corner of the Pacific Highway and Fullers Road/Help Street.

Figure C1 - Proponent's Photomontage of the Proposed Development Concept



The proposed building envelope locates the tallest element of the building in the northeast corner, with building height stepped down to the south to minimise shadow impact on Chatswood Primary School. This stepping down of building height is illustrated in Figure C2, below, which is an extract from the proponent's PP Report.

Figure C2 - Proposed Development Concept Pacific Highway Profile

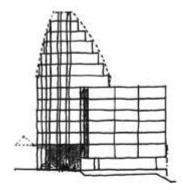


The stepped building form is also illustrated below at left (Figure C3) in the proponent's sketch view, looking north from the Pacific Highway. A lower tower height building (5 storeys) is proposed west of the main tower building, extending west along the site's common boundary with Kenneth Slessor Park. This is illustrated below at right (Figure C4) in the proponent's sketch view, looking south from the Pacific Highway.

Figure C3 - Building Form Looking North

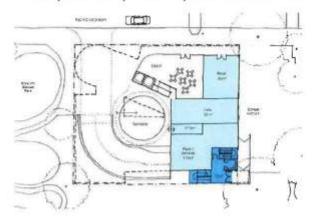
Figure C4 - Building Form Looking South





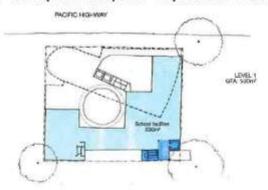
The Development Concept provides an area of undercover open space at ground level, including an outdoor seating area for the proposed café/restaurant. The publicly accessible open space at ground level has a north to northeast orientation and extends across to Kenneth Slessor Park to provide a pedestrian and visual link to the Park. The proponent's ground floor level concept is reproduced in **Figure C5**, below.

FigureC5 - Development Concept Plan - Proposed Ground Floor Plate



At first floor level, the Development Concept includes office floor space of some 530m2, which is proposed to be dedicated for use by Chatswood Primary School, as part of the proponent's proposal to enter into a Voluntary Planning Agreement, which also includes 1 level of basement parking (25 car spaces). The proponent's first floor level concept is reproduced in **Figure C6**, below.

FigureC6 - Development Concept Plan - Proposed Level 1 Floor Plate



Above Level 1, the Development Concept proposes 5 to 11 levels of apartments around a central service/lift core. The Level 2 floorplate covers approximately 80% of the site, but floor plate size reduces as building height increases. This is illustrated in Figure C7 which shows a range of proposed residential floor plates above Level 1. Level 2 has a GFA of 806.5m2 and Levels 3-6 a GFA of 670m2. Above Level 6, floorplate size reduces significantly to 450m2 on Level 7, down to just 85m2 on Level 12 which comprises the top floor of a 2 storey penthouse.

1B 52ml LEVEL 12 GFA: 85m<sup>2</sup> LEVEL 11 GFA: 143m<sup>2</sup>

FigureC7 - Development Concept Plan Example Residential Floor Plates

5

If the PP is supported by Council, the proponent intends to enter into a Voluntary Planning Agreement (VPA) providing for the following public benefits.

- Provision of 530m2 of office space (563m2 including non-assessable GFA) for Chatswood Primary School on Level 1 of the future building;
- Provision of 1 basement car park level comprising 25 car spaces for staff parking for Chatswood Primary School (this equates to 5 car spaces for the proposed school office space and 20 extra car spaces for school use);
- Contribution of \$150,000 towards the cost of improvements/upgrading of Kenneth Slessor Park in accordance with Council's Master Plan for this Park.

In addition to the above public benefits, the proponent has noted public benefits associated with "high quality publically accessible space on the ground floor of the site" and potential for removing the existing driveway to the Primary School parking area.

PAGE 302

# APPENDIX D

Urban Design Report – 688-692 Pacific Highway Chatswood dated 13 November 2015 prepared by Kennedy Associates Architects

## 688 pacific highway, chatswood

urban design report



## A. INTRODUCTION:

This study has been prepared by Kennedy Associates Architects.

The study addresses the urban design issues raised by the Preliminary Planning Report Rev A, dated 25 June 2015, prepared by Conrad Gargett Ancher Mortlock Woolley for the subject site being:

## 688 Pacific Highway, Chatswood

That report, which we understand is intended to form the basis of planning proposal for the subject site, proposes a 13 storey, mixed use, commercial / residential development on the subject site with a building height of approximately 40m and a FSR of approximately 4.74:1

Kennedy Associates were engaged by Willoughby City Council to review the Preliminary Planning Report in terms of its urban design and architectural character, quality and impacts.

This report summarises Kennedy Associates assessment of the proposal.

## B. ABOUT THE AUTHOR

Steve Kennedy, is a partner of Kennedy Associates Architects, an architectural and urban design practice based in Annandale, Sydney, specialising in urban design and community, residential and environmental architecture.

Steve has 30 years experience as an architect and urban designer, started private practice in 1991and formed Kennedy Associates in 1994.

Steve is the author of numerous articles and papers, has presented at conferences and forums across Australia and has been a guest critic and taught architecture and urban design at several universities. In 2012 / 2013 Steve gave a series of lectures titled, 'Marx was right Beauty Matters'.

Steve's academic studies have included, Arts (Syd), Architecture, (hons) (UNSW) and Urban Design (MBErw, UTS). Steve is a registered architect with the NSW, ACT and Queenstand Architects Registration Boards, registration numbers 5828, 2500 and 4953.

National President of the Association of Consulting Architects of Australia (ACA) Director of the Australian Construction Industry Forum (ACIF) Director of The Australian Council of Built Environment Design Professions (BEDP) Life Fellow of the Australian Institute of Australia (PIA) Member of the Planning Institute of Australia (PIA)

Steve has acted as an architectural and urban design consultant to both local and state government for over 15 years and has been a member of numerous working groups, advisory boards, design excellence panels, design review panels and independent hearing and assessment panels, during which time he has participated in over 250 panel sessions and reviewed more than 1000 projects. His current membership of review panels includes:

Sydney East Joint Regional Planning Panel (JRPP) (representing Warringah Council)
Warringah Development Assessment Panel (WDAP)
Fairfield City Council Independent Development Assessment Committee (IDAC)

Steve regularly acts as an expert witness to the NSW Land and Environment Court.

Kennedy Associates Architects, employs 15 people, has worked on over 500 projects ranging in value up \$100m, is currently working on projects in both Australia and Asia and has a client base that includes, government agencies, local councils, religious organisations, community organisations, and private developers.

Kennedy Associates work has:

won over 20 industry awards and commendations been published in over 40 magazines and journals in Australia, Asla, America and Europe been featured in several books on architecture been featured in several government publications and websites been featured in several television programs and films, including the ABC 7.30 Report been selected by The NSW Department of Planning and the Australian Greenhouse Office for use in their promotion of sustainable design.

In 2006 the Bowden Centre, designed by Kennedy Associates was awarded the Australian Institute of Architects' Sir John Sulman Prize, the highest award for architecture in NSW.

In 2014 Steve was awarded the NSW Institute of Architects President's Prize for 'outstanding contribution to the architectural profession'.

688 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 2 OF 9

### C. REPORT:

## Subject Site

The subject site is located at:

## 688 - 692 Pacific Highway, Chatswood

The site is located on the western side of the Pacific Highway at the intersection of the Pacific Highway and Victoria Avenue, Chatswood.

### The site:

- Is an amalgamation of two adjoining sites, being lots DP 626676 & DP 838366
- has an area of 1142m2
- is approximately square in shape
- has dimensions of approximately 36.5m X 31.25m
- is located approximately 200m from Chatswood Railway Station
- is zoned B5 Business Development
- has a permissible height of 18m
- has a permissible FSR of 3.57:1

The site currently contains a low scale commercial building that occupies the entire site area.

### **Adjoining Properties**

The subject site adjoins:

- Chatswood Public School to its south. The site in fact adjoins the carpark to the school with the school
- buildings being located approximately 20m south of the subject site

  A public park "Western Park" to its north. The park, which falls steeply from the Pacific Highway to James Street, is approximately 65m long and 25m wide. The park adjoins Western Way to its north.
- A residential development of three pairs of attached (duplex) two storey buildings to its west. These buildings, which appear to have been built as a single development have frontages to James Street. This residential development has two continuous lines of mature evergreen screen trees planted in their rear garden area extending fro the full width of the properties. This planting, which is approximately 10m deep, has been planted to create a visual barrier between the dwellings and the existing buildings on the subject site, separating them from the subject site. The trees are mature and have an overall of height of approximately 12m-15m.
- The subject site also adjoins at its south eastern corner part of the playground area of Chalswood Public School, which is located at the James Street level, approximately 6-10m below the subject site.

The site is located on the edge of the ridge of the hill along which the Pacific Highway travels.

Whilst the subject site is relatively level with a fall of approximately 3m across the site from east to west, it adjoins land that falls steeply down to James Street. James Street, which is located approximately approximately 65m west of Pacific Highway, is approximately 11m below the highway.

## Proposal

The Preliminary Planning Report prepared by Conrad Gargett Ancher Mortlock Woolley for the subject site proposes a development that provides:

- 4 levels of basement parking
- 162m2 of commercial / retail space plus residential lobby at ground level
- 530m2 of office facilities for Chatswood Public School at first floor level
- 58 units of residential accommodation over 11 storeys

The proposal creates two distinct building volumes for the site, being a:

- 7 storey rectangular building facing north to 'Western Park'
- 13 storey tapered, wedged shaped building facing Pacific Highway.

The larger building is highly modelled and steps down towards Chatswood Public School in a manner designed to retain solar access to the grounds of the school.

686 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 3 OF 9

### Chatswood CBD

The central business zone of Chatswood, Chatswood Town Centre / CBD, is cantered on Chatswood Railway Station and the main shopping area located along Victoria Avenue.

On the western side of the railway line the CBD is defined and contained by the Pacific Highway.

To the east of the Pacific Highway the Town Centre / CBD can be defined as generally occupying the area of land between the intersection of Railway Street and the Pacific Highway to the north and Albert Road or Eliis Street to the south.

Within this area high density development, being buildings with an FSR of 2:1 or greater and a height of 30m or greater, is currently permissible.

The northern point of this zone, the intersection of Railway Street and the Pacific Highway, is a natural demarcation point as the highway runs almost adjacent to the highway beyond that point, making large scale development very difficult without building over the railway line itself.

The southern point of termination or demarcation of Chatswood Town Centre / CBD is less clearly defined but, based on current controls, building typologies and development patterns, can be defined as being either Albert Road or Ellis Street.

This is significant in that the area thus defined remains within 400m of Chatswood Station.

#### Zoning

The site is zoned 85 Business Development. This zoning applies to a number of sites along the western side of the Pacific Highway adjoining the Chatswood Town Centre / CBD.

This identifies those sites as being different to sites on the eastern side of the highway, where the zoning is generally 83.

It also identifies that the subject site is part of a line of existing and anticipated commercial development along the highway that was intended to form a transition between the town centre and the adjoining low scale residential development to the west.

### Height

As with the zoning, fand to the west of the highway generally has a permissible height of not greater than 18m, again identifying that this strip of development was intended to form a transition between the town centre and the adjoining low scale residential development to the west.

## FSR

The pattern is repeated in the permissible FSR for development along the western perimeter of the highway, which does not exceed 2:1, in contrast to development on the eastern edge of the highway where an FSR of 5:1 is permissible.

This includes the area where the subject site is located.

## Bonus FSR

Wildoughby LEP also a number of sites where so long as certain criteria are met, primarily related to lot size, then the permissible FSR increases.

Willoughby LEP identifies the site as being specifically designated as 'Area 12' where an FSR of 3.7:1 is permissible, so long as the site has an area of not les than 1140m2.

That is, so long as the development proposal incorporates both lots within the subject site then the permissible FSR is 3.7:1,

To that extent the subject site is recognised in Council's planning documents as both being part of the Chatswood CBD and as suitable for an intensification of development.

The LEP does not, however, vary the permissible height for the subject site.

## Strategic Plan

The outcome of the above is to suggest the subject site is part of a considered, existing and clearly defined urban strategy, where it was intended to establish the Pacific Highway as the symbolic and physical demarcation between Chatswood Town Centre / CBD and adjoining areas.

To date that strategy appears to have been maintained and implemented and to have been successful.

As with many other areas of Sydney, Chatswood Town Centre / CBD is visually identifiable and understood.

686 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 4 OF 9

## Expansion of Chatswood Town Centre / CBD

Whilst it may be seeking approval to change the controls on one particular site, the planning proposal seeks to alter and expand the urban identity of Chatswood Town Centre / CBD by permitting higher density, taller buildings on the western side of the highway.

This will have several effects.

- If will extend the boundary of the Chatswood Town Centre / CBD outside its current boundaries which
  are fairly clearly and easily defined and understood, on the western side of the railway line at least
- It will create a clear precedent of other similarly zoned sites, particularly a to its north at the intersection
  of the Highway, Fullers Road and Help Street, and more probably, between Railway Street, and
  Freemans Road. If not further
- It will create clear interface issues for sites along the western side of the Highway

Changes in Urban Density Across Sydney

Sydney is, however, currently going through a process of substantial renewal and change, particularly in terms of FSR and height.

Areas through out the greater metropolitan area are experiencing a significant 'upitf' in building heights with taller buildings achieving densities significantly greater than previously permissible appearing across the city, especially in major urban renewal sites near major railway stations.

This is evidenced in Chatswood CBD where building heights have increased substantially in recent years.

#### Island

Notwithstanding the above, the site can also be seen, and described, as an "Island" in that it is surrounded by and adjoins land on all sides that is neither capable of or suitable for similar redevelopment, being a school, a park and low scale residential development.

That is, it does not physically adjoin any other potential development sites and as such does hold a somewhat unique position within Chatswood Town Centre / CBD.

### Victoria Avenue

The subject site is located at the western end of Victoria Avenue, one of the key streets of Chatswood and holds a prominent location in terms of both the highway and Chatswood Town Centre.

To that extent having a significant building that closes or completes the vista of Victoria Avenue would provide a valuable urban element to Chatswood.

## Capacity to achieve the permissible FSR within an 18m height limit

Using the building model as proposed in the Preliminary Planning Report it would appear that an Apartment Design Guide complaint scheme of approximately:

- 2.5:1 would be achievable within a height limit of 18m (5 storeys)
- 3.57:1 would be achievable within a height limit of 24m (7 storeys)

## Setbacks

The proposal provides a range of setbacks to adjoining properties including:

- · nil setbacks to the Pacific Highway
- nil setbacks to Western Park
- nil setbacks to the south / school for 2 storeys then a series of stepped setbacks above that
- nil setbacks at basement and ground level to the west and houses in James Street
- a setback of approximately 3m for a portion of the first floor to the west

These setbacks reflect, in part the existing building form on the site.

## Pacific Highway

The lack of a street setback is not uncommon in Chatswood or along the highway, though it should be noted this is more applicable to older and smaller scale buildings of up to three storeys than taller buildings. Larger scale buildings along the highway and directly opposite the subject site lend to have setbacks along their frontages to accommodate planting etc.

Buildings in Victoria Avenue do not have street setbacks.

686 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 5 OF 9

Given the relativety shallow depth of the subject site, the fact that the site adjoins areas of open space and the manner with which the proposed building will 'close' the vista along Victoria Avenue, allowing a building with nil setback to the highway in this location would appear reasonable.

#### Western Park

The development proposes a 7 storey building with nil setback to Western Park. The park appears to be primarily a 'transitional' park rather than a highly used recreational park, due to both its steepness and proximity to the highway. As such the provision of a nil setback to Western Park is unlikely to impact on its use or amenity

However, it will be necessary to have an appropriate qualified consultant assess the impacts of the proposed development on the existing trees within Western Park and, if those impacts are found to be unsatisfactory then the development have to be adjusted to ensure the trees are preserved and maintained.

#### School

The development proposes a nil setback to the Chatswood Public School to its south. The wall height on the boundary will be similar to the existing wall height and site in fact adjoins the carpark to the school with the school buildings being located approximately 19m south of the subject site. As such the provision of a nil setback to Western Park is unlikely to impact on its use or amenity.

#### James Stree

The development proposes a nil setback to the west and houses in James Street. With the exception of the north western portion of the site, the wall height on the boundary will be similar to the existing wall height.

The core issue to consider when assessing the impact the proposed development will have on the properties in James Street is the impact it will have on the health and long term viability of the existing screen trees.

These trees form a significant and 'solid' barrier and separation between the two properties and the success of the proposed development, in its current form, is dependent on those trees being preserved and maintaining their health.

Before Council could accept the development is suitable to proceed to a gateway assessment the applicant would need to demonstrate, through the provision of an expert report by an appropriate qualified consultant, that:

- nii setbacks to the Pacific Highway
- nil setbacks to Western Park
- nil setbacks to the south / school for 2 storeys then a series of stepped setbacks above that

If these issues cannot be satisfactorily addressed then applicant would need to amend their design to ensure the above criteria are met.

## Massing

The proposal provides a highly modelled, stepped massing.

In general the massing has been developed to reflect and fit within the current building form along the southern and western boundaries, with the tailer portions of the building being concentrated on the eastern and northern boundaries.

As such the development has sought to deliver a building at its southern and western boundaries that is similar in scale and proportion to that existing.

## Height Plane

The proposed development seeks to substantially increase the permissible height on the subject site above both what currently exists and is permissible. The proposed building:

- generally exceeds the permissible height plane of 18m
- seeks support for a building of up to 40m in height

That is the proposal seeks to effectively double the permissible height plane for the site, albeit in a stepped form that delivers the height primarily to the north eastern corner of the site.

The proposal does, also, deliver a varied height plane with some portions of the development being substantially lower than the permissible height plane of 18m, primarily in the southern and south western portions of the site.

These areas have been designed to comply with and address the 8.5m height plane that applies to the adjoining residential zones.

As such, the proposal seeks to deliver a building that responds to its context.

This is an appropriate approach that gives merit to the proposal

685 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 6 OF 9

The proposal provides a diagram demonstrating how the proposed height fits within the hierarchy of building heights in Chatswood Town Centre / CBD.

Kennedy Associates analysis suggests the height plane provided in the planning proposal is only partly accurate and that another more localised height plane is also applicable and that this height plane, as anticipated by the LEP, would more comfortably support a building height of between 18m and 24m on the Pacific Highway, or potentially 30m.

### Articulation / Character

The proposed development provides a 'stand alone' building that is not intended to 'fit' within a more continuous urban landscape.

Given the nature of the site, this approach is not inappropriate.

The stepped nature of the main built form makes the building visually and physically 'unique'.

Steeped buildings of this type are generally a result of complex solar access issues and are becoming a common building typology in cities across the world.

The architectural freatment of the building as suggested in the photomontages indicates a well designed and attractive building.

### Gateway

The design is seeking to give the proposal a degree of 'gateway' presence, which may, in my opinion, be overstating the urban and visual significance of the site, particularly if other developments of a similar height are permitted on nearby sites.

However, Chatswood CBD contains a rich and varied built form with many visually dominant buildings competing for attention.

As such another 'stand alone' building will not have a significant impact on the urban character of the town centre.

### Interface

The interface issues impacting on the proposed development are:

- . the impact on the school to the south
- the impact on Western Park to the north
- the impact on the dwellings in James Street to the west
- the impact on the Pacific Highway to the east.

## School

- . The design seeks to address the interface issues with the adjoining school through its massing
- so long as the scheme can demonstrate that it maintains an appropriate level of sunlight to the school
  the proposal does not appear to result in any significant urban design issues
- given the existing urban context there do not appear to be any Heritage issues with respect to proposed development

## Park

- . the proposed development specifically addresses and faces Western Park
- whilst providing a strong urban edge to the park, given the urban character of Chatswood, this is not out
  of character and will be unlikely to have a significant impact upon or be substantially detrimental to the
  use of or amenity of the park.

## Houses in James Street

- the proposed development does address the issue of the interface with the houses to its South west in James Street
- the proposed development generally retains the height, bulk and scale of the existing development along this interface
- the proposed bulk of the building facing Western Park, will potentially have some impact in the houses, primarily in terms off overshadowing of rear countyard spaces, although this is likely to be not significantly different to the impacts resulting from the double row of trees currently providing the visual interface between the dwellings and the blank wall of the existing development.
- The proposed development does not provide any additional setbacks to the boundary with the adjoining houses but, as it is largely the same as the existing wall which appears to predate the houses, this does not appear to be unacceptable

688 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 7 OF 9

Pacific Highway

- the proposed development provides a street wall to the Pacific Highway, albeit one which varies in height from approximately 8.5m to 40m
- . The street wall will after the visual character of the Pacific Highway
- the current planning controts already permit a 5 or 6 storey building along the highway that will, in itself, significantly after the 'reading' of the highway
- the more pronounced difference will be primarily experienced when travelling from north to south as the primary way people experience of the Highway is from cars travelling along it
- the traffic lights at Fullers Road, Victoria Avenue and Albert Avenue means that vehicles are regularly stationery or travelling slowly through that section of the Chatswood and therefore there is the potential for drivers and passengers to be more aware of their immediate surroundings
- the provision of a street wall in the location of the subject site will:
  - have a visual impact on the street where it will be most visible
  - close the vista of sky currently available when travelling in that direction

It should be noted, however, that the existing two and three storey buildings on the subject site already in part close that vista.

#### Solar Impacts

The planning proposal provides solar studies that suggest that the proposed development will maintain acceptable levels of solar access to the school and houses in James Street.

Before Council could accept the proposed development is suitable to proceed to a gateway assessment the applicant would need, through the provision of much more detailed and accurate solar studies, based on accurate survey information and utilising both detailed site plans and sections, to demonstrate that:

- appropriate solar access has been achieved and maintained
- the development does not result in any further loss of solar access to the adjoining properties than currently exists

This may result in the applicant having to amend the design through either some reduction in height, particularly the portion facing Western Park, or a stepping in that building at its western end to limit its wall height to, say, not more than 18m at the boundary.

In this instance it would be appropriate and reasonable to include the impacts of the existing trees on the solar access of the existing houses in James Street as part of that analysis.

## Justification for the Planning Proposal

The key components of the planning proposal are:

- an increase in FSR from 3.7:1 to 4.74:1
  - an increase in permissible height from 18m to 40m

The proposal justifies the increase in height through a series of analysis diagrams showing the site in context with the CBD.

KAA's analysis suggests this justification, whilst not totally accurate or fully addressing the various contextual issues discussed above, does have some merit in terms of establishing a hierarchy of heights from the centre of the CBD outwards.

## Summary

Kennedy Associates analysis suggests that the proposed development demonstrates an understanding of the contextual issues impacting on the site and potentially addresses in an appropriate and successful manner.

The stepped massing and form are well considered and can be supported.

The retention of wall heights not greater than currently exists on the southern and western boundary is important and should be enforced.

Kennedy Associates analysis suggests that, as anticipated by the LEP, the site would potentially more comfortably support a building height of between 18m and 24m, and possibly 30m, on the Pacific Highway.

However, given the rapidly changing attitudes to heights of buildings across Sydney and the scale of development elsewhere in the CBD, in urban design terms, so long as it can demonstrate acceptable impacts on adjoining properties in terms of the protection of existing trees and the delivery of sufficient solar access, the somewhat unique character of the site and the massing and volumes proposed in the scheme suggest that a development of the type being proposed could be supported as a stand alone development.

688 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 8 OF 9

#### However

There is a larger urban design issue to be considered which the documentation provided in support of the proposed development does not address.

This is the question of:

- whether it is an appropriate urban strategy to permit high rise development on the western side of the highway
- whether permitting a development of this type in this location will establish a precedent that will 'open the doors' for other similar developments along the western side of the highway
- · whether allowing this will deliver a strategically valuable and appropriate long term urban outcome

The key issues to consider in this are:

- the visual and physical containment of the CBD provided by the Pacific Highway
- the topographical characteristics of the area
- . the interface issues which will result from allowing development of this type to 'cross' the highway

In Kennedy Associates opinion, the previous approach of allowing the Pacific Highway to provide a natural demarcation between the CBO and its surrounds was sensible, practical and manageable.

We recognise that elsewhere in the CBD this simple interface was not available and other mechanisms have had to be provided, but along the CBD's western perimeter the Highway has not only been an effective edge to the CBD but has given the CBD a specific and identifiable urban form.

We recognise that Sydney is changing rapidly and providing a corridor of tall buildings along the highway is, in itself, not an unreasonable urban approach.

In fact it is what in most instances we would recommend.

However, given the unique characteristics of the Chatswood CBD and the complex and obvious interface issues the topography and urban character of the area provide, we think council need to be very careful in their assessment of this development.

In our opinion, should this planning proposal be supported and approved it will have immediately redefined the urban character of Chatswood for the entire extent of the highway between at least Freemans Road and Railway Street, and potentially much further.

This is the key urban design question raised by this planning proposal.

It is a strategic issue which only Council can address, but in our opinion, unless Council is prepared to accept a significant change in the urban character of not only Chatswood CBD but also its immediately adjoining precincts' it would be wise to maintain the status quo and, limit the height of buildings along the western side of the Pacific Highway to something similar to those currently in place.

Alternatively, if council are prepared to support a change in the use and height of the western side of the Pacific Highway then it would be imperative for Council to look at the entire strip in one single exercise and establish a new hierarchy of heights, including for the subject site.

If this were the case then if may be possible to consider that a height of 40m on the subject site was both reasonable and good urban design

This exercise may be something the applicant should undertake as part of their justification for the current proposal.

end of document

688 PACIFIC HIGHWAY, CHATSWOOD

13 NOVEMBER 2015

PAGE 9 OF 9