DEVELOPMENT APPLICATION

EXECUTIVE SUMMARY

Primary Property	100 Eton Road LINDFIELD NSW 2070
Lot & DP	Lot 1 DP 1151638
Proposal	Construct 2 residential flat buildings comprising 70 units and basement car park - Precinct 4
Development application no.	DA0300/12
Ward	ROSEVILLE
Applicant	Defence Housing Australia
Owner	Defence Housing Australia
Date lodged	27/07/2012
Issues	Setbacks; number of storeys; distance of kitchens to a window
Submissions	Yes
Land & Environment Court	N/A
Recommendation	Approval
Assessment Officer	Adam Richardson

LEGISLATIVE REQUIREMENTS:

Zoning	Residential R1
Permissible under	KPSO; Concept Approval MP06_0130
Relevant legislation	SEPP 55 SEPP 65 SEPP (BASIX) 2004 KPSO SEPP (Infrastructure) 2007 SREP (Sydney Harbour Catchment) 2005, Edgelea Urban Design Guidelines DCP 47 – Water Management
Integrated development	NO

PURPOSE OF REPORT

This matter is reported to the JRPP as the application has been made with a capital investment value of more than $20 million ($25,879,935). Pursuant of Clause 5 of Schedule 4A of the Environmental Planning and Assessment Act, 1979, the JRPP is the consent authority.

HISTORY

Site

In 1967, work began on the initial stages of what is today UTS Ku-ring-gai. Following construction in several stages, the site reached its current capacity and configuration in the mid 1980's.

After failed rezoning attempts in the early parts of the 2000's, the Minister for Planning announced on 12 December 2005 that the NSW Department of Planning would consider the subject site as a state significant site and on 14 June 2007 declared a Major Project under the now repealed Part 3A of the EP&A Act for the site's redevelopment. A Concept plan for the site's redevelopment was subsequently lodged. On 11 June 2008, the Minister for Planning approved Concept plan MP06_0130 and at this time also gazetted amendments to Schedule 3 of SEPP (Major Development) 2005 which along with the Concept Approval established the necessary planning framework for the redevelopment of the UTS Ku-ring-gai site.

The Concept Approval (**Annexure B**) has undergone four modifications, with these modifications mostly addressing mistakes and errors within the Concept Approval's conditions. Although the second and third modifications to the Concept Approval addressed errors, it also changed to a degree the approved concept, including the reconfiguration of Precincts 2 & 3, facilitated the retention of the University's gymnasium and footbridge and also included the realignment of zone boundaries to improve the future configuration of the development. The changes also included amendments to SEPP (Major Development) 2005 to enable demolition and subdivision on site that had otherwise been overlooked by the Department. The most recent modification considered by the Department redistributed dwelling yields throughout the site as well as re-align building footprints to be consistent with the Urban Design Guidelines.

The Concept Approval currently consents to the following:

- retention and adaptive reuse of the main campus building for either an educational or commercial use, subject to separate approval
- provision of a 9,800sqm soccer field and 300sqm of community space to be dedicated to Ku-ring-gai Council
- dedication of 34,570sqm of bushland to the NSW National Parks and Wildlife Service
- new residential development ranging from detached single dwellings to 5 storey residential flat buildings for a maximum of 345 dwellings. The ratio of this is broken down into 10 single lot dwellings, 25 integrated dwellings (or townhouses) and 310 apartments
- a street and pedestrian network that extends and integrates with the existing streets and footpaths
- asset protection zones for bushfire management

The current application is derived from the development scheme within the Concept Approval. As the Minister's Approval is for a concept only, the detail necessary to successfully realise a large scale brown field development of this capacity necessitates a series of further development applications. Assessment and determination is delegated to Council and the JRPP, under the provisions of the Concept Approval and recent amendments to the KPSO.

An assessment of the subject Development Application against the Concept Approval is provided further within this report.

Pre-DA

A formal Pre-DA consultation was held between Council officers and Defence Housing Australia (DHA) representatives on 30 May 2012 to discuss the proposed development.

The Pre-DA advice did not raise any significant issues, rather, suggestions to improve the development's design and its function, notwithstanding its highly progressed design at the time of the Pre-DA.

As detailed within this report and attachments, the applicant has responded to the matters raised in the Pre-DA advice.

DA History

27 July 2012	Application Lodged
31 July 2012	Application referred to internal and external bodies
10 August 2012 to 10 September 2012	Application notified
3 September 2012	Request for additional information letter sent to applicant
14 November 2012	Additional information and amended plans provided to Council
30 November 2012	Amended plans re-notified for 28 days
17 January 2013	Final concurrence issued by RailCorp

SITE DESCRIPTION

Visual character study category:	Post 1968
Easements/rights of way:	Yes – various drainage easements and rights of way
Heritage Item:	Yes – Local
Heritage conservation area:	No
In the vicinity of a heritage item:	No
Bush fire prone land:	Yes
Endangered species:	Yes – *Darwina biflora; Red Crowned Toadlet*

Urban bushland:	Yes
Contaminated land:	No

THE SITE

The subject site is known as 100 Eton Road, Lindfield (comprising Lot 1 and Lot 4 DP 1151638), known commonly as UTS Ku-ring-gai. The University still occupies and operates from this site.

The UTS Ku-ring-gai campus is a 20.8ha parcel of land which is bounded by the Lane Cove National Park to the east, south and west and residential development in the suburb of Lindfield to the north.

The portion of the site being redeveloped is the northern section of the site, with the existing university buildings to remain.

The resultant developable portion of the site is 13.68ha and includes bushland which surrounds the UTS campus buildings, car parking areas dedicated to the campus, sporting facilities (including oval and tennis courts), a childcare centre as well as associated internal roads.

The site is located within the catchments of College, Sugarbag and Blue Gum Creeks, which are tributaries of the Lane Cove River, flowing into Sydney Harbour. Topographically the already developed portions of the site are on sandstone plateaus, which fall away to steep, heavily vegetated gullies. Vegetation communities vary with the topography and aspect of the site and include vegetation communities of Heath-leaved Banksia / Scribbly Gum closed bushland; Sydney Red Gum Forest; Sydney Red Gum / Sydney Peppermint Forest / Red Bloodwood Open Forrest. These communities support known threatened species including *Darwina biflora, Pseudophyrne australis* – Red crowned toadlet *and Ninox strenua* – Powerful owl.

The developable portion of the site has been broken up into a series of land zonings under the Major Development SEPP to facilitate its redevelopment. **Figure 1** below highlights (in red) the part of the site to which this application / building relates:

Figure 1

Surrounding development

The UTS Ku-ring-gai site is located on the periphery of the Ku-ring-gai Local Government Area and is bounded, with the exception of the northern part of the site, by the Lane Cove National Park. The land to the north of the site accommodates low density residential development located along Winchester, Lyle and Kimo Streets. In addition, Film Australia has a site (101 Eton Road) which sits in the middle of the UTS site effectively segmenting the north into two blocks. Historically, surrounding development has been undertaken to respond to the varying topography of the surrounding area. The below aerial photograph (**Figure 2**) highlights surrounding development patterns within the vicinity of the UTS Ku-ring-gai sites.

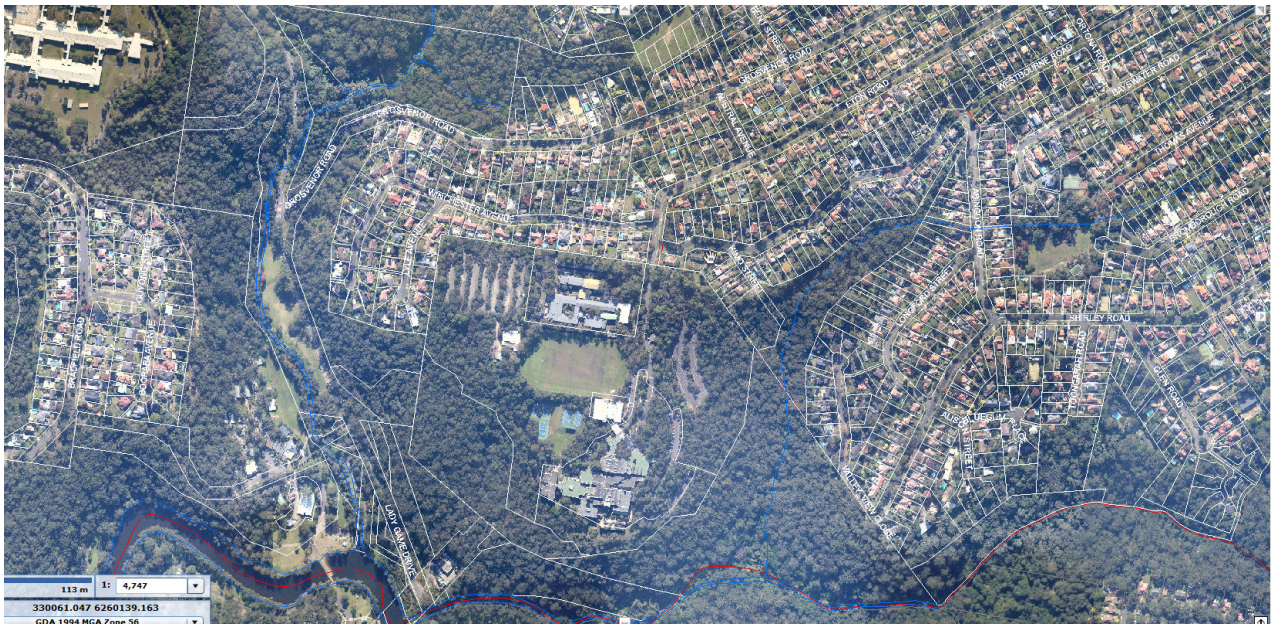


Figure 2

THE PROPOSAL

Consent is sought for the following works:

- partial clearing of the site and removal of hardstand areas that are currently used as part of the lower car park for the university
- excavation and construction of a 2 level basement for 138 car spaces, waste room and ancillary plant rooms
- construction of a two 4 storey residential flat buildings above the basement containing 70 units (10 x 1 bed, 24 x 2 bed & 36 x 3 bed)
- comprehensive landscaping of the site, including dedicated communal area at the rear (eastern side) of the site

Amended plans dated 14 November 2012

The amended plans proposed the following changes:

- increase in the size of ground floor terraces for the two bedroom units
- increase in size of bedrooms to meet 3m x 3m size requirement
- modified landscaping scheme to account for bushfire and necessary architectural changes
- revision of site levels to minimise the extend of earthworks
- revision of apartment layouts to improve / maintain solar access
- change in the number and mix of units within the development from 71 - 2 x 1 bed, 40 x 2 bed & 29 x 3 bed to 70 - 10 x 1 bed, 24 x 2 bed and 36 x 3 bed units
- minor façade amendments
- revised stormwater layout and function

- modified plans and documentation to meet BASIX commitments

COMMUNITY CONSULTATION

In accordance with Development Control Plan No. 56, owners of surrounding properties were given notice of the application. In response, submissions from the following were received:

1. *Steve & Yolande Wakeham - 11 Valley View Close, Lindfield*
2. *Brett Anslow – 10 Valley View Close, Lindfield*
3. *Richard Singleton – 57 Winchester Avenue, Lindfield*
4. *Office of Environment & Heritage – PO Box 668, Parramatta NSW*
5. *David Don Turner – 136 Narrow Neck Road, Katoomba*

The submissions raised the following issues:

The residents of Valley View Close currently enjoy a bush outlook which will be severely diminished by the proposed development.

The height of the proposed buildings and their location are consistent with the Concept Approval. It is acknowledged that the views from Valley View Close towards UTS will be disrupted, however given the status of the Concept Approval there is no opportunity to insist on lower or smaller buildings.

The 1994 bushfires proved that Lindfield was not immune from the devastating damaged caused by bush fires. The single access to Winchester Avenue with its small number of homes and residents was a problem. Some 345 new houses is only going to exacerbate this issue and place many lives at risk.

The site's bushfire affectation has been extensively considered and assessed as part of the Concept Approval Phase of the project. The outcome being the implementation of a Bushfire Management Plan prepared in consultation with the NSW Rural Fire Service. This plan focuses on the management of Asset Protection Zones throughout the site, strategic location of water reserves, dedicated access for fire vehicles and on going education of residents, in accordance with the provisions of Planning for Bushfire 2006. The proposal is acceptable with respect to bushfire considerations.

Whilst the planning documents concentrate on the design and building of the dwellings, the effects on local and Sydney traffic infrastructure must be considered.

Traffic was extensively considered and assessed as part of the Concept Approval, with **Condition B10(2)** requiring that prior to the submission of the first development application to Council for habitable floor space (DA0270/12 determined 4 December 2012), modelling in order to improve phasing efficiencies to be implemented to benefit local traffic. Subsequently, it is considered that traffic impacts have been minimised as envisaged by the Concept Approval.

The development fails to provide facilitates for children.

In addition to the communal open space within the development, the redevelopment of the UTS Ku-ring-gai site also includes a public soccer field and a 300m^2 community facility. These facilities / areas will benefit the future residents of the site.

The Office of Environment and Heritage's main concern in respect of the development is to ensure that the development has no adverse effect on the natural and cultural values of the National Park, particularly any additional quantity of water running off-site into the park nor a decrease in the water quality of the current run-off.

The Concept Approval (**Condition B7**) required the preparation of a stormwater management plan that was to consider and address such impacts and be also integrated with the threatened species management plan. These plans have been prepared and successfully integrated and approved, as required with the first application DA0677/11. The development proposed is assessed as being consistent with the requirements of these management plans and will have an acceptable impact upon the adjoining Lane Cove National Park.

The proposed development includes stormwater control devices that are located on community land, that discharge stormwater onto community land which then naturally runs down into the Lane Cove National Park. This system also includes an overland flow path. It should be confirmed that this overland flow path is within the community land.

The stormwater infrastructure referred to above was designed, considered and approved under DA0677/11. The stormwater system approved does not rely upon the Lane Cove National Park for its stormwater discharge.

Furthermore, the stormwater system and associated design has been undertaken in accordance with the requirements of the stormwater management plan, itself a requirement of the Concept Approval (**Condition B7**).

Any stormwater flows at the stormwater outlets within the community lands should be at pre-development flows.

The development has been designed (as required) with an onsite detention basin that limits flows to pre-development levels.

Asset protection zone works that are to be provided for the development are not to extend into the Lane Cove National Park. It is suggested that the boundary between the community lands and the Lane Cove National Park be marked prior to works to ensure no encroachment.

All APZ works necessary for the redevelopment of the UTS site are related to the Concept Approval and DA0677/11 and not associated with this application.

The Concept Approval specified a 50m wide APZ between the south-eastern edge of the existing building and north western edge of the site and a 60m wide APZ to be provided east of the residential development, extending to the north east of the site. To further support and ensure the provision of the APZ, the APZ area's have been zoned E3 Environment Management, restricting any opportunity for development and to distinguish them from the National Park, itself zoned E1 National Parks and Nature Reserves.

The moral rights legislation has been in force since 2000 which requires the original architect to be asked for their views before documents are completed.

This is a matter separate and unrelated to DA assessment.

The site should have been retained for educational purposes, as the change in operation of the site result in clashes.

The prevailing Concept Approval removes any opportunity to revisit this matter.

Always in the original design of the UTS campus if it was necessary to remove the native plantings then these were replaced with native plantings to preserve the integrity of the site. Any introduction of non native trees onto the site as proposed will be to the detriment of the surrounding bushland.

The Urban Design Guideline's require 50% native plantings associated with the development, which the proposed landscape plan more than provides for. Whilst the proposed planting scheme does introduce some non natives onto the site, these plantings are not assessed as having a detrimental, invasive impact upon the surrounding bushland. It is also noted that landscaping species have been selected with regard to bushfire requirements.

Amended plans dated 14 November 2012

The amended plans were notified to surrounding residents. Comments from the following were received by Council in response:

1. *Richard Singleton – 57 Winchester Avenue, Lindfield*

The plan provides no local shops or retail outlets. With the limited bus services, it will be necessary to use private transportation to obtain basic groceries. This is short sighted and does not accord with Ku-ring-gai's green credentials.

The Concept Approval did not contain any provisions for retail facilities, with the proposal before Council in accordance with the scope of development. The site is approximately 1400m from the Roseville town centre, providing for the necessary services generated by the development.

INTERNAL REFERRALS

Landscaping

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

> ***Site characteristics***
> *The subject site is mostly vegetated and falls steeply to the east from the entry road, Road 1. A north/south loop of existing carpark is cut into the sandstone bedrock with a central island of retained vegetation. The existing vegetation along the western boundary forms an effective buffer between the development and the heritage listed campus buildings. The site is accessed from the north by the existing carpark access road, Road 3. An asset protection zone (Lot 1) adjoins the eastern and southern boundaries of the site.*
>
> ***Deep soil***
> *The proposed deep soil area is 46% (40% required).*
>
> ***Edgelea Urban Design Guidelines (Edgelea UDG)***
> *<u>Character area objectives, principles and controls(1.2 Edgelea UDG)</u>*
> *The site is located within character area C: bushland entry. The bushland entry experience of Road 1 is considered 'an element of heritage significance'. To preserve the landscape character of the site, the bushland adjoining the entry road, within the western frontage of Precinct 4, is proposed to be retained (design principle A, 1.5.2 Edgelea UDG).*
>
> *To ensure the retention of significant mature trees, the buildings are restricted to the existing at-grade carpark. This objective has been met with the exception of the elevated projections on the western elevation which encroach only minimally upon the vegetated slopes.*
>
> *<u>Landscape character (5.1 Edgelea UDG)</u>*
> *The concept plan component is to provide 'Heavy landscaping between the access road and proposed adjoining development' has been incorporated within the Landscape Management Plan and the Urban Design Guidelines to ensure retention of the existing bushland along Road 1.*
>
> *The landscape proposal for the existing bushland to be retained within the western slope of the site adjoining Road 1 has been certified by the bushfire consultant.*
>
> *<u>Street character – road 3 (5.2 Edgelea UDG)</u>*
> *A landscape objective to ensure retention of the street character of community titled roads within Edgelea is to 'maintain and enhance the bushland character along existing roads' (Objective 2). To achieve this objective a 'minimum 5m vegetation easement ' is to be provided on the southern side of Road 3 (5.2.1 Edgelea UDG), and for 'street planting to be used to infill existing bushland where necessary' (Figure 2.1-1 and Figure 2.1-2 Edgelea UDG)*

*Rationale for the removal of the following trees located within the frontage to Road 3 has not been provided. The trees are located outside of the proposed works at the northern frontage of the development and are in good condition. These trees will be conditioned to be retained (**Condition 15**).*

- *tree 1099/Eucalyptus haemastoma (Scribbly Gum) 18H, fronting Road 3, within northern frontage of development*
- *tree 1145/ Corymbia gummifera (Red Bloodwood)16H, fronting Road 3/driveway entry*

The landscape plans indicate retention of the 5m vegetated easement along the southern side of Road 3. To enhance the bushland character in accordance with the landscape management plan and the Edgelea UDG, where works are proposed within the vegetated easement, indigenous infill planting have been provided along the street frontages.

Tree canopy (5.5 Edgelea UDG)
To retain and protect trees of local significance (Objective 3)
An arborist report, prepared by Naturally Trees, dated 14/09/12, has been submitted as part of the original application. Tree numbers refer to this report.

The following abbreviations have been used to describe the size of existing trees in metres: height (H), canopy spread(S), diameter at breast height (DBH), diameter immediately above root buttress (D), tree protection zone (TPZ) and structural root zone (SRZ).

Significant trees to be removed
The proposed development will require the removal of 86 significant trees, including Angophora costata (Sydney Red Gum), Corymbia gummifera (Red Bloodwood) and Eucalyptus haemastoma (Scribbly Gum).

*Rationale for the removal of trees located well away from the development has not been provided. The trees are in good condition and the canopies are in excess of 2m from the buildings. The trees will be conditioned to be retained (**Condition 15**).*

- *tree 1025/ Corymbia gummifera (Red Bloodwood)9H within western frontage of development*
- *tree 1077/Casuarina sp/ 22H, within western frontage of development*
- *tree 1079/ Casuarina sp /18H, within western frontage of development*
- *tree 1099/Eucalyptus haemastoma (Scribbly Gum) 18H, fronting Road 3, within northern frontage of development*
- *tree 1145/ Corymbia gummifera (Red Bloodwood)16H, fronting Road 3/driveway entry*

An additional 16 low significance trees are to be removed and their removal is supported.

Trees to be retained

The arborists report states that there are one hundred and nineteen (119) significant trees assessed as likely to incur adverse impacts due to disturbance during the development. An individual assessment of the level of impact has not provided, however, an arboricultural method statement in association with tree management plans have been provided to ensure successful retention of trees within the site (Section 4, Arborist report, Naturally Trees, 14/09/12)

Pedestrian access (5.4 Edgelea UDG)
Access is to be provided from the east end of Road 3 to the existing and proposed walking tracks located within the APZ, refer to Figure 5.4-1 (Control 1)(Refer also 5.7.1, Control 4).

*Access from the east end of Road 3 should be indicated on the plans in accordance with this control. This can be conditioned (**Condition 15**).*

Precinct interface relationships (5.7 Edgelea UDG)
The interface between the communal open space or common area and the APZ should be defined by a sandstone edge or retaining wall to a height of up to 1 metre. The wall should be designed to avoid damage to existing significant trees, refer to Figure 5.7.1-4(Control 1, 5.7.1).

The landscape sections demonstrate the retention of existing low walls at the bushland interface.

Communal open space (Edgelea UDG, SEPP 65)
The proposal provides a large communal open space at the south-east of the site, between the buildings and the asset protection zone to the east. It includes a lawn area, seating and a BBQ. The area is well situated with generous solar access and sufficient casual surveillance from balconies. An accessible path located along the western side of the development, descends to the southern end of the communal open space.

An additional smaller area is located between the two buildings, on podium, with stair access to the playing field/community facilities and communal open space.

Private courtyards
Due to the existing topography, the private courtyards are designed as balconies. This is considered acceptable.

BASIX compliance
The BASIX certificate nominates the following areas within the common area landscape for the site.

Common area garden – 5918m2. This area comprises the existing bushland area and the proposed new garden beds associated with the development.

Common area lawn – 343m2

Indigenous/low water planting –2726m2

The proposed private courtyards for the units have no areas of garden and lawn. This is consistent with the BASIX certificate.

Stormwater plan
The amended stormwater plan will result in earthworks and associated tree impacts within the existing bushland located to the west of the development. To ensure viability of proposed planting, the finished level of the retention tanks within the proposed car park have been lowered in some sections to provide sufficient soil depth (Refer Detail 1, Dwg P4-DA-L-014/C, Turf, 8/01/13).

Bush fire certificate
The entire site is to be managed as an Inner Protection Area. The Bushfire Protection Assessment prepared by Eco Logical, dated 16 January 2013, states that 'the proposed landscaping complies with the intent of the landscaping management provisions contained within the Bushfire Management Plan and Planning for Bush Fire Protection 2006 (PBP).'

Conclusion
The proposal is considered acceptable.

Ecology

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

Ecological background

A detailed ecological investigation and assessment has been undertaken for threatened flora and fauna species by Environmental Resource Management (ERM) for the concept approval for development of the UTS site. A summary of the main findings from the ecological investigations/assessment undertaken by ERM are presented below.

No endangered ecological communities listed under either the Threatened Species Conservation Act 1995 (TSC Act) or under the Environmental Protection & Biodiversity Act 1999 (EPBC Act) have been recorded from the subject property.

Native vegetation within and close proximity to the subdivision is Sydney Sandstone Ridgetop Woodland (SSRW). The SSRW community provides suitable habitat for a number of threatened species.

Threatened species that have been recorded on the subject property are a threatened shrub Darwinia biflora, the Red-Crowned Toadlet (Pseudophryne australis) (ERM 2011b) and the Powerful Owl (Ninox strenua) (ERM 1999). Assessments of significance for potential impacts of the Concept Plan to these species were undertaken by ERM (ERM 2008). The assessments of significance of impacts to threatened species under the EP&A Act concluded that if proposed

impact amelioration measures and proposed management plans were implemented at the site, then potential impacts to threatened species were unlikely to be significant.

A referral to the Commonwealth Minister for the Environment for impacts to D. biflora was submitted. The proposed Concept Plan was deemed a controlled action under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and consequently offsets were sourced for impacts to D. biflora.

Impacts upon trees

A review of the arborist report has identified that one-hundred & two (102) native trees are proposed to be removed for the proposal. Trees which are proposed to be removed comprise a mixture of locally occurring endemic species and planted endemic native species. Native endemic species include: Corymbia gummifera (Red Bloodwood), Eucalyptus saligna (Blue Gum), Eucalyptus haemastoma (Scribbly Gum), & Acacia parramattensis.

The trees/vegetation which is proposed to be removed for the construction of two residential flat buildings, basement parking, landscaping and associated works (fire asset protection zones). A further number of significant trees could be 'potentially' adversely affected due to construction encroachment within the TPZ. Tree protection zones have been proposed to ensure the protection of trees to be retained.

No ecological assessment or impact assessments (7-part test) is considered to be warranted under part 5a of the Environmental Protection & Assessment Act 1979 as a detailed ecological assessment was completed and approved by the Department of Planning at the concept stage.

Bushfire & vegetation management

The landscape plan and the management of bushland areas within the site are to be managed as an Inner Protection Area. The Bushfire Protection Assessment prepared by Eco Logical, dated 12 November 2012, states that 'the proposed landscaping complies with the intent of the landscaping management provisions contained within the Bushfire Management Plan and Planning for Bush Fire Protection 2006 (PBP).'

A detailed vegetation and weed management plan which was approved as part of the subdivisions works will ensure that the vegetation (bushland) within the site is managed in an appropriate manner to retain habitat/s for flora and fauna species.

Conclusion:

The application is acceptable.

Engineering

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

> ***Water management***
>
> *The Bonacci Civil Design Report addresses the requirements of the Northrop Stormwater Plan.*
>
> *The BASIX water commitments still include an 8 000 litres rainwater tank collecting runoff from 100 square metres of roof, with re-use for toilet flushing, irrigation and car washing.*
>
> *The actual volume and level of rainwater retention and re-use required to achieve the requirements of the Northrop Stormwater Plan has been calculated by Waterman to be 170 cubic metres, with re-use for laundry as well as the above uses. Re-use for laundry will be included in the recommended engineering conditions.*
>
> *Section 3.7 of the Northrop Stormwater Management Plan also states that 25 000 litres of retained roofwater is to be dedicated for fire fighting. This is shown on the Bonacci plan.*
>
> *Discharge of stormwater from the site is towards the bushland as existing. Under the Northrop Stormwater Management Plan, the proposal is to effectively manage the flow so as not to cause any detrimental effects to the existing drainage system and downstream environment.*
>
> *The Northrop proposal shows the existing headwalls to be retained, and the Bonacci report states that rock lining will be provided at each outlet, which will achieve the commitment in the Northrop plan for scour protection.*
>
> *The Bonacci proposal is for Stormfilter cartridges for treatment of runoff instead of raingardens. A total of 154 cartridges will be provided. Calculations are given in the report. This alternative is justified by the steepness of the embankment at the northern half of the site.*
>
> *The on site detention system has been designed to accommodate the overland flow collected from the swales upstream of the building. This is satisfactory.*
>
> *The overland flow swales have been sized to convey the 100 year ARI flow from the area upstream of the building. They are in the form of a grated drain along the entire rear of the building. This is a suitable solution.*

Traffic generation

The subject development is for 70 units. The Major Project Approval issued by the Minister for Planning will result in a total of 345 new dwellings on the UTS site.

A Transport Management and Accessibility Report by Traffix was submitted with DA0677/11, in accordance with Condition B10 of the Minister's approval, which also required consultation with RTA (now Roads and Maritime Services) and further traffic modelling. The report concludes that the whole proposal will have a minimal impact on the operation of critical intersections in the locality which will continue to operate at existing levels of service and with similar delays.

The Precinct 4 development represents only 20% of the overall generation of the site and will not impact on the operation of critical intersections in the locality.

Vehicular access and parking

Vehicular access to the Precinct 4 site is via a driveway leading off Road 1. Each basement level has its own vehicular access.

The traffic engineer's report states that the dimensions of the parking spaces and manoeuvring areas comply with AS2890.1:2004, Off street car parking, as do the driveway and ramp gradients. Only A3 drawings were provided, and the parking spaces and aisle widths are not dimensioned, so it is not possible to confirm this, however the recommended conditions include a requirement that this be again certified on the Construction Certificate plans.

The development requires between 70 and 120 resident and 18 visitor parking spaces. The drawings show 120 resident spaces, which include 8 spaces for the adaptable units, and 1 visitor disabled parking spaces. The remaining 17 visitor spaces are provided at grade in front of Building B.

The Access Report confirms that the disabled parking spaces comply with AS2890.6:2009

Waste management

Internal waste collection by Council's small waste collection vehicle is required. It is proposed to collect all waste from Building B. The waste storage rooms for Building B have sufficient space for the 70 x 240 litres containers required for the whole development.

The civil works plans by Bonacci show the required 2.6 metres of headroom at the entry to the lower carpark.

Construction traffic management

A detailed Construction Traffic Management Plan will be required prior to commencement of any works on the site. There is only one way to enter the site, which is from Eton Road. Heavy vehicle routes from the main site entrance to the arterial road network will most likely be evenly distributed between the Pacific Highway and M2.

Geotechnical investigation

The site is underlain by sandstone, except where fill have been placed behind the retaining wall.

A major constraint for the Precinct 4 development is the sandstone wall and rock face which are to be retained and incorporated into the building form. Advice from the structural engineer is that the wall should be dismantled and reconstructed, due to the impracticality of working around the wall in situ.

The report also contains a recommendation that Screen Australia be consulted regarding the sensitivity of their equipment to vibrations, so this has been incorporated into the engineering conditions.

The structural report by Bonacci has been prepared for RailCorp to assess the effect of the excavation on the rail tunnel.

Urban Design

Council's Urban Design Consultant has assessed the development and has commented on the proposal as follows:

PRINCIPLE 1: CONTEXT
Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area. Responding to context involves identifying the desirable elements of a location's current character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.

The proposal has been made with regards to the Edgelea Urban Design Guidelines (EUDG) adopted by Council which have already considered the question of what a suitable contextual response to this site should be. On the whole, the proposal is generally in accordance with the EUDG and is considered to be an appropriate design of high quality, and will make a positive contribution to the area,

PRINCIPLE 2: SCALE
Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.

The building is considered to be of a suitable scale. Whilst the basement levels protrude more than 1m above the existing ground level (EUDG 2.1.23.3), and should technically be considered a storey, the proposal is still within the 16m height limit as required by SEPP MD and is considered to be acceptable in this regards as the overall height is compliant. In a design sense, the basement protrusion has been well resolved through its intention to be read as an extension of the existing sandstone retaining wall below.

Each building is over 60m in length which exceeds the 36m stipulated in EUDG 2.1.6.5. The linear north-south building layout proposed is considered to be a desirable and necessary response to the dimension and physical constraints of the site. In a design sense, it is considered that the issue of length is skilfully addressed through incorporation of vertical recesses between elements, stepping down of height along the site, and a stepping in plan, all of which successfully assist the two buildings to present as six separate pavilions by virtue of articulation (as can be seen in the main photomontage provided). The buildings operate as separate entities too, each of the six pavilions having its own lift core.

This particular aspect is strongly supported as it gives an excellent unit-to-core ratio with only 9 to 14 units per core and a maximum of four units per floor. This strategy keeps the building footprints small, allowing the floor levels to be at different RLs so that the building can step down the hill effectively. It also has the efficiency benefit of short corridors and social benefit of improved safety through recognition of neighbours.

PRINCIPLE 3: BUILT FORM
Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including views and vistas, and provides internal amenity and outlook.

The built form approach of the proposal is clear and has a strong relationship to the topography and man made features of the site. The north-south layout along the upper terrace as per EUDG 1.5.2 is considered to be the most appropriate urban design solution and is supported.

The proposal does not comply with the required setbacks at the northern and southern extremities of the buildings as set out in EUDG Figure 2.1.3-5 and basement setbacks EUDG 2.1.3.2. However, it is considered that the extent of above ground encroachments are relatively minor, are limited in location, and are acceptable given that the encroaching habitable spaces are well screened, there are no existing or anticipated future neighbours located in close proximity and no other negative impact can be discerned from an urban design perspective. Landscape issues however, such as bushfire setback, should be verified. The basement encroachments follow the same footprint as the above ground encroachments and are therefore also considered acceptable.

The inclusion of the cantilevered apartments to the west is generally supported. The Pre-DA issue of these units blocking the bedroom windows of the central apartments has been successfully resolved by reducing their width.

Similarly, the concern regarding the split level arrangement of the cantilevered units and the sharing of the lift has also been resolved by lowering them and matching the floor levels of Levels 1 and 2.

The proposal does not comply with the provisions of EUDG 2.1.7.2 requiring buildings to address the street, however the specific site constraints make it very difficult to achieve the wording of this control. It is considered that the solution that has been proposed with six entries along a path to the west of the building is appropriate and makes a significant effort to connect the building with the greater site in a positive manner. Concern was raised at Pre-DA stage with the location of the building entries beneath undercroft spaces in terms of EUDG 2.1.7, however the detailed design resolution as presented in the Design Report p17 Diagram 6.1.1, and the planning of the western pathway with clear lines of site and no building returns, is considered to be architecturally well resolved and satisfactorily addresses these concerns. The level change between the path and the adjacent bedrooms as shown on p17 Diagram 6.1.2 is considered suitable to achieve privacy. Satisfactory landscape and lighting solutions will still be critical to the success of these entries.

The amendments to the car park layout since the Pre-DA, with the Basement Level 2 car park entrance at the northern end of the site through the sandstone wall allowing the southern external area to become a communal open space, are strongly supported.

The issue of undercover bicycle parking has been satisfactorily resolved through its inclusion within the car park. The issue of car wash bay provision has been satisfactorily resolved through its incorporation with the garbage pick up bay. The issue of adequate storage provision has been satisfactorily addressed through provision of a storage schedule that appears to meet the requirements. Access to the waste room from the southernmost building core has not been addressed but is considered a minor issue.

PRINCIPLE 4: DENSITY
Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

The number of dwellings appears to be acceptable and in accordance with the controls, however concern is raised over the method for accounting of unit numbers across the site. Whilst the rationale runs that the upper limit for dwelling numbers has not yet been reached therefore the number of units proposed is acceptable.

PRINCIPLE 5: RESOURCE, ENERGY AND WATER EFFICIENCY
Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction. Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.

The environmental performance of the proposal is acceptable with an adequate proportion of units receiving sunlight and cross ventilation.

PRINCIPLE 6: LANDSCAPE
Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by co-ordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character. Landscape design should optimise usability, privacy and social opportunity, equitable access and respect for neighbour's amenity, and provide for practical establishment and long term management.

The landscape plan appears to be of generally good design, making for quality outdoor spaces. The location of the primary communal open space at the southern end of the lower terrace provides the opportunity for ample, good quality open space. The central courtyard garden on the upper terrace is also considered to be positive for this linear site, providing a passive, green orientation space between the buildings with a new stair leading up to Eton Road connecting to the greater site. It appears that the deep soil, site coverage and communal open space areas are likely to comply given the site dimension and building configuration, however these figures should be verified. Pathways over 1m wide should be noted as permeable as per EUDG 2.1.4.5.

The issue of the size of private open spaces at ground level has been satisfactorily resolved. The majority of ground floor private open spaces now meet the minimum 25m2 required by EUDG 2.1.10.2, with the exception of the three southern most apartments. These apartments are physically constrained by the site conditions but manage to achieve a minimum area of 16m2 with a minimum dimension of 2.4m, which is considered to be acceptable. The issue of balcony size for 1 bedroom apartments has been resolved through redesign of the floor plate.

PRINCIPLE 7: AMENITY
Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.

A total of 50 of 70 (71%) of dwellings achieve 3 hours solar access to primary living spaces and balconies with 8 of these (11%) requiring skylights to satisfy the control. Whilst skylights are not a preferred solution, as they do not have the same flexibility as windows and heat gain can be difficult to control in summer, in this particular situation, this solution is considered acceptable given the desirable layout for the buildings is north-south which results in an east-west apartment orientation limiting the hours of available sun. The design of the skylights and their relationship to the plan could be given further design consideration. It is considered that EUDG 2.1.14.2 'Buildings must be oriented to optimise

the northern aspect' is not appropriate for this site and directly conflicts with the urban design guidance provided by the figure at EUDG 1.5.2.

A total of 55 of 70 (78%) of apartments are cross ventilated, with a high proportion of these achieving this with cross-through ventilation made possible through the provision of multiple cores. This is a positive outcome and should be commended.

A total of 34 of 70 (49%) of apartments have living rooms which are greater than 8m to the rear of the kitchen (approximately 8.3-8.8m in depth). This is non-compliant with EUDG 2.1.12.2 and the RFDC Rule of Thumb p69. Whilst a reasonable attempt at justification has been given (JBA letter 13 November 2012 p2), strictly speaking there remains no sufficient demonstration that 'satisfactory daylighting... can be achieved.' To expand on this, demonstration of satisfactory daylight would require scientific testing and modelling incorporating a numerical daylight measurement and a benchmark to assess its adequacy against. A definition of 'satisfactory daylighting' might be considered to be daylight by which common activities can be undertaken (for example, reading a book in a lounge room or cutting with a knife in a kitchen) without the need to turn on artificial lighting during the day. Scientific research has shown that a 'room depth-to-ceiling height' ratio of 2:1 from a window can provide consistently adequate daylight for these purposes (if there is no external obstruction). For standard apartment ceilings at 2.7m high, this gives a room depth of 5.4m. Recently, the DoPI SEPP65 and RFDC Review Key Stakeholder Forum in December floated the new figure of 6.8m deep for habitable rooms, which is equivalent to a 'room depth-to-ceiling height' ratio of 2.5:1 for standard ceilings. As can be seen, the existing 8m deep control (approximately 3:1) appears to be inadequate to meet its objective and therefore should be considered a maximum which should not be exceeded. At this point in time however, before the release of the future Residential Flat Design Guidelines which hopefully may address this issue, and with no convenient precedent to hand for scientific testing, the proposed apartments might be considered acceptable given the overall superior quality of the design and strength of the reasons provided, particularly the relevance of the precedent plan. Consistency of approvals is an important consideration and it may be more appropriate for Council to raise the bar once a new guideline is available that can be pointed to.

The issue of the number of kitchens with windows has been satisfactorily resolved. 20 of 70 (29%) of kitchens now have direct access to a window which complies with EUDG 2.1.15.3 and the RFDC Rule of Thumb p87.

PRINCIPLE 8: SAFETY AND SECURITY

Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

The safety and security of the proposal is considered acceptable.

PRINCIPLE 9: SOCIAL DIMENSIONS AND HOUSING AFFORDABILITY

Good designs respond to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community. New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.

The issue of a northern accessibility ramp has been satisfactorily addressed by the access consultant and it is agreed that the topographic constraints prevent its inclusion. Similarly, the issue of an accessible pathway from the accessible visitor car parking spaces is considered to have been satisfactorily addressed by the additional justifications given by the access consultant.

The issue of the inclusion of an adaptable 1 bedroom apartment remains and depends on whether the 10% rate for these apartments applies across the entire site (Concept Plan?) or to each apartment building (EUDG 2.1.25.1 'All residential flat buildings...'). The latter interpretation is preferred so that from a performance point of view, the benefit of the control is spread equitably across the site. The provision of 8 adaptable 3 bedroom apartments does not satisfy EUDG 2.1.25.2 the objective of which is to deliver a mix of adaptable dwellings, not a quantum. Council should satisfy itself that the proposed provision of adaptable 1 bedroom apartments only in future stages of the project is satisfactory to meeting the underlying intention of the control.

The issue of insufficient inclusion of 1 bedroom apartments has been satisfactorily addressed through redesign of the floor plate. 8 of 70 (11%) apartments are now 1 bedroom in compliance with EUDG 2.1.26.4. The issue of providing a 1 bedroom apartment at ground level in compliance with EUDG 2.1.26.3 has also been satisfactorily resolved through redesign of the floor plate.

Planning Comment: In respect of the concerns relating to the number and distribution of adaptable units, particularly 1 bedroom units, the Concept Approval requires that a minimum of 10% of all dwellings are to be a minimum of 1 bedroom, with the UDG's supporting this control requiring that 10% of the 1 bedroom apartments being adaptable. These controls all to the entire UTS campus development, rather than the individual precincts. When this development is *combined with the development in Precinct 1A, the following dwelling yield is provided for:*

Precinct	1 Bedroom	2 Bedroom	3 Bedroom	Total
1	4	12	7	23
2	-	-	-	-
3	-	-	-	-
4	10	24	36	70
5	-	-	-	-
Total	14	36	43	**93**

Despite the reservations, this development and that previously approved by Council is consistent with the scope of development envisaged for the site, notwithstanding the applicant's commitment that future stages, particularly Precinct 2 will have a higher proportion of 1 bedroom units, with 10% of these to be adaptable.

PRINCIPLE 10: AESTHETICS
Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

The appearance of the development is of a high architectural standard and generally in accordance with the requirements of the EUDG. Modulation of the overall built form is meaningful and attractive. Material selections, as specified in the Design Report p19-20 combined with the notations on the elevations, are appropriate and in line with EUDG 3.3.

The issue of perceived balcony length has been skilfully resolved with a subtle change in the balustrade detail which makes a portion of the balustrade solid to provide visual privacy, as well as creating some visual variation along the balcony length to break its appearance down.

EXTERNAL REFERRALS

Rural Fire Services

In accordance with the provisions of section Part 1(b) of Section 79BA of the Environmental Planning and Assessment Act 1979, Council has *been provided with a certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements.* As such, the application does not require a referral to Rural Fire Services. It is also noted that the UTS site is also subject of a Bushfire Management Plan that was implemented under DA0677/11, as a requirement of the Concept Approval.

Council has considered the measures to be taken with respect to the protection of persons, property and the environment from danger that may arise from a bush fire. An appropriate condition that adopts the recommendations of the bush fire risk assessment report, certificate and Bushfire Management Plan, is recommended (**Condition 1**).

STATUTORY PROVISIONS

State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 require consideration of the potential for a site to be contaminated.

In accordance with SEPP 55 (clause 7), the consent authority must not grant consent on land unless,

> *(a) it has considered whether the land is contaminated, and*
>
> *(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
>
> *(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose*.

The matter of soil contamination on the site was dealt with in a preliminary way as part of the Concept Approval assessment. The Concept Approval was supported by a limited Phase 1 assessment which identified the potential for soil contamination, the origin of which would likely be from the Film Australia site, as well as pesticides and fertilisers from the maintenance of the University's sporting oval. In response to this, the Statement of Commitments (**Annexure C**) detailed the terms for a Phase 2 contamination report, to be provided with the first application for development of this site in accordance with the Concept Approval.

In response to the Statement of Commitments, the applicant submitted a Phase 2 contamination report that comprehensively investigates the Edgelea site for contamination, with special regard given to the potential 'hot spots' near the Film Australia site and the existing sports oval.

The contamination report provided to Council as part of the first application for development on the site concluded that the developable portion of the UTS Ku-ring-gai site is not contaminated, with soil readings for contaminants being below the most conservative of thresholds for residential use.

In this regard, the proposed development is satisfactory with respect to the considerations of SEPP 55 and no further investigation or remediation is considered warranted in this regard.

Sydney Regional Environmental Planning Policy (Sydney Harbour Catchment) 2005

Matters for consideration under SREP 2005 include biodiversity, ecology and environmental protection, public access to and scenic qualities of foreshores and waterways, maintenance of views, control of boat facilities and maintenance of a working harbour. The proposal is not in close proximity to, or within view, of a waterway or wetland and is considered satisfactory. Water re-use measures will minimise the impact on downstream waterways.

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

A valid BASIX certificate has been submitted. The certificate demonstrates compliance with the provisions of the SEPP and adequately reflects all amendments to the application.

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

Council's Urban Design Consultant has reviewed the application against the 10 design quality principles of SEPP 65, with an in depth assessment provided earlier in this report.

Residential Flat Design Code:

The Residential Flat Design Code supports the ten design quality principles identified in SEPPP 65. The considerations contained in the Design Code are as follows:

	Guideline	***Consistency with Guideline***
PART 02 SITE DESIGN		
Site Configuration		
Deep Soil Zones	A minimum of 25 percent of the open space area of a site should be a deep soil zone; 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
Fences + walls	Define the edges between public and private land to provide privacy and security and contribute positively to the public domain.	YES
Open Space	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.	YES
	The minimum recommended area of private open space for each apartment at ground level or similar space on a structure, such as on a podium or car park, is $25m^2$.	YES

Orientation	Optimise solar access, contribute positively to desired streetscape character, support landscape design with consolidated open space areas, protect amenity of existing development and improve thermal efficiency.	YES
Planting on Structures	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 equivalent	YES
Stormwater management	Minimise impact on the health and amenity of natural waterways, preserve existing topographic and natural features and minimise the discharge of sediment and other pollutants to the stormwater drainage system.	YES
Safety	Carry out a formal crime risk assessment for all residential developments of more than 20 new dwellings.	YES
Visual Privacy	Refer to Building Separation minimum standards - up to four storeys/12 metres - 12 metres between habitable rooms/balconies - 9 metres between habitable/balconies and non-habitable rooms - 6 metres between non-habitable rooms - five to eight storeys/up to 25 metres - 18 metres between habitable rooms/balconies - 13 metres between habitable rooms/balconies and non-habitable rooms - 9 metres between non-habitable rooms	YES
Building Entry	Create entrances which provide a desirable residential identity, provide clear orientation for visitors and contribute positively to the streetscape and building façade design.	YES
Parking	Provide adequate parking for occupants, visitors and disabled.	YES
Pedestrian Access	Identify the access requirements from the street or car parking area to the apartment entrance.	YES
	Follow the accessibility standard set out in Australian Standard AS 1428 (parts 1 and 2), as a minimum. Provide barrier free access to at least 20 percent of dwellings in the development.	YES
Vehicle Access	Generally limit the width of driveways to a	YES

	maximum of six metres.	
	Locate vehicle entries away from main pedestrian entries and on secondary frontages.	YES
PART 03 **BUILDING DESIGN**		
Building Configuration		
Apartment layout	Single-aspect apartments should be limited in depth to 8 metres from a window.	NO
	The back of a kitchen should be no more than 8 metres from a window.	NO
	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
	If Council chooses to standardise apartment sizes, a range of sizes that do not exclude affordable housing should be used. As a guide, the Affordable Housing Service suggest the following minimum apartment sizes, which can contribute to housing affordability: (apartment size is only one factor influencing affordability) - 1 bedroom apartment 50m² - 2 bedroom apartment 70m² - 3 bedroom apartment 95m²	YES
Apartment Mix	Include a mixture of unit types for increased housing choice.	YES
Balconies	Provide primary balconies for all apartments with a minimum depth of 2 metres. 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.	YES
Ceiling Heights	The following recommended minimum dimensions are measured from finished floor level (FFL) to finished ceiling level (FCL). - in residential flat buildings or other residential floors in mixed use buildings: - 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 2.25m is permitted.	YES
Ground Floor Apartments	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

	Provide ground floor apartments with access to private open space, preferably as a terrace or garden.	YES
Internal Circulation	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.	YES
Storage	In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: - studio apartments 6m³ - one-bedroom apartments 6m³ - two-bedroom apartments 8m³ - three plus bedroom apartments 10m³	YES
Building Amenity		
Acoustic Privacy	Ensure a high level of amenity by protecting the privacy of residents within apartments and private open space	YES
Daylight Access	Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid winter.	YES
	Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10% of the total units proposed.	YES
Natural Ventilation	Building depths, which support natural ventilation typically, range from 10 to 18 metres.	YES
	Sixty percent (60%) of residential units should be naturally cross ventilated.	YES
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 debris.	YES

The above table notes non-compliance with the rules of thumb within the RFDC concerning the distance of kitchens from a window. Per the comments of Council's Consultant Urban Desiger and discussions concerning this matter further in this report, the departure from the RFDC is this instance is acceptable and supported.

SEPP (Infrastructure) 2007

The UTS Ku-ring-gai site is burdened below ground by a land dedication for the Epping to Chatswood rail line. This rail line is contained within a tunnel that extends up to 90 metres below the surface of the site.

Clause 86 of the Infrastructure SEPP requires that, where development is proposed within 25 metres (horizontally) of the rail corridor (which is the case in this instance), if excavation associated with the development is to extend 2 metres below ground level, the development is to be referred to RailCorp for its consideration and concurrence.

Works associated with the proposed development does involve excavation below ground level of more than 2m within 25 metres of the rail corridor. In this respect, the development has required referral to RailCorp under the SEPP.

In respect of the referral to RailCorp, concurrence was issued on 17 January 2013. Concurrence was issued subject to the following conditions which have been included within the recommended conditions of consent (**Condition 42**).

In addition to the concurrence provisions of Clause 86, Clause 87 requires Council to assess the impact of rail noise and vibration on the development. Clause 87 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

In respect of subclause (2) above, the proposed development has been considered against the interim guidelines for development near rail corridors and busy roads, published by the NSW Department of Planning and Infrastructure, with the development assessed as being consistent with the design criteria of the guidelines. It is noted that only a small portion of the building at its northern end is above the Epping to

Chatswood rail corridor and that the rail tunnel is some 40m below the surface of the area being developed.

Furthermore, in the case of subclause (3), the application has been supported by a detailed acoustic assessment which demonstrates that the proposed development is capable of being constructed to achieve the required noise criteria. To ensure this is achieved during construction, the acoustic report and its recommended construction methods is included as a 'stamped' plan in **Condition 1**.

Ku-ring-gal Planning Scheme Ordinance

In its declaration as a Major Project and issue of a Concept Approval, the redevelopment of the UTS Ku-ring-gai was also supported by a series of controls and zoning pursuant of SEPP (Major Development) 2005. At the time, the site was declared a State Significant Site. Schedule 3, Part 30 of the SEPP dealt specifically with the UTS Ku-ring-gai site, establishing a series of controls to facilitate the redevelopment envisaged by the Concept Approval. However, on 21 December 2012, the NSW Department of Planning and Infrastructure approved an amendment to the KPSO which migrated these controls from the SEPP to the KPSO.

The following Clauses of the KPSO are relevant to the assessment of the application:

26Z Land to which Part applies

This part applies to the land identified on the Land Application Map, referred to in this Part as the UTS Ku-ring-gai Campus Site.

26ZB Zone R1 General Residential

(1) The objectives of Zone R1 Residential are as follows:

- *(a) to provide for the housing needs of the community,*
- *(b) to provide for a variety of housing types and densities,*
- *(c) to enable other land uses that provide facilities or services to meet the day to day needs of residents,*
- *(d) to provide for development that is compatible with the environmental and heritage qualities of the locality,*
- *(e) to promote a high standard of urban and architectural design of development,*
- *(f) to promote the establishment of a sustainable community.*

(2) Development for any of the following purposes is permitted without consent in Zone R1 General Residential:

home occupations; roads.

(3) Development for any of the following purposes is permitted only with development consent in Zone R1 General Residential:

attached dwellings; boarding houses; child care centres; community facilities; dwelling houses; educational facilities; group homes; hostels; multi dwelling housing; neighbourhood shops; places of public worship; recreational facilities (indoor);

residential flat buildings; residential care facilities; semi-detached dwellings; seniors housing; shop top housing.

(4) Except as otherwise provided by this Policy, development is prohibited on land within Zone R1 General Residential unless it is permitted by subclause (2) or (3).

The proposed development is assessed as being satisfactory and consistent with the objectives of the Residential R1 zone. It is noted that residential flat developments are permissible with consent in the zone.

26ZL Height of buildings

(1) The objectives of this clause are as follows:
(a) to protect the heritage significance of the UTS Ku-ring-gai Campus main building,
(b) to protect the views to the UTS Ku-ring-gai Campus main building.

(2) The height of a building on any land within the UTS Ku-ring-gai Campus site is not to exceed the maximum height shown for the land on the Height of Buildings Map.

The proposed development is under the 16m height limit imposed by the Height of Buildings Map referred to in Clause 17.

26ZN Maximum number of dwellings

The consent authority must not grant development consent for the erection of a dwelling on land within the UTS Ku-ring-gai Campus site if the number of dwellings within that site would exceed 345.

The application seeks consent for 70 units. As this is the second application for habitable floor space on site, it, when considered against the 23 units approved by Council on 11 December 2012 as part of DA0270/12, both these developments combined do not exceed the maximum dwelling threshold of 345 dwellings.

Concept Approval MP06_130

The function of the Concept Approval is to give in-principle approval for the redevelopment of the UTS Ku-ring-gai site. This approval gives the developer certainty with regards to the redevelopment potential of the site, what portions of the site are developable and what further work needs to be done to realise the development envisaged under the Concept Approval.

The Concept Approval requires that the final composition of the development be generally consistent with the terms of the Concept Approval as well as the preparation of specific management plans and further studies, the timing of which is dependant on the delivery of the development.

The subdivision of the site at this time essentially prepares the site for development consistent with the Concept Approval, however as it is the first stage of the development, certain conditions of the Concept Approval are to be satisfied with, or prior to the first

development application. In this regard, the following conditions of the Concept Approval are relevant:

A1. Development description

(1) Except as modified by this Consent, Concept Plan approval is granted only to the carrying out of development solely within the Concept Plan area as described in the document titled Preferred Project Report and Statement of Commitments UTS Ku-ring-gai Campus Lindfield, SEPP Major Projects and Concept Plan Volumes 1 and 2 dated February 2008 and prepared by JBA Planning Consultants and DEM Architects.

The proposed residential flat buildings within this part of the site is consistent with the scheme approved as part of the Concept Plan with the proposed building location and footprint consistent with the built form envisaged for the site.

A2. Development in accordance with plans and documentation

(1) Except as modified by this approval, the development shall generally be in accordance with the following plans and documentation (including any appendices therein):

(a) Preferred Project Report and Statement of Commitments UTS Ku-ring-gai Campus Lindfield, SEPP Major Projects and Concept Plan Volumes 1 and 2 dated February 2008 and prepared by JBA Planning Consultants and DEM Architects;

(b) Modification report by JBA Urban Planning Consultants dated February 2010 and its revised appendices, including University of Technology Sydney Ku-ring-gai Campus State Significant Site Amendment Concept Plan, DEM, April 2010, letter from JBA Urban Planning Consultants dated 24 March 2010 and its attachments; and

(c) Modification report by JBA Urban Planning Consultants dated 26 July 2011 and its appendices.

The content of the application made to Council has been considered against the plans and associated documentation listed within Condition A2. Of particular note is satisfaction of the proposed development (and application) with the matters specified within the Statement of Commitments. Council's assessment of the development against the relevant sections of the Statement of Commitments concludes that the proposal is consistent with the commitments made by the proponent at the time that the Concept Approval was granted. A detailed assessment of the proposed development against the required criteria is provided in **Annexure C**.

B1. Urban Design Guidelines

(1) The Design Guidelines referred to on page 2 of the revised Statement of Commitments are to have regard to DCP 55 Railway/Pacific Highway Corridor St Ives Centre adopted by Council on 14 December 2004 and DCP 38 Residential Design Manual adopted by Council on 20 December 2001;

(2) *The Urban Design Guidelines must be approved by Council before the first Development Application can be determined.*

The Urban Design Guidelines prepared by the proponent in conjunction with Council satisfy the Statement of Commitments and have appropriate regard to DCP 55 and DCP 38, as required by Condition B1(1). These guidelines were considered and approved by Council on 12 June 2012, as required by Condition B1(2). An assessment of the proposal against the Urban Design Guides is provided further in this report.

B3. Dwelling yield

(1) *The Concept Plan is modified to reduce the maximum number of dwellings on the site to 345 in accordance with Figure 1 of this Consent.*

The development proposes 70 units on site. When this figure is added to 23 units approved as part of DA0270/12, as total of 93 dwellings is proposed on site, less than the maximum of 345 approved under the Concept Plan. In addition, Figure 1 referred to in Condition B3 sets a maximum of 71 dwellings in this Precinct. As 70 units are proposed, the development is within its maximum yield and consistent with Condition B3.

B4. Dwelling mix

(1) *The Concept Plan is modified to provide a minimum of 10% of the total number of dwellings on the site are to be a maximum of one bedroom.*

The proposed development includes 10 x 1 bedroom units. As this condition applies to the entire development approved by the Concept Approval, these dwellings will be added to the number of 1 bedroom units within DA0270/12 (which contained 4 x 1 bedroom units). To date, 14 x 1 bedroom units have been proposed within 93 units, representing 15% of dwellings, satisfying the obligations of Condition B4. Future applications for residential development will need to have regard both to this condition and the extent of development already approved.

B5. Setbacks

(1) *The following modifications refer to Figure 1 of this Consent.*

(2) *Building 'A' of Precinct '1' is modified to provide a minimum setback of 4.5m from the Film Australia Boundary.*

(3) *Building 'B' of Precinct 2 is to provide a minimum setback of 10m from the sports oval with particular regard to edge effects.*

(4) *Deleted*

The buildings subject of this application are not affected by the specific conditions of B5.

B6. Height

(1) Building 'A' of Figure 1 of this Consent is modified to the extent that it is a maximum of 2 storeys in height excluding attics.

(2) The Concept Plan is modified to the extent that in the event that the floor to ceiling heights of a building is less than 3.5m, the maximum number of stories permissible on the site must be in accordance with the Concept Plan as modified in this Consent.

The proposed buildings are not affected by the specific height provisions required by Condition B6.

B12. Utilities

(1) The Concept Plan is modified to ensure all electrical and gas lines shall be accommodated underground where ecological or landscape outcomes are not compromised.

Details have been provided to Council which demonstrates that electrical and gas lines associated with the development are located underground in a manner in which their location does not compromise ecological and landscaping outcomes. The development is assessed as being consistent with Condition B12.

A2. Design guidelines

(1) Future development applications are to be in accordance with the design guidelines referred to on page 2 of the revised Statement of Commitments.

The proposed development has been designed with regard to the Urban Design Guidelines which apply to the site. A full assessment against the guidelines is provided below.

POLICY PROVISIONS

As mentioned earlier within the report, the site subject of the proposed development is subject of a Concept Approval under the former Part 3A controls of the EP&A Act. The conditions of the Concept Approval required the preparation of Urban Design Guidelines, with the expectation that future developments be designed to satisfy these guidelines. The following assessment of the proposal against the applicable sections and controls of the design guidelines is provided:

Section		Requirement	Compliance
Part 2 Specific Building Type Controls			
Section 2.1 Residential Flat Building			
2.1.1 Building Siting	1	There is to be grade separation between private / communal spaces and the adjacent Asset Protection Zone to restrict direct access.	Yes
	2	Buildings are to be positioned to allow for retention and protection of Darwinia biflora and significant trees where possible.	Yes

Section	Requirement	Compliance
	3 Consider siting in relation to: i) Asset Protection Zones; ii) soccer field; iii) site circulation; iv) provision of adequate space for water sensitive urban design; v) solar access; and vi) adequate separation for amenity and landscaping.	Yes
	4 Buildings must not be located on or within a drainage depression, easement, or piped drainage system.	Yes
2.1.2 Building Separation	1 The minimum separation between residential buildings on the development site must comply with the following controls:	Yes
	Up to 4th storey	Yes
	i) 12m between habitable rooms / balconies;	Yes
	ii) 9m between habitable / balconies and non-habitable rooms.	N/A
	5th storey	N/A
	i) 18m between habitable rooms / balconies; ii) 13m between habitable room / balcony and non-habitable room; iii) 9m between non-habitable rooms.	
2.1.3 Building Setbacks and Site Coverage (continued) **Controls – Precinct 4**	1 Residential flat buildings in Precinct 4 must meet the minimum setback requirements shown below in Figures 2.1.3-5.	No
	2 Site coverage is to be a maximum of 60% of the site area.	Yes
	3 The deep soil landscaping area is to be a minimum of 40% of the site area.	Yes
2.1.3 Building Setbacks and Site Coverage (continued) **General Considerations**	1 Notwithstanding compliance with the permissible site coverage requirements, the bulk and relative mass of development is to be established in consideration of: ▪ overshadowing and privacy; ▪ streetscape considerations; ▪ parking and landscape requirements; ▪ visual impact and impact upon existing views and heritage setting; ▪ existing significant trees on site; ▪ the size and shape of the allotment; and ▪ site topography.	Yes
2.1.3 Building Setbacks and Site Coverage (continued) **Encroachments**	2 Basements must not encroach into the front, side or rear setbacks.	No
	3 Ground floor private terraces / courtyards may encroach into setback areas with a minimum setback of: i) 4m to the site boundary where the minimum setback is 6m; ii) 6m to the site boundary where the minimum setback is 8 – 10m.	Yes
	4 No more than 15% of the total area of the front setback area is to be occupied by private terraces / courtyards.	Yes
	5 The following elements may also encroach into setback areas: i) eaves; ii) sun shading; and iii) blades, fins and columns.	Yes
2.1.4 Deep Soil Landscaping	**Design** 1 Residential flat development at Edgelea must have a minimum deep soil landscaping areas in accordance with Section 2.1.3	Yes
	2 Deep soil zones must be configured to allow for required tree planting and for screen planting at side and rear boundaries.	Yes

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></tr>
<tr><td></td><td>3 Deep soil planting must be provided in common areas as a buffer between buildings.</td><td>Yes</td></tr>
<tr><td></td><td>4 Driveways are not to dominate the street setback zone to maximise deep soil landscaping areas.</td><td>Yes</td></tr>
<tr><td></td><td>5 Permeable pathways are to be used for pathways wider than 1m.
Note: Such pathways must comply with standards for access for people with disabilities.</td><td>Yes</td></tr>
<tr><td></td><td>6 Natural ground level must be maintained beneath the canopy spread of trees to be retained.
Note: If the ground level is modified by excavation or fill within the canopy spread, a report from a suitably qualified arborist will be required.</td><td>Yes</td></tr>
<tr><td></td><td>Tree replenishment and planting
7 Lots are to support tall trees capable of attaining a mature height of at least 13m on shale / transitional soils and 10m on sandstone derived soils at the following rate:
▪ 1 tall tree per 300m² of site area or part thereof.</td><td>Yes</td></tr>
<tr><td></td><td>8 In addition to tall trees, a range of medium trees, small trees and shrubs are to be selected to ensure that vegetation softens the building form.</td><td>Yes</td></tr>
<tr><td></td><td>9 Species are to be chosen for an appropriate range of height and foliage density, and for their low maintenance characteristics, water efficiency, aesthetic appeal and suitability to the characteristics of the site and location. Species for screen planting are also to be chosen for relatively fast growth.</td><td>Yes</td></tr>
<tr><td></td><td>10 Siting and choice of trees must consider:
i) good solar access to useable open space areas;
ii) provision of summer shade;
iii) proximity to buildings, fences and other structures;
iv) proximity to stormwater, electricity, gas, sewer, other infrastructure and services; and
v) measures to minimise the potential hazard on sites prone to bushfire risk.</td><td>Yes</td></tr>
<tr><td>2.1.5 Building Storeys</td><td>1 Maximum building heights are to be in accordance with Amendment 30 to State Environmental Planning Policy (Major Development) 2005.
The maximum number of storeys that applies to each Precinct is as follows:
<table>
<tr><th>Precinct</th><th>Maximum Building Height</th><th>Maximum Storeys</th></tr>
<tr><td>Precinct 1</td><td>9 metres</td><td>2</td></tr>
<tr><td>Precinct 2</td><td>16 metres</td><td>4</td></tr>
<tr><td>Precinct 3</td><td>20 metres</td><td>5</td></tr>
<tr><td>Precinct 4</td><td>16 metres</td><td>4</td></tr>
<tr><td>Precinct 5</td><td>9 metres</td><td>2</td></tr>
</table></td><td>No, non-compliance with number of storeys, compliant with maximum building height</td></tr>
<tr><td>2.1.6 Building Facades</td><td>1 Buildings are to reflect the character of the existing campus buildings through a consistent use of geometric forms, deep reveals and the use of a limited palette of colours and materials.</td><td>Yes</td></tr>
<tr><td></td><td>2 Building design is to emphasise strong horizontal massing and vertical articulation.</td><td>Yes</td></tr>
</table>

Section	Requirement	Compliance
	3 Street, side and rear building facades are to respond to the articulation of the retained campus buildings. Methods of achieving articulation and modulation include: i) defining a base, middle and top related to the overall proportions of the building; ii) expressing building layout or structure, such as vertical bays or party walls; iii) using a variety of window types to create a rhythm or express the building uses; iv) using recessed balconies and deep windows to add visual depth; and / or v) using change of material, texture, colour to break down large flat facades, and create a rhythm.	Yes
	4 No single wall plane is to exceed 81m² in area.	Yes
	5 The continuous length of a single building on any elevation must not exceed 36m unless site constraints necessitate additional length or it can be demonstrated that building design complements the existing campus buildings. In such cases, the building shall be sufficiently recessed and / or articulated so as to present as a separate building.	Yes
	6 Building facades must be designed to respond to solar access by using solar protection elements such as eaves, louvres and other sun shading devices as environmental controls.	Yes
	7 All building elements including shading devices, signage, drainage pipes, awnings / colonnades and communication devices must be coordinated and integrated with the overall façade design.	Yes
	8 When individual air conditioning units are used, they must not be located on the building façade or within the private open space, (e.g. balconies or terraces).	Yes
	9 Balconies that run the full length of the building façade are not permitted.	No
	10 Blade walls are not to be the sole element used to provide articulation.	Yes
	11 Windows to a habitable room are to be situated to encourage opportunities for passive surveillance to the street, on site areas surrounding the building and to bushland.	Yes
	12 Corner buildings are to address both street frontages.	Yes
	13 Building façades are to incorporate a limited palette of colours and materials in earthy, neutral tones which respond to the context of the neighbouring heritage buildings. Materials are to be concrete, honed or polished concrete blockwork, face brick, glass or metal sheet panel. Accent elements may be cement rendered with painted finish / integral colour render, metal or stone cladding. *Note: Refer to Section 3.3 for relevant controls on materials finishes and colours.*	Yes
2.1.7 Building Entries	1 Provide access to and within all developments in accordance with the Disability Discrimination Act 1992.	Yes
	2 Buildings must address the street either: i) with main entrances to lift lobbies directly accessible and visible from the street; or ii) with the path to the building entry readily visible from the street where site configuration is conducive to having a side entry.	Yes
	3 Buildings with frontages over 18m long must have multiple entries.	Yes
	4 Building entry must be integrated with building façade design. At street level, entry is to be articulated with awnings, porticos, recesses or projecting bays for clear identification.	Yes
	5 All entry areas must be well lit and designed to avoid any concealment or entrapment areas. All light spill to apartments is prohibited.	Yes
	6 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.	Yes
	7 On large development site comprising multiple building blocks, clear way-finding signs are to be provided.	Yes

Section	Requirement	Compliance
2.1.8 Top Storey Design and Roof Forms	1 Roofs are to be simple and geometric e.g. low pitched, mono-pitched, skillion or flat with parapets. Hip and gable roofs should be screened by parapets.	Yes
	2 Roofs should be steel or concrete; tiled roofs are not appropriate for buildings in Edgelea. Roof gardens should be considered. *Note: Refer to Section 3.3 for relevant controls on materials, finishes and colours.*	Yes
	3 Projecting roof elements may be used to break up long, consistent roof lines, but elements should relate to the plan of the building or massing of the form. Avoid superfluous roof elements.	Yes
	4 Service elements are to be integrated into the overall design of the roof so as not to be visible from the public domain or any surrounding development. These elements include lift overruns, plant equipment, chimneys, vent stacks, water storage, communication devices and signage.	Yes
	5 Roof design must respond to solar access, for example, by using eaves and skillion roofs.	Yes
	6 Where solar panels are provided they must be integrated into the roof line.	Yes
	7 Lightweight pergolas, sun screens, privacy screens and planters are permitted on the roof, provided they do not increase the bulk of the building and create visual clutter.	Yes
2.1.9 Fencing	**Front Fences** 1 A landscaped frontage with a mix of trees, shrubs and groundcover plantings is desirable. High hedges along the entire front boundary are not encouraged.	Yes
	2 No fences or walls higher than 500mm are to be built on the boundary to a street. Low stone walls / hobs (500mm maximum) and or bush rocks / rock cuttings with a combination of planting can be used.	N/A
	3 Private courtyard fencing (to a public street) is to be set back a minimum of 4m from the street and be a maximum of 1.8m in height.	N/A
	4 Private courtyard fencing can comprise a solid component to a maximum height of 1.5m and a minimum transparent component of 0.3m. The solid component is to be either sandstone block work, off-form concrete or face brick.	Yes
	5 Planting is to be used to soften the look of the fencing to the street.	Yes
	6 A gate should be provided to common areas from the private open space where available.	No
	7 All front boundary treatment must be designed to highlight entrances.	Yes
	Rear boundary and fences to APZ 8 Rear boundaries should be delineated where required by retaining bushland, rock outcrops and new retaining walls.	Yes
	9 Fencing to be complimentary and to the bushland setting and site slopes and contours.	Yes
2.1.10 Private Open Space	1 Where buildings adjoin the Asset Protection Zone, a grade separation of up to 1.2m is to be provided between ground level private open spaces and the natural bushland.	N/A
	2 Ground level and podium level apartments are to have a private outdoor courtyard / terrace with a minimum (internal dimension) of 25m^2.	No
	3 Ground level private open space is to have a minimum dimension of 2.4m.	Yes
	4 All apartments that are not at ground or podium level are to include private open space (such as a roof garden, balcony, deck or terrace) with a minimum area (internal dimension) of: i) 10m² for each one bedroom apartment; ii) 12m² for each two bedroom apartment; and iii) 15m² for each apartment with three or more bedrooms.	Yes

Section	Requirement		Compliance
	5	Primary balconies for all apartments are to have a minimum depth of 2.4m.	Yes
	6	All private open space area requirements are exclusive of any areas for the provision of services, e.g. external clothes drying facilities.	Yes
	7	The primary open space is to have direct access from the main living areas.	Yes
	8	Primary private open space with southern orientation should be avoided.	Yes
	9	Balcony or terrace design may incorporate building elements such as pergolas, sun screens, shutters, operable walls and the like to respond to the street context, building orientation and residential amenity. The use of such building elements must not enable the balcony or terrace to be used as a habitable room.	Yes
	10	Private open space (outdoor) for ground and podium level apartments is to be differentiated from common areas by: i) a change in level; ii) screen planting, such as hedges and low shrubs; iii) fence / wall to a maximum height of 1.8m. - refer to Section 2.1.9 Fencing.	Yes
	11	One gas outlet (where gas services are available) and one water outlet are to be provided to the primary private open space.	Yes
	12	Air conditioning units must not be located in private open space.	Yes
	13	Retain and incorporate existing landscape features, such as sandstone outcrops and significant trees, into private open spaces where possible.	Yes
	14	Planting in private open spaces is to consist of not less than 50% of local native tree species and 50% native understorey species.	Yes
	15	Select planting that provides screening to private open space, allows passive surveillance of public and communal areas and allows good solar access.	Yes
	16	Provide direct access where possible from ground floor courtyards to adjacent communal open space.	Yes
	17	Avoid providing direct access to the APZ from private open space.	Yes
	18	Planting should be in accordance with planting lists in Section 5.6.	Yes
2.1.11 Communal Open Space	1	The landscape treatment of communal open spaces is to complement the natural bushland features of the site.	Yes
	2	Communal open spaces are to be located and designed to maximise passive surveillance from adjoining apartments.	Yes
	3	At least 10% of the site area must be provided as communal open space with a minimum dimension of 5m.	Yes
	4	At least one single parcel of communal open space with the following requirements must be provided: i) a minimum area of 80m²; and ii) a minimum dimension of 8m.	Yes
	5	The communal open space must be located at ground level behind the building line.	Yes
	6	Access to and within the communal open space must be provided for people with a disability (refer to AS1428).	Yes
	7	The location and design of communal open space should optimise opportunities for social and recreation activities, solar access and orientation, summer shade, outlook and the privacy of residents.	Yes
	8	Communal open space should be integrated with significant natural features of the site and soft landscape areas.	Yes
	9	Concealment or entrapment areas should not be created within the communal open space.	Yes
	10	Communal open space should be well lit with an energy efficient lighting system to be used in conjunction with timers or daylight controls. All light spill to apartments is prohibited.	Yes

Section	Requirement	Compliance
	11 Shared facilities such as barbeques, shade structures, play equipment and seating, are to be provided within the communal open space.	Yes
	12 Garden maintenance storage areas and connections to water and drainage must be provided to communal open space.	Yes
	13 Planting within communal open space, other than turf, should consist of 70% native species, preferably locally occurring native plants.	Yes
	14 Communal open spaces are to incorporate a structured and ordered landscape treatment to provide a distinction between developed and natural bushland areas.	Yes
	15 Accent planting should be used to highlight nodal points and building entries.	Yes
	16 A minimum 1.5 metre wide planted buffer of small trees, shrubs and groundcovers should be provided between communal open space and private courtyard fences where possible.	Yes
2.1.12 Apartment Depth and Width	1 Dual aspect apartments are to have a maximum internal plan depth of 18m from glass line to glass line.	Yes
	2 Single aspect apartments are to have a maximum internal plan depth of 8m from glass line to internal face of wall of habitable area unless the design of the apartment can clearly demonstrate that adequate natural light and ventilation can be achieved.	Yes
	3 The width of dual aspect apartments over 15m deep must be 4m or greater to avoid deep narrow apartment layouts.	Yes
	4 All kitchens must be located no more than 8m to the back wall of the kitchen, from an external opening unless the design of the apartment can clearly demonstrate that adequate natural light and ventilation can be achieved.	Yes
2.1.13 Ground Floor Apartments	1 The finished ground level of private open space adjacent to living areas of ground level apartments must not be more than 0.9m below existing ground level.	Yes
	2 Where the finished ground level outside the living area at the building line is more than 0.5m, the private open space must be level for a minimum of 2.4m from the living area.	Yes
	3 No obstructions, such as retaining walls or fences, are permitted to project beyond a 45˚ control plane, (10am sun angle at 23 March) drawn from the finished ground level outside the living area at the building line to the end of the private open space. Plants may project beyond the 45˚ control plane.	Yes
2.1.14 Solar Access	1 All developments must comply with the Apartment Depth Controls in Part A2.1.13 to optimise solar access to habitable rooms.	Yes
	2 Buildings must be oriented to optimise the northern aspect.	Yes
	3 At least 70% of apartments must receive a minimum of three hours direct sunlight to living rooms and adjacent private open space between 9am and 3pm on 21st June. *Note: shadows cast by trees and vegetation are excluded from this calculation.*	Yes
	4 At least 50% of the communal open space for residents' use must receive direct sunlight for at least three hours between 9 am and 3 pm on 21st June.	Yes
	5 The number of single aspect apartments with a southern orientation (SW-SE) must be limited to a maximum of 10% of the total apartments proposed in the development. Developments which seek to vary from the minimum standards must demonstrate how site constraints and orientation prohibit the achievement of these controls.	Yes
	6 Use light shelves, reflectors, lightwells, skylights, atriums and clerestories where possible to maximise the quantity and quality of natural light within internal areas.	Yes
	7 The use of lightwells / skylights as a primary source of daylight in habitable rooms is prohibited.	Yes

Section	Requirement	Compliance
	8 All developments must allow the retention of at least three hours of sunlight between 9am and 3pm on 21st June to the living areas and the principal portion of the private and communal open space of: - existing residential flat buildings and multi-dwelling housing on adjoining lots; and - any adjoining residential development. Where existing overshadowing by buildings is greater than this, sunlight is not to be reduced by more than 20%.	Yes
	9 Overshadowing must not compromise the development potential of the adjoining under-developed site(s).	Yes
	10 Developments must allow the retention of a minimum of 4 hours direct sunlight between 9am to 3pm on 21st June to all existing neighbouring solar collectors and solar hot water services.	Yes
	Sun Shading 11 All developments must utilise shading and glare control. Design solutions include: i) providing external horizontal shading to north-facing windows such as eaves, overhangs, pergolas, awnings, colonnades, upper floor balconies, and / or deciduous vegetation; ii) providing vertical shading to east and west windows such as sliding screens, adjustable louvres, blinds and / or shutters; iii) providing shading to glazed and transparent roofs; iv) using low glare high performance glass with an overall 3 star Window Energy Rating Scheme rating (refer to www.wers.net); and v) using glass with reflectance below 20%.	Yes
	12 All shading devices must be integrated with building façade design.	Yes
	13 Consideration should be given to the integration of solar shading with solar energy collection technology.	Yes
	14 Reflective films applied to windows and glazing is to be avoided.	Yes
2.1.15 Natural Ventilation	1 All habitable rooms are to have operable windows or doors.	Yes
	2 At least 60% of apartments must have natural cross ventilation.	Yes
	3 At least 25% of all kitchens are to be naturally ventilated.	Yes
	4 Use the building layout and section to increase the potential for natural ventilation. Design solutions include: i) facilitating cross ventilation by designing narrow building depths and providing dual aspect apartments (cross-through and corner apartments) - refer to Section 2.1.12 Apartment Depth and Width; ii) facilitating convective currents by designing units which draw cool air in at lower levels and allow warm air to escape at higher levels (eg. maisonette and two-storey apartments); iii) minimising interruptions in air flow through the apartment, the more corners or rooms airflow must negotiate, the less effective the natural ventilation; iv) grouping rooms with similar usage together, for example, keeping living spaces together and sleeping spaces together, this allows the apartment to be compartmentalised for efficient summer cooling or winter heating.	Yes
2.1.16 Visual Privacy	1 All developments must comply with the Building Separation Controls in Section 2.1.2 to ensure visual privacy.	Yes

Section	Requirement	Compliance
	2 Buildings must be designed to ensure privacy without compromising access to light and air. Design solutions include: i) off-setting windows in relation to adjacent buildings/windows; ii) using recessed balconies and/or vertical fins between adjacent private balconies; iii) using solid or semi-transparent balustrades to balconies; iv) using louvres/screen panels to windows and balconies; v) providing vegetation as a screen between spaces; vi) incorporating planter boxes into walls or balustrades to increase the visual separation between areas; vii) utilising pergolas or shading devices to limit overlooking of lower building levels or common and private open space.	Yes
	3 Continuous transparent balustrades are not permitted to balconies or terraces for the lower 3 storeys.	Yes
	4 Screening between apartments must be integrated with the overall building design.	Yes
	5 Landscaped screening must be provided to adjoining site(s).	Yes
2.1.17 Acoustic Privacy	1 All developments must comply with the Building Separation Controls in Section 2.1.2 to ensure adequate acoustic privacy for building occupants.	Yes
	2 Buildings must be designed to minimise the impact of traffic noise through planning, construction and materials in accordance with: i) AS2107-2000: Acoustics- Recommended design sound levels and reverberation times for building interiors. ii) AS3671-1989: Acoustics- Road traffic noise intrusion- Building siting and construction.	Yes
	3 Residential flat buildings must be designed to minimise noise transition by, but not limited to, the following means: i) grouping room uses according to the noise level generated; ii) using storage or circulation zones within an apartment to buffer noise from adjacent apartments, mechanical equipment or corridors and lobby areas; iii) minimising the amount of shared walls with other apartments; iv) using service areas/corridors to buffer noise sensitive areas (i.e. bedrooms) from noise generators including traffic, service and loading vehicle entries; v) incorporating appropriate noise shielding or attenuation techniques into the design and construction of the building.	Yes
2.1.18 Internal Ceiling Heights	1 All residential flat buildings must comply with the following minimum ceiling heights, measured from finished floor level (FFL) to finished ceiling level (FCL): i) 2.7m for all habitable rooms; ii) 2.25m for all non-habitable rooms.	Yes
2.1.19 Room Sizes	1 Living areas must have a minimum internal plan dimension as follows: i) 4m for apartments with 2 or more bedrooms; ii) 3.5m for other apartments.	Yes
	2 One and two bedroom apartments must have a minimum internal plan dimension of 3m (excluding wardrobe space) in all bedrooms.	Yes
	3 Apartments with three or more bedrooms are to have at least two bedrooms with a minimum internal plan dimension of 3m (excluding wardrobe space).	Yes
2.1.20 Internal Common	1 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.	Yes

Section	Requirement	Compliance
Circulation	2 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 materials.	Yes
	3 Where artificial lighting is required energy efficient lights are to be used in conjunction with timers or daylight controls.	Yes
	4 All single common corridors must: i) serve a maximum of 8 apartments; ii) be at least 1.5m wide (to allow ease of movement of furniture); and iii) be at least 1.8m wide at lift lobbies.	Yes
	5 Buildings must designed to avoid blind corners or dark alcoves near lifts and stairwells, at the entrances, along corridors and walkways, and within car parks.	Yes
2.1.21 Storage	1 Storage space shall be provided for each apartment at the following minimum volumes: i) 6m² for studio; ii) 8m² for one bedroom apartments; iii) 10m² for two bedroom apartments; and iv) 12m² for apartments with three or more bedrooms.	Yes
	2 At least 50% of the storage space must be provided within the apartment. The remaining storage space outside apartments, such as within basements, must be separately allocated to the relevant apartments. *Note 1: Storage space within apartments can be in the form of cupboards in halls, living rooms, laundries, flexible spaces (which can also be used as studios/media rooms etc). Storage in kitchens, bedrooms or bathrooms will not count towards this requirement.* *Note 2: Storage space outside apartments can be in basements and dedicated storerooms. The rear of a parking space is an appropriate location in the basement for part of the storage controls.* *Note 3: Where two car spaces are provided for an apartment, the requirement for the basement storage component may be waived in order to ensure basements do not extend greater than 10% of the ground floor perimeter.* *Note 4: Refer to Section 3.13 for waste storage.*	Yes
2.1.22 External Air Clothes Drying Facilities	1 Each apartment is required to have access to an external air clothes drying area, e.g. a screened balcony, a terrace or common area.	Yes
	2 External air clothes drying areas must be screened from public and common open space areas.	Yes
	3 Where provided in common areas facilities are to be provided including clothes lines.	Yes
2.1.23 Car Parking Provision	**Car parking design** 1 All residential flat developments must provide on-site car parking within basements.	Yes
	2 To maximise landscaping area, basement car park areas must be consolidated under building footprints. *Note: Basements may be permitted to extend under the space between buildings on the site.*	Yes
	3 The basement car park must not project more than 1m above existing ground level to the floor level of the storey immediately above. *Note: refer to Section 3.7 for additional basement car parking design controls.*	No
	4 Direct internal access from basement car parks must be provided to each level of the building.	Yes

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></tr>
<tr><td></td><td>5 A space for temporary parking for service and removalist vehicles must be provided and clearly signposted.</td><td>Yes</td></tr>
<tr><td></td><td>6 The temporary space for service and removalist vehicles may be provided as a visitors' space provided it has a minimum dimension of 3.5m x 6m, a minimum manoeuvring area 7m wide and adequate headroom.</td><td>Yes</td></tr>
<tr><td></td><td>Car parking rates
7 The following parking rates apply to residential flat developments:
<table><tr><th>Apartment Size</th><th>Parking Space Requirement per apartment</th></tr><tr><td>Studio</td><td>0 – 0.5 spaces</td></tr><tr><td>One bedroom</td><td>0.7 - 1 spaces</td></tr><tr><td>Two bedrooms</td><td>1 - 1.5 spaces</td></tr><tr><td>Three or more bedrooms</td><td>1 - 2 spaces</td></tr></table></td><td>Yes</td></tr>
<tr><td></td><td>8 At least one visitor car space is to be provided within the site for every 4 apartments or part thereof.
Note: refer to Section 3.8 for visitor parking design controls.</td><td>Yes</td></tr>
<tr><td></td><td>9 Any spaces provided which exceed the upper range are to be included in the calculation of gross floor area.</td><td>N/A</td></tr>
<tr><td></td><td>10 Each adaptable housing dwelling must be provided with at least one disabled car parking space designed in accordance with AS 1428 and AS 4299.
Note: Refer to Section 3.9 for parking for people with a disability design controls.</td><td>Yes</td></tr>
<tr><td>2.1.24 Bicycle Parking Provision</td><td>1 Provide on-site, secure bicycle parking spaces and storage at the following rates:
i) 1 bicycle parking space per 5 units (or part thereof) for residents within the residential car park area; and
ii) 1 bicycle parking space (in the form of a bicycle rail) per 10 units for visitors in the visitor car park area.
Note: Refer to Section 3.11 for bicycle parking design controls.</td><td>Yes</td></tr>
<tr><td>2.1.25 Adaptable Housing</td><td>1 All residential flat buildings must contain at least one apartment for each 10 apartments (or part thereof) designed as adaptable housing in accordance with the provisions of AS 4299-1995: Adaptable Housing Class C.</td><td>Yes</td></tr>
<tr><td></td><td>2 A minimum of 10% of one bedroom apartments are to be designed as adaptable housing.</td><td>Yes</td></tr>
<tr><td></td><td>3 Each adaptable housing apartment must be provided with at least one disabled car parking space designed in accordance with AS 2890.6.</td><td>Yes</td></tr>
<tr><td></td><td>4 At least 70% of apartments are to be "visitable" in accordance with AS 4299</td><td>Yes</td></tr>
<tr><td>2.1.26 Apartment Mix and Sizes</td><td>1 A range of apartment sizes and types must be included within the development.</td><td>Yes</td></tr>
<tr><td></td><td>2 Apartments are to be a minimum size (GFA) of:
i) 50m² for studios and one bedroom apartments;
ii) 70m² for two bedroom apartments;
iii) 95m² for three bedroom apartments.</td><td>Yes</td></tr>
<tr><td></td><td>3 A mix of one, two and three-bedroom apartments are to be located on the ground level.</td><td>Yes</td></tr>
<tr><td></td><td>4 A minimum of 10% of the total number of dwellings on the site are to be a maximum of one bedroom.</td><td>Yes</td></tr>
<tr><td colspan="3">Part 3 General Development Controls</td></tr>
</table>

Section	Requirement	Compliance
3.1 Landscape for Biodiversity and Bushfire Management	**Site Planning and Design** 1 All developments must: i) be designed to conserve indigenous vegetation, habitat and existing natural features on the site as part of the site planning and the site layout process; *Note: Where losses occur, compensatory actions are likely to be required. These include measures such as tree replenishment and site rehabilitation.* ii) retain the most significant, intact and sustainable areas of vegetation; iii) be located to retain views of public reserves; iv) be designed to retain habitat within and adjacent to the site (where it is safe to do so) including: ▪ drainage features and damp areas; ▪ old or dead trees and hollow logs; ▪ leaf litter and fallen branches; ▪ bushrock and rock outcrops. If bushrock cannot be retained in place, it is to be relocated within the site; v) be designed to consider subsurface / groundwater flows near bushland and other significant vegetation or habitats.	Yes
	2 Where development is located close to a reserve, passive surveillance of the reserve is encouraged.	N/A
	3 Structures (including stormwater pipes and structures) must be located outside the canopy spread of the trees to be retained. This applies to street trees, trees on site and on adjoining sites.	No
	4 Disturbance of natural soil profiles must be minimised.	Yes
	5 The introduction of imported soils and disturbance of local seed banks must be avoided wherever possible.	Yes
	6 Vegetation retention and planting must also consider resilience: i) Healthy, undamaged specimens are to be the priority for conservation, particularly habitat trees. ii) While single trees may be ecologically important in their own right, or as part of a broader community, groups of trees generally provide increased resilience to storm events.	Yes
	Planting 7 All planting in communal open space within Edgelea is to consist of 100% native planting preferably where possible locally occurring native plants, apart from turf areas.	Yes
	8 All planting in private open space within Edgelea is to consist of not less than 50% locally native tree species and 50% native understorey species.	Yes
	9 Private and communal open spaces should use fire retardant plants where possible.	Yes
	10 Exotic tree species are to be selectively used for solar access purposes within private courtyards and gardens.	Yes
	11 The Darwinia biflora communities are to be retained and protected within the site and the APZ.	N/A
	12 The planting of species listed in Council's Weed Management Policy as 'Urban Environmental Weeds' will not be permitted.	Yes
	13 Species used for planting or revegetation in or directly adjacent to areas with significant vegetation or habitat must be of local provenance. *Note: To enable this, propagation must be started well before any construction begins. Council's community bursary may be contacted to discuss availability of appropriate species. A list of appropriate species for native vegetation communities within Ku-ring-gai is available from Council and on Councils website (www.kmc.gov.nsw.au)*	Yes
3.2 Earthworks	1 Development must demonstrate consideration of site topography, drainage, soil landscapes, flora, fauna and bushfire hazard.	Yes

Section	Requirement	Compliance
and Slope	2 Development must be accommodated within the natural slope of the land. Level changes across the site are to be primarily resolved within the building footprint. This may be achieved by: iii) stepping buildings down a site; iv) locating the finished ground floor level as close to existing ground level as practicable.	Yes
	3 Avoid earthworks on steeply sloping sites. Note: Sites with a slope in excess of 15% may require certification from a geotechnical engineer as to the stability of the slope in regard to the proposed design.	Yes
	4 For any dwelling house or small lot dwelling, excavation within the building footprint must not exceed 1.0m depth relative to ground level (existing), fill must not exceed 0.9m relative to ground level, with a maximum level different across the building footprint of 1.8m. See figure 3.2-1.	N/A
	5 A minimum 0.6m width is required between retaining walls to provide adequate soil area and depth to ensure that they do not read as a single level change, and for the viability of landscaping. *Note: A minimum width of 2m is required between retaining walls for this area to be included in deep soil calculations.*	Yes
	6 Existing ground level is to be maintained for a distance of 2m from any boundary.	Yes
	7 Grassed embankments are not to exceed a 1:6 slope. Vegetated embankments, planted with soil stabilising species, may be to a maximum of 1:3.	N/A
	8 Excavated and filled areas shall be constructed to have no adverse impact on: i) structures to be retained on the site; ii) structures on adjacent public or private land; iii) trees to be retained on site or on adjoining sites; iv) waterways or bushland. *Note: A geotechnical / hydrological report may be required to demonstrate this.*	Yes
	9 The use of imported fill is to be avoided.	Yes
	10 Excavated and filled areas shall be constructed so as not to redirect or concentrate stormwater or surface water runoff onto adjoining properties or bushland.	Yes
	11 Retaining walls and excavation and fill areas must not compromise the long term health and stability of trees.	Yes
	12 Avoid excavation and fill beneath the canopy of trees. If the ground level is modified within the canopy spread, an arborist's report will be required to assess the impact of the proposed works in accordance with AS 4970-2009: Protection of Trees on Development Sites.	Yes
	13 The design of the proposal must consider the impacts of altered subsurface / groundwater flows or direction on groundwater dependent ecosystems or species. *Note: Riparian systems and a number of vegetation communities or species may be fully or partially dependent on subsurface / groundwater flows. A hydrological report may be required to address changes to groundwater. Details of measures proposed to mitigate such impacts are required.*	Yes
	14 All development applications must be accompanied by an 'Erosion and Sediment Control Plan' (ESCP) that will describe the measures to be taken at development sites to minimise land disturbance and erosion and to control sediment pollution. An ESCP shall be prepared in accordance with Landcom "Managing Urban Stormwater, Soil and Construction".	Yes
3.3 Materials, Finishes and Colours	1 External walls must be constructed of high quality and durable materials and finishes.	Yes
	2 Reuse or recycling of existing materials from the locality such as sandstone and brick is encouraged.	Yes
	3 Large, unbroken expanses of any single material and finish (rendered or not) to building facades must be avoided. *Note: refer to Part 2 for relevant building façade articulation controls.*	Yes

Section	Requirement	Compliance
	4 New development is to avoid extensive use of highly reflective or gloss materials on the exterior of buildings.	Yes
	5 The exterior finish material must be integral to the overall building façade design and must not appear to be cosmetic.	Yes
	6 Contrasting materials / colours are to be used to assist in the articulation of building elements.	Yes
	7 Louvres are encouraged as an integral element to the building façade design.	Yes
	8 Where building cladding is used, consider dual purpose solution. For example, use of photovoltaic cells mounted on panels used for cladding.	N/A
	9 Where additions and alterations are proposed, external materials and finishes must complement the existing building.	N/A
	10 The selection of a colour scheme must comply with the following guidelines: i) Base colours for major areas of building façade are to be in earthy, neutral tones with minimal colour intensity (or hue). Apartment building colours are to complement but not duplicate colours of the existing campus building; light cream or sandy colours are to be avoided. Use of a greater variety of colours is permitted for dwelling houses adjoining existing residential areas. Pure colours, black and white must be avoided, as these detract from the prominence of other façade details. Contrasting tints, tones and shades are to be restricted to small areas. ii) Highlight colours to window and door mouldings, string courses, parapet details and the like, are to be in sufficient contrast to the base colour. Pure colours must be avoided. Details should be finished in a matt to semi gloss range. iii) Trim colours for window frames and awning fascias are to be darker contrast to base and highlight colours. Window frames should be finished in either semi gloss or full gloss.	Yes
	11 For buildings of 3 storeys or above, recessive colours are encouraged for the upper levels of buildings to assist in minimising the bulk and scale of the building.	Yes
	Indicative Building Materials and Colours 12 Buildings are to incorporate a limited palette of materials in earthy, neutral tones for the following building types: i) Residential Flat Buildings ▪ concrete, honed or polished concrete block work, face brick or metal sheet panel; ▪ cement rendered masonry with painted / integral colour render, metal or stone cladding for accent elements. ii) Small Lot Housing or Dwelling House ▪ honed or polished concrete block work, face brick or cement rendered masonry with painted / integral colour render; ▪ timber, metal or stone cladding for accent elements.	Yes
	13 All new buildings within Edgelea are to have steel or concrete roofs; terracotta or concrete tiles are not permitted. Roof colours with low reflectivity are to be used such as mid-grey and dark-grey as shown below.	Yes
3.4 Sustainability of Building Materials	1 Developments should use building materials which: i) are recycled or recyclable with low embodied energy; ii) come from renewable sources or those that are sustainable and generate a lower environmental cost; iii) have acceptable life cycle costs and durability; and iv) involve environmentally acceptable production methods.	Yes
	2 Rainforest timbers and timbers from old growth forests must not be specified for the construction or finishing of the development.	Yes
	3 Medium Density Fibreboard (MDF) and particleboard must not be specified as a construction material for the development.	Yes
	4 The use of alternatives to PVC piping is encouraged including Colorbond (above ground only), and HDPE where appropriate.	Yes

Section	Requirement	Compliance
	5 Avoid the use of construction materials and chemicals with toxic components to facilitate recycling and reduce pollution.	Yes
	6 Structures must be designed with physical, rather than chemical, termite measures. This can be achieved by: i) appropriate materials and construction design; ii) physical barriers; iii) suspended floor systems.	Yes
	7 Low Volatile Organic Compounds (VOC) should be used throughout the building interior (carpets, paints, adhesives, sealants and all other finishes), and low emission building materials are to be used across the site.	Yes
	8 Avoid the use of ozone depleting products and materials, or products and materials manufactured using ozone depleting substances.	Yes
	9 Avoid materials likely to contribute to poor internal air quality, such as those generating formaldehyde, or those that may create a breathing hazard in the event of fire, such as polyurethane.	Yes
3.5 Roof Terraces and Podiums	1 All roof terraces and podiums must provide appropriate building systems to make them trafficable, and to support landscaping.	Yes
	2 Roof and terrace common open areas must incorporate sun shading devices and wind screens, alongside facilities such as BBQ and kitchenette area to encourage usage.	N/A
	3 Where artificial lighting is required, energy efficient lights must be used in conjunction with timers or daylight controls. All light spill is prohibited.	Yes
	4 Roof terraces and podiums must provide soft landscaping areas that complement the appearance of the building; soften the edges of the building; and reduce the scale of raised terraces and other built elements such as services.	Yes
	5 Robust and drought tolerant plant material must be used to minimise maintenance and ensure long term survival.	Yes
	6 Roof terraces and podiums are to be designed for optimum conditions for plant growth by appropriate solar access, soil mix, and the provision of water connections and drainage.	Yes
	7 Minimum soil provision for a range of plant sizes must be in accordance with the following: i) Large trees (canopy diameter of up to 16m at maturity) ▪ minimum soil volume 150m3 ▪ minimum soil depth 1.3m ▪ minimum soil area 10m x 10m area or equivalent ii) Medium trees (8m canopy diameter at maturity) ▪ minimum soil volume 36m3 ▪ minimum soil depth 1m ▪ approximate soil area 6m x 6m or equivalent iii) Small trees (4m canopy diameter at maturity) ▪ minimum soil volume 11m3 ▪ minimum soil depth 0.8m ▪ approximate soil area 3.5m x 3.5m or equivalent iv) Shrubs ▪ minimum soil depth 0.5-0.6m v) Ground cover ▪ minimum soil depth 0.3-0.45m vi) Turf minimum soil depth 0.1-0.3m *Note : Any subsurface drainage requirements are in addition to the minimum soil depths quoted above.*	Yes
3.6 Vehicle Access	1 Vehicle access driveways must be set back a minimum of 10m from street intersections or as specified in Clause 3.2.3 of AS2890.1 (whichever is the greater).	Yes

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></tr>
<tr><td></td><td>2 Vehicle and pedestrian access to buildings must be separated and clearly distinguished. Vehicle access must be located a minimum of 3m from pedestrian entrances.</td><td>Yes</td></tr>
<tr><td></td><td>3 Provide clear sight lines at pedestrian and vehicle crossings.</td><td>Yes</td></tr>
<tr><td></td><td>4 Driveway width is to comply with the table below. Greater widths will only be considered where it is required by Australian Standards relating to off-street parking and pedestrian safety.
<table>
<tr><th>Proposed Number of Car Parking Spaces in Development</th><th>Driveway Clear Width</th></tr>
<tr><td>Less than 25 spaces</td><td>3.7m min. – 5m max.</td></tr>
<tr><td>25 - 100 spaces</td><td>3.7 min. – 6m max.</td></tr>
<tr><td>100 – 300 spaces</td><td>6m min – 9m max</td></tr>
</table></td><td>Yes</td></tr>
<tr><td></td><td>5 For residential flat buildings, vehicles must be able to enter and exit from the site in a forward direction.</td><td>Yes</td></tr>
<tr><td></td><td>6 Vehicle entries and service areas are to be set back or recessed from the main facade line and integrated into the overall façade design, so as not to dominate the building elevation.</td><td>Yes</td></tr>
<tr><td></td><td>7 Vehicle entries, walls and ceilings are to be finished with high quality materials, finishes and detailing, similar to the external facades of the building.</td><td>Yes</td></tr>
<tr><td></td><td>8 Service ducts, pipes and storage facilities must not be visible from the street.</td><td>Yes</td></tr>
<tr><td></td><td>9 External security doors may be provided where necessary. Security doors are to be of high quality material and detail and must blend into the building facade.</td><td>Yes</td></tr>
<tr><td>3.7 Basement Car Parking</td><td>1 A logical and efficient structural grid must be provided to the basement car park areas.</td><td>Yes</td></tr>
<tr><td></td><td>2 The minimum height between floor level and an overhead obstruction is to be 2.2m, except for the following:
i) 2.5m for parking area for people with a disability;
ii) 2.6m for residential waste collection and manoeuvring area; and
iii) 4.5m for commercial waste collection and manoeuvring area.</td><td>Yes</td></tr>
<tr><td></td><td>3 Where natural ventilation is not possible, a ventilation system for the basement car park is to be provided and designed in accordance with AS1668.2 The use of ventilation and air conditioning in buildings - Ventilation design for indoor air contaminant control. Monitoring of CO2 and variable speed fans are to be provided with any basement car park mechanical ventilation systems.</td><td>Yes</td></tr>
<tr><td></td><td>4 Unimpeded access to visitor parking and waste and recycling rooms located within a secure basement parking must be maintained.</td><td>Yes</td></tr>
<tr><td></td><td>5 Where ventilation grilles or screening devices are provided they are to be recessed and integrated into the overall facade and landscape design of the development.</td><td>Yes</td></tr>
<tr><td></td><td>6 Vehicle access ways to basement car parking must not be located in direct proximity to doors or windows of habitable rooms.</td><td>Yes</td></tr>
<tr><td>3.8 Visitor Parking</td><td>1 All visitor parking spaces are to be provided on site and clearly marked.</td><td>Yes</td></tr>
<tr><td></td><td>2 Visitor parking spaces must be conveniently located and must not be obstructed by security grilles or similar devices wherever possible.</td><td>Yes</td></tr>
<tr><td></td><td>3 If visitor parking is located behind security grilles, an intercom system will be required for users to gain entry.</td><td>Yes</td></tr>
<tr><td></td><td>4 For residential flat buildings, at least one visitor parking space is to be adaptable by complying with the dimensional and locational requirements of AS 2890.6.</td><td>Yes</td></tr>
<tr><td></td><td>5 For residential flat buildings, one visitor parking bay is to be provided with a tap, to make provision for on-site car washing.</td><td>Yes</td></tr>
<tr><td>3.9 Parking for People with a</td><td>1 Accessible car parking spaces are to be level and have a continuous path of travel to the building's principal entrance or lift.</td><td>Yes</td></tr>
</table>

Section	Requirement	Compliance
Disability	2 Accessible car parking spaces are to be identified by a sign incorporating the international symbol specified in AS1428 and be designed in accordance with the provisions of AS2890.6.	Yes
	3 Appropriate international symbols for the disabled must be displayed/used where appropriate to assist in direction to ramps, lifts etc.	Yes
3.10 Pedestrian Movement within Car Parks	1 Marked pedestrian pathways, with clear sight lines and appropriate energy efficient lighting must be provided in all car parks.	Yes
	2 Pedestrian pathways, entrances, stairway and lift areas must be clearly visible, conveniently located, well lit and have minimal conflict with vehicular traffic	Yes
	3 All pathways and ramps within car parks must conform to the minimum dimensional requirements set out in AS1428.1.	Yes
	4 All pedestrian path surfaces within car parks are to be stable, even and constructed of slip resistant material.	Yes
3.11 Bicycle Parking and Facilities	1 Bicycle parking and storage facilities are to be designed in accordance with AS2890.3 to ensure: i) both wheels and frames can be locked to the device without damaging the bike; ii) easy access from a bicycle lane or roadway with appropriate signage; iii) access paths have a minimum width of 1.5m to accommodate a person pushing a bicycle, and adequate sight lines for safety.	Yes
3.12 Building Services	1 All applicants must consult with providers for services such as energy, electricity, gas, water, telephone and fire. For residential flat buildings any services and structures required by the providers are to be located within the basement, or concealed within the facade, with appropriate access. Where this is not possible, the proposal must demonstrate an alternative method of minimising street impact, such as screening with landscape or built elements. Particular care should be taken to ensure substations and fire hydrants are not visible from the primary street and principal active street frontages.	Yes
	2 Residential flat buildings must accommodate proposed or future air conditioning units within the basement or on rooftops, with provision of associated vertical/horizontal stacks to all sections of the building.	Yes
	3 Air conditioning units located within basements must be screened and have adequate ventilation.	Yes
	4 Air conditioning units located on the roof must be well screened and integrated into the building form.	N/A
3.13 Waste Management	1 All waste and recycling facilities must comply with the BCA and all relevant Australian Standards.	Yes
	2 All waste and recycling storage containers must be stored within the boundary of the subject site.	Yes
	3 All putrescible and non-putrescible waste materials stored in any waste and recycling room or at centralised collection points must be contained in approved rigid containers supplied by the Council.	Yes
	Storage Room 4 Sufficient space must be provided within the premises for the storage and manoeuvring of the number of bins required to store the volume of waste and recycling materials likely to be generated during the period between collections.	Yes
	5 Sufficient space must be provided to adequately house any additional equipment to handle or manage the waste generated.	Yes
	6 For buildings exceeding four (4) storeys, where a chute system is proposed, a fully enclosed waste and recycling materials compartment must be provided within each storey of the building. The facility shall be designed to contain the waste chute hopper and the number of recycling storage bins equivalent to 2 x 240 litre bins for every 4 units per storey.	N/A

Section	Requirement	Compliance
	Access to collection point *Note: This does not apply to residential developments of 4 dwellings or less, which do not have an internal collection point.* 7 The location of the waste and recycling room must be conveniently accessible and have unimpeded access for both occupants and collection service operators. In the event that the proposed development is protected by a security system and/or locked gates, the waste and recycling room/s must have unimpeded access for the collection service providers. Where security gates are provided to the development, gates must be accessible by Council's master key.	Yes
	8 The maximum grade of any access road leading to a waste and recycling room must be not more than 1:5 (20%). The turning area at the base of any ramp must be sufficient to allow for the manoeuvre of a 6.0m rigid vehicle to exit the building in a forward direction.	Yes
	9 The waste and recycling collection point must be located on a level surface away from gradients and vehicle ramps, with the path of travel being free from any floor obstructions such as steps to allow for the transfer of wheelie bins to and from the storage room to the collection vehicle.	Yes
	10 The vehicle access road leading to and from the collection point in a waste and recycling room must have a minimum finished floor to ceiling height of 2.6m for residential waste rooms and 4.5m for commercial waste rooms for the entire length of travel within the building. (Includes being free from conduits, ducting or other obstructions fitted to ceilings).	Yes
	Construction of waste and recycling rooms 11 The floor of any waste and recycling room must be constructed of either: i) concrete which is at least 75mm thick; or ii) other equivalent material; and iii) graded and drained to a floor waste which is connected to the sewer.	Yes
	12 All floors are to be finished to a smooth even surface, coved at the intersection of walls and floor.	Yes
	13 The walls of any waste room, recycling room and waste service compartment are to be constructed of solid impervious material and shall be cement rendered internally to a smooth even surface coved at all intersections.	Yes
	14 All waste and recycling rooms must be provided with an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock. This does not include waste and recycling service compartments located on residential floors of multi-occupancy dwellings. *Note: This control is to aid in cleaning of the area.*	Yes
	15 A close-fitting and self-closing door that can be opened from within the room must be fitted to all waste and recycling rooms.	Yes
	16 In the event that Council permits the installation of a roller shutter door (under special circumstance only), a sign must be erected in a conspicuous position drawing attention to the fact the door must be kept closed at all times when not in use.	Yes
	17 All waste and recycling rooms must be constructed in such a manner (eg. no gaps under access doors etc) as to prevent the entry of vermin.	Yes
	18 All waste and recycling rooms must be ventilated by either: i) mechanical ventilation system exhausting at a rate of 5L/s per m² of floor area, with a minimum rate of 100L/s; or ii) permanent, unobstructed natural ventilation openings direct to the external air, not less than one-twentieth (1/20th) of the floor area.	Yes
	19 All waste and recycling rooms must be provided with artificial light controlled by switches located both outside and inside the rooms.	Yes
	20 Clearly printed "NO STANDING" signs must be affixed to the external face of each waste and recycling room.	Yes

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></tr>
<tr><td></td><td>21 Clearly printed signage must be affixed in all communal waste collection and storage areas, specifying which materials are acceptable in the recycling system and identifying the location of waste and recycling storage areas, as well as waste and recycling service compartments.</td><td>Yes</td></tr>
<tr><td></td><td>22 No compaction equipment is to be used for 120 and 240 litre bins.</td><td>Yes</td></tr>
<tr><td></td><td>23 Waste management systems must not be visible from outside the building. Where this is unavoidable and Council is in agreement, it must be designed to be consistent with the overall appearance of the development.</td><td>N/A</td></tr>
<tr><td></td><td>Residential Buildings
24 Centralised waste collection points are required where site characteristics (e.g. steep sites, narrow street frontage) make access to the street difficult for individual unit holders and where placement of bins on the street frontage is assessed as dangerous for either the public or service personnel, or would have a detrimental effect on the street amenity.</td><td>N/A</td></tr>
<tr><td></td><td>Residential Flat Buildings
25 Ku-ring-gai Council’s standard waste and recycling service for residential flat buildings is as follows:
<table>
<tr><th>Waste Type</th><th>Number of Units</th><th>Number of Bin/s</th></tr>
<tr><td>Waste (garbage)</td><td>N/A</td><td>1 x 120L MGB per unit dwelling or 1 x 240L MB per 2 units</td></tr>
<tr><td>Co-mingled recycling of glass, steel and aluminium cans and plastic etc</td><td>For every 4 units or part thereof</td><td>1 x 240L MGB (communal)</td></tr>
<tr><td>Recycling of paper and cardboard</td><td>For every 4 units or part thereof</td><td>1 x 240L MGB (communal)</td></tr>
<tr><td>Green waste</td><td>Optional</td><td>Subject to Owners Corporation Agreement on a fee for service basis.</td></tr>
</table></td><td>Yes</td></tr>
<tr><td></td><td>26 A centralised waste and recycling room must be provided in the basement that has sufficient capacity to store all waste and recycling likely to be generated in the entire building in the period between normal collection times.</td><td>Yes</td></tr>
<tr><td></td><td>27 The full path of travel to and from the waste and recycling room is to be designed to allow a 6m rigid vehicle, weighing GVM 7 tonnes, to enter and exit the development in a forward direction.</td><td>Yes</td></tr>
<tr><td></td><td>28 The minimum floor to ceiling height within the vehicle accessway leading to and from the waste and recycling room(s) must be 2.6m for the entire length of travel required within the development.</td><td>Yes</td></tr>
<tr><td></td><td>29 Noise attenuation measures are required to ensure that the use of, and collection from, the waste and recycling room do not give rise to “offensive noise” as defined under the Protection of the Environment Operations Act 1997.</td><td>Yes</td></tr>
<tr><td></td><td>30 An area is to be nominated for on-site communal composting.</td><td>Yes</td></tr>
<tr><td></td><td>32 Developments must allocate, within each property boundary, an area for storing Council specified waste and recycling bins, preferably located at the rear of the premises to minimise visual clutter. The storage area is to be a minimum of 3m from openable windows and integrated with the landscaping.</td><td>N/A</td></tr>
<tr><td></td><td>33 All new dwellings must be designed so as to allow the internal accommodation of one receptacle to collect waste and another to collect recycling materials, each with the capacity to store one day’s worth of material.</td><td>Yes</td></tr>
<tr><td></td><td>34 A path must be established for wheeling bins to the collection point; it must be level and free of steps or kerbs.</td><td>N/A</td></tr>
<tr><td></td><td>35 An area is to be nominated for on-site composting.</td><td>Yes</td></tr>
</table>

Section	Requirement	Compliance
3.14 Social Impact	1 Where relevant, proposals must consider the impacts of the development on the following groups: ▪ children; ▪ young people; ▪ women; ▪ older people; ▪ people with a disability; ▪ people from culturally and linguistically diverse background; ▪ Aboriginal and Torres Strait Islander people.	Yes
	2 Community integration statements are to be provided with the first application for works.	Yes
Part 5 – Landscape Controls		
5.1 Landscape Character	1 Protect and retain existing significant trees and understorey where possible and introduce supplementary planting in clumps to reflect the natural bushland setting.	Yes
	2 Provide a clear definition between the built environment and the surrounding bushland.	Yes
	3 Landscape designs within each precinct should provide an urban bushland park character through provision of a structured landscape that incorporates predominantly native plant species.	Yes
	4 Plant species and landscape materials should be selected to complement the bushland character of the site, the retained campus buildings and the new residential buildings of Edgelea.	Yes
5.6 Planting and Plant Schedules	1 Fire retardant planting should be used in private and communal open spaces where possible.	Yes
	2 Exotic tree species should be incorporated within private courtyards and gardens to assist passive solar access control.	Yes
	3 Darwinia biflora communities are to be retained and protected.	N/A
	4 The planting of species listed in Council's Weed Management Policy as 'Urban Environmental Weeds' will not be permitted.	Yes
	5 Species used for planting or revegetation in or directly adjacent to areas with significant vegetation or habitat must be of local provenance.	Yes
	6 For vegetation communities and plant species refer to the Vegetation Management Plan by ERM *Note: To enable use of species of local provenance, propagation must be started well before any construction begins. Council's community nursery may be contacted to discuss availability of appropriate species. A list of appropriate species for native vegetation communities within Ku-ring-gai is available from Council and on Councils website (www.kmc.gov.nsw.au)*	Yes
5.7.1 Communal open space and common area adjoining the Asset Protection Zone (APZ) – Precincts 2, 3 and 4	1 Communal open spaces adjoining the APZ should be designed to incorporate landscape features such as rock outcrops and large groupings of trees and understorey plants.	Yes
	2 The interface between the communal open space or common area and APZ should be defined by a sandstone edge or retaining wall to a height of up to 1 metre. The wall should be designed to avoid damage to existing significant trees.	Yes
	3 Where possible, turf areas are to be located on previously disturbed land and defined by stone edging and / or level changes.	Yes
	4 To minimise damage and introduction of weed species to the APZ and the bushland, access to the APZ is to be limited to the designated pedestrian access points located at the ends of Roads 1, 2 and 3.	N/A
5.8 Materials	1 The materials should complement the robust form of the sandstone cuttings and outcrops on the site as well as the natural bushland and the Brutalist architecture of the retained campus buildings.	Yes
5.9 Lighting	1 Lighting is not to be incorporated in the APZ's and light spill into these areas is to be minimised.	Yes

Section	Requirement		Compliance
	2	Lighting is to be provided that maximises safety along streets and within communal open space. Lighting levels are to reflect the use and function of the space.	Yes
	3	Light spill from communal open spaces to dwellings is prohibited.	Yes
	4	Design lighting to minimise the source of the light and use lighting fixtures that promote this effect.	Yes
	5	Utilise lighting design to showcase landscape features.	Yes
	6	Lighting selection should consider light output and energy efficiency.	Yes

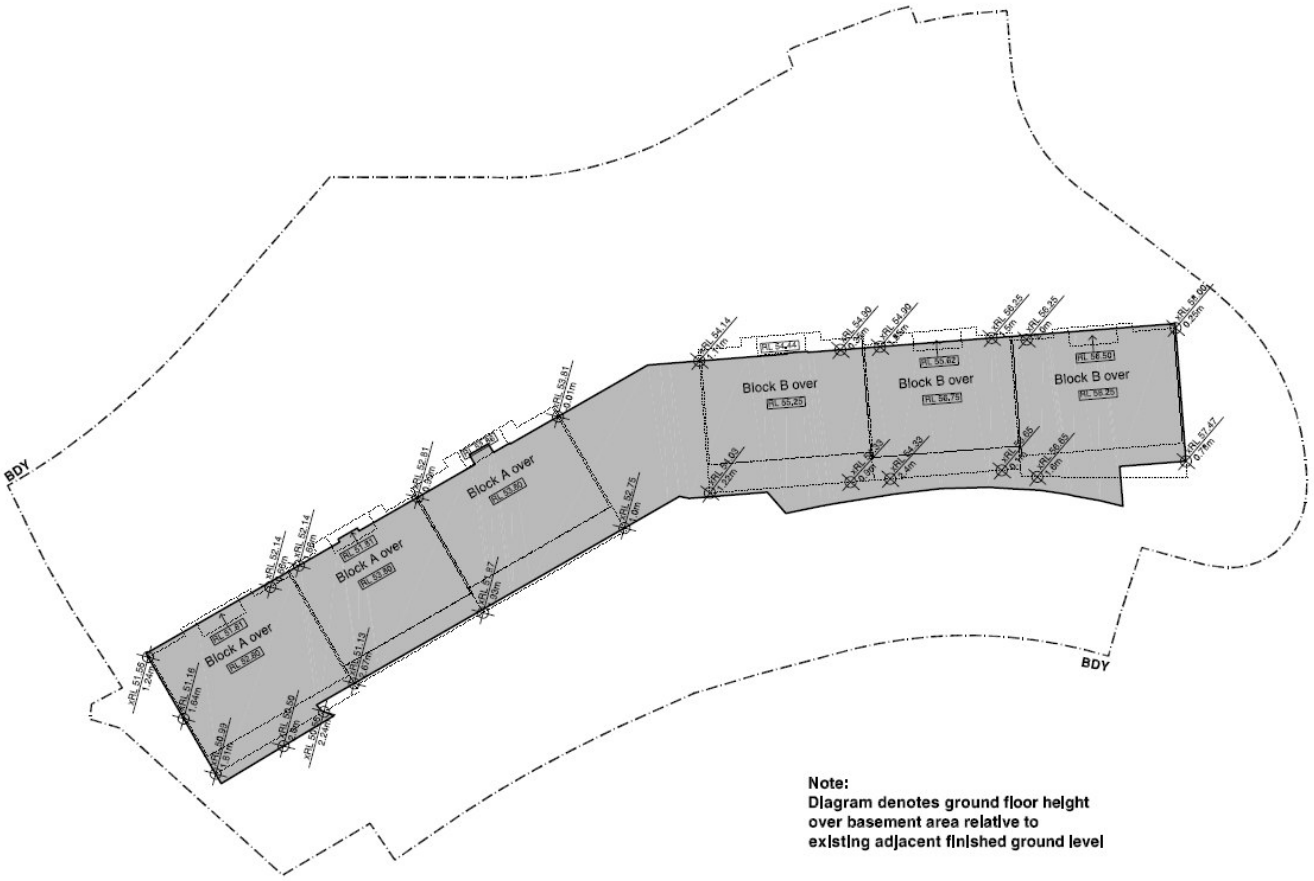
Building setbacks:

The proposed development is generally consistent with the setback controls of the UDG's, with the exception of the building's setback to the southern and northern boundary.

The UDG's require a 5m setback of both the building and basement to these boundaries, with the proposed scheme at its south-eastern and north-eastern corners encroaching into this setback by up to 2.4m. This minor variation (of 21.5m^2) results in no unreasonable impacts and it is attributable to a constrained building envelope associated with the top portion of the existing car park. The encroachments into the setback have also resulted in a need to configure the building to ensure compliant solar access into the units. Given the site's surplus deep soil and generous communal open spaces areas, as well as its relative detachment from the other areas of the site to be developed, the reduced setbacks do not restrict or inhibit landscaping or deep soil plantings on site, the primary objective for setbacks within the UDG's. Accordingly, the proposed departure from the UDG setback controls is satisfactory, as proposed.

Maximum building height / stories and basement projection:

The development, due to prevailing site levels, technically results in a 5 storey building with regard to the technical definition of a storey. This is as a consequence of the top level of the basement protruding more than 1m above the established ground levels. The degree of variation is detailed in the below diagram, however the extent of basement which projects more than 1m above natural ground level is less than 50% of the basement floor plate.



Both the Concept Approval and the UDG's limit the development in the section of the UTS Ku-ring-gai campus to 4 storeys, with a maximum building height of 16m.

Whilst non-complaint with the strict interpretation of the definitions applying to a storey, the development is assessed as being satisfactory and supportable as only 4 storeys of residential development is proposed (which is consistent with the prevailing conditions and scope of development envisaged under the Concept Approval), further, as mentioned earlier in this report, the building is below the maximum building height pursuant of the special controls for this site contained within the KPSO.

An important factor that should be recognised in respect of this variation is that the proposed building is being erected on the top portion of the university's existing lower car park. The two main levels of the car park are separated by a sand stone wall which is to be retained and integrated into the design of the building. Retaining this wall as a design feature of the building restricts the position and configuration of the basement and limits the ability of the top of the basement to be within 1m of natural ground level as required.

This is an acceptable outcome and is supported.

Building design:

Control 2.1.6.9 of the UDG's state:

…balconies that run the full length of the building façade are not permitted….

The design provides for balconies that run the full length of the two buildings which comprise the development along its eastern façade. This design approach has been supported as the balconies have been broken up into a series of 6 sections that correspond with the 'pod' of units to which they relate. Also differing balustrades are proposed to add visual interest and provide for a varying aspect.

More important, however is that the eastern aspect enjoyed by the units is towards the surrounding bushland (which is a mixture of public and private ownership). This favourable aspect invites future residents to the balconies and external from the units (promoting high levels of amenity). This bushland also softens the building and given it substantial separation from adjoining properties / dwellings (approximately 100m), the built impact of the full length balconies is lessened and minimised, notwithstanding that the balconies and for that matter the development will be visible from the adjoining streets, particularly Valley View Close . It is noted that this matter has been considered by Council's Consultant Urban Designer and subsequently found to be acceptable.

Fencing:

As the development sits atop a rock wall, the ground floor terraces associated with the ground floor units are not designed or provided with access into the communal open space areas, as encouraged by the UDG's. The UDG's encourage interaction between public and private areas with the appropriate location or fencing and gates, however such an arrangement due to the abrupt change in levels between the ground floor terraces and communal open space is unnecessary and unworkable. Therefore the design approach to depart from this is satisfactory and supported.

Kitchens:

The proposed development includes unit designs and configurations whereby the back wall of the kitchen is more than 8m from a window. This design arrangement results in a departure from both the UDG controls and the rules of thumb from the Residential Flat Design Code. In total 26 units are affected.

This design and subsequent departure from the controls has been argued by the applicant on the basis that the RFDC provides for that where standards cannot be met, it must be demonstrated how the non-compliant dwellings achieve satisfactory natural light and ventilation. This has been substantiated on the following:

- the majority of the kitchen area is within 8m of a window
- the affected units are all cross ventilated
- the kitchens all face north-east or east to full height windows that span across

the width of the opening to which the unit relates

The non-compliant units are provided with kitchen depths of approximately 8.5m.

Consistent with the comments of Council's Consultant Urban Designer, this is not ideal, however in the circumstance presented it is considered acceptable. The mitigating factor is that the affected units are cross ventilated and serviced with large openings to the primary light source, compensating for the distance of the back of the non-complaint kitchens to a window.

Ground level apartments:

The RFDC and UDG's encourage the provision of 25sqm of private open space for ground floor units. This open space requirement is in recognition of the ground floor location being able to accommodate a larger area of open space without the need for excessively sized balconies.

The proposed development is generally compliant with this requirement, with the exception of the 3 ground floor units at the southern end of the southern block. The 3 units are 2 bedroom units, 1 single aspect and 2 dual aspect units.

Variation to the control has been given support on the basis that the development has been set within the existing cut out of the top tier of the lower car park associated with the university. The design approach provides for a strong design feature as the proposed development sits atop a rock wall, essentially set on its edge. However the angle of the building along with the prevailing angle of the existing stone wall is such that the available building area is restricted at the southern end of the southern building. This has necessitated shallow balcony (or terrace) depths that extent to the edge of the stone wall, which in turn have resulted in areas less than 25sqm. Whilst non compliant with the size for ground floor units, the resulting balconies are $\geq 16m^2$ which is otherwise compliant, were they balconies at or above the 1^{st} floor. The resultant depths still achieve the minimum depth requirements of 2.4m. Given the constraints and strong relationship between the development and the rock wall this variation is acceptable.

Structures within canopy spread of trees:

The comprehensive landscaping and arboriculture assessment notes that the design of the development's stormwater system will result in stormwater pipes being located within the canopy spread of several trees to be retained.

These incursions within the canopy spreads have been documented and justified by the consulting arborist, with the incursions and proposed construction methods to minimise the impact on the trees being considered and accepted by Council's Landscape Assessment Officer. Whilst not strictly in accordance with the controls of the UDG's, the design response is assessed as being acceptable in the circumstance proposed. Council's Landscape Assessment Officer has raised no concerns, subject to conditions (**Conditions 54 & 55**).

Section 94 Plan

Condition B13(1) of the Concept Approval states:

…The proponent shall enter into arrangements for the transfer of that land identified in the additional commitments provided by the Proponent by letter dated 13 May 2008 in accordance with those commitments, including:

- *(a) a minimum 9,800sqm of land for an adult sized soccer field and curtilage to Council;*
- *(b) 300sqm for a community facility to Council is to be located in the RE1 Public Recreation within the site as agreed with Council; and*
- *(c) land zoned E1 to DECC*

Note: *These items will be in lieu of S.94 contributions in future applications…..*

The effect of the condition is such that it dispenses with the S94 contribution that would ordinarily be applied to the site / development. It is noted that the mechanisms for the transfer of land referred to in Condition B13 has otherwise been covered within the associated VPA under DA0677/11, which was determined by Council in June 2012.

LIKELY IMPACTS

As demonstrated by the this assessment, the proposed development is assessed as having an acceptable impact upon the surrounding natural, social, economic and built environments, particularly given its association with the Concept Approval which gave in principal approval to the site's redevelopment in the manner proposed.

SUITABILITY OF THE SITE

The site is considered to be suitable for the proposed development.

ANY SUBMISSIONS

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

PUBLIC INTEREST

The approval of the application is considered to be in the public interest.

CONCLUSION

Having regard to the provisions of section 79C of the Environmental Planning and Assessment Act 1979, the proposed development is considered to be satisfactory. Therefore, it is recommended that the application be approved.

RECOMMENDATION

PURSUANT TO SECTION 80(1) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

THAT the Sydney West Joint Regional Planning Panel, as the consent authority, grant development consent to DA0300/12 for the construction of a residential flat development of two blocks containing 70 units, including ancillary site works, basement and landscaping on land at 100 Eton Road, Lindfield for a period of two (2) years from the date of the Notice of Determination, subject to the following conditions:

1. Approved architectural plans and documentation

The development must be carried out in accordance with the following plans and documentation listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Plan no.	Drawn by	Dated
P4_DA02.101[B]	Batessmart	9/11/12
P4_DA02.102[B]	Batessmart	9/11/12
P4_DA02.200[B]	Batessmart	9/11/12
P4_DA02.201[B]	Batessmart	9/11/12
P4_DA02.202(B)	Batessmart	9/11/12
P4_DA02.203(B)	Batessmart	9/11/12
P4_DA02.204(B)	Batessmart	9/11/12
P4_DA07.001[B]	Batessmart	9/11/12
P4_DA07.002[B]	Batessmart	9/11/12
P4_DA08.001[B]	Batessmart	9/11/12
P4_DA11.001[B]	Batessmart	9/11/12
P4-DA-L-3 – Issue C	Turf Design	21.12.12
P4-DA-L-4 – Issue C	Turf Design	21.12.12
P4-DA-L-5 – Issue C	Turf Design	21.12.12
P4-DA-L-6 – Issue C	Turf Design	20.12.12
P4-DA-L-7 – Issue C	Turf Design	21.12.12
P4-DA-L-8 – Issue C	Turf Design	21.12.12
P4-DA-L-11 – Issue C	Turf Design	06.09.12
P4-DA-L-12 – Issue C	Turf Design	06.09.12
P4-DA-L-13 – Issue C	Turf Design	06.09.12
P4-DA-L-14 – Issue C	Turf Design	06.09.12
Basement pump out system details	Waterman	18 October 2012
Basement plan level 01 drainage layout	Waterman	12.10.12
Basement plan level 02 drainage layout	Waterman	12.10.12
Basement car park entry / exit	Bonacci	09.11.12
Stormwater plan	Bonacci	09.11.12
Bulk earthworks plan	Bonacci	09.11.12

Document(s)	Dated
Colours and finishes schedule S11427	02 July 2012
Typical balustrade design	
Bush fire risk assessment and certification, prepared by Daniel Copland - Project No. 11GOSBUS-0152	16 January 2013
Acoustic Assessment – Precinct 4 Report No. 12180-P4 Version A, prepared by Wilkinson Murry	July 2012

Reason: To ensure that the development is in accordance with the determination

2. Inconsistency between documents

In the event of any inconsistency between conditions of this consent and the drawings/documents referred to above, the conditions of this consent prevail.

Reason: To ensure that the development is in accordance with the determination.

Conditions to be satisfied prior to demolition, excavation or construction:

3. Road opening permit

The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a road opening permit being obtained from Council (upon payment of the required fee) beforehand.

Reason: Statutory requirement (Roads Act 1993 Section 138) and to maintain the integrity of Council's infrastructure.

4. Notice of commencement

At least 48 hours prior to the commencement of any development (including demolition, excavation, shoring or underpinning works), a notice of commencement of building or subdivision work form and appointment of the principal certifying authority form shall be submitted to Council.

Reason: Statutory requirement.

5. Notification of builder's details

Prior to the commencement of any development or excavation works, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder intending to carry out the approved works.

Reason: Statutory requirement.

6. Dilapidation survey and report (public infrastructure)

Prior to the commencement of any development or excavation works on site, the Principal Certifying Authority shall be satisfied that a dilapidation report on the visible and structural condition of all structures of the following public infrastructure, has been completed and submitted to Council:

Public infrastructure

- Grosvenor Road, Austral Avenue, Eton Road (Austral Avenue to site entrance).
- Road 1 from Eton Road to Precinct 4 site access point.

The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both written and photographic) existing damaged areas on the aforementioned infrastructure so that Council is fully informed when assessing any damage to public infrastructure caused as a result of the development.

The developer may be held liable to any recent damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded by the requirements of this condition prior to the commencement of works.

Note: A written acknowledgment from Council must be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any excavation works.

Reason: To record the structural condition of public infrastructure before works commence.

7. Construction and traffic management plan

The applicant must submit to Council a Construction Traffic Management Plan (CTMP), which is to be approved prior to the commencement of any works on site.

The plan is to consist of a report with Traffic Control Plans attached.

The report is to contain commitments which must be followed by the demolition and excavation contractor, builder, owner and subcontractors. The CTMP applies to all persons associated with demolition, excavation and construction of the development.

The report is to contain construction vehicle routes for approach and departure to and from all directions.

The report is to contain a site plan showing entry and exit points. Swept paths are to be shown on the site plan showing access and egress for an 11 metre long heavy rigid vehicle.

The Traffic Control Plans are to be prepared by a qualified person (red card holder).

One must be provided for each of the following stages of the works:

- Excavation
- Concrete pour

Traffic controllers must be in place at the site entry and exit points to control heavy vehicle movements in order to maintain the safety of pedestrians and other road users.

When a satisfactory CTMP is received, a letter of approval will be issued with conditions attached. Traffic management at the site must comply with the approved CTMP as well as any conditions in the letter issued by Council. Council's Rangers will be patrolling the site regularly and fines may be issued for any non-compliance with this condition.

Reason: To ensure that appropriate measures have been considered during all phases of the construction process in a manner that maintains the environmental amenity and ensures the ongoing safety and protection of people.

8. Erosion and drainage management

Earthworks and/or demolition of any existing buildings shall not commence until an erosion and sediment control plan is submitted to and approved by the Principal Certifying Authority. The plan shall comply with the guidelines set out in the NSW Department of Housing manual "Managing Urban Stormwater: Soils and Construction" certificate. Erosion and sediment control works shall be implemented in accordance with the erosion and sediment control plan.

Reason: To preserve and enhance the natural environment.

9. Tree protection fencing/ground protection

To preserve the following tree/s, no work shall commence until the area beneath their canopy is fenced off or ground protection installed as per following Tree Management Plans to prevent any activities, storage or the disposal of materials within the fenced area. The fencing/ground protection shall be maintained intact until the completion of all demolition/building work on site.

Plan no.	Drawn by	Date
TMP01 Sheets 1- 3	Naturally Trees	14/09/12

The tree protection fencing shall be constructed of galvanised pipe at 2.4 metre spacing's and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres in height prior to work commencing. Ground protection shall be in accordance with AS4970-2009 Protection of trees on development sites.

Reason : To protect existing trees during construction phase

10. Tree fencing inspection

Upon installation of the required tree protection measures, an inspection of the site by the Principal Certifying Authority is required to verify that tree protection measures comply with all relevant conditions.

Reason: To protect existing trees during the construction phase.

11. Fauna Protection

A qualified ecologist is to inspect/investigate bushland areas prior to tree/vegetation removal being undertaken. The ecologist is to supervise the relocation of any fauna found within the impact area in accordance with appropriate licensing requirements.

Prior to tree/vegetatioin removal being undertaken eight nest boxes (2 microbat, 2 small mammal, 2 medium mammal, 2 medium parrot) constructed of durable wood material (marine ply) are to be installed within the Asset Protection Zone (bushland) area to the east of the proposed development area. Nest boxes are to be installed to height of no lower than 6m and be positioned under the direction of a qualified ecologist.

The qualified ecologist must hold Animal Ethics Permit from the Department of Industries and Investment and a wildlife licence under section 132C of the *National Parks and Wildlife Act 1974* issued by the Office of Environment & Heritage. Evidence of engagement of the qualified ecologist and the required licensing must be provided to the Principal Certifying Authority and copied to Council's Ecologist prior to tree removal being undertaken and evidence of installation of fauna nest boxes.

12. Seed bank

No work shall commence until seed and vegetative material from locally occurring native plants at the site and within 5 kilometres of the site is collected and propagated for use in subsequent landscape works at the site. Seed and vegetative propagation material is to be collected, stored and propagated by a native propagation nursery in conjunction with a qualified bush regenerator.

The minimum qualifications and experience for the supervising regenerator is a Technical and Further Education (TAFE) Certificate 2 in Bushland Regeneration and one year demonstrated experience for other personnel. In addition, the supervising bush regenerator is to be eligible for full professional membership of the Australian Association of Bush Regenerators (AABR).

Reason: To conserve and enhance local species diversity and preserve existing indigenous plant species.

13. Construction waste management plan

Prior to the commencement of any works, the Principal Certifying Authority shall be satisfied that a waste management plan, prepared by a suitably qualified person, has been prepared in accordance with Council's DCP 40 – Construction and Demolition

Waste Management.

The plan shall address all issues identified in DCP 40, including but not limited to: the estimated volume of waste and method for disposal for the construction and operation phases of the development.

Note: The plan shall be provided to the Certifying Authority.

Reason: To ensure appropriate management of construction waste.

14. Noise and vibration management plan

Prior to the commencement of any works, a noise and vibration management plan is to be prepared by a suitably qualified expert addressing the likely noise and vibration from demolition, excavation and construction of the proposed development and provided to the Principal Certifying Authority. The management plan is to identify amelioration measures to achieve the best practice objectives of AS 2436-2010 and NSW Department of Environment and Climate Change Interim Construction Noise Guidelines. The report shall be prepared in consultation with any geotechnical report that itemises equipment to be used for excavation works.

The management plan shall address, but not be limited to, the following matters:

- identification of the specific activities that will be carried out and associated noise sources
- identification of all potentially affected sensitive receivers, including residences, churches, commercial premises, schools and properties containing noise sensitive equipment
- the construction noise objective specified in the conditions of this consent
- the construction vibration criteria specified in the conditions of this consent
- determination of appropriate noise and vibration objectives for each identified sensitive receiver
- noise and vibration monitoring, reporting and response procedures
- assessment of potential noise and vibration from the proposed demolition, excavation and construction activities, including noise from construction vehicles and any traffic diversions
- description of specific mitigation treatments, management methods and procedures that will be implemented to control noise and vibration during construction
- construction timetabling to minimise noise impacts including time and duration restrictions, respite periods and frequency
- procedures for notifying residents of construction activities that are likely to affect their amenity through noise and vibration
- contingency plans to be implemented in the event of non-compliances and/or noise complaints

Reason: To protect the amenity afforded to surrounding residents during the

construction process.

Conditions to be satisfied prior to the issue of the construction certificate:

15. Amendments to approved landscape plans

Prior to the issue of a Construction Certificate, the Principal Certifying Authority shall be satisfied that the approved landscape plans, listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as other conditions of this consent:

Plan no.	Drawn by	Date
P4_DA-L-2/C to P4_DA-L-014/C	Turf Design	21/12/12

The following changes are required to the Landscape Plan:

1. The following significant trees are to be shown to be retained, Tree/Location

    - Tree 1025/ *Corymbia gummifera* (Red Bloodwood)9H within western frontage of development
    - Tree 1077/*Casuarina sp*/ 22H, within western frontage of development
    - Tree 1079/ *Casuarina sp* /18H, within western frontage of development
    - Tree 1099/*Eucalyptus haemastoma* (Scribbly Gum) 18H, fronting Road 3, within northern frontage of development
    - Tree 1145/ *Corymbia gummifera* (Red Bloodwood)16H, fronting Road 3/driveway entry

2. The landscape plans are to indicate proposed access from the eastern end of Road 3 to the existing and proposed walking tracks located within the APZ in accordance with 5.4 Edgelea Urban Design Guidelines.

Prior to the issue of the Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape plan has been amended as required by this condition.

Note: An amended plan, prepared by a landscape architect or qualified landscape designer shall be submitted to the Certifying Authority.

Reason: To ensure adequate landscaping of the site

16. Amendments to approved engineering plans

Prior to the issue of a Construction Certificate, the Certifying Authority shall be satisfied that the approved engineering plan(s), listed below and endorsed with Council's stamp, have been amended in accordance with the requirements of this condition as well as

other conditions of this consent:

Plan no.	Drawn by	Dated
20 0127501 SK05 P7	Bonacci Group	09.11.12

The above engineering plan(s) shall be amended as follows:

The plans are to indicate that the roofwater stored in the rainwater tank is to be re-used on site for toilet flushing, laundry, car washing and irrigation.

Note: An amended engineering plan, prepared by a qualified engineer shall be submitted to the Certifying Authority.

Reason: To ensure that the development is in accordance with the determination.

17. Long service levy

In accordance with Section 109F(i) of the Environmental Planning and Assessment Act a Construction Certificate shall not be issued until any long service levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 (or where such levy is payable by instalments, the first instalment of the levy) has been paid. Council is authorised to accept payment. Where payment has been made elsewhere, proof of payment is to be provided to Council.

Reason: Statutory requirement.

18. Builder's indemnity insurance

The applicant, builder, developer or person who does the work on this development, must arrange builder's indemnity insurance and submit the certificate of insurance in accordance with the requirements of Part 6 of the Home Building Act 1989 to the Certifying Authority for endorsement of the plans accompanying the Construction Certificate.

It is the responsibility of the applicant, builder or developer to arrange the builder's indemnity insurance for residential building work over the value of $20,000. The builder's indemnity insurance does not apply to commercial or industrial building work or to residential work valued at less than $20,000, nor to work undertaken by persons holding an owner/builder's permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).

Reason: Statutory requirement.

19. External service pipes and the like prohibited

Proposed water pipes, waste pipes, stack work, duct work, mechanical ventilation plant and the like must be located within the building. Details confirming compliance with

this condition must be shown on construction certificate plans and detailed with construction certificate specifications. Required external vents or vent pipes on the roof or above the eaves must be shown on construction certificate plans and detailed with construction certificate specifications. External vents or roof vent pipes must not be visible from any place unless detailed upon development consent plans. Where there is any proposal to fit external service pipes or the like this must be detailed in an amended development (S96) application and submitted to Council for determination.

Vent pipes required by Sydney Water must not be placed on the front elevation of the building or front roof elevation. The applicant, owner and builder must protect the appearance of the building from the public place and the appearance of the streetscape by elimination of all external services excluding vent pipes required by Sydney Water and those detailed upon development consent plans.

Reason: To protect the streetscape and the integrity of the approved development.

20. Access for people with disabilities (residential)

Prior to the issue of the Construction Certificate, the Certifying Authority shall be satisfied that access for people with disabilities to and from and between the public domain, residential units and all common open space areas is provided. Consideration must be given to the means of dignified and equitable access.

Compliant access provisions for people with disabilities shall be clearly shown on the plans submitted with the Construction Certificate. All details shall be provided to the Principal Certifying Authority prior to the issue of the Construction Certificate. All details shall be prepared in consideration of the Disability Discrimination Act, and the relevant provisions of AS1428.1, AS1428.2, AS1428.4 and AS 1735.12.

Reason: To ensure the provision of equitable and dignified access for all people in accordance with disability discrimination legislation and relevant Australian Standards.

21. Adaptable units

Prior to the issue of the Construction Certificate, the Certifying Authority shall be satisfied that the nominated adaptable units within the development application, G.04, G.05, 1.04, 1.05, 2.04, 2.05, 3.04 & 3.05 are designed as adaptable housing in accordance with the provisions of Australian Standard AS4299-1995: Adaptable Housing.

Note: Evidence from an appropriately qualified professional demonstrating compliance with this control is to be submitted to and approved by the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Disabled access & amenity.

22. Stormwater management plan

Prior to issue of the Construction Certificate, the applicant must submit, for approval by

the Principal Certifying Authority, scale construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) must be in accordance with **Bonacci Group Drawings 20 0127501C SK05 P4 and SK07 P3** and must also include the following detail:

- the required basement stormwater pump-out system is to cater for subsoil drainage and driveway runoff in the event that the grated drain becomes blocked or its capacity is exceeded. (refer appendix 7.1.1 of Development Control Plan 47 for design)

Reason: To protect the environment.

23. Excavation for services

Prior to the issue of the Construction Certificate, the Principal Certifying Authority shall be satisfied that no proposed underground services (i.e.: water, sewerage, drainage, gas or other service) unless previously approved by conditions of consent, are located beneath the canopy of any tree protected under Council's Tree Preservation Order, located on the subject allotment and adjoining allotments.

Note: A plan detailing the routes of these services and trees protected under the Tree Preservation Order shall be submitted to the Principal Certifying Authority.

Reason: To ensure the protection of trees.

24. Driveway grades – basement carparks

Prior to the issue of the Construction Certificate, longitudinal driveway sections are to be prepared by a qualified civil/traffic engineer and be submitted for to and approved by the Certifying Authority. These profiles are to be at 1:100 scale along both edges of the proposed driveway, starting from the centreline of the frontage street carriageway to the proposed basement floor level. The traffic engineer shall provide specific written certification on the plans that:

- vehicular access can be obtained using grades of 20% (1 in 5) maximum and
- all changes in grade (transitions) comply with Australian Standard 2890.1 –"Off-street car parking" (refer clause 2.5.3) to prevent the scraping of the underside of vehicles.

If a new driveway crossing is proposed, the longitudinal sections must incorporate the driveway crossing levels as issued by Council upon prior application.

Reason: To provide suitable vehicular access without disruption to pedestrian and vehicular traffic.

25. Basement car parking details

Prior to issue of the Construction Certificate, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements must be submitted to and approved by the Certifying Authority. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:

- all parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply with Australian Standard 2890.1 – 2004 "Off-street car parking"
- a clear height clearance of **2.6 metres** (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement
- no doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area
- the vehicle access and accommodation arrangements are to be constructed and marked in accordance with the certified plans

Reason: To ensure that parking spaces are in accordance with the approved development.

26. Vehicular access and garaging

Driveways and vehicular access ramps must be designed not to scrape the underside of cars. In all respects, the proposed vehicle access and accommodation arrangements must be designed and constructed to comply with Australian Standard 2890.1 – 2004 "Off-Street car parking". Details are to be provided to and approved by the Certifying Authority prior to the issue of the Construction Certificate.

Reason: To ensure that parking spaces are in accordance with the approved development.

27. Car parking allocation

Car parking within the development shall be allocated in the following way:

Resident car spaces	120
Visitor spaces	18
Total spaces	138

Each adaptable dwelling must be provided with car parking complying with the dimensional and location requirements of AS2890.1 – parking spaces for people with disabilities.

At least one visitor space shall also comply with the dimensional and location requirements of AS2890.1 – parking spaces for people with disabilities. Visitor's spaces are to be provided on street as shown on the site plan and sign posted and restricting parking to visitors to the building for a period not exceeding 4 hours. In addition to sign

posting, the spaces shall also painted 'Visitor's Parking'.

Consideration must be given to the means of access from disabled car parking spaces to other areas within the building and to footpath and roads and shall be clearly shown on the plans submitted with the Construction Certificate.

Reason: To ensure equity of access and appropriate facilities are available for people with disabilities in accordance with federal legislation.

28. Number of bicycle spaces

The basement car park shall be adapted to provide 15 bicycle spaces in accordance with the Edgelea Urban Design Guidelines. The bicycle parking spaces shall be designed in accordance with AS2890.3. Details shall be submitted to the satisfaction of the Certifying Authority prior to the issue of a Construction Certificate.

Reason: To provide alternative modes of transport to and from the site.

29. Utility provider requirements

Prior to issue of the Construction Certificate, the applicant must make contact with all relevant utility providers whose services will be impacted upon by the development. A written copy of the requirements of each provider, as determined necessary by the Certifying Authority, must be obtained. All utility services or appropriate conduits for the same must be provided by the developer in accordance with the specifications of the utility providers.

Reason: To ensure compliance with the requirements of relevant utility providers.

30. Underground services

All electrical services (existing and proposed) shall be undergrounded from the proposed building on the site to the appropriate power pole(s) or other connection point. Undergrounding of services must not disturb the root system of existing trees and shall be undertaken in accordance with the requirements of the relevant service provided. Documentary evidence that the relevant service provider has been consulted and that their requirements have been met are to be provided to the Certifying Authority prior to the issue of the Construction Certificate. All electrical and telephone services to the subject property must be placed underground and any redundant poles are to be removed at the expense of the applicant.

Reason: To provide infrastructure that facilitates the future improvement of the streetscape by relocation of overhead lines below ground.

Conditions to be satisfied prior to the issue of the construction certificate or prior to demolition, excavation or construction (whichever comes first):

31. Infrastructure restorations fee

To ensure that damage to Council Property as a result of construction activity is rectified in a timely matter:

a) All work or activity taken in furtherance of the development the subject of this approval must be undertaken in a manner to avoid damage to Council Property and must not jeopardise the safety of any person using or occupying the adjacent public areas.

b) The applicant, builder, developer or any person acting in reliance on this approval shall be responsible for making good any damage to Council Property, and for the removal from Council Property of any waste bin, building materials, sediment, silt, or any other material or article.

c) The Infrastructure Restoration Fee must be paid to the Council by the applicant prior to both the issue of the Construction Certificate and the commencement of any earthworks or construction.

d) In consideration of payment of the Infrastructure Restorations Fee, Council will undertake such inspections of Council Property as Council considers necessary and also undertake, on behalf of the applicant, such restoration work to Council Property, if any, that Council considers necessary as a consequence of the development. The provision of such restoration work by the Council does not absolve any person of the responsibilities contained in (a) to (b) above. Restoration work to be undertaken by the Council referred to in this condition is limited to work that can be undertaken by Council at a cost of not more than the Infrastructure Restorations Fee payable pursuant to this condition.

e) In this condition:

"Council Property" includes any road, footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, letter bins, trees, shrubs, lawns, mounds, bushland, and similar structures or features on any road or public road within the meaning of the Local Government Act 1993 (NSW) or any public place; and

"Infrastructure Restoration Fee" means the Infrastructure Restorations Fee calculated in accordance with the Schedule of Fees & Charges adopted by Council as at the date of payment and the cost of any inspections required by the Council of Council Property associated with this condition.

Reason: To maintain public infrastructure.

32. Bush fire risk certification

Bush fire protection measures shall be carried out in accordance with the following bush fire risk assessment, report and certificate, listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Document title	Prepared by	Dated
Bushfire Protection Assessment 11GOSBUS-0152	Ecological Australia	16 January 2013

Prior to the issue of the construction certificate, the principal certifying authority must be satisfied that the construction certificate is in accordance with the recommendations of the report and certificate as listed above.

Reason: To ensure that the development is in accordance with the determination.

Conditions to be satisfied during the demolition, excavation and construction phases:

33. Prescribed conditions

The applicant shall comply with any relevant prescribed conditions of development consent under clause 98 of the Environmental Planning and Assessment Regulation. For the purposes of section 80A (11) of the Environmental Planning and Assessment Act, the following conditions are prescribed in relation to a development consent for development that involves any building work:

- The work must be carried out in accordance with the requirements of the Building Code of Australia
- In the case of residential building work for which the Home Building Act 1989 requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any works commence.

Reason: Statutory requirement.

34. Hours of work

Demolition, excavation, construction work and deliveries of building material and equipment must not take place outside the hours of 7.00am to 5.00pm Monday to Friday and 8.00am to 12 noon Saturday. No work and no deliveries are to take place on Sundays and public holidays.

Excavation or removal of any materials using machinery of any kind, including compressors and jack hammers, must be limited to between 7.30am and 5.00pm Monday to Friday, with a respite break of 45 minutes between 12 noon 1.00pm.

Where it is necessary for works to occur outside of these hours (ie) placement of concrete for large floor areas on large residential/commercial developments or where building processes require the use of oversized trucks and/or cranes that are restricted by the RTA from travelling during daylight hours to deliver, erect or remove machinery, tower cranes, pre-cast panels, beams, tanks or service equipment to or from the site, approval for such activities will be subject to the issue of an "outside of hours works permit" from Council as well as notification of the surrounding properties likely to be affected by the proposed works.

Note: Failure to obtain a permit to work outside of the approved hours will result in on

the spot fines being issued.

Reason: To ensure reasonable standards of amenity for occupants of neighbouring properties.

35. Temporary irrigation

Temporary irrigation within the Tree Protection Fencing is to be provided. Irrigation volumes are to be determined by the Project Arborist.

Reason: To protect trees to be retained on site.

36. Demolition of existing site structures

To preserve the health and condition of existing trees to be retained, all demolition of existing building and landscape structures including tree removal, are to be undertaken within the access restricted to the existing roads and parking areas and in accordance with Section 2, Appendix 6 and Appendix 7, Arboricultural Impact Appraisal and Method Statement, Naturally Trees, 14/09/12. Where vehicular access is required across existing soft landscape area, temporary ground protection capable of supporting the vehicles is to be constructed in accordance with Section 4.5.3, AS4970-2009 Protection of trees on development sites.

Reason: To protect trees to be retained on site.

37. Approved plans to be on site

A copy of all approved and certified plans, specifications and documents incorporating conditions of consent and certification (including the Construction Certificate if required for the work) shall be kept on site at all times during the demolition, excavation and construction phases and must be readily available to any officer of Council or the Principal Certifying Authority.

Reason: To ensure that the development is in accordance with the determination.

38. Construction noise

During excavation, demolition and construction phases, noise generated from the site shall be controlled in accordance with the recommendations of the approved noise and vibration management plan.

Reason: To ensure reasonable standards of amenity to neighbouring properties.

39. Site notice

A site notice shall be erected on the site prior to any work commencing and shall be displayed throughout the works period.

The site notice must:

- be prominently displayed at the boundaries of the site for the purposes of informing the public that unauthorised entry to the site is not permitted
- display project details including, but not limited to the details of the builder, Principal Certifying Authority and structural engineer
- be durable and weatherproof
- display the approved hours of work, the name of the site/project manager, the responsible managing company (if any), its address and 24 hour contact phone number for any inquiries, including construction/noise complaint are to be displayed on the site notice
- be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted

Reason: To ensure public safety and public information.

40. Dust control

During excavation, demolition and construction, adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood. The following measures must be adopted:

- physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust
- earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed
- all materials shall be stored or stockpiled at the best locations
- the ground surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs
- all vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust
- all equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays
- gates shall be closed between vehicle movements and shall be fitted with shade cloth
- cleaning of footpaths and roadways shall be carried out daily

Reason: To protect the environment and amenity of surrounding properties.

41. Post-construction dilapidation report

The applicant shall engage a suitably qualified person to prepare a post construction dilapidation report at the completion of the construction works. This report is to ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure and roads. The report is to be submitted to the Principal Certifying Authority. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the Principal Certifying Authority must:

- compare the post-construction dilapidation report with the pre-construction dilapidation report
- have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads.

A copy of this report is to be forwarded to Council at the completion of the construction works.

Reason: Management of records.

42. RailCorp requirements

- All excavation and construction works are to be undertaken in accordance with the details, methodology, advice, undertakings and recommendations detailed in the following documents:

    - Report on Geotechnical Investigation prepared by Douglas Partners dated 20 July 2012 (Project 72980)
    - Structural Design Report for Development Application prepared by Bonacci Group Pty Ltd dated 23 July 2012 (Ref 2001275-4-S-DA Rev 4)
    - Civil Design Report for Development Application prepared by Bonacci Group Pty Ltd dated 27 July 2012 (Ref 2001275-4-C-DA Rev 4)
    - Numerical Modelling Analysis prepared by Douglas Partners dated 29 October 2012 (Project 72980)

  Subject to the following modifications:

    - The Applicant shall undertake a dilapidation survey of RailCorp's tunnel infrastructure to the satisfaction of RailCorp prior to the issue of a construction certificate, on completion of the excavation and a post-construction dilapidation survey to the satisfaction of RailCorp prior to the issue of an Occupation Certificate.
    - Vibration caused by excavation and piling machinery to be controlled to a safe level as recommended by the consultants.
    - All surface runoff and seepage towards the excavation site to be collected and immediately discharged outside to prevent water infiltration towards the tunnels.

- Prior to the issuing of a Construction Certificate, the Applicant is to submit Final Construction/Shoring plans consistent with the above requirements to RailCorp for endorsement. The Principal Certifying Authority shall not issue the Construction Certificate until written confirmation has been received from RailCorp confirming that this condition has been satisfied.

- All piling and excavation works with 25m of the rail corridor are to be supervised by a geotechnical engineer experience with such excavation projects.

- No rock anchors/bolts are to be installed into RailCorp's property or easements.

- No modifications may be made to that approved design without the consent of RailCorp.

- Prior to the issuing of an Occupancy Certificate the Applicant shall provide as-built drawings and survey locating the development with respect to any rail boundary, RailCorp easement and rail infrastructure. This work is to be undertaken by a registered surveyor, to the satisfaction of RailCorp's representative. The as-built survey is to confirm that there has been no encroachment into any RailCorp land or easement area.

- An acoustic assessment is to be submitted to Council and RailCorp 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 Corridors and Busy Roads- Interim Guidelines". The Principal Certifying Authority shall not issue the Construction Certificate until written confirmation has been received from Council and RailCorp confirming that the subject report is adequate in meeting the relevant requirements.

- Prior to the issue of a Construction Certificate the Applicant is to engage an Electrolysis Expert to prepare a report on the Electrolysis Risk to the development from stray currents. The Applicant must incorporate in the development all the measures recommended in the report to control that risk. A copy of the report is to be provided to the Principal Certifying Authority with the application for a Construction Certificate.

- Prior to the issue of a Construction Certificate a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS) for the proposed works are to be submitted to RailCorp for review and comment on the impacts on rail corridor. The Principal Certifying Authority shall not issue the Construction Certificate until written confirmation has been received from RailCorp confirming that this condition has been satisfied.

- Prior to the issue of a Construction Certificate the Applicant must hold current public liability insurance cover for a sum to be determined by RailCorp. This insurance shall not contain any exclusion in relation to works on or near the rail corridor. The Applicant is to contact RailCorp's Rail Corridor Management Group to obtain the level of insurance required for this particular proposal. Prior to issuing the Construction Certificate the Principal Certifying Authority must witness written proof of this insurance in conjunction with RailCorp's written advice to the Applicant on the level of insurance required.

- Where a condition of consent requires RailCorp's endorsement the Principal Certifying Authority shall not issue a Construction Certificate or Occupancy Certificate, as the case may be, until written confirmation has been received from RailCorp that the particular condition has been complied with.

43. Further geotechnical input

The geotechnical and hydro-geological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report by Douglas Partners. Over the course of the works, a qualified geotechnical/hydro-geological engineer must complete the following:

- further geotechnical investigations and testing recommended in the above report(s) and as determined necessary
- further monitoring and inspection at the hold points recommended in the above report(s) and as determined necessary
- written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs

Reason: To ensure the safety and protection of property.

44. Compliance with submitted geotechnical report

A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee excavation.

Geotechnical aspects of the development work, namely:

- appropriate excavation method and vibration control
- support and retention of excavated faces
- hydro-geological considerations

must be undertaken in accordance with the recommendations of the geotechnical report prepared by Douglas Partners. Approval must be obtained from all affected property owners, including Ku-ring-gai Council, where rock anchors (both temporary and permanent) are proposed below adjoining property(ies).

Reason: To ensure the safety and protection of property.

45. Use of road or footpath

During excavation, demolition and construction phases, no building materials, plant or the like are to be stored on the road or footpath without written approval being obtained from Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.

Reason: To ensure safety and amenity of the area.

46. Guarding excavations

All excavation, demolition and construction works shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.

Reason: To ensure public safety.

47. Toilet facilities

During excavation, demolition and construction phases, toilet facilities are to be provided, on the work site, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Reason: Statutory requirement.

48. Recycling of building material

During demolition and construction, the Principal Certifying Authority shall be satisfied that building materials suitable for recycling have been forwarded to an appropriate registered business dealing in recycling of materials. Materials to be recycled must be kept in good order.

Reason: To facilitate recycling of materials.

49. Road reserve safety

All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "Traffic Control Devices for Work on Roads". If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.

Reason: To ensure safe public footways and roadways during construction.

50. Road repairs necessitated by excavation and construction works

It is highly likely that damage will be caused to the roadway at or near the subject site as a result of the construction (or demolition or excavation) works. The applicant, owner and builder (and demolition or excavation contractor as appropriate) will be held responsible for repair of such damage, regardless of the Infrastructure Restorations Fee paid (this fee is to cover wear and tear on Council's wider road network due to heavy vehicle traffic, not actual major damage).

Section 102(1) of the Roads Act states "A person who causes damage to a public road is liable to pay to the appropriate roads authority the cost incurred by that authority in making good the damage."

Council will notify when road repairs are needed, and if they are not carried out within 48 hours, then Council will proceed with the repairs, and will invoice the applicant, owner and relevant contractor for the balance.

Reason: To protect public infrastructure.

51. Services

Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the applicants' full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services (including water, phone, gas and the like). Council accepts no responsibility for any matter arising from its approval to this application involving any influence upon utility services provided by another authority.

Reason: Provision of utility services.

52. Sydney Water Section 73 Compliance Certificate

The applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing CoOrdinator. The applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-develop" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the CoOrdinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.

Reason: Statutory requirement.

53. Arborist's report

The trees to be retained shall be inspected, monitored and treated by a Project Arborist who must be a qualified (AQF) Level 5 arborist in accordance with AS4970-2009 Protection of trees on development sites. Regular inspections and documentation from the Project Arborist to the Principal Certifying Authority are required including at the following times or phases of work. All monitoring shall be recorded and provided to the Principal Certifying Authority prior to completion of the works.

Schedule

Tree/location	**Time of inspection**
As shown on Tree Management Plans, TMP01 Sheets 1- 3, prepared by Naturally Trees and dated 14/09/12	As per Program of arboricultural imput, Appendix 7, Arboricultural Impact Appraisal and Method Statement, Naturally Trees, 14/09/12.

Reason: To ensure protection of existing trees.

54. Canopy/root pruning

Canopy and/or root pruning of the following tree(s) as necessary to accommodate the approved building works shall be undertaken by an experienced AQF level 3 Arborist under the supervision of the Project Arborist and in accordance with the reduction pruning clause of AS4373-2007. All other branches are to be tied back and protected during construction, under the supervision of a qualified arborist.

Reason: To protect the environment.

55. Treatment of tree roots

If tree roots are required to be severed for the purposes of constructing the approved works, they shall be cut cleanly by hand, by an experienced Arborist/Horticulturist with a minimum qualification of Horticulture Certificate or Tree Surgery Certificate. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees.

Reason: To protect existing trees.

56. No storage of materials beneath trees

No activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order at any time.

Reason: To protect existing trees.

57. Removal of refuse

All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.

Reason: To protect the environment.

58. Canopy replenishment trees to be planted

The canopy replenishment trees to be planted shall be maintained in a healthy and vigorous condition until they attain a height of 5.0 metres whereby they will be protected by Council's Tree Preservation Order. Any of the trees found faulty, damaged, dying or dead shall be replaced with the same species

Reason: To maintain the treed character of the area.

59. Survey and inspection of waste collection clearance and path of travel

At the stage when formwork for the ground floor slab is in place and prior to concrete being poured, a registered surveyor is to:

- ascertain the reduced level of the underside of the slab at the driveway entry,
- certify that the level is not lower than the level shown on the approved DA plans; and

- certify that the minimum headroom of 2.6 metres will be available for the full path of travel of the small waste collection vehicle from the street to the collection area.
- This certification is to be provided to Council's Development Engineer prior to any concrete being poured for the ground floor slab.
- No work is to proceed until Council has undertaken an inspection to determine clearance and path of travel.

At the stage when formwork for the ground floor slab is in place and prior to concrete being poured, Council's Development Engineer and Manager Waste Services are to carry out an inspection of the site to confirm the clearance available for the full path of travel of the small waste collection vehicle from the street to the collection area. This inspection may not be carried out by a private certifier because waste management is not a matter listed in Clause 161 of the Environmental Planning and Assessment Regulation 2000.

Reason: To ensure access will be available for Council's contractors to collect waste from the collection point.

60. On site retention of waste dockets

All demolition, excavation and construction waste dockets are to be retained on site, or at suitable location, in order to confirm which facility received materials generated from the site for recycling or disposal.

- Each docket is to be an official receipt from a facility authorised to accept the material type, for disposal or processing.
- This information is to be made available at the request of an Authorised Officer of Council.

Reason: To protect the environment.

Conditions to be satisfied prior to the issue of an Occupation Certificate:

61. Construction of roads and stormwater infrastructure

Reason: To provide for legal and physical vehicular access and stormwater disposal.

62. Easement for waste collection

Prior to issue of the Occupation Certificate, an easement for waste collection is to be created under Section 88B of the Conveyancing Act 1919. This is to permit legal access for Council, Council's contractors and their vehicles over the subject property for the purpose of collecting waste from the property. The terms of the easement are to be generally in accordance with Council's draft terms for an easement for waste collection and shall be to the satisfaction of Council's Development Engineer.

Reason: To permit legal access for Council, Council's contractors and their vehicles over the subject site for waste collection.

63. Maintenance of water quality measures

Prior to issue of the Occupation Certificate, the applicant must create a positive covenant and restriction on the use of land under Section 88E of the Conveyancing Act 1919, burdening the owner with the requirement to maintain the water quality measures (Stormfilter cartridges) on the lot.

For existing titles, the positive covenant and the restriction on the use of land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the cartridges, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

Registered title documents, showing the covenants and restrictions, must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.

Reason: To protect the environment.

64. Compliance with BASIX Certificate

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall be satisfied that all commitments listed in BASIX Certificate No. 434418M_04 have been complied with.

Reason: Statutory requirement.

65. Clotheslines and clothes dryers

Prior to the issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that the units either have access to an external clothes line located in common open space or have a mechanical clothes dryer installed.

Reason: To provide access to clothes drying facilities.

66. Mechanical ventilation

Following completion, installation and testing of all the mechanical ventilation systems, the Principal Certifying Authority shall be satisfied of the following prior to the issue of any Occupation Certificate:

1. The installation and performance of the mechanical systems complies with:

    - The Building Code of Australia
    - Australian Standard AS1668
    - Australian Standard AS3666 where applicable

2. The mechanical ventilation system in isolation and in association with other mechanical ventilation equipment, when in operation will not be audible within a habitable room in any other residential premises adjoining the development site before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and public holidays. The operation of the unit(s) outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measured at the nearest adjoining residential boundary.

Note: Written confirmation from an acoustic engineer that the development achieves the above requirements is to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: To protect the amenity of surrounding properties.

67. Completion of landscape works

Prior to the release of the Occupation Certificate, the Principal Certifying Authority is to be satisfied that all landscape works, including the removal of all noxious and/or environmental weed species, have been undertaken in accordance with the approved plan(s) and conditions of consent.

Reason: To ensure that the landscape works are consistent with the development consent.

68. Completion of tree works

Prior to the release of the Occupation Certificate, the Principal Certifying Authority is to be satisfied that all tree works, including pruning in accordance with AS4373-2007 or remediation works in accordance with AS4370-2009, have been undertaken in accordance with the approved plan(s) and conditions of consent.

Reason: To ensure that the tree works are consistent with the development consent.

69. Accessibility

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall be satisfied that:

- the lift design and associated functions are compliant with AS 1735.12 & AS 1428.2
- the level and direction of travel, both in lifts and lift lobbies, is audible and visible
- the controls for lifts are accessible to all persons and control buttons and lettering are raised
- international symbols have been used with specifications relating to signs, symbols and size of lettering complying with AS 1428.2
- the height of lettering on signage is in accordance with AS 1428.1 – 1993

- the signs and other information indicating access and services incorporate tactile communication methods in addition to the visual methods

Reason: Disabled access & services.

70. Retention and re-use positive covenant

Prior to issue of the Occupation Certificate, the applicant must create a positive covenant and restriction on the use of land under Section 88E of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site stormwater retention and re-use facilities on the property.

The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instruments for protection of retention and re-use facilities" and to the satisfaction of Council (refer to appendices of Ku-ring-gai Water Management Development Control Plan No. 47). For existing titles, the positive covenant and the restriction on the use of land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the reuse and retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

Registered title documents showing the covenants and restrictions must be submitted to and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.

Reason: To protect the environment.

71. Provision of copy of OSD designs if Council is not the PCA

Prior to issue of the Occupation Certificate, the following must be provided to Council's Development Engineer:

- a copy of the approved Construction Certificate stormwater detention/retention design for the site
- a copy of any works-as-executed drawings required by this consent
- the Engineer's certification of the as-built system.

Reason: For Council to maintain its database of as-constructed on-site stormwater detention systems.

72. Certification of drainage works

Prior to issue of the Occupation Certificate, the Principal Certifying Authority is to be satisfied that:

- the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans
- the minimum retention and on-site detention storage volume requirements of BASIX and Ku-ring-gai Water Management Development Control Plan No. 47

respectively, have been achieved
- retained water is connected and available for use
- basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and Appendix 7.1.1 of Ku-ring-gai Water Management Development Control Plan No. 47
- all grates potentially accessible by children are secured
- components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage Code AS3500.3 2003 and the Building Code of Australia
- all enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices

The rainwater certification sheet contained in Appendix 13 of the Ku-ring-gai Water Management Development Control Plan No. 47, must be completed and attached to the certification. Where an on-site detention system has been constructed, the on-site detention certification sheet contained in Appendix 4 of DCP 47 must also be completed and attached to the certification.

Note: Evidence from a qualified and experienced consulting civil/hydraulic engineer documenting compliance with the above is to be provided to Council prior to the issue of an Occupation Certificate.

Reason: To protect the environment.

73. Certification of as-constructed driveway/carpark – RFB

Prior to issue of an Occupation Certificate, the Principal Certifying Authority is to be satisfied that:

- the as-constructed car park complies with the approved Construction Certificate plans

- the completed vehicle access and accommodation arrangements comply with Australian Standard 2890.1 – 2004 "Off-Street car parking" in terms of minimum parking space dimensions

- finished driveway gradients and transitions will not result in the scraping of the underside of cars

- no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area

- the vehicular headroom requirements of:
  - Australian Standard 2890.1 – "Off-street car parking",
  - **2.6 metres** height clearance for waste collection trucks (refer DCP 40) are met from the public street into and within the applicable areas of the basement carpark.

Note: Evidence from a suitably qualified and experienced traffic/civil engineer indicating compliance with the above is to be provided to and approved by the Principal Certifying Authority prior to the issue of an Occupation Certificate.

Reason: To ensure that vehicular access and accommodation areas are compliant with the consent.

74. WAE plans for stormwater management and disposal

Prior to issue of the Occupation Certificate, a registered surveyor must provide a works as executed survey of the completed stormwater drainage and management systems. The survey must be submitted to and approved by the Principal Certifying Authority prior to issue of the Occupation Certificate. The survey must indicate:

- as built (reduced) surface and invert levels for all drainage pits
- gradients of drainage lines, materials and dimensions
- as built (reduced) level(s) at the approved point of discharge to the public drainage system
- as built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site
- the achieved storage volumes of the installed retention and detention storages and derivative calculations
- as built locations of all access pits and grates in the detention and retention system(s), including dimensions
- the size of the orifice or control fitted to any on-site detention system
- dimensions of the discharge control pit and access grates
- the maximum depth of storage possible over the outlet control
- top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system

The works as executed plan(s) must show the as built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to commencement of works. All relevant levels and details indicated must be marked in red on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

Reason: To protect the environment.

75. Basement pump-out maintenance

Prior to issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that a maintenance regime has been prepared for the basement stormwater pump-out system.

Note: A maintenance regime specifying that the system is to be regularly inspected and checked by qualified practitioners is to be prepared by a suitable qualified professional and provided to the Principal Certifying Authority.

Reason: To protect the environment.

76. OSD positive covenant/restriction

Prior to issue of the Occupation Certificate, the applicant must create a positive covenant and restriction on the use of land under Section 88E of the Conveyancing Act 1919, burdening the owner with the requirement to maintain the on-site stormwater detention facilities on the lot.

The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of on-site detention facilities" and to the satisfaction of Council (refer to appendices of Ku-ring-gai Council Water Management DCP 47). For existing titles, the positive covenant and the restriction on the use of land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the on-site detention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

Registered title documents, showing the covenants and restrictions, must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.

Reason: To protect the environment.

77. Sydney Water Section 73 Compliance Certificate

Prior to issue of an Occupation Certificate the Section 73 Sydney water Compliance Certificate must be obtained and submitted to the Principal Certifying Authority

Reason: Statutory requirement.

78. Infrastructure repair

Prior to issue of the Occupation Certificate, the Principal Certifying Authority must be satisfied that any damaged public infrastructure caused as a result of construction works (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council Development Engineer and at no cost to Council.

Reason: To protect public infrastructure.

79. Fire safety certificate

Prior to the issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that a Fire Safety Certificate for all the essential fire or other safety

measures forming part of this consent has been completed and provided to Council.

Note: A copy of the Fire Safety Certificate must be submitted to Council.

Reason: To ensure suitable fire safety measures are in place.

Conditions to be satisfied at all times:

80. Car parking

At all times, the visitor car parking spaces are to be clearly identified and are to be for the exclusive use of visitors to the site. On site permanent car parking spaces are not to be used by those other than an occupant or tenant of the subject building. Any occupant, tenant, lessee or registered proprietor of the development site or part thereof shall not enter into an agreement to lease, license or transfer ownership of any car parking spaces to those other than an occupant, tenant or lessee of the building.

The use of Visitor's spaces and Tenant Spaces are to be protected and are to be enforced through the following:

- restrictive covenant placed on title pursuant to Section 88B of the Conveyancing Act, 1919
- restriction on use under Section 68 of the Strata Schemes (Freehold Development) Act, 1973 to all lots comprising in part or whole car parking spaces

Reason: To ensure adequate provision of visitor parking spaces.

81. Concept Approval

All works associated with the development and its ongoing use shall have regard to, and be undertaken in accordance with the Conditions and supporting documentation of Concept Approval MP06_0130.

Reason: To ensure compliance with the Concept Approval.

Adam Richardson
Executive Assessment Officer

Selwyn Segall
Team Leader Development Assessment

Corrie Swanepoel
Manager – Development Assessment

Michael Miocic
Director – Development & Regulation

Attachments:

Annexure A -Zoning Extract
Annexure A - Objectors Map
Annexure B- Minister's Concept Approval
Annexure C - Statement of Commitments
Annexure D – Plan Level Basement 01
Annexure E - Plan Level Basement Level 02
Annexure F - Plan Level 00
Annexure G - Plan Level 01
Annexure H – Plan Level 02
Annexure I – Plan Level 03
Annexure J - Roof Plan
Annexure K - North + East Elevations
Annexure L - South + West Elevations
Annexure M - Sections AA + BB + CC
Annexure N - Landscape – Site and Context
Annexure O - Landscape – Master plan
Annexure P - Landscape – Block B and Communal Open Space
Annexure Q - Landscape – Block A, Visitor Parking and Entry Plazas
Annexure R - Landscape – Site Sections A-A
Annexure S - Landscape – Site Sections B-B
Annexure T - Landscape – Planting Strategies