

Item 4
JRPP 2014SYW090
DA0180/14
870-898 Pacific Highway
Gordon
Council Assessment
Report

**JOINT REGIONAL PLANNING PANEL
(Sydney West Region)**

JRPP No	2014SYW090
DA Number	0180/14
Local Government Area	Ku-ring-gai Council
Proposed Development	Demolish existing structures and construct a mixed use development containing 3 buildings, 144 residential apartments, retail space, basement parking and landscaping works
Street Address	870-898 Pacific Highway, Gordon
Applicant	Alto Prestige Pty Ltd
Owner	Alto Prestige Pty Ltd Georgio Altomonte Holdings Pty Ltd
Number of Submissions	Original proposal – 3 submissions Amended proposal – 1 submission Further amended proposal – 1 submission
Recommendation	Refusal
Report by	Grant Walsh, Executive Assessment Officer

EXECUTIVE SUMMARY

Primary Property	870-898 Pacific Highway, GORDON NSW 2072
Lot & DP	Lot 1 DP 654047 Lot 3 DP 609007 Lot 16 DP 249171
Proposal	Demolish existing structures and construct a mixed use development containing 3 buildings, 144 residential apartments, retail space, basement parking and landscaping works.
Development Application No.	DA0180/14
Ward	GORDON
Applicant	Alto Prestige Pty Ltd
Owner	Alto Prestige Pty Ltd Georgio Altomonte Holdings Pty Ltd
Date lodged	22 May 2014
Issues	Site isolation, height, extent of retail floor space, street activation
Submissions	Original proposal – 3 submissions Amended proposal – 1 submission Further amended proposal – 1 submission
Land & Environment Court Recommendation	N/A
Assessment Officer	Refusal Grant Walsh

LEGISLATIVE REQUIREMENTS:

Zoning	B4 – Mixed Use
Permissible under Relevant legislation	KLEP (Local Centres) 2012 SEPP 55 SEPP 65 SEPP (Infrastructure) 2007 SEPP (BASIX) 2004 SREP (Sydney Harbour Catchment) 2005 KLEP (Local Centres) 2012 KDCP (Local Centres) 2013 Ku-ring-gai Contributions Plan 2010
Integrated development	No

PURPOSE FOR REPORT

To determine Development Application No. 0180/14, which seeks consent for the demolition of the existing structures and construction of a mixed use development within 3 buildings comprising, 144 residential apartments, retail space, basement parking and landscaping works on land at 870-898 Pacific Highway, Gordon.

The application is required to be determined by the Joint Regional Planning Panel as the stated cost of works (CIV) of \$50, 942, 985 exceeds \$20 million.

HISTORY

Site history:

The site has a history of commercial uses.

Pre-Development Application consultation:

Date:	Application ID:	Proposal:	Key Issues:
5 August 2013	Pre0081/13	Residential Flat Building	Non-compliance with maximum building height control of LEP, benefits of a Mixed Use development as opposed to a Residential Flat Building, non-compliances with Ku-ring-gai Local Centres DCP 2013, activation of street frontages, site isolation.

Rezoning history

The site was rezoned in February 2013 from the Business 3(b)-(B1) Commercial Services zone under the Ku-ring-gai Planning Scheme Ordinance to the current B4 - Mixed Use zone under the Ku-ring-gai LEP (Local Centres) 2012.

Development Application history

22 May 2014	The development application was lodged.
6 June 2014	The application was notified/advertised for 30 days.
6 June 2014	The Joint Regional Planning Panel (JRPP) was advised of application lodgment.
6 June 2014	The application was referred to the NSW Roads and Maritime Service (RMS) and Railcorp.
1 July 2014	Comments were received from RMS.
10 July 2014	Comments were received from Railcorp.
21 August 2014	Council staff briefed the Joint Regional Planning Panel.

2 September 2014	An issues letter was sent to the applicant which identified issues associated with site isolation, building height, extent of retail/commercial floor space and street activation.
8 October 2014	A meeting was held with the applicant to discuss the outstanding issues.
9 December 2014	Amended plans and documentation were received.
13 January 2015	The amended plans were re-referred to NSW RMS.
14 January 2015	The amended plans were notified/advertised for 30 days.
9 February 2015	Comments were received from the RMS.
2 June 2015	A further meeting was held with applicant to discuss remaining outstanding issues.
23 July 2015	Amended plans and documentation were received.
6 November 2015	The application was referred to a Collegiate Review meeting.

THE SITE AND SURROUNDING AREA

The site:

Visual character study category:	1920 -1945
Easements/rights of way:	No
Heritage Item:	No
Heritage conservation area:	No
In the vicinity of a heritage item:	No
Bush fire prone land:	No
Endangered species:	Yes (Blue Gum)
Urban bushland:	No
Contaminated land:	Yes

Site description:

The site consists of three separate allotments identified as Lot 1 in DP 654047, Lot 3 in DP 609007 and Lot 16 in DP 249171 and is known as 870, 880 and 898 Pacific Highway, Gordon. The site is located on the western side of Pacific Highway, Gordon, between Ryde Road and Merriwa Street and located within the Gordon Local Centre. The site also has frontages to Merriwa Street and Fitzsimons Lane. The site has the following indices:

- Site area 6,066m²
- 106.38 metres frontage (north) to Pacific Highway.
- 90.445 metres frontage (south-west) to Fitzsimons Lane.
- 24.885 metres frontage (south) to Merriwa Street.

The site is irregular in shape and has a steep fall from Pacific Highway down to Fitzsimmons Lane (approximately 12m) and a marked cross fall of approximately 5 metres from with the lowest point being the intersection of Fitzsimons Lane and Merriwa Street. The site has previously been excavated to cater for the current uses on site resulting in significant level changes.

Existing development on the site consists of:

870 Pacific Highway: Two/three storey commercial building, with vehicular access off Merriwa Street to the rear.

880 Pacific Highway: One/three storey building, with vehicular access of both Fitzsimons Lane and Pacific Highway.

898 Pacific Highway: Two/three storey commercial building, with vehicular access off Fitzsimons Lane to the rear.

Current uses on the site are:

870 Pacific Highway

Shop 1: Nobby Kitchens

Shop 2: vacant

Suites 1 and 2: (1st floor): vacant

Suites 3 and 4: (1st floor): Nobby kitchens storage and meeting rooms

880 Pacific Highway

Showroom 1: rug showroom

Showroom 2: Sydney carwash café

Level 1 garages: Commlec garages for hire cars with associated office

Level 1 workshop: occupied by Alto Wholesale for vehicle storage

Mezzanine: vacant

898 Pacific Highway

Shop and residence: vacant

Workshop Fitzsimons Lane: occupied by North Shore Mower repairs.

The significant vegetation on the site consists of 2 Sydney blue gum trees (listed as being part of a critically endangered ecological community) located on the southern corner of the site, at the corner of Fitzsimons Lane and Merriwa Street.

The site does not contain any heritage items, is not within the vicinity of a heritage item and is not within a heritage conservation area.

Surrounding development

Development on surrounding sites is a mix of commercial, residential, retail and office uses.

To the south-east of the site at 860 and 854 Pacific Highway, are two small commercial allotments occupied by retail/commercial uses, including a lighting shop.

To the west of the site at 900 Pacific Highway, is a commercial building which includes a flooring shop and Gordon smash repairs.

The land to the south-west of the site, 1 Merriwa Street, is developed by a 6-8 storey office building.

A residential flat building is located to the south (and opposite) the subject site at 8-14 Merriwa Street.

The entire northern frontage of the site is to Pacific Highway. The land opposite the site, 815/821 Pacific Highway, is developed by a mini golf centre with the Northshore rail corridor being located beyond that as shown in **Figure 1** below:



Figure 1- Aerial photo of the site and surrounding area (source: KMC GIS)

THE PROPOSAL

The proposal, as originally submitted, involves the demolition of all buildings and car park structures and construction of a mixed use development comprising three residential flat buildings (A, B, C) containing 170 apartments, 263m² of retail space, basement carparking for 220 vehicles and associated landscape works.

The proposed apartment mix is as follows:

- 93 x 1 bedroom apartments
- 75 x 2 bedroom apartments

- 2 x 3 bedroom apartments

The proposal includes vehicle access off Merriwa Street on the southern corner of the site.

The proposal also includes a dedication of land on the Fitzsimons Lane frontage of approximately 450m² to Council for the purposes of road widening.

Amended plans dated 28 November 2014

The amended plans proposed numerous changes to the application as follows:

- reduction of units to 147 (80 x 1, 58 x 2 and 9 x 3 bedroom apartments) with three levels of basement carparking, totaling 213 car spaces
- increase in retail floor space to 521m² and a total residential GFA of 12 959.7m²
- decreased floor space ratio of 2.136:1
- roof gardens added to all 3 buildings
- vehicular access relocated to be off Fitzsimons Lane (as opposed to Merriwa Street) to allow for the retention of two Sydney Blue gums (Trees 4 and 9)
- increased setback of Building A to northern boundary to allow for the future redevelopment of the neighboring property
- reduced height and change of unit mix to Buildings A and B
- increase in height to Building C (remains compliant with height control) and change of unit mix

Amended plans dated 30 June 2015

The amended plans proposed numerous further changes to the application as follows:

- reduction in units to 144 (67 x 1 bedroom, 10 x 1 bedroom with study, 58 x 2 bedroom, 9 x 3 bedroom) with three levels of basement carparking totaling 213 spaces.
- increase in retail floor space to 729.85m²
- decreased floor space ratio of 2.109:1
- minor internal and aesthetics changes
- alterations to stormwater tank designs
- minor changes to landscape scheme

COMMUNITY CONSULTATION

In accordance with the notification provisions of Part 5 of the Ku-ring-gai Local Centres Development Control Plan, owners of surrounding properties were given notice of the application. In response, submissions from the following were received:

1. *John Seckhold on behalf of Strata Plan 69123, 26-30 Merriwa Street, Gordon.*
2. *Rosalind and Silvano Zerbo, 49 Ridge Street, Gordon.*
3. *Sunnyland, 98 Victoria Street, Potts Point.*

The submissions raised the following concerns:

The road infrastructure is deficient in its ability to cater for the proposal

Council's Development Engineer reviewed the proposal in terms of available car spaces and also expected traffic generation on the local road network. The Development Engineer is satisfied that the proposal is compliant with the provisions of Council's Local Centres DCP. The proposal has further been reviewed by the Roads and Maritime Service of NSW who are satisfied. Refer to comments made below by Council's Development Engineer and the RMS.

Merriwa Street is too narrow

As noted above, Council's Development Engineer is satisfied that the proposal will have an acceptable impact on the surrounding road network.

Reduced on-street parking

The proposed development provides for a compliant amount of off street carparking spaces, including visitor spaces. A traffic and parking assessment has indicated that the proposal meets Council's requirements in this respect.

Denudation of trees within the area

The original design proposed the removal of the two significant Sydney blue gums on the site by virtue of the driveway location. Concern was raised with the applicant in this respect who amended the driveway location so as to retain the two significant trees. Council's Landscape Assessment Officer has further reviewed the proposal in terms of Council's controls and deemed the proposal to be satisfactory in terms of tree loss/retention and supplementary plantings.

Overcrowding of the area as a result of an excessive 170 units

The proposed development is a permitted and encouraged use within the zone and is compliant with the maximum floor space allowance provided by Council's LEP.

Increase in pollution

The proposed use is permissible within the zone and complies with floor space requirements for the site.

The building is too high

The proposed development does result in a breach of the maximum building height development standard contained within the Local Centres LEP. The amended plans received by Council have reduced the overall height of the building, however, the building would breach the maximum building height. The applicant has lodged a request to vary the development standard under the provisions of Clause 4.6 of the Local Centres LEP. Refer to assessment below.

The building design is unsightly and out of character with the area

Council's Urban Design consultant reviewed the proposal and has indicated that the architectural aesthetics of the design are satisfactory.

Amended plans dated 28 November 2014

The amended plans were also notified. Submissions from the following were received:

1. Virginia Neighbour, 18 Mount William Street, Gordon

The submission in response to the amended plans raised the following additional issues:

Privacy

The proposed development complies with building separation requirements and privacy controls contained within the RFDC and the Local Centres DCP.

Loss of views from Pacific Highway

Minimal views are currently available from the Pacific Highway through the site given the existing development. The proposal is considered to meet the objectives of the zone.

Loss of solar access to adjoining development

The proposed development will result in some overshadowing of adjoining development however, the extent of overshadowing complies with Councils controls.

Lack of communal open space

The proposed development has been amended to make provision for three areas of communal open space on rooftops equating to approximately 1,670m² which complies with Council's controls for mixed use development.

Development has not fulfilled environmental obligations

The application has been lodged with a BASIX certificate in compliance with the provisions of the State government requirements. The application has met its obligations within the legislation.

Amended plans dated 30 June 2015

The amended plans were not required to be re-notified as the amendments did not involve greater impacts than the original proposal. Notwithstanding, a submission was received from the following:

Don Fox Planning on behalf of Sakha & Sons Pty Ltd, 860 Pacific Highway, Gordon

The submission raised the following additional concerns:

Site Isolation of 860 Pacific Highway and lack of negotiations in accordance with the DCP and case law.

It is agreed that the applicant has not adequately demonstrated that the process required under part 3 of the DCP and the established case law in relation to negotiations between property owners (with the inclusion of valuations) has occurred. The application is not supported in this respect.

INTERNAL REFERRALS

Engineering

Council's Development Engineer commented on the proposal as follows:

Water management

The BASIX water commitments include a 28 000 litre rainwater tank, collecting runoff from the entire roof, with re-use for toilet flushing. The report confirms that a 50% reduction in runoff days will be achieved with this level of re-use.

The drawings show that only roofwater will be connected to the rainwater tank, with other stormwater directed to the detention tank. The proposed rainwater re-use and water quality measures are satisfactory and will achieve the objectives and controls in Council's Local Centres DCP.

Although invert levels are not given on the survey plan for the street drainage pits, if the stormwater line is not as deep as assumed in the design, the pipe could be lowered, since the pit opposite is deep enough. This would be at the applicant's expense and is able to be conditions if required.

Landscape Assessment have recommended conditions in relation to the relocation/ deletion of the new pits and subsoil drainage lines near the significant trees.

Traffic and parking

The total car parking provision complies with the DCP.

The gradient of the entry driveway is sufficiently gentle that it is considered that adjustments can be made when Fitzsimons Lane is widened without compromising the headroom for the small waste collection vehicle.

The traffic generation rates used in the traffic engineer's report are from the Roads and Maritime Services Technical Direction Guide to Traffic Generating Developments – Updated Traffic Surveys, dated August 2013. This publication gives traffic generation rates for high density residential flat buildings greater than six storeys and includes metropolitan regional centres, such as Chatswood and St Leonards. The morning peak hour traffic generation used is 0.19 vehicle trips per unit.

Although this site is not within 400 metres of Gordon Station (so the traffic generation would be expected to be slightly higher than 0.19), the overall findings of the traffic report, that the development would not be expected to change the operation of the surrounding intersections or adversely affect the road network, are accepted.

Waste management

The waste management plan report states that either Council or a private contractor will be engaged to collect waste from the retail component of the development. However the head clearance provided is only 3.6 metres, whereas Council's vehicle requires 4.5 metres. The recommended conditions would require a contract for internal collection of retail waste to be provided to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Geotechnical investigation

Up to 9 metres of excavation is required to achieve basement level. The site is underlain by shale and sandstone of varying strength, generally increasing to medium below about 7 to 8 metres. The submitted geotechnical report contains recommendations for excavation methods and support, vibration monitoring and inspections. The report states that only minor seepage is expected into the excavation. A dilapidation survey of neighbouring structures could be conditioned."

Landscaping

Council's Landscape and Tree Assessment Officer commented on the proposal as follows:

Tree impacts

All existing trees and vegetation located on and within the Pacific Highway nature strip are proposed to be removed. This is acceptable as the plantings are in poor condition due to the harsh growing environment and do not have broader landscape significance.

T4 and T9 Eucalyptus saligna (Sydney blue gum) are species consistent with the critically endangered Blue Gum High Forest (BGHF) plant community. The trees are mapped as being landscape remnants (Category 5) as part of Council's Greenweb/Biodiversity mapping. The trees are proposed to be retained with minimal impact. The assessing landscape officer concurs with the arborist's assessment and recommendations, which may be conditioned.

Nominated tree removal is acceptable as the most significant trees (T4 & T9) are retained.

Basement Plan 03 2838-102(D) shows a retaining wall that spatially conflicts with T4 which is identified as being existing. The wall does not exist and should be deleted by condition. It is required that existing levels and grades be retained to minimise tree impact.

Landscape plan

Tree replenishment planting is not required within B4 zoning.

No deep soil landscape area available for canopy tree replenishment (deep soil landscape area not required) beyond area retained for T4 & T9.

The proposed planting is acceptable.

The landscape plan is inconsistent with the BASIX certificate regarding the courtyard areas for Units B0908, and B0901. It may be conditioned for the landscape plan to be amended. This would ensure consistency with the BASIX certificate.

Stormwater plan

The proposed (amended) stormwater plan is accepted. A minor amendment to the location of subsoil drainage and drainage pits within the root zone of T4 and T9 could be conditioned to reduce impacts on the tree. The proposed location of the subsoil pipe spatially conflicts with T4 and T9 and is not practical.

BASIX

Numerous landscape area commitments have been made within the BASIX certificate.

The landscape plan is inconsistent with the architectural plans regarding the private area of garden and lawn for two units. It may be conditioned for the landscape plan to be amended to be consistent with the architectural plans and BASIX certificate.

Deep soil

Not applicable for B4 mixed use zoning.

Communal open space (COS)

The KLCDCP requires 10sqm per dwelling of communal open space for the amenity of the development and facilitate social interaction. For a development of this size (144 units) a total of 1440sqm is required. The development proposes numerous communal open spaces with facilities, including roof top areas where expansive views over the Sydney basin can be viewed. The amenity of the proposed COS is acceptable on landscape grounds. The addition of fixed seating and maintenance anchorage points may be conditioned.

Erosion and sediment control plan C-13 Issue D

The plan shows proposed levels which are inconsistent with the development proposal. Levels indicated within the tree protection zone of retained significant trees are substantially lower than existing. It is required that these levels be deleted. This may be conditioned.

The plan also indicates the existence of a retaining wall adjacent to the Merriwa St and Fitzsimons Lane corner. This wall does not exist and is not proposed. It should be deleted.

Excavation plan

The plan indicates excavation and battering within the TPZ of retained significant trees (T4 and T9) which is likely to result in tree impact. It is required that apart from the removal of existing surface driveways existing ground levels remain beyond the basement footprint. It may be conditioned for the plan to be amended deleting the proposed battering to be replaced with shore piling at the basement line.

Conclusion

The application is acceptable on landscape grounds, subject to conditions.

Ecology

Council's Ecological Assessment Officer commented on the proposal as follows:

A site inspection was undertaken on 20 August 2014. During the site inspection, remnant trees were identified within the rear of the subject property.

*The remnant vegetation comprises Blue Gum High Forest (BGHF) a critically endangered vegetation type listed under the Threatened Species Conservation Act 1995. The BGHF community was primarily identified as comprising of Trees 4 & 9 Sydney blue gum (*Eucalyptus saligna*) which are located within the lower steeper front setback to Fitzsimons Lane.*

Native BGHF Trees 4 & 9 which are proposed for retention have been mapped as category 5 "Landscape Remnant" under the Town Centres KLEP DCP 2013.

DCP controls

- 1. Retain trees identified as Category 5 Canopy Remnant on the Greenweb map. (Refer to maps in 6R.1 of this Part).*
- 2. Planting within land identified as Category 5 on the Greenweb map is to consist of not less than 30% locally native species. Species are to reflect the relevant vegetation communities within the area. A mix of groundcover shrubs and trees is desirable.*

Objectives

To protect smaller canopy remnants for habitat, species diversity and ecosystem services across a range of topographies.

To maintain trees for the services they provide to human well-being.

Ecological assessment

No ecological assessment (7-part test) has been provided for Blue Gum High Forest, however, noting that both Trees 4 & 9 are proposed to be retained, no such assessment is necessary.

Amended landscape plan

The amended landscape plan is considered to be satisfactory and has been prepared in accordance with controls for the category 5 "Canopy Remnant"/

A mixture of Blue Gum High Forest species as listed in the scientific determination is proposed to be planted beneath the canopy spread of Trees 4 & 9 which will result in the ecological enhance of the BGHF.

Conclusion: *The application is acceptable, subject to conditions.*

Urban design

Council's Urban Design Consultant has reviewed the application against the provisions of SEPP 65 and has provided the following comments:

Principal 1 - Context

The site is located on the south-western side of the Pacific Highway, Gordon between Ryde Road and Merriwa Street. The site is comprised of three lots being 870, 880 and 898 Pacific Highway which together have a combined site area of 6,066m². The site has a northeastern frontage of 106.38m to the Pacific Highway, a southwestern frontage of 90.445m to Fitzsimons Lane, and a southern frontage of 24.885m to Merriwa Street (from survey). The depth of the site varies from approximately 50m to 65m. The site is irregular in shape, has a steep fall from Pacific Highway to Fitzsimons Lane, and also a cross fall with the lowest point being at the intersection of Fitzsimons Lane and Merriwa Street. The site is approximately 650m walk from Gordon Station via Wade Lane.

The proposal isolates 854 and 860 Pacific Highway in terms of redeveloping for the purpose of a residential flat building. KLEPLC2012 6.5(2) requires a minimum lot size of 1,200m². 854 and 860 Pacific Highway together have an area of 875m² (RPData). However, there does not appear to be a limitation for 854 and 860 Pacific Highway in terms of redeveloping as mixed use as the sites have a primary frontage length longer than the 20m required by KLEPLC2012 6.7(2).

The issue of isolation of 900 Pacific Highway has been resolved from an urban design perspective.

A diagram (2838_705B) has been submitted which shows a potential development scheme for 900 Pacific Highway which could be generally considered to achieve an appropriate urban form in an orderly and economic manner and achieve an acceptable level of amenity in accordance with the provisions of KLEPLC2012 and KLCDPC2013. It appears that the FSR would be approximately 2.0:1 and that solar access and cross ventilation would be compliant, including taking into account neighbouring development to its north-west. The diagram, however does not show a ground floor plan that demonstrates how non-residential uses would work, nor an upper level plan that demonstrates the additional building separation required at these levels. The car park layout would also require additional design attention. However, it is considered likely that these aspects could be resolved satisfactorily, based on the approach shown in the typical floor plan. On balance, this aspect is now considered acceptable.

The issue of active uses at street level has been generally resolved from an urban design perspective. The ground level plan (2838_105D) now shows that the majority of the frontage to the Pacific Highway is occupied by retail tenancies. Only one unit (B0302) remains with its primary orientation to the Pacific Highway at ground floor which is not an ideal outcome in terms of the impact of pollution on the health of residents as the Pacific Highway will provide very poor amenity to this dwelling which can have a serious and negative impact on the health of residents (for example see Development Near Rail Corridors and Busy Roads - Interim Guide with regards to noise, vibration and pollutants, particularly 3.8.4 (p25) and 4.3.2 (p34)).

The long sandstone wall to the western end of the Fitzsimons Lane frontage remains, however this aspect was discussed at the meeting at Council (2 June 2015) and it was agreed that this aspect was acceptable in the circumstances. The uses and building design elements as shown will encourage interaction between the inside of the building and the external public areas adjoining the building. On balance, this aspect is now considered acceptable.

The issue of the quantity of non-residential uses proposed has been resolved from an urban design perspective. The retail floor space provided is now 730m² (2838_911D) which is approximately 5.7% or 1/18th of the total gross floor area. This is also a meaningful (37%) increase compared to the previous scheme in terms of the floor area provided. Whilst further retail still would be desirable, this aspect is now considered to be marginally acceptable.

Principal 2 - Scale

The issue of building height has been resolved from an urban design perspective. Block A has been reduced at its upper levels at its southern end. Block B has been reduced by one storey in height. These changes mean that the remaining breaches to the height plane are localised to the lift overruns of Block A and Block B and small areas of roof parapet near to these lift overruns (Figure 5 Statement of Environmental Effects p11). These minor breaches appear to cause only negligible overshadowing (Solar Access report diagrams p7-11) and are unlikely to be conspicuous from the public domain. This aspect is acceptable from an urban design perspective.

The issue of the length of Block B has been resolved from an urban design perspective. The central portion of Block B has been further recessed to provide more articulation and shadowing, additional material treatments have been incorporated to provide elevational variety, and the expression of the building now reads as four clear vertical bays of projecting balconies rather than a single continuous wall. This aspect is considered acceptable.

Principal 3 – Built form

The issue of providing a 4m setback to the Pacific Highway has been discussed previously. This aspect is considered acceptable. The provision of zero setback to the Pacific Highway for the car parking levels was discussed at the meeting at Council (2 June 2015) and it was agreed that this aspect was acceptable in the circumstances.

The issue of corridor width has been resolved. The corridors to the north of the plant room on Basement 1 and Basement 2 are now 1.5m wide (2838_103D and 2838_104D) which meets the minimum required by the controls. This aspect is now considered acceptable.

The issue of providing a boom gate within the car park has been resolved. A boom gate has now been shown at the bottom of the ramp at basement 3 which will successfully secure the residential car parking spaces from the residential visitor car parking spaces and car retail parking spaces (2838_102D). This aspect is now considered acceptable.

The issue of providing commercial bicycle spaces and change rooms has been partially resolved. 2 retail bicycle spaces and shower facilities have been provided at basement 3 (2838_102D). This does not meet the 3 bicycle spaces required by the controls. This aspect should be referred to Council's traffic section for comment.

The issue of providing basement knock-out panels to neighbouring sites has been resolved. Basement knock-out panels have been provided to both 900 Pacific Highway and 854-860 Pacific Highway at Basement 3 and Basement 2 without the need to remove retail and residential car spaces (however, see issue of shortfall of retail car parking spaces above). This aspect is now considered acceptable.

The issue of providing a car wash bay has been resolved. A car wash bay has been provided at Basement 3 (2838_102D). This aspect is now considered acceptable.

The issue of waste chutes has been partially resolved. The waste chutes to Block A and Block B now align with garbage rooms at Basement 3, however Block C does not appear to have waste chutes and it is unclear how waste will be managed for this building. This aspect should be verified.

The issue of letterbox location has been resolved. Letterboxes are located centrally within the ground floor communal open space (LP03B), are close to the street, and are relatively convenient to all three buildings. This aspect is now considered acceptable.

The issue of providing awnings to the retail component along Pacific Highway has been resolved. An awning is provided to Retail Tenancies 2 to 6, whilst Retail Tenancy 1 is provided cover by the overhang of unit 0108 (2838_105D). It is noted that this overhang does not appear to be picked up on the Block A elevations (2838_211D). This aspect is now considered acceptable.

Principal 4 - Density

The issue of the proportion of mixed uses has been resolved (see Principal 1: Context). This aspect is now considered acceptable.

Principal 5 – Resource, energy and water efficiency

The issue of providing communal external clothes drying areas has been resolved. All unit types are shown as having an individual drying rack on their balconies (2838_701D through 2838_704D). This provision removes the necessity for a communal clothes drying area. Comparing the unit types to the floor plans and elevations, it appears that the majority of clotheslines will be visually concealed beyond solid balustrades or vertical screen elements. This aspect is now considered acceptable.

The issue of the building depth to Block A is considered acceptable.

Principal 6 - Landscape

The issue of communal open space provision is resolved. Large roof top terraces to each block provide good quality communal open space with ample solar access. These spaces are complemented by communal open space at ground level located centrally between the three buildings as well as communal open space at Basement 3 located at the Merriwa Street corner and associated with the existing retained trees. This aspect is considered acceptable.

The issue of the green landscaped wall to the car park facade has been discussed previously. This aspect should be referred to Council's landscape section for comment.

Principal 7 - Amenity

Taking into account the potential development scheme for 900 Pacific Highway (using the model in the SEPP 65 Amenity Compliance Report dated, 23 November 2014, p7-p11), and including those units at the top most floors which are now provided with clerestory windows, the revised plans show that 88 of 144 (61%) units now appear to achieve 2 hours direct sunlight to living rooms and private open spaces between 9am and 3pm in midwinter. This does not meet the 70% required by the controls or the RFDC Rule of Thumb (p85), however it is difficult to see how solar access could be increased without taking a significantly different approach to the overall site layout. Additional solar access may be also possible if 900 Pacific Highway were developed in accordance with the potential development scheme (as it does not have a rear wing to the northern tower)(2828_705B), or if 900 Pacific Highway did not substantially redevelop at all because it does not meet the minimum site area or primary street frontage required by KLEPLC2012. As previously discussed, with the changes made to include clerestory windows, this aspect is now considered acceptable in the circumstances.

The issue of internalised habitable rooms has been resolved. The internalised and enclosed studies to unit C0103 (and typical over) have been fully opened to the corridor enabling it to borrow light and air from the hall way and living room. This aspect is now considered to be acceptable.

The issue of natural cross ventilation has been resolved. The revised plans show that 86 of 144 (60%) units are naturally cross ventilated. Previous suggestions to improve natural cross ventilation performance have been incorporated. This aspect is now considered to be acceptable.

The issue of kitchens being adjacent to an operable window remains. The revised plans show that 28 of 144 (19%) of kitchens are immediately adjacent to an operable window (A0102, C0101, A0202, C0201, A0302, A0305, C0301, A0402, A0405, B0402, C0401, A0502, A0507, B0502, C0501, A0602, A0607, B0602, C0601, A0702, A0707, B0702, C0701, A0805, B0802, A0901, A0902, B0901). This does not meet the 25% required by the controls or the RFDC Rule of Thumb (p85). A minimum of 8 additional kitchens are required. It is suggested that clerestory windows be included, or moved directly above kitchens to units A0903, B0902, B0903, B0904, B0905, B0906, B0907, B0908. This would bring the total to 36 of 144 (25%) units which would be considered acceptable. This aspect should be addressed.

The issue of unit sizes has been resolved. 1 bedroom type C and 1 bedroom type D (2838_701D) now measure at 50.1m² and 50.3m², respectively. This meets the 50m² minimum unit size of the RFDC Rule of Thumb (p69). The room proportions have also been improved and the preferable unit layout has been adopted. This aspect is now considered acceptable.

The issue of depth of kitchens from a window has been discussed previously. One atypical unit has its kitchen 8.7m from a window (B0908)(2838_109D), however the inclusion of a clerestory window above the kitchen as suggested above would resolve the issue. This aspect should be addressed.

The issue of living room and bedroom widths has been discussed previously. This aspect is now considered acceptable.

The issue of balconies within the car park levels has been discussed previously. This aspect is now considered acceptable.

The issue of private open space has been partially resolved. All two bedroom unit balconies now meet the minimum area of 12m² at 2.4m width required by the controls. However, three podium level units (A0306, B0301, B0304)(2838_105D) do not appear to meet the minimum 25m² area at the minimum 2.4m width required by the controls, or the 4m width of the RFDC Rule of Thumb (p49). Also, the balcony of unit type 1 bedroom + study B (2838_701D) does not meet the 10m² required by the controls. These aspects should be addressed.

The issue of storage volumes has been resolved. All units now have adequate storage volumes within each unit, with the exception of some very minor shortfalls. All units have adequate, or more than adequate, storage areas within the basement levels. This aspect is now considered acceptable.

Principal 8 – Safety and security

The issue of ground floor activation along the Pacific Highway has been resolved (see Principal 1: Context).

The issue of providing security to the communal open space from Pacific Highway has been resolved. A fence and gate has been provided between Block A and Block B which secures the communal open space at the ground floor plan (LP03B). This aspect is now considered acceptable.

The issue of fire stairs egressing within the building lobbies has been partially resolved. All fire stairs now egress to open space external to the lobbies at basement 3 (2838_102D) and ground floor (2838_105D), however the level of the landing at the exit door does not always appear to be level with the ground beyond it (for instance Block C Basement 2 and 1 eastern core, and Block A northern core). This aspect should be verified.

Principal 9 – Social dimensions and housing affordability

The issue of nominating adaptable units has been resolved. The unit numbers of the 15 intended adaptable apartments are shown on the respective floor plans as

well as the adaptable unit sheets (2838_711D and 2838_712D). This aspect is now considered acceptable

The issue of disabled retail car parking spaces has been resolved. 3 disabled car parking spaces have now been provided at basement 3 (2838_102D). This aspect is now considered acceptable.

*Visitable units are considered acceptable.
The issue of unit mix is considered acceptable*

Principal 10 - Aesthetics

The issue of balconies running the full length of the building facades has been discussed previously. This aspect is considered acceptable.

The issue of material selection was discussed at the meeting at Council (2 June 2015) and it was agreed that this aspect was subjective and was acceptable in the circumstances.

The issue of articulating the uppermost storey of the northern elevation of Block B and the southern elevation of Block C was discussed at the meeting at Council (2 June 2015) and it was agreed that this aspect was subjective and was acceptable in the circumstances.

Conclusion

This proposal is acceptable from an urban design perspective with minor changes and verifications. All major issues have been resolved. Minor issues that should be addressed include: percentage of naturally ventilated kitchens; the kitchen depth of unit B0908; the area and dimension of several private open spaces; and fire stair design. All of these issues could potentially be addressed through conditions of consent. Minor issues to be verified with other sections of Council include: the quantity of retail car parking; the quantity of retail bicycle parking; the method of waste disposal for Block C; and the performance of the green landscaped wall to the car park levels.

Council's Urban Design consultant is therefore satisfied with the proposal. It is agreed that the outstanding issues/verifications discussed could be resolved via conditions should the proposal be approved. It is noted that Apartments A306, B0301 and B0304 have an area of 35m² and meet the minimum dimensions of 2.4 and 4 metres.

Strategy

Council's Senior Urban Planning Officer commented on the proposal and raised issues with the following:

- *Street activation – Pacific Highway*
- *Street activation – Fitzsimons Lane*
- *Lack of through site link*
- *Isolated sites at 900, 860 and 854 Pacific Highway*
- *Amenity impacts on ground floor apartments in close proximity to Pacific Highway*

- *Adaptable apartments*

These issues are all discussed in planning and urban design comments below.

Building

Council's Building Surveyor is satisfied the proposed development would be compliant with the requirements of the Building Code of Australia and the access to premises standards, subject to conditions.

Health

Council's Environmental Health Officer has no objection to the proposal, subject to conditions.

EXTERNAL REFERRALS

Nil required

STATUTORY PROVISIONS

Sydney Regional Environmental Planning Policy (Sydney Harbour Catchment) 2005

SREP 2005 applies to the site as the site is located in the Sydney Harbour Catchment. The Planning Principles in Part 2 of the SREP must be considered in the preparation of environmental planning instruments, development control plans, environmental studies and master plans. The proposal is not affected by the provisions of the SREP which relate to the assessment of development applications as the site is not located in the Foreshores and Waterways Area as defined by the Foreshores and Waterways Area Map.

State Environmental Planning Policy No. 55 - Remediation of Land

The provisions of SEPP 55 require Council to consider the potential for a site to be contaminated. 880 Pacific Highway is identified on Council's mapping system to have had potential contaminating uses on the site. The applicant has submitted a detailed site investigation report, prepared by SMEC Testing Services Pty Ltd. The report indicates that the site has been used for commercial purposes since at least the 1930's and was redeveloped in the 1960's for the purposes of motor vehicle sales and servicing, printing, the retailing of various goods and the storage and possible manufacturing of furniture, glassware and plastic products. The report further indicates that three underground petroleum storage systems (UPSSs) have been located on the south-western portion of the site as well as washbay/workshop areas with below ground wastewater collection separators pits and above ground oil storage tanks. Testing of the site has occurred and the report has concluded (in part):

"Based on the result of this DSI, the site is considered to be suitable for an on-going commercial/industrial use in its current condition. However, should the proposed mixed commercial and high density redevelopment proceed, the UPSSs and separator pit should be removed and the surrounding hydrocarbon impacted soil remediated."

The site is therefore required to be remediated to enable it to be suitable for the proposed use(s) which is able to be achieved via a condition of consent.

State Environmental Planning Policy (Infrastructure) 2007

The property has a frontage to a classified road, being Pacific Highway, and is within relative close proximity to the North Shore Rail Corridor. Consideration is required pursuant to Division 15 Clause 87 and Division 17 Clauses 101, 102, and 104 of the SEPP.

Clause 87 of the SEPP states:

87 Impact of rail noise or vibration on non-rail development

(1) This clause applies to development for any of the following purposes that is on land in or adjacent to a rail corridor and that the consent authority considers is likely to be adversely affected by rail noise or vibration:

- (a) a building for residential use,*
- (b) a place of public worship,*
- (c) a hospital,*
- (d) an educational establishment or child care centre.*

(2) Before determining a development application for development to which this clause applies, the consent authority must take into consideration any guidelines that are issued by the Director-General for the purposes of this clause and published in the Gazette.

(3) If the development is for the purposes of a building for residential use, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded:

- (a) in any bedroom in the building—35 dB(A) at any time between 10.00 pm and 7.00 am,*
- (b) anywhere else in the building (other than a garage, kitchen, bathroom or hallway)—40 dB(A) at any time.*

To address the above requirements, the applicant has submitted an acoustic assessment, prepared by PKA Acoustic Consulting, that addressed both rail related noise and vibration. The report concludes that there are no additional acoustic treatments required to address rail noise and vibration encountered on the site. The proposal is therefore considered to be satisfactory in this respect.

The application was additionally referred to Rail Corporation New South Wales (RailCorp) for comment. The following comments (in part) have been provided:

I refer to Council's letter received 13 June 2014 regarding the proposed development at the above address.

Rail Corporation New South Wales (RailCorp) has reviewed the proposal and asks that the following issues be addressed in the conditions for this proposed development.

1. Noise and Vibration

RailCorp is concerned that the future occupants of the development will encounter rail-related noise and vibration from the adjacent rail corridor. Rail

noise and vibration can seriously affect residential amenity and comfort, jeopardise the structural safety of buildings, and thus should be addressed early in the development process.

The Department of Planning has released the document titled "Development Near Rail Corridors and Busy Roads – interim Guidelines". The document is available on the Department of Planning website.

Council is therefore requested to impose the condition of consent.

An acoustic assessment is to be submitted to Council prior to the issue of a construction certificate demonstrating how the proposed development will comply with the Department of planning's document titled "Development Near Rail Corridor and Busy Roads – interim Guidelines"

Should the application be approved, the above condition would form part of any consent.

Clause 101 of the SEPP states:

101 Development with frontage to classified road

- (1) *The objectives of this clause are:*
 - (a) *to ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and*
 - (b) *to prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.*
- (2) *The consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that:*
 - (a) *where practicable, vehicular access to the land is provided by a road other than the classified road, and*
 - (b) *the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of:*
 - (i) *the design of the vehicular access to the land, or*
 - (ii) *the emission of smoke or dust from the development, or*
 - (iii) *the nature, volume or frequency of vehicles using the classified road to gain access to the land, and*
 - (c) *the development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.*

The vehicular access for the development is located on Fitzsimons Lane. As noted within comments provided by Council's Development Engineer, the overall findings of the traffic report were that the development would not be expected to change the operation of the surrounding intersections or adversely affect the road network.

Clause 102 of the SEPP states:

102 Impact of road noise or vibration on non-road development

- (1) *This clause applies to development for any of the following purposes that is on land in or adjacent to the road corridor for a freeway, a tollway or a transitway or any other road with an annual average daily traffic volume of more than 40,000 vehicles (based on the traffic volume data published on the website of the RTA) and that the consent authority considers is likely to be adversely affected by road noise or vibration:*
- (a) a building for residential use,*
 - (b) a place of public worship,*
 - (c) a hospital,*
 - (d) an educational establishment or child care centre.*
- (2) *Before determining a development application for development to which this clause applies, the consent authority must take into consideration any guidelines that are issued by the Director-General for the purposes of this clause and published in the Gazette.*
- (3) *If the development is for the purposes of a building for residential use, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded:*
- (a) in any bedroom in the building—35 dB(A) at any time between 10 pm and 7 am,*
 - (b) anywhere else in the building (other than a garage, kitchen, bathroom or hallway)—40 dB(A) at any time.*
- (4) *In this clause, **freeway**, **tollway** and **transitway** have the same meanings as they have in the Roads Act 1993.*

To address the above requirements, the applicant has submitted an acoustic assessment prepared by PKA Acoustic Consulting. The report includes recommended construction techniques and states that the proposal will achieve the above mentioned noise guideline requirements, subject to those construction techniques. The proposal is therefore considered to be satisfactory in this respect.

The application was referred to the New South Wales Roads and Maritime Service for comment under the provisions of Clause 104 of the SEPP. The following comments have been provided.

I refer to Council's letter dated 6 June 2014 regarding the above mentioned development application (DA0180/14) forwarded to the Roads and Maritime Services (Roads and Maritime) for comment under Section 104 of the State Environmental Planning Policy (Infrastructure) 2007.

It is noted that Pacific Highway is a classified road under the care and control of Roads and Maritime. Therefore, concurrence is required for the proposed removal of the existing driveway on Pacific Highway under Section 138 (2) of the Roads Act, 1993. Roads and Maritime has reviewed the submitted application and would provide concurrence subject to the following conditions being included in any consent issued by Council.

1. Roads and Maritime previously vested a strip of land as road along part of the Pacific Highway frontage of the subject property, as shown by grey colour on the attached aerial.

Roads and Maritime has no approved proposal that requires any part of the subject property for road purposed. All buildings or structures are clear if the Highway road reserve (unlimited in height or depth) together with any improvements integral to the future use of the site.

2 The redundant driveway on Pacific Highway shall be removed and replaced with kerb and gutter to match existing.

3. The design and construction of the kerb and gutter works on Pacific Highway shall be in accordance with Roads and Maritime requirements. Details of these requirements should be obtained from Roads and Maritime Project Services Manager, Traffic Projects Section Parramatta (telephone 8849 2138).

Detailed designs plans of the proposed kerb and gutter works are to be submitted to Roads and Maritime for approval prior to the issue of a Construction Certificate and commencement of any road works.

4. Council should ensure that post development storm water discharge from the subject site into the Roads and Maritime drainage system are to be submitted to the Roads and Maritime for approval, prior to the commencement of any works.

Details should be forwarded to:

The Sydney Asset Management
Roads and Maritime Services
PO Box 973 Parramatta CBD 2124.

A plan checking fee will be payable and a performance bond may be required before the Roads and Maritime approval is issued. With regard to the Civil Works requirements please contact the Roads and Maritime Project Engineer, External Works Ph: 8849 2114 or Fax: 8849 2766

5 The developer is to submit design drawings and documents relating to the excavation of the site and support structures to Roads and Maritime assessment, in accordance with Technical Direction GTD2012/001.

The developer is to submit all documentation at least six (6) weeks prior to commencement of construction and is to meet the full cost of the assessment by Roads and Maritime.

If it is necessary to excavate below the base of the footings of the adjoining roadways, the person acting on the consent shall ensure that the owner/s of the roadway is/are given at least seven (7) days notice of the intention to excavate below the base of the footings. The notice is to include complete details of the work.

6. The proposed residential component of the development should be designed such that road traffic noise from Pacific Highway is mitigated by durable materials to satisfy requirements under Clause 102(3) of State Environmental Planning Policy (Infrastructure) 2007. The Roads and Maritime's Environmental Noise

Management Manual provides practical advice in selecting noise mitigation treatments.

7. A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council prior to the issue of a construction certificate.

In addition to the above, Roads and Maritime also provides the following comments to Council for its consideration in the determining of the application:

1. The layout of the proposed car parking areas, loading docks and access driveway associated with the subject development (including, driveways, grades, turn paths, sight distance requirements, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS 2890.1 – 2004 and AS 2890.2 – 2002 for heavy vehicle usage.

2. The swept path of the longest vehicle (including garbage trucks) entering and existing the subject site, as well as maneuverability through the site, shall be in accordance with AUSTROADS. In this regard, a plan shall be submitted to Council for approval, which shows that the proposed development complies with this requirements.

3. All demolition and construction vehicles are to be contained wholly within the site and vehicles must enter the site before stopping.

Should the application be approved the above conditions would form part of any consent.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

A valid BASIX certificate has been submitted (Certificate number 538100M _04, dated 15 July 2015). The certificate demonstrates compliance with the provisions of the SEPP and adequately reflects all amendments to the application. As noted within the Landscape comments above, there is an inconsistency between the Landscape plan and the BASIX certificate. Council's Landscape Assessment Officer has advised that the landscape plan could be conditioned to be consistent.

State Environmental Planning Policy No. 65 - Design quality of residential flat development

SEPP 65 aims to improve the design quality of residential flat buildings across NSW and provides an assessment framework, the Residential Flat Design Code (RFDC), for assessing 'good design'.

Clause 50(1A) of the EPA Regulation 2000 requires the submission of a design verification statement from the building designer at lodgement of the development application. This documentation has been submitted and is satisfactory.

On 23 September 2014, the Department of Planning and Environment exhibited the proposed changes to SEPP 65 which includes the refinement of the RFDC to produce an Apartment Design Guideline.

The changes to SEPP 65 were notified on the NSW legislation website on 19 June 2015, and commenced on 17 July 2015.

The changes to SEPP 65 include savings provisions. For apartment development applications lodged prior to 19 June 2015, the Residential Flat Design Code applies.

The subject application was lodged on 22 May 2014. Notwithstanding the savings provision, these amendments have been considered in the assessment of the application. The proposal is generally consistent with amended SEPP 65 and the Apartment Design Guideline, as is largely reflected in the RFDC assessment.

The following consideration has been given to the requirements of the SEPP and the Residential Flat Design Code.

Residential Flat Design Code:

The Residential Flat Design Code (RFDC) supports the ten design quality principles identified in SEPP 65. Council's Urban Design consultant considered the development to be acceptable and the application is also considered satisfactory having regard to an assessment against the RFDC guidelines as provided in the below compliance table.

RFDC Compliance Table

	Guideline	Compliance
PART 02 SITE DESIGN		
Site Configuration		
<i>Deep Soil Zones</i>	A minimum of 25 percent of the open space area of a site should be a deep soil zone (1516.5m ²); more is desirable. Exceptions may be made in urban areas where sites are built out and there is no capacity for water infiltration. In these instances, stormwater treatment measures must be integrated with the design of the residential flat building.	YES (27%)
<i>Open Space</i>	The area of communal open space required should generally be at least between 25 and 30 percent of the site area. Larger sites and brown field sites may have potential for more than 30 percent (1516.5m ²).	YES (1670m ² - 27%)
<i>Planting on Structures</i>	In terms of soil provision there is no minimum standard that can be applied to all situations as the requirements vary with the size of plants and trees at maturity. The following are recommended as minimum standards for a range of plant sizes: Medium trees (8 metres canopy diameter at maturity) - minimum soil volume 35 cubic metres - minimum soil depth 1 metre - approximate soil area 6 metres x 6 metres or	YES

	Guideline	Compliance
	equivalent.	
<i>Safety</i>	<p>Carry out a formal crime risk assessment for all residential developments of more than 20 new dwellings.</p> <p>Reinforce the development boundary to strengthen the distinction between public and private space</p> <p>Optimise the visibility, functionality and safety of building entrances</p> <p>Improve the opportunities for casual surveillance.</p> <p>Minimise opportunities for concealment</p> <p>Control access to the development.</p>	YES – Refer to planning discussion
<i>Visual Privacy</i>	Refer to Building Separation minimum standards	YES (acceptable privacy and building separation outcomes - refer to urban design comments).
<i>Pedestrian Access</i>	Identify the access requirements from the street or car parking area to the apartment entrance.	YES
	<p>Follow the accessibility standard set out in Australian Standard AS 1428 (parts 1 and 2), as a minimum.</p> <p>Provide barrier free access to at least 20 percent of dwellings in the development.</p>	YES
<i>Vehicle Access</i>	Generally limit the width of driveways to a maximum of six (6) metres.	YES (6.0 metres)
	Locate vehicle entries away from main pedestrian entries.	YES
PART 03 BUILDING DESIGN		
Building Configuration		
<i>Apartment layout</i>	Single-aspect apartments should be limited in depth to 8 metres from a window.	NO (8.7 metres)
	The back of a kitchen should be no more than 8 metres from a window.	NO (8.7 metres)
	The width of cross-over or cross-through apartments over 15 metres deep should be 4 metres or greater to avoid deep narrow apartment layouts.	YES (6m)

	Guideline	Compliance
<i>Apartment Mix</i>	Provide a diversity of apartment types, which cater for different household requirements now and in the future.	YES
<i>Balconies</i>	<p>Provide primary balconies for all apartments with a minimum depth of 2 metres.</p> <p>Developments which seek to vary from the minimum standards must demonstrate that negative impacts from the context-noise, wind – can be satisfactorily mitigated with design solutions.</p>	YES
<i>Ceiling Heights</i>	<p>The following recommended dimensions are measured from finished floor level (FFL) to finished ceiling level (FCL).</p> <p>These are minimums only and do not preclude higher ceilings, if desired in residential flat buildings or other residential floors in mixed use buildings:</p> <p>In general, 2.7 metres minimum for all habitable rooms on all floors, 2.4 metres is the preferred minimum for all non-habitable rooms, however 2.25 metres is permitted.</p> <p>For two storey units, 2.4 metres minimum for second storey if 50 percent or more of the apartment has 2.7 metres minimum ceiling heights.</p>	YES (2.7m residential 4.0 metres ground floor.)
<i>Ground Floor Apartments</i>	Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site.	YES (mixed use zoning – ground floor apartments with separate entries provided as appropriate to given topography and residential streetscape amenity considerations to Fitzsimons Lane to achieve required street activation).
	Provide ground floor apartments with access to private open space, preferably as a terrace or garden.	YES
<i>Internal Circulation</i>	<p>In general, where units are arranged off a double-loaded corridor, the number of units accessible from a single core/corridor should be limited to eight. Exceptions may be allowed:</p> <p>for adaptive reuse buildings where developments can demonstrate the achievement of the desired streetscape character and entry response</p>	YES (refer to Urban Design comments)

	Guideline	Compliance
	where developments can demonstrate a high level of amenity for common lobbies, corridors and units, (cross over, dual aspect apartments).	
Storage	In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: <ul style="list-style-type: none"> - studio apartments 6m³ - one-bedroom apartments 6m³ - two-bedroom apartments 8m³ - three plus bedroom apartments 10m³ 	YES (refer to Urban Design comments)
Building Amenity		
Daylight Access	Living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid-winter. In dense urban areas a minimum of two hours may be acceptable.	NO (61%)
	Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10% of the total units proposed. Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these standards and how energy efficiency is addressed (see Orientation and Energy Efficiency).	YES (9 units 6.25% maximum)
Natural Ventilation	Building depths, which support natural ventilation typically range from 10 to 18 metres.	YES (18m maximum)
	Sixty percent (60%) of residential units should be naturally cross ventilated.	YES (60%)
	Twenty five percent (25%) of kitchens within a development should have access to natural ventilation.	NO (19%)
Building Performance		
Waste Management	Supply waste management plans as part of the development application submission as per the NSW Waste Board.	YES
Water Conservation	Rainwater is not to be collected from roofs coated with lead- or bitumen-based paints, or from asbestos- cement roofs. Normal guttering is sufficient for water collections provided that it is kept clear of leaves and	YES

	Guideline	Compliance
	debris.	

An assessment of the variations to the design controls identified in the compliance table is provided below.

Safety

The Residential Flat Design Code (RFDC) requires the submission of a formal crime risk assessment where a development includes more than 20 dwellings. A specific report has not been provided by the applicant, however, the architect has addressed the requirements through a SEPP 65 compliance discussion and through the plans that demonstrate areas of concealment or entrapment have been avoided, appropriate security fencing and gating has been provided and lighting would be used to assist in this respect.

Apartment layout

As noted in Council's Urban Design consultants comments, one typical unit type has kitchens that are located at 8.7 metres from a window. Council's Urban Design consultant has indicated that the addition of a clerestory window above the kitchen for each respective unit would resolve the issue by providing sufficient light to the kitchen. This issue could be conditioned should the application be approved.

Daylight access

The RFDC requires that at least 70% of units receive at least 2 hours (in dense urban areas) of direct sunlight . The proposal would result in a total of 61% of units that would receive 2 hours at midwinter to their living rooms and private open spaces. It is noted that the 61% figure includes overshadowing from a concept design for 900 Pacific Highway which is yet to be developed and that 57.8% of units will achieve 3 hours of direct sunlight at midwinter.

The applicant has argued that the rule of thumb under the RFDC (and the solar access control in the DCP) are not development standards, that the steeply sloping site being in a southerly direction results in self overshadowing, that amenity is achieved in units through protection from Pacific Highway and Northshore Rail Corridor, and that capturing expansive district views (through the southerly aspect) will create amenity for the units. The applicant has further argued that the proposal satisfies the maximum building depth, apartment layout requirements and ventilation requirements.

Council's Urban Design consultant has indicated that it would be difficult to achieve a greater percentage without taking a significantly different approach to site layout and the proposal is acceptable given the site circumstances (i.e orientation, slope and location of adjoining development/future adjoining development).

Natural ventilation

The RFDC requires that 25% of kitchens are to be immediately adjacent to a window for ventilation and light purposes. As indicated in the compliance table above, the development proposal would achieve a maximum of 19% of Kitchens that would meet this requirement. Council's Urban Design consultant has indicate that clerestory windows be

added or moved directly above kitchens to units A0903, B0902, B0903, B0905, B0906, B0907, B0908 to achieve the required 25%. This issue could be conditioned should the application be approved

Local Content

Ku-ring-gai LEP (Local Centres) 2012

Zoning and permissibility:

The site is zoned B4 Mixed Use. The proposed development is a mixed use building containing a residential flat building with commercial uses and is permissible in the zone.

Mixed use zone objectives:

The development:

- provides a mix of compatible land uses
- integrates business, office, residential, retail and other development in proximity to public transport and encourages walking and cycling through footpath upgrades, and well designed and planned bicycle facilities
- supports the integrity and viability of adjoining local centres by providing for a range of “out of centre” uses and business activities

The proposed development therefore satisfies the zone objectives.

Development standards:

Development standard	Proposed	Complies
Building height: 26.5m	30.5m	NO
Floor space ratio: 2.3:1	2.109:1	YES
Ground floor development in business zones: Applicable to development with commercial premises component: No residential and no parking at ground floor	Residential and car parking located at ground floor levels	NO
Minimum street frontage in business zones: 20m	106.38m Pacific Highway	YES

Clause 4.3 Height of buildings

The proposed development has a maximum height of 30.5 metres which exceeds the prescribed height control standard of 26.5 metres allowed for the site. The applicant has made a submission pursuant of Clause 4.6 “Exceptions to development standards” of the LEP requesting a variation to the standard. Refer to discussion under Clause 4.6 below.

Clause 4.6 Exceptions to development standards

The proposed development breaches both Clause 4.3 “Height of buildings” and 6.6 “Ground floor development in business zones” development standards contained within the LEP. The applicant has made a submission pursuant of Clause 4.6 to vary those development standards. Clause 4.6 is as follows:

(1) The objectives of this clause are as follows:

(a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,

(b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.

(2) Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.

(3) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention by demonstrating:

(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and

(b) that there are sufficient environmental planning grounds to justify contravening the development standard.

(4) Development consent must not be granted for development that contravenes a development standard unless:

(a) the consent authority is satisfied that:

(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and

(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Director-General has been obtained.

Whether compliance with the standard is unreasonable and unnecessary in the circumstances of the case

The applicant has provided justification that strict compliance with the height standard is unnecessary and unreasonable for the following reasons:

"In our view, the proposed variation to allow lift over runs to breach the maximum building height standard is justified for the following reasons: -

- The revised proposal remains consistent with the objectives of a B4 Mixed use zone in providing:*
- a variety of housing types integrated with suitable retail uses which combined will assist in maximising public transport patronage;*

- *high density housing close to the Gordon Town Centre and the neighbouring Macquarie Business Park will assist in supporting the viability of both localities;*
- *the contravention of the height standard does not impact on the visual privacy or create overshadowing of adjacent properties – (Note: this matter was one of Council's major concerns and considerable effort has been given to ensuring that loss of privacy and over shadowing do not pose an impact on neighbouring properties);*
- *a development, the scale of which is considered appropriate for a site that is 6,066m² in area and is within 400m of the Gordon Town Centre.*
- *The overall floor space ratio of 2.109:1 complies with the maximum 2.30:1 under KLEP (TC) 2012*

The site is totally covered with hard paved areas and buildings with extensive excavation and basement structures - when measured against the definition of existing ground level creates a distorted ground plane which produces a 3-D building height that adversely impacts the development potential of the site.

- *The site is severely constrained by a two directional cross fall of 12.0 metres from Pacific Highway down to Fitzsimons Lane and 5.0 metres longitudinally across the site from the North West boundary to the south east boundary.*
- *The excessive slope of the land combined with the degree of excavation has created a unique situation that requires special consideration and a site - specific design solution – which has been achieved.*
- *The overall height of all 3 buildings complies with the 26.5 standard across the site - the breach in height is located in the middle of the site in part obscured by parapets, when viewed from the corner of Merriwa Street and Fitzsimons Lane – consequently, the streetscape is not adversely impacted by the non-compliances.*
- *The scale and form of the proposed development is consistent with the expected outcomes of Council's strategic aims and objectives for the locality and is a direct response to the site's topographical constraints.*
- *The proposed heights are contextually appropriate for a site of 6,066m² and presents a responsive streetscape incorporating sound urban design principles and amenity outcomes within an emerging area close to the Gordon Town Centre.*
- *The total land holdings are under the one ownership that have been consolidated over many years with the specific purpose of being redeveloped to maximise the site's strategic location on Pacific Highway, surrounded by a mixture of residential, commercial and retail uses.*
- *As demonstrated in architectural drawings prepared by Nettleton Tribe, the revised scheme maintains the required 3 hours of sunlight to buildings located on the southern side of Merriwa Street.*

The applicant has argued that the application of the height control strictly in accordance with the definition of "height" and "ground level" would be unreasonable and would result in

a significantly reduced development potential that is anticipated for the site. The definition of building height is as follows:

Building height (or height of building) means the vertical distance between ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communications devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

The definition of ground level (existing) is as follows:

Ground level (existing) means the existing level of a site at any point

The existing levels of the site have been highly modified through excavation to facilitate the existing development on the site. The resulting height plane calculated in accordance with the definition includes a significant vertical drop approximately halfway through the site resulting in a height plane that is significantly constraining. It is considered that strict compliance with the development standard is unreasonable in this case.

Environmental planning grounds to justify contravening the development standard

The applicant has further argued that there are sufficient environmental planning grounds to justify contravention of the development standard demonstrating that the proposal would comply with an interpolated ground line with the exception of minor breaches to a maximum of 1.295m associated with a lift overrun as demonstrated in **Figure 2.0** below, and the lack of impacts associated with the breach.

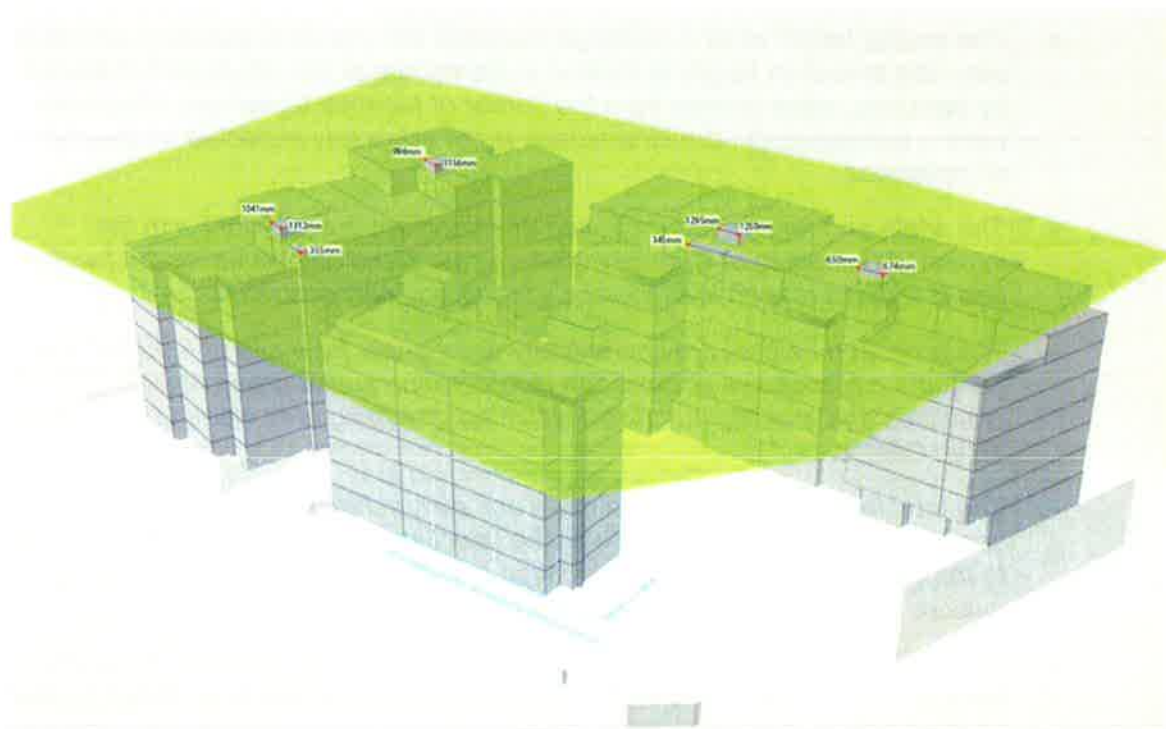


Figure 2.0 – Source – Clause 4.6 prepared by Ryan Planning, dated July 2015

It is noted that there are no discernible impacts that arise as a result of these height breaches (above the interpolated ground line or the height plane as defined by the LEP). The reasons/justification put forward by the applicant are well founded and are accepted in this case.

Public interest – Development consistent with the zone objectives and objectives of the development standard

The objectives of the Height of buildings standard are as follows:

4.3 Height of buildings

(1) The objectives of this clause

- (a) to ensure that the height of development is appropriate for the scale of the different centres within the hierarchy of Ku-ring-gai centres,*
- (b) to establish a transition in scale between the centres and the adjoining lower density residential and open space zones to protect local amenity,*
- (c) to enable development with a built form that is compatible with the size of the land to be developed.*

It is considered that the objectives of the Height of buildings development standard would be met through the proposed design and associated variation.

The objectives for the B4 Mixed Use zone are as follows:

Zone B4 Mixed Use

1 Objectives of zone

- To provide a mixture of compatible and uses.*
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.*
- To support the integrity and viability of adjoining local centres by providing for a range of “out of centre” retail uses such as bulky goods premises and compatible business activities.*

It is considered that the objectives of the zone would be met.

Concurrence of the Director General

Circular PS 08-003 issued on 9 May 2008 informed Council that it may assume the Director-General's concurrence for exceptions to development standards.

In accordance with the provisions of Clause 4.6 (5):

In deciding whether to grant concurrence, the Director General must consider:

- (a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
- (b) the public benefit of maintaining the development standard, and*

- (c) *any other matters required to be taken into consideration by the Director-General before granting the concurrence.*

Whether contravention of the development standard raises any matter of significance for state or regional environmental planning

It is considered that the objectives of the height standard in the LEP are achieved and that approval of the proposed development would not raise any matters of significance for state or regional environmental planning. The proposed variation to Clause 4.3 – Height of buildings of the Ku-ring-gai (Local Centres) Local Environmental Plan 2012 has been assessed on its merits and this does not infer that future variation of this standard would be granted in any other instance unless appropriate justification can be provided.

The public benefit of maintaining the development standard

Given the nature of the proposed variation it is considered that there is minimal public benefit in maintaining the development standard having regard to the merits of this application. It is considered that no public benefit would be achieved in reducing the building height simply to achieve compliance with the stated height provision.

Any other matters required to be taken into consideration by the Director-General before granting the concurrence

All relevant State and local planning provisions have been taken into consideration in the assessment of the application prior to the granting of concurrence to the proposed variation of Clause 4.3 – Height of buildings of the Ku-ring-gai (Local Centres) Local Environmental Plan 2012.

The proposal also results in a breach of Clause 6.6 which is as follows:

- "(1) *The objective of this clause is to ensure that active uses are provided at the street level in business zones to encourage the presence and movement of people.*
- (2) *This clause applies to land in the following zones:*
- (a) *Zone B2 Local Centre,*
 - (b) *Zone B4 Mixed Use,*
 - (c) *Zone B5 Business Development.*
- (3) *Development consent must not be granted to development for the purposes of commercial premises or to a mixed use development with a commercial premises component, or a change of use of a building to commercial premises, on land to which this clause applies unless the consent authority is satisfied that the ground floor of the building:*
- (a) *will not be used for the purposes of residential accommodation or a car park or to provide ancillary car parking spaces, and*
 - (b) *will provide uses and building design elements that encourage interaction between the inside of the building and the external public areas adjoining the building.*
- (4) *Subclause (3) (b) does not apply to any part of a building that:*
- (a) *faces a service lane that does not require active street frontages, or*
 - (b) *is used for 1 or more of the following purposes:*

- (i) a lobby for a commercial, residential, serviced apartment or hotel component of the building,
- (ii) access for fire services,
- (iii) vehicular access."

The objective of Clause 6.6 relates to the provision of active uses at street level. The phrase "ground floor of the building" means the floor of the building at about the street level of the building, meaning that on a sloping site the ground floor of a building can be different levels of the building at different parts of the site as is the case with the subject proposal. The proposed development includes residential, ancillary parking at ground floor levels which results in a breach of the standard.

Whether compliance with the standard is unreasonable and unnecessary in the circumstances of the case

The applicant argues that strict compliance with the ground floor development in business zones standard is unnecessary and unreasonable for the following reasons:

As previously documented in the original application and the December 2014 revision, for several years now the owners of the site have been attempting to obtain retail tenants for the site pending approval of the subject DA. The premises at 898 Pacific Highway has been vacant since 2008 and the shop at 870 Pacific Highway has been vacant since September 2007. This reflects on the findings of the Market Assessment & Feasibility Analysis prepared by Hill PDA in May 2012 that demand for commercial sites is decreased the further away they are from the Gordon Town Centre and rail station.

- *The revised proposal, which now comprises 730m² (i.e. 172% increase to what was originally proposed) of retail/commercial uses (including six (6) separate tenancies activating Pacific Highway, will provide for the orderly and economic development of the site in keeping with existing and recently approved developments on neighbouring sites;*
- *The site is severely constrained by a two directional cross fall of 12.0 metres from Pacific Highway down to Fitzsimons Lane and 5.0 metres longitudinally across the site from the North West boundary to the south east boundary. These constraints are not conducive to being able to design a continuous retail strip along the Pacific Highway;*
- *It is not economically viable to restrict the uses of the entire ground floors to non-residential in a development the scale of what is proposed on a site that is removed from the Gordon Town Centre;*
- *The proposed retail has been strategically designed to integrate with the pedestrian ways and lobbies of each building to invite passing trade;*
- *The individual floor areas of the various retail 'nodes' along Pacific Highway ranging in size from 62m²; 78m²; and 113m², are of practical size and conducive to accommodating a variety of uses, compared to providing for example, a smaller space that was only suitable to accommodating a café;*
- *The development does not cause any adverse environmental impacts to neighbouring properties, and would be a welcome addition to the cafes and*

medical suites that have recently been approved in neighbouring developments.

To allow residential uses to occupy selected parts of the ground floor of a mixed use development, the scale of which has been proposed, is considered justifiable for the following reasons: -

- *Over the last number of years the owner/applicant has received a number of approaches from various companies and groups wishing to investigate the possible development of the site to allow for commercial or retail uses, particularly using the Pacific Highway frontage of the site. These approaches have resulted in discussions of potential development schemes, many of which were subsequently prepared to sketch stage. Each proponent has individually investigated various levels of interest in the site, from outright purchase of the site for development, to taking a lease of developed space once the development was completed.*
- *In every case, discussions were not able to be concluded as the proponents were not able to prepare a viable proposal for the site that included retail or commercial space on the Pacific Highway. Discussions were held with:*
 - *Coles, for Officeworks*
 - *Bunnings*
 - *Aldi Stores*
 - *Woolworths*
 - *Fit n Fast Health Studio*
 - *McDonalds*
 - *Coles, for Liquor Store*
 - *Yum Restaurants (KFC)*
 - *Dal Cross Hospital*
 - *Coles for mixed use*

Environmental planning grounds to justify contravening the development standard

The development has resulted in a sufficiently activated street frontage and the design is well integrated by virtue of retail uses at both Pacific Highway and Fitzsimons Lane. In terms of the 106m frontage to Pacific Highway, approximately 75 metres of this is activated with the remaining frontage area being located at either end of the building for a residential purpose. The area of this activation in part extends to approximately 30 metres into the site incorporating large communal spaces with access to these retail premises.

Approximately 55m of the 90 metres frontage to Fitzsimons lane is activated through retail uses to Fitzsimons Lane with the remaining area catering for the driveway for the development and the southwestern end of Block A which is for residential purposes. The objective of encouraging the presence and movement of people is met. Further, the development acknowledges the land dedication for lane widening and the provision of footpaths anticipated within the Ku-ring-gai Local Centres DCP.

In this regard, the development is considered to be in the public interest.

Public interest – Development consistent with the zone objectives and objectives of the development standard

The objectives of Clause 6.6 area as follows:

“(1) The objective of this clause is to ensure that active uses are provided at the street level in business zones to encourage the presence and movement of people.

The proposal is considered to meet the objectives of the clause.

The objectives for the B4 Mixed Use zone are as follows:

Zone B4 Mixed Use

1 Objectives of zone

- *To provide a mixture of compatible and uses.*
- *To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.*
- *To support the integrity and viability of adjoining local centres by providing for a range of “out of centre” retail uses such as bulky goods premises and compatible business activities.*

The proposal is considered to meet the objectives of the zone.

Concurrence of the Director General

Circular PS 08-003 issued on 9 May 2008 informed Council that it may assume the Director-General's concurrence for exceptions to development standards.

In accordance with the provisions of Clause 4.6 (5):

In deciding whether to grant concurrence, the Director General must consider:

- (d) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
- (e) the public benefit of maintaining the development standard, and*
- (f) any other matters required to be taken into consideration by the Director-General before granting the concurrence.*

Whether contravention of the development standard raises any matter of significance for state or regional environmental planning

It is considered that the objectives of the ground floor development in business zones standard in the LEP are achieved and that approval of the proposed development would not raise any matters of significance for state or regional environmental planning. The proposed variation to Clause 6.6 – Ground floor development in business zones of the Ku-ring-gai (Local Centres) Local Environmental Plan 2012 has been assessed on its merits and this does not infer that future variation of this standard would be granted in any other instance unless appropriate justification

can be provided.

The public benefit of maintaining the development standard

Given the nature of the proposed variation it is considered that there is minimal public benefit in maintaining the development standard having regard to the merits of this application. It is considered that minimal public benefit would be achieved in imposing a greater degree of retail/commercial space or removing residential or ancillary car parking spaces simply to achieve compliance with the stated standard.

Any other matters required to be taken into consideration by the Director-General before granting the concurrence

All relevant State and local planning provisions have been taken into consideration in the assessment of the application prior to the granting of concurrence to the proposed variation of Clause 6.6 - Ground floor development in business zones of the Ku-ring-gai (Local Centres) Local Environmental Plan 2012.

Clause 5.9 – Preservation of trees or vegetation

Council's Landscape Assessment Officer is satisfied that the proposed development will not unduly impact upon any existing significant trees or vegetation, subject to conditions. It is noted that the applicant made amendments to the plans in order to retain the two significant Sydney Blue Gums located in the southern corner of the property.

Clause 5.10 – Heritage conservation

The site does not contain a heritage item and is not in the immediate vicinity of any heritage items or within a heritage conservation area.

Clause 6.1 – Earthworks

The proposed development will not restrict the existing or future use of the site, adversely impact on neighbouring amenity, the quality of the water table or disturb any known relics. Council's Development Engineer has reviewed the Geotechnical report submitted with the application and deemed its recommendations to be satisfactory.

Clause 6.2 - Stormwater and water sensitive urban design

Council's Development Engineer is satisfied that the proposed development has been designed to control stormwater run-off as per the requirements of the LEP, subject to conditions.

Clause 6.5 – Site requirements for multi dwelling housing and residential flat buildings

Clause 6.5 stipulates that:

“Development consent must not be granted for the erection of multi dwelling housing or a residential flat building on a lot unless the lot has an area of at least 1,200 square metres and at least 1 street frontage of not less than:
(a) if the area of the lot is less than 1,800 square metres—24 metres, or
(b) if the area of the land is 1,800 square metres or more—30 metres”

The subject site has an area of 6,066m² and a frontage of 106 metres to the Pacific Highway. The site meets the 1,200m² minimum site requirement and the 30 metres minimum frontage requirement for a residential flat building.

Clause 6.6 – Ground floor development in business zones

The development breaches the above development standard. As discussed above, a 4.6 request for an exception to the standard has been submitted and assessed as acceptable.

The objective of clause 6.6 relates this clause to the provision of active uses at street level. The phrase “ground floor of the building” means the floor of the building at about the street level of the building, meaning that on a sloping site the ground floor of a building can be different levels of the building at different parts of the site. The development, whilst providing active uses at those parts of the building that relate directly to the street, includes residential and parking uses at the ground floor of the building.

Clause 6.7 - Minimum street frontages for lots in business zones

Clause 6.7 stipulates (in part) that:

Development consent must not be granted for the erection of a building or more than 2 storeys on land in B2 Local Centre, Zone B4 Mixed Use or Zone B5 Business Development if the land does not have a primary street frontage of at least 20 metres.

The subject site meets this minimum requirement.

POLICY PROVISIONS

Policy Provisions (DCPs, Council policies, strategies and management plans)

Ku-ring-gai Local Centres Development Control Plan

COMPLIANCE TABLE		
Development control	Proposed	Complies
Volume A		
Part 3 Land amalgamation and subdivision		
Lot amalgamation is to avoid creating:	Street frontage and lot size less than required for 900 Pacific Highway.	NO
A primary street frontage less than that required by KLEP (Local Centres) 2012	Lot size less than required for 860 and 854 Pacific Highway	
A lot size less than that required by KLEP (Local Centres) 2012		
Part 8 Mixed use development controls		
8A – Site design		
8A.1 Building setbacks		

Street setback - site specific requirements as per Volume B Part 1: Pacific Highway: 4 metres Merriwa Street: 6 Metres Fitzsimons Lane: Variable based on land dedication to achieve road widening Side setback Nil required setback Party wall required for setbacks < 3m	0.0 metres (basement) 3.8 metres building 11 metres Plans demonstrate compliance Nil setback to eastern boundary Nil setback to western boundary (basement) 13 metres for apartments	NO YES YES YES YES
8A.2 Building separation		
The minimum separation between residential buildings on the development sites and the adjoining sites must be: Up to 4 th storey 12m between habitable rooms/balconies 9m between habitable rooms/balconies and non-habitable rooms 6m between non-habitable rooms 5 to 8 storeys over the podium 18m between habitable rooms/balconies 13m between habitable rooms/balconies and non-habitable rooms 9m between non-habitable rooms	>12m >12m >18m	YES YES YES
8A.3 Wind impact		
10m/second at the footpath	Awning provided to deflect wind at footpath level.	YES

8B – Access and parking		
8B.1 Vehicle and Service Access and Loading Facilities		
In accordance with Volume B 1D, being: <ul style="list-style-type: none"> - All access from Fitzsimons Lane or Merriwa Street - No vehicular or service access from Pacific Highway - Residential and commercial lobbies located on Fitzsimons Lane. 	Vehicle access point on Fitzsimons lane	YES
Vehicle access Shared vehicle entry/exit point for different uses and secure and separate parking between uses	Shared access point from Fitzsimons Lane and parking spaces allocated between uses.	YES
Service access Enter and exit in a forward direction Waste access to have 4.5m finished ceiling height for the path of travel of waste vehicle for commercial/retail and 2.6m for residential	Compliant (as per Development Engineer comments).	YES
Loading facilities Internal loading facilities to be provided. Loading docks must not be visible public streets. Access and manoeuvring in accordance with AS2890.2	Loading facility accessible off Fitzsimons Lane entry. Access & manoeuvring compliant.	YES
8B.2 Car parking provision		
Design All parking to be within basement.	All parking is within the basement.	YES
Car parking shall not project above the finished ground level for active street frontages (Fitzsimons Lane) and <1m for supporting frontages (Pacific Highway)	No projection within active frontage setback areas	YES
Car parking to comply with AS2890.1	Compliant	YES
Floor to ceiling heights for any above ground parking must be 3m to allow for change of use.	3.1m	YES
Car parking rates	Refer Development Engineer comments above.	YES

8C.2 – Natural ventilation		
All habitable rooms are to have operable windows or doors	Operable windows and doors provided.	YES
At least 60% of apartments must have natural cross ventilation	60%	YES
At least 25% of kitchens are to be immediately adjacent to an operable window	19%	NO
Cross ventilation is not to be dependent on skylights or open corridors where it would impact on privacy	No privacy impacts.	YES
Office workspaces to have operable windows to 30% of window area	No offices proposed	YES
Dual aspect commercial workspaces to be provided where possible	Yes	YES
Where natural ventilation cannot be achieved, mechanical ventilation is to be provided to commercial workspaces	Natural ventilation achieved.	YES
8C.3 – Office floor depth		
Internal plan depth for office floors to be 10m maximum from glass to internal face of wall	9.6m	YES
Maximise opportunities for external openings – access to daylight and views	Yes	YES
8C.4 – Apartment depth and width		
Dual aspect apartments are to have a maximum internal plan depth of 18m from glass line to glass line	18m (max)	YES
Single aspect apartments are to have a maximum internal plan depth of 8m from glass line to internal face of wall of habitable area	8.7m	NO
The width of dual aspect apartments over 15m deep must be 4m or greater to avoid deep narrow apartment layouts	6m or less	YES
All kitchens must not be located more than 8m to the back wall of the kitchen from an external opening	8.7m	NO
8C.5 – Apartment mix and sizes		

A range of apartment sizes and types must be included in the development	An acceptable mix of 1 bedroom to 3 bedroom apartments are proposed.	YES
One bedroom and studio apartments are to have a minimum floor area of 50m ²	50.1m ²	YES
Two bedroom apartments are to have a minimum floor area of 70m ²	70.32m ²	YES
Three bedroom apartments are to have a minimum floor area of 90m ²	100.1m ²	YES
A mix of 1, 2 and 3 bedroom apartments are to be provided on the ground level	1, 2 and 3 bedroom apartments provided on the ground level.	YES
At least one apartments for each ten apartments is to be designed as adaptable housing Class C	10% adaptable apartments provided.	YES
At least 70% of apartments in the development are to be visitable	78% visitable apartments provided.	YES
8C.6 – Room sizes		
Living areas in apartments with two or more bedrooms are to have living areas with a minimum internal plan dimension of 4m	>4m	YES
Living areas in one bedroom apartments are to have a minimum internal plan dimension of 3.5m	>3.5m	YES
Bedrooms in one and two bedroom apartments must have minimum internal plan dimension of 3m (excluding wardrobes)	>3m	YES
In apartments with three or more bedrooms at least two bedrooms are to have minimum internal plan dimension of 3m (excluding wardrobes)	>3m	YES
Built in wardrobes are to be provided to all studio apartments, to all bedrooms in one and two bedroom apartments and to at least two bedrooms in apartments of three or more bedrooms	Built in wardrobes provided as required.	YES
Living areas in apartments with two or more bedrooms are to have living areas with a minimum internal plan	>4m	YES

dimension of 4m		
8C.7 – Building entries		
Buildings must address the street either: with main entrances to lift lobbies directly accessible and visible from the street; or with the path to the building entry readily visible from the street where site configuration is conducive to having a side entry.	YES	YES
Buildings with facades over 18m long must have multiple entries.	All blocks have multiple entries	YES
Building entry must be integrated with building facade design. At street level, the entry is to be articulated with awnings, porticos, recesses or projecting bays for clear identification.	YES	YES
All entry areas must be well lit and designed to avoid any concealment or entrapment areas. All light spill is prohibited.	The entry area does not contain concealment or entrapment areas. Light spill will be minimised by the arrangement of building form.	YES
Lockable mail boxes must be provided close to the street. They must be at 90 degrees to the street and to Australia Post standards and integrated with front fences or building entries.	Mailboxes are suitably located.	YES
8C.8 – Internal common circulation		
The design of internal common circulation space must comply with the provisions in AS1428.1 and AS1428.2 to provide adequate pedestrian mobility and access.	An access report which demonstrates compliance with the standards has been provided.	YES
All common circulation areas including foyers, lift lobbies and stairways must have: i) appropriate levels of lighting with a preference for natural light where possible; ii) short corridor lengths that give clear sight lines; iii) clear signage noting apartment numbers, common areas and general direction finding; iv) natural ventilation; v) low maintenance and robust	Appropriate lighting, sight lines, way finding, ventilation and materials to be available to lift lobbies and foyers.	YES

materials.		
Where artificial lighting is required energy efficient lights are to be used in conjunction with timers or daylight controls.	This issue is addressed by the BASIX certificate.	YES
All single common corridors must: <ul style="list-style-type: none"> - serve a maximum of 8 units - >1.5m wide - >1.8m wide at lift lobbies 	Max 5 apartments 1.5m minimum corridor width 1.8m at lift lobbies	YES
8C.9 – Roof forms and podiums		
Upper storey must be articulated with differentiated roof forms	The upper storeys are sufficiently articulated (level 4 and above) with differentiated roof forms to minimise visual impacts.	YES
Service elements to be integrated into the design of the roof	Sufficiently integrated	YES
Roof design must respond to solar access	The roof design maintains solar access.	YES
8C.10 – Communal open space		
At least 10m ² per dwelling must be provided as communal open space (1440m ²)	1670m ²	YES
A single parcel of communal open space with a minimum area of 80m ² , minimum dimensions of 8m and 2 hours solar access to 50% of the space on 21 June must be provided	Sufficient parcel provided	YES
Shared facilities such as BBQs, shade structures, play equipment and seating are to be provided in the communal open space	BBQ facilities, shade (communal room) and seating provided.	YES
Access for people with a disability must be provided to communal open space	Access provided to all communal open space areas.	YES
8C.11 – Private open space		
Ground floor and podium apartments are to have a terrace or private courtyard with a minimum area of 25m ²	25-35m ² .	YES
All apartments not at the ground floor or podium level are to include private open space with a minimum area (internal dimension) of:: <ul style="list-style-type: none"> - 10m² – 1 bedroom apartment - 12m² – 2 bedroom apartment - 15m² – 3 bedroom or larger apartment 	10m ² 12m ² 15m ²	YES

The primary outdoor open space must have a minimum dimension of 2.4m	2.4m	YES
The primary private open space is to have direct access from the main living areas	Private open spaces are accessed from the main living area.	YES
Private open space for ground and podium level apartments is to be differentiated from common areas by: A change in level Screen planting, such as hedges and low shrubs A fence wall to a maximum height of 1.8m, any solid wall component is to be a maximum height of 1.2m with 30% transparent component above plus gate to the common area	Changes in level, planting and fencing are used to differentiate ground level private open space from common areas. Planter boxes are proposed to a height of 1.2 metres at ground floor level.	YES
8C.12 Building facades		
For building façade street wall controls for mixed use buildings in urban precincts (precinct G4), refer to Volume B Part 1D.3.	The proposal accords with the building setbacks and public domain outcomes of Volume B Part 1D.3 (Refer Part 8A.1 as above).	YES
Built form (1D.4)- Provide active frontages to Fitzsimons Lane and Pacific Highway where ever possible.	YES	YES
Public domain (1D.5)- Provide a new pedestrian accessway linking Fitzsimons Lane and Pacific Highway.	Through site link not provided	NO
The continuous length of a residential building over the podium facing the street or public domain must not exceed 36m.	59 metres Block B	NO
Street, side and rear building facades must be modulated and articulation with wall planes varying in depth by not less than 0.6m. Defined base, middle and top. Expression of varied floor to floor height. Location of openings to reflect the rhythm and expression of uses within the building.	The development is well articulated. Refer to urban design comments.	YES
Buildings must be designed to incorporate solar protection elements, and must be co-ordinated and integrated with façade design.	The building outcome achieves these measures. Refer to urban design comments.	YES

Air conditioning units must not be located on the building façade or within the private open space.	Air conditioning units locations are not nominated however plant rooms are nominated within basement areas.	YES
Balconies that run the full length of the building façade are not permitted.	Balconies are adequately treated aesthetically.	YES
Balconies must not project more than 1.2m from the outermost wall of the building façade.	Balconies are integrated into the building design	YES
Windows to a habitable room are to be situated to encourage opportunities for passive surveillance to the site and on site areas surrounding the building.	Windows to a habitable room are located to provide for passive surveillance to the site and on site areas surrounding the building.	YES
8C.13 – Corner building articulation		
<p>Street corners must be emphasised by accentuating parts of the building façade, through:</p> <ul style="list-style-type: none"> i) changes in height, colour or facade materials; ii) change in building articulation; iii) facade orientation; iv) change in roof expression; v) splayed setbacks or curves; vi) corner entries. <p>Corner buildings are to address both street frontages.</p>	The site is not a corner site, although has dual frontages. The proposal articulates all street frontages. The building has a sense of address from all frontages. Refer to urban design comments.	YES
8C.14 – Ground commercial uses		
Buildings on principle active street frontages must provide facades that address the street and public domain with appropriate façade treatments at street level.	The development is acceptable having regard to street activation, and addresses the street and public domain on all frontages as far as practicable given topographical constraints.	YES
8C.15 – Awnings		
<p>Continuous awning must be provided to the full length of the principal active street frontage.</p> <p>Provide awnings along the supporting active street frontages (including mixed use buildings in R4 zones) wherever practical, especially at key pedestrian entrances.</p>	Awnings are provided at building entries and with retail uses along active frontages.	YES

8C.16 – Colonnades		
<p>All colonnade spaces must be within the property boundary.</p> <p>Colonnades are to have a height/width ratio no less than 1.5:1, a minimum width of 2.4m, and a minimum soffit height of 3.6m.</p>	Colonnades are not proposed as part of the development.	YES
8C.17 – Internal ceiling heights		
<p>The minimum ceiling heights are to be:</p> <p>i) 3.3m for ground floor;</p> <p>ii) 3m for first floor commercial or residential uses;</p> <p>iii) 2.7m for residential use or 3m for commercial uses on all other floors</p>	<p>4.0 metres ground floor</p> <p>2.7 metres residential</p>	<p>YES</p> <p>YES</p>
8C.18 – Visual privacy		
Buildings must be designed to ensure privacy for residents of the development and of the neighbouring site. The use of offset balconies, recessed balconies, vertical fins, solid and semi-transparent balustrades, louvres/screen panels and planter boxes is encouraged.	<p>Privacy for residents of the development and neighbouring sites has been suitably achieved through the use of measures including:</p> <ul style="list-style-type: none"> - recessed balconies - 1.8m high timber screens are between courtyards/balconies - 1.2m high planter boxes to private open spaces - 1.8m high fencing to separate private open spaces from pedestrian through link 	YES
Privacy for ground floor apartments should be achieved by the use of a change in level and/or screen planting.	Changes in level, fencing and landscaping used to achieve privacy for ground floor units.	YES
Continuous transparent balustrades are not permitted to balconies or terraces for the lower 3 storeys.	No continuous transparent balconies across the facades.	YES
Screening between apartments must be integrated with the overall building design.	Screening devices are integrated into the design of the building.	YES

Landscaped screening must be provided to adjoining sites.	Landscaped deep soil planter zones are provided adjacent to the site's eastern and western side boundaries to facilitate suitable screen planting.	YES																					
8C.19 – Acoustic privacy																							
<p>The maximum LAeq (1 hour) noise levels of any development must not exceed the levels as set out in Table 8C.19-1, when measured at the window of a habitable room within a residential occupancy and in any case not more than 5 dB(A) above the background level during the day and evening and not exceeding the background level at night.</p> <table> <tr> <th><i>Time of day</i></th><th><i>Maximum noise level - Windows open</i></th><th><i>Maximum noise level - Windows closed</i></th></tr> <tr> <td><i>Day</i></td><td>55 dB(A)</td><td>45 dB(A)</td></tr> <tr> <td><i>Evening</i></td><td>50 dB(A)</td><td>40 dB(A)</td></tr> <tr> <td><i>Night</i></td><td>45 dB(A)</td><td>35 dB(A)</td></tr> <tr> <td></td><td>bedrooms only</td><td>bedrooms only</td></tr> <tr> <td></td><td>50 dB(A)</td><td>40 dB(A)</td></tr> <tr> <td></td><td>living areas</td><td>living areas</td></tr> </table>	<i>Time of day</i>	<i>Maximum noise level - Windows open</i>	<i>Maximum noise level - Windows closed</i>	<i>Day</i>	55 dB(A)	45 dB(A)	<i>Evening</i>	50 dB(A)	40 dB(A)	<i>Night</i>	45 dB(A)	35 dB(A)		bedrooms only	bedrooms only		50 dB(A)	40 dB(A)		living areas	living areas	An acoustic impact assessment has been provided in support of the proposed development. The development will comply with the expected acoustic privacy requirements.	YES
<i>Time of day</i>	<i>Maximum noise level - Windows open</i>	<i>Maximum noise level - Windows closed</i>																					
<i>Day</i>	55 dB(A)	45 dB(A)																					
<i>Evening</i>	50 dB(A)	40 dB(A)																					
<i>Night</i>	45 dB(A)	35 dB(A)																					
	bedrooms only	bedrooms only																					
	50 dB(A)	40 dB(A)																					
	living areas	living areas																					
8C.20 – Late night trading																							
Development for late night trading premises must be designed to minimise the impacts of noise production on nearby and adjoining premises	No late night trading proposed.	YES																					
8C.21 – Apartment storage																							
<p>Storage space shall be provided at the following minimum volumes:</p> <ul style="list-style-type: none"> - 6m³ for studio and one bedroom apartments - 8m³ for two bedroom units - 10m³ for two bedroom units - 12m³ for units with three or more bedrooms <p>At least 50% of the required storage space must be provided inside the apartment.</p>	Storage provision complies with these requirements through the provision of 178 lockers and internal storage areas.	YES																					
8C.22 – External air clothes drying facilities																							
Each apartment is required to have access to an external air clothes drying area, e.g. a screened balcony,	External clothes drying located in screened locations on balconies	YES																					

a terrace or common area.		
External air clothes drying areas must be screened from public and common open space areas.	All external clothes drying areas are screened from public and common open space areas.	YES

Volume A

3A.1 Land amalgamation

Amalgamation of 870-898 Pacific Highway would result in 860, 854 and 900 Pacific Highway not achieving a minimum site area of 1200m² or a minimum frontage of 24 metres (on 900 Pacific Highway) which is required to facilitate a residential flat building or a mixed use development including a residential flat building use on those sites through the Local Centres LEP. Those sites are therefore isolated.

The above control of the DCP stipulates (in part) the following:

6 Where a development proposal results in an isolated site, as described in 4 above, the applicant must demonstrate that:

- i) Negotiations between the owners of the lots have commenced prior to the lodgement of the development proposal. Where a satisfactory result cannot be achieved the development proposal should include details of the negotiations, demonstrating that a reasonable offer has been made to the owner of the isolated site: and*
- ii) Both the isolated site and the development site can be orderly and economically developed in accordance with the provisions of KLEP (Local Centres) 2012 and this DCP, including*
 - Achieving an appropriate urban form for the location, and*
 - Having an acceptable level of amenity.*

Note: *A reasonable offer, for the purposes of determining the development application and addressing the planning implications of an isolated lot, is to be based on at least one recent independent valuation and may include other reasonable expenses likely to be incurred by the owner of the isolated property in the sale of the property.*

In relation to 3A. 6 i), the applicant has indicated that discussions were held with Real estate agents representing 860 Pacific Highway, however, the purchase price was financially unrealistic and negotiations did not proceed.

The applicant has further provided a letter, dated 24 November 2014, indicating that discussions were held with the property owners of 900 Pacific Highway in April 2009 whereby the owner of that site indicated they were not interested in selling the property. The information has not provided any responses from those affected property owners.

The application has not provided sufficient evidence of negotiations or that reasonable offers including independent valuations were made/undertaken in accordance with the control. The application is therefore unacceptable in this respect.

It is acknowledged that concept plans have been provided for both 900 Pacific Highway and an amalgamated 860-854 Pacific Highway, however, when considering the above clause construction, 6 i) must be fulfilled before 6 ii) can be considered.

8A.1 Building setbacks

The proposed development has a non-compliance with the front setback provision relating to Pacific Highway. The DCP requires that a 4 metres setback be provided to Pacific Highway. The proposal includes a basement which maintains a zero building line setback. The applicant has provided justification in that the basement is below ground does not prohibit the planting of vegetation (as the area is meant to be an active zone to encouraging and around the retail premises) and is not visible from the public domain. The applicant's arguments are accepted.

The proposal has a further non-compliance in that retail shop 3 (at its norther corner) has a setback of 3.8 metres. The non-compliance is considered to be very minor and would not result in any discernible impacts.

8C.1 – Solar access

The non-compliance with solar access provisions has been addressed above under the SEPP 65 and Residential Flat Design Code assessment.

8C.2 – Natural ventilation

The non-compliance with natural ventilation relating to kitchen locations has previously been addressed above under the SEPP 65 and Residential Flat Design Code assessment.

8C.4 – Apartment depth and width

The non-compliances associated with the depth of single aspect apartments being greater than 8 metres and the back of kitchens being greater than 8 metres from a window have been addressed above under the SEPP 65 and Residential Flat Design Code assessment.

8C.12 Building facades

The above mentioned control of the DCP stipulates that building facades are not to be longer than 36 metres. Block B has a façade length above the podium of 58 metres. This issue was raised with the applicant who in turn made amendments. As noted above, Council's Urban Design consultant has commented upon this issue as follows:

"The issue of the length of Block B has been resolved from an urban design perspective. The central portion of Block B has been further recessed to provide more articulation and shadowing, additional material treatments have been incorporated to provide elevational variety, and the expression of the building now reads as four clear vertical bays of projecting balconies rather than a single continuous wall. This aspect is considered acceptable."

Volume B

The site is within the Gordon Centre Urban Precinct. The relevant provisions of Volume B Part 1D Gordon Local Centre are addressed within the mixed use development compliance table above as many aspects the development controls overlap with the exception of the following:

1D.2 Local Centre Community Infrastructure

The proposed development is to be designed to support and compliment the provision of Key Community Infrastructure. Specifically, to facilitate the reconstruction of Fitzsimons lane to be 15 metres wide and include footpaths on both sides, as well as on street parking. The applicant has nominated a land dedication of approximately 450m² to achieve the 15 metres requirement for the lane widening on the plans and has all proposed structures (except required driveway crossover) outside of this area. The applicant has further requested that Council enter into a voluntary planning agreement (VPA) to facilitate the land dedication. This process is on-going.

1D.5 Local Centre Public Domain and Pedestrian Access

The above mentioned control of the DCP requires a new pedestrian access way through the site. The applicant has not provided the through site link on the basis that a through site link was provided with the recently approved development at 904-914 Pacific Highway and a second link exists at 924 Pacific Highway. The applicant further argues that Merriwa Street already provides adequate pedestrian access and permeable around the local centre to Pacific Highway from Fitzsimmons Lane. The applicant's arguments are accepted.

Part 2 – Site design for water management

Council's Development Engineer is satisfied that the proposed development has been designed to control stormwater run-off as per the requirements of the DCP, subject to conditions.

Part 3 – Land contamination

A site investigation report has been submitted with the application and the site is deemed suitable for the proposed development subject to remediation. The proposal is satisfactory having regard to land contamination as discussed above in relation to the provisions of SEPP 55.

Volume C

Part 1 – Site design

This part relates to earthworks and landscape design.

The proposed development incorporates earthworks, particularly those needed to accommodate the basement car parking. These works are effectively integrated into the natural topography of the site and are consistent with the requirements of this part.

Additionally, the landscaping works of the proposed development will complement the

character of the surrounding area. The plantings are sited in a manner that will achieve amenity for the users of the site and neighbouring properties.

Part 2 – Access and parking

Access and parking aspects of the proposed development are acceptable as discussed above by Council's Development Engineer.

Part 3 – Building Design and Sustainability

The proposal satisfies the relevant provisions of building design and sustainability. The following considerations are noted in particular:

- 3.4 – Waste Management

A waste management plan prepared in accordance with the DCP has been submitted and is acceptable.

- Part 3.5 and 3.6 – Acoustic privacy and visual privacy

The applicant has submitted an acceptable acoustic impact report, detailing the measures to be implemented to protect resident amenity from noise sources both on and off the site. Council's Environmental Health Officer has no objection to the development having regard to acoustic privacy, subject to conditions that would require compliance with the recommendations in the submitted report.

The visual privacy impacts of the development have been assessed having consideration of the controls set out under SEPP65 and LEP (Local Centres) 2012 and the underlying DCP. Any likely impacts are acceptable in this regard.

- Part 3.7 – Materials, finishes and colours

The applicant has submitted a materials and finishes board. The proposed materials and finishes to be used are acceptable.

Part 4 – Water management

Council's Development Engineer is satisfied that the proposed development has been designed to control stormwater run-off as per the requirements of the DCP, subject to conditions.

Part 5 – Notification

The application has been notified in accordance with the requirements of the DCP. The submissions received are addressed above.

Section 94 Development Contributions Plan 2010

The development would attract a section 94 contribution should it be approved.

LIKELY IMPACTS

The likely impacts of the development have been considered within this report and are deemed to be unacceptable based on resulting isolated sites.

SUITABILITY OF THE SITE

The site is considered to be suitable for a mixed use development however, the application has not adequately demonstrated that the process required for addressing isolated sites has been undertaken.

ANY SUBMISSIONS

All submissions received have been considered in the assessment of this application.

PUBLIC INTEREST

The public interest is best served by the consistent application of the requirements of the relevant environmental planning instruments and by Council ensuring that any adverse impacts on the surrounding area are minimised. The proposal has been assessed against the relevant environmental planning instruments and policy provisions and is deemed unsatisfactory in its current form.

The proposed development is not considered to be in the public interest as the development of the site would result in isolated adjoining sites as defined in the DCP.

CONCLUSION

This application has been assessed under the heads of consideration of Section 79C of the Environmental Planning and Assessment Act 1979 and all relevant instruments and policies. The proposal would result in the isolation of adjoining sites and the applicant has not demonstrated that the correct process as required by the DCP has been undertaken.

RECOMMENDATION

THAT the Sydney West Joint Regional Planning Panel, as the consent authority, refuse development consent to DA0180/14, for the demolition of the existing structures and construction of a mixed use development containing 3 buildings, 144 residential apartments, retail space, basement parking and landscaping works, on land at 870-890 Pacific Highway, Gordon, for the following reasons:

1. Site isolation of 860, 854 and 900 Pacific Highway, Gordon

Particulars

(a) The proposed development and amalgamation of 870-890 Pacific Highway would result in 900, 860 and 854 Pacific Highway not achieving a minimum site area of 1200m² and consequently hinder any reasonable redevelopment for residential flat building use or a mixed use including a residential flat building on those sites consistent with the B4 Zoning.

(b) The proposed development and amalgamation of 870-890 Pacific Highway would result in 900 Pacific Highway not achieving a minimum frontage of 24 metres and consequently hinder any reasonable redevelopment for residential flat building use or a mixed use including a residential flat building on that site consistent with the B4 Zoning.

(c) It has not adequately been demonstrated that the process required under 3A.1 "Land Amalgamation" of the DCP relating to the adjoining properties at 860, 854 and 900 has been undertaken. Specifically, there is no evidence that negotiations have taken place or that a reasonable offer including independent valuations were made/undertaken in accordance with the control.

(d) Submissions have been received on behalf of the property owner of 860 Pacific Highway raising concern that no negotiations have taken place in accordance with the 3A.1 of the DCP and that their site would become isolated.

Grant Walsh
Executive Assessment Officer

Richard Kinninmont
Team Leader Development Assessment

Corrie Swanepoel
Manager Development Assessment

Michael Miocic
Director Development and Regulation

Attachments:

1. Location sketch
2. Ku-ring-gai Planning Scheme Zoning Extract
3. Architectural plans
5. Landscape plans
6. Stormwater management plans
7. Basix certificate
8. Clause 4.6 variation submission

**SUPPLEMENTARY EXPERT OPINION
SEPP 65 AMENITY COMPLIANCE
SOLAR ACCESS
PROPOSED MIXED USE MULTI-RESIDENTIAL
REDEVELOPMENT
'ALTO'
870-898 Pacific Highway Gordon
23 November 2014**



Signed,

A handwritten signature in black ink that reads "Steve King".

Steve King

STEVE KING
CONSULTANT
11 Clovelly Road Randwick NSW 2031 Australia
PHONE 0414385485

1.0 PRELIMINARIES AND SUMMARY

1.1 This supplementary opinion is an update of my summary expert opinion report of 5 May 2014, and is to be read in conjunction with that report. The opinions deal with **solar access** compliance with relevant local controls, and with the Residential Flat Design Code (RFDC) as it gives effect to the Amenity provisions of SEPP65, for the proposed **mixed use residential flat building** at 870-898 Pacific Highway Gordon.

1.2 My qualifications and experience are attached at *B.0 Appendix A*.

1.3 **Solar access.** On this site and in the context of the emerging high density development in the precinct, it is reasonable to adopt a 'two-hour standard' as allowed for under the RFDC.

Analysis by use of a full 3D digital model shows that the **proportion of dwellings which achieve projected solar access of minimum 2 hours between 9am and 3pm June 21 is 90 units from a total of 147, being 61.2%, of which the overwhelming majority achieve a minimum of three hours.**

The RFDC *Rules of Thumb* and the relevant DCP both nominate as a minimum 70%. As I discuss in 3.3.1, the situation of the subject site and development is directly comparable to that considered by **Brown, C. in Botany Development Pty Ltd v Council of the City of Botany Bay LEC 10360 of 2013**. The Commissioner confirms that neither the DCP controls nor the RFDC can be regarded as a development standard, and gives guidance to a reasonable shortfall compared to those guidelines where considerable design effort has informed the compliance achieved.

In this instance, the analysis performed for my initial report took account of existing development to the north of the site. Subsequently, Council required potential development to be taken into account. The applicant significantly modified the proposal, including the substantial reduction of the number of dwellings proposed, in order to maintain a comparable solar access compliance level as reported in this supplementary opinion.

Clearly, higher compliance levels could be achieved by the simple expedient of allowing additional height and length for the component of the scheme facing the Pacific Highway, and therefore favourably oriented for solar access.

In my considered opinion, the architects have made a considerable design effort to maximise the solar access potential of an overall site plan and massing which is clearly determined by desirable urban design outcomes. The solar access achieved would appear to be about the natural limit for the site with these constraints.

I conclude that Council may reasonably exercise discretion to vary the Rules of Thumb in determining compliance on this site.

2.0 REVISED DEVELOPMENT APPLICATION

The proposal is for a mixed use residential flat development on an amalgamated site, consisting of 4/6 storeys of apartments over common car parking. I note that the total number of units in the revised application is significantly lower than originally proposed. I have been advised that the main changes are as follows:

- Revised footprint and unit layout to Building A
- Increased setback of Building A to northern boundary
- Reduced height and change of mix to Buildings A and B
- Increased height and change of mix to Building C
- Where applicable, apartments orientated away from the view and to the north for solar access
- Additional retail/commercial space to ground floor level to Pacific Highway
- Retention of trees T4 and T9 and relocation of the carpark driveway
- Modification of basement carpark layouts and numbers

3.0 SOLAR ACCESS DISCUSSION AND ANALYSIS

3.1 Methodology

3.1.1 I have been provided with revised architectural plans, and with a new digital 'block model' of the proposed revised development.

3.1.2 I have repeated the method of analysis undertaken for the original development application. I note that given the definition of complying solar access in the relevant Kuring gai DCP provides for living area glazing or adjacent private open space to receive the mandated periods of direct sun, a block model-based analysis gives reasonable confidence of compliance.

A key additional feature of the new digital model is the inclusion in block model form of a reasonable interpretation of an otherwise complying development to the north adjacent to the subject site. The impact of this potential future development is significant overshadowing in the afternoons, reducing potential solar access for a significant number of dwellings in the subject development.

3.1.3 My detailed re-analysis was again performed primarily by using projections known as 'View from the Sun'. The block model of the revised proposal is illustrated in Figure 1.

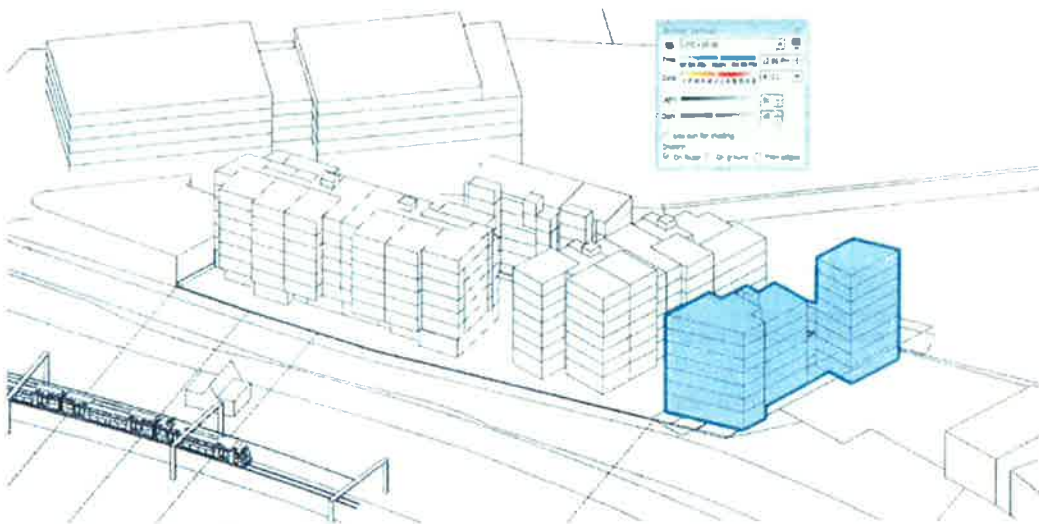


Figure 1: View from the sun 12pm June 21

Note that the model incorporates relevant adjacent development

The hypothetical otherwise complying envelope of a development to the north-west of the site is shown shaded in blue

Referring to Figure 1, I note in particular the overshadowing of the lower three floors of Building A. It is self-evident that as the afternoon progresses that overshadowing will become worse.

3.2 Projected solar access

Table 1 summarises the projected level of compliance for the revised proposal. Table 2 in Appendix B reproduces for reference the half-hourly views from the sun on June 21.

Table 1: Summary of solar access compliance

	Block A		Block B		Block C		TOTAL	
Number of units	54		72		15		147	
Units which achieve 3 hours or more sunlight to Living or POS 9am – 3pm	30	55.6%	52	72.2%	3	14.3%	85	57.8%
Units which achieve 2 hours or more sunlight to Living or POS 9am – 3pm	5	9.3%					5	3.4%
Total units with minimum 2 hours direct winter sun	35		52		3		90	61.2%

The RFDC *Rules of Thumb* require a minimum of 70%. The development does not achieve the proportion recommended in the RFDC and nominated in turn in the DCP.

3.3 Solar access: Discussion

I repeat here for convenience, the relevant factors to be taken into account in determining compliance for solar access.

3.3.1 The situation of the subject site and development is directly comparable to that recently considered by Brown, C. in *Botany Development Pty Ltd v Council of the City of Botany Bay LEC 10360 of 2013*. I quote the relevant paragraphs of that judgement:

- 84 On the issue of solar access, I agree with the conclusions of Mr King. As a starting point, I accept that the site is located in a "dense urban area(s)". While the RFDC does not define this term, I am satisfied that an area that contemplates a maximum height of 22m and an FSR of 1.65:1 can be regarded as a "dense urban area(s)". On this basis, the appropriate requirement in the Rules of Thumb is at least 70% of apartments should receive a minimum of 2 hours direct sunlight between 9 am and 3 pm in mid winter.
- 85 The proposal provides 64% and while this does not satisfy the 70% requirement, and while it is not optimal, it is acceptable in the circumstances. The site has a long axis in an east—west direction and consequently a long south facing boundary to Bay Street. The site also has a 6 storey building near its northern boundary (9-19 Myrtle Street) that could compromise solar access to the northern aspect of any design however, in this case, I accept that the design is well considered through the location of the building away from the northern boundary so that solar access is maximised to its northern elevation.
- 86 I do not accept that the RFDC should be read as a development standard or a requirement that must be complied with. In the second dot point, the Rules of Thumb contemplate variations to the requirements. Also, the definition in the RFDC for of Thumb supports the application of a flexible approach where it states:
- rules of thumb recommend minimum standards as a guide for local decision making. Minimum standards may vary depending on local context issues and/or if development applicants are able to demonstrate that they have addressed the better design practice guidelines and achieved the stated objectives.
- 87 In this case, I am satisfied that the minimum 70% standard can be varied given the relatively small variation (10 units out of 158 units excluding any benefit from the deletion of 4 units), the sunlight available between 8 am and 4 pm, the orientation of the site and the design that seeks to maximise solar access to the northern face of the building.

The utility of the judgement is that it confirms that neither the DCP controls nor the RFDC can be regarded as a development standard, and gives guidance to a reasonable shortfall compared to those guidelines where reasonable design effort has informed the compliance achieved.

In the case of the subject site, the shortfall from a nominal 70% is 13 units out of 147, being almost exactly of the order nominated by Commissioner Brown as acceptable under the comparable circumstances of that case.

I note that the compliance reported fully takes into account the likely future overshadowing by the adjacent development on the north-west boundary, and the overshadowing of all dwellings in Block C (other than the three top floor apartments that can achieve solar access by way of skylights which are not overshadowed).

3.3.2 I remain of the considered opinion that Council may and should exercise discretion to vary the *Rules of Thumb* in determining compliance on this site. The achieved solar access is actually high compared to what may be termed the 'solar access opportunity', and it is difficult to contemplate how the applicant could increase the proportion of dwellings with longer solar access.

7.0 CONCLUSIONS

7.1 Solar access

7.1.1 On this site and in the context of the emerging high density development in the precinct, it is reasonable to adopt a 'two-hour standard' as allowed for under the RFDC. **The proportion of dwellings which achieve projected solar access of minimum 2 hours between 9am and 3pm June 21 is 90 units from a total of 147, being 61.2%, of which the overwhelming majority achieve a minimum of three hours.**

The RFDC *Rules of Thumb* and the relevant DCP both nominate as a minimum 70%.

7.1.2 The compliance reported fully takes into account the projected future overshadowing by the adjacent development on the north-west boundary, and the overshadowing of almost all dwellings in Block C.

As I discuss in 3.3.1, the situation of the subject site and development is directly comparable to that considered by Brown, C. in *Botany Development Pty Ltd v Council of the City of Botany Bay LEC 10360 of 2013*. In the case of the subject site, the shortfall from a nominal 70% is 13 units out of 147, being almost exactly of the order nominated by Commissioner Brown as acceptable under the comparable circumstances of that case.

Consistent with the principles set out by Brown, C. in that determination, in my view Council may reasonably exercise discretion to vary the proportion of dwellings nominated in the RFDC Rules of Thumb in relation to solar access compliance.

In my considered opinion, on this site solar access should not be determinative in the consideration of the development application.

A.0 APPENDIX: CREDENTIALS

I have been teaching architectural design, thermal comfort and building services at the Universities of Sydney, Canberra and New South Wales since 1971. From 1992, I was a Research Project Leader in SOLARCH, the National Solar Architecture Research Unit at the University of NSW. Until its disestablishment in December 2006 I was the Associate Director, Centre for Sustainable Built Environments (SOLARCH), UNSW.

My research and consultancy includes work in solar access, energy simulation and assessment for houses and multi-dwelling developments. I am the principal author of *SITE PLANNING IN AUSTRALIA: Strategies for energy efficient residential planning*, published by AGPS, and of the BDP Environment Design Guides on the same topic. Through NEERG Seminars, I conduct training in solar access and overshadowing assessment for Local Councils. I have delivered professional development courses on topics relating to energy efficient design both in Australia and internationally.

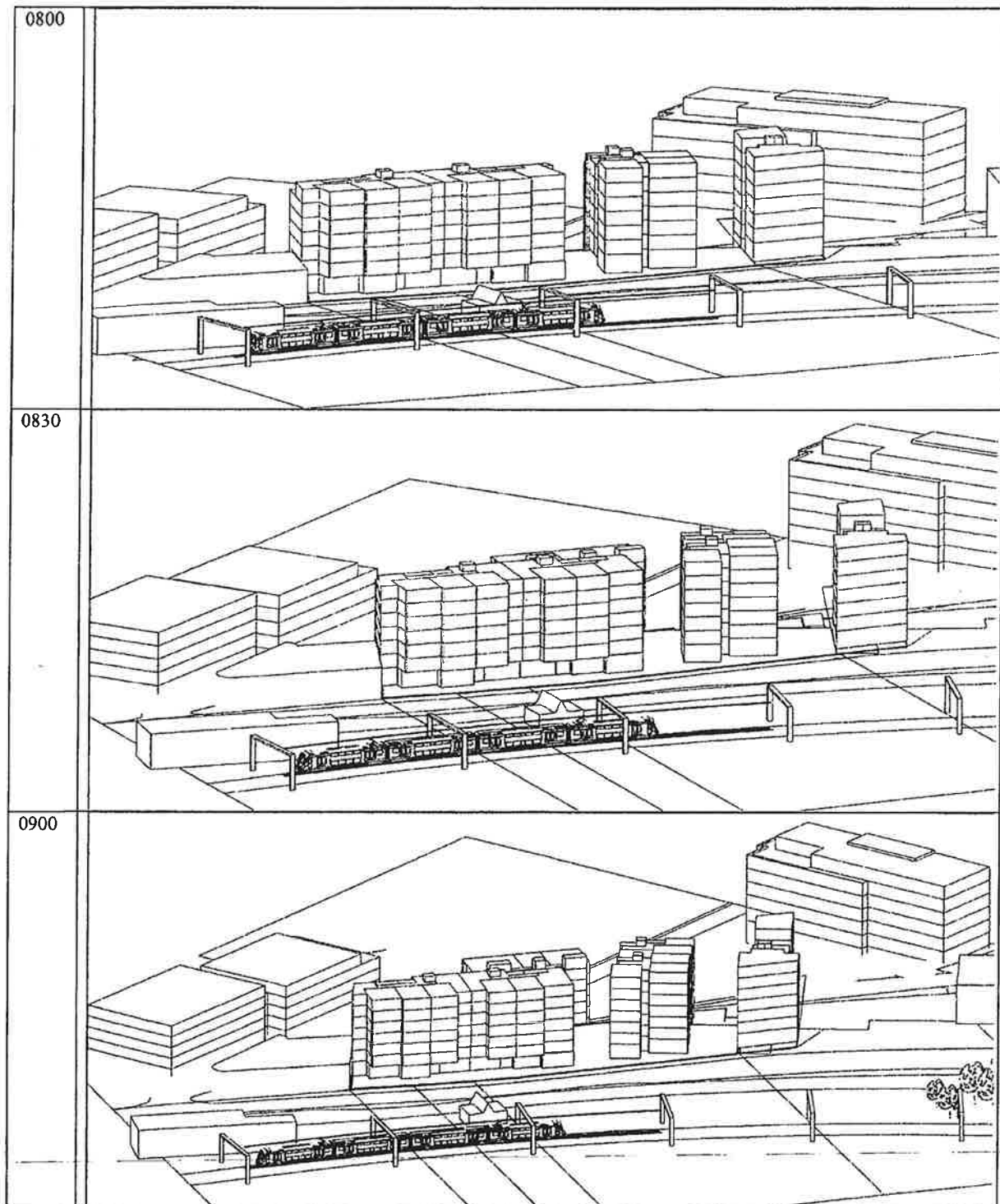
I teach the wind and ventilation components of environmental control in the undergraduate course in architecture at UNSW, and am the author of internationally referenced, web accessed coursework materials on the subject. I have supervised PhD research specifically on the problem of single sided ventilation of multi-storey apartments.

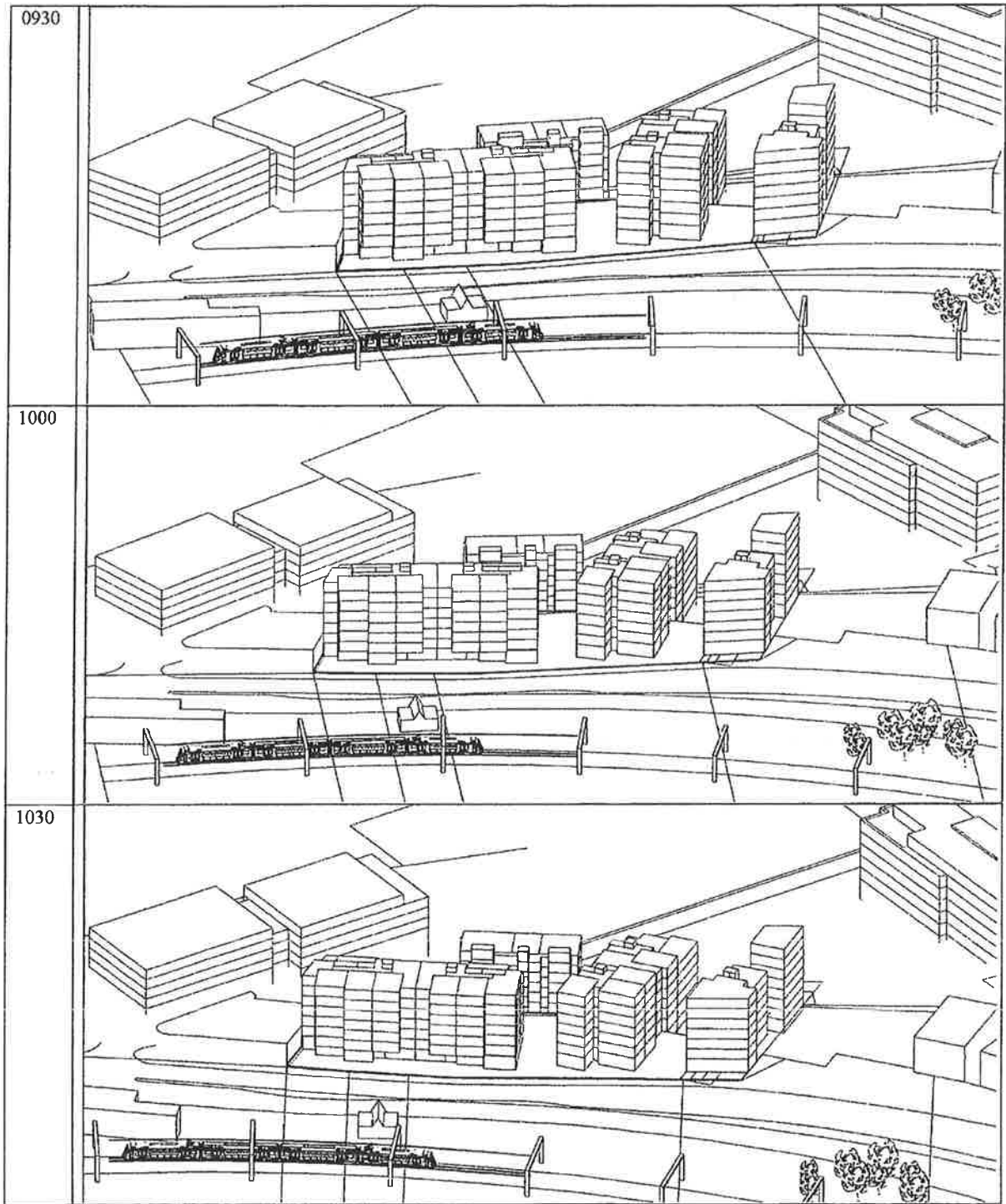
Of particular relevance, I have delivered the key papers in the general area of assessment of *ventilation and solar access performance and compliance* at the NEERG Seminars and other professional development settings. Most Recently, Senior Commissioner Moore cited my assistance in reframing of the Land and Environment Court Planning Principle related to solar access (formerly known as the Parsonage Principle) in *The Benevolent Society v Waverley Council [2010] NSWLEC 1082*.

I practised as a Registered Architect 1971 to 2014 and maintain a specialist consultancy advising in relation to sustainability and climate responsive architecture. I regularly assist the Land and Environment Court as an expert witness in related matters.

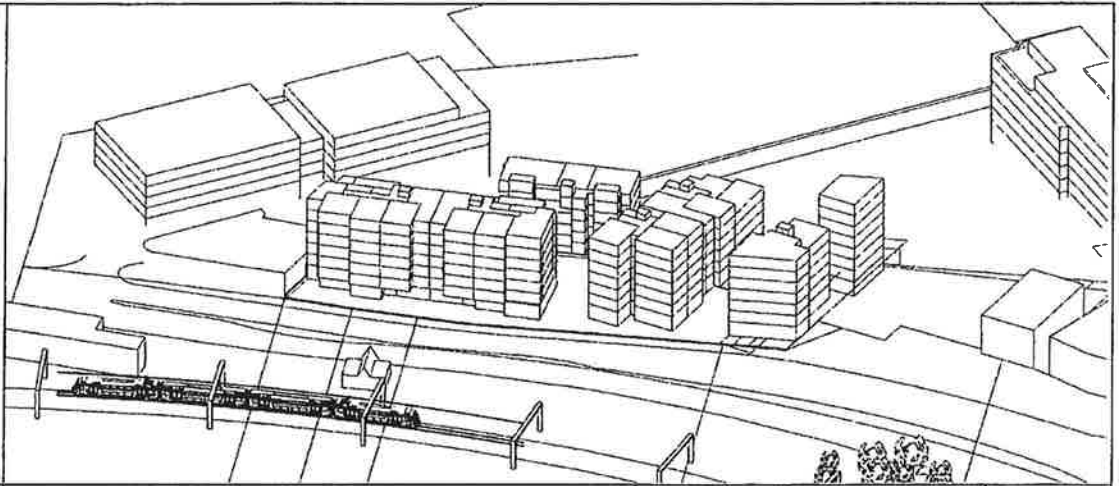
B.0 APPENDIX: VIEWS FROM THE SUN

The attached table reproduces for reference in reduced form the half-hourly views of solar access projections for June 21. The projections were prepared by me from a 3D digital model in Trimble SketchUp v8.

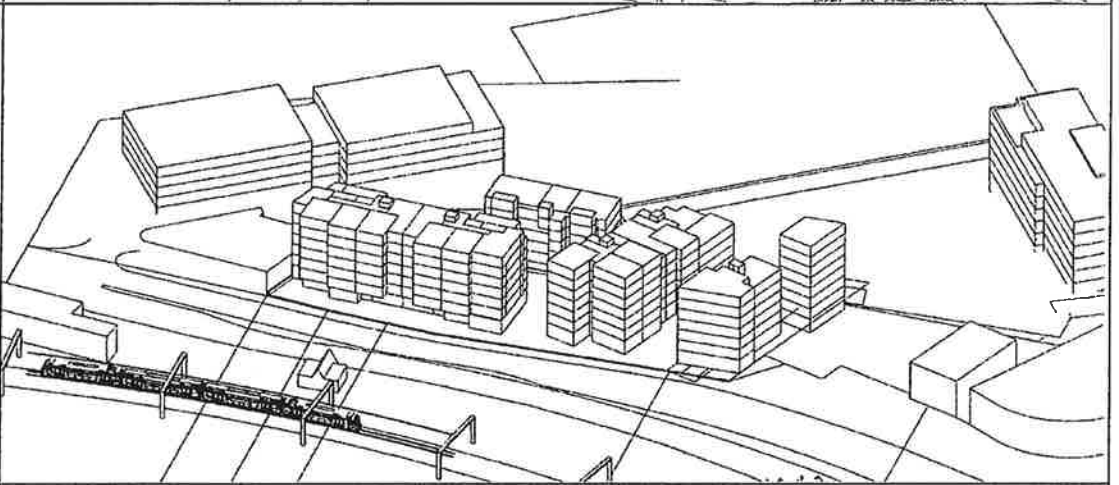




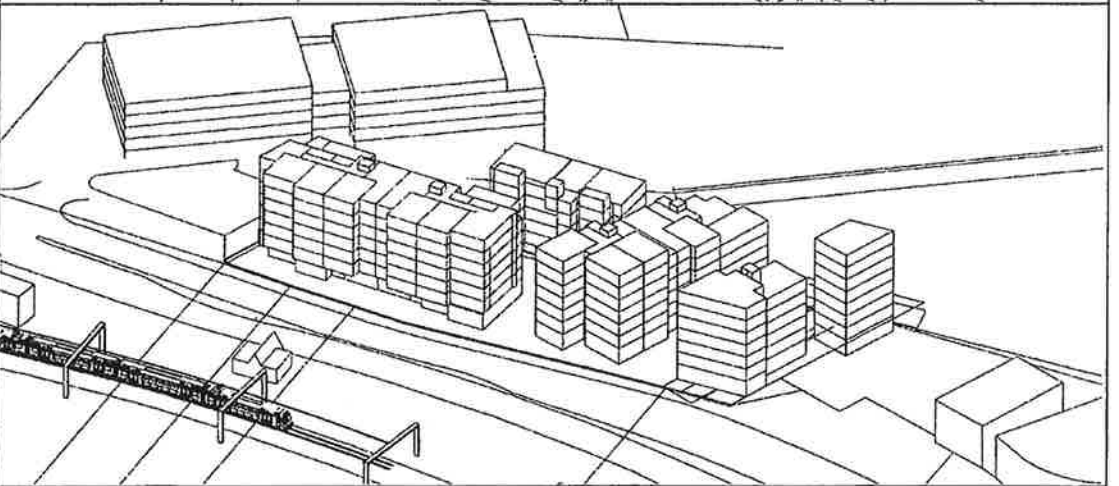
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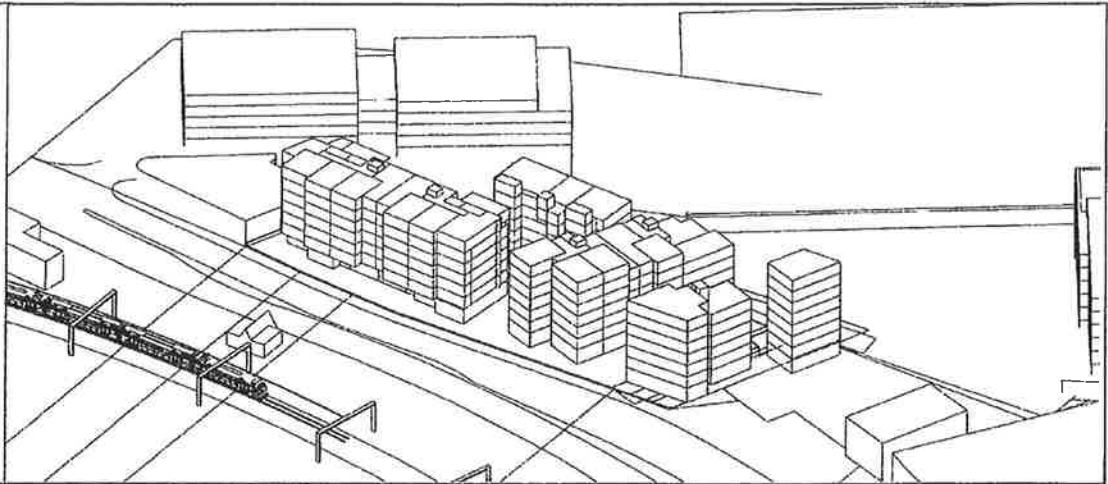
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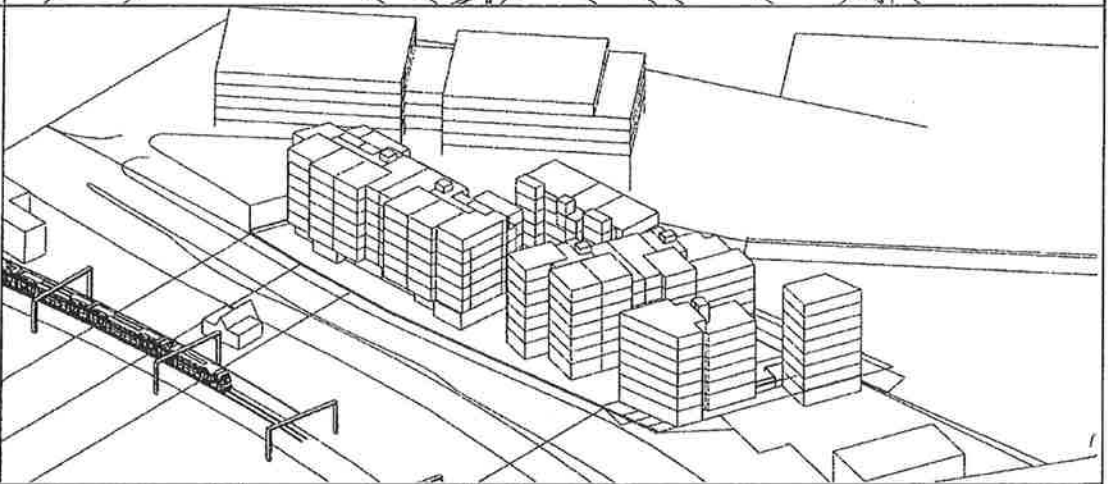
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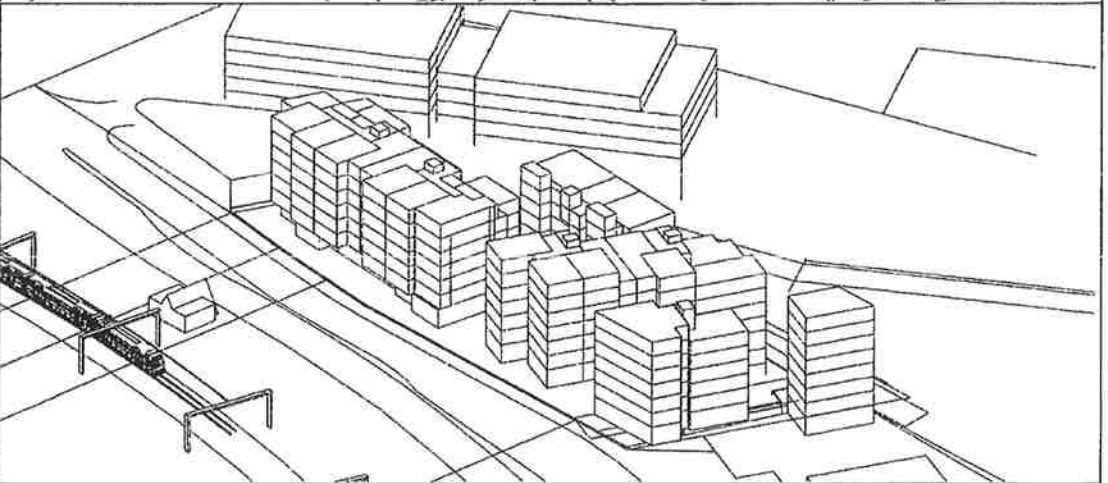
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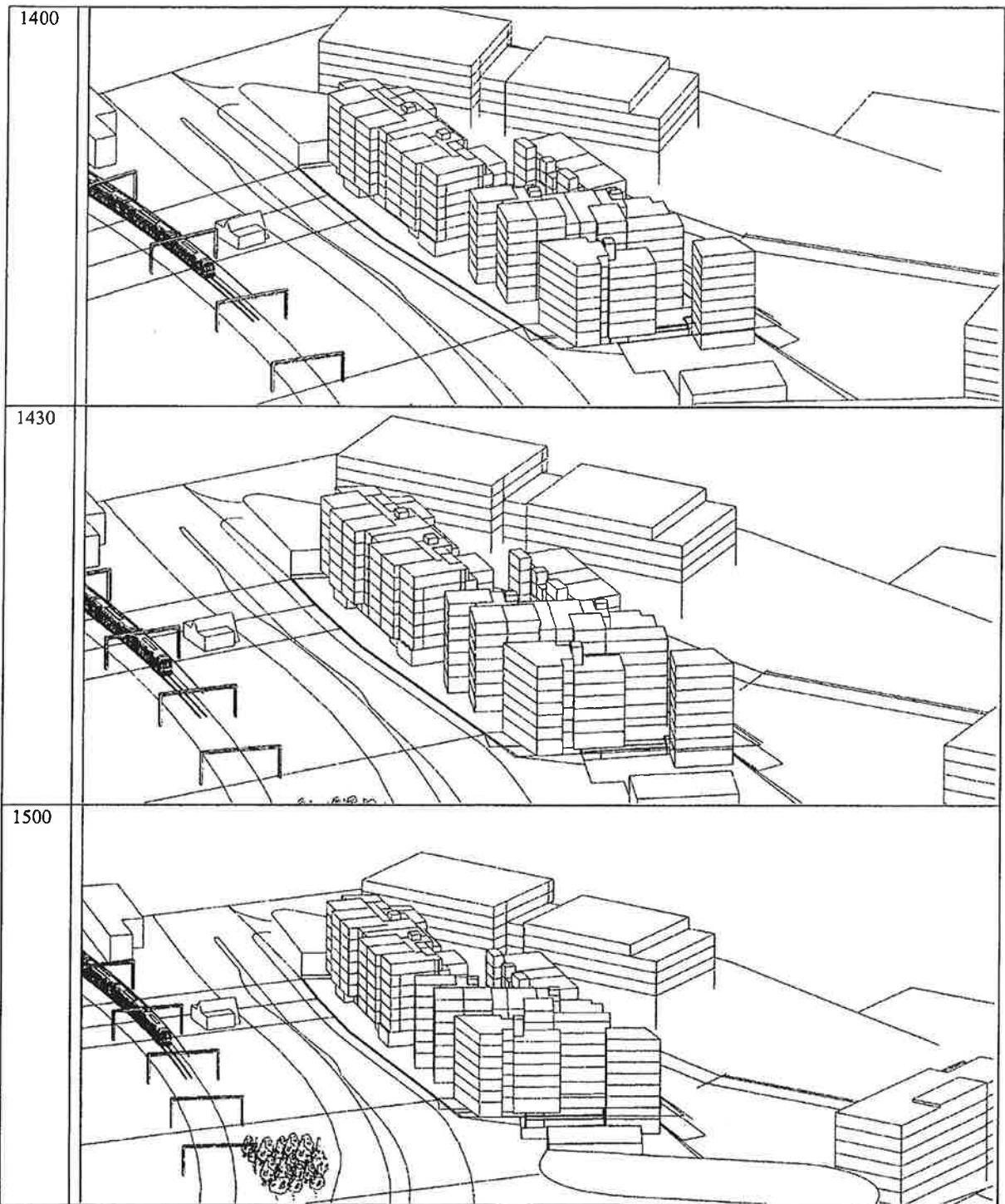


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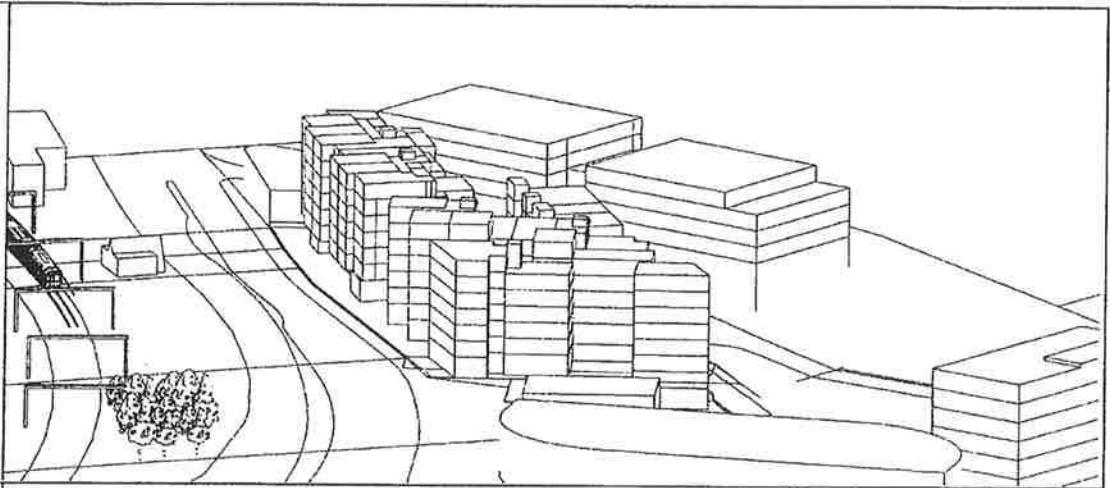


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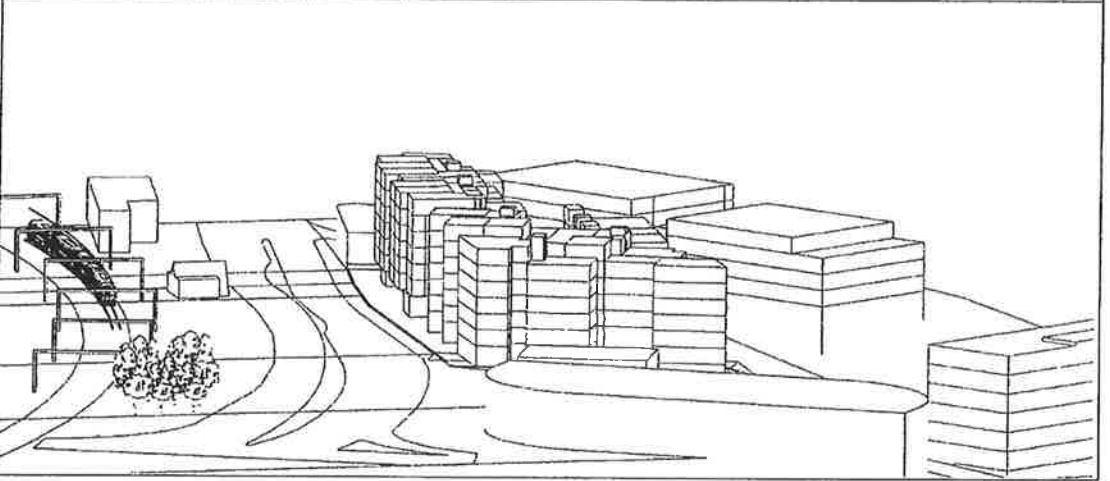




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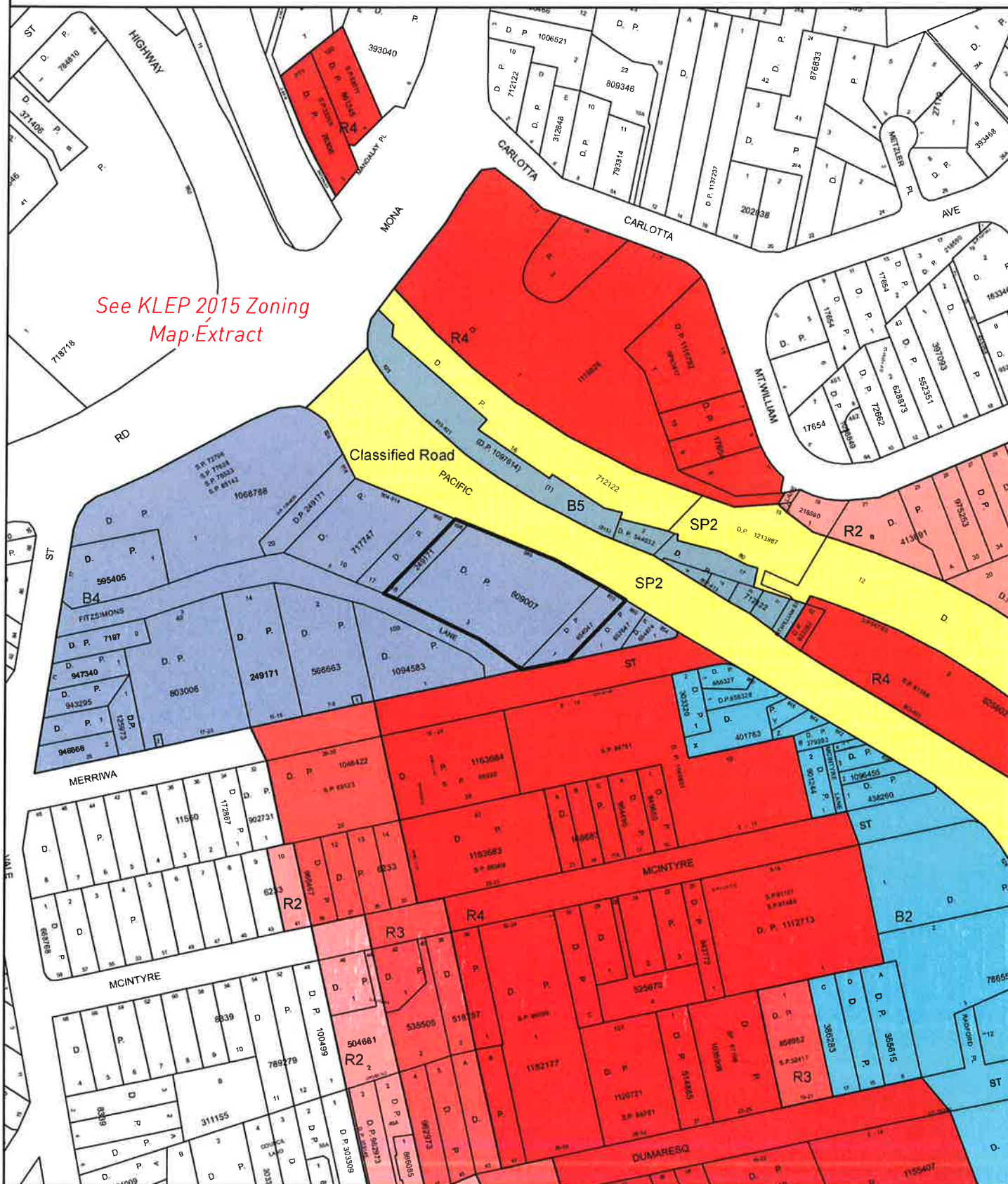
1600



Ku-ring-gai LEP 2012 Local Centres Zoning Extract

870 - 898 Pacific Highway, Gordon (DA0180/14)

See KLEP 2015 Zoning
Map Extract




ZONES

B2 LOCAL CENTRE	R2 LOW DENSITY RESIDENTIAL	RE1 PUBLIC RECREATION
B4 MIXED USE	R3 MEDIUM DENSITY RESIDENTIAL	SP1 SPECIAL ACTIVITIES
B5 BUSINESS DEVELOPMENT	R4 HIGH DENSITY RESIDENTIAL	SP2 INFRASTRUCTURE
E2 ENVIRONMENTAL CONSERVATION		

NORTH

Scale :
1:3000

Date :
18/11/2015



Ku-ring-gai
Council



RYAN PLANNING

SUPPLEMENTARY STATEMENT of ENVIRONMENTAL EFFECTS

PROPOSED MIXED USE DEVELOPMENT

870 - 898 PACIFIC HIGHWAY, GORDON

Prepared for the ALTO GROUP

[December 2014]



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1 Overview

1.1 Introduction

This amended Statement of Environmental Effects (**SEE**) has been prepared in response to Council's preliminary assessment of DA0180/14 and issues raised in their letter dated 2 September 2014. Following receipt of the letter, a meeting was held on 8 October 2014 to discuss the matters raised.

Whilst many of the issues raised were DCP compliance matters, there were three major issues that required considerable attention and effort to resolve. These were:

1. To ensure that any breach to the building height control (i.e. 26.5m) does not result in adverse impacts on adjoining properties – and if Council is to accept the interpolated ground line as the means of determining height, buildings should fall within that height plane;
2. Additional efforts are required to activate the ground floor levels to Pacific Highway and Fitzsimons Lane; and
3. The two Sydney Blue Gums (T4 and T9) located in the southern corner of the site are to be retained.

Detailed in the table below is a summary of the major components of the original proposal and that which is now submitted as a revised scheme.

Table 1: Comparative Information of original DA to revised DA

	Original Proposal	Revised Proposal
Total no. of units	170	147
No. 1 bedroom units	93	80
No. 2 bedroom units	75	58
No. 3 bedroom units	2	9
FSR	2.28:1	2.136:1
GFA	13,582m ²	12,960m ²
Retail space	263m ² to Fitzsimons Lane	531m ² to Pacific Highway & Fitzsimons Lane
Building Height	Not all buildings complied with 26.5m height control	All buildings comply with 26.5m controls – minor breach with lift over runs
Vehicular access	Merriwa Street	Fitzsimons Lane

1.2 Supporting Documentation

This revised Statement of Environmental Effects has been prepared in conjunction with amended architectural drawings prepared by Nettleton Tribe Architects and supported by the following amended specialist consultant reports:

- Architectural Drawings prepared by Nettleton Tribe Architects
- Solar Access and Cross Ventilation advice prepared by Steve King
- Traffic and Parking Report prepared by Colston Budd Hunt & Lafes
- Stormwater and Drainage prepared by Warren Smith & Partners
- Acoustic Report prepared by PKA Acoustic Consulting
- Access Review Report prepared by Morris Golding Accessibility Solutions
- Arboricultural Impact Report prepared by Landscape Matrix Pty Ltd
- Basix Assessment prepared by Eco Certificates
- Landscaping by SiteDesign+Studios
- Detailed Site Investigation Report (Contamination/Geotechnical) prepared by SMEC Testing Services

2 Revised Architectural Scheme

The amended design now proposes the construction of a mixed use development comprising three residential flat buildings (A, B and C) with heights ranging from 7 storeys fronting Pacific Highway and 8 storeys fronting Fitzsimons Lane with:

- A total of 147 apartments (70 x 1 bed; 10 x 1 bed + study; 58 x 2 bed and 9 x 3 bed) with three basement levels of car parking totalling 213 car spaces;
- A total residential GFA of 12,959.7m² (including retail space of 531m² to both Pacific Highway and Fitzsimons lane);
- Floor space ratio of 2:136:1
- Roof gardens now to be created on all three buildings comprising Building A – 217m² on level 5 and 278 m² on level 6; Building B – 216 m² on level 6 and Building C – 381m² on level 5;
- Vehicular access off Fitzsimons Lane in lieu of Merriwa Street;
- A revised footprint and unit layout to Building A;
- Increased setback of Building A to northern boundary to allow for the future redevelopment of the neighbouring property;
- Reduced height and change of unit mix to Buildings A and B;
- Increased height and change of unit mix to Building C;
- Apartments are now generally orientated away from the view to the west and to the north for as a means of improving solar access;
- Additional retail/commercial floor space has now been added to the ground floor level fronting Pacific Highway an increase from 263m² fronting Fitzsimons lane to 531m² fronting both Fitzsimons Lane and Pacific Highway; and
- The retention of two Sydney Blue Gums (T4 and T9) in the southern corner of the site.

The proposed 147 units represents a 13.5% reduction (23 units) on the original 170 units originally proposed. Refer to Table 2 for a breakup of unit types.

The unit mix to Building A and B has been modified and the overall height of both buildings has been reduced. To compensate for a reduction in unit numbers in Buildings A and B, additional units and height have been added to Building C.

Table 2: Unit Types

	Building A	Building B	Building C	Total
1 bedroom	22	41	7	70
1 bedroom & study	6	4	0	10
2 bedroom	26	25	7	58
3 bedroom	0	2	7	90
Total	54	72	21	147

2.1 Height of Building

Clause 4.3(2) of KLEP (TC) 2012 stipulates that the height of buildings is not to exceed the maximum height identified on the Height of Building Map, which is 26.5m as measured in accordance with 'building height'.

'Building height (or height of building)' means the vertical distance between ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

'Ground level (existing)' means the existing level of a site at any point.

As submitted in the original Statement of Environmental Effects and discussed at the meeting with Council on 8 October 2014, it is our view that the application of existing ground level as defined in KLEP (TC) 2012 is too onerous an interpretation for the site considering the topographical constraints and excess slope. Adopting existing ground level as a means of interpreting building height creates a distorted ground plane, which we submit is unreasonable for reasons that will be discussed in the following Clause 4.6 submission.

Adopting interpolated ground line is considered to be a more practicable measure, which takes into account the various changes in level and cross fall. On this basis, all three buildings now comply with the 26.5m height control, with the exception of lift over runs to Buildings A and B, which are located in the middle of each building.

2.1.1 Clause 4.6 – Exceptions to Development Standards – HEIGHT

This submission contends that strict compliance with the maximum building height limit of 26.5m is unreasonable and unnecessary on the grounds that the variation being sought can be adequately justified under the provisions of Clause 4.6. Architectural drawings and shadow diagrams prepared by Nettleton Tribe Architects have been used to explain and support this variation submission.

As discussed in Section 2.1, the deemed non-compliance with the 26.5m height standard is worsened from the application of existing ground level as defined in KLEP (TC) 2012. The basis of this submission is that the height standard fails to recognise sites that are burdened by severe slope or that have been previously modified, or in the subject case, extensively excavated. Consequently, this results in dramatic changes in level that have significantly changed the natural ground levels of the site thereby producing complex height planes.

Topographically, the site poses a number of unique challenges – the most significant being that the land has a two directional cross fall of approximately 12.0 metres from Pacific Highway down to Fitzsimons Lane and 5.0 metres from its north western boundary to the south eastern boundary.

Given the significant site cross falls and an existing heavily excavated basement, it is our view that a more reasonable approach is to use interpolated ground level in lieu of the existing ground level as the height control. To use existing ground level is too onerous an interpretation and creates a distorted ground plane which in turn results in a 3-D building height plane that adversely impacts the development potential of the site.

A more reasonable interpretation of ground level for sites like 870-898 Pacific Highway with deep excavations is to establish the likely 'natural' fall of the site prior to excavation by joining existing levels at the boundary on the high side (Pacific Highway) with existing levels at the boundary on the low side (Fitzsimons Lane). Effectively, this creates a more uniform and natural sloping ground plane from which maximum building height can be determined in accordance with what we believe is the intention of the Town Centre LEP.

As demonstrated in Figure 1, the maximum building heights of Building A and B both comply with the maximum 26.5m across the entire site. However, there are some minor breaches to this, namely some of the lift over runs, which are all located in the middle of each building. This is best depicted in Figure 3 and 4.



Figure 1: Pacific Highway Street Elevation – both Buildings A and B comply with



Figure 2: Fitzsimons Lane street elevation best describes the topographical constraints and significant cross fall.

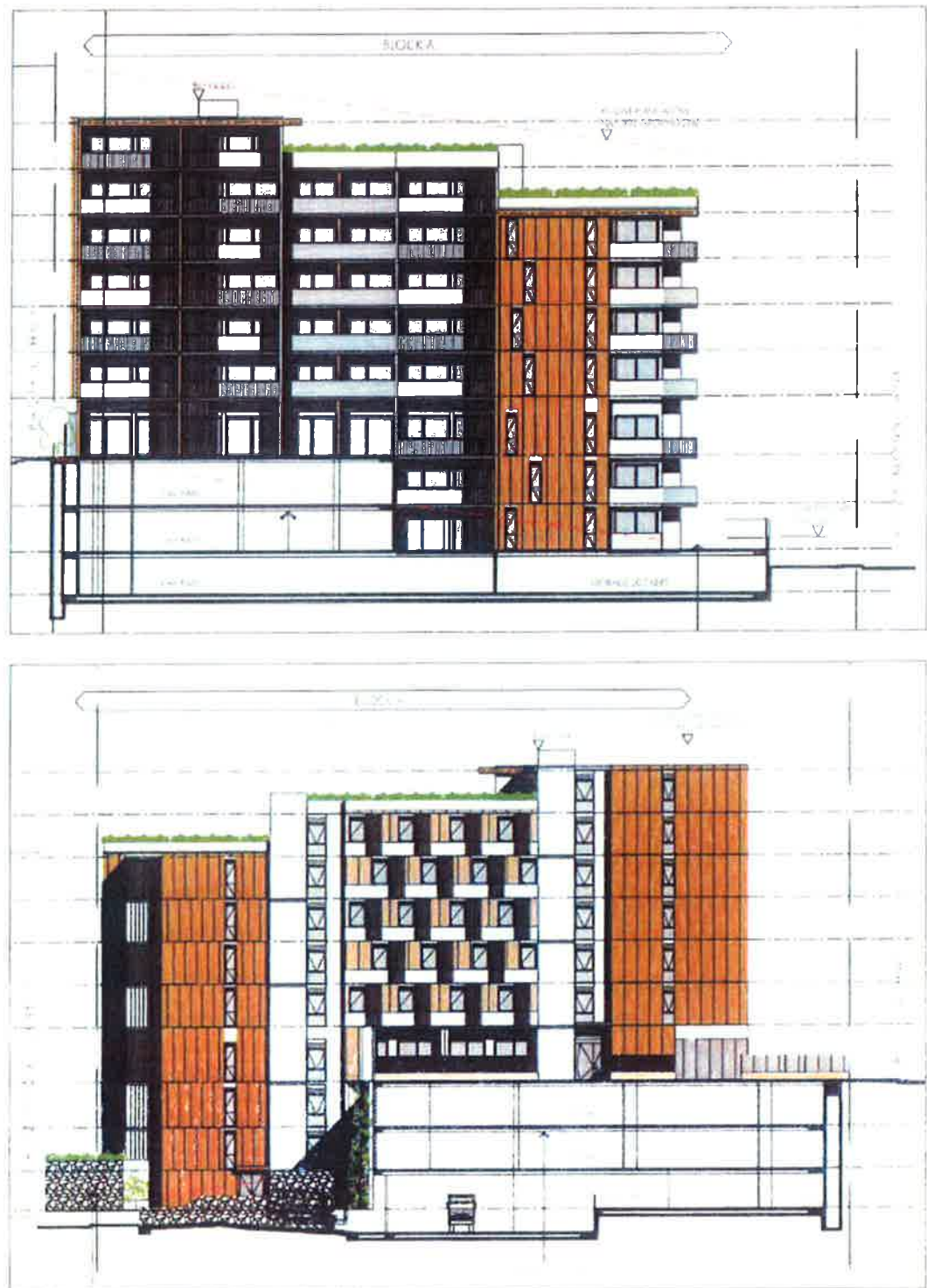


Figure 3: Cross sectional elevations of Building A from Pacific Highway to Fitzsimons Lane

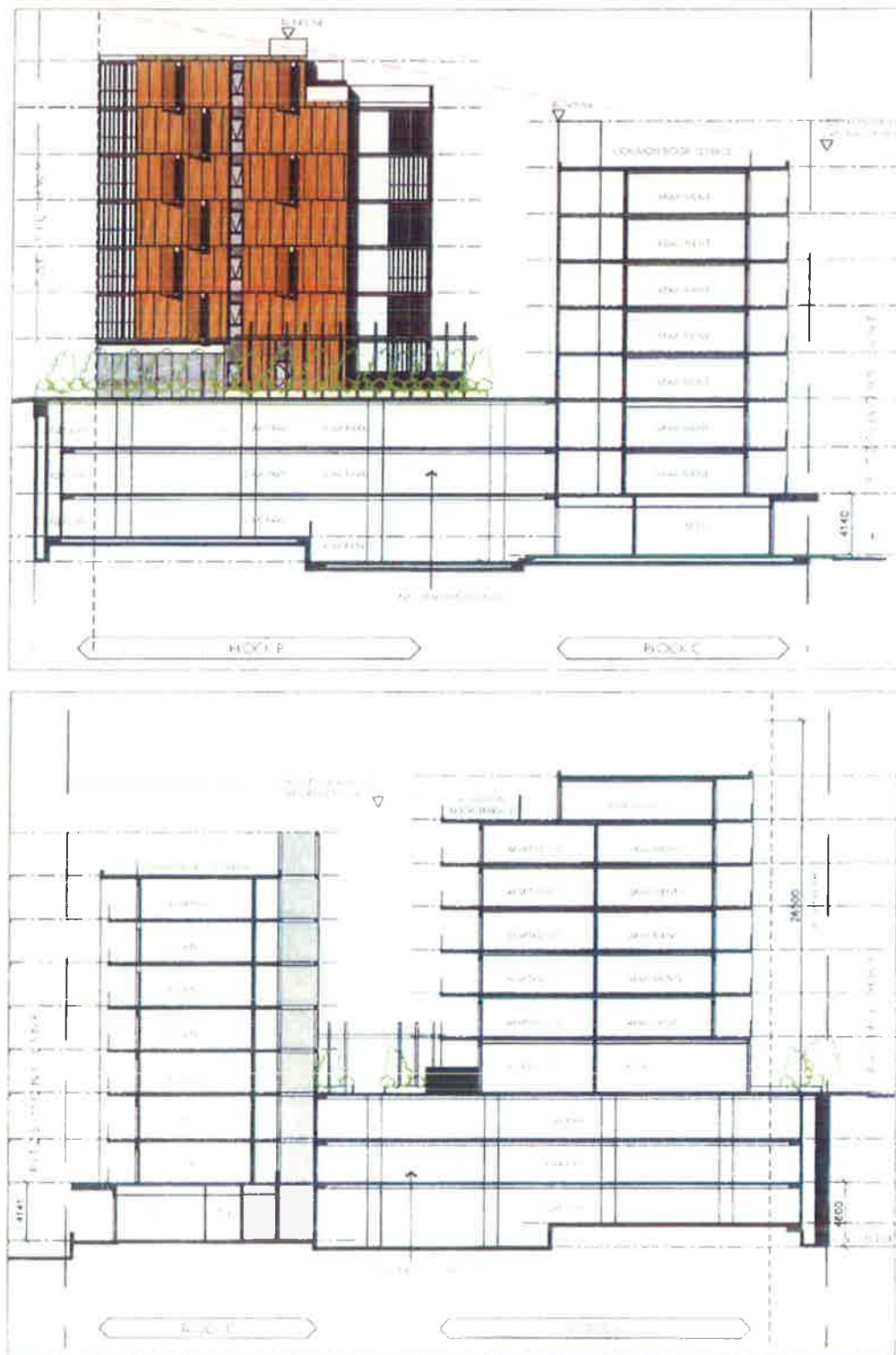


Figure 4: Cross sectional elevations of Building B and C from Pacific Highway to Fitzsimons Lane

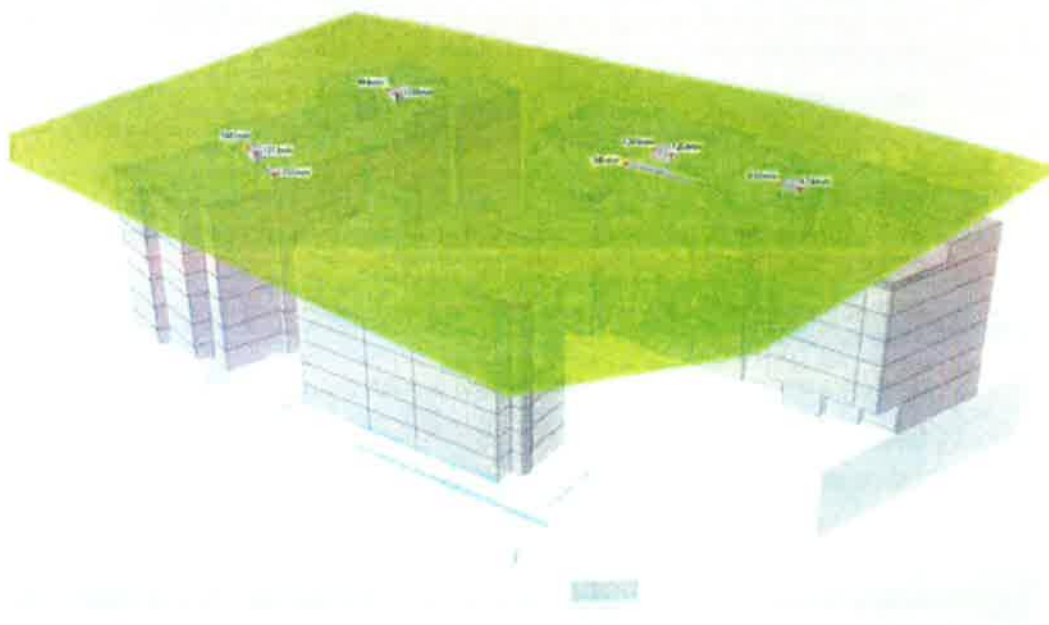


Figure 5: 3D model demonstrating minor breaches to 26.5m height control of lift over runs –all of which are located in the middle of the site and do not create any over shadowing of neighbouring properties.

JUSTIFICATION

The following submission addresses the relevant subclauses under Clause 4.6 of KLEP (TC) 2012.

Clause 4.6 (1)

The objectives of this clause are:

- (a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,*
- (b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.*

Response

Clause 4.6 is a mechanism used to relax numerical development standards set by environmental planning instruments. It is similar to State Environmental Planning Policy No. 1 – Development Standards, which by virtue of Clause 1.9(2) of the LEP no longer applies. It recognises that in exceptional circumstances standards, controls such as height may be unnecessary or unreasonable and thereby provides a means by which a variation to the standard can be achieved by adopting an appropriate degree of flexibility.

As further explained, the revised proposal is considered to be a suitable design solution on a site that has a number of challenges and topographical constraints.

Clause 4.6 (2)

Development consent may be granted even though the proposed development may contravene a development standard.

Response:

It is submitted that the building height standard is not excluded from the clause.

Clause 4.6 (3)

A written request is required in support of the contravention to the development standard that demonstrates:

- (a) compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
- (b) there are sufficient environmental planning grounds to justify contravention.*

Response:

The objectives of Clause 4.3 Height of Buildings are:

- a) to ensure that the height of development is appropriate for the scale of the different centres within the hierarchy of Ku-ring-gai centres,*
- b) to establish a transition in scale between the centres and the adjoining lower density residential and open space zones to protect local amenity,*
- c) to enable development with a built form that is compatible with the size of the land to be developed.*

In our view, the proposed variation to allow lift over runs to breach the maximum building height standard is justified for the following reasons: -

- The revised proposal remains consistent with the objectives of a B4 Mixed use zone in providing:
 - a variety of housing types integrated with suitable retail uses which combined will assist in maximising public transport patronage;
 - high density housing close to the Gordon Town Centre and the neighbouring Macquarie Business Park will assist in supporting the viability of both localities;
 - the contravention of the height standard does not impact on the visual privacy or create overshadowing of adjacent properties – *(Note: this matter was one of Council's major concerns and considerable effort has been given to ensuring that loss of privacy and overshadowing do not pose an impact on neighbouring properties);*
 - a development, the scale of which is considered appropriate for a site that is 6,066m² in area and is within 400m of the Gordon Town Centre.
- The overall floor space ratio of 2:136:1 complies with the maximum 2:30:1 under KLEP (TC) 2012;
- The site is totally covered with hard paved areas and buildings with extensive excavation and basement structures - when measured against the definition of existing ground level creates a distorted ground plane which produces a 3-D building height that adversely impacts the development potential of the site.

- The site is severely constrained by a two directional cross fall of 12.0 metres from Pacific Highway down to Fitzsimons Lane and 5.0 metres longitudinally across the site from the North West boundary to the south east boundary.
- The excessive slope of the land combined with the degree of excavation has created a unique situation that requires special consideration and a site - specific design solution – which has been achieved.
- The overall height of all 3 buildings complies with the 26.5 standard across the site - the breach in height is located in the middle of the site in part obscured by parapets, when viewed from the corner of Merriwa Street and Fitzsimons Lane – consequently, the streetscape is not adversely impacted by the non-compliances.
- The overall scale and form of the proposed development is consistent with the expected outcomes of Council's strategic aims and objectives for the locality and is a direct response to the site's topographical constraints.
- The proposed heights are contextually appropriate for a site of 6,066m² and presents a responsive streetscape incorporating sound urban design principles and amenity outcomes within an emerging area close to the Gordon Town Centre.
- The entire land holdings are under the one ownership that have been consolidated over many years with the specific purpose of being redeveloped to maximise the site's strategic location on Pacific Highway, surrounded by a mixture of residential, commercial and retail uses.
- As demonstrated in Drawing 2838_507 [A], the revised scheme maintains the required 3 hours of sunlight to buildings located on the southern side of Merriwa Street.

Comment:

The NSW Land and Environment Court has determined that the most commonly invoked way to establish that compliance with a development standard is unreasonable or unnecessary is to determine if the objectives of the development standard are achieved notwithstanding non-compliance with the standard. Based on the above mentioned arguments, it is our view that full compliance with the 26.5m height control is unreasonable and that the objectives of the building height standard have been achieved.

Clause 4.6 (4)

The consent authority must not grant development consent that contravenes the standard unless it is satisfied that the applicant's written request has adequately addressed matters in subclause (3), and the proposed development is in the public interest.

Response:

Sufficient written justification has been provided under subclause (3) justifying that the request for variation is minor and is the direct result of the site's excessive slope and excavation. There is no public benefit to be gained by strictly enforcing the adoption of ground floor level to determine building height that does not facilitate sites that have a unique topography. The variation will allow additional residential units to be achieved which is beneficial to the local housing demands.

Clause 4.6 (5)

The Director-General must consider:

(a) whether contravention of the standard raises any matters of significance for State or regional planning, and

(b) public benefit of maintaining the development standard, and

(c) other matters required to be taken into consideration.

Response:

To allow minor lift over runs to breach the 26.5m height control does not give rise to any matters of State or regional planning that would be considered contradicting or negative – as there would be no public benefits in maintaining the standard when the overall bulk, scale and built form of the three buildings comply with the height control. To the contrary, the public will benefit from the site being redeveloped because of its strategic location close to the Gordon Town centre and its ability to becoming a catalyst for future developments within the surrounding area. In fact, under the previous 2010 Town centres LEP, the site was nominated as a 'Key site' – this is proof that to approve the proposal as now submitted will be a positive public benefit.

Clause 4.6 (6)

This subclause does not apply to the proposed development.

Clause 4.6 (7)

Upon determining a development application, the consent authority must keep a record of matters in the written request referred to in subclause (3)

Response:

This provision is noted.

Clause 4.6 (8)

This clause does not allow development consent to be granted that contravenes:

- (a) a development standard for complying development,*
- (b) BASIX commitment*
- (c) Clause 5.4*

Response

This subclause does not apply to the proposed development.

2.2 Ground Floor Development in Business Zones

Clause 6.6 of KLEP (TC) 2012 requires that Council must be satisfied that the ground floor of commercial premises or a mixed use development is not used for residential accommodation or a car park and provide uses that encourage interaction between the inside of the building and the external public areas. The objective being to ensure that active uses are provided at the street level in business zones including a B4 zone.

As confirmed in Council's letter dated 2 September 2014, Clause 6.6 is a development standard and the ground floor is the street level, which the proposal has two. In addition to retaining the original 263m² retail space to Fitzsimons lane, the revised scheme now proposes an additional 268m² to the Pacific Highway frontage in Buildings A and B. Refer to Drawing 2838_105A Ground Floor

As submitted in the original SOEE, it is not practicable nor economically feasible to allocate the entire ground floors of both buildings as non-residential across all three buildings – made all the more difficult by excessive slope of the site and changes in levels from Pacific Highway and Fitzsimons Lane

At the request of Council an additional 268m² of retail space has now been provided at the Pacific Highway frontage as three selected 'nodes' - two (2) separate retail spaces are located in Building B and one (1) in Building A. The spaces range in area from 62m² to 113m². Each space has a regular uniformed shape and openly addresses the Highway frontage. The revised landscape drawings also assist in demonstrating the pedestrian interaction between the Pacific Highway and the retail spaces itself.

2.2.1 Clause 4.6 - Exceptions to Development Standards – GROUND FLOOR DEVELOPMENT

The following submission addresses each of the individual subclauses under Clause 4.6 of KLEP (TC) 2012 in support of allowing non-residential uses at ground floor.

JUSTIFICATION

The following submission addresses the relevant subclauses under Clause 4.6 of KLEP (TC) 2012.

Clause 4.6 (1)

The objectives of this clause are:

- (a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,*
- (b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances*

Response

Clause 4.6 is a mechanism used to relax numerical development standards set by environmental planning instruments. It is similar to State Environmental Planning Policy No. 1 – Development Standards, which by virtue of Clause 1.9(2) of the LEP no longer applies. The clause recognises that in exceptional circumstances standards, controls such as prohibiting residential uses on the ground floor of a mixed use development may be unnecessary or unreasonable - thereby providing an acceptable means by which a variation to the standard can be achieved with an appropriate degree of flexibility. As previously explained it has been difficult to create a suitable design solution on a site that has a number of design challenges and topographical constraints.

Clause 4.6 (2)

Development consent may be granted even though the proposed development may contravene a development standard.

Response:

It is submitted that the *Ground Floor Development in Business Zones* standard is not excluded from the clause.

Clause 4.6 (3)

A written request is required in support of the contravention to the development standard that demonstrates:

- (a) compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
- (b) that there are sufficient environmental planning grounds to justify contravention.*

Response:

To allow residential uses to occupy selected parts of the ground floor of a mixed use development, the scale of which has been proposed, is considered justifiable for the following reasons: -

- Over the last number of years the owner/applicant has received a number of approaches from various companies and groups wishing to investigate the possible development of the site to allow for commercial or retail uses, particularly using the Pacific Highway frontage of the site. These approaches have resulted in discussions of potential development schemes, many of which were subsequently prepared to sketch stage. Each proponent has individually investigated various levels of interest in the site, from outright purchase of the site for development, to taking a lease of developed space once the development was completed.
- In every case, discussions were not able to be concluded as the proponents were not able to prepare a viable proposal for the site that included retail or commercial space on the Pacific Highway. Discussions were held with:
 - Coles, for Officeworks
 - Bunnings
 - Aldi Stores
 - Woolworths
 - Fit n Fast Health Studio
 - McDonalds
 - Coles, for Liquor Store
 - Yum Restaurants (KFC)
 - Dal Cross Hospital
 - Coles for mixed use
- As detailed in the attached letter dated 4 December 2014 (Appendix A), for several years now the owners of the site have been attempting to obtain retail tenants for the site pending approval of the subject DA. The premises at 898 Pacific Highway has been vacant since 2008 and the shop at 870 Pacific Highway has been vacant since September 2007. This reflects on the findings of the *Market Assessment & Feasibility Analysis* prepared by Hill PDA in May 2012 that demand for commercial sites is decreased the further away they are from the Gordon Town Centre and rail station.
- The revised proposal, which is for a mixed use development comprising residential uses and 531m² of retail/commercial uses (including three (3) separate tenancies activating Pacific Highway, will provide for the orderly and economic development of the site – which is in keeping with existing and recently approved developments on neighbouring sites;
- The site is severely constrained by a two directional cross fall of 12.0 metres from Pacific Highway down to Fitzsimons Lane and 5.0 metres longitudinally across the site from the North West boundary to the south east boundary. These constraints are not conducive to being able to design a continuous retail strip along the Pacific Highway;
- It is not economically viable to restrict the uses of the entire ground floors to non-residential in a development the scale of what is proposed on a site that is removed from the Gordon Town Centre;
- The proposed retail has been strategically designed to integrate with the pedestrian ways and lobbies of each building to invite passing trade;
- The individual floor areas of the 3 retail 'nodes' along Pacific Highway (i.e. 62m², 78m², 113m²) are of practical size and conducive to accommodating a variety of uses, compared to providing for example, a smaller space that was only suitable to accommodating a café;

- The development does not cause any adverse environmental impacts to neighbouring properties, and would be a welcome addition to the cafes and medical suites that have recently been approved in neighbouring developments.

Clause 4.6 (4)

The consent authority must not grant development consent that contravenes the standard unless it is satisfied that the applicant's written request has adequately addressed matters in subclause (3), and the proposed development is in the public interest.

Response:

It is submitted that sufficient written justification has been provided under subclause (3) justifying that the request for variation is minor and worthy of support. There is no public benefit to be gained by strictly requiring the entire ground floor of all three buildings to be used for non-residential uses. It is not economically viable on a site that is removed from the Gordon Town Centre and is located on the Pacific Highway. It is more important to ensure that sufficient retail space is available for the immediate residents, rather than strictly adhering to a standard as a means of simply ticking the box.

Clause 4.6 (5)

The Director-General must consider:

- (a) whether contravention of the standard raises any matters of significance for State or regional planning, and*
- (b) public benefit of maintaining the development standard, and*
- (c) other matters required to be taken into consideration.*

Response:

The proposed breach does not give rise to any matters of State or regional planning that would be considered contradicting or negative. There are however positive benefits of the consent authority endorsing the proposed height limits, namely the provision of increased housing close to public rail infrastructure and major employments centres such as Macquarie Business Park.

Clause 4.6 (6)

This subclause does not apply to the proposed development.

Clause 4.6 (7)

Upon determining a development application, the consent authority must keep a record of matters in the written request referred to in subclause (3)

Response:

This provision is noted

Clause 4.6 (8)

This clause does not allow development consent to be granted that contravenes:

- (a) a development standard for complying development.*
- (b) BASIX commitment*
- (c) Clause 5.4*

Response

This subclause does not apply to the proposed development

3 Consideration of Council's Concerns

Due to the magnitude of some of the major issues that were raised by Council the overall design has had to be amended. In addition to reducing the total number of units from 170 to 147, there has also been changes to the building layout, location of the driveway, unit placement and distribution of floor space.

To assist in considering the various matters that Council has raised, Table 1 has been prepared which itemises each issue and provides a response on behalf of the applicant. Matters which require a more comprehensive response are addressed in Section 3.1.

Table 1 –Response to Council's Concerns

No	KLEP (Local Centres) 2012	Response
1	CI 4.3 Building Height Adopt interpolated ground level and ensure height breaches do not impact on solar access to adjoining units i.e. south Merriwa St	Refer to Section 2.1
2	CI 4.4 FSR Confirm whether there is any excess car parking	<p>Colston Budd Hunt & Kafes (CBHK) have prepared a revised traffic statement, which addresses parking; access, servicing and internal layout; traffic generation and effects; and the matters raised by council.</p> <p>CBHK's revised report confirms that traffic generated by the proposal will have its greatest effects during morning and afternoon peak periods when it combines with commuter traffic. The RMS surveys of traffic generation of residential apartments indicate that high density residential flat buildings close to public transport generate 0.19 and 0.15 vehicles per hour per apartment (two-way) during weekday morning and afternoon peak hours respectively.</p> <p>Based on five vehicles per hour per 100m² for the small retail component during the afternoon peak hour, the proposed development would generate some 50 to 55 vehicles per hour two-way during weekday peak hours. This is a low generation, equivalent to an average of only one vehicle every two minutes at peak times.</p> <p>This generation is similar to that assessed in their previous traffic report. Such a low generation would not have noticeable effects on the operation of the surrounding road network with surrounding intersections being able to cater for this additional traffic.</p> <p>Their report also confirms that the proposed parking provision is within the range indicated by the Ku-ring-gai Local Centres DCP</p>

		<p>and therefore is not in excess of Council's requirements.</p> <p>In summary, it has been concluded that:</p> <ul style="list-style-type: none"> the proposed parking provision is considered appropriate; access, internal circulation and layout are considered appropriate; the proposed development will have a low traffic generation, equivalent to only one vehicle every two minutes at peak times; and the road network will be able to cater for the traffic from the proposed development.
3	<p>CI 6.6 Ground floor development (uses)</p> <p>Need to provide street activation and active uses to Pacific Highway frontage</p>	Refer to Section 2.2 for comment.
4	Land Amalgamation	The owner of the site has provided a letter (submitted under separate cover dated 28 November 2014 - copy attached in Appendix A) which details negotiations with adjoining property owners. An architectural concept plan has also been prepared to demonstrate that both sites can be redeveloped as individual properties without the need to be amalgamated with 870-898 Pacific Highway.
KDCP 2013		
5	Ground floor commercial	See Section 2.2
6	Internal ceiling heights	Ceiling heights of the ground floor of Buildings A and B have been amended to 3.3m. Unfortunately, it has not been possible to maintain a 3.3m ceiling height to Level 1 as a result of having to maintain an overall building height across the site of 26.5m. To increase the Level 1 ceiling height would effectively create a breach in building height for both buildings. It is not economically viable therefore to further reduce over overall yield of the site considering that this revised scheme is represents a reduction of 23 units on what was originally proposed.
7	<p>Local centre building setbacks – Front fence design</p> <p>Voluntary Planning Agreement</p>	Both Buildings A and B now comply with the 4 metre setback to Pacific Highway. As detailed in the revised landscape plans, the design of the front fence has been amended to no longer being a continuous fence along the entire Pacific Highway frontage – to now being a combination of fencing and street activation achieved by entries to the three retail space and the lobbies of Buildings A and B. Pedestrian access is also provide to Building C off Pacific Highway with appropriate signage to be installed.

		<p>As detailed in the attached letter dated 8 December 2014 (Appendix A), the owners of the site wishes to enter into a VPA regarding:</p> <ol style="list-style-type: none"> 1 Dedication of land along Fitzsimons Lane of approximately 450m² for road widening; 2 Construction of carriageway width in accordance with widening of Fitzsimons Lane; realignment of the kerb; landscaping; and relocation of services if required. <p>The owner's solicitor is currently in discussions with Council officers in regard to this matter.</p>
8	Local centre public domain & pedestrian access – through site link	Refer to Item 10 below
URBAN DESIGN		
9	Residential at ground floor	See Section 2.2
10	Through site link	As was discussed at the 8 October meeting, it is our view that an additional through site link through the subject site is not required on the grounds that a through site link will be provided with the recently approved development at No. 916 Pacific Highway, and Merriwa Street already provides adequate pedestrian access to Pacific Highway from Fitzsimons Lane and beyond.
11	Height breaches impacting on overshadowing	See Section 2.1
12	Block B @ 58m in length (not to exceed 36m)	<p>As detailed in the revised drawings, a number of additional architectural treatments have been introduced into the design of Building B to reduce the perceived length to resemble 2 separate buildings. These include the introduction of recessed timber-look clad balconies to the centre element to contrast the other balcony treatments and visually separate the building into 2 distinct buildings each of 22m and 26m in length.</p> <p>Each of these main buildings are further broken down into smaller components by vertical masonry walls with timber-look cladding which are recessed to create shadow lines within the façade. A variety of materials including solid upstand and metal balustrades, timber-look screens and cladding, and areas of shopfront glazing to the ground floor contribute to varying the appearance of the building and reducing its overall visual scale.</p>
13	4m front setback to Pacific Highway	Proposal now complies

14	Length of corridors	Proposal now complies																																													
15	Width of corridors (Block B) less than 1.5m	Proposal now complies																																													
16	Knock out panels in perimeter wall	Proposal now complies																																													
17	Provision for external clothes line	Proposal now complies																																													
18	Block A @ 20-23m - Rule of Thumb 10-18m	Proposal now complies at 12-18m																																													
19	Communal roof top terrace on Block B	All buildings now have access to a communal roof terrace																																													
20	3 storey elevation of above ground car park	Additional tree planting is now proposed in the natural deep soil zones to encourage tree growth to assist in screening the car park wall.																																													
21	Solar access @ 57% - requires 70%	<p>A revised solar access report, prepared by <i>Steve King Consultant</i> is submitted under separate cover. The revised solar access calculations are detailed in the table below and are the result of:</p> <ul style="list-style-type: none">▪ excluding all bedrooms from the calculations;▪ allowing for the redevelopment of the adjoining site to the north; and▪ increasing the setback of Building A from the northern boundary. <p>In summary, 61.2% of units achieve acceptable solar access of between 2 and 3 hours. 57.8% achieve 3 hours or more between 9.00am and 3.00pm, in addition to 3.4% achieving 2 hours or more between the same time period.</p> <table><caption>Table 1: Summary of solar access compliance</caption><tr><th></th><th colspan="2">Block A</th><th colspan="2">Block B</th><th colspan="2">Block C</th><th colspan="2">TOTAL</th></tr><tr><td>Number of units</td><td>54</td><td></td><td>72</td><td></td><td>15</td><td></td><td>147</td><td></td></tr><tr><td>Units which achieve 3 hours or more sunlight to living or POS 9am - 3pm</td><td>30</td><td>55.6%</td><td>52</td><td>72.2%</td><td>3</td><td>14.3%</td><td>85</td><td>57.8%</td></tr><tr><td>Units which achieve 2 hours or more sunlight to living or POS 9am - 3pm</td><td>5</td><td>9.3%</td><td></td><td></td><td></td><td></td><td>5</td><td>3.4%</td></tr><tr><td>Total units with minimum 2 hours direct winter sun</td><td>35</td><td></td><td>52</td><td></td><td>3</td><td></td><td>90</td><td>61.2%</td></tr></table> <p>The main issue of contention is to what extent should a 2 hour standard' of sunlight between 9.00am and 3.00pm on June 21st be accepted, compared to the '3 hour rule' which nominates a minimum 70%. As documented in King's report, analysis by use of a full 3D digital model shows that the proportion of dwellings</p>		Block A		Block B		Block C		TOTAL		Number of units	54		72		15		147		Units which achieve 3 hours or more sunlight to living or POS 9am - 3pm	30	55.6%	52	72.2%	3	14.3%	85	57.8%	Units which achieve 2 hours or more sunlight to living or POS 9am - 3pm	5	9.3%					5	3.4%	Total units with minimum 2 hours direct winter sun	35		52		3		90	61.2%
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Total units with minimum 2 hours direct winter sun	35		52		3		90	61.2%																																							

		<p>which achieve projected solar access of minimum 2 hours on the standard date is 90 units from a total of 147 - being 61.2%, of which the overwhelming majority achieve a minimum of 3 hours.</p> <p>King submits that the 2 hour standard is reasonable for the site in the context of the emerging high density development that is envisaged for the surrounding area, and the standard is allowed for under the RFDC. King's opinion is based on his experience in a Land and Environment Court decision (Brown, C. in Botany Development Pty Ltd v Council of the City of Botany Bay LEC 10360 of 2013) in which Commissioner Brown found that whilst the RFDC does not define a "dense urban area", he was satisfied that a site which contemplated a maximum height of 22m and an FSR of 1.65:1 can be regarded as a "dense urban area". Therefore, it is reasonable to submit that the subject site, which has a 26.5m height and a FSR of 2.30:1 is also located in a "dense urban area" and a 2 hour standard should be accepted.</p> <p>Commissioner Brown did not accept that the DCP controls nor the RFDC can be regarded as a development standard, and gives guidance to a reasonable shortfall compared to those guidelines where reasonable design effort has informed the compliance achieved. In the subject case, the shortfall from a nominal 70% is 13 units out of 147, being almost exactly of the order nominated by Commissioner Brown as acceptable under the comparable circumstances of that case. The shortfall in the Botany case was 10 units out of 158 units.</p> <p>In Steve King's opinion, ... "higher compliance levels could be achieved by the simple expedient of allowing additional height and length for the component of the scheme facing the Pacific Highway and therefore favourably oriented for solar access". Council has the ability to apply a flexible approach and exercise discretion to vary the Rules of Thumb in determining compliance on this site. King concludes by saying that ... "the achieved solar access is actually high compared to what may be termed the 'solar access opportunity', and it is difficult to contemplate how the applicant could increase the proportion of dwellings with longer solar access"</p> <p>Based on this relatively small variation, it is our view the proposal is worthy of support.</p>
22	8 units have internalised habitable rooms	Proposal now complies
23	Natural ventilation changes required	Natural ventilation has increased from 57% to 64% and now complies

24	Windows to kitchen C0101, B1001, B1008	Proposal now complies.
25	16 units have kitchens located more than 8m from window	Proposal now complies.
26	33 units have living areas less than 4m wide	Proposal now complies.
27	Units not complying with private open space requirements	Proposal now complies.
28	Units A0101 & A0201 partially within car park	Proposal now complies.
29	51 units have insufficient volumes of storage	Proposal now complies with storage provided in all units.
30	Block C has no building entry visible from street	DA drawings have been amended and Building C now has its main entry from Pacific Highway with appropriate directional signage to be installed.
31	Increased % of 3 bedroom units required	The number of 3 bedroom units has increased from two (2) in the original DA to nine (9), which is 6% of the total number of units.
32	Review external elevations of buildings to appear less monotonous	Whereby the previous design had a number of large solid panels to primary streetscape facades, the revised design has now incorporated a variety of treatments including balconies, windows, screens, shop front glazing and vertical clad elements to these facades to provide additional texture and visual interest. All of which contribute to more diverse facades within a harmonious and integrated architectural palette.
ENGINEERING		
33	Use of rainwater	Refer to revised documentation prepared by Warren Smith & Partners.
34	Water balance model required	Refer to revised documentation prepared by Warren Smith & Partners.
35	On site detention calculations requires clarification	Refer to revised documentation prepared by Warren Smith & Partners.
36	One additional visitor parking space required	Refer to revised DA drawings and traffic report prepared by Colston Budd Hunt & Lafes
37	Longitudinal section required through path of travel of small waste collection vehicle	Refer to revised DA drawings and traffic report prepared by Colston Budd Hunt & Lafes

38	Geotechnical report required to address excavation, dilapidation survey of neighbouring structures and groundwater inflow	SMEC Testing Services have been engaged to address excavation methods and a dilapidation survey of neighbouring structures and vibration control. At the time of preparing this report, all drill testing had been completed and the report is being finalised. This will be submitted under separate cover.
LANDSCAPE		
39	Removal of trees (T4 & T9)	Both trees will now be retained. Refer to Item 48 for a detailed explanation.
40	Delete reference to planting Eucalyptus saligna in planter boxes.	Refer to revised documentation prepared by Site Design Studios
41	Delete reference to planting Angophora floribunda within Pacific Hwy road reserve	Refer to revised documentation prepared by Site Design Studios
42	Amend planting Elaeocarpus reticulatus in private courtyards	Refer to revised documentation prepared by Site Design Studios
43	Reconsider use of vertical gardens	Refer to revised documentation prepared by Site Design Studios
STORMWATER		
44	Stormwater plan required amending to accommodate existing trees	Refer to revised documentation prepared by Warren Smith & Partners.
BASIX		
45	Communal area landscape – Landscape plan to include highlighted areas included in	Refer to revised BASIX certificate
46	Private area landscape - ensure plans are consistent with BASIX certificate	Refer to revised BASIX certificate
47	Communal open space – explore further utilising the rooftops as roof gardens and communal open spaces.	A total of 1,092m ² of roof gardens and communal open space areas are now provided across each of the three buildings comprising Building A – 217m ² on level 5 and 278 m ² on level 6, Building B – 216 m ² on level 6 and Building C – 381m ² on level 5. Improved landscaping has been integrated into the Pacific Highway and Fitzsimons Lane setback areas with the expanded retail floor space.

	ECOLOGY	
48	<p>Ecological assessment is required to support removal of T4 and T9 (both Sydney Blue Gums) to support their removal.</p>	<p>In response to Council not supporting the removal of the two Sydney Blue Gums (T4 and T9) located in the southern corner of the site, a revised Arboricultural Impact Report was prepared by Guy Paroissien from <i>Landscape Matrix Pty Ltd</i>. As discussed in his report, both T4 and T9 have now been retained and will not be removed – and therefore there is no need to undertake ecological assessment (7-part test).</p> <p>In summary, Paroissien's report confirms that:</p> <ul style="list-style-type: none"> • The proposed works are outside the identified TPZ of tree number 4 and no impact of substance is predicted for this tree. • The proposed works will encroach within 2.77% of the identified TPZ of tree number 9 – this is a low level of impact and within an acceptable threshold for the tree. • There are existing structures within the TPZs of tree numbers 4 and 9 that will require demolition/removal to create the landscape buffer that these trees will be located within. These structures include buildings and car park surfaces. A combination of tree protection fencing and ground protection will be required for the building demolition works. It is recommended the existing car park surfaces be retained in situ during the bulk of construction works and only be removed at the stage when final landscape surfaces/works are being implemented to minimise disturbance within the TPZ. • Tree numbers 1, 2 and 3 are proposed to be removed from the Pacific Highway frontage of the site and replaced with more appropriate species. • Tree numbers 5, 6, 7, 8, 10, 11, 12, 13, 14, 15 and 16 are within or adjacent to proposed development works and identified to be removed as part of the works. <p>It is further recommended that specific protection measures are implemented to assist in minimising potential impacts that may arise during the removal and replacement of the existing car park surfaces within the identified protection zones of tree numbers 4 and 9. These are:</p> <ol style="list-style-type: none"> 1 The existing surfaces are to be removed in small sections using light machinery and hand tools under the supervision of the site arborist to ensure roots immediately under the driveway/sealed areas are protected. 2 Existing roots exposed by removal of the driveway are to be immediately covered by moist hessian or equivalent to prevent drying out and desiccation. The hessian is to be

		maintained in moist condition until the exposed roots are covered by installation of the new landscape surface/soil.
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4 Conclusion

In response to Council's preliminary assessment of DA0180/14 considerable effort has been given to preparing a revised scheme that aims to satisfy Council's main issues of concern. In addition to complying with the various DCP controls, particular attention has been given to ensuring all three buildings comply with the 26.5m height control; that additional retail space is provided to Pacific Highway to promote street activation and ensuring that the two Sydney Blue Gums (T4 and T9) located in the southern corner of the site are retained. The revised scheme also addresses solar access requirements taking into account the proposed redevelopment of the adjoining site to the north.

The revised scheme has been designed so that it does not give rise to any significant adverse impacts on the surrounding locality in terms of traffic generation, overshadowing, privacy or visual impact. The development remains one of high quality and architectural design, with additional detail given to the external facade treatments.

We therefore seek Council's approval.



Michael Ryan

Ryan Planning Pty Ltd

5 Appendix A – Letters from Owner - (1) Clause 6 of Part 3A; (2) Voluntary Planning Agreement; and (3) Proposed Retail Uses

Alto Group

24th November 2014

Grant Walsh
Assessment Officer
Ku-ring-gai Council
818 Pacific Highway
GORDON NSW 2072

Dear Sir

RE: Application No DA180/14

PPTY: 870 – 898 Pacific Hwy Gordon

We are writing to address clause 6 of Part 3A.1 of the DCP.

In relation to the adjoining site to the south of the proposed development, 860 Pacific Highway, we have provided a scheme to council demonstrating that this site can be orderly and economically developed in accordance with the provisions of the KLEP (Town Centres) 2012.

In relation to 900 Pacific Highway, we approached the owner of that site, McLennan Properties Pty Ltd through our agent Brett Burrridge, who was then with Colliers. Mr Burrridge advised us that the owners were not interested in discussing the possible sale of the property, as it was a good investment for them. This was in April 2009 when we were preparing a development proposal for our site under the then KLEP. George Altomonte made a note of this conversation in his file at that time. This approach demonstrates compliance with clause 6(i) of the DCP controls.



Alto Group Pty Limited
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In a subsequent meeting held on 8 September 2009 between George Altomonte, Trevor Hamilton and Mike Ryan from Alto and Craig Wyse, Antony Fabbro and Bill Royal from Council, George Altomonte informed council's officers of this approach and the result. Mr Altomonte also made a note of this in his file.

As the advice from the owner was very clearly that they were not interested in discussing a sale, no further approach in this regard has been made to them.

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We have now prepared a scheme demonstrating that the site can be orderly and economically developed in accordance with the provisions of the KLEP (Town Centres) 2012, which is attached. This demonstrates compliance with clause 6(ii) of the DCP controls.

Yours faithfully

A handwritten signature in black ink, appearing to read 'G. Altomonte', with a large, sweeping flourish extending to the right.

George Altomonte

Chairman

Alto Group Pty Ltd

Alto Group

8th December 2014

The General Manager

Ku-Ring-Gai Council

818 Pacific Highway

GORDON NSW 2072

Dear Sir

RE: Application No DA 180/14

PPTY: 870-898 Pacific Hwy Gordon

Alto Prestige Pty Ltd and Georgio Altomonte Holdings Pty Ltd, being the owners of the property at 870-898 Pacific Highway Gordon for which the above DA has been lodged with council, wishes to enter into a Voluntary Planning Agreement with Ku-Ring-Gai Council in relation to its Development Application.

The Voluntary Planning Agreement would provide for the following:

1. Dedication of a strip of land along the Fitzsimons Lane frontage of the site, containing an area of approximately 450 square meters, as shown hatched on the Site Plan No 2838_011[A] dated 6/05/2014 prepared by Nettleton Tribe and described as "Extent of Land Dedication to Council for Road Widening" (the "Road Land"), subject to final survey and conditions of approval.
2. Carrying out construction of the following works to the Road Land:
 - a. carriageway to the width of Fitzsimons Lane as widened;
 - b. Footpath to an agreed width on the northern side of the carriageway including cutouts to allow for street planting if required;
 - c. Realignment of the kerb;
 - d. Landscape footpath to an agreed standard; and
 - e. Relocate any services if required.
3. The making of Development Contributions to Council, taking into account the value of the land to be dedicated and the cost of the roadworks to be provided, and otherwise in accordance with Council's Planning Agreement Policy 2008.



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Yours faithfully

Ralph Fitzgerald, Corporate Counsel, Alto Group Pty Ltd

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Alto Group

4th December 2014

Grant Walsh

Assessment Officer

Ku-ring-gai Council

818 Pacific Highway

GORDON NSW 2072

Dear Sir

RE: Application No DA 180/2014

PPTY: 870 – 898 Pacific Hwy Gordon

We refer to our application noted above, and in particular the requirement that active uses be provided at ground floor frontages of the development, to activate the Pacific Hwy and Fitzsimons Lane street fronts.

You will be aware that our original proposal contained residential units at the Pacific Hwy frontage, which was activated by variations in the building setbacks, by having building entries and foyers opening onto the highway and by including communal open space. Following our meeting with council officers on the 8th October 2014 we have redesigned the Pacific Hwy frontage to include commercial nodes at selected sites. Notwithstanding this, we believe that these nodes will struggle to find retail or commercial users, based on our research and experience with the site in recent years.



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Since we began to consider a scheme for the development of the site at 870-898 Pacific Hwy Gordon, we have received numerous approaches from various companies and groups who wished to investigate the possible development of the site to allow for commercial or retail uses, particularly using the Pacific Highway frontage of the site. These approaches have resulted in discussions of potential development schemes, many of which were subsequently prepared to sketch stage.

The Alto name and the Alto Group logo are registered trade marks of the Alto Group Pty Limited

We have received approaches from and held discussions with the following organisations in recent years:

- Coles, for Officeworks
- Bunnings
- Aldi Stores
- Woolworths
- Fit n Fast Health Studio
- McDonalds
- Coles, for Liquor Store
- Yum Restaurants (KFC)
- Dalcross Hospital
- Coles for mixed use

The proponents investigated various levels of interest in the site, from outright purchase of the site for development, to taking a lease of developed space once the development was completed. In every case, the discussions were not able to be concluded as the proponents were not able to prepare a viable proposal for the site that included retail or commercial space on the Pacific Highway. The reasons we have been given for this include that the site is too removed from the Gordon centre, and that the location is too difficult given the volume of traffic on the Pacific Hwy and the difficulties that creates for parking and access to the site. The location of the site close to the major intersection of Pacific Hwy with Ryde Road creates additional difficulties and obstructs access to the site during peak times.

We also note the experience of other developers of sites in the vicinity of our property. In these cases the applicants have sought to satisfy the activation requirement by including token coffee shops, child care centres or SOHO apartments at ground level. In our view based on the experience we have, these components of the developments will remain unoccupied for a considerable time, which is an outcome that does nothing to achieve the goal of activating the street frontage.

In addition to our experience with proposed occupants of a new development, we have for several years now been attempting to obtain retail tenants for our properties pending this application. Our site at 898 Pacific Highway has been vacant since April 2008, and our shop at 870 Pacific Hwy has been vacant since September 2007. Since then, the properties have been listed with our agents to find a tenant but we have had almost zero enquiries for either site. We have also had the office suites at first floor 870 Pacific Hwy listed with our agents during this time, but only managed to obtain a tenant for one of the four suites for a three year term. That tenant vacated the premises a year ago.

This experience reflects the findings of the Market Assessment and Feasibility Analysis of the site completed by Hill PDA in May 2012. That report found that demand for commercial sites decreased

the further the sites were from the commercial core centred around Gordon station. We have attached copies of the following sections of that report to this letter:

4.1 Commercial Land Uses

4.3 Implications for the Site

5.3 Summary of Findings

The overwhelming conclusion from this evidence is that commercial and retail sites will struggle to find users in this location, given its distance from the commercial core and the lack of current demand for these uses that has been demonstrated to exist. This may change with time, and in this regard we have redesigned the ground floor level of the Pacific Highway frontage with a ceiling height of 3.3 metres, which will allow these units to be converted to retail or commercial uses in the future should demand for these uses reappear.

In the meantime, it is clear from current evidence as referred to above that an insistence on including retail and commercial uses at ground floor will not achieve the desired outcome of increasing active street frontages to this site.

Yours faithfully

A handwritten signature in dark ink, appearing to read 'G. Altomonte', with a stylized flourish at the end.

George Altomonte

Chairman

Alto Group Pty Ltd

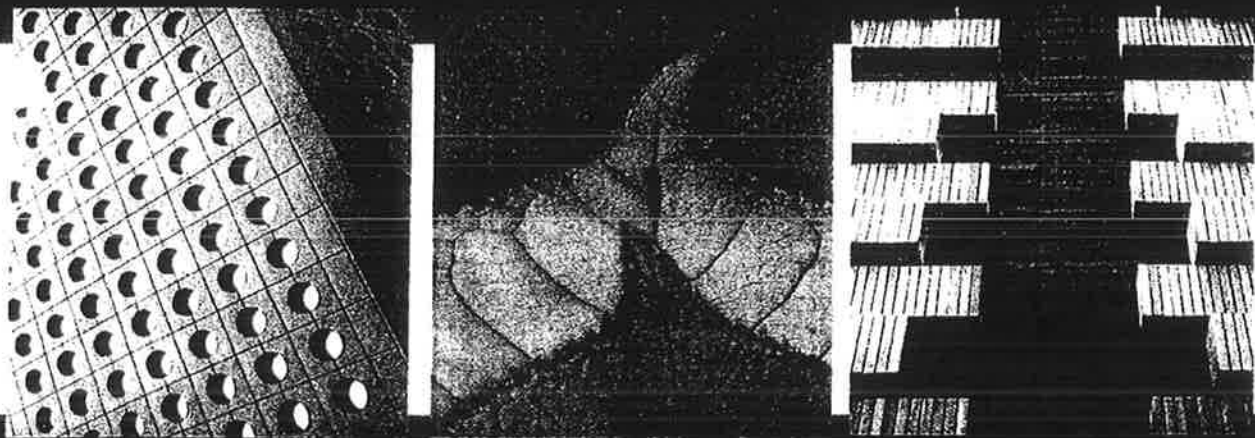
Market Assessment and
Feasibility Analysis of 870-898
Pacific Highway, Gordon

PREPARED FOR



Alto Group

May 2012



Hill

4. MARKET RESEARCH

4.1 Commercial Land Uses

The Site is located within a Business zone as provided for under the current planning instrument. Existing uses along the immediate portion of Pacific Highway include a mix of commercial uses with occupiers including car dealerships, smash repairers, panel beaters and retailers of household supplies.

Hill PDA's market research identified that the performance of properties within the Gordon centre is mixed. Traditional strip retailing is concentrated along Pacific Highway focused around the Gordon train station (between Moree and McIntyre Streets) while commercial uses are more evident in the northern fringe of the centre, i.e. to the north of McIntyre Street and where the Site is located. This suggests a decline in face rents⁶ towards the northern fringe, commensurate with an increasing focus on commercial land uses.

Discussions with leasing agents in the area reveal that interest in the area has been gradually declining over the last decade, properties generally taking more than 12 months to lease with many lessors having to reduce face rents to retain tenants. The northern fringe has traditionally been the focus of car dealerships and car yards; in the face of car dealership relocations whether due to the GFC or other factors, leasing agents have commented that due to its location "off-pitch" away from the core of the Gordon town centre it has been challenging re-letting the space in the northern fringe. Tenant enquiries are observed to be largely limited to local interest.

There are several vacant sites available for lease and for sale in the immediate vicinity of the Site, an indication of the declining attractiveness of the immediate location as a business location.

807-813 Pacific Highway is diagonally opposite the Site and has been vacant and unoccupied for some years. This site is understood to straddle both Railcorp and private land, measuring some 1,800sqm of site area. The site used to accommodate a Holden car showroom, having been vacant for a number of years now. The site is within a proposed B5 Business Development zone and is currently available for sale or lease.



836-840 Pacific Highway is also available for sale. Comprising almost 1,900sqm in site area, this former car showroom is located within a proposed B2 Local Centre zone which permits a mix of retail, commercial and residential land uses. Informal enquiries to the selling agent suggest expectations around \$3.5m and annual income potential in the region of \$300,000 to \$350,000 per annum. A sale price of \$3.5m would equate to \$1,840/sqm of overall site area.

⁶ 'Face rents' are the rents shown on a lease document which may or may not include incentives or outgoings

4.2 Residential Land Uses

Residential Units

Whilst the long term outlook for the residential market is good and underpinned by strong fundamentals which form the key drivers to demand, an important factor not to be dismissed is the growing ability of the market to discern quality and residential amenity. Residential developers are increasingly attempting to 'product-differentiate' by masterplanning developments, incorporating sustainability features (not just into design but building performance) as well as combining various inclusions with dwelling sales.

Informal discussions with selling agents active in Gordon and surrounds reveals that demand for dwellings is primarily from the mass market and not the luxury market, there is a strong underlying demand for smaller (one and two bedroom units) in close proximity to train stations and public transport links. Selling agents have remarked that there appears to be an oversupply of larger type units (three and four bedroom units) originally aimed at the retiree/downsizer. These units have experienced protracted selling periods with many remaining unsold, due primarily to their higher price point.

Apartment developments along Pacific Highway appear to have fair market acceptance, a prominent investor market remarked to be active. Informal discussions with agents involved in marketing new apartments along Pacific Highway indicate a moderate demand for these units, appropriate pricing obviously essential to avoid extended selling periods.

Rental returns from unit developments close to train stations and bus links are strong, regardless of a Pacific Highway location, this and strong investment fundamentals underpinning investor demand for dwellings along Pacific Highway.

Development Sites

There is muted transactional activity for development sites compared to the 2009/10 period. All things being equal sites along the Pacific Highway are generally less valuable compared to those located on quiet suburban streets. This is due to the adverse impacts of a main arterial road on residential amenity, however with larger sites this can be mitigated to a degree with setbacks and buildings to taller heights.

The following development sites have been transacted in the last 18 months:

Table 2 - Summary of Development Site Sales

Address Site Area (sqm) FSR (Dwelling yield)	Sale Price/Date Analysis	Comments
35-39 Dumaresq St Gordon	\$14,000,000* (April 2012)	Comprising 3 freestanding dwellings, this development site was sold with development consent for 80 units designed by an award winning architectural team. Well located 350m west of Gordon town centre and within 650m of train station. The site was sold at auction and interest was reportedly moderate.
6,048sqm FSR 1.3:1 (80 units)	\$2,315/sqm \$175,000/unit	
989-1015 Pacific Highway Roseville	\$8,500,000 (December 2011)	Comprising an irregular shape, this site was proposed to be zoned B5 'Business Development' under the draft Willoughby LEP 2010, however has since been proposed R3 Medium Density Residential under the draft Willoughby LEP 2012.
4,357sqm	\$1,951/sqm	

Address Site Area (sqm) FSR (Dwelling yield)	Sale Price/Date Analysis	Comments
728-730 Pacific Highway Gordon	\$5,629,000 (Sept 2010)	Comprising freestanding collages, this development site sold with development consent for 37 units. Located to approximately 600m to the south of the Gordon town centre, this development site is about 450m from the train station. Sales off-the-plan have commenced with over 90% of the units understood to have been sold.
2,852sqm FSR 1.3:1 (37 units)	\$2,180/sqm \$152,000/unit	

*Approximate only, not verified as site has exchanged but not settled as at the date of reporting

Source: RP data, Reed Construction data, Hill PDA research 2012

An analysis of recent market activity yields the following observations:

For sites fronting Pacific Highway, site values range from \$2,000/sqm to \$2,200/sqm.

Sites located in quieter locations away from Pacific Highway are more valuable, site values typically exceed \$2,200/sqm.

Development sites where the existing use is 'low density residential', i.e. detached dwellings, lower density thresholds are required for viability, i.e. sites are observed to be developed to FSR 1.3:1.

The demand for dwellings in the Inner and Middle Rings of Sydney remain resilient, infill developments are typically selling well ahead of their completion. It should also be noted that where located in close proximity to major arterial routes, in order to mitigate the impacts of noise, pollution and other issues associated with a main road location, developments need to be in the form of high-rise buildings to facilitate the capture of vistas either of the City or the water. This is to enable the realisable sale prices of units on higher levels (as the impacts of noise and pollution diminish with each higher level), particularly those offering sweeping views to offset the otherwise lower revenue expected from development on a main arterial such as Pacific Highway.

4.3 Implications for the Site

As identified in section 4.1, performance of commercial properties in the Gordon town centre is mixed with increased vacancy levels in the northern fringe of the town centre, an indication of weak underlying demand.

The Gordon residential market is showing strength of demand. By way of example, a proposed development at 728-730 Pacific Highway is reportedly well received with 90% of the units selling off-the-plan.

- The fundamentals and key drivers underpinning the residential property market are robust.
- Demand for dwellings is primarily from the mass market and not the luxury market, with affordability being a primary selling point; the economic viability of residential development hence very much dependent on development yields.
- Dwellings fronting Pacific Highway have moderate demand subject to investor pricing. Investor demand is noted to be prevalent due to the relatively strong rental demand for accommodation close to transport nodes and irrespective of a Pacific Highway frontage.

Some residential developments that front Pacific Highway have in the past experienced protracted selling periods, a function of market resistance to living on a main road. Lack of design amenity and privacy were cited as among the reasons by purchasers for not considering those developments.

Despite the strong demand for rental accommodation, the amenity disadvantages associated with a Pacific Highway location need to be offset not only by good design but also greater building heights.

Planning controls, specifically height and density are fundamental for the economics of development; they can promote urban renewal, or stifle development where there is no incentive to demolish and redevelop. Furthermore, planning controls should be cognisant of unique site and contextual characteristics that underpin a site's potential for development. More specifically, the Site is subject to a two-way fall in the gradient of the slope hence making development more challenging.

The impact of various densities and heights on development viability is considered in the following section

The 'As Is' value of the Site has been assessed at between \$10m and \$11.5m⁹; accordingly a land use/density which results in a Residual Land Value exceeding this bandwidth is necessary to bring about change and urban renewal on the Site. As mentioned earlier, the utility offered by and the condition of existing improvements underpin the 'as is' value of a property.

Feasibility modelling at the density option at FSR 2:1 (as proposed by the draft LEP) indicates that the resultant Residual Land Value (\$10m) is less than the 'As Is' value. As explained above, a sufficient uplift in land value is needed to incentivise redevelopment of any site. Additional feasibility modelling indicates that development to FSR 2.25:1 is also not viable.

Feasibility modelling at FSR 2.5:1 indicates that this is the *minimum density* required to provide sufficient incentive for redevelopment of the Site.

5.3 Summary of Findings

As indicated earlier there are sites along the Pacific Highway which suffer from poor returns with weak underlying demand and interest. An upshot of the poor demand and low returns has seen some sites starved of private capital investment leading to a continued deterioration of the existing stock with high levels of vacancies observed.

Notwithstanding the above commentary, there are other sites along the Pacific Highway that offer good functional utility to their current uses, the existing commercial buildings still possessing a remaining economic useful life. These sites are typically in and around the central core of a local centre. Such sites are likely to be held 'as is' for a period of years either due to the requirements of current operations or due to favourable yields on existing/substantial improvements.

In investigating the required densities for residential feasibility, Hill PDA formulated high-level development options based on various densities.

Urban design testing suggests that due to the two-way fall in site gradient and overshadowing impacts, FSR 2.5:1 development would require to be accommodated in buildings of between 26m and 32m¹⁰.

The outcomes of the feasibility analysis are summarised below:

- In order for redevelopment to be 'feasible', there needs to be sufficient uplift to the 'As Is' value, thereby providing an incentive for a change in land use. In order for residential redevelopment to be feasible, feasibility testing suggests that densities need to be at a *minimum* of FSR 2.5:1.
- Negative impacts associated with a Pacific Highway location need to be offset by setbacks and/or taller buildings which offer views, otherwise viability is expected to be delicate. As a consequence the economic viability of residential redevelopment particularly for sites fronting Pacific Highway is very much dependent on development yields.

⁹ Ibid

¹⁰ Nettleton Tribe, Development Option Analysis, 29 May 2012

- Notwithstanding the above, dwellings along Pacific Highway enjoy healthy demand particularly from the investor market, subject to appropriate pricing.
- The feasibility of sites away from Pacific Highway is expectedly better with sale rates of completed product expected to be higher.
- Sites with improvements either offering substantial utility or adequate returns are unlikely to be redeveloped in the short to medium term; in the case of the Site a density threshold of FSR 2.5:1 is needed for redevelopment to be viable.

Despite the strong demand for rental accommodation, the amenity disadvantages associated with a Pacific Highway location need to be offset by both good design and greater building heights; necessary building height would be required to deliver a viable outcome.

In order to achieve a feasible redevelopment on the Site, a minimum density in the order of FSR 2.5:1 is required. To achieve good design, it then follows that appropriate height controls are required, particularly with the Site's characteristics (two-way fall in gradient) and a Pacific Highway location. Urban design testing has demonstrated that minimum heights required to achieve minimum density and good urban design are 26m and 32m¹¹.

5.4 Issues for Economic Viability

There has generally been a lack of development (englobo) site sales in recent times, indicative of a lack of developer confidence. This may be attributed largely to a combination of factors, the disparity between the high cost of development, low realisable end sale values and more recently the difficulty in obtaining credit. This problem is not unique to the North Shore but has been prevalent throughout the Sydney metropolitan area and indeed elsewhere in the state. Until recently and still a viability issue, high construction costs coupled with developer contributions have eroded developer profits and margins, providing an effective disincentive in many cases.

There have been sporadic transactions of development sites on the North Shore, however these are typically limited to locations away from Pacific Highway. This is not unexpected as unless the impacts of a Pacific Highway are adequately mitigated development feasibility is delicate and can indeed pose a higher risk.

The following issues continue to challenge development, with feasibility in many instances delicate:

- **Site assembly** - acquisition of land is a high risk and high resource activity for developers particularly where numerous parcels of land have to be amalgamated prior to development. With particular reference to the northern fringe where the Site is located, many of the adjoining properties are smaller lots in fragmented ownership. This element of risk is at a minimum with sites like the Subject that are in single ownership.

Site constraints - physical shape and environmental constraints and the need for infrastructure provision (particularly applicable in release areas) affect the developable area of a site. Sufficient setbacks would

¹¹ Ibid

6. CONCLUSION & RECOMMENDATIONS

A Land Use Shift

There is an apparent decline in the demand for traditional industrial-type uses following a shift towards a knowledge-based and high-tech economy. As found in earlier studies¹² by Council, the performance of the commercial market particularly in the six centres continues to be challenging with prevailing vacancy rates noted in some instances to be high. The performance of commercial properties was expected to continue to be challenging due to various factors including the following:

- Competition for new space from other commercial markets that already benefit from agglomeration, services and infrastructure and market acceptance
- Demand for commercial space largely confined to a 'local marketplace'.
- Competition for older, secondary grade stock in other markets such as Chatswood and Macquarie Park.

It is conceivable that both the LEP 2010 and draft LEP were cognisant of the structural changes that were occurring in the six local centres, i.e. a declining need for traditional industrial and commercial floorspace, trends towards business park accommodation, etc. and in order to ensure the centres remain competitive, recognised the necessity to respond by creating flexibility in land use policy to meet with changing needs of the community. Consequently the Town Centres LEP 2010 incorporated land use changes (to a B4 Mixed Use zone) and increases to the density and height controls (up to FSR 3:1 and 8 storeys).

The main objectives of the draft LEP as stated in the Planning Proposal are *"to enable the redevelopment of certain land in and adjacent to the commercial centres (Gordon included) for higher-density residential and commercial development that will better contribute to sub-regional planning objectives"*

In assessing the likelihood of the Site contributing to the above objectives, it is necessary to consider the interaction between existing uses and alternate, economic uses. This involves considering if the planning controls as proposed by the draft LEP are appropriate, if they are sufficient to instigate change/redevelopment of the Site. Planning controls, as intimated in section 4.3, are fundamental to the viability of development, determining if and where redevelopment will occur.

Viability of Development

Building densities and heights are important issues to consider when investigating the likely success and viability of a development site. The value of a development site in its existing use compared with a development option is a crucial decision-making factor for landowners in deciding to retain or demolish the existing improvements and redevelop. The Site's value in its existing use ('As Is') is estimated at between \$10m and \$11.5m¹³. Accordingly, for a redevelopment option to be feasible, the resultant Residual Land Value needs to exceed the \$10m-\$11.5m range.

¹² SGS Economics and Planning, draft Ku-ring-gai Town Centres Assessment, July 2011

¹³ Knight Frank Valuations, Market Valuation Under Instructions from ANZ Banking Group, January 2012

Market research and feasibility modelling suggests that the planning controls as proposed by the draft LEP are *insufficient* to incentivise change on the Site. Higher densities (minimum FSR 2.5:1) together with minimum building heights (26m and 32m¹⁴) to accommodate the densities, are necessary to promote renewal.

The nature of the existing land uses (i.e. 'higher order' uses including commercial) makes it challenging for redevelopment to occur at lower densities, a higher density threshold therefore required for existing commercial uses. Note that with existing low density residential uses, lower density threshold for redevelopment is required, i.e. in most cases FSR 1.3:1.

Of particular relevance is the Site's location on Pacific Highway. The adverse impacts of a main road location if not adequately addressed could undermine the feasibility of redevelopment. Equally, unique site conditions (i.e. two-way fall in gradient and existing basement level) should be adequately addressed to ensure that the required densities can be accommodated within the building envelopes. Good urban design will include adequate setbacks from Pacific Highway, also requiring sufficient building height and density to mitigate the amenity disadvantages and impacts of a busy road.

As outlined in previous sections there are many factors that influence the feasibility of development. A major challenge for infill development/urban renewal is the fragmentation of sites. The cost and time associated with assembling a development site from multiple landowners is in many cases a major hurdle. The large dimensions of the Site not only provide flexibility from an urban design perspective, but its single landholding status is a major advantage.

A Vibrant Town Centre

The draft LEP recognises the need to not only focus on dwelling numbers but to address "*issues of economic viability, employment growth, centre revitalisation, community infrastructure and housing choice*"

Gordon is classified as a 'main centre', falling at the top of the hierarchy of centres as identified in the Subregional Strategy. As the main centre, Gordon is the primary economic focus of the LGA comprising the tallest buildings, highest densities and greatest commercial/retail footprint of all the centres. There exists an opportunity to strengthen the residential focus of Gordon (particularly on the northern fringe) by facilitating an intensification of uses.

An increase in the height controls to 32m to accommodate a density of FSR 2.5:1 is considered to have minimal impact on surrounding uses particularly with the topography of the Site sloping to the rear. This will promote redevelopment on the Site, which is associated with the following benefits:

- Utilisation of existing infrastructure subsisting in the Gordon town centre.
Promoting the feasible/economic renewal of ageing and underperforming stock.
- Development of residential dwellings in the northern fringe would help lift the profile of the town centre as a residential location; an increase in resident numbers also adding to demand for retail goods and services in the centre.

¹⁴ Nettleton Tribe, Development Option Analysis, 29 May 2012

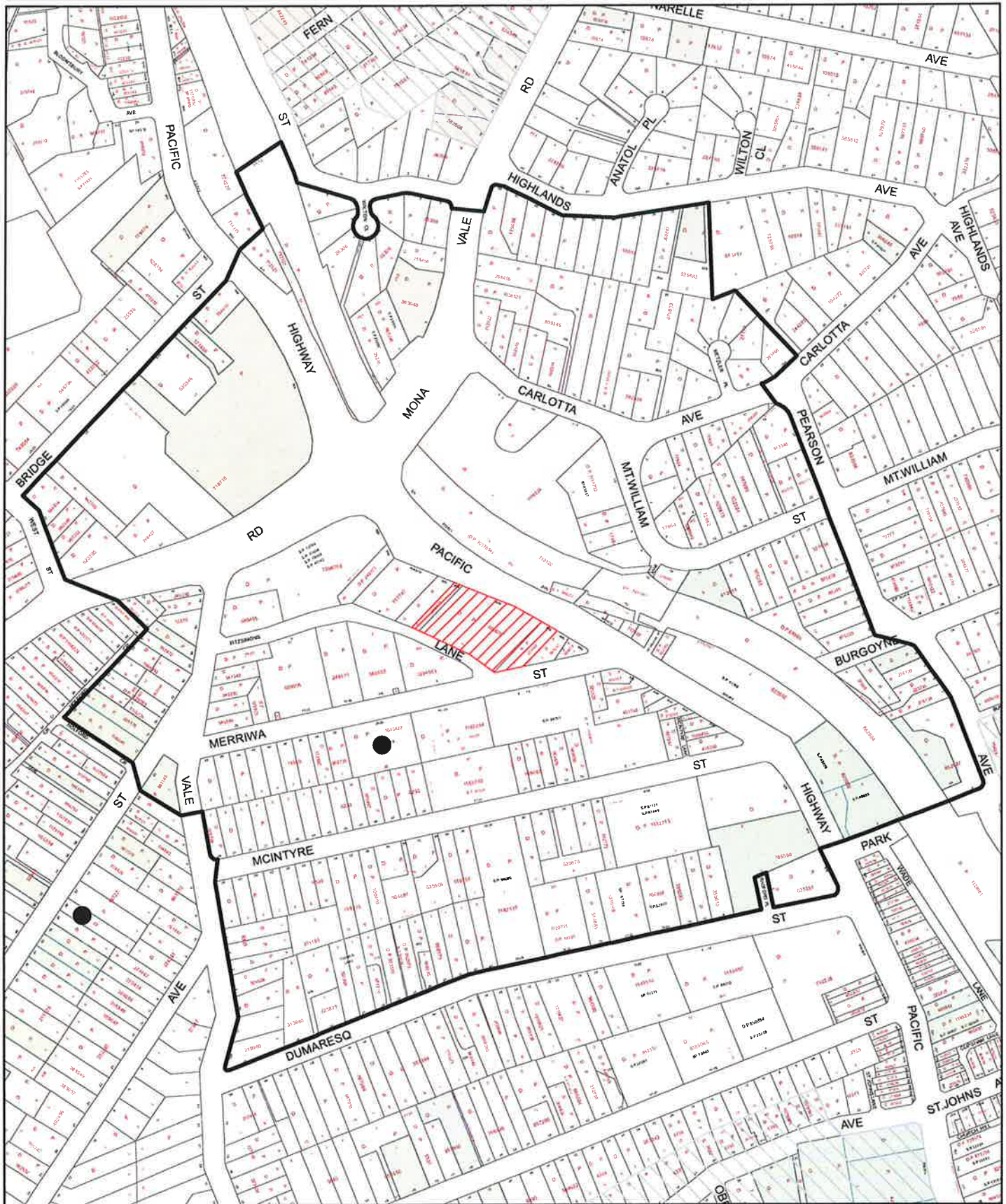
- Facilitate diversity in housing choice and meeting gaps acknowledged to exist in current residential offer.
Contribute to revitalising the northern fringe of the Gordon centre and provide an impetus for future development in the broader locality.
- Intensification of new development within the Gordon town centre, i.e. with higher densities and taller buildings could conceivably alleviate the pressure to redevelop single detached dwellings located away from town centres.

Under the planning controls envisaged by the draft LEP, there is insufficient incentive to redevelop. It is conceivable that the Site could remain 'as is' in its current state without any redevelopment occurring in the short to medium term. The existing low intensity use of the Site without redevelopment occurring would result in an opportunity foregone to increase much needed dwelling numbers, lift the performance of the northern fringe and contribute to a revitalisation of the main centre Gordon, which is the focus of economic activity of the LGA.

LOCATION SKETCH

870 - 898 Pacific Highway, Gordon

DEVELOPMENT APPLICATION No. DA0180/14



DATE: 18 Nov 2015

0 30 60 120

- ▲ AGREEMENT
- OBJECTION
- ▣ PETITION

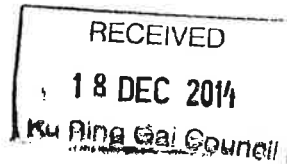
- SUBJECT LAND
- HERITAGE ITEM
- CONSERVATION AREA

**Ku-ring-gai
Council**





ALTO PRESTIGE PTY LTD



**870-898 PACIFIC HIGHWAY
GORDON**

ACCESS REVIEW

Morris-Goding Accessibility Consulting

FINAL v2

17th December 2014



REPORT REVISIONS		
Date	Version	Drawing No / Revision
21.03.2014	Final	102_2, 103_2, 104_2, 105_2, 106_2, 107_2, 108_2, 109_2, 110_2, 711_3, 712_3.
27.11.2014	Amended Final	102[A], 103[A], 104[A], 105[A], 108[A], 109[A], 110[A], 701A, 701B, 701C, 801D, 711[B].
17.12.2014	Amended Final V2	2838_102-Basement 03, 2838_103-Basement 02, 2838_104-Basement 01, 2838_105-Ground, 2838_106-Level 1, 2838_107-Level 2-4, 2838_108-Level 5, 2838_109-Level 6, 2838_701-Unit Types_1, 2838_702-Unit Types_2, 2838_703-Unit Types_3, 2838_704-Unit Types_4, 2838_711-Unit Types Adapt 1 And 2838_712-Unit Types Adapt 2.
<i>This report prepared by:</i>  Mohinder Padam Access Consultant Morris Goding Accessibility Consulting		<i>Reviewed by</i>  David Goding Director Morris Goding Accessibility Consulting

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1. EXECUTIVE SUMMARY

The Access Review Report is a key element in design development of 870-898 Pacific Highway, Gordon and an appropriate response to the AS1428 series, Building Code of Australia (BCA), DDA Access to Premises Standards (including DDA Access Code and ultimately the Commonwealth Disability Discrimination Act (DDA)).

Morris-Goding Accessibility Consulting has prepared the Access Report to provide advice and strategies to maximise reasonable provisions of access for people with disabilities.

The development has been reviewed to ensure that ingress and egress, paths of travel, circulation areas, accommodation and toilets comply with relevant statutory guidelines.

In general, the development has accessible paths of travel that are continuous throughout. In line with the reports recommendations, the proposed development has demonstrated an appropriate degree of accessibility. The Development Application drawings indicate that compliance with statutory requirements, pertaining to site access, common area access, accessible parking and adaptable units, can be readily achieved.

The recommendations in this report are to be developed in the ongoing design development and should be confirmed prior to construction certificate stage. As the project proceeds, further review of documentation is strongly recommended to ensure that appropriate access is provided to and throughout the development.

The main recommendations that have arisen from the access review include:

- (i) Ensure there is 1 adaptable car bay for each adaptable unit in the development (to a total of 21) in accordance with AS4299 and the Ku-Ring-Gai Council DCP.
- (ii) Ensure the adaptable car bays are to be located in close proximity to the lift core that services the adaptable unit associated with that car bay.

2. INTRODUCTION

2.1. General

Alto Prestige Pty. Ltd. has engaged Morris-Goding Accessibility Consulting to provide a design review of the proposed residential development located at 870-898 Pacific Highway, Gordon.

From the information provided, the proposed development is composed of 3 residential buildings with 3 levels of mixed residential/common car parking below. There are a total of 170 residential units provided in the development. There is a single retail tenancy on basement 03 level and 3 additional retail tenancies on ground floor.

The requirements of the investigation are to:

- Review supplied drawings of the proposed development.
- Provide a report that will analyse the provisions of disability design of the development, and
- Recommend solutions that will ensure the design complies with the Federal Disability Discrimination Act (DDA), DDA Access to Premises Standards (including DDA Access Code) and Building Code of Australia (BCA) and AS 1428 series.

2.2. Objectives

The report considers user groups such as residents and residential visitors. The Report attempts to deliver equality, independence and functionality to people with disabilities inclusive of:

- ✱ People with sensory impairment (hearing and vision)
- ✱ People with mobility impairments (ambulant and wheelchair)
- ✱ People with dexterity impairments

The Report seeks to provide compliance with the DDA. In doing so, the Report attempts to eliminate, as far as possible, discrimination against persons on the ground of disability.

2.3. Limitations

This report is limited to the accessibility provisions of the buildings in general. It does not provide comment on detailed design issues, such as: internals of accessible, fit-out, lift specification, slip resistant floor finishes, door schedules, hardware and controls, glazing, luminance contrast, stair nosing, TGSI's, handrail design, signage, hearing augmentation etc. that will be included in construction documentation.

2.4. Statutory Requirements

The following standards are to be used to implement the Report:

- AS 1428.1:2009 (General Requirements for Access-New Building Work)
- AS 4299:1995 (Adaptable Housing Code)
- AS 1735.12:1999 (Lifts, Escalators, & Moving Walks)
- AS 2890.6:2009 (Off Street Parking for People with Disabilities)
- BCA – Building Code of Australia 2013
- DDA Access to Premises Standards 2010

- Ku-Ring-Gai DCP Part 7 2012

3. INGRESS & EGRESS

3.1. Building A Entry

From the pedestrian footpath there are stairs and a ramp leading to the Building A lobby on basement 3 level. There are dual-hinged doors leading into the lobby area with appropriate door clearances and circulation in accordance with AS1428.1.

There is a suitable accessible path of travel to the lift lobby area compliant with AS1428.1.

Recommendations:

- (i) Ensure the entry ramp has a maximum 1:14 gradient compliant with AS1428.1 and the DDA Premises Standards.
- (ii) Provide handrails on both sides of the ramp and stairs with suitable TGSIs compliant with AS1428.1.

3.2. Building B Entry

There is an accessible path of travel from the pedestrian footpath near Pacific Highway to Block B on the ground floor of the development. A level accessible path of travel between buildings is achievable.

The entry doors are setback from the site boundary with dual-hinged entry doors leading into lobby areas. The dual-hinged entry doors have appropriate door clearances and circulation compliant with AS1428.1.

3.3. Building C Entry

There are entry stairs leading from Fitzsimons Lane to the Retail tenancy and forecourt on basement 3 level. Modification of the stair is required at the boundary to ensure suitable clearances for handrails and TGSIs. There is a level accessible path of travel to the retail forecourt located no greater than 50m from the entry stairs compliant with AS1428.1.

The forecourt area has stairs leading to the lobby area of Block C. There is a ramp adjacent to the stairway which provides an accessible path of travel compliant with AS1428.1. There are suitable clearances for compliant handrails.

From the entry ramp, there is a suitable accessible path of travel to the lift lobby areas compliant with AS1428.1. There are dual-hinged entry doors leading into the lobby area compliant with AS1428.1 and the DDA Premises Standards.

There is a suitable accessible path of travel to the lift lobby area compliant with AS1428.1.

Recommendations:

- (i) Ensure the entry stair is recessed 900mm from the site boundary to allow for suitable handrails and TGSIs, compliant with the DDA Premises Standards.
- (ii) Ensure the entry ramp has a maximum 1:14 gradient compliant with AS1428.1 and the DDA Premises Standards.
- (iii) Provide handrails on both sides of the ramp and stairs with suitable TGSIs compliant with AS1428.1.

3.4. Emergency Egress

There are a total of 6 fire stairs within the development (2 in each block) providing an egress route from all residential floors and from the basement levels to ground floor. All fire doors have 800mm clear widths.

The ground level pathways to the site boundary are regarded as the most appropriate means of accessible egress in the event of an emergency situation.

Recommendations:

- (i) Provide at least one accessible handrail within all fire-isolated stairs, compliant with AS1428.1 as required under BCA 2013 part D2.17.
- (ii) Consider providing 850mm clear width fire doors (advisory).
- (iii) Consider that emergency services include audible and visual warnings and signals to assist people with sensory disabilities (advisory).

4. PATHS OF TRAVEL

4.1. General

There is an accessible path of travel from all building entries to the front entry doors of all ground floor units and to all residential lift lobbies on the ground floor. There currently does not appear to be any linkages between buildings.

There are internal corridor doors within Building B. Doorways have suitable clearances and circulation compliant with AS1428.1.

In general, all common paths of travel have suitable clearances to allow wheelchair users to perform 180° turns and for two wheelchair users to pass one another in front of lift lobbies.

The passenger lifts provide an appropriate continuous path of travel to all residential and basement levels of each building in accordance with the DDA Premises Standards.

Recommendations:

- (i) Ensure all corridors within Building A have suitable 1540mm x 2070mm clearances within 2m of the ends of corridors, compliant with AS1428.1.
- (ii) Ensure common area floor surfaces are suitably slip resistant and traversable by a wheelchair or walking frame, compliant with AS 1428.1:2009 and HB197/AS4856 (wet pendulum method).

4.2. Doors

In general, all common use doors in the development have suitable 850mm clear door width and appropriate circulation areas compliant with AS1428.1.

Recommendation:

- (i) Ensure all common use doors (e.g. retail tenancies) have minimum 850mm clear width (generally 920mm door leaf) and appropriate door circulation compliant with AS1428.1 Fig. 31.

4.3. Lifts

There are a total of 5 passenger lifts within the proposed development with 2 within Building A, 2 servicing Building B and 1 for Building C.

The passenger lifts in each building form an accessible path of travel between all residential and basement levels compliant with AS1428.1 and the DDA Premises Standards.

All passenger lifts are identical and have internal dimensions of approximately 1600mm x 2000mm compliant with the DDA Premises Standards.

Recommendation:

- (i) Lift car components (grabrail, control buttons, lighting) to comply with AS1735.12.

4.4. Sanitary Facilities

There is an accessible toilet proposed within the retail tenancy on basement 3. The accessible WC has appropriate internal dimensions to provide suitable clearances around the pan, basin and shower.

There is a unisex toilet adjacent the accessible toilet. In accordance with the DDA

Premises Standards Part F2.4(c), this toilet has suitable clearances and circulation to comply with ambulant cubicle requirements.

Recommendation:

- (i) Accessible toilet and ambulant toilet fixtures to comply with AS1428.1.

5. ACCOMMODATION

5.1. Residential Units

There is an accessible path of travel from the main entrance of each building to the passenger lifts(s) of that building. The passenger lifts provide an appropriate continuous accessible path of travel to all unit entry doors on all floors in each of the buildings. There are a total of 170 residential units within the development.

The development falls under Ku-Ring-Gai Council. According to Council DCP, a minimum of 10% of total units is required to be designed according to AS4299 and AS1428.1. The unit summaries nominate a total of 21 adaptable units over buildings A and B in the development, satisfying the requirements of the Ku-Ring-Gai Council DCP (17 adaptable units required).

Additionally, according to Council DCP, a minimum of 70% of total units is required to be visitable.

The following section outlines the requirements for adaptable and visitable unit design.

5.2. 1 Bed + Study A Adaptable Unit Design

The entry door has appropriate clearances and circulation which lends itself to providing appropriate clearances in front of the laundry appliances adjacent. There is a kitchen located near the entry. The kitchen has suitable circulation areas based on AS4299. There is a suitable 8700mm long bench space adjacent the cooktop.

The living area has suitable clearances and circulation for wheelchair manoeuvrability in accordance with AS4299 with a continuous accessible path of travel to the bedroom and bathroom.

The bedroom door has suitable doorway clearances and circulation in accordance with AS1428.1. The adaptable bedroom has appropriate clearances (ie 1000mm each side of bed, 1000mm at the base of the bed and 1540mm x 2070 near the door at the base of the bed), compliant with AS4299.

The bathroom appears to have suitable internal dimensions that will allow the circulation areas of pan, basin and shower to achieve compliance with AS4299. The basin will be removed and basin to be repositioned. The pan will be relocated and the shower area will remain.

Recommendations:

- (i) Provide slip-resistant floor surface with min. wet pendulum test rating of 'X' (under HB197/AS4856) in all adaptable unit bathrooms, kitchens and laundries at pre-adaption stage as required in AS4299 clause 4.5.4. Test results will be required at OC Stage.

5.3. 1 Bed + Study B Adaptable Unit Design

The adaptable unit entry door 850mm clear width (920mm door leaf) with appropriate (in/out) latch side clearances, as per the requirements of AS1428.1 – 2009.

The laundry has appropriate 1550mm diameter clearances in front of appliances, compliant with AS4299.

The kitchen island bench will be capable of moving to cater for circulation areas under AS4299. A suitable 800mm clearance between sink, cooktop and refrigerator is achievable.

The living area has appropriate clearances for wheelchair manoeuvrability with appropriate paths of travel to the bedroom and bathroom.

The bathroom appears to have suitable internal dimensions that will allow the circulation areas of pan, basin and shower to achieve compliance with AS4299. The basin will be removed and basin to be repositioned. The pan will be relocated and the shower area will remain.

The bedroom door has suitable doorway clearances and circulation in accordance with AS1428.1. The adaptable bedroom has appropriate clearances (ie 1000mm each side of bed, 1000mm at the base of the bed and 1540mm x 2070 near the door at the base of the bed), compliant with AS4299.

Recommendation:

- (i) Provide slip-resistant floor surface with min. wet pendulum test rating of 'X' (under HB197/AS4856) in all adaptable unit bathrooms, kitchens and laundries at pre-adaption stage as required in AS4299 clause 4.5.4. Test results will be required at OC Stage.

5.4. 2 Bed C Adaptable Unit Design

The adaptable unit entry door 850mm clear width (920mm door-leaf) with appropriate (in/out) latch side clearances, as per the requirements of AS1428.1 – 2009.

The kitchen island bench will be capable of moving to cater for circulation areas under AS4299. A suitable 800mm clearance between sink, cooktop and refrigerator is achievable.

The living area has appropriate clearances for wheelchair manoeuvrability with appropriate paths of travel to the bedroom and bathroom.

The bathroom appears to have suitable internal dimensions that will allow the circulation areas of pan, basin and shower to achieve compliance with AS4299. The basin will be removed and basin to be repositioned. The pan will be relocated and the shower area will remain.

The bedroom door has suitable doorway clearances and circulation in accordance with AS1428.1. The adaptable bedroom has appropriate clearances (ie 1000mm each side of bed, 1000mm at the base of the bed and 1540mm x 2070 near the door at the base of the bed), compliant with AS4299.

Recommendations:

- (i) The laundry will require 1550mm circulation area from the outset
- (ii) Provide slip-resistant floor surface with min. wet pendulum test rating of 'X' (under HB197/AS4856) in all adaptable unit bathrooms, kitchens and laundries at pre-adaption stage as required in AS4299 clause 4.5.4. Test results will be required at OC Stage.

5.5. Visitable Units

The unit summaries show a total of 170 units.

From our review, 70% of the units (119 no.) have an accessible path of travel from unit entry to living area and an accessible pathway to a visitable toilet. The visitable toilet has 900mm x 1250mm area in front of pan.

Recommendation:

- (i) The entry door and visitable toilet to have 850mm clear width (920mm door leaf) compliant with AS1428.1.

6. COMMON USE RESIDENTIAL FACILITIES

6.1. Car Parking

There are 3 basement car parking levels of 203 car bays including residential (176) and visitor (37) car bays.

Of the 37 visitor car bays, 1 accessible car bay has been designed to be accessible in accordance with AS2890.6. There are 16 adaptable unit car bays. An additional car bay is required. There is no parking allocated to the retail tenancy.

All accessible car parking bays are 2400mm wide x 5400mm long and each have a 2400mm wide x 5400mm long shared bay adjacent compliant with 2890.6. All of the accessible car bays are located near the building B passenger lifts.

Recommendations:

- (i) Ensure the adaptable car bays are to be located in close proximity to the lift core that services the adaptable unit associated with that car bay.
- (ii) The approach to each accessible or adaptable car parking bay should not have vertical clearance of less than 2.2m.
- (iii) Consider providing adaptable car bays for the additional 4 adaptable units in the development (to a total of 21) in accordance with AS4299 and the Ku-Ring-Gai Council DCP (advisory).

6.2. Garbage Areas

There is garbage rooms located on the basement 3 level. The drawings show that all garbage room doors have appropriate clear width and door circulation compliant with AS1428.1. There appears to be sufficient space within the garbage rooms that will allow a wheelchair user to make 180° turns compliant with AS1428.1.

There are garbage chutes/recycling bin bays in the upper floors of Building A & B entry doors have appropriate door circulation spaces within corridors. However, door and latch side clearances including clearances within garbage rooms will need to be enlarges, compliant with AS1428.1-2009.

Recommendation:

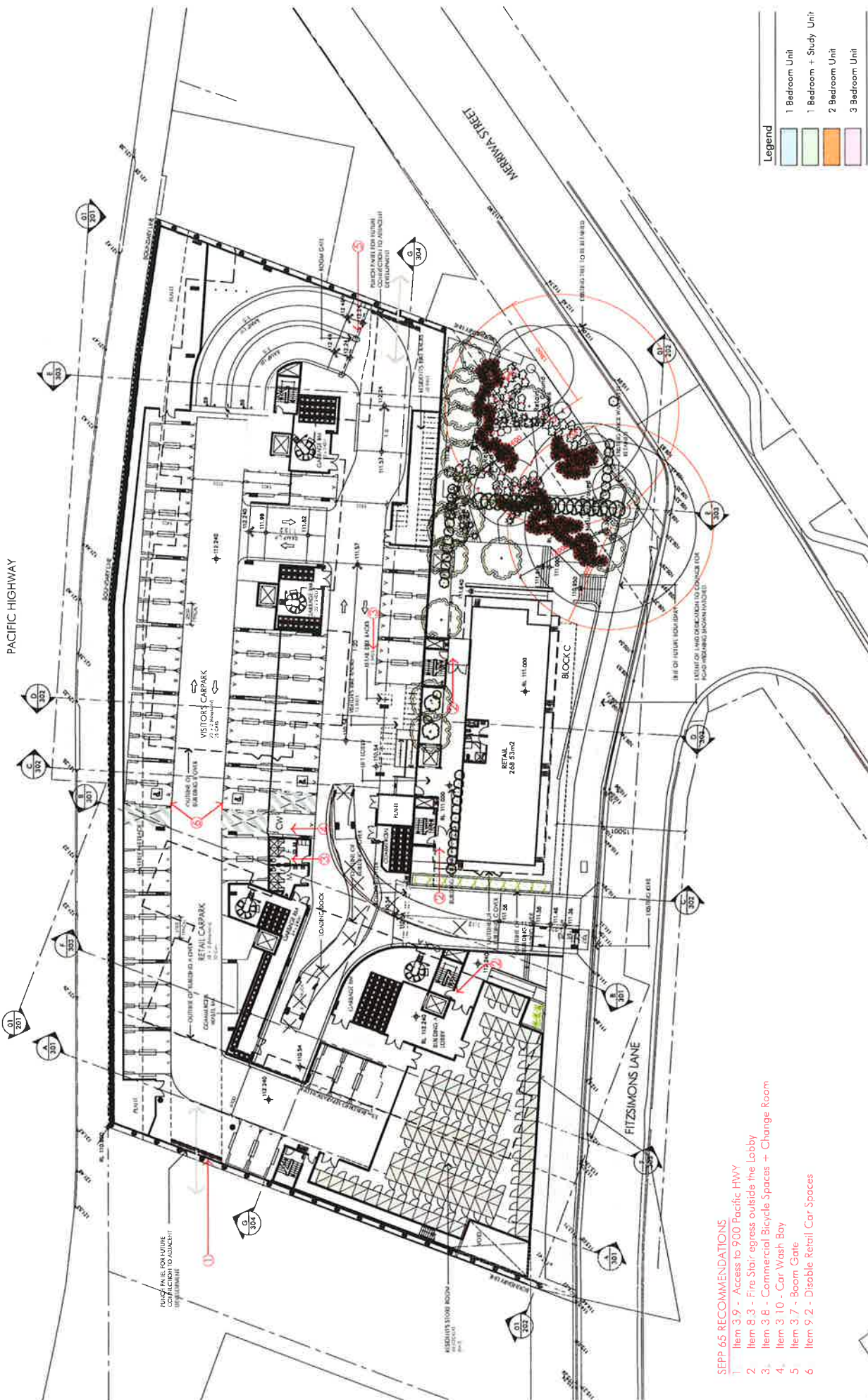
- (i) Entry doors to have 850mm clear width (920mm door leaf) with appropriate (in/out) latch side clearances, as per the requirements of AS1428.1 – 2009.
- (ii) Provide 1550mm diameter circulation spaces within garbage shoot rooms, compliant with AS1428.1-2009.

6.3. Mailbox Areas

Currently the drawings do not show details of the mailbox areas.

Recommendations:

- (i) Ensure an accessible path of travel to mailboxes from all buildings compliant with AS1428.1 and AS4299.
- (ii) Ensure a level area (maximum 1:40 gradient) over 1550mm diameter turning area in front of mailboxes suitable for a wheelchair user to perform 180° turns in accordance with AS4299.



Legend

1 Bedroom Unit
1 Bedroom + Study Unit
2 Bedroom Unit
3 Bedroom Unit

- SEPP 65 RECOMMENDATIONS**
- Item 3.9 - Access to 900 Pacific HWY
 - Item 8.3 - Fire Stair egress outside the Lobby
 - Item 3.8 - Commercial Bicycle Spaces + Change Room
 - Item 3.10 - Car Wash Bay
 - Item 3.7 - Boom Gate
 - Item 9.2 - Disable Retail Car Spaces

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Gordon NSW

BASEMENT 03
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Colston Budd Hunt & Kafes Pty Ltd

as Trustee for C & B Unit Trust
ABN 27 623 918 759

Our Ref: JH/9287/jj

14 July, 2015

Transport Planning
Town Planning
Retail Studies

Alto Group
c/- Nettleton Tribe
117 Willoughby Road
CROWS NEST NSW 2065

Attention: **Jeremy Bishop**
Email: JeremyBishop@nettletontribe.com.au

Dear Sir,

**RE: PROPOSED AMENDED RESIDENTIAL/RETAIL MIXED USE
DEVELOPMENT, 870-890 PACIFIC HIGHWAY, GORDON**

1. As requested, we are writing to set down our comments in relation to the amended drawings for the above development. We have previously prepared a report¹ which was submitted with the development application and a letter of 2 December 2014 regarding amended plans for the development.
2. Council has raised a number of matters in a subsequent letter regarding the application. In response to these matters, further amended drawings for the development have been prepared.
3. The amended development provides 144 residential apartments with ancillary retail of 730m². This compares to the previously proposed development which provided 147 apartments and 521m² retail.
4. Our comments in relation to the amended development are set down through the following sections:
 - parking provision;
 - access, servicing and internal layout;
 - traffic generation and effects;
 - matters raised by council; and
 - summary.

¹ Transport Report for Proposed Residential Mixed Use Development, 870-898 Pacific Highway, Gordon, May 2014.

Parking Provision

5. The Ku-ring-gai Local Centres DCP includes the following car parking requirements for mixed use developments:
 - 0.6 to one space per one bedroom apartment;
 - one to 1.25 spaces per two bedroom apartment;
 - two spaces per three bedroom apartment;
 - one space per six apartments for visitors; and
 - one space per 17m² for retail uses.
6. With 77 one bedroom, 58 two bedroom and nine three bedroom apartments and 730m² retail proposed, the parking requirement is 189 to 235 spaces (122 to 168 resident spaces, 24 visitor spaces and 43 retail spaces). The proposed provision is 217 spaces (150 resident spaces and 67 visitor/retail spaces) which satisfies this requirement.
7. The DCP includes the following bicycle parking requirements for mixed use development:
 - one space per 600m² for employees for retail uses;
 - one space per 2,500m² for visitors for retail uses;
 - one space per five apartments for residents; and
 - one space per 10 apartments for residential visitors.
8. On this basis, 45 bicycle parking spaces are required (29 resident spaces and 16 retail/visitor spaces). 47 bicycle spaces are proposed in accordance with this requirement, on parking level B3.

Access, Servicing and Internal Layout

9. Access to the proposed development is proposed to be provided from Fitzsimons Lane. A two-way driveway would be provided for access to and from the parking levels and loading dock. The driveway would be a minimum of six metres wide to accommodate two-way traffic, in accordance with the Australian Standard for Parking Facilities (Part 1: Off-street car parking), AS 2890.1:2004.
10. Within the building, ramps will connect the three parking levels. The ramps will be provided with appropriate grades and transitions, in accordance with AS 2890.1:2004, to prevent vehicles scraping.
11. A loading bay will be provided on parking level B3. The bay will accommodate vehicles ranging in size up to 6.4 metre rigid trucks for waste collection and deliveries. Service vehicles will be able to enter and exit the site in a forward

direction. 3.5 metres height clearance will be provided, which satisfies the AS 2890.2 – 2002 requirement for a small rigid truck. It will also accommodate council's small waste collection vehicles which have a height clearance requirement of 2.6 metres.

12. Within the parking levels, spaces will be a minimum of 5.4 metres long by 2.5 metres wide with 5.8 metre wide circulation aisles and columns set back 750 mm from the front of spaces. Spaces with adjacent obstructions will be 0.3 metres wider. Disabled spaces will be 2.4 metres wide, with a 2.4 metre wide adjacent area for wheelchairs. Height clearance will be a minimum of 2.2 metres, with 2.5 metres above disabled spaces. These dimensions are considered appropriate, being in accordance with AS 2890.1:2004.

Traffic Generation and Effects

13. Traffic generated by the proposed development will have its greatest effects during morning and afternoon peak periods when it combines with commuter traffic. The RMS surveys of traffic generation of residential apartments indicate that high density residential flat buildings close to public transport generate 0.19 and 0.15 vehicles per hour per apartment (two-way) during weekday morning and afternoon peak hours respectively.
14. Based on five vehicles per hour per 100m² for the small retail component during the afternoon peak hour, the proposed development would generate some 60 to 65 vehicles per hour two-way during weekday peak hours. This is a low generation, similar to that assessed in our previous letter. Such a low generation would not have noticeable effects on the operation of the surrounding road network. Surrounding intersections would be able to cater for this additional traffic.

Matters Raised by Council

15. Council's most recent correspondence includes the following:

Waste management

The basement configuration has been amended and the retail area expanded. No amended Waste Management Plan was submitted and there does not seem to be enough space allocated for residential waste collection (this may be partly due to mislabelling). In addition it appears that internal collection of retail waste is now proposed, but the floor to floor height in the loading dock at 4.6 metres only leaves 100mm for the Basement 02 slab.

Colston Budd Hunt & Kafes Pty Ltd

The traffic engineer's comments only refer to the small waste collection vehicle, but the architectural plans show the 11 metre truck using the loading bay. This should be clarified.

A longitudinal section through the vehicular crossing and entry drive must be provided which demonstrates that adequate headroom and suitable driveway gradients are provided for access by the waste collection vehicles.

16. The space for residential waste collection is being addressed by the waste management consultant. As noted above, the height clearance in the loading bay and areas used by service vehicles will be 3.5 metres to accommodate small rigid trucks and garbage collection vehicles used by council. A small rigid truck will be suitable for collection garbage and deliveries to the small retail component. The long section is being prepared by the project architect.

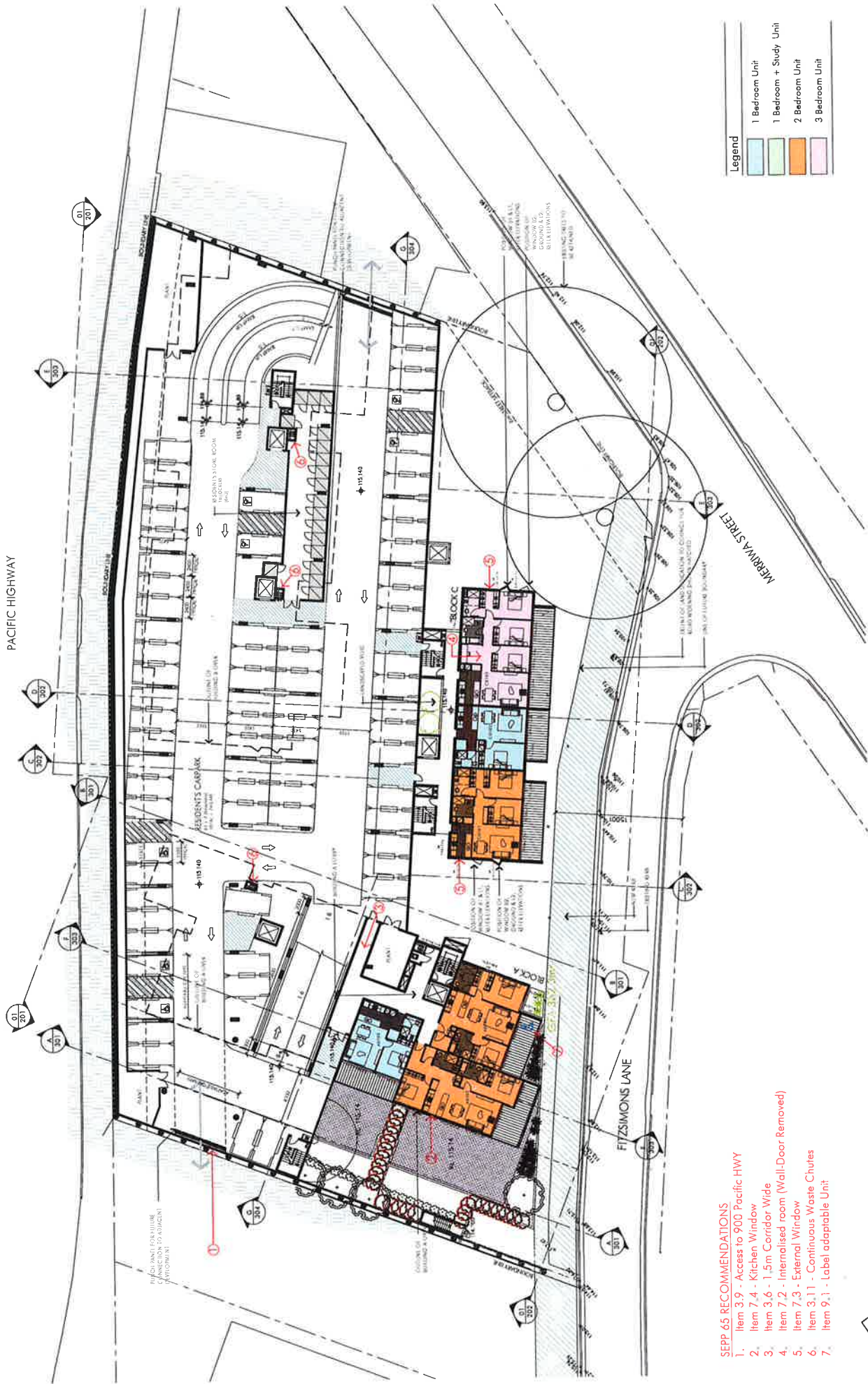
Summary

17. In summary, the main points relating to the traffic and parking implications of the proposed amended development are as follows:
- i) the proposed parking provision is considered appropriate;
 - ii) access, internal circulation and layout are considered appropriate;
 - iii) the proposed development will have a low traffic generation; and
 - iv) the road network will be able to cater for the traffic from the proposed development.
18. We trust the above provides the information you require. Finally, if you should have any queries, please do not hesitate to contact us.

Yours faithfully,
COLSTON BUDD HUNT & KAFES PTY LTD



J. Hollis
Director



Legend

	1 Bedroom Unit
	1 Bedroom + Study Unit
	2 Bedroom Unit
	3 Bedroom Unit

- SEPP 65 RECOMMENDATIONS**
- Item 3.9 - Access to 900 Pacific HWY
 - Item 7.4 - Kitchen Window
 - Item 3.6 - 1.5m Corridor Wide
 - Item 7.2 - Internalised room (Wall/Door Removed)
 - Item 7.3 - External Window
 - Item 3.1.1 - Continuous Waste Chutes
 - Item 9.1 - Label adaptable Unit

ARBORICULTURAL IMPACT REPORT

870-890 PACIFIC HIGHWAY
GORDON NSW

REVISED REPORT

18 NOVEMBER 2014

PREPARED FOR ALTO GROUP PTY LTD



Prepared by:
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1. BACKGROUND

Landscape Matrix Pty Ltd has been engaged by Alto Group Pty Ltd to prepare an Arboricultural report in respect to 16 trees potentially affected by a proposed new residential development with ancillary retail use at 870-890 Pacific Highway Gordon (the site). The trees assessed for this report are located within the site, in the SE corner of the site and on the Pacific Highway nature strip frontage of the site.

The site was inspected on 5 March 2014 to collect data for the 16 trees. The assessment of the trees was based upon a visual inspection of the trees from ground level using elements of the Visual Tree Assessment (VTA) approach developed by Mattheck & Breloer (1994). The visual inspection included examination of the trees' dimensions, foliage density and foliage health, form, structure, structural condition, overall health and vigour and landscape significance.

The inspection was limited to visual inspection of the trees without dissection, probing or coring. No aerial inspection of the trees was carried out and the assessment did not include any woody tissue testing or subterranean root investigation.

The tree heights and canopy spreads were estimated and expressed in metres and the tree diameters at breast height (DBH) were measured with a standard metal tape at approximately 1.4 metres above ground level and expressed in millimetres. The DBH for trees 15 and 16 was estimated from an adjacent staircase due to limited access to these trees.

Measurements from the trees referred to in this report are to be taken as if measured from the centre of the trees' trunks.

This report has been updated and revised in November 2014 in response to an amended development proposal.

2. TREES ASSESSED FOR THIS REPORT

Sixteen semi mature to mature trees have been assessed in preparing this report. The trees assessed for this report are located within the site, in the SE corner of the site and on the Pacific Highway nature strip frontage of the site. The location and context of the trees within the site is illustrated in the photograph on the cover page of this report.

A summary of these trees, their dimensions, condition, Safe Use and Life Expectancy (SULE) and landscape significance is attached in Appendix B. The SULE categories identified in Appendix B follow those of Barrell (1996).

The locations of the trees are shown on the attached Survey Plan prepared by Whelans Insites Pty Ltd dated 4/5/2011 and identified as Job Ref. H295, Drawing CAD Ref. H295-001. The sixteen trees are summarised in table 1 as follows:

Table 1: Summary of trees assessed at 870-890 Pacific Highway Gordon

Tree No.	Species and Common Name	Summary
1	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	A mature, single trunked palm approximately 9 metres in height with a frond spread of 6 metres and a diameter at breast height (DBH) of 360mm. In good health and an environmental pest species of low landscape significance. Located on the Pacific Hwy nature strip frontage of the site.
2	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	A mature, single trunked palm approximately 7 metres in height with a frond spread of 6 metres and a DBH of 310mm. In good health and an environmental pest species of low landscape significance. Located on the Pacific Hwy nature strip frontage of the site. At the time of inspection the palm was of fair vigour with poor foliage coloration.
3	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	A mature, single trunked palm approximately 9 metres in height with a frond spread of 6 metres and a DBH of 290mm. In good health and an environmental pest species of low landscape significance. Located on the Pacific Hwy nature strip frontage of the site.
4	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	A mature, twin trunked specimen approximately 32 metres in height with a canopy spread of 23 metres and DBH of 480x620 and 780mm. In good health and of significant landscape value. The tree displays fair branch attachment with codominant leaders form 1.4 metres - not considered at risk of failure in the short term. Low levels of dieback in canopy typical for species and age. Additional dieback in mid/upper NW canopy.
5	<i>Thuja orientalis</i> (Chinese Arborvitae)	A semi mature, twin trunked specimen approximately 7 metres in height with a canopy spread of 1.5 metres and DBH of 70 and 120mm. In moderate health and of low landscape significance. At the time of inspection the tree was of moderate health and poor vigour and exhibited reduced foliage density and high levels of English Ivy growth over the tree.
6	<i>Angophora floribunda</i> (Rough Barked Apple)	A mature, single trunked specimen approximately 7 metres in height with a canopy spread of 4 metres and a DBH of 200mm. In poor health and of low landscape value. At the time of inspection the tree was of poor health and poor vigour and exhibited reduced foliage density, moderate levels of dieback and significant levels of English Ivy growth over the tree. The tree displays poor branch attachment being an epicormic shoot attached to a stump with decay following past removal of the tree to a stump 0.7 metres in height.
7	<i>Yucca sp.</i> (Agave - variegated form)	A mature, single trunked specimen approximately 5 metres in height with a canopy spread of 4 metres and a DBH of ca. 400mm. In good health and of low landscape value.
8	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	A mature, twin trunked specimen approximately 6 metres in height with a canopy spread of 8 metres and DBH of 100 and 110mm. In poor health and of low to moderate landscape significance. Continued next page...

		At the time of inspection the tree was of poor health and poor vigour with significant levels of English Ivy growth over the tree and significant levels of foliage browsing (possums?) - less than 1% foliage.
9	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	A mature, twin trunked specimen approximately 24 metres in height with a canopy spread of 22 metres and DBH of 380 and 1100x 1160mm. In good health and of high landscape significance. At the time of inspection the tree was of fair vigour and exhibited low to moderate levels of dieback with small to medium sized dead wood present. There are significant levels of English Ivy growing on the tree to 12 metres. The Ivy restricted visual assessment of the tree's structure.
10	<i>Schefflera actinophylla</i> (Umbrella Tree)	A mature, multi trunked specimen approximately 10 metres in height with a canopy spread of 6 metres and DBH of up to 200mm (630mm above the root flare). In moderate health and an environmental pest species of low landscape significance. The tree's past canopy development has been suppressed. The tree displays poor branch attachment with multiple leaders and evidence of poor attachment at the junctions (not considered at risk of failure in the short term).
11	<i>Muraya paniculata</i> (Murraya, Orange Jessamine)	A mature, multi trunked specimen approximately 4.5 metres in height with a canopy spread of 3.5 metres and DBH of up to 80mm (260mm above the root flare). In good health and of low landscape significance. The tree's past canopy development has been suppressed.
12	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	A mature, single trunked specimen approximately 9 metres in height with a canopy spread of 11 metres and a DBH of 250mm. In moderate health and of moderate landscape value. The tree's past canopy development has been suppressed. Significant levels of foliage browsing (possums?) - less than 1% foliage.
13	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia) x 2	Two semi mature specimens of 5 to 6 metres height with canopy spreads of 3 to 4 metres and DBH of 90mm. In moderate health and of low landscape significance. The tree's past canopy development has been suppressed. Significant levels of foliage browsing (possums?) - less than 1% foliage.
14	<i>Celtis sinensis</i> (Chinese Hackberry)	A semi mature, single trunked specimen approximately 12 metres in height with a canopy spread of 12 metres and a DBH of 280mm. In good health and an environmental pest species of moderate to high visual significance. Evidence of past mechanical injuries to lower trunk tissue on east side.
15	<i>Casuarina glauca</i> (Swamp Oak)	A mature, multi trunked specimen approximately 16 metres in height with a canopy spread of 14 metres and DBH of ca. 250, 250 and 700mm. In good health and of moderate to high landscape significance. The tree displays signs of instability being located close to the edge of an unconsolidated cutting downslope of the tree. The tree displays fair branch attachment with 3 codominant leaders form near ground level with some evidence of poor attachment at the junction - not considered at risk of failure in the short term.
16	<i>Howea forsteriana</i> (Kentia Palm)	A mature, single trunked palm approximately 12 metres in height with a frond spread of 6 metres and a DBH of ca. 200mm. In good health and of moderate landscape significance.

None of the trees assessed is listed individually as a threatened species under the NSW *Threatened Species Conservation Act 1995* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

It is noted that *Eucalyptus saligna* (Sydney Blue Gum) is a component species of the vegetation community identified as Blue Gum High Forest in the Sydney Basin Bioregion. This vegetation community is listed as a critically endangered ecological community under both the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

3. IDENTIFICATION OF SETBACKS FOR THE TREES

A number of methods to determine the likely extent of root zones and appropriate setbacks for tree root protection zones for trees on development sites have been developed in the past. The key criteria used in determining setbacks is the tree's trunk diameter at breast height (DBH) in conjunction with other factors including the sensitivity of the species in question to environmental disturbance/change, the age of the tree and the tree's health and vigour at the time.

Harris et al (2004) provide formulae for calculating tree protection zones based on the above criteria and modified from the 1991 British Standard for protection of trees on construction sites (BS 5837:1991). The 2005 version of the British Standard (BS 5837:2005) recommends a radius of 12 times the tree's DBH. For multi trunked trees BS 5837:2005 recommends a setback of 10 times the basal trunk diameter.

The Australian Standard AS 4970-2009 Protection of Trees on Construction Sites also identifies a 'Tree Protection Zone' of 12 times the tree's DBH. The Australian Standard also provides a formula for calculating the "Structural Root Zone" of trees on development sites. In regard to palms, other monocots, cycads and tree ferns the Standard identifies the Tree Protection Zone should not be less than 1 metre outside the crown projection. (Australian Standards Association 2009)

The tree protection zones identified below have been calculated using the Australian Standard AS 4970 Protection of Trees on Construction Sites and are the optimum setback from the trees where disturbance (e.g. soil level changes, compaction, excavation etc) should be minimised to reduce potential impacts on the long term health of the trees.

Table 2: Tree Protection Zones - 870-890 Pacific Highway Gordon

Tree No.	Species and Common Name	Tree Protection Zone	Structural Root Zone
1	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	4 metres	N/A
2	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	4 metres	N/A
3	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	4 metres	N/A
4	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	12 metres	4 metres
5	<i>Thuja orientalis</i> (Chinese Arborvitae)	2* metres	1.5 metres
6	<i>Angophora floribunda</i> (Rough Barked Apple)	2.4 metres	2.3 metres
7	<i>Yucca sp.</i> (Agave - variegated form)	3 metres	N/A
8	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	1.9 metres	1.7 metres
9	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	13.6 metres	3.6 metres
10	<i>Schefflera actinophylla</i> (Umbrella Tree)	7.6 metres	2.7 metres
11	<i>Murraya paniculata</i> (Murraya, Orange Jessamine)	2.9 metres	1.8 metres
12	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	3 metres	2 metres
13	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia) x 2	2* metres	1.5 metres
14	<i>Celtis sinensis</i> (Chinese Hackberry)	3.4 metres	2.2 metres
15	<i>Casuarina glauca</i> (Swamp Oak)	9 metres	3.6 metres
16	<i>Howea forsteriana</i> (Kentia Palm)	4 metres	N/A

* Minimum TPZ under AS4970-2009

Preferably, no more than 10% of the tree protection zone should be disturbed with compensation made by extension of other areas of the TPZ to compensate for the area(s) disturbed. Where greater than 10% of the tree protection zone is potentially disturbed the tree's viability needs to be investigated and demonstrated by the project arborist. The structural root zone is the area required for stability and where disturbance of any sort should be avoided.

4. POTENTIAL IMPACTS ON THE TREES

The impacts have been assessed using the following plans:

- Basement 01 Plan prepared by Nettleton Tribe dated 06/05/2014 and identified as Drawing No. 2838_104 (A), and
- Ground Floor Plan prepared by Nettleton Tribe dated 06/05/2014 and identified as Drawing No. 2838_105 (A).

The extent of potential impacts to the trees is summarised in the table 3 as follows. The extent of impacts to the trees in table 3 has been rated using the following guideline:

- 0% of root zone impacted – no impact of significance
- 0 to 10% of TPZ impacted – low level of impact
- 10 to 15% of TPZ impacted – low to moderate level of impact
- 15 to 20% of TPZ impacted – moderate level of impact
- 20 to 25% of TPZ impacted – moderate to high level of impact
- 25 to 35% of TPZ impacted – high level of impact
- >35% of TPZ impacted – significant level of impact

The root zone calculations referred to in this report were made using scale drawings of the trees' identified tree protection zones (TPZ) in a CAD program (TurboCAD®) with potentially affected areas added to the drawing. The area of potential impact was converted to a percentage of TPZ using a spreadsheet (Microsoft Excel®).

Table 3: Summary of potential impacts on the trees – 870-890 Pacific Highway Gordon

Tree No.	Species and Common Name	Summary
1	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	This palm is identified to be removed and replaced with a more suitable species on the nature strip frontage of the site.
2	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	This palm is identified to be removed and replaced with a more suitable species on the nature strip frontage of the site.
3	<i>Syagrus romanzoffiana</i> (Cocos Palm, Queen Palm)	This palm is identified to be removed and replaced with a more suitable species on the nature strip frontage of the site.
4	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	The proposed building is located 12 metres from tree at the closest point and is outside the tree's identified tree protection zone (TPZ) – no impact of substance. However, there are existing structures within the tree's TPZ that will require demolition/removal to create the landscape buffer that tree numbers 4 and 9 will be located within. These structures include buildings and carpark surfaces. A combination of tree protection fencing and ground protection will be required for the building demolition works. It is recommended the existing carpark surfaces be retained in situ during the bulk of construction works and only be removed at the stage when final landscape surfaces/works are being implemented to minimise disturbance within the TPZ.

5	<i>Thuja orientalis</i> (Chinese Arborvitae)	Located within the proposed landscape setback and identified to be removed as part of the works.
6	<i>Angophora floribunda</i> (Rough Barked Apple)	Located within the proposed landscape setback and identified to be removed as part of the works (poor health and poor vigour).
7	<i>Yucca sp.</i> (Agave - variegated form)	Located within the proposed landscape setback and identified to be removed as part of the works.
8	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	Located within the proposed landscape setback and identified to be removed as part of the works.
9	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	The proposed extension to the basement wall is located 7.85 metres from the tree at the closest point and, allowing for 800mm over-excavation, will impact on 16.12m ² or 2.77% of the tree's identified TPZ – this is a low level of impact and within an acceptable threshold. However, there are existing structures within the tree's TPZ that will require demolition/removal to create the landscape buffer that tree numbers 4 and 9 will be located within. These structures include buildings and carpark surfaces. A combination of tree protection fencing and ground protection will be required for the building demolition works. It is recommended the existing carpark surfaces be retained in situ during the bulk of construction works and only be removed at the stage when final landscape surfaces/works are being implemented to minimise disturbance within the TPZ.
10	<i>Schefflera actinophylla</i> (Umbrella Tree)	Located within the proposed landscape setback and identified to be removed as part of the works (undesirable species).
11	<i>Murraya paniculata</i> (Murraya, Orange Jessamine)	Located within the footprint of the basement and will require removal as part of the works.
12	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	Located within the proposed landscape setback and identified to be removed as part of the works (poor vigour).
13	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia) x 2	Located within the proposed landscape setback and identified to be removed as part of the works (poor vigour).
14	<i>Celtis sinensis</i> (Chinese Hackberry)	Located within the proposed landscape setback and identified to be removed as part of the works (weed species).
15	<i>Casuarina glauca</i> (Swamp Oak)	Located within the footprint of the basement and will require removal as part of the works.
16	<i>Howea forsteriana</i> (Kentia Palm)	Located within the footprint of the basement and will require removal as part of the works.

The potential impacts can be summarised as follows:

- The proposed works are outside the identified TPZ of tree number 4 and no impact of substance is predicted for this tree.
- The proposed works will encroach within 2.77% of the identified TPZ of tree number 9 – this is a low level of impact and within an acceptable threshold for the tree.
- There are existing structures within the TPZs of tree numbers 4 and 9 that will require demolition/removal to create the landscape buffer that these trees will be located within. These structures include buildings and carpark surfaces. A combination of tree protection fencing and ground protection will be required for the building demolition works. It is recommended the existing carpark surfaces be retained in situ during the bulk of construction works and only be removed at the stage when final landscape surfaces/works are being implemented to minimise disturbance within the TPZ.
- Tree numbers 1, 2 and 3 are proposed to be removed from the Pacific Highway frontage of the site and replaced with more appropriate species.
- Tree numbers 5, 6, 7, 8, 10, 11, 12, 13, 14, 15 and 16 are within or adjacent to proposed development works and identified to be removed as part of the works.

The following specific protection measures are recommended to assist in minimising potential impacts that may arise during the removal and replacement of the existing carpark surfaces within the identified protection zones of tree numbers 4 and 9:

- The existing surfaces are to be removed in small sections using light machinery and hand tools under the supervision of the site arborist to ensure roots immediately under the driveway/sealed areas are protected.
- Existing roots exposed by removal of the driveway are to be immediately covered by moist hessian or equivalent to prevent drying out and desiccation. The hessian is to be maintained in moist condition until the exposed roots are covered by installation of the new landscape surface/soil.

5. TREE PROTECTION MEASURES

The following generic tree protection measures are recommended to assist in minimising potential impacts to other trees that may be proposed for retention on the site.

A. Measures to be implemented prior to the commencement of any works on the site.

1. Trees to be retained are to be clearly identified by signage as protected trees.
2. The tree protection zones of trees to be retained are to be protected by fencing during the entire construction period except for specific areas directly required to achieve construction works.
3. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacing and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres and shall be installed prior to work commencing.
4. The tree protection fencing shall be installed as closely as possible to the alignment of the identified tree protection zone and shall be approved and certified by the site arborist prior to commencement of any construction or demolition works on the site.

B. Measures to be implemented and maintained during the life of construction works on the site.

5. Any excavation within the identified root protection zones of trees to be retained shall be carried out by hand to minimize disturbance to tree roots. Roots greater than 25mm are not to be damaged or severed without prior assessment by an arborist to determine likely level of impact and the restorative actions required to minimise the impacts of root damage.
6. Tree roots between 10mm and 25mm diameter, severed during excavation, shall be cut cleanly by hand by an experienced Arborist/Horticulturist with a minimum qualification of the Horticulture Certificate or Tree Surgery Certificate.
7. The following activities/actions are prohibited from the tree protection zones:
 - Soil cut or fill including excavation and trenching
 - Soil cultivation, disturbance or compaction
 - Stockpiling storage or mixing of materials
 - The parking, storing, washing and repairing of tools, equipment and machinery
 - The disposal of liquids and refueling
 - The disposal of building materials
 - The siting of offices or sheds
 - Any action leading to the impact on tree health or structure
8. Canopy pruning of trees identified for protection which is necessary to accommodate approved building works shall be undertaken in accordance with Australian Standard 4373-2007 'Pruning of Amenity Trees'.

6. CONCLUSION

Landscape Matrix has been engaged to assess 16 trees potentially impacted by a residential development with ancillary retail use at 870-890 Pacific Highway Gordon. The trees assessed for this report are located within the site, in the SE corner of the site and on the Pacific Highway nature strip frontage of the site.

The majority of the trees were of good health at the time of inspection and did not exhibit any visual evidence of significant pest or disease. However, tree numbers 6, 8, 12 and 13 were of declining health and vigour. In addition, tree numbers 4 and 15 displayed fair branch attachment with codominant leaders with some evidence of poor attachment at the junctions – these junctions are not considered at risk of failure in the short term. Tree number 10 has multiple leaders and evidence of poor attachment at the junctions.

Tree number 9 was of fair vigour and exhibited low to moderate levels of dieback with small to medium sized dead wood present. There are significant levels of English Ivy growing on this tree to 12 metres. The Ivy restricted visual assessment of the tree's structure.

In addition to the above, tree numbers 1, 2, 3 and 10 are environmental pest species.

The potential impacts can be summarised as follows:

- The proposed works are outside the identified TPZ of tree number 4 and no impact of substance is predicted for this tree.
- The proposed works will encroach within 2.77% of the identified TPZ of tree number 9 – this is a low level of impact and within an acceptable threshold for the tree.
- There are existing structures within the TPZs of tree numbers 4 and 9 that will require demolition/removal to create the landscape buffer that these trees will be located within. These structures include buildings and carpark surfaces. A combination of tree protection fencing and ground protection will be required for the building demolition works. It is recommended the existing carpark surfaces be retained in situ during the bulk of construction works and only be removed at the stage when final landscape surfaces/works are being implemented to minimise disturbance within the TPZ.
- Tree numbers 1, 2 and 3 are proposed to be removed from the Pacific Highway frontage of the site and replaced with more appropriate species.
- Tree numbers 5, 6, 7, 8, 10, 11, 12, 13, 14, 15 and 16 are within or adjacent to proposed development works and identified to be removed as part of the works.

The following specific protection measures are recommended to assist in minimising potential impacts that may arise during the removal and replacement of the existing carpark surfaces within the identified protection zones of tree numbers 4 and 9:

- The existing surfaces are to be removed in small sections using light machinery and hand tools under the supervision of the site arborist to ensure roots immediately under the driveway/sealed areas are protected.

- Existing roots exposed by removal of the driveway are to be immediately covered by moist hessian or equivalent to prevent drying out and desiccation. The hessian is to be maintained in moist condition until the exposed roots are covered by installation of the new landscape surface/soil.

Generic tree protection measures are identified in section 5 of the report to identify measures that could be used to assist in minimising potential impacts to other trees on and adjacent to the site that are proposed for retention.



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18 November 2014

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APPENDIX A



Photograph 1: Tree #s 5 and 6 - Illustrating the high to significant levels of English Ivy.



Photograph 2: Tree # 4 - Illustrating the codominant leaders from 1.4 metres.



Photograph 3: Tree # 9 - Illustrating the significant levels of English Ivy growing on the tree to 12 metres.



Photograph 4: Tree # 10 - Illustrating the multiple leaders and evidence of poor attachment at the junctions.



Photograph 5: Illustrating the significant possum browsing of foliage of tree numbers 8, 12 and 13 (tree 12 illustrated).



Photograph 6: Tree # 16 - Illustrating the unconsolidated cutting downslope of the tree.

APPENDIX B - TREE DATA SUMMARY - 870-890 PACIFIC HIGHWAY GORDON

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DPI for T22	DOL for 682	Foliage Condition	Age Class	Trunk	Trunk Lean	Grown balance	Past Pruning	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or disease	BUL2	Landscape Significance	Retention Value	Comments
1	<i>Syagrus romanzoffiana</i> (Cocco Palm, Queen Palm)	9	6	360	N/A	N/A	Good foliage condition	Mature	Single trunk	Upright	Balanced canopy area	No evidence of significant past pruning	Appears stable	N/A	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Environmental pest species	4	Located on the Pacific Hwy nature strip frontage of the site.
2	<i>Syngnathus romanzoffiana</i> (Cocco Palm, Queen Palm)	7	6	310	N/A	N/A	Fair foliage condition	Mature	Single trunk	Upright	Balanced canopy area	No evidence of significant past pruning	Appears stable	N/A	Good health	Fair vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Environmental pest species	4	Located on the Pacific Hwy nature strip frontage of the site. At the time of inspection the palm was of fair vigour with past foliage colouration.
3	<i>Syngnathus romanzoffiana</i> (Cocco Palm, Queen Palm)	9	8	250	N/A	N/A	Good foliage condition	Mature	Single trunk	Upright	Balanced canopy area	No evidence of significant past pruning	Appears stable	N/A	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Environmental pest species	4	Located on the Pacific Hwy nature strip frontage of the site.
4	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	32	23	780	1000	1550	Good foliage condition	Mature	Twin trunked	Upright	Balanced canopy area	Lower limbs pruned in past 0.7 metres high	Appears stable	Fair branch attachment	Good health	Good vigour	5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Significant in the landscape	1	The tree displays fair branch attachment with codominant leaders from 1.4 metres - not considered at risk of failure in the short term. Low levels of dieback in canopy typical for species and age. Additional dieback in midcrown N.W. canopy.
5	<i>Thuja orientalis</i> (Chinese Arborvitae)	7	1.5	70, 120	145	160	Fair foliage condition	Mature	Twin trunked	Upright	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Moderate health	Poor vigour	5%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Low landscape significance	3	Health and poor vigour and exhibited reduced foliage density and high levels of English ivy growth over the tree.
6	<i>Angophora torrida</i> (Rough Barked Apple)	7	4	200	200	410	Poor foliage condition	Mature	Single trunk	Upright	Balanced canopy area	Tree previously cut to stump 0.7 metres high	Appears stable	Poor branch attachment	Poor health	Poor vigour	20%	Dieback in stump	3 Short (5 to 15 years)	Low landscape significance	3	At the time of inspection the tree was of poor health and poor vigour and exhibited reduced foliage density, moderate levels of dieback and significant levels of English ivy growth over the tree. The tree displays a stump with decay following past removal of the tree to a stump 0.7 metres in height.
7	<i>Yucca sp.</i> (Agave - variegated form)	5	4	68, 400	N/A	N/A	Good foliage condition	Mature	Single trunk	Upright	Balanced canopy area	No evidence of significant past pruning	Appears stable	N/A	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Low landscape significance	3	
8	<i>Pistia chinensis</i> (Chinese Pistache, Pistache)	6	8	100, 110	160	210	Poor foliage condition	Mature	Twin trunked	Upright	Balanced canopy area	Upper branches pruned for OH wires on east	Appears stable	Fair branch attachment	Poor health	Poor vigour	10%	Significant levels of foliage browsing (possums?)	3 Short (5 to 15 years)	Low to moderate landscape significance	3	At the time of inspection the tree was of poor health and poor vigour with significant levels of English ivy growth over the tree. The tree displays a moderate level of dieback and significant levels of foliage browsing (possums?) - less than 1%.
9	<i>Eucalyptus saligna</i> (Sydney Blue Gum)	24	22	380, 1160	1135	1750	Good foliage condition	Mature	Twin trunked	Upright	Balanced canopy area	Mid canopy branches pruned for OH wires on east	Appears stable	Fair branch attachment	Good health	Fair vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	High landscape significance	1	At the time of inspection the tree was of fair vigour and exhibited low to moderate levels of dieback with small to medium sized dead wood present. There are significant levels of English ivy growing on the tree to 12 metres. The ivy restricted visual assessment of the tree's structure.
10	<i>Scaevola taccinifolia</i> (Murraya, Onopogon)	10	6	620 x 640 above the root line	630	630	Fair foliage condition	Mature	Multi trunked	Upright	Majority of canopy to the NW	No evidence of significant past pruning	Appears stable	Poor branch attachment	Moderate health	Fair vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Environmental pest species	4	The tree's past canopy development has been suppressed. The tree displays poor branch attachment with multiple leaders and evidence of poor attachment at the junctions (not considered at risk of failure in the short term).
11	<i>Murraya paniculata</i> (Murraya, Onopogon)	4.5	3.5	240	240	240	Good foliage condition	Mature	Multi trunked	Upright	Majority of canopy to the south	Lower limbs pruned in past to 1.5 metres	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Low landscape significance	3	The tree's past canopy development has been suppressed.
12	<i>Parado chinensis</i> (Chinese Pistache, Pistache)	9	11	250	250	310	Poor foliage condition	Mature	Single trunk	Upright	Majority of canopy to the NE	Lower limbs pruned in past to 3 metres	Appears stable	Sound branch attachment	Moderate health	Poor vigour	5%	Significant levels of foliage browsing (possums?) - less than 1%.	3 Short (5 to 15 years)	Moderate landscape significance	3	The tree's past canopy development has been suppressed. Significant levels of foliage browsing (possums?) - less than 1%.

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (cm)	DBH for TPZ (cm)	DBH for SPT (cm)	Foliage Condition	Age class	Trunk	Trunk Lean	Grown Balance	Pest Damage	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or Disease Significance	Landscaping Significance	Retention Value*	Comments
13	<i>Platanus chinensis</i> (Chinese Platanus)	5 to 6	3 to 4	50-90	50	15	Poor foliage condition	Semi Mature	Single trunk	Upright	Majority of canopy on LE & W side	Lower limbs pruned in past to 3 metres appears stable	Appears stable	Sound branch attachment	Moderate health	Poor vigour	5%	Significant levels of foliage browsing (possums?) - in pruning foliage. Decay wounds.	3 Short (5 to 15 years)	3	The tree's past canopy development has been suppressed. Significant foliage browsing (possums?) - less than 1% foliage.
14	<i>Cedrus deodora</i> (Chinese Cedar)	12	12	200	200	272	Good foliage condition	Semi Mature	Single trunk	Upright	Balanced canopy area	Lower limbs pruned in past to 4 metres	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	evidence of significant pest or disease	1 Long (> 40 years)	4	Evidence of past mechanical injuries to lower trunk fracture on east side.
15	<i>Casuarina glauca</i> (Swamp Oak)	16	14	250- 200	250	1200	Good foliage condition	Mature	Multi trunked	Upright	Balanced canopy area	No evidence of significant pest or disease	Displays signs of instability	Fair branch attachment	Good health	Good vigour	5%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	3	The tree displays signs of instability being located close to the edge of an unconsolidated cutting down slope of the road. The tree has a branch attachment with 3 codominant leaders for several years and with some evidence of poor attachment at the junction - not considered at risk of failure in the short term.
15	<i>Hovea tomentosa</i> (Korua Palm)	12	6	ca. 200	N/A	N/A	Good foliage condition	Mature	Single trunk	Upright	Balanced canopy area	No evidence of significant pest or disease	Appears stable	N/A	Good health	Good vigour	<5%	evidence of significant pest & disease	1 Long (> 40 years)	2	Moderate landscaping significance

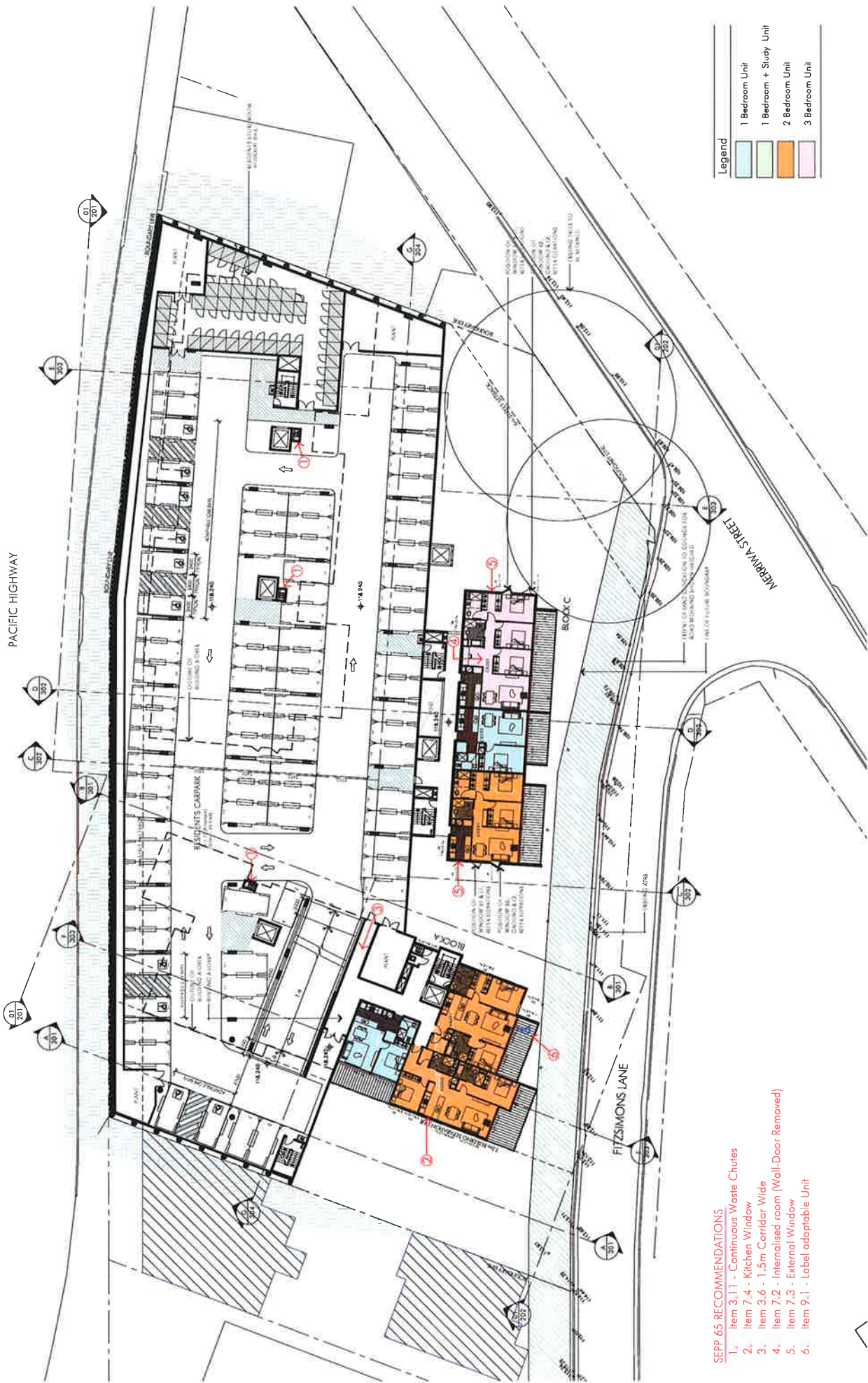
ca = approximate diameter at breast height (DBH) estimated from nearest property boundary or fence where trees were located on adjoining properties.
* Retention Values: 1 - High (Priority for retention); 2 - Moderate (Consider); 3 - Low or short term (Not warranting specific design consideration) and 4 - Remove (very short S.U.E. - structurally unsound, weed species, etc.).



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AO

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- SEPP 65 RECOMMENDATIONS**
- Item 3.1.1 - Continuous Waste Chutes
 - Item 7.4 - Kitchen Window
 - Item 3.6 - 1.5m Corridor Wide
 - Item 7.2 - Internalised room (Wall-Door Removed)
 - Item 7.3 - External Window
 - Item 9.1 - Label adaptable Unit

Legend

	1 Bedroom Unit
	1 Bedroom + Study Unit
	2 Bedroom Unit
	3 Bedroom Unit



Acoustic Report

**Residential Development
870 Pacific Highway Gordon**

Project 214 023

November 2014

File : 214 023 R01 v2-0 Acoustic Report

Prepared For
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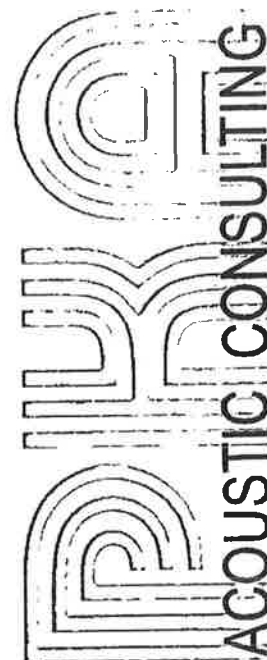
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This firm is a member of the Association of Australian Acoustical Consultants. The work reported herein has been carried out in accordance with the terms of membership.

We stress that the advice given herein is for acoustic purposes only, and that qualified personnel should be consulted with regard to compliance with requirements governing areas other than acoustics. All materials and recommendations have been determined only on the basis of their acoustic value. No consideration has been given to any other purpose or function. Separate advice must be sought for other issues including but not limited to, mechanical suitability, fire safety, structural and loading requirements, aesthetic value and for compatibility with any non-acoustic requirements.

1 Introduction

The purpose of this report is to assess the potential noise and vibration impacts from road and rail traffic onto the proposed residential development at 870 Pacific Highway, Gordon. Design goals for any future mechanical plant associated with the development are also provided.

This report has been prepared to accompany a Development Application for a residential development made up of three towers, located at 870 Pacific Highway Gordon, backing onto Fitzsimons Lane.

Noise intrusion from road and rail traffic has been assessed against *State Environmental Planning Policy (Infrastructure) 2007* (the SEPP) and the NSW Department of Planning's *Development near Rail Corridors and Busy roads – Interim Guideline*. Criteria for noise from future mechanical plant systems have been derived from the EPA's *Industrial Noise Policy* (INP).

This report is based on site inspections, measurements and calculations by PKA as well as architectural drawings prepared by Nettleton Tribe Partnership, project #2838 dated 14th November 2014.

2 Summary

The site has been assessed for noise intrusion from road and rail traffic as well as vibration impacts from the rail line.

Impacts from both noise and vibration from the North Shore rail line are low, and no additional treatment is required to address noise or vibration from the rail line.

Road traffic from the Pacific Highway was identified as impacting the site, with some areas of the new buildings requiring architectural treatment to satisfy the internal noise goals from the State Environmental Planning Policy (Infrastructure) 2007. Details of these requirements are set out in Section 8 of this report.

Details of any mechanical plant for the site are not currently available. Any mechanical plant which forms part of the development must be designed to comply with the noise criteria set out in Section 5.3 of this report.

3 Site Description

The site is bounded by Pacific Highway to the north and Fitzsimons Lane to the south. Directly adjacent the site to the east and west are commercial premises. The nearest residential premises are located on the southern side of Merriwa Street, approximately 30m from the site boundary.

The front of the site directly adjoins the Pacific Highway and is subject to significant road traffic noise.

The North Shore rail line is located to the north of the site, across the Pacific Highway and beyond a currently vacant car yard opposite. The nearest rail line is approximately 50m from the site boundary.

The development comprises three apartment blocks, Block A with 7 levels including 3 basement levels, Block B with 8 Levels and Block C with 3 Levels including 3 basement levels.

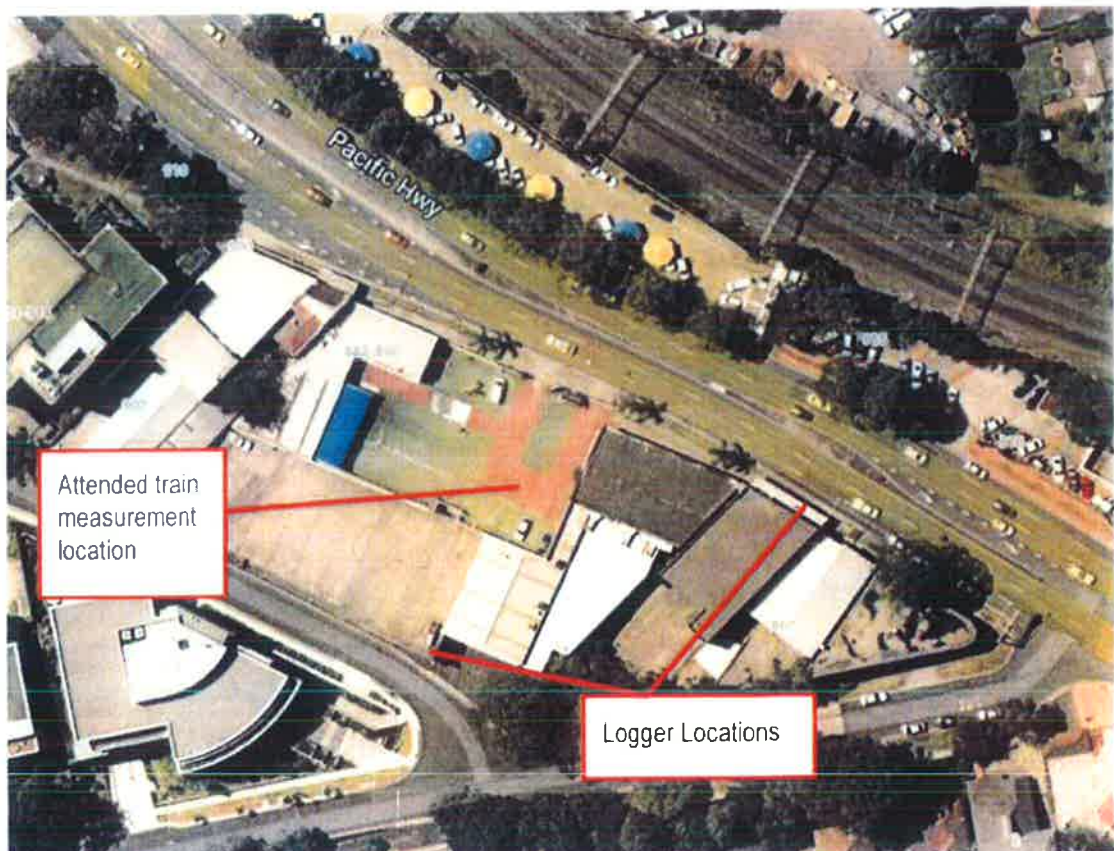


Figure 1: Site and measurement locations

4 Measurement Results

Measurements of rail and road traffic noise and well as rail vibration were carried out and are presented below

4.1 Unattended Noise Loggers

Existing background noise levels were measured at the site via the installation of two noise data loggers over a period of 8 consecutive days. One logger was located adjacent the Pacific Highway, on top of the ground floor awning of the existing commercial building at 870 Pacific Highway. A second logger was positioned in the south-western corner of the rear car park deck, overlooking Fitzsimons Lane.

The loggers recorded from 3:15pm on Monday 24th February to 11:30 am on Tuesday 4th March 2014. The loggers are an ARL Type 316 noise logger and sampled in 15 minute periods, using an A-weighting curve before converting the information to statistical quantities and commencing a new period. The loggers were calibrated prior to and following measurements with a Bruel & Kjaer Sound Level Calibrator Type 4230.

The average levels, calculated in accordance with the EPA Industrial Noise Policy (INP), are shown below.

	Day 0700-1800	Evening 1800-2200	Night 2200-0700
RBL Rating Background Level	60.8	57.6	39.7
Leq Noise Level $L_{Aeq(period)}$	71.5	69.8	67.6

Table 4.1: Noise logger at Pacific Highway boundary – INP descriptors

	Day 0700-1800	Evening 1800-2200	Night 2200-0700
RBL Rating Background Level	53.2	52.5	51.6
Leq Noise Level $L_{Aeq(period)}$	60.6	60.6	55.6

Table 4.2: Noise logger rear of development overlooking Fitzsimons Lane – INP descriptors

214 023 Acoustic Report - Residential Development 870 Pacific Highway Gordon

The average Leq noise levels for traffic noise assessment, calculated in accordance with the EPA Road Noise Policy (RNP), are shown below.

	Leq _(15h) Day 0700-2200	Leq _(9h) Night 2200-0700
Pacific Highway logger	71.1	67.5
Fitzsimons Lane logger	60.2	54.8

Table 4.3: Noise logger results - RNP descriptors

We note that the L₉₀ background noise levels at the rear of the site were significantly impacted by mechanical plant on the rooftop of the new residential apartment building on the southern side of Merriwa Street.

Daily noise logger graphs are presented in Appendix A

4.2 Attended Rail Noise Measurements

Train noise measurements were carried to capture the train pass-by levels. A set of measurements was taken approximately 60m from the railway line, near the proposed building facade. Measurements were carried out on Thursday 20th March 2014 between 1:50pm and 2:15pm

A NTI XL2 TA sound level meter was used to measure the train pass-by noise levels. The meter calibration setting was reference checked at the start and end of the monitoring period with a B&K 4320 sound level calibrator. No significant drift was detected.

The Leq and sound exposure noise level (SEL or L_{AE}) measurements for several train pass-bys are presented in Table 2.

Train Type	Direction	Leq contribution (excluding traffic) dB(A)
8 car Tangara	Up	62
8 car, Silver	Down	61
8 car, Millennium	Up	58
8 car, Tangara	Down	58
8 car, Millennium	Up	60
8 car, Silver	Down	62
8 car, Tangara	Up	58
8 car, Tangara	Down	60
8 car, Millennium	Up	63
8 car, Millennium	Down	59

Table 4.4: Measured Train Noise Levels

All measurements are free field with no façade reflection (2.5dB)

4.3 Rail Vibration Measurements

Attended train vibration measurements were taken near the Pacific Highway boundary at the nearest part of the development to the railway line. This location was approximately 50m from the nearest rails.

Measurements were carried out on Monday 24th February 2014 between 3:00pm and 4:05pm

A Svan 949 Sound & Vibration Analyser was used to measure the train pass-by. The meter calibration setting was reference checked at the start and end of the monitoring period with a B&K 4294 vibration exciter. No significant drift was detected.

The Vibration Dose Values (VDVs) for individual train passbys ranged from 2.3 to 4.3mm/s^{1.75} over 16 train passbys.

The current train timetable indicates there are approximately 202 trains passing the site during the Day period (7am-10pm) and 34 passing during the Night period (10pm-7am). Based on these volumes the expected total VDV for the Day period will be 0.012m/s^{1.75} and the VDV for the Night period will be 0.008m/s^{1.75}.

5 Criteria

Noise intrusion from road and rail traffic has been assessed against State Environmental Planning Policy (Infrastructure) 2007 (the SEPP) and the NSW Department of Planning's *Development near Rail Corridors and Busy roads – Interim Guideline*. Criteria for noise from future mechanical plant systems have been derived from the EPA's Industrial Noise Policy (INP).

5.1 Road traffic noise

Clause 102 of State Environmental Planning Policy (Infrastructure) 2007 must be applied for sites adjacent roads with AADTs in excess of 40,000 and may also be applied for best practice for sites with AADTs exceeding 20,000.

Guidelines to the application of the Infrastructure SEPP criteria are published by the NSW Department of Planning in their document titled *Development Near Rail Corridors and Busy Roads – Interim Guideline*.

Section 13.6.1 of the DoP guidelines sets internal noise criteria for residences with windows closed. It also states that:

"if internal noise levels with windows or doors open exceed the criteria by more than 10dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also meet the ventilation requirements of the Building Code of Australia"

The measurement metrics applied in the DoP criteria are the $L_{eq(15hr)}$ Day and $L_{eq(9hr)}$ Night levels. From this the following criteria would apply to the site:

Internal Space	Time Period	Internal Noise Level – Windows Closed	Measurement Descriptor
Sleeping areas (bedroom)	Night (10pm to 7am)	35 dB(A)	$L_{eq(9hr)}$ Night
Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	Day or Night	40 dB(A)	$L_{eq(15hr)}$ Day or $L_{eq(9hr)}$ Night

Table 5.1: Internal noise goals from DoP guidelines / SEPP Clause 102

5.2 Rail noise and vibration

Where a residential development is proposed adjacent to a rail corridor the provisions of the State Environmental Planning Policy (Infrastructure) 2007 ('Infrastructure SEPP') must be taken into account.

Clause 87 of the SEPP addresses sites affected by rail noise. Guidelines for implementation of the requirements of the SEPP are detailed in the NSW Department of Planning (DoP) document *Development Near Rail Corridors and Busy Roads – Interim Guideline*. The SEPP and DoP Guidelines contain criteria for both noise and vibration.

Rail noise criteria

Section 13.6.1 of the DoP guidelines sets internal noise criteria for residences with windows closed. It also states that:

"if internal noise levels with windows or doors open exceed the criteria by more than 10dB(A), the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also meet the ventilation requirements of the Building Code of Australia"

The measurement metrics applied in the DoP criteria are the Leq(15hr) Day and Leq(9hr) Night levels. From this the following criteria would apply to the site:

Internal Space	Time Period	Internal Noise Level – Windows Closed	Measurement Descriptor
Sleeping areas (bedroom)	Night (10pm to 7am)	35 dB(A)	Leq(9hr) Night
Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	Day or Night	40 dB(A)	Leq(15hr) Day or Leq(9hr) Night

Table 5.2: Internal noise goals from DoP guidelines / SEPP Clause 102

Rail vibration criteria

Section 3.6.3 of the DoP Guidelines require that intermittent vibration emitted by trains should comply with the criteria in the EPA's document *Assessing Vibration: a technical guideline*.

Table 2.4 of the *Assessing Vibration* guidelines set out the following acceptable vibration dose values for residences affected by intermittent vibration:

Period	Preferred VDV	Maximum VDV
Day (7am-10pm)	0.20	0.40
Night (10pm-7am)	0.13	0.26

Table 5.3: Acceptable vibration dose values for intermittent vibration in residences (m/s^{1.75})

5.3 Mechanical plant noise

Noise from any future mechanical plant on the site must be assessed against the EPA Industrial Noise Policy (INP).

In summary, the INP criteria require that the potential noise be investigated and assessed in relation to intrusiveness and amenity:

Intrusiveness Criterion

The intrusiveness of a stationary noise source may be considered acceptable if the average of the maximum A-weighted levels of noise, $L_{Aeq\ 15\ minute}$ from the source do not exceed by more than 5dB the Rating Background Level (RBL) measured in the absence of the source. This applies during all times of the day and night. There also exists an adjustment factor K_i to be applied according to the character of the noise. This includes factors such as tonal, fluctuating, low frequency, impulsive, intermittent etc. qualities of noise.

The RBL is determined in accordance with Section 3 - *Determining existing noise levels* of the policy.

The intrusiveness criterion is;

$$L_{Aeq\ 15\ minute} + K_i < RBL + 5$$

Amenity Criterion

To limit continuing increases in noise levels, the maximum ambient noise level within an area from commercial noise sources should not normally exceed the levels as specified in Section 2.2 of the policy. This protects against impacts such as speech interference and community annoyance. As for the intrusiveness criterion, a modifying factor should be applied to account for the characteristics of the noise source.

The recommended Acceptable Noise Level (ANL) for the amenity criterion is determined in accordance with Table 2.1 and Table 2.2 of the policy.

The residential receivers are in an Urban area (as defined in Chapter 2 of the INP), which has a recommended Acceptable Noise Level (ANL) of 60dB(A) during the Daytime, 50dB(A) during the Evening, and 45dB(A) during the Nighttime.

Site specific criteria

The site specific criteria are summarised below.

Criteria	Day	Evening	Night
Amenity	60	50	45
Intrusiveness	58	58	45

Table 5.4: Site Specific Limiting Criteria

* The time periods refer to daytime as 7:00am to 6:00pm, evening as 6:00pm to 10:00pm, and night time as 10:00pm to 7:00am. Therefore, the amenity criterion limit is described as $L_{Aeq\ 11\ hour}$ for the daytime, $L_{Aeq\ 4\ hour}$ for the evening, and $L_{Aeq\ 9\ hour}$ for the night time period. The intrusiveness criteria is an $L_{Aeq(15min)}$.

6 Predicted Noise Levels

6.1 Modelling Procedures And Assumptions

Traffic noise levels across the site have been predicted with SoundPlan v7.3, using the Calculation of Road Traffic Noise (CoRTN) methodology.

We have not been provided with detailed traffic volume data but for the purposes of modelling have assumed AADT traffic volumes of approximately 65,000 for the Pacific Highway and 45,000 for Ryde Road based on 2008 RTA traffic counts plus 6%.

The model was calibrated against the logger measurements on site. A model run based on the existing site layout and gave a result approximately 1dB higher than the noise level measured by the Pacific Highway logger. The model is therefore considered slightly conservative.

The noise predictions from CoRTN are in terms of $L_{10(18 \text{ hour})}$ descriptors. The criteria for the site are in terms of Leq levels. We have used noise logging data from the logger on the Pacific Highway to determine the following conversion factors which we have applied to the site:

Conversion from	Conversion to	Conversion factor
$L_{10(18hr)}$	$Leq(15hr)$ Day	-2.2
$L_{10(18hr)}$	$Leq(9hr)$ Night	-5.8

Table 6.1: Conversion from L_{10} to Leq

The finishes for each room are unknown at this stage. For the purposes of calculation of internal noise levels we have assumed a reverberation time of 0.5sec for bedrooms and 0.8sec for other habitable areas.

Receiver heights are based on 1.5m above floor level and noise contour maps show the noise level 1.5m above terrain level. Noise levels were calculated for all levels in each residential block.

6.2 Noise level results

Figure 6.1 below shows Daytime Leq(15h) noise levels across the site at 1.5m above ground level.

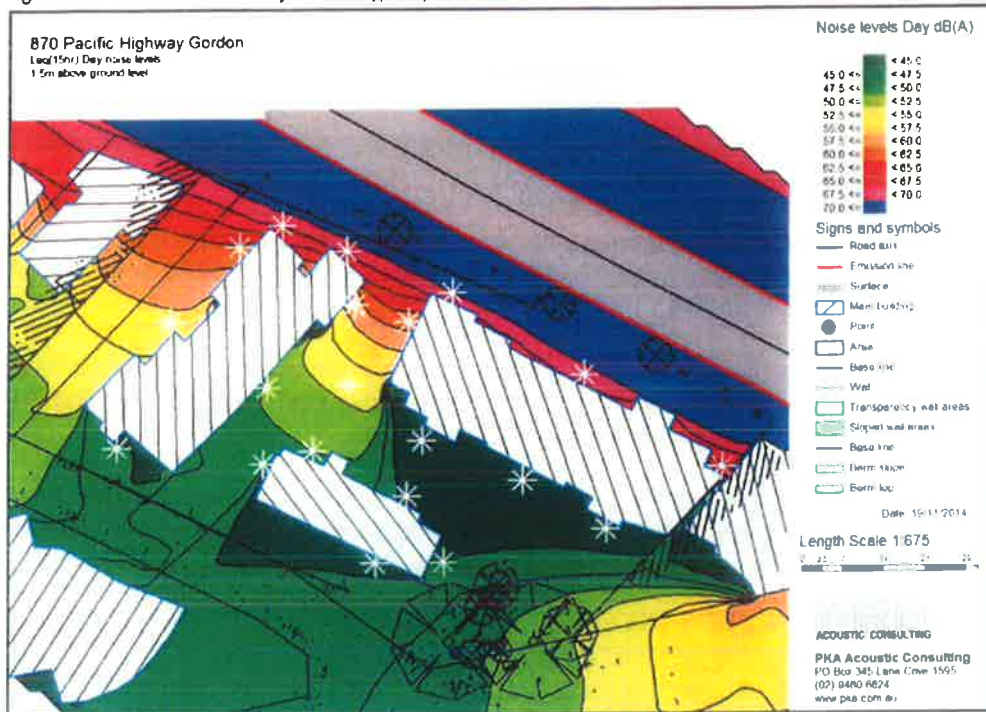


Figure 6.1: Noise level plot – Leq(15h) Day at 1.5m above ground level

A number of façade sections are affected by road noise and require acoustic treatment. Figure 6.2 below sets out the identification of façades used in the both the treatment table (Table 8.1) and the noise level table (Table 6.2)

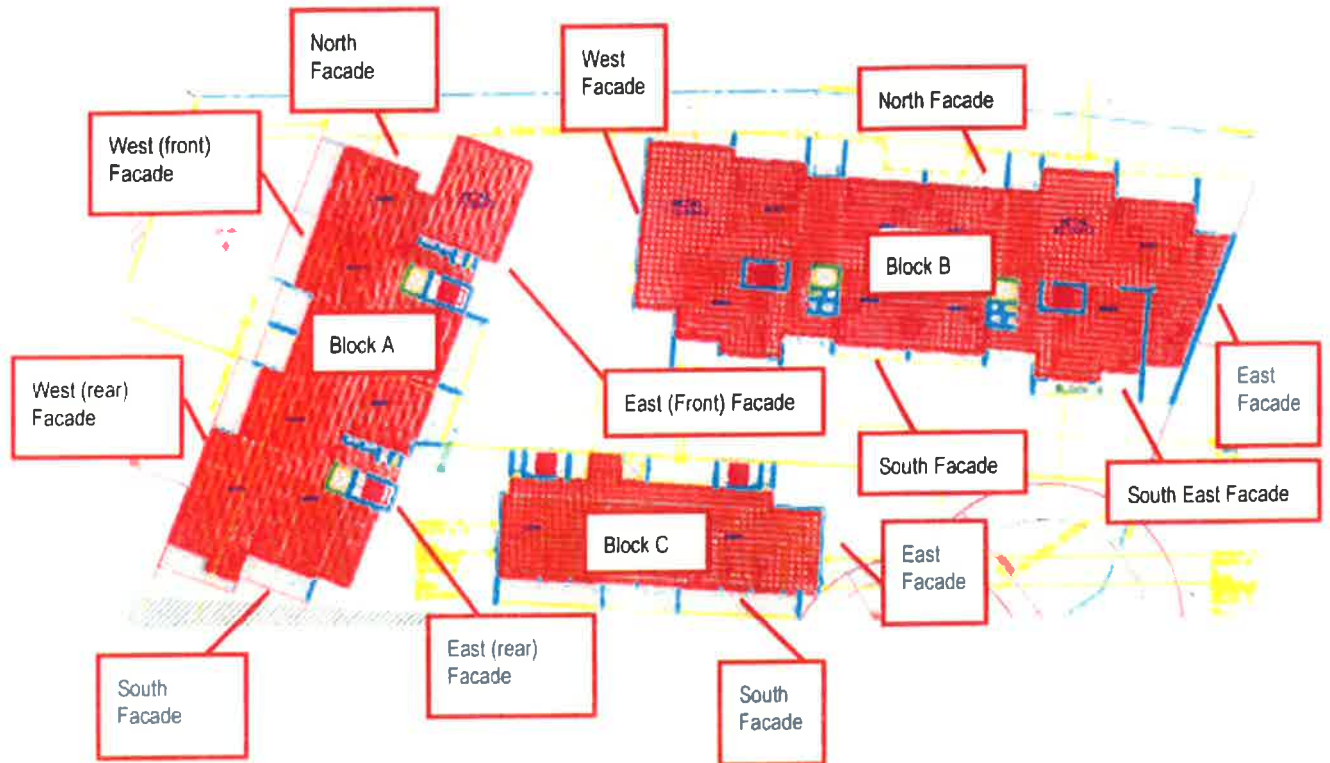


Figure 6.2: Façade identification

Table 6.2 below shows the external noise levels in dB(A) at each façade of the building, due to road traffic noise.

Block	Façade	Level	Day Time	Night Time
Block A	North	Ground - 6	74	70
	East (Front)	B2-B1	53	49
	East (Front)	Ground - 6	67	63
	East (Rear)	B2 - Ground	53	49
	East (Rear)	Levels 1 - 6	59	55
	South	All Levels	54	50
	West (Front)	Ground - 6	70	66
	West (Rear)	B2 - B1	53	49
	West (Rear)	Ground	63	60
	West (Rear)	Levels 1 - 6	67	64
Block B	North	Ground - 7	74	71
	East	Ground - 1	59	55
	East	Levels 2 - 3	64	60
	East	Levels 4 - 7	67	64
	South East	Ground	43	40
	South East	Level 1	47	43
	South East	Levels 2 - 5	59	55
	South East	Levels 6 - 7	60	56
	South	All Levels	47	43
	West	Ground - 7	69	66
Block C	North & East	All Levels	56	53
	South		51	48
	West		58	54

Table 6.2: Façade noise levels due to road traffic

7 Discussion.

7.1 Road Traffic Noise

From Table 6.2 the Daytime $L_{eq(15h)}$ traffic noise levels at the building façade range from 73/74dB(A) at the facades fronting directly onto the Pacific Highway to 58dB(A) at the rear of the site (Block C).

It is typically accepted that an open window (partially open to meet ventilation requirements) results in an attenuation of external noise of approximately 10dB. Where external noise levels are below 60dB(A) $L_{eq(15h)}$ Day and 55dB(A) $L_{eq(9h)}$ Night the SEPP internal noise criteria will be satisfied without any acoustic treatment to the building façade. This is the case for some facades, particularly towards the rear of the site, away from the Pacific Highway.

Where external noise levels are above 60dB(A) $L_{eq(15h)}$ Day or 55dB(A) $L_{eq(9h)}$ Night the affected facade will need to be acoustically upgraded to achieve the internal noise levels required by the SEPP. Section 8 sets out the required works for such areas.

7.2 Rail Noise

The current train timetable indicates there are approximately 202 trains passing the site during the Day period (7am-10pm) and 34 passing during the Night period (10pm-7am). Based on these volumes and the noise levels for individual train passbys set out in Section 4.2 the total L_{eq} levels for the Day and Night period have been calculated.

At the most affected point on the site the $L_{eq(15h)}$ Day from train noise is 45dB(A), whilst the $L_{eq(9h)}$ Night from train noise is 40dB(A).

It is typically accepted that an open window (partially open to meet ventilation requirements) results in an attenuation of external noise of approximately 10dB. Where external noise levels are below 60dB(A) $L_{eq(15h)}$ Day and 55dB(A) $L_{eq(9h)}$ Night the SEPP internal noise criteria will be satisfied without any acoustic treatment to the building façade. This is the case for the entire site.

As such no additional acoustic treatment is required to address rail noise.

7.3 Rail Vibration

From Section 4.3 the total VDV on site for the Day period will be $0.012\text{m/s}^{1.75}$ and the VDV for the Night period will be $0.008\text{m/s}^{1.75}$. These are well below the criteria set out in Table 5.3 of $0.20\text{m/s}^{1.75}$ for the Day period and $0.13\text{m/s}^{1.75}$ for the Night period.

As such no additional works are required to address rail vibration.

8 Recommendations

The traffic noise levels measured on site are sufficiently high to require acoustic treatment to parts of the external building envelope most exposed to the Pacific Highway. Noise modelling was carried out to predict the expected traffic noise levels each façade and floor level.

In calculating the recommendations we have assumed the following:

- All external walls and roof having a minimum performance of R_w 50 (to be verified prior to CC)
- All connections between wall and windows, roof and walls to acoustically sealed to future detail.

The recommendations are based on measurements taken from the DA drawings. As these drawings are general and not to construction detail it is recommended that the recommended R_w ratings for the glazing be reviewed by PKA against relevant dimensioned schedules when available. This may alter some of the R_w ratings.

8.1 Windows and Glazing

The R_w rating required for each window will vary from room to room. Recommendations for windows also apply to any other item of glazing located on the external facade of the building in a habitable room unless otherwise stated.

As can be seen from the tables, the calculated R_w requirements for some of the windows and glazed doors are higher than the R_w 23 expected from a standard glazing suite.

Where double glazing is selected, the minimum airspace between the panes is 150mm, this will achieve the minimum rating needed for this development to comply, a bigger airspace is recommended.

Where an R_w rating in excess of 35 is required (particularly where this includes a glass door) it may be preferable to provide a wintergarden/enclosed balcony. Options for glazing suites with sliding doors having performance in excess of R_w 35 are limited and superior performance may be achieved by two glazing suites (each with a lower R_w specification) that in combination achieve the total R_w requirement.

Note that the R_w rating is required for the complete glazing and frame assembly. The minimum glazing thicknesses will not necessarily meet the required R_w rating without an appropriate frame system. It will be therefore necessary to provide a window glass and frame system having a laboratory tested acoustic performance (in accordance with AS 1191 Acoustics – Method for laboratory measurement of airborne sound insulation of building elements) meeting that required in the above table.

The entire frame to the glazing must be sealed into the structural opening using acoustic mastics and backer rods. Normal weather proofing details do not necessarily provide the full acoustic insulation potential of the window system. The manufacturers' installation instructions for the correct acoustic sealing of the frame must be followed.

It is possible that structural demands for wind loading or fire rating or the like may require more substantial glass and framing assemblies than nominated above. Where this is the case the acoustic requirements must clearly be superseded by the structural or fire rating demands.

The following tables present the required Rw ratings for glazing and door elements for 870 Pacific Highway, Gordon. See Figure 6.1 for identification of the various facades.

Block	Façade	Level	Minimum Rw
Block A	North	Ground - 6	39
	East (Front)	B2-B1	<23
	East (Front)	Ground - 6	32
	East (Rear)	B2 - Ground	<23
	East (Rear)	Levels 1 - 6	<23
	South	All Levels	<23
	West (Front)	Ground - 6	35
	West (Rear)	B2 - B1	<23
	West (Rear)	Ground	28
	West (Rear)	Levels 1 - 6	32
Block B	North	Ground - 7	35
	East	Ground - 1	<23
	East	Levels 2 - 3	29
	East	Levels 4 - 7	32
	South East	Ground - 5	<23
	South East	Levels 6 - 7	25
	South	All Levels	<23
	West	Ground - 7	34
Block C	All facades	All Levels	<23

Table 8.1 Minimum Rw Glazing Requirements

Where an Rw rating of less than 23 is specified in the table above standard glazing units (with no specific acoustic rating) will be sufficient.

8.2 External doors

Doors from sleeping or other habitable rooms to external areas must also achieve the Rw performances identified in Table 8.1.

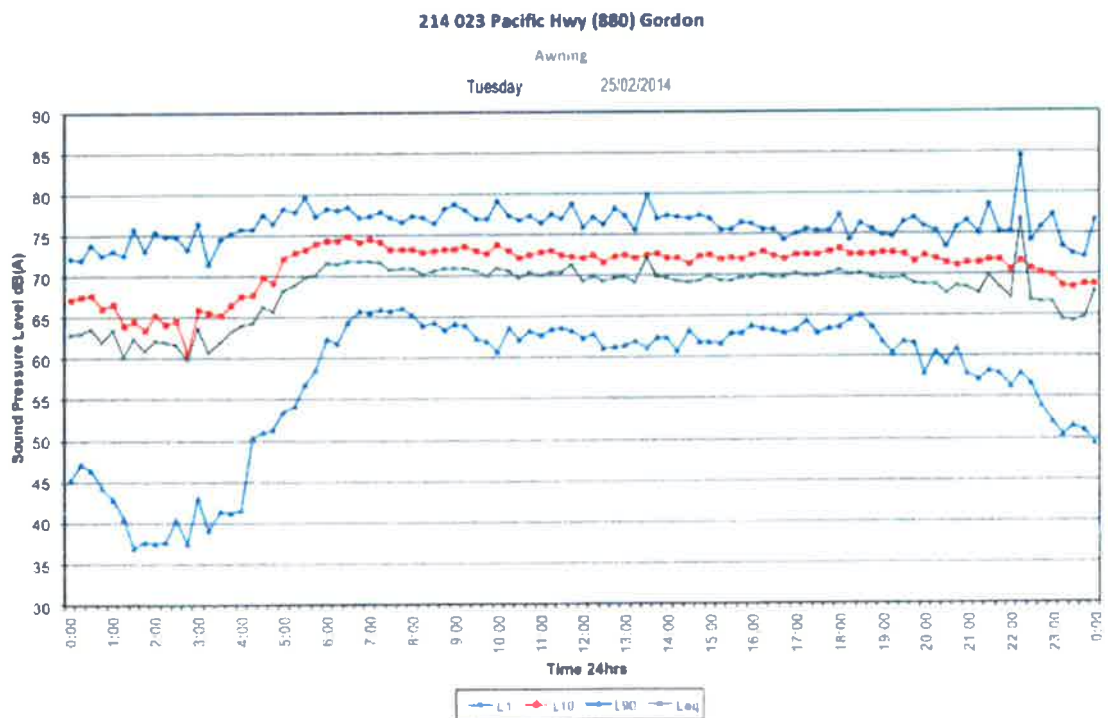
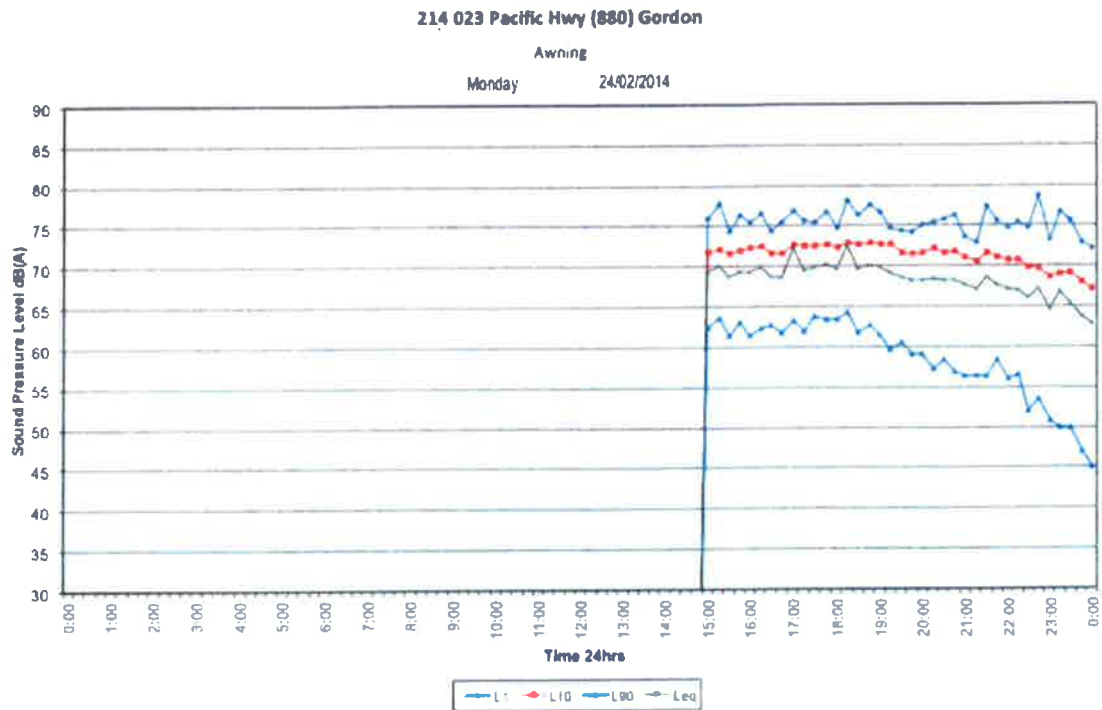
8.3 Penetrations in façade and roof

Penetrations in the building façade, and to a lesser extent the roof, will provide an ingress path for intruding traffic noise. Such penetrations frequently appear for kitchen and toilet exhaust fans, outside air intakes etc., particularly those that directly serve an apartment. In these instances the penetrations and associated ductwork must be acoustically designed and detailed such that the specified acoustic performance of the façade is not compromise. This must be checked prior to CC.

8.4 Alternative ventilation

The DoP Interim Guidelines require that where rooms are identified in Table 8.1 as requiring upgraded glazing the design of ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also meet the ventilation requirements of the Building Code of Australia.

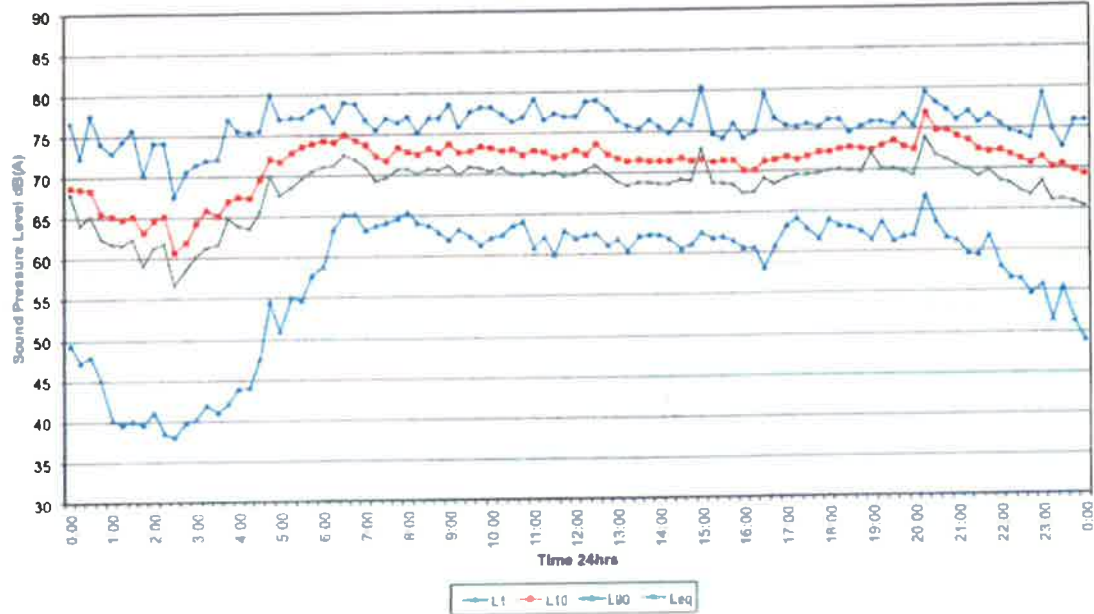
8 APPENDIX A - Noise logger at Pacific Highway Boundary



214 023 Pacific Hwy (880) Gordon

Awning

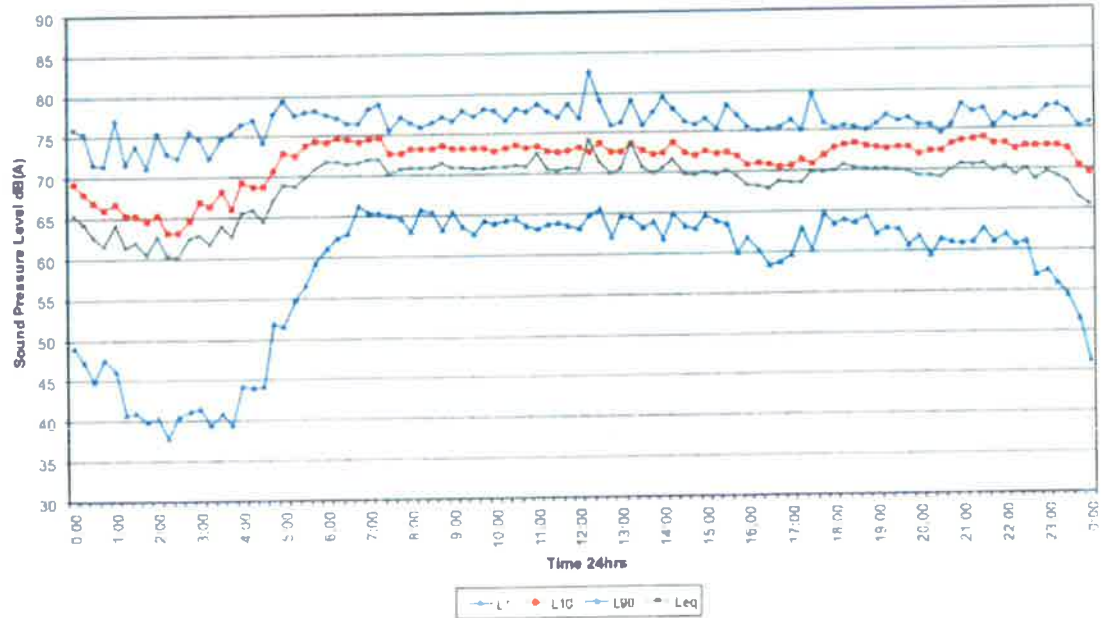
Wednesday 26/02/2014

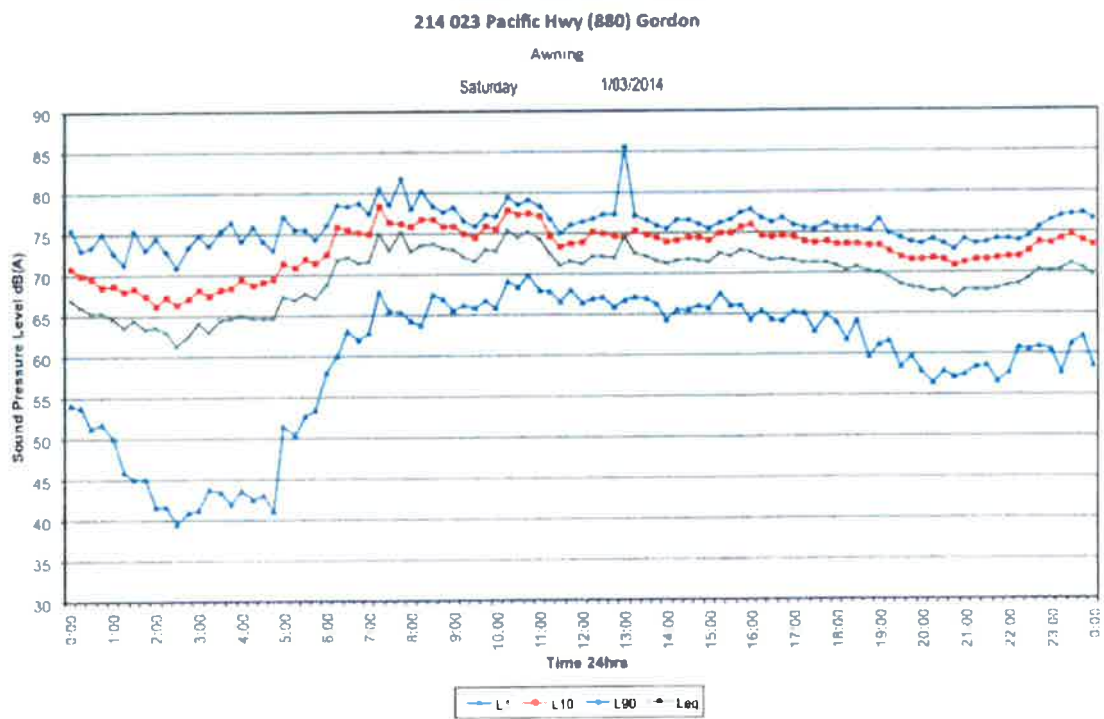


214 023 Pacific Hwy (880) Gordon

Awning

Thursday 27/02/2014

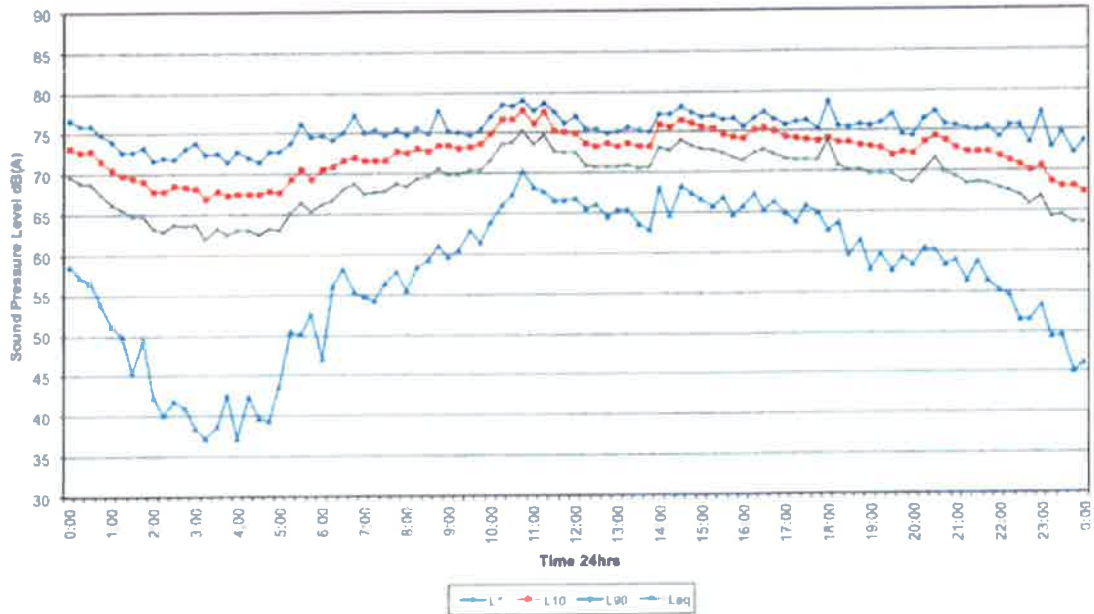




214 023 Pacific Hwy (880) Gordon

Awning

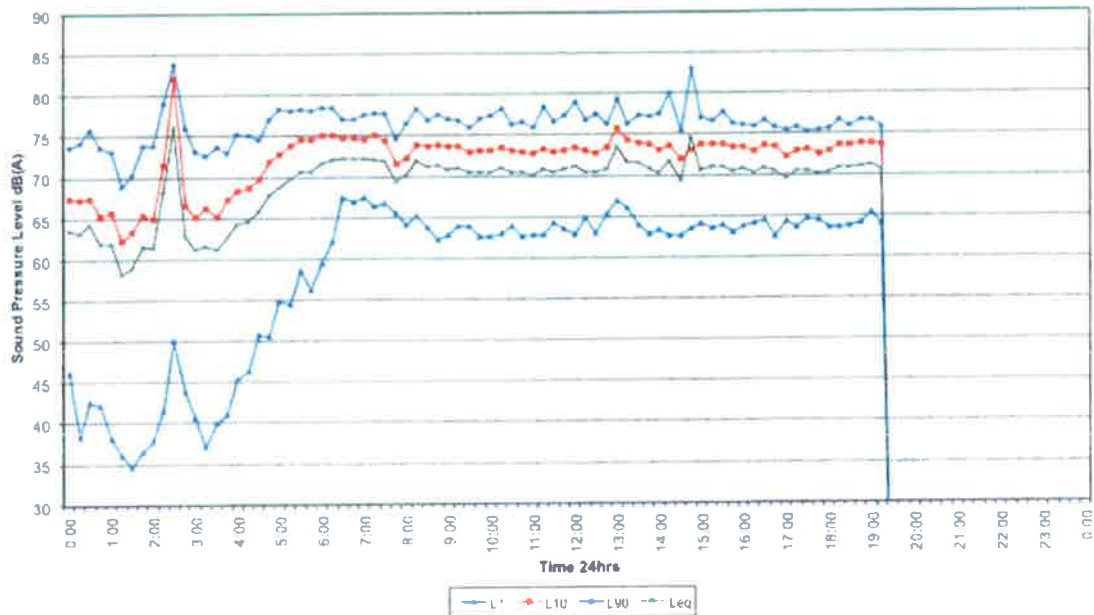
Sunday 2/03/2014



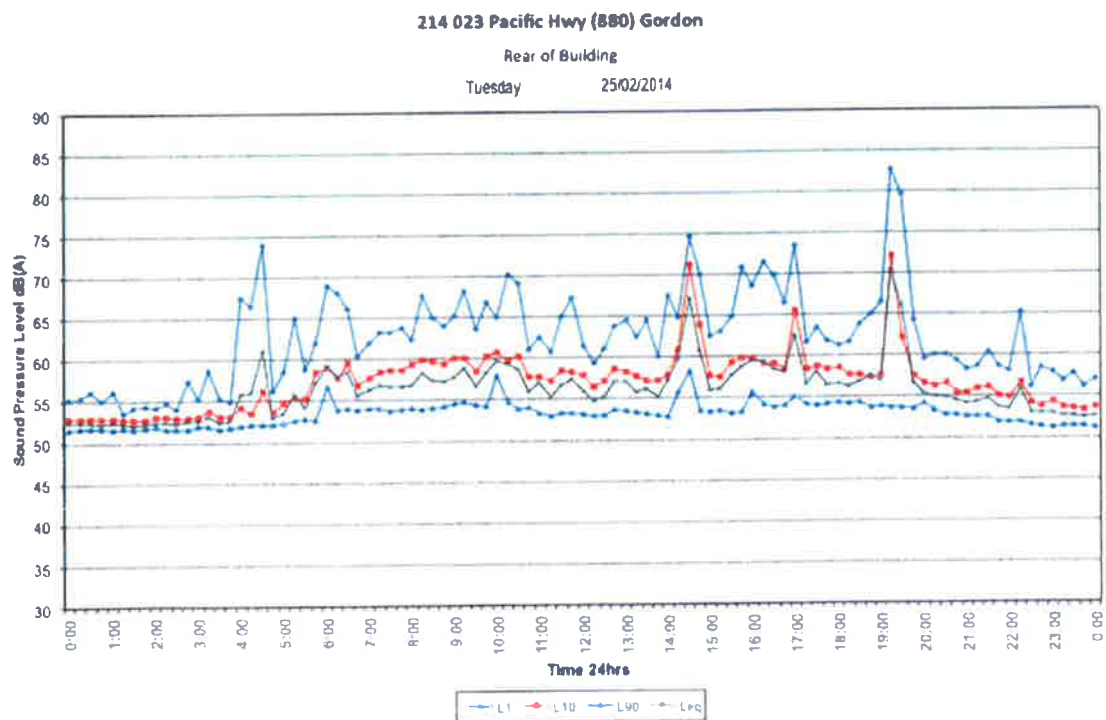
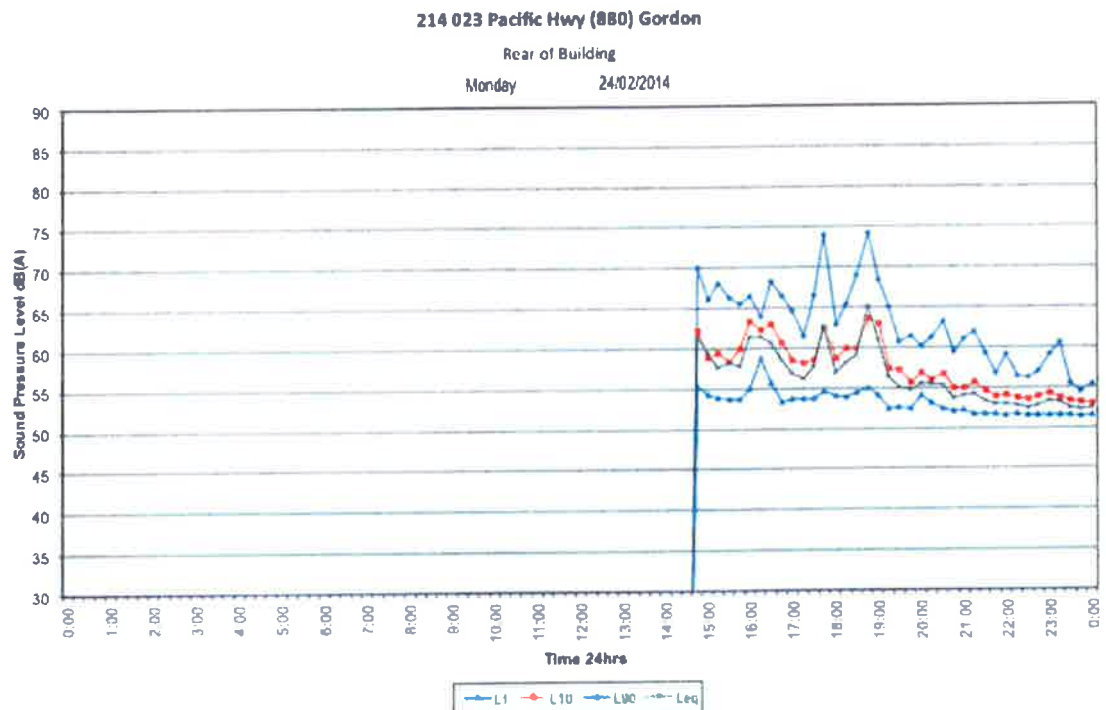
214 023 Pacific Hwy (880) Gordon

Awning

Monday 3/03/2014



9 APPENDIX B: Noise logger Rear of Development facing Fitzsimons Lane



214 023 Pacific Hwy (880) Gordon

Rear of Building

Wednesday 26/02/2014



214 023 Pacific Hwy (880) Gordon

Rear of Building

Thursday 27/02/2014



214 023 Acoustic Report - Residential Development 870 Pacific Highway Gordon

214 023 Pacific Hwy (880) Gordon

Rear of Building

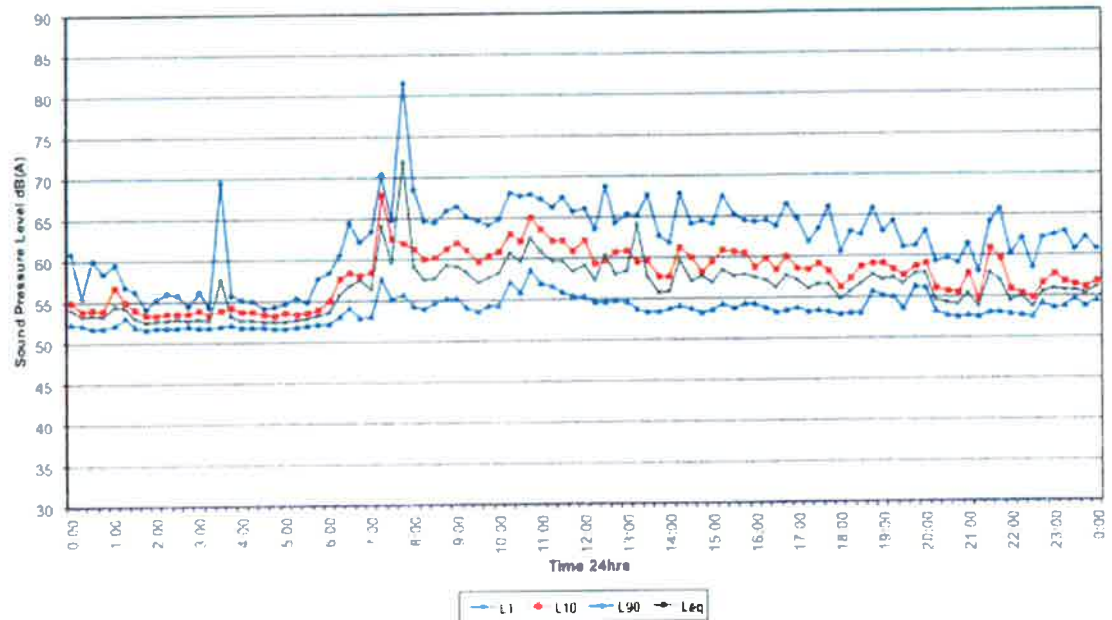
Friday 28/02/2014



214 023 Pacific Hwy (880) Gordon

Rear of Building

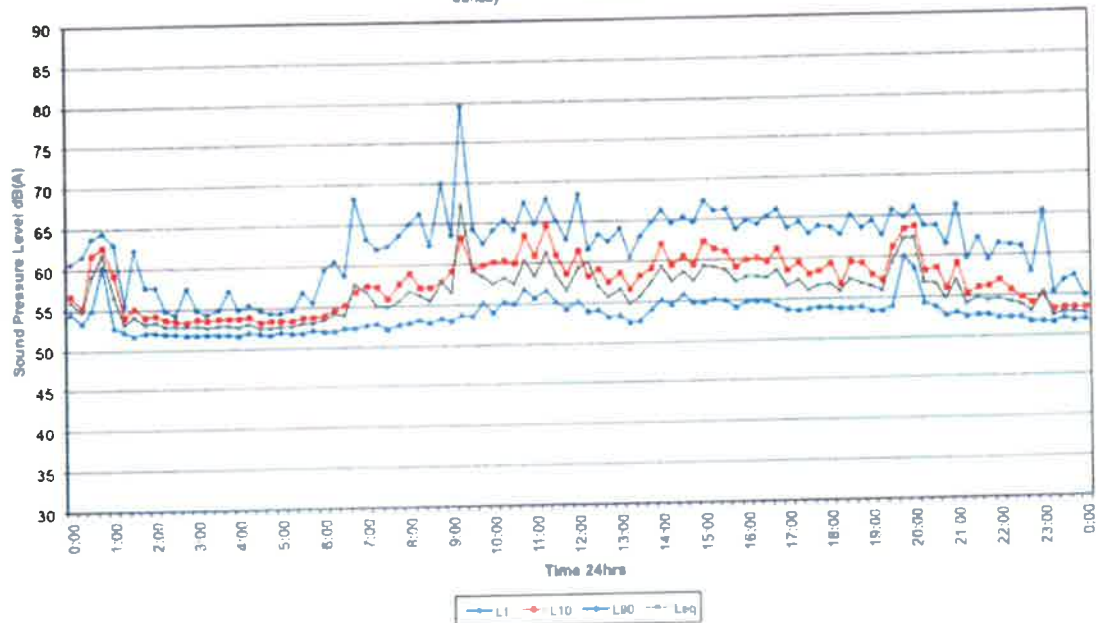
Saturday 1/03/2014



214 023 Pacific Hwy (880) Gordon

Rear of Building

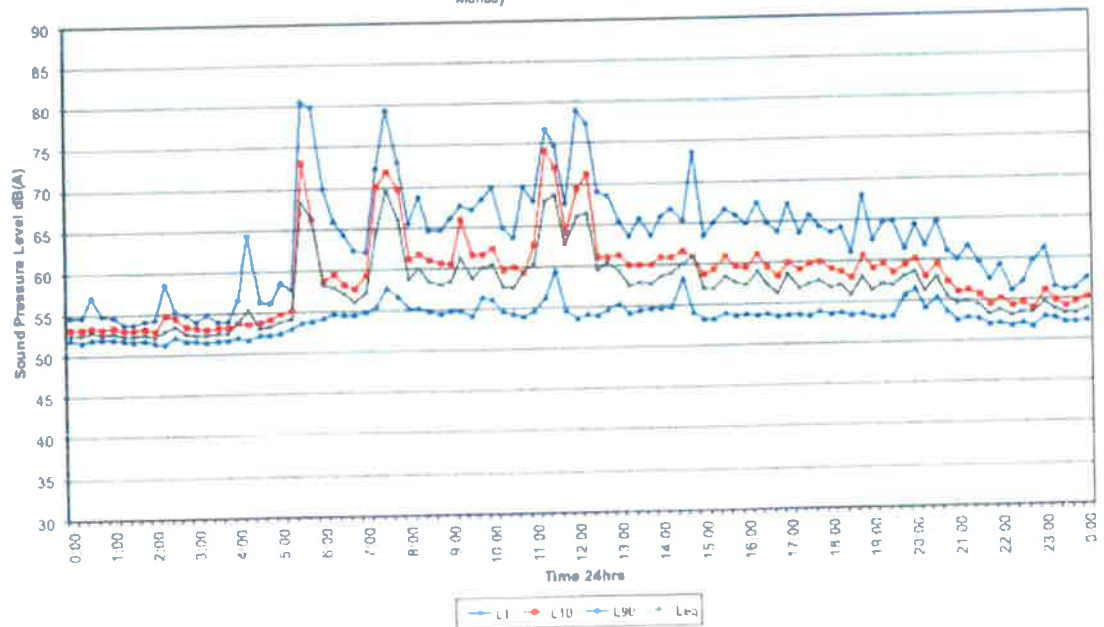
Sunday 2/03/2014

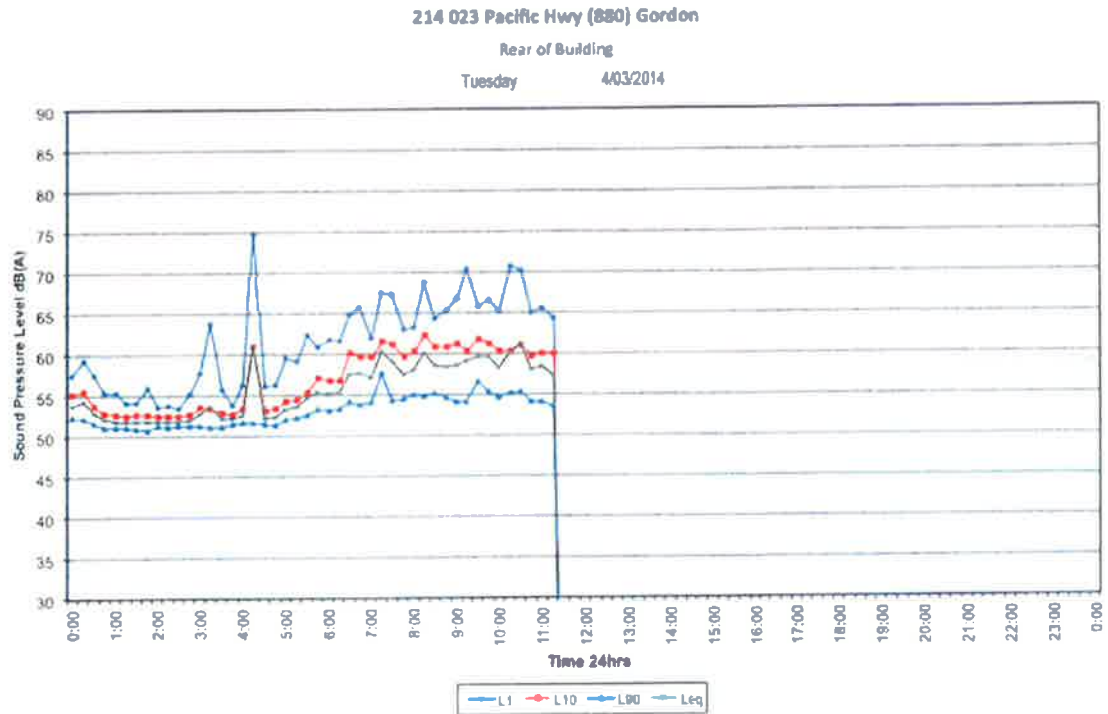


214 023 Pacific Hwy (880) Gordon

Rear of Building

Monday 3/03/2014





PKA ACOUSTIC CONSULTING

BUILDING ACOUSTICS

INDUSTRIAL ACOUSTICS

MECHANICAL ACOUSTICS

OCCUPATIONAL NOISE SURVEYS

VIBRATION

AUDIO VISUAL

LEGAL ACOUSTICS

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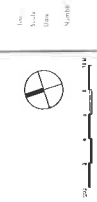
Legend

Light Blue	1 Bedroom Unit
Light Green	1 Bedroom + Study Unit
Orange	2 Bedroom Unit
Pink	3 Bedroom Unit

- SEPP 65 RECOMMENDATIONS**
- Item 3.13 - Awning
 - Items 1.2, 1.4, 4.2 - Retail Facing the Pacific Hwy.
 - Item 8.2 - Fence & Gate (Block C) entry door
 - Item 7.2 - Internalised room (Wall-Door Removed)
 - Item 7.3 - External Window
 - Item 7.4 - Kitchen Window
 - Item 7.8 - Private open Space over 25sqm
 - Item 9.1 - Label adaptable unit



GROUND LEVEL PLAN
 1:2000A1 / 1:4000A2
 28/04/2018
2838_105[D]



Gordon Mixed Use Development
 870-598 Pacific Highway
 Gordon NSW

Alto Prestige Pty Ltd
 Level 3, 7/9 Mervue Street, Gordon, NSW 2072
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**DETAILED SITE INVESTIGATION,
870-898 PACIFIC HIGHWAY, GORDON,
NEW SOUTH WALES**

FOR

ALTO PRESTIGE PTY LTD

**PROJECT NO. 19399/3606C
REPORT NO. 13/2084**

NOVEMBER 2013

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DRAWING NO. 13/2084/1 - SITE LOCATION

DRAWING NO. 13/2084/2 - SITE FEATURES AND SAMPLING LOCATIONS

TABLES OF RESULTS

APPENDIX A: AERIAL PHOTOGRAPHY

APPENDIX B: SECTION 149 (2) CERTIFICATES

APPENDIX C: HISTORICAL LAND TITLES INFORMATION

APPENDIX D: WORKCOVER NSW INFORMATION

APPENDIX E: SOIL PROFILE LOG SHEETS

APPENDIX F: GROUNDWATER WELL PURGING SHEETS

APPENDIX G: CHAIN OF CUSTODY DOCUMENTATION

APPENDIX H: ANALYTICAL LABORATORY REPORTS

EXECUTIVE SUMMARY

A detailed site investigation (DSI) was performed for the property at 870-898 Pacific Highway, Gordon, New South Wales for Alto Prestige Pty Ltd. The objectives of the investigation were to determine the nature and extent of any soil contamination and groundwater impacts at the site that may be significant for a mixed commercial and high-density residential land use setting. The investigation was performed in accordance with Environment Protection Authority (EPA) and national guidelines for the assessment and management of site contamination.

The site is approximately 6 000 m² and has been used for commercial/industrial purposes since at least the 1930s. The property was most recently redeveloped in the 1960s, and the configuration of the land has since remained the same. Activities that are either known or expected to have occurred at the site include motor vehicle sales and servicing, printing, the retail of various goods and the storage and possible manufacture of furniture, glassware and plastic products. In addition, three underground petroleum storage systems (UPSSs) have been located in the south-western portion of the site since the 1960s, and washbay/workshop areas with below ground wastewater collection pits/separator pits and above ground oil storage tanks have also been present at several locations.

Soil was sampled at 19 locations across the site for this investigation, and one groundwater monitoring well was also installed down-gradient of the UPSSs. The results of the soil sampling program show that the concentrations of chemical contaminants measured in the soils across the site are generally low. Further, the results of the groundwater sampling show that the site is not likely to be the source of any unacceptable groundwater impacts. However, elevated concentrations of petroleum hydrocarbons have been measured in the soils in the vicinity of the UPSSs and a separator pit in the south-west of the site. The hydrocarbon impacts identified are likely to be isolated in extent and are not considered significant for an on-going commercial/industrial use of the land, however, they could present a risk to human-health via a vapour intrusion/inhalation exposure pathway for a residential land use setting.

Based on the results of this DSI, the site is considered to be suitable for an on-going commercial/industrial use in its current condition. However, should the proposed mixed commercial and high-density residential redevelopment proceed, the UPSSs and separator pit should be removed, and the surrounding hydrocarbon impacted soil remediated. It would be most cost effective to undertake the remedial works at the time of redevelopment.

1. INTRODUCTION

On 16 October 2013 Alto Prestige Pty Ltd engaged SMEC Testing Services Pty Limited (STS) to undertake a detailed site investigation (DSI) for the property at 870-898 Pacific Highway, Gordon, NSW (the 'site').

The objectives of the DSI were to determine the nature and extent of any soil contamination and groundwater impacts at the site that may be significant for a mixed commercial and high-density residential land use setting. The investigation was performed in accordance with Environment Protection Authority (EPA) and national guidelines for the assessment and management of site contamination.

The scope of the DSI included:

- Examination of aerial photographs to identify historical land uses at the site and its surrounds;
- Review of historical land title information relating to the site;
- Review of local Council, EPA and WorkCover NSW records;
- Site inspection;
- Appraisal of local geology and hydrogeology;
- Soil sampling from 19 locations across the site and laboratory analysis of the soil samples retrieved for a broad screen of potential chemical contaminants;
- Installation and development of one groundwater monitoring well;
- Groundwater sampling, and analysis of the groundwater samples for key contaminants of concern;
- Assessment of analytical data and quality assurance (QA);
- Appraisal of the magnitude and extent of soil and groundwater impacts at the site based on the results of the investigation, including an appraisal of potential harm to human-health and the environment, potential exposure pathways and off-site impacts;

- Recommendations for the site in accordance with EPA guidelines; and
- Preparation of a confidential report to Alto Prestige Pty Ltd on the results of the investigation.

2. REDEVELOPMENT AND PROPOSED LAND USE

We understand that the site is proposed to be redeveloped for a mixed commercial and high-density residential land use, which would most likely comprise ground floor commercial units with a multi-story residential unit complex above. It is also likely that basement car parking areas would form part of the future redevelopment. In addition, it is likely that the majority (possibly all) of the site would be covered by new buildings, in which case landscaping areas would be either non-existent or extremely limited.

3. SITE IDENTIFICATION

The site at 870-898 Pacific Highway, Gordon has an area of approximately 6 000 m² and is defined as part of Lot 1 in Deposited Plan (DP) 654047, Lot 3 in DP 609007 and Lot 16 in DP 249171, 737027, Parish of Gordon, County of Cumberland. The location of the site is shown on Drawing No. 13/2084/1.

The site is within the Ku-Ring-Gai Council local government area, and is zoned 'B4 – Mixed Use'.

4. SITE FEATURES

The site was inspected on several occasions between 15 and 21 January 2013 to confirm the condition of the land and to identify potential contamination sources. A plan showing the current site configuration is shown on Drawing No.13/2084/2. The key site features as determined by the site inspection are:

- The site is located on a hillslope which slopes steeply to the south, however, the land has a stepped profile which indicates that significant cutting and filling is likely to have occurred. This morphology has produced three tiers to the site, including an upper level which is accessed via the Pacific Highway, and intermediate and lower tiers which are accessed from Fitzsimons Lane at the rear of the property.
- The site comprises three individual allotments (Lots 1, 3 and 16, refer to Section 3 above). Lot 3 is the largest allotment and forms the central portion of the site. This area comprises a former motor vehicle sales and servicing centre. The upper tier of Lot 3 is occupied by a car washing facility, whilst the middle tier is occupied by H2 Limousines and used for vehicle storage and detailing. The lower tier is currently occupied by Mitsubishi Motors and used as a storage area for second hand vehicles. The eastern portion of this allotment also comprises a retail shop (currently occupied by a rug vendor) as well as a small office building (occupied by numerous tenants).
- Lot 1 forms the eastern portion of the site, and comprises a kitchen shop accessed via the Pacific Highway, along with a small warehouse which is accessed from Fitzsimons lane. The lower (third tier) area in the south of this allotment is formed by a concrete covered car parking area. The warehouse area appears largely unused, however, it appears to have previously been a workshop, possibly for motor vehicle servicing.
- Lot 16 forms the western portion of the site. The northern portion of this allotment comprises a retail shop which is currently unoccupied, whilst the southern portion is occupied by a lawn mower sales and servicing business.
- Three underground petroleum storage systems (UPSSs) were observed in the western portion of Lot 3. These facilities are located in the access driveway off Fitzsimons Lane which leads to the second tier area. The dip points for two of these facilities were able to be accessed, and confirmed that the tanks each had a capacity of 10 000 L, had been used to store petrol and diesel respectively and are currently empty. The dip for the third UPSS had been sealed with concrete. However, based on the results of a Ground Penetrating Radar (GPR) survey it is likely that this facility also has a capacity of 10 000 L. The fuel dispensers have been removed, although these were confirmed to have been located adjacent to the building to the north of the UPSSs.

- Two disused washbay areas are also present on Lot 3, one being located in the lower tier off Fitzsimons Lane and the other in the second tier area. A small wastewater collection sump is present in each of the washbay facilities. The sump in the second tier washbay is connected to an above ground oil/water separation unit, whilst the sump in the lower tier washbay is connected to a separator pit. A small wastewater collection sump was also observed in the lower warehouse/workshop area of Lot 1 in the east of the site.
- The second tier area of Lot 3 appears to have once served as a large motor vehicle servicing workshop. Several vehicle inspection pits remain in this area, and two above ground storage tanks (AGSTs) that are believed to have previously been used to store either waste oil or new oil are present in the pits. It is possible that the lower tier area of Lot 3 (accessed directly off Fitzsimons Lane) may also have once been used for vehicle servicing activities.
- The land to the east and west of the site and also across the Pacific Highway to the north is occupied by commercial/industrial properties of similar age, whilst the land to the south is occupied by a new commercial building.

5. GEOLOGY AND HYDROGEOLOGY

The Geological Survey of NSW 1:100,000 Sydney Geological Map (Sheet 9130) shows that the site is located in an environment which is underlain by the Middle Triassic Age 'Ashfield Shale', which comprises black to dark-grey shale and laminite.

The natural soils encountered during the investigation comprised silty clays, which are consistent with soils in-situ weathered from the regional geological formation. Further, shale bedrock was encountered in four boreholes at depths between 1.2 m and 2.2 m below the land surface. Our review of the Acid Sulfate Soil risk maps available on the EPA NSW Natural Resources Atlas also shows that the site is located in an area that is not likely to be affected by ASSs. This is consistent with the geomorphology of the site and observations made during our drilling activities.

A layer of fill between 0.3 m and in excess of 7 m in thickness was also identified at each sample location, with the greatest depths being encountered in the southern portion of the site. The composition of the fill varied, and comprised silty clay, sand, gravelly sand, gravelly clay, sandy gravel and sandy clay. Fragments of anthropogenic wastes including bricks, concrete rubble, ash and glass were also identified in the fill at several sample locations.

A search of the Department Natural Resources (DNR) groundwater database was also performed to identify wells in the vicinity of the site. The search results identified 21 registered groundwater monitoring wells located within 2 km of the site, 10 of which are registered for monitoring purposes, eight as irrigation bores, two for 'domestic' purposes and one for general use. The aquifer depths (where reported) are stated as being between 4.5 m and 58 m below the ground surface, and there appears to be multiple aquifers present at different depths.

The depth to groundwater in the monitoring well installed on the site as part of this investigation was 5.15 m below the land surface, and is expected to be perched water at the soil/bedrock interface.

Based on the observations made during our groundwater sampling activities, the results of the groundwater level survey and our review of the site geology and regional groundwater conditions, a summary of the site hydrogeology is summarised in Table 5.1.

TABLE 5.1 – SITE HYDROGEOLOGY

Aquifer Type and Lithology:	Clays and Shale ^{1,2}
Perched groundwater:	Present at the soil/bedrock interface ¹
Depth to Aquifer at Site:	Approximately 5 m to 10 m ^{1,2}
Local Groundwater Flow Direction:	South-West, in alignment with hillslope ¹
Regional Groundwater Flow Direction:	South-West, in alignment with hillslope and regional valley orientation ¹
Receiving Environments:	Blackbutt Creek, located approximately 650 m to the south-west of the site ^{1,2} .

¹ Actual conditions based on observations made during soil sampling

² Inferred conditions based on site/regional geology and geomorphology.

6. SITE HISTORY REVIEW

The history of the land subject to the investigation was obtained from the following sources:

- Aerial photographs of the site and surrounds held by the Department of Lands;
- Historical land titles;
- A Section 149 (2) Certificate provided by Ku-Ring-Gai Council;
- WorkCover NSW records; and
- EPA records.

6.1 Aerial Photographs

Aerial photographs from 1930, 1951, 1961, 1970, 1986, 1994, 2002 and 2005 were examined to identify previous land uses at the site and its surrounds. A copy of each aerial photograph showing the location of the site is provided in Appendix A, and a description of the observations made is provided in Table 6.1.

TABLE 6.1 – AERIAL PHOTOGRAPH OBSERVATIONS

Year	Site Features	Surrounding Land Use
1930	The quality of the photograph is poor, however, a number of what appear to be small commercial buildings are located adjacent to the Pacific Highway in the north of the site, and the land behind these buildings is covered in trees. Two houses also appear to be located in the south-western portion of the site.	The land to the west and south of the site appears to be used for residential purposes, and a small commercial building is located on the land to the east. The land to north of the site across the Pacific Highway appears vacant and unused, however, the north shore railway line is visible further to the north.
1951	The site remains largely unchanged.	The land surrounding the site also remains essentially unchanged, although several small commercial/industrial buildings have been constructed on land to the north of the site

TABLE 6.1 (CONT) – AERIAL PHOTOGRAPH OBSERVATIONS

Year	Site Features	Surrounding Land Use
1930	The quality of the photograph is poor, however, a number of what appear to be small commercial buildings are located adjacent to the Pacific Highway in the north of the site, and the land behind these buildings is covered in trees. Two houses also appear to be located in the south-western portion of the site.	The land to the west and south of the site appears to be used for residential purposes, and a small commercial building is located on the land to the east. The land to north of the site across the Pacific Highway appears vacant and unused, however, the north shore railway line is visible further to the north.
1951	The site remains largely unchanged.	The land surrounding the site also remains essentially unchanged, although several small commercial/industrial buildings have been constructed on land to the north of the site
1961	The majority of the site remains unchanged, however, the residential buildings that were previously visible in the south-west of the site have been demolished.	The land to the north, south and east of the site is largely unchanged, however, the new commercial industrial buildings have replaced the previously existing residences on the land to the west.
1970	The site has been redeveloped. All previously existing buildings have been removed and replaced with a large commercial/industrial building complex, which appears to consist of three individual allotments. A large number of motor vehicles are visible in the central (and largest) allotment, which suggests this area may be used for motor vehicle sales and/or servicing.	Commercial/industrial buildings are located on the land to the north, east and west, whilst the land to the south is occupied by residential properties and a car park. The car parking area appears to be associated with the site.
1986, 1994, 2002 & 2005	The site remains largely unchanged.	The land surrounding the site also remains largely unchanged.

6.2 Section 149 (2) Certificates

Section 149 (2) Certificates were obtained from Ku-Ring-Gai Council to determine if any restrictions have been placed on the land due to contamination related risks. A copy of the certificates is provided in Appendix B. The Section 149 (2) Certificates show that there are no notices under the provisions of the *Contaminated Land Management Act 1997* issued in relation to the site. Further, the site has not been the subject of a Site Audit.

6.3 Historical Title Search

Copies of the historical land title transfers were obtained from the Land Titles Office, and are provided in Appendix C. A summary of the property ownership details is summarised in Table 6.2, along with key leaseholders.

TABLE 6.2 – HISTORICAL LAND TITLE SUMMARY

Year	Registered Owner/Occupant
<u>Lot 1 in DP 654047</u>	
1985-present	Georgio Altomonte Holdings Pty Ltd Whiteway House No.6 Pty Ltd/Barador Pty Ltd (lessee circa 1988-circa 1998) Vadasin Pty Ltd (lessee circa 1988) Rag Distributors Pty Ltd (lessee circa 1988) Snap Franchising Limited (lessee 1990- circa 2000) The Australian 1900 Steamship Co Pty Ltd (lessee 1990-circa 1993) Nobby Furniture Pty Ltd (lessee 1990-circa 1998) Controls Pty Ltd (lessee circa 1993) Flite Holdings Pty Limited/Cormi Pty Ltd (lessee 1996-circa 2003) Drummoyne Classic Cars Pty Ltd (lessee circa 1998) Campo's Sport & Leisurewear Pty Ltd (lessee circa 2001)
1977-1985	Lai Yin Wong Australian Bedding Co Pty Ltd (lessee circa 1981) Super 8 Services Pty Ltd (lessee circa 1983) Inner City Design Company Limited (lessee circa 1983)

TABLE 6.2 (CONT) – HISTORICAL LAND TITLE SUMMARY

Year	Registered Owner/Occupant
<u>Lot 1 in DP 654047</u>	
1969-1977	Lorton Pty Limited Mar Jenn Enterprises Pty Limited (lessee circa 1973-1976) ASP (Dryers) Pty Ltd (lessee circa 1976)
1962-1969	Arndale Developments Australia Pty Ltd
1953-1962	Armstrong Glass Pty Limited
1951-1953	John William Mackerras
1947-1951	Thelma Inez Squire
1934-1947	Edgar Greenwood
<u>Lot 3 in DP 609007</u>	
1980-present	Alto Ford Pty Limited (later Alto Prestige Pty Limited) Sydney RJV Pty Ltd (lessee circa 2001)
1967-1980	Ford Sales Company of Australia Limited
1962-1967	Arndale Developments Australia Pty Ltd
1958-1962	Gordon Holdings Pty Limited
1951-1958	George Ball (later George Ball Limited)
1947-1951	John Vincent Bound & William Walker Swan
1945-1947	Christina Selkirk Hadden, Catherine Alexander Swan, Annie Rankin McLean & Jane Moffat Pierce, William Walker Swan
1944-1945	Walter Thomas Pierce & Catherine Alexander Swan
1930-1944	David Swan, John Swan & Walter Thomas Pierce & Catherine Alexander Swan
1927-1930	John Swan & Catherine Alexander Swan
1918-1927	David Rankin Swan & Catherine Alexander Swan

TABLE 6.2 (CONT) – HISTORICAL LAND TITLE SUMMARY

Year	Registered Owner/Occupant
<u>Lot 16 in DP 249171</u>	
2002-present	Alto Prestige Pty Limited
1989-2002	George Altomonte
1989	Brian Nebenzahl & Jocelyn Nebenzahl
1974-1989	Donald Ernest Robinson & Lucy Madeline Robinson
1973-1974	Pelandode Pty Ltd
1969-1973	Jean Phyllis Swan Robinson Printing Pty Ltd (lessee circa 1973)
1962-1969	Jean Phyllis Swan & Hugh James Moffat Robinson Printing Pty Ltd (lessee since 1961)
1955-1962	John Gordon Swan Robinson Printing Pty Ltd (lessee from 1961) Plastic Surfaces Pty Ltd (lessee circa 1960)
1930-1955	David Swan, William Walker Swan & John Gordon Swan

Based on an internet search of the above site owners/occupants, known or expected uses of the site have included motor vehicle sales and servicing, commercial printing, furniture, glassware and plastic products storage and possibly manufacture, and administration/retail.

6.4 WorkCover NSW Records

WorkCover was also requested to search their Dangerous Goods License database to identify if the property is currently, or had previously been licensed for the storage of dangerous goods. The response provided by WorkCover is presented in Appendix D.

The information provided by WorkCover shows that three UPSSs have been located on the site, and these facilities were positioned in the south-west of property near the access ramp to the second level workshop area. Further, the UPSSs are reported to each have a capacity of 10 000 L and have been used to store petrol. Our site inspection performed for the investigation (discussed in Section 4) has confirmed these facilities remain on the site. The WorkCover information also shows that the UPSSs were installed some time prior to 1968.

6.5 NSW EPA Records

The EPA contaminated land public register was inspected on 7 November 2013 to determine if any notices have been issued for the site by EPA under the *Contaminated Land Management Act 1997* (CLM Act) or if the site is registered under the *Protection of the Environment Operations Act 1997* (POEO Act). Our review shows that the site is not listed under the provisions of these Acts, nor is it located in the vicinity of a listed property. Further, our review shows that the site is not listed on EPA's database of properties for which a notification has been received (under the provisions of the *Contaminated Land Management Act 1997*) due to site contamination.

6.6 Site History Summary

Based on the historical information reviewed, the site has been used for commercial/industrial purposes since at least the 1930s. The property was most recently redeveloped in the 1960s, and the configuration of the land has since remained the same. Activities that are either known or expected to have occurred at the site include motor vehicle sales and servicing, printing, retail of various goods and the storage and possible manufacture of furniture, glassware and plastic products. In addition, three UPSSs have been located in the south-western portion of the site since the 1960s, and washbay/workshop areas with below ground wastewater collection pits and above ground oil storage tanks have also been present at several locations.

7. PREVIOUS ENVIRONMENTAL ASSESSMENTS

No previous environmental assessments are known to have been performed at the site.

8. POTENTIAL CONTAMINATION SOURCES

The potential for the site to be contaminated from on-site sources and off-site sources was considered by STS during this investigation. Based on the findings of our site inspection and site history review the following actual or potential contamination sources were identified:

- A range of organic and inorganic contaminants in imported fill material. As the source of the fill cannot be confirmed it has the potential to be contaminated.
- There is the potential for the UPSSs and wastewater pits to have leaked and impacted the surrounding soil with hydrocarbon compounds.
- There is the potential for the near surface soils to be impacted with a range of organic and inorganic contaminants due to the long history of commercial/industrial activities at the site, in particular hydrocarbons and heavy metals used in association with motor vehicle servicing and printing operations.

9. DATA QUALITY OBJECTIVES

The *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM) (and updated April 2013) and Australian Standard (AS) 4482.1-2005 recommend that data quality objectives (DQOs) be implemented during the investigation of potentially contaminated sites. The DQO process described in AS 4482.1-2005 outlines seven distinct steps which are designed to ensure an investigation is performed in a structured and efficient manner. The seven steps and the associated processes that were implemented to ensure data and decision making quality are outlined below:

Step 1 – State the Problem

A mixed commercial and high-density residential land use is proposed for the site. Prior to this assessment there was insufficient data to determine if the site is suitable for this proposed use.

Step 2 – Identify the Decision

To determine if the concentrations of contaminants in the soil and groundwater at the site present an unacceptable risk to human-health or the environment for mixed commercial and high-density residential land use setting.

Step 3 – Identify Inputs to the Decision

To enable a decision regarding the extent of contamination at the site to be made, the following inputs were required:

- Soil sampling from 19 locations positioned at evenly spaced locations across the site;
- Analysis of the soil samples for a broad screen or potential contaminants;
- Groundwater sampling from one monitoring well, and analysis of the groundwater samples collected for contaminants of concern; and
- Implementation of a quality assurance/quality control (QA/QC) program.

Step 4 – Define the Study Boundaries

The assessment was undertaken within the boundaries of the site located at 870-898 Pacific Highway, Gordon, NSW. The boundaries of the site are defined in Section 3 and are shown on Drawing No. 13/2084/2.

Step 5 – Develop a Decision Rule

To determine if any soil or groundwater impacts at the site are significant for a mixed commercial and high-density residential land use setting, data was compared to relevant EPA endorsed criteria. The criteria for this assessment are further discussed in Section 12.

Step 6 - Specify Limits on Decision Errors

To ensure the precision, accuracy, completeness and comparability of data a field QA program was implemented and acceptable error limits were defined. These are further discussed in Section 11.

Step 7 – Optimize the Design for Obtaining Data

To ensure there are sufficient, reliable data to enable the project objectives to be met the following was implemented:

- Obtaining samples from an appropriate number of locations to assess an 6 000 m² site in accordance with EPA guidelines;

- Collection, storage and transport of soil samples in an appropriate manner to ensure sample integrity (refer to Section 10);
- The collection of an appropriate number of samples from each location and the analysis of samples for an appropriate analytical suite to screen the site for potential soil contamination, based on the potential contamination sources identified from our site inspection and site history review;
- Installation of a sufficient number of groundwater monitoring wells and in appropriate locations to determine the extent of any groundwater impacts that may have results from on-site sources, and sampling from those wells using appropriate low-flow equipment in accordance with EPA requirements; and
- Analysis of the groundwater samples collected for the contaminants of concern, as identified from the results of the soil sampling program and site history review.

10. FIELD INVESTIGATION

The field activities for the DSI were undertaken by STS between 21 and 29 October 2013. The assessment was performed according to:

- EPA guidelines comprising:
 - *Contaminated Sites: Guidelines for Assessing Service Station Sites, 1994;*
 - *Contaminated Sites: Sampling Design Guidelines, 1995;*
 - *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, 1997;*
 - *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition), 2006;*
 - *Guidelines for the Assessment and Management of Groundwater Contamination, 2007;*
- Guidelines issued under Schedule B of the *National Environment Protection (Assessment of Site Contamination) Measure* (NEPM), Environment Protection and Heritage Council (EPHC)/National Environment Protection Council (NEPC), December 1999 (and updated NEPM of April 2013);
- *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites* published by the Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council, January 1992 (ANZECC Guidelines);

- Australian Standard 4482.1-2005: *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-volatile and Semi-volatile Compounds*, 2 November 2005, Standards Australia.
- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, published by the Australian and New Zealand Environment Conservation Council, 2000 (ANZECC 2000);
- *Australian Drinking Water Guidelines 6, 2011* (ADWG), published by the National Health and Medical Research Council (NHMRC) and National Resource Management Ministerial Council (NRMMC), 2011 (ADWG 2011); and
- *Australian/New Zealand Standard, Water Quality – Sampling Part II: Guidance on Sampling of Groundwaters*, 5 April 1998 (AS/NZS 5667.II.1998).

10.1 Soil Sampling

The sampling program involved the collection of soil samples from 19 locations, which were positioned both across the general site and also adjacent to the potentially contaminating facilities which were identified at the property, these being the UPSSs, wastewater pits and sumps, above ground oil storage tanks, vehicle inspection pits and washbay areas. This is a sufficient number of sample locations to characterize the nature and extent of soil contamination on the 6 000 m² site in accordance with EPA guidelines and the NEPM. The sample locations and site features are shown on Drawing No. 13/2084/2.

Sample locations were referenced to existing ground features and positioned subject to on-site services, subsurface conditions and other constraints, which were encountered during fieldwork activities. The samples were collected by qualified and experienced environmental engineers and technicians. A description of all the samples collected and their corresponding sample locations is provided on soil profile log sheets in Appendix E.

10.1.1 Soil Sample Handling & Equipment Decontamination

A drill rig was used to retrieve the samples, however, the presence of loose and/or gravelly fill on the site prevented the use of core sampling equipment. Instead, solid augers were used and the samples were collected directly off the auger flights by hand using disposable latex gloves, and were transferred into new clean jars prepared by Australian Laboratory Services (ALS).

Where vehicle access was not possible, hand augers were used to advance the boreholes. Where fill was observed or where odorous soil was encountered no sample mixing was carried out to ensure that the loss of any volatile compounds that could be present within the soil matrix is minimized. All sampling equipment was decontaminated prior to use and between sampling locations by washing with a mixture of water and DECON 90 and rinsing with potable water.

All jars were filled to the rim to minimize head space. The sample jars were then placed into ice-filled chests and transferred to ALS for analysis. Chain of Custody (COC) documentation was used to record and track the samples, and is provided in Appendix H. COC documentation detailing the required analyses accompanied the samples to the laboratory. The environmental engineer signed the appropriate section of the COC form before providing the samples to the laboratory.

10.1.2 Analytical Program for Soil Samples

The selection of analytes was based on the site history review, our observations made during our site inspection and EPA site assessment guidelines. The analytes for the soil samples included heavy metals, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH), monocyclic aromatic hydrocarbons (MAH), volatile chlorinated hydrocarbons, polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), organophosphorus pesticides (OPPs), phenolic compounds, cyanide and asbestos.

The analytical program for the soil samples is outlined in the COC documentation, which is provided in Appendix H. ALS Sydney was selected as the primary laboratory, and ALS Brisbane was selected as the secondary laboratory for implementation of the field quality assurance program. ALS is NATA accredited for the analyses performed.

10.1.3 Soil Vapour Survey

During the soil sampling program the concentrations of ionisable volatile organic compounds (VOCs) released from the soil matrix were measured using a photoionisation detector (PID). This provides a qualitative screen of the degree to which the soil samples may be impacted with VOCs. The screening methodology involved the placement of a small portion of each sample (up to approximately 50g) into a sealed plastic 'snaplock' bag, which is kept at room temperature and out of direct sunlight for 10-20 minutes, before the PID reading is taken in the headspace above the sample. The PID was calibrated using a 100ppm isobutylene span gas prior to use.

The PID readings obtained during the soil vapour survey are presented on the soil profile logs in Appendix E. The concentration of ionisable vapours measured in the headspace above the soil ranged from 0.2 ppm to 0.9 ppm (v/v isobutylene equivalent) for the majority of samples, which are low and suggest that the soil is not significantly impacted with VOCs. However, elevated PID readings of 5.1 ppm to 20.2 ppm were recorded for several samples retrieved from around the UPSSs and separator pit, which are indicative of potential hydrocarbon impacts.

10.2 Groundwater Sampling

The groundwater investigation component of the project involved the installation of one monitoring well, which was positioned immediately down-gradient of the UPSSs. This is a sufficient number and location of wells to determine the potential for the site to contributing to groundwater impacts based on the outcome of the site history review and site inspection. The location of the well is shown on Drawing No. 13/2084/2.

The construction details for the monitoring well are illustrated in Appendix E. The well was installed to a depth of 6.9 m below the ground surface, and was constructed from screened and unscreened lengths of 50 mm diameter PVC standpipe casing. The well was screened from above the water table to the base, and a filter pack of 5mm grade sand was installed around the screened interval. A bentonite seal was installed around the upper, unscreened lengths of standpipe, followed by a concrete grout plug at the surface.

Following installation the well was developed, which involved the removal of 8 L of water from the well using a disposable teflon bailer. The well was then allowed to stand for a period seven days prior to sampling.

The groundwater well was gauged with an interface meter prior to sampling and it was confirmed that non-aqueous phase liquids (NAPLs) were not present. The well was then purged and sampled using a low flow peristaltic pump, which is a low-flow/minimum drawdown method in accordance EPA guideline recommendations.

During the purging of each well key groundwater parameters were measured in the field, including pH, electrical conductivity (EC), redox potential (Eh), temperature and dissolved oxygen (DO). The volumes of groundwater purged from the wells prior to sampling and the drawdown over the purging and sampling event were also recorded. A summary of the parameters recorded for each well prior to sampling are presented in Table 10.1, and the well purging records sheets completed in the field are provided in Appendix F.

Table 10.1 Summary of Groundwater Pre-sampling Measurements

Groundwater Monitoring Well No.	Sample Date	Draw Down (m)	Pump Rate (L/min)	Volume Purged (Litres)	pH (Units)	EC (uS/cm)	Eh (mV)	Temp. (°C)	DO (ppm)
GW1	29/10/13	0.4	0.07	4.5	8.91	599	135	23.4	1.01

Notes: DO = Dissolved Oxygen
EC = Electrical Conductivity
Eh = Redox Potential

Groundwater samples were not collected until the groundwater parameters measurements were within 10% variance for three consecutive readings. With this approach, the samples collected are expected to be representative of the aquifer conditions beneath the site.

10.2.1 Groundwater Sample Handling & Equipment Decontamination

The groundwater samples were collected in bottles and vials provided by ALS, which were specifically prepared for the analyses performed. The bottles were filled directly from low density polyethylene (LDPE) and silicon tubing attached to the sampling pump. To ensure that no cross contamination occurred between sample locations, new LDPE tubing was used in each well and the silicon tubing attached to the peristaltic pump was thoroughly washed with a mixture of water and DECON 90 and rinsed with potable water before being reused.

The samples were placed in ice-filled chests and transferred to ALS for analysis. Chain of Custody (COC) documentation was used to record and track the samples, and is provided in Appendix G. The environmental engineer signed the appropriate section of the COC form before providing the samples to the laboratory.

10.2.2 Analytical Program for Groundwater Samples

The groundwater samples were analysed for the contaminants of concern as determined from the historical review and site inspection, these being heavy metals, TPH, MAH and ammonia. The analytical program for the groundwater samples is outlined in the COC documentation (Appendix G). ALS Sydney was selected as the primary laboratory, and is NATA accredited for the groundwater analyses performed.

11. QUALITY ASSURANCE PROGRAM

Quality assurance (QA) of data was a key component of this investigation in order to appraise the representativeness and integrity of samples and accuracy and reliability of the analytical results. This is in accordance with the NEPM and AS 4482.1-2005.

The QA procedures, actions and checks implemented during the investigation included:

- The utilisation of appropriate sampling methods in accordance with the EPA requirements, the NEPM and other key guidelines;

- Appropriate sample handling and transportation, and analysis of samples within recommended holding times;
- Appropriate construction, development and purging of the groundwater wells;
- The use of appropriate groundwater sampling equipment;
- The collection and analysis of quality control (QC) samples;
- Implementation of internal laboratory QC analyses; and
- The use of National Association of Testing Authorities (NATA) registered laboratories (primary and secondary) and methods.

11.1 Quality Control Sampling

Inaccuracies in sampling and analytical programs can result from many causes, including collection of unrepresentative samples, cross contamination between samples, unanticipated interferences between elements during laboratory analyses, equipment malfunctions and operator error. Inappropriate sampling, preservation, handling, storage and analytical techniques can also reduce the precision and accuracy of results.

In order to address these potential data quality issues, a field-based QC program was undertaken to measure the effectiveness of the QA procedures by comparison with acceptance criteria. The NEPM has documented procedures for QC sampling and analysis to ensure that the required degree of accuracy and precision is obtained. The NEPM and EPA guidelines recommend the use of two laboratories for the implementation of a field QC program in addition to the internal QC procedures followed by the laboratories, which are required in accordance with their NATA registration.

According to the NEPM the collection of intra and inter-laboratory duplicate samples is required, along with blank samples. Intra-laboratory and inter-laboratory samples are duplicates of primary samples that are collected in the field. Intra-laboratory samples are analysed by the primary laboratory and are used as a check on the precision of the sampling and analytical procedures. Inter-laboratory samples are analysed by a secondary laboratory and provide a check as to the accuracy of the analytical data. Field blank samples include rinsate blanks and trip blank samples.

Rinsate blanks are samples of water collected from field equipment after decontamination, and are used to determine the effectiveness of the decontamination procedures. Trip blanks are samples of deionised water prepared prior to sampling, and are stored and transported with the samples. They are used to identify laboratory errors or to identify sources of contamination due to sample storage and handling.

According to the NEPM a split of a minimum of 10% of the primary samples as field duplicate samples (5% inter-laboratory and 5% intra-laboratory) as well as blanks is required. Where less than 20 samples are to be analysed, a minimum of two field duplicate samples (one inter-laboratory and one intra-laboratory) and a blank is generally considered sufficient. Blanks are generally collected on each day that sampling is performed, and are analysed where necessary.

For this contamination assessment the following field quality control samples were collected and analysed:

- Two intra-laboratory duplicate soil samples; and
- One inter-laboratory duplicate soil sample.

In view of the rigorous field-based decontamination procedures that were implemented during the investigation, the collection of rinsate and trip blank samples was not considered necessary.

11.2 Quality Control Criteria

A check on the comparability of the field duplicate sample results is achieved by calculating the Relative Percent Difference (RPD). RPDs are calculated as the absolute value of the difference between the primary and duplicate sample results, divided by the average value, expressed as a percentage.

According to AS 4482.1-2005 (and referenced in the NEPM) RPDs below 50% are considered to demonstrate good correlation between duplicate sample results. However, AS 4482.1-2005 also states that the acceptable variation between results can be higher for organic analytes than for inorganics, and for low concentrations of analytes. In view of this, and based on STS's experience, RPDs up to 70% are considered to be acceptable for organic species. RPDs of 100% or more are generally considered to demonstrate poor correlation unless results are less than five times the laboratory detection limits.

11.3 Laboratory Quality Control

A laboratory QC program involves the preparation and analysis of their own duplicate samples, reagent blanks and control samples (where the analyte concentration is known) or matrix spikes. Duplicate samples are subjected to the same preparation and analytical procedures as primary samples. The laboratories are required to analyse matrix spikes or control samples at a minimum frequency of 5% of the total number of primary samples in each sample batch.

The results of method blanks, duplicates and control sample analyses are compared by the laboratory to established quality assurance criteria for data precision and accuracy. If the results do not meet the criteria, then the analyses should be repeated. The relevant criteria are:

- Method blanks should not return any positives on analysis;
- Duplicate samples should not vary by more than 35% from the mean result; and
- Control samples should generally give a recovery of 75-125%.

12. ASSESSMENT CRITERIA

The quality criteria used during this investigation to appraise the significance of the contaminant concentrations in the soil and groundwater are outlined below.

12.1 Soil Criteria

Current EPA guidelines state that the key criteria for assessing potentially contaminated sites in New South Wales are the Soil Investigation Levels (SILs), which are outlined in *Guidelines for the NSW Site Auditor Scheme, 2nd Edition* (DEC, 2006). The SILs have been adopted from Schedule B(1) of the National Environmental Protection Council document *National Environmental Protection (Assessment of Site Contamination) Measure 1999* (NEPM).

The NEPM criteria comprise Health-Based Investigation Levels (HILs) and the Ecologically-Based Investigation Levels (EILs). The HILs are threshold values that are indicative of potential adverse impacts to human health, whilst the EILs are values that indicate a potential phytotoxic effect to plants.

In recent years the 1999 NEPM has been under review, with an updated draft document being released in 2010. In April 2013 the updated NEPM was officially released and has since been endorsed by EPA. The new 2013 NEPM has been developed using essentially the same framework as the 1999 version, however, it does provide updated HIL criteria for a range of chemical contaminants. It also builds on the EILs provided in the 1999 NEPM by outlining a more comprehensive set of environmental screening levels (ESLs), which are designed not only to be indicative thresholds for phytotoxic effects to plants, but to be protective of ecosystems generally. Further, the 2013 NEPM outlines criteria for key volatile hydrocarbon compounds which are designed to be protective of human-health via a soil vapour inhalation exposure pathway (termed Health Screening Levels (HSLs)). The 2013 NEPM criteria should be used for environmental assessments in the Australian context as they are the most current and comprehensive set of screening criteria available. That is, they are used in preference to the SILs.

There are four main categories of HIL outlined in the 2013 NEPM, which are each used to appraise the risks posed by site contamination for different land use settings. These include:

Residential A: for a ‘standard’ residential land use with gardens and accessible soil, including children’s day care centres, preschools and primary schools.

Residential B: for a residential land use with minimal opportunities for soil access, including properties with fully and permanently paved yard space such as high-rise apartments and flats

Recreational C: for parks, recreational open space, playing fields, including secondary schools

Commercial/Industrial D: for a commercial/industrial land use.

It is noted that the NEPM HILs do not provide criteria for some petroleum hydrocarbon compounds. In the absence of HIL criteria the ‘*threshold concentrations for a sensitive land use*’ (EPA Threshold Concentrations) outlined in EPA’s “*Guidelines for Assessing Service Station Sites*” (EPA, 1994) are used, however, the 1999 NEPM HILs do provide threshold values for hydrocarbon fractions that may be adopted provided that speciation testing is undertaken for specific aromatic and aliphatic components.

Where a proposed land use will include more than one land use category (e.g. mixed residential/commercial development) the criteria which are protective of the most sensitive of the combined land uses should be adopted.

We understand that a mixed commercial and high-density residential land use is proposed for the site. Therefore, the HIL Residential B criteria (for a residential land use setting with minimal opportunities for soil access) are the most applicable and have been adopted for this investigation. The EPA Threshold Concentrations have also been adopted for petroleum hydrocarbon compounds in the absence of HIL criteria. In addition, the HSLs for vapour intrusion have been considered.

Given that grass or gardens areas at the site post development would be expected to be limited, the ESLs are not considered to be relevant and have therefore not been used for this investigation. This is in accordance with the decision tree for assessing urban development sites which is outlined in Appendix 1 of the *Guidelines for the NSW Site Auditor Scheme (2nd Edition)* (EPA, 2006), which states that environmentally based criteria do not need to be adopted for commercial/industrial sites

The clean-up criteria which have been adopted for this validation program are outlined in Table 12.1 on the following page.

TABLE 12.1 – SITE SOIL ASSESSMENT CRITERIA
(all concentrations in units of mg/kg)

Contaminant	HIL (Residential B)	HSL A and B (Low-High Density Residential) ³	EPA Threshold Concentrations
Inorganics			
Arsenic (total)	500		
Barium			
Beryllium	90		
Boron	40000		
Cadmium	150		
Chromium	500 ¹		
Cobalt	600		
Copper	30000		
Lead	1200		
Manganese	14000		
Mercury	120 ²		
Nickel	1200		
Vanadium			
Zinc	60000		
Organic Contaminants			
TPH (C ₆ -C ₉)			65
TPH (C ₁₀ -C ₃₆)			1000
F1 TPH		45 ⁴	
F2 TPH		110 ⁵	
Benzene		0.5	1
Toluene		160	1.4
Ethyl benzene		55	3.1
Total Xylenes		40	14
Naphthalene		3	
Total PAHs	400		
Carcinogenic PAHs	4		
Aldrin + Dieldrin	10		
Chlordane	90		
DDT+DDD+ DDE	600		
Heptachlor	10		
PCBs	1		
Phenols	45000		

¹ Criterion for hexavalent chromium

² Criterion for inorganic mercury

³ HSL for sandy soils within 1 m of the land surface

⁴ F1 TPH = TPH (C₆-C₉) minus BTEX fraction

⁵ F2 TPH = TPH (C₁₀-C₁₆) minus naphthalene fraction

12.2 Groundwater Criteria

EPA's *Guidelines for the Assessment and Management of Groundwater Contamination* (DEC, 2007) (Groundwater Guidelines) outlines four general Relevant Environmental Values (REVs) for groundwater that are required to be protected under state environmental legislation. These comprise:

- **Aquatic Ecosystems:** Including surface water and groundwater ecosystems.
- **Human Uses:** Including potable water supply, agricultural water supply (irrigation and stock watering), industrial water use, aquaculture and human consumption of aquatic foods, recreational use (primary and secondary contact) and visual amenity.
- **Human Health in Non-Use Scenarios:** Includes consideration of health risks that may arise without direct contact between human and the groundwater, for example, exposure to volatile contaminants above groundwater contaminant plumes.
- **Buildings and Structures:** Includes protection from groundwater contaminants that can degrade building materials through contact, for example, the weakening of building footings resulting from chemically aggressive groundwater.

In accordance with EPA's Groundwater Guidelines, when assessing potential risks from groundwater contamination all REVs need to be identified and evaluated with regard to potential impacts. It is stated in the guidelines that when groundwater comes to the surface, whether from natural seepages or existing or potential future bores, it must not compromise the REVs.

An exception to this rule applies where groundwater or 'hypopheric' ecosystems are present. In such circumstances, the groundwater itself forms the ecosystem (for example karst systems or coarse alluvial sediments linked to stream base flows) that should be protected. However, we have previously been advised by EPA (formerly Department of Natural Resources) groundwater ecologists that a hypopheric ecosystem, by definition, should include several levels of biological taxa, including to macro invertebrate level.

Applying this rationale to the site, the geology of the aquifer beneath the site is characterized by residual clay soils and shale bedrock which have very limited pore space and could not support macro-invertebrates. In view of this, the aquifer is not likely to constitute a hypopheric ecosystem.

There are several sets of criteria available that can be used to evaluate potential risks to REV's, and which have been adopted for this investigation. These include:

ANZECC 2000 Groundwater Guidelines

The ANZECC 2000 guidelines include a set of threshold criteria that are designed to be protective of aquatic ecosystems for both fresh and marine waters. These criteria are based on a review of the earlier ANZECC 1992 guidelines and include more recent water quality data for different regions and ecosystem types in Australia. The ANZECC 2000 guidelines also provide guidance on site specific assessment and recommend a risk-based approach for protecting aquatic ecosystems. The ANZECC 2000 criteria were calculated at four different levels of species protection, these being 80%, 90%, 95% and 99%. That is, they signify the percentage of species within an ecosystem to be protected. It should be noted that the criteria for 95% species protection have been adopted as the Groundwater Investigation Levels (GILs) outlined in the recently released NEPM 2013 guidelines.

In view of the extensive research that is necessary to derive the ANZECC criteria, high reliability criteria (ie those for which the toxicology research has been completed to the required level) are not available for all chemical species. In the absence of definitive criteria, the ANZECC guidelines outline moderate and low reliability criteria which have been derived using the application of a risk-based coefficient. That is, they are typically conservative as to account for data limitations.

In the absence of high reliability criteria, EPA has specified that the low and moderate reliability criteria should be used. In some cases however, in particular for petroleum hydrocarbon compounds, the low/moderate reliability criteria are impracticably conservative and are actually below the limits of laboratory reporting. In such instances, EPA has advised that the adopted ecosystem protection criteria may be set as the lowest possible laboratory detection limit that can be achieved with the analytical technique remaining NATA accredited.

The receiving body for groundwater that flows beneath the site is Blackbutt Creek, which is located approximately 460 m to the south-west of the site. Blackbutt Creek flows into Lane Cove River after a distance of approximately 2.5 km. Both Blackbutt Creek and Lane Cove River (at the point of discharge) are fresh water environments. In view of this, the trigger values for 95% species protection in fresh waters are considered to be the most appropriate and have been adopted for this investigation.

The ANZECC 2000 guidelines also provide criteria that are designed to be protective of human-health for primary and secondary contact recreation. Criteria for irrigation, aquaculture protection and stock water quality are also provided.

Australian Drinking Water Guidelines 2011

ADWG 2011 is to provide a framework for the appropriate management of drinking water supplies in the Australian context, and is designed to ensure safety at the point of use. The guidelines include criteria that are protective of human-health via a pathway of ingestion, however, they also include criteria that are protective of drinking water aesthetics based on colour, odour and taste. The ADWG 2011 criteria have also been adopted as GILs in the recently released NEPM 2013 guidelines.

Criteria for Built Structures Protection

The Australian Standards *AS 2159-2009 Piling – Design and Installation* and *AS 2870-2011 Residential Slabs and Footings* outline a range of ‘exposure classification’ criteria for aggressiveness (ie corrosion potential) to both concrete and steel based on the pH and sulfate and chloride concentrations in groundwater. They are not threshold levels which, if exceeded, are indicative of potential harm to built structures. Rather, they are to be used as a guide to assist in the appropriate selection of pile, slab and footings design parameters to ensure the longevity of built structures in the environment in which they are constructed.

11.2.1 Relevant Environmental Values at the Site

Whilst the Groundwater Guidelines state that all REVs listed above should be applied as part of a groundwater investigation, certain REVs may not be applicable in some cases where they would never be realized.

The site is located within an urban environment which is serviced by a reliable and high quality reticulated town water supply. Therefore, the groundwater that flows beneath the site is not likely to be used as a drinking water supply or industrial water source, nor is it likely to be used for agricultural purposes. However, the receiving environments for groundwater migrating beneath the site (Blackbutt Creek and Lane Cover River) have their own ecological value, and these environments may also be used for contact-based recreation. Also, the site is proposed to be built on and occupied in the long term.

In view of the above, the REVs which are applicable at the site and have been appraised for this investigation include:

- Protection of the aquatic ecosystem in the receiving surface water bodies (Blackbutt Creek and Lane Cover River);
- Protection of human-health via contact-based recreation (in relation to the receiving surface water body);
- Potential impacts to human-health as a result of organic vapours being emitted from contaminated groundwater; and

- Preservation of the structural integrity of buildings or features constructed on the site.

In order to evaluate potential adverse impacts to the above REV's the ANZECC 2000 criteria for 95% species protection in fresh waters have been used, along with the ANZECC 2000 criteria for the protection of human-health in recreational waters. Also, whilst not relevant at the site, the results have also been compared to the ADWG 2011 criteria as these are used as a trigger for notifiable contamination under the provisions of the *Contaminated Land Management Act 1997*.

13. ANALYTICAL RESULTS AND INTERPRETATION

The analytical results for the soil and groundwater samples are presented in the NATA endorsed laboratory reports included in Appendix H and are summarised in the Tables of Results attached to this report. The results exceeding the assessment criteria are highlighted in the tables accordingly.

13.1 Interpretation of Soil Sampling Results

The analytical results for the soil samples are presented in Table A. The results show that the concentrations of organic and inorganic species analysed for are generally low and below the HIL/HSL Residential B criteria and the EPA Threshold Concentrations with the exception of petroleum hydrocarbons in several samples.

Elevated TPH (C₆-C₉) (482 mg/kg) and TPH (C₁₀-C₃₆) (1 230 mg/kg) concentrations were measured in two soil samples retrieved from boreholes BH3 and BH4, and are above their EPA Threshold Concentrations criteria of 65 mg/kg and 1 000 mg/kg respectively. In addition, the F1 TPH (750 mg/kg) and F2 TPH (240 mg/kg) measured in a sample collected from BH3 are above the NEPM 2013 HSL criteria for vapour intrusion of 50 mg/kg and 280 mg/kg respectively. These boreholes were positioned adjacent to the UPSSs in the south-west of the site, and show that these facilities have leaked mildly.

Elevated concentrations of TPH (C₆-C₉) (116 mg/kg), TPH (C₁₀-C₃₆) (1 230 mg/kg), F1 TPH (218 mg/kg) and F2 TPH (350 mg/kg and 1 080 mg/kg) were also measured in two soil samples retrieved from location BH6A, which was positioned adjacent to the separator pit in the washbay area in the south-west of the site. These concentrations exceed the abovementioned EPA Threshold Concentrations and NEPM 2013 HSL criteria and also show that the separator pit has leaked.

13.2 Interpretation of Groundwater Sampling Results

The analytical results for the groundwater samples retrieved from the monitoring wells are presented in Table B. The results show that the concentrations of cadmium (0.4 ug/L), copper (2 ug/L), zinc (67 ug/L) and ammonia (5 340 ug/L) measured in the monitoring well are above the ANZECC 2000 freshwater ecosystems protection criteria for these analytes of 0.4 ug/L, 1.4 ug/L, 8 ug/L and 2 180 ug/L respectively. This ammonia concentration also exceeds the ANZECC 2000 criterion for ammonia in recreational waters of 10 ug/L.

14. HUMAN HEALTH AND ENVIRONMENTAL RISK ANALYSIS

14.1 Soil Exposure Pathways

The results of the sampling program performed for this investigation show that apart from the elevated concentrations of petroleum hydrocarbons measured in the soils in the vicinity of the UPSSs and separator pit in the south-west of the site, the contaminant concentrations measured in the soils are below criteria that are protective of human-health and the environment for a residential land use setting with minimal opportunities for soil access. That is, the contaminant concentrations in the soils across the majority of the site do not present a risk to human-health or the environment for the existing (commercial/industrial) or proposed (mixed commercial and high-density residential) use of the land.

Further, the elevated petroleum hydrocarbons which have been measured in the soils are unlikely to present an unacceptable risk to human-health for the abovementioned land uses based on dermal contact and ingestion exposure pathways given that the impacted soil is currently contained under concrete pavements and would most likely remain covered by hardstand pavements in the future. However, given that the F1 and F2 TPH concentrations in the vicinity of the UPSSs and wastewater pit are above the HSL Residential B criteria, these soils could present a risk to human health via a vapour intrusion exposure pathway for a high-density residential land use setting, especially if basement areas were proposed in which elevated hydrocarbon vapours could potentially accumulate.

It should also be noted that whilst a vapour intrusion risk could potentially be realized for the proposed mixed commercial and a high-density residential redevelopment, the risks for an ongoing commercial/industrial use of the site in its current condition are not considered to be significant.

14.2 Groundwater Exposure Pathways

A risk analysis for the potential impacts to the REV's for groundwater in the vicinity of the site is provided below.

Aquatic Ecosystems

The results of this investigation show that the groundwater beneath the site contains concentrations of arsenic, copper, zinc and ammonia above the ANZECC 2000 criteria for ecosystem protection in fresh water environments. However, in view of the low concentrations of heavy metals measured in the soils on the site and also the low concentrations of petroleum hydrocarbons in the groundwater (ammonia can be a breakdown product of TPH), the elevated arsenic, copper, zinc and ammonia levels which have been measured are expected to be representative of the background concentrations in the regional groundwater. Further, given that the nearest receiving environment is Blackbutt Creek, which is located approximately 650 m down-gradient, the heavy metals and ammonia concentrations would be expected to attenuate via degradation and dilution before discharging to the creek at potentially harmful levels. That is, the groundwater beneath the site would not present an unacceptable risk to down-gradient water bodies even if the site had contributed to the heavy metals and ammonia impacts.

Human Uses

The REVs for human uses that are applicable at the site include contact-based recreation.

Whilst the ammonia concentrations in the groundwater are likely to be representative of the background concentrations in the regional aquifer (discussed above), they have been measured to exceed the ANZECC 2000 criteria for recreational water. That is, there is the potential that the groundwater beneath the site could present a risk to human-health via contact-based recreational activities in Blackbutt Creek and Lane Cover River further downstream. However, as discussed above, the ammonia concentrations would be expected to attenuate naturally prior to discharging to Blackbutt Creek at potentially harmful levels. That is, it is considered unlikely that the contaminant concentrations in the groundwater beneath the site would present an actual risk to human-health via contact-based recreation exposure pathways even if the site had contributed to the ammonia impacts.

Human Health in Non-Use Scenarios

Human-health impacts from non-use scenarios may include vapour impacts from a contaminant plume. However, no phase separated hydrocarbons were identified on the groundwater during sampling and the concentrations of hydrocarbon contaminants measured in the groundwater are very low and well below levels that would present a vapour risk. Therefore, no adverse impacts to human-health resulting from the groundwater in non-use scenarios would be expected.

Buildings and Structures

The elevated concentrations of heavy metals and ammonia which have been measured in the groundwater beneath the site would not present a risk to built structures. Further, the pH of the groundwater that was measured during the purging of the monitoring wells (shown in Table 10.1) is not significantly acidic and would not present an unacceptable corrosion risk to steel or concrete.

14.3 Potential for Off-Site Migration of Contamination

Given that the entire site is covered with hardstand surfaces, off-site migration of contaminants via surface runoff or wind action is unlikely to occur. Further, as outlined in Section 132 above, groundwater containing unacceptable and potentially harmful levels of chemical contaminants is not likely to be migrating off-site, and is also unlikely to migrate off-site in the future.

14.4 Duty to Report Site Contamination

Under the provisions of the *Contaminated Land Management Act 1997* (CLM Act), a site owner or occupant has a duty to notify EPA of any significant contamination that has the potential to cause human-health or environmental impacts. The requirements for reporting contamination are outlined in EPA's *Guidelines on the Duty to Report Contamination Under the Contaminated Land Management Act 1997*, which became effective on 1 December 2009. This guideline outlines the specific triggers which need to be considered for notifiable contamination under the CLM Act.

For soil, the notification thresholds are the SILs, which are outlined in EPA's *Guidelines for the NSW Site Auditor Scheme (2nd Edition)*. Where contaminants exceed their SIL criteria by more than 2.5 times or where the average concentrations of contaminants in soil exceed the applicable SILs, EPA must be notified. Further, it should be noted that the Duty to Report Guidelines do not define notification thresholds for all contaminants. EPA has advised that where no criteria are listed, the need to submit a notification (or otherwise) should be based on advice provided by an environmental consultant.

With regard to groundwater, EPA must be notified if elevated concentrations of contaminants are a) identified to be above criteria which are protective of drinking water (adopted from the *Australian Drinking Water Guidelines 6, 2011*) and b) due to sources on a particular site rather than being regional or background concentrations. Where impacted groundwater is likely to be discharging into a surface water body within 500 m of the contaminant source, criteria that are protective of aquatic ecosystems in both fresh and marine waters (outlined in the *ANZECC 2000 Guidelines on Fresh and Marine Water Quality*) also apply. The threshold criteria for notification in relation to groundwater impacts are provided in Appendices A and B of the Duty to Report Guidelines.

The results of this investigation show that the concentrations of chemical contaminants in the soils on the site are below the SIL (Colum 4) criteria for a commercial/industrial land use setting, this being the current use. Further, whilst there are no specific notification criteria for TPH in soil, it is our recommendation that the concentrations of petroleum hydrocarbons measured in the soils on the site would not present an unacceptable risk for a commercial/industrial land use setting. Further, as discussed in Section 14.2 above, the concentrations of chemical contaminants that have been measured in the groundwater beneath the site are likely to be representative of the background concentrations in the regional aquifer, and the site is located greater than 500 m from the nearest receiving environment. Also, the concentrations of contaminants in the groundwater are below the *Australian Drinking Water Guideline* thresholds. Therefore, there would be no need to submit a notification to EPA based on currently available data.

14.5 Assessment Outcomes

The results of this DSI show that the concentrations of chemical contaminants in the soils on the site are generally low and would not present an unacceptable risk to human-health for an on-going commercial/industrial use of the land in its current condition. Further, the site is not expected to be a source of unacceptable groundwater impacts. However, the concentrations of petroleum hydrocarbons measured in the soils in the vicinity of the UPSSs and separator pit in the south-west of the site present a potential risk to human-health for a high-density residential land use setting. That is, should the proposed mixed commercial and high-density residential redevelopment proceed, the UPSSs and separator pit should be removed, and the surrounding hydrocarbon impacted soil remediated. The hydrocarbon impacts identified are expected to be isolated in extent, and it would be most cost effective to undertake the remedial works at the time of redevelopment.

15. EVALUATION OF QUALITY ASSURANCE

15.1 Field Duplicate Sample Results

The results of the field intra and inter-laboratory duplicate sample analyses are compared to those of the corresponding primary samples in Table C.

The results for the soil duplicate samples show that the variations between the primary and duplicate sample concentrations do not exceed the allowable Relative Percentage Difference (RPD) criteria of 50% for inorganic species and 70% for organic analytes in 85 of the 91 comparable data sets, which is an acceptable rate of correlation. The discrepancies encountered are expected to be due to the heterogeneous distribution of the contaminants within fill material and therefore the RPD discrepancies do not affect the outcome of the investigation.

15.2 Laboratory Quality Control Program

Our review of the laboratory's internal QC program has shown that the majority of internal duplicate samples, spike recoveries, surrogate standards and laboratory blanks were within the laboratories' recommended range for acceptable reproducibility. Therefore, STS considers the laboratory data obtained in the sampling program to be of acceptable precision, accuracy and reliability and representative of the site conditions encountered.

15.3 Procedure Based Quality Control

An appraisal of the key procedure-based quality control aspects of the investigation are summarized in Table 15.1 below.

Table 15.1 Appraisal of Procedure-Based Quality Control

Item	Compliance	Reference/Comments
Appropriate sampling methods adopted?	Yes	Refer to Sections 10.1 & 10.2
Appropriate sample handling and transportation procedures implemented?	Yes	Refer to Sections 10.1 & 10.2 and COC documentation in Appendix G
Samples analysed within recommended laboratory holding times?	Yes	Refer to COC documentation in Appendix G and laboratory reports in Appendix H
NATA accredited laboratory testing methods used?	Yes	Refer to laboratory reports in Appendix H
Appropriate purging of groundwater wells prior to sampling?	Yes	Refer to purging records sheets in Appendix F

16. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the DSI, the following conclusions and recommendations are made:

- The site has been used for commercial/industrial purposes since at least the 1930s. The property was most recently redeveloped in the 1960s, and the configuration of the land has since remained the same. Activities that are either known or expected to have occurred at the site include motor vehicle sales and servicing, printing, the retail of various goods and the storage and possible manufacture of furniture, glassware and plastic products. In addition, three UPSSs have been located in the south-western portion of the site since the 1960s, and washbay/workshop areas with below ground wastewater collection pits/separator pits and above ground oil storage tanks have also been present at several locations.
- The results of the soil sampling program performed for this investigation show that the concentrations of chemical contaminants measured in the soils across the site are generally low. Further, the site is not expected to be the source of any unacceptable groundwater impacts. However, elevated concentrations of petroleum hydrocarbons have been measured in the soils in the vicinity of the UPSSs and a separator pit in the south-west of the site. The hydrocarbon impacts identified are likely to be isolated in extent and are not considered significant for an on-going commercial/industrial use of the land, however, they could present a risk to human-health via a vapour intrusion/inhalation exposure pathway for a residential land use setting.
- Based on the results of this DSI, the site is considered to be suitable for an on-going commercial/industrial use in its current condition. However, should the proposed mixed commercial and high-density residential redevelopment proceed, the UPSSs and separator pit should be removed, and the surrounding hydrocarbon impacted soil remediated. It would be most cost effective to undertake the remedial works at the time of redevelopment.

17. LIMITATIONS

SMEC Testing Services Pty Limited has performed its services for this project in accordance with its current professional standards. Laboratory analyses were undertaken as part of this investigation by Australian Laboratory Services, who are NATA accredited for the analyses performed.

When assessing the extent of contamination across a site from a soil or groundwater sampling program there is the possibility that variations may occur between sample locations and the actual presence of contaminated material at the site may differ from that referred to herein, since no sampling program, no matter how comprehensive, can reveal all anomalies and hot spots that may be present.

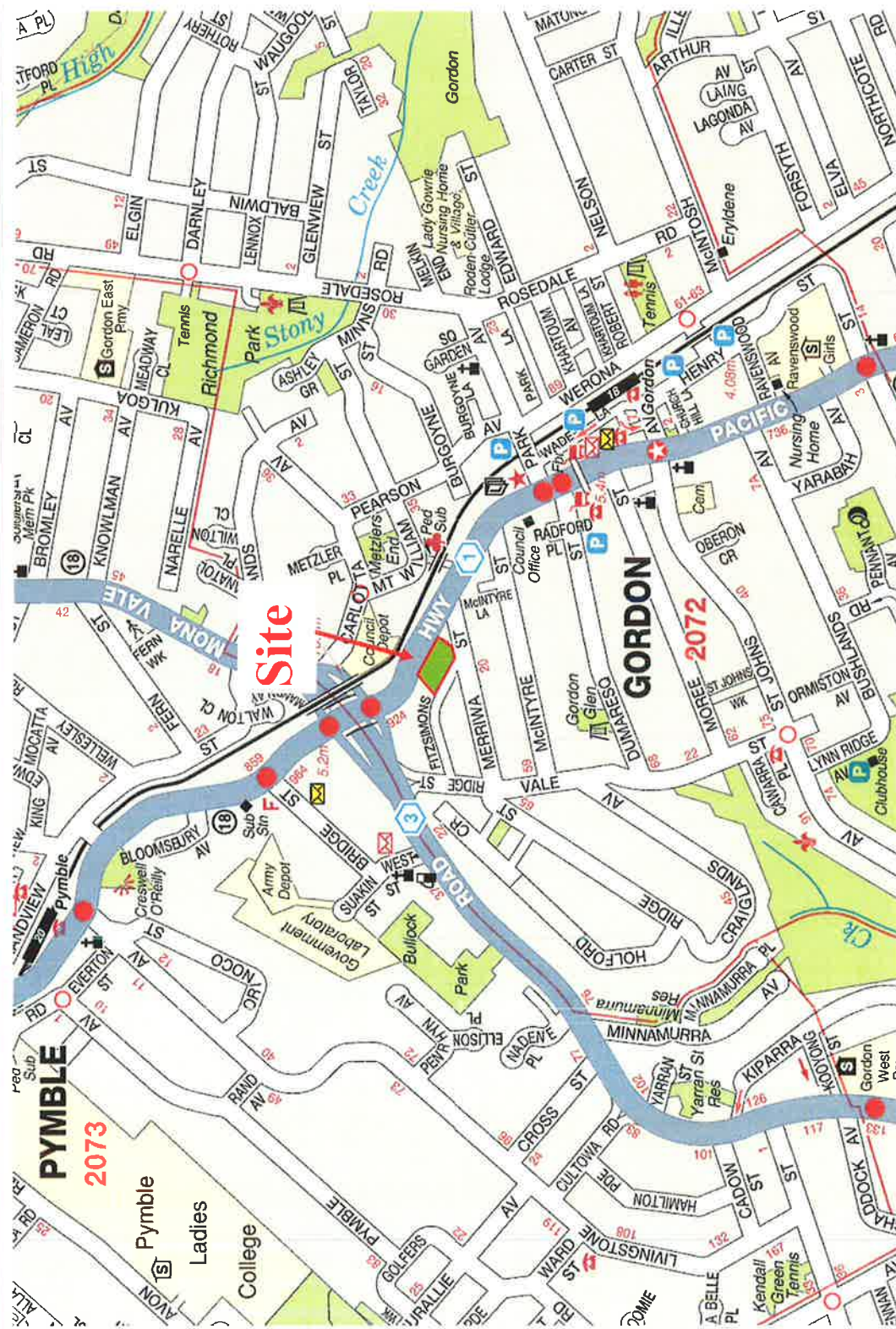
The data collected has been used to form an opinion about site contamination with regard both the current (commercial/industrial) and proposed use of the site (mixed commercial and high-density residential). If the nature of the proposed development changes, the conclusions given in this report may need to be revised. Also, regulatory evaluation criteria are constantly changing and as a consequence, concentrations of contaminants presently considered low may, in the future, fall under different regulatory standards that may alter the outcome of this investigation. Opinions and judgments expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions.

This document and the information herein have been prepared solely for the use of Alto Prestige Pty Ltd for the purposes nominated in this report. No person or organization other than Alto Prestige Pty Ltd is entitled to rely on any part of the report without the prior written consent of SMEC Testing Services Pty Ltd. Any third party relying on this report shall have no legal recourse against SMEC Testing Services Pty Ltd or its parent organizations or subsidiaries and shall indemnify and defend them from all and against all claims arising out of, or in conjunction with such use or reliance.

A handwritten signature in black ink, appearing to read 'D Yonge'.

David Yonge (BSc, MSc)
Environmental Manager,
SMEC Testing Services Pty Limited

FIGURES



Date: November 2013

Scale: 1: 15530 (at A4)

SMEC TESTING SERVICES Pty Ltd

Client: ALTO PRESTIGE PTY LIMITED

DETAILED SITE INVESTIGATION
8870-898 Pacific Highway, Gordon, NSW: Site Location

Project No.
19399/3606C

Drawing No: 13/2084/1



Legend

- Boundary of Site
- - Extent of Tier 2 Area
- ... Extent of Tier 3 Area
- ⊠ Location of UPSS
- 8/GW/1 Borehole/Monitoring Well Number & Location

SMC TESTING SERVICES Pty Ltd	Scale: 1:770 (at A4)	Date: November 2013
Client: ALTO PRESTIGE PTY LIMITED		
DETAILED SITE INVESTIGATION		
870-898 Pacific Highway, Gordon, NSW: Plan Showing Site		
Features and Sampling Locations		
Project No.	18399/3606C	
Drawing No:	13/2084/2	

TABLES OF RESULTS

	Sample Numbers								NEPM Background Ranges				
Borehole No.	BH-6	BH-5	BH-6	BH-7	BH-8	BH-2	BH-3	BH-3	BH-4	BH-4	BH-4	BH-1	BH-1
Analyses	51	52	54	55	57	58	59	60	61	62	63	64	65

[illegible]

SMEC Testing Services

Table E Analytical Results for Groundwater Samples

Sample No.		ANZECC 2008 Criteria for 95% Species Protection in Fresh Waters*	ANZECC 2000 Recreational Water Health Criteria*	ADWGW 2011 Drinking Water Criteria*
Analytes	Date Sampled			
Metals				
Arsenic	<1	13 (a)	50 (g)	10 (g)
Cadmium	0.4	0.2	5	2
Chromium	<1	10 (c)	50 (h)	50 (c)
Copper	2	1.4	1000	2000
Lead	<1	3.4	50	10
Mercury	<0.1	0.6 (d)	1 (i)	1 (i)
Nickel	4	11	100	20
Zinc	67	8	5000	
Monocyclic Aromatic Hydrocarbons (MAHs)				
Benzene	<1	950	10	1
Ethylbenzene	<2	80 (b)		300
Toluene	<2	180 (b)		800
Xylenes	<2	75 (b),(e)		600 (j)
Napthalene	<5	16		
Total Petroleum Hydrocarbons (TPHs)				
TPH C ₈ -C ₉	<20	7 (b)		
Total TPH C ₁₀ -C ₃₄	<50	7 (b)		
Ammonia	5340	2180 (f)	10	

Notes : Results expressed as µg/L unless indicated otherwise.

ND = No individual species was detected above the laboratory detection limits.

* ANZECC, ARMCANZ Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (ANZECC 2000).

* NHMRC/NRMMC, National Water Quality Management Strategy, Australian Drinking Water Guidelines 6, 2011

1 Denotes result for inter-laboratory duplicate sample BH51

Results that have been shaded green exceed the ANZECC 2000 criteria for 95% species protection for marine waters

Results that have been shaded red exceed the ANZECC 2000 criteria for recreational water

Results shaded dark blue exceed the health-based criteria for drinking water outlined in the ADWGW 2011

Results that have been shaded blue exceed both the ANZECC 2000 criteria for ecosystem protection and recreational water

(a) Criterion for Arsenic (V)

(b) ANZECC 2000 low reliability trigger value

(c) Criterion for Chromium (III)

(d) Criterion for inorganic mercury

(e) Criterion for m-xylene

(f) Criterion for pH 7.0

(g) Criterion for total arsenic

(h) Criterion for total chromium

(i) Criterion for total mercury

(j) Criterion for total xylenes

Table C Results of Quality Control - Intra and Inter Laboratory Duplicate Soil Samples

Analyte	Sample Numbers					
	S40	S41*	RPD (%)	S40	S42 [#]	RPD (%)
Metals						
Arsenic	<5	<5	<50	<5	<5	<50
Cadmium	<1	<1	<50	<1	<1	<50
Chromium (total)	11	8	32	11	8	32
Copper	29	18	47	29	16	58
Lead	21	14	40	21	13	47
Mercury	<0.1	<0.1	<50	<0.1	<0.1	<50
Nickel	9	5	57	9	4	77
Zinc	41	20	69	41	16	88
Monocyclic Aromatic Hydrocarbons (MAHs)						
Benzene	<0.2	<0.2	<70	<0.2	<0.2	<70
Ethylbenzene	<0.5	<0.5	<70	<0.5	<0.5	<70
Toluene	<0.5	<0.5	<70	<0.5	<0.5	<70
Xylenes	<0.5	<0.5	<70	<0.5	<0.5	<70
Naphthalene	<1	<1	<70	<1	<1	<70
Total Petroleum Hydrocarbons (TPHs)						
Total C ₉ -C ₉	<10	<10	<70	<10	<10	<70
Total C ₁₀ -C ₁₄	<50	<50	<70	<50	<50	74
Total C ₁₅ -C ₂₈	<100	<100	<70	<100	<100	<70
Total C ₂₉ -C ₃₆	<100	<100	<70	<100	<100	<70
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	<0.5	<0.5	<70	<0.5	<0.5	<70
Acenaphthylene	<0.5	<0.5	<70	<0.5	<0.5	<70
Anthracene	<0.5	<0.5	<70	<0.5	<0.5	<70
Benz(a)anthracene	<0.5	<0.5	<70	<0.5	<0.5	<70
Benzo(a)pyrene	<0.5	<0.5	<70	<0.5	<0.5	<70
Benzo(b)fluoranthene	<0.5	<0.5	<70	<0.5	<0.5	<70
Benzo(k)fluoranthene	<0.5	<0.5	<70	<0.5	<0.5	<70
Benzo(g,h,i)perylene	<0.5	<0.5	<70	<0.5	<0.5	<70
Chrysene	<0.5	<0.5	<70	<0.5	<0.5	<70
Dibenzo(a,h)anthracene	<0.5	<0.5	<70	<0.5	<0.5	<70
Fluoranthene	<0.5	<0.5	<70	<0.5	<0.5	<70
Fluorene	<0.5	<0.5	<70	<0.5	<0.5	<70
Indeno(1,2,3-cd)pyrene	<0.5	<0.5	<70	<0.5	<0.5	<70
Naphthalene	<0.5	<0.5	<70	<0.5	<0.5	<70
Phenanthrene	<0.5	<0.5	<70	<0.5	<0.5	<70
Pyrene	<0.5	<0.5	<70	<0.5	<0.5	<70

Note: Results expressed as mg/kg

* Denotes intra-laboratory duplicate sample analysed by primary laboratory (ALS Sydney)

Denotes inter-laboratory duplicate sample analysed by secondary laboratory (ALS Brisbane)

RPDs that have been shaded exceed the acceptance criteria



APPENDIX A

AERIAL PHOTOGRAPHY



Source: Department of Lands

2005 Aerial Photograph Showing the Site and its Surrounds



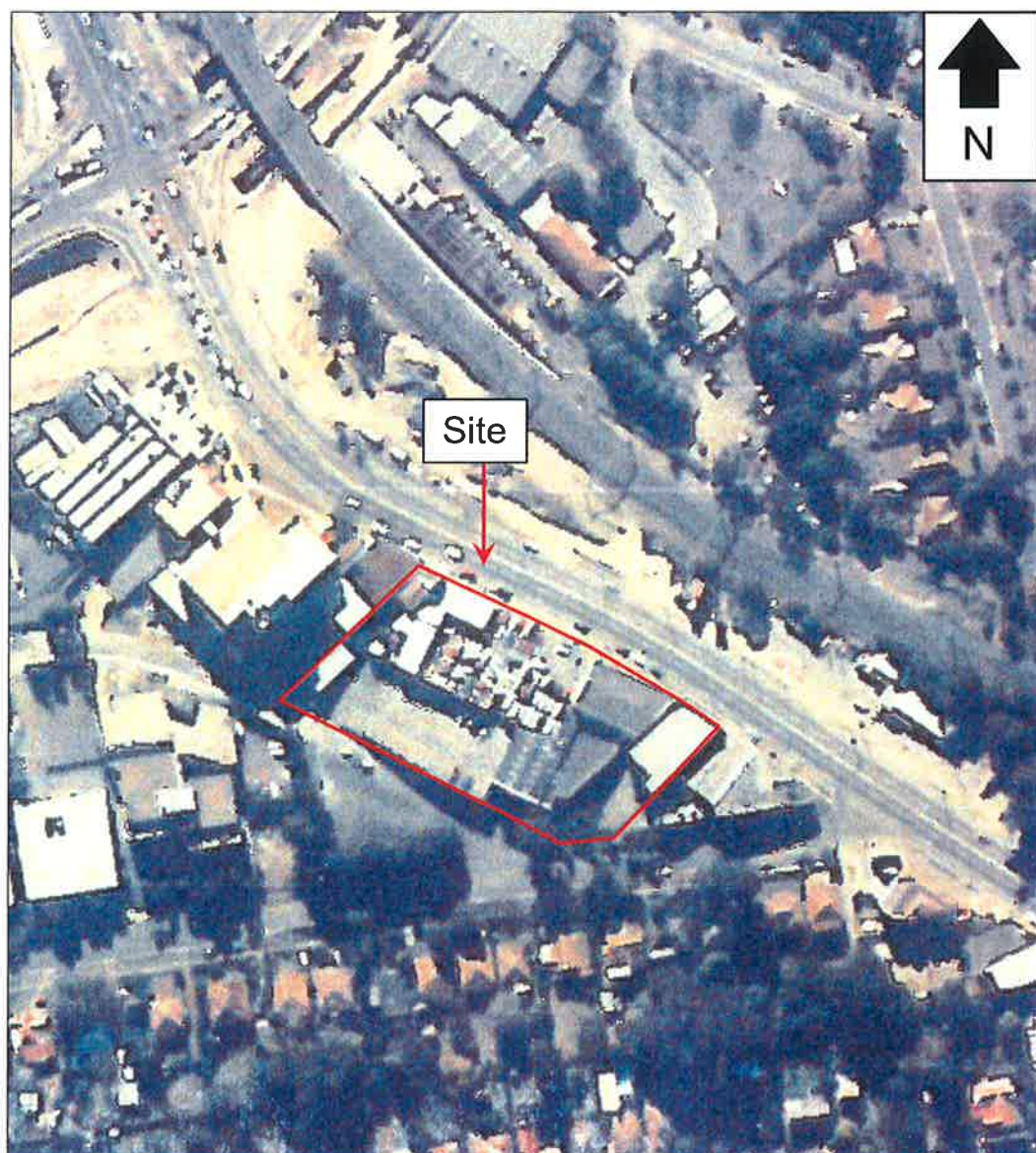
Source: Department of Lands

2002 Aerial Photograph Showing the Site and its Surrounds



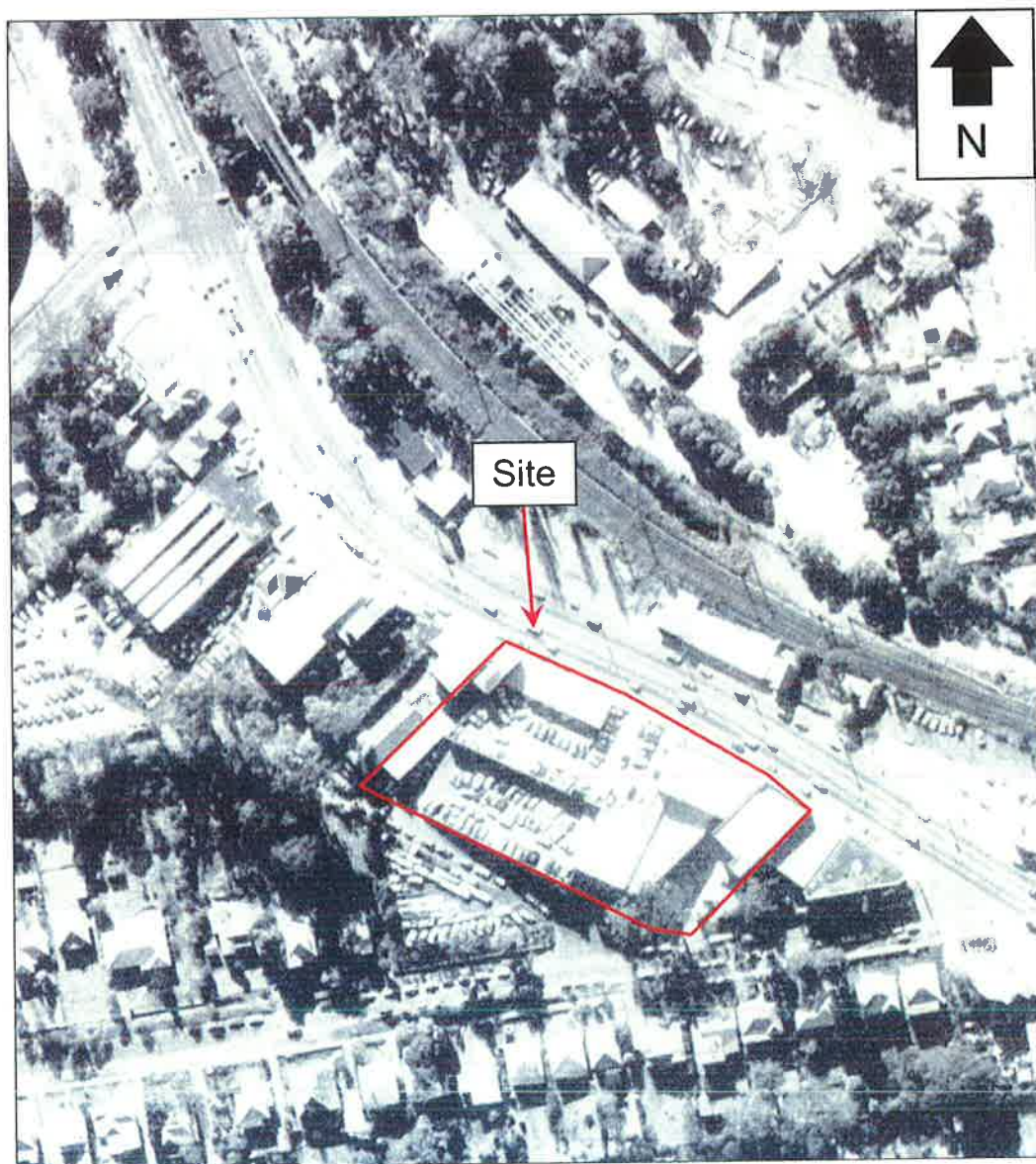
Source: Department of Lands

1994 Aerial Photograph Showing the Site and its Surrounds



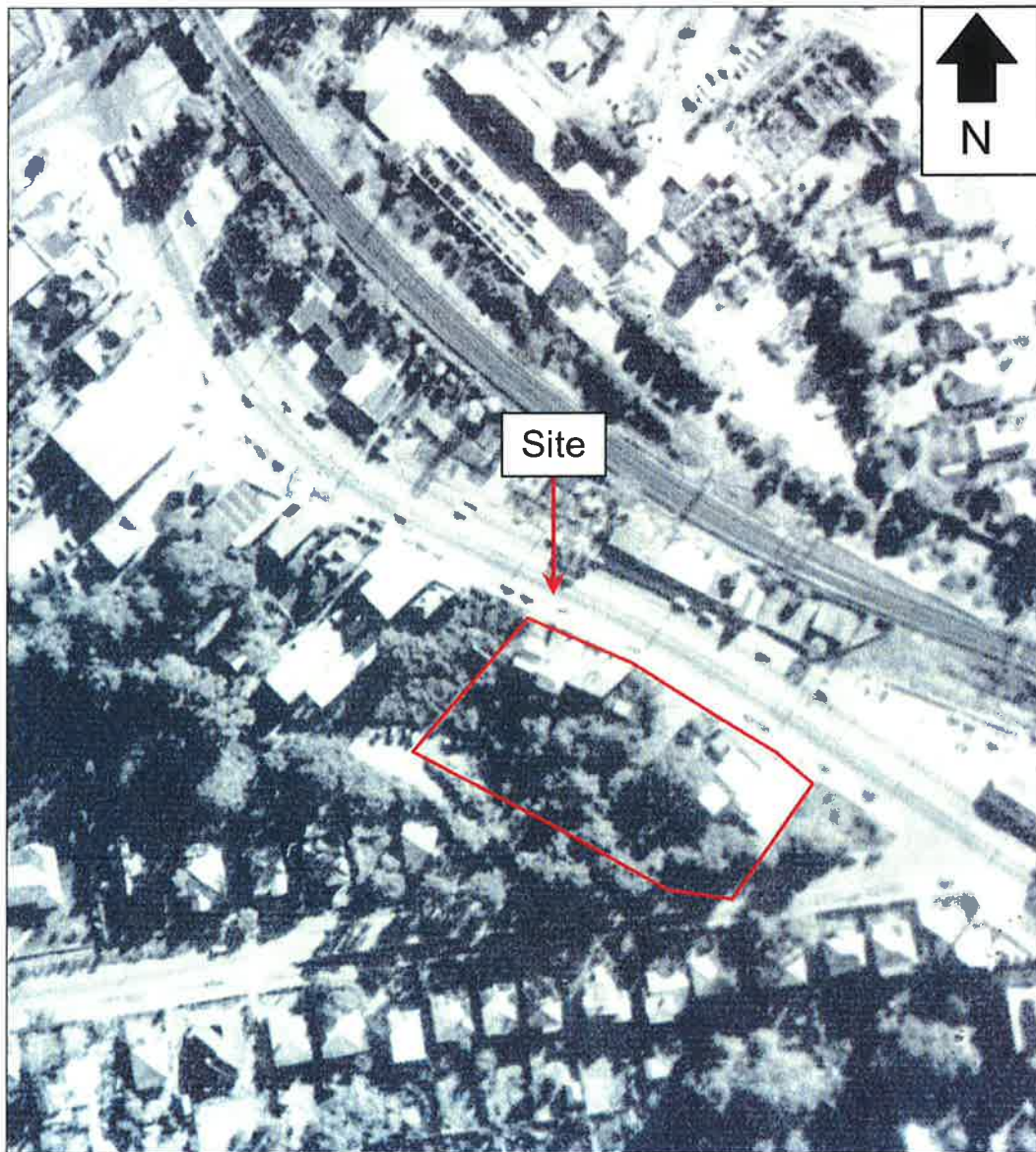
Source: Department of Lands

1986 Aerial Photograph Showing the Site and its Surrounds



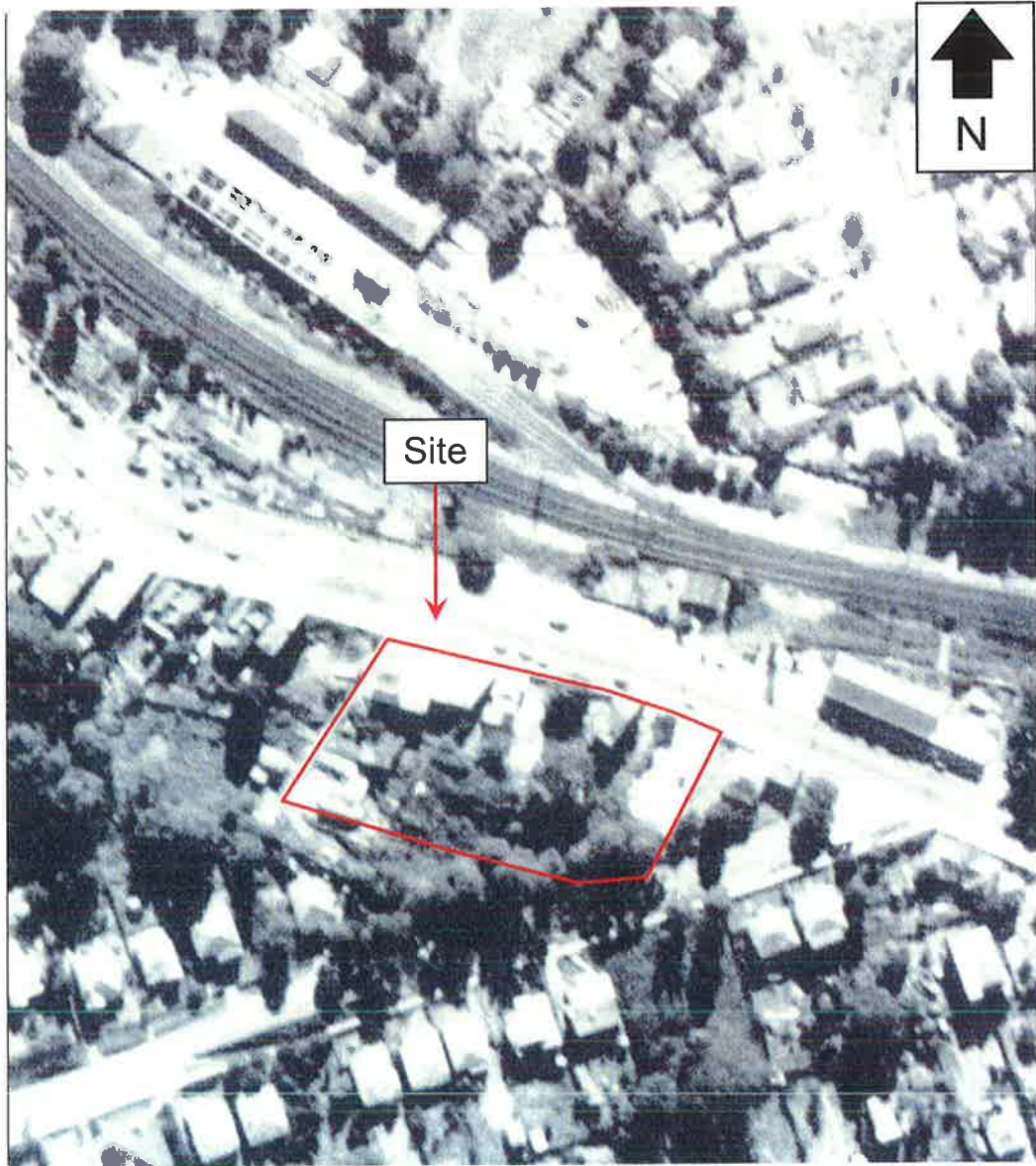
Source: Department of Lands

1970 Aerial Photograph Showing the Site and its Surrounds



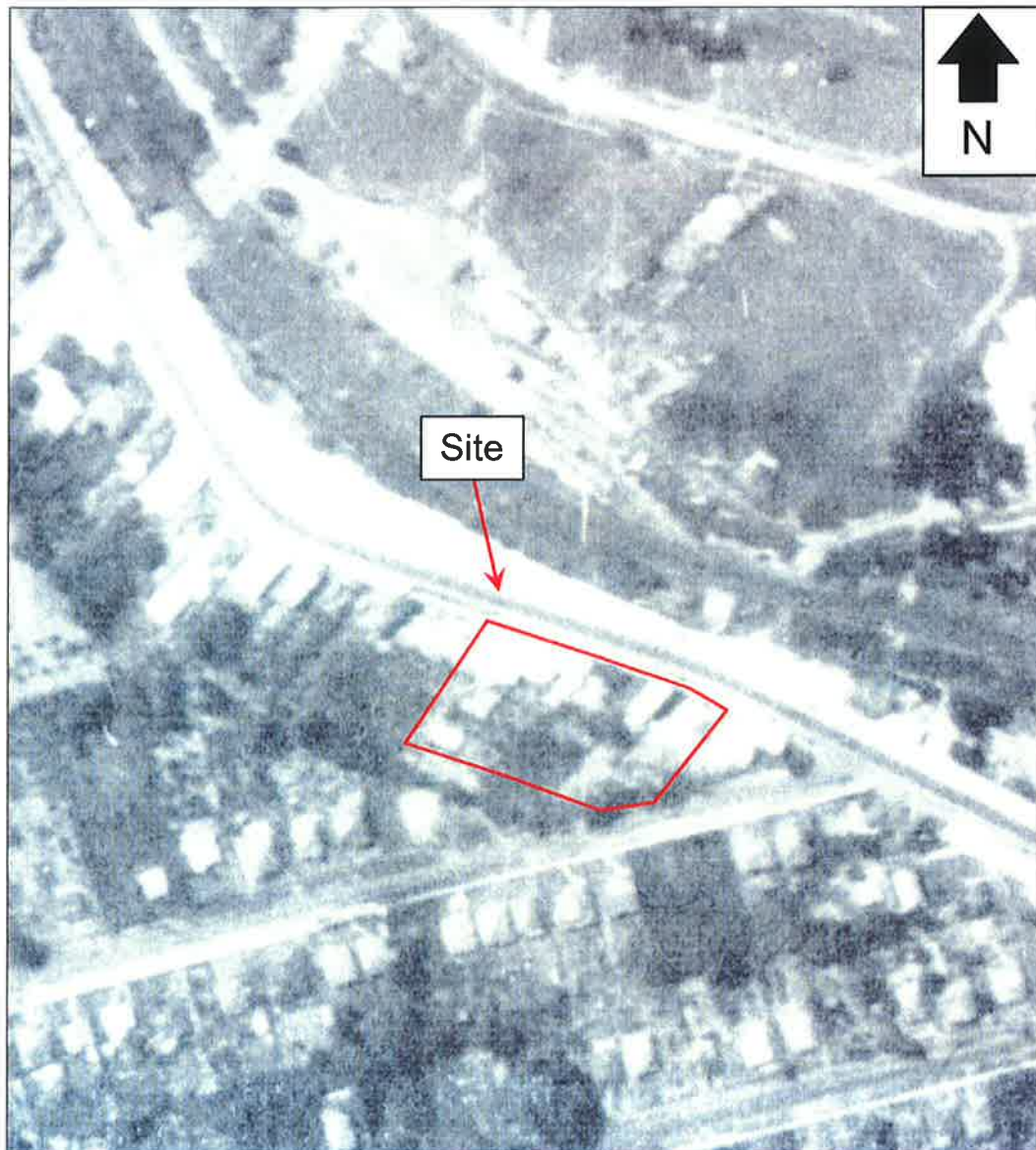
Source: Department of Lands

1961 Aerial Photograph Showing the Site and its Surrounds



Source: Department of Lands

1951 Aerial Photograph Showing the Site and its Surrounds



Source: Department of Lands

1930 Aerial Photograph Showing the Site and its Surrounds



APPENDIX B

SECTION 149 (2) CERTIFICATES

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1056, Pymble NSW 2073
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmg@kmgc.nsw.gov.au
W www.kmgc.nsw.gov.au

ABN 86 408 856 411



RECEIVED
22 OCT 2013

PROPERTY DETAILS

Address: 870 Pacific Highway GORDON NSW 2072

Lot Description: Lot 1 DP 654047

CERTIFICATE DETAILS

Certificate No: PC3627/13

Certificate Date: 18/10/2013

Certificate Type: Section 149(2)

Receipt No: 382811

APPLICANT'S DETAILS

REF: 17019422 3194523



SAI Global Property Division
PO Box A2151
SYDNEY SOUTH NSW 1235

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

B4 Mixed Use

under the provisions of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Home occupations.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Boarding houses; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Group homes (permanent); Hostels; Hotel or motel accommodation; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Water reticulation systems; Any other development not specified in item 3 or 5

5. WHAT IS PROHIBITED by the above environmental plan(s)?

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Highway service centres; Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Residential accommodation; Rural industries; Sewage treatment plants; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY?

Not applicable. Dwelling houses are not permitted within this zone.

7. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
State Environmental Planning Policy No.6 - Number of storeys in a building.
State Environmental Planning Policy No.19 - Bushland in Urban Areas.
State Environmental Planning Policy No.21 - Caravan Parks.
State Environmental Planning Policy No.22 - Shops and Commercial Premises.
State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).
State Environmental Planning Policy No.33 - Hazardous & Offensive Development.
State Environmental Planning Policy No.44 - Koala Habitat Protection.
State Environmental Planning Policy No.55 - Remediation of Land.
State Environmental Planning Policy No.62 - Sustainable Aquaculture.
State Environmental Planning Policy No.64 - Advertising and Signage.
State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.
State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.
State Environmental Planning Policy (Major Development) 2005.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
State Environmental Planning Policy (Temporary Structures) 2007.
State Environmental Planning Policy (Infrastructure) 2007.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
State Environmental Planning Policy (Affordable Rental Housing) 2009.
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

8. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

9. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

10. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

***SPECIAL NOTE:** Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.*

11. IS THE PROPERTY IN A CONSERVATION AREA?

No.

***SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.*

12. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

13. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

14. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

15. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

23. IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?

No.

24. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?

No.

- 25. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. **IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

***SPECIAL NOTE:** The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

- 30. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRES, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

-
- 31. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

-
- 32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**


This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact the Department of Environment, Climate Change and Water, Tel: 99955000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
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E kmg@kmg.nsw.gov.au
W www.kmg.nsw.gov.au
ABN 86 408 856 411



RECEIVED
22 OCT 2013

PROPERTY DETAILS

Address: 880 Pacific Highway GORDON NSW 2072

Lot Description: Lot 3 DP 609007

CERTIFICATE DETAILS

Certificate No: PC3632/13

Certificate Date: 18/10/2013

Certificate Type: Section 149(2)

Receipt No: 382811

APPLICANT'S DETAILS

REF: 17019502:31942612



SAI Global Property Division
PO Box A2151
SYDNEY SOUTH NSW 1235

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No.

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(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

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16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage, Tel:131 555 or email info@environment.nsw.gov.au

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

23. IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?

No.

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No.

- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

- 30. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRES, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Council has adopted by resolution a Contaminated Land Policy which may restrict the development of the land. This policy is implemented when zoning or land use changes are proposed on lands which may have previously been used for certain purposes. Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.

- 31. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact the Department of Environment, Climate Change and Water, Tel: 99955000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per



PLANNING

CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072

Locked Bag 1056, Pymble NSW 2073

T 02 9424 0000 F 02 9424 0001

DX 8703 Gordon TTY 02 9424 0875

E kmc@kmc.nsw.gov.au

ABN 86 408 856 411



RECEIVED
22 OCT 2013

PROPERTY DETAILS

Address: 898 Pacific Highway GORDON NSW 2072

Lot Description: Lot 16 DP 249171

CERTIFICATE DETAILS

Certificate No: PC3633/13

Certificate Date: 18/10/2013

Certificate Type: Section 149(2)

Receipt No: 382811

APPLICANT'S DETAILS

REF: 17019556:31942711



SAI Global Property Division
PO Box A2151
SYDNEY SOUTH NSW 1235

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

B4 Mixed Use

under the provisions of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Home occupations.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Boarding houses; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Group homes (permanent); Hostels; Hotel or motel accommodation; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Seniors housing; Shop top housing; Water reticulation systems; Any other development not specified in item 3 or 5

5. WHAT IS PROHIBITED by the above environmental plan(s)?

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Highway service centres; Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Residential accommodation; Rural industries; Sewage treatment plants; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY?

Not applicable. Dwelling houses are not permitted within this zone.

7. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
State Environmental Planning Policy No.6 - Number of storeys in a building.
State Environmental Planning Policy No.19 - Bushland in Urban Areas.
State Environmental Planning Policy No.21 - Caravan Parks.
State Environmental Planning Policy No.22 - Shops and Commercial Premises.
State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).
State Environmental Planning Policy No.33 - Hazardous & Offensive Development.
State Environmental Planning Policy No.44 - Koala Habitat Protection.
State Environmental Planning Policy No.55 - Remediation of Land.
State Environmental Planning Policy No.62 - Sustainable Aquaculture.
State Environmental Planning Policy No.64 - Advertising and Signage.
State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.
State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.
State Environmental Planning Policy (Major Development) 2005.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
State Environmental Planning Policy (Temporary Structures) 2007.
State Environmental Planning Policy (Infrastructure) 2007.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
State Environmental Planning Policy (Affordable Rental Housing) 2009.
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

8. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

9. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

10. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

***SPECIAL NOTE:** Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.*

11. IS THE PROPERTY IN A CONSERVATION AREA?

No.

***SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.*

12. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

13. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

14. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

15. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

23. IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?

No.

24. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?

No.

- 25. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (STATE INFRASTRUCTURE DELIVERY) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. **IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

- 30. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRES, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

-
- 31. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

-
- 32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact the Department of Environment, Climate Change and Water, Tel: 99955000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per _____



APPENDIX C

HISTORICAL LAND TITLES INFORMATION

SEARCH REPORT

SUBJECT LAND: 870-898 Pacific Highway, Gordon
Lot 1 in Deposited Plan 654047,
Lot 3 in Deposited Plan 609007 and
Lot 16 in Deposited Plan 249171
as shown on the Site Plan annexed

OWNERSHIP:

As regards Lot 1 DP654047

from circa 1934 to 28.11.1947	Edgar Greenwood, Gentleman
from 28.11.1947 to 25.6.1951	Thelma Inez Squire, Spinster
from 25.6.1951 to 15.9.1953	John William Mackerras, Master Builder
from 15.9.1953 to 26.7.1962	Armstrong Glass Pty Limited
from 26.7.1962 to 8.5.1969	Arndale Developments (Australia) Pty Limited
from 8.5.1969 to 6.1.1977	Lorton Pty Limited
from 6.1.1977 to 6.9.1985	Lai Yin Wong, Accountant and Howard Li, Restaurateur
from 6.9.1985 to Date	Georgio Altomonte Holdings Pty Ltd

As regards Lot 3 DP609007

Part shaded orange

from circa 1918 to 1.4.1927	David Rankin Swan, Builder
from 1.4.1927 to 14.10.1930	John Swan, Civil Servant
from 14.10.1930 to 25.5.1944	David Swan, Builder, Walter Thomas Pierce, Provision Merchant and John Swan, Civil Servant
from 25.5.1944 to 26.4.1945	said Walter Thomas Pierce

Disclaimer

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SEARCH REPORT

from 26.4.1945
to 2.6.1947

Christina Selkirk Hadden, Widow, Catherine Alexander Swan,
Spinster, Annie Rankin McLean wife of Thomas McLean,
Iron moulder and Jane Moffat Pierce wife of Walter Thomas Pierce,
Retired

from 2.6.1947
to 20.7.1951

John Vincent Bound, Mechanical Engineer

from 20.7.1951
to 29.8.1955

George Ball, Engineer

Part shaded green

from circa 1918
to 30.6.1948

Catherine Alexander Swan, Spinster

from 30.6.1948
to 20.7.1951

William Walker Swan, Carpenter

from 20.7.1951
to 29.8.1955

George Ball, Engineer

Part shaded yellow

from circa 1930
to 18.9.1945

David Swan, Builder

from 18.9.1945
to 8.6.1953

William Walker Swan and Gordon Swan, Carpenters

from 8.6.1953
to 31.8.1955

George Ball, Engineer and Vida Marion Ball his wife

Part shaded pink

from circa 1930
to 18.9.1945

David Swan, Builder

from 18.9.1945
to 8.6.1953

William Walker Swan and John Gordon Swan, Carpenters

from 8.6.1953
to 31.8.1955

George Ball (Gordon) Pty Limited

Continued as to the *Whole of Lot 3*

from 29 & 31.8.1955
to 11.8.1958

George Ball Limited

from 11.8.1958
to 10.5.1962

Gordon Holdings Pty Limited

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SEARCH REPORT

from 10.5.1962
to 11.4.1967

Arndale Developments (Australia) Pty Limited

from 11.4.1967
to 18.7.1980

Ford Sales Company of Australia Limited

from 18.7.1980
to Date

Alto Ford Pty Limited
Now Alto Prestige Pty Limited

As regards Lot 16 DP249171

from circa 1930
to 1945/1953 (in parts)

David Swan, Builder

from 1945/1953
to 25.8.1955

William Walker Swan and John Gordon Swan, Carpenters

from 25.8.1955
to 14.9.1962

John Gordon Swan, Carpenter

from 14.9.1962
to 7.10.1969

Jean Phyllis Swan, Widow and Hugh James Moffat Swan, Painter

from 7.10.1969
to 15.2.1973

said Jean Phyllis Swan

from 15.2.1973
to 22.2.1974

Pelandode Pty Ltd

from 22.2.1974
to 3.2.1989

Donald Ernest Robison, Printer and Lucy Madeline Robison his wife

from 3.2.1989
to 13.10.1989

Brian Nebenzahl and Jocelyn Nebenzahl

from 13.10.1989
to 15.1.2002

George Altomonte

from 15.1.2002
to Date

Alto Prestige Pty Limited

REGISTERED LEASES

As regards Lot 1 DP654047

L889627
Dated 19.1.1970

to Zoltan Polma, Businessman and his wife

L887650
Dated 30.1.1970

to George Hudoon Holdings Pty Ltd

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SEARCH REPORT

M501139 Dated 28.9.1971	to General Telephone and Electronics Australia Pty Limited
N738962 Dated 23.1.1974	to Alan Worthington, District Manager
N777061 Dated 20.2.1974	to Elizabeth Luyten
N814660 Dated 28.3.1973	to Mar Jenn Enterprises Pty Limited
P770020 Reg'd 2.11.1976	to A.S.P. (Dryers) Pty Ltd
P920311 Reg'd 2.11.1976	to Mar Jenn Enterprises Pty Ltd
R383628 Reg'd 23.8.1979	to The Commonwealth of Australia
S309392 Reg'd 19.2.1981	to Australian Bedding Co. Pty Ltd
T355506 Reg'd 23.12.1982	to Glenn Arthur Freeman
T409353 Reg'd --.2.1983	to Super 8 Services Pty Ltd
T770425 Reg'd 11.10.1983	to Inner City Design Company Limited
T979243 Reg'd 23.2.1984	to Geoffrey Campbell Glenwright
V205204 Reg'd 12.7.1984	to Stanley George Young and Andrew Christopher
X724784 Reg'd 30.8.1988	to Whiteway House No. 6 Pty Ltd – Later Barador Pty Ltd
X724785 Reg'd 30.8.1988	to Vadasin Pty Ltd
X787246 Reg'd 14.9.1988	to Rag... (Distributors) Pty Ltd
Y833133 Reg'd 12.4.1990	to Snap Franchising Limited

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SEARCH REPORT

Y902479 Reg'd 12.4.1990	to The Australian 1900 Steamship Co Pty Ltd
Y942781 Reg'd 9.5.1990	to The Commonwealth of Australia
Z202933 Reg'd 17.10.1990	to Nobby Furniture (Aust) Pty Ltd
I775547 Reg'd 12.11.1993	to The Australian Steamship 1900 Co. Pty Ltd
I775548 Reg'd 12.11.1993	to Barador Pty Ltd
I775549 Reg'd 12.11.1993	to Controls Pty Ltd
2348829 Reg'd 1.8.1996	to Snap Franchising Limited
2348830 Reg'd 1.8.1996	to Fite Holdings Pty Limited
5296650 Reg'd 28.9.1998	to Nobby Kitchens Pty Ltd
5296651 Reg'd 28.9.1998	to Drummoyne Classic Cars Pty Ltd
5296652 Reg'd 28.9.1998	to Barador Pty Ltd
6845738 Reg'd 7.6.2000	to Snap Franchising Limited
7450906 Reg'd 2.3.2001	to Fite Holdings Pty Ltd – Later Cormi Pty Ltd
7625908 Reg'd 21.5.2001	to Campo's Sport and Leisurewear Pty Ltd
9874175 Reg'd 12.8.2003	to Cormi Pty Ltd

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SEARCH REPORT

As regards Lot 3 DP609007

L163701 to Alto Ford Pty Ltd
Dated 6.8.1968

R232870 to Alto Ford Pty Ltd
Reg'd 1.6.1979

8221028 to Sydney RJV Pty Ltd
Reg'd 19.12.2001

As regards Lot 16 DP249171

H723083 to Robison Printing Pty Ltd
Dated 26.1.1961

H723084 to Plastic Surfaces Pty Ltd
Dated 2.5.1960

N472512 to Robison Printing Pty Ltd
Dated 2.8.1973

24 October, 2013



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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

22/10/2013 3:42PM

FOLIO: 1/654047

First Title(s): OLD SYSTEM
Prior Title(s): VOL 11408 FOL 127

Recorded	Number	Type of Instrument	C.T. Issue
29/6/1994		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
1/8/1996	2348828	DETERMINATION OF LEASE	
1/8/1996	2348829	LEASE	
1/8/1996	2348830	SUB-LEASE	EDITION 1
28/9/1998	5296650	LEASE	
28/9/1998	5296651	LEASE	
28/9/1998	5296652	LEASE	EDITION 2
19/1/1999	5524255	DISCHARGE OF MORTGAGE	
19/1/1999	5524256	MORTGAGE	EDITION 3
31/5/2000	6825769	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 4
7/6/2000	6845738	LEASE	EDITION 5
2/3/2001	7450906	SUB-LEASE	EDITION 6
21/5/2001	7625908	LEASE	EDITION 7
3/4/2002	8476361	VARIATION OF LEASE	
3/4/2002	8476362	VARIATION OF LEASE	
3/4/2002	8476363	TRANSFER OF LEASE	
12/8/2003	9874174	DETERMINATION OF LEASE	
12/8/2003	9874173	DETERMINATION OF LEASE	
12/8/2003	9874175	LEASE	EDITION 8
5/10/2011	AG537049	DISCHARGE OF MORTGAGE	
5/10/2011	AG537050	MORTGAGE	EDITION 9

*** END OF SEARCH ***

PRINTED ON 22/10/2013

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