JOINT REGIONAL PLANNING PANEL
Sydney West

JRPP No	**2013SYW098**
DA Number	**DA0391/13**
Local Government Area	**Ku-ring-gai**
Proposed Development	**Construct 2 residential flat buildings comprising 88 units and basement car park and associate site works**
Street Address	**100 Eton Road, Lindfield – Precinct 2**
Applicant/Owner	Defence Housing Australia
Number of Submissions	**2 objections**
Regional Development Criteria (Schedule 4A of the Act)	**Schedule 4A(3)**
List of All Relevant s79C(1)(a) Matters	• s79C(1)(a)(i) - Ku-ring-gai Planning Scheme Ordinance - Concept Approval MP06_0130 - SEPP No. 55 - SEPP No. 65 - SEPP (BASIX) - SREP (deemed SEPP) (Sydney Harbour Catchment) 2005 • s79C(1)(a)(ii) - Ku-ring-gal Local Centers LEP 2012 (draft instrument at time of lodgment) • s79C(1)(a)(iii) - Edgelea Urban Design Guidelines - DCP 47 – Water Management • s79C(1)(a)(iv) - Environmental Planning & Assessment Regulation 2000
List all documents submitted with this report for the panel's consideration	- **Architectural Plans** - **Landscape Plans**
Recommendation	**Approval**
Report by	**Adam Richardson**

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 88 units and basement car park and associated site works - Precinct 2
Development application no.	DA0391/13
Ward	ROSEVILLE
Applicant	Defence Housing Australia
Owner	Defence Housing Australia
Date lodged	10/10/2012
Issues	number of storeys within development; basement projection; unit configuration; length of buildings
Submissions	Yes (2)
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 Draft KLEP 2013 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 a capital investment value of more than $20 million ($32,921,879). Pursuant of Schedule 4A of the Environmental Planning and Assessment Act, 1979, the JRPP is the consent authority.

HISTORY

In 1967, work began on the initial stages of what is today known as '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 the redevelopment of the site as a Major Project under the now repealed Part 3A of the EP&A Act. 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 since 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 26 June 2013 to discuss the proposed development.

The Pre-DA advice did not raise any significant issues, rather, it made suggestions to improve the development's design and 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

10 October 2013	application lodged
22 October to 25 November 2013	application notified
5 December 2013	request for additional information letter sent to applicant
15 January 2014	meeting with applicant to discuss issues
24 February 2014	additional information and amended plans provided to Council
24 April 2014	final plans submitted to Council
8 May 2014	panel members briefed on proposal

THE SITE

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 subject site at 100 Eton Road, Lindfield (comprising Lot 1 and Lot 4 DP 1151638), is known commonly as UTS Ku-ring-gai. The university still 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 western section adjacent to the soccer oval, 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 KPSO to facilitate its redevelopment. **Figure 1** below highlights (in red) the part of the site to which this application relates:

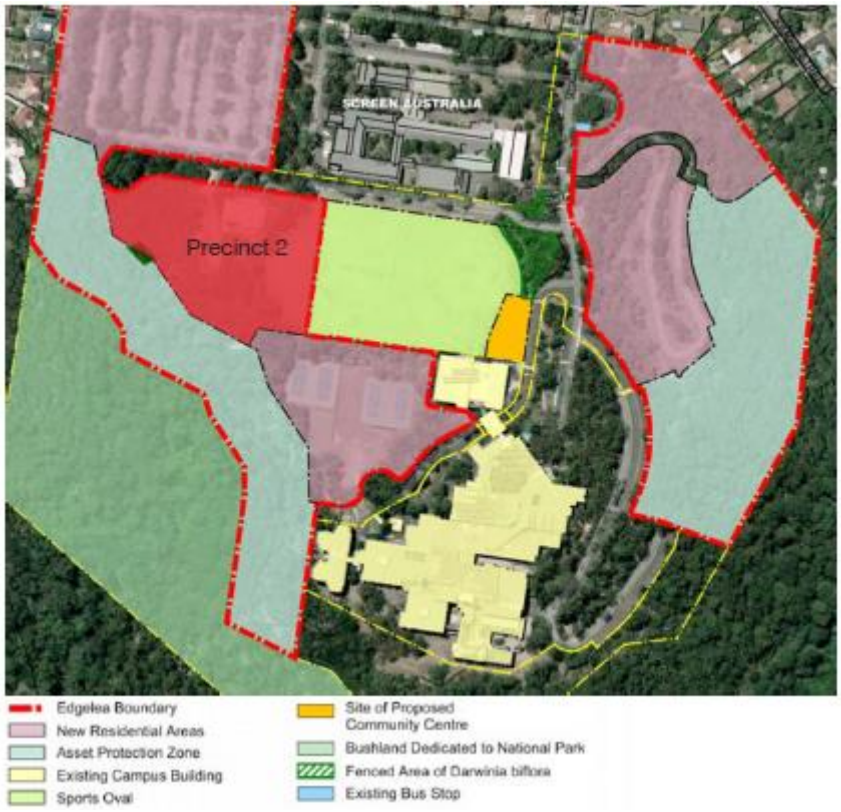


Figure 1

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 divides 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 site.

Figure 2

THE PROPOSAL

Consent is sought for the following works:

- partial clearing of the site and demolition of the existing child care centre and maintenance sheds
- excavation and two levels of basement for 167 car spaces, waste rooms, ancillary plant rooms and storage areas
- construction of 2 x 4 storey residential flat buildings above the basement containing a total of 88 units (9 x 1 bed, 59 x 2 beds & 20 x 3 beds)
- comprehensive landscaping of the site, including communal areas at the rear and extensive pathways linking with the adjoining bushland

Amended plans – February & April 2014

The amended plans proposed the following changes to the application:

- rationalise pathways through common area and provide designated way finding strategy
- improve function and layout of communal open space
- revision of apartment layouts to improve solar access and natural ventilation
- minor façade amendments
- revise stormwater system design and function
- modify 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, 2 submissions were received from the following:

1. *Cathy Angus – 18 Lyle Avenue, Lindfield*
2. *Richard Singleton – 57 Winchester Avenue, Lindfield*

Grosvenor Road as it approaches the Pacific Highway has a pedestrian path on either side of the road which we consider unnecessary. It is suggested that the path on the opposite side to the school be removed and the road widened to facilitate an additional tuning bay on the Pacific Highway.

The Concept Approval that facilitates this residential flat development (along with the other developments within the UTS site) included at the time significant investigations with respect to traffic movements and traffic flow in and around the surrounding street network. Subject to phasing efficiencies associated with the Grosvenor Road / Pacific Highway intersection (which it is understood have been implemented by the RMS), the road network was considered acceptable and did not require any upgrade or additional turning bays.

It is not clear if the 88 units provide for sufficient car parking beneath the building.

The development provides for car parking in excess of the minimum requirements specified within the UDG's.

Given the significant increase in density associated with the site and surrounding traffic and parking problems, the opening of a train station at 'UTS' on the Epping to Chatswood line must be considered.

In consenting to the Concept Approval, the Minister did not consider a train station beneath UTS necessary for the increase in density facilitated by the Concept Approval.

The proposal provides for no local shops or retail outlets. Access to services requires additional vehicle movements, which places greater strain on the local road network.

The Concept Approval did not provide a basis for any commercial or retail space as part of the UTS redevelopment and hence such has not been included in this, or any other Development Application to date. As the proposed development accords with the Concept Approval, no basis for this inclusion exists, irrespective of perceived demand.

The additional families that move to the area in the developed will be poorly served with no facilitates for children or youth.

The wider UTS redevelopment includes a completed soccer oval and community centre to help support the demands of the future residents. Specifically, the development itself provides for extensive communal open space for passive recreation and is within accessible proximity to the community services of Lindfield and greater Sydney.

Amended plans:

The amended plans were not notified as the changes made to the scheme did not result in a greater environmental impact than that of the original proposed scheme.

INTERNAL REFERRALS

Landscaping

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

> ***Site characteristics***
>
> *The site (11,622 m^2) is located on the western side of the site. The site adjoins the existing playing field to the east, and bushland to the south-west (Lot 1). The site is accessed from the western end of the modified existing access road, Road 2.*
>
> ***Landscape Management Plan, DEM, December 2011***
>
> *Protection of Conservation Area B - Darwinia biflora protection*
>
> *The Precinct 2 objectives include the following:*
>
> *'Retain, maintain and protect areas of Darwinia biflora adjoining the precinct in accordance with the Threatened Species Management Plan by ERM'.*
>
> *All vegetation within 10 metres of Conservation Area B, the Darwinia biflora areas is to be retained (p24, Threatened Species Management Plan, ERM, 8/12/11). Associated edge affects to internal paths reduce vegetation alongside paths and create compaction and increased runoff (p12, Darwinia biflora Conservation Area Weed Management Plan, ERM, 8/08/11). Two proposed decomposed gravel paths are located within the 10m setback zone of the Darwinia protection area in addition to an existing track on the western side. To preserve existing vegetation and*

prevent an increased flow of runoff in the vicinity of Area B, these paths are not to encroach within 10 metres of the Darwinia biflora protection area - Conservation Area B.

Deep Soil (Part 6 Edgelea UDG)

Numerical compliance 56% (25% required)

Response

The proposal provides in excess of twice the amount of deep soil landscape area on the site, satisfying the deep soil requirement.

Edgelea Urban Design Guidelines (Edgelea UDG)

Design Principles - Character Area B: Central Area (Part 1, 1.2, Section 1.4.2 Edgelea UDG)

To preserve the landscape character of the site, the design principles for Precinct 2 include:

> *A. Locate residential flat buildings primarily within the areas that have already been developed. Configure buildings to maximise opportunities for retained/new landscaping and outdoor living spaces.*
>
> *B. Retain and protect areas of Darwinia biflora (refer Landscape Management Plan)*
>
> *C. Provide pedestrian connections to existing bush tracks*
>
> *E. Retain and protect existing rock fill oval batter and associated vegetation*
>
> *F. Manage the Asset Protection Zone to retain its bushland character within constraints for controlling fuel loads.*
>
> *G. Provide a 10m setback from the northeast boundary adjoining the soccer field.*

H. Retain and protect existing rock filled batter and associated vegetation.

Response

The proposed terraced retaining walls to the south-west corner of the basement are constructed to hide the basement entry while maximizing opportunities for retained and new plantings.

Landscape character (Section 5.1 Edgelea UDG)

To provide a high quality landscape that respects the heritage and ecological values of the site and is appropriate to the scale and context of the development, the Concept Plan Approval required the landscaping of the site to satisfy the following landscape conditions:

'maintenance of the bushland setting of the site',

'long term preservation and maintenance of tree assets', and

'retention of the planted retaining wall between the existing oval and tennis courts'.

To achieve the above landscape character, the controls require the landscape design to 'protect and retain existing significant trees and understorey where possible' and provide 'an urban bushland park character through provision of a structured landscape that incorporates predominantly native plant species'. This will build upon the philosophy and principles of the original landscape architect, Bruce Mackenzie.

The landscape character has been incorporated within the Landscape Management Plan and the Edgelea UDG's. The landscape objectives and controls that are to address these landscape conditions are provided within 'Precinct Interface Relationships'.

Response

The development proposes planting of predominantly native plant species within an urban bushland park character. The use of sandstone for low rock walls in the landscape details complements the natural bushland setting.

Precinct interface relationships

Communal open space and common area adjoining the Asset Protection Zone (APZ) (Section 5.7.1 Edgelea UDG).

The main area of communal open space adjoining the asset protection zone is associated with an existing filled area used for sheds.

The communal area incorporates sandstone boulder retaining walls (Detail 8, dwg 501/C, Arcadia,11/02/14) to replace the existing graded banks.

Response

To clearly demarcate developed and bushland areas, the existing batters to the sheds have been replaced with stone retaining walls as shown on the landscape details. To optimise the area of lawn and to ensure that the edge treatment is well defined, the proposed batter from the filled turf area has been replaced with a retaining wall (Control 1, 5.7.1 Section Edgelea UDG).

Landscape treatment to interface between Precinct 2 and soccer field (Section 5.7.2 Edgelea UDG)

To ensure adequate screening is provided for privacy, the proposed development is to include a 10 metre minimum width landscape buffer to the playing field. The edge treatment is to be achieved by a maximum 1.5m high retaining wall. Planting within the buffer is to be an informal arrangement of locally occurring species.

Response

The proposal provides an effective landscape buffer to the playing field.

Retention of the planted retaining wall between the existing oval and tennis courts (Section 5.7.4 Edgelea UDG)

The significant rock retaining wall wraps around the western end of the existing filled oval and defines the south-east corner of Precinct 2. To ensure the retention of the planted retaining wall, the proposed development is to demonstrate that the embankment will be maintained (refer to Figure 5.7.4-1-4 Edgelea UDG).

Response

The proposal retains the planted retaining wall as an important feature of the development.

Street character – Road 2 (5.2 Edgelea UDG)

The site is located on Public Road 2 (Shout Ridge Road) is included within the Precinct 2 site and is therefore subject to the Urban Design Guidelines. The groundcover treatment shown on the landscape plans and the architectural perspectives is consistent with the bushland character of the Road 2 streetscape design. The regular planting of trees along the site frontage is to be avoided.

Response

The groundcover treatment shown on the landscape plans and the architectural perspectives is consistent with the bushland character of the Road 2 streetscape design. The regular planting of trees along the site frontage is to be avoided. The proposed planting of Angophora costata (Sydney Red Gum) should be replaced with Eucalyptus haemastoma (Scribbly Gum). This is addressed by, ***Condition 17****.*

Tree canopy (5.1, 5.5 Edgelea UDG)

To retain and protect trees of local significance (Objective 3)

An amended arborist report, prepared by Naturally Trees, dated 14/02/14, has been submitted as part of the application. Tree numbers refer to this report.

The arborist report is considered satisfactory.

Significant trees to be removed

The arborist report states that the proposed development will require the removal of 53 important or 'high category' trees. These are mostly underscrubbed areas of regrowth Eucalyptus haemastoma (Scribbly Gum) and Corymbia gummifera (Red Bloodwood) open woodland. The area is also rich in locally occurring shrub and groundcover species. A small patch is to be retained in the south-west of the site.

An additional 15 low significance trees will be removed. The trees are mostly within the building footprint in the concept approval. There is no objection to the removal of the trees.

Trees to be retained

The arborist report states that there are twenty-eight (28) important or 'high category' trees assessed as likely to incur adverse impacts due to disturbance during the development and fifty-three (53) unimportant or 'low category' trees. The trees are along the edge of the proposed development represent several different locally occurring tree communities within the site in addition to planted vegetation associated with the campus. A small patch of Eucalyptus haemastoma (Scribbly Gum) and Corymbia gummifera (Red Bloodwood) open woodland located in the south-west of the site will provide a narrow buffer of approximately 11 metres between the proposed retaining walls and the Darwinia biflora Conservation Area.

- *Tree 385 / Eucalyptus haemastoma (Scribbly Gum) This mature tree is located south of the building. The proposed basement is 9m*

from the tree at its closest point, outside the tree protection zone. The tree protection zone is to be retained at existing grade and the proposed path is to be suspended construction with post holes to be hand dug under arborist supervision (p7, Naturally Trees, 2014). The impacts are considered acceptable.

- *Tree 387 / Angophora costata (Sydney Red Gum) This mature tree is located south of the building. The tree has been subject to past filling within its tree protection zone. The proposed suspended timber boardwalk is 1.7m from the tree, outside the tree protection zone. The tree protection zone is to be retained at existing grade with minor modifications for construction of sandstone retaining wall in front of existing batter. The proposed path is to be suspended construction with post holes to be hand dug under arborist supervision (p7, Naturally Trees, 2014). The impacts are considered acceptable.*

- *Tree 389 / Eucalyptus tereticornis (Forest Gum) This mature tree is located west of the Building B. The proposed path abuts the trunk of the tree. The tree protection zone is to be retained at existing grade and the proposed path is to be suspended construction with post holes to be hand dug under arborist supervision (p7, Naturally Trees, 2014). The impacts are considered acceptable.*

- *Tree 556 / Eucalyptus saligna (Sydney Blue Gum) This mature tree is located on the rock embankment at the south-west corner of Building B. The proposed basement and building is approximately 3 metres from the tree. A retaining wall is approximately 2 metres from the tree. The arborist has considered that the encroachment is in accordance with AS4970-2009 Protection of trees on development sites.*

- *Tree 747/ Corymbia gummifera (Red Bloodwood) This tree is located south-west of Building A. The proposed driveway/path is approximately 3m from the tree. The proposed reconfiguration of the contours (dwg 301C, Arcadia, dwg C050/P2, Bonacci) is not likely to impact in excess of 10% of the canopy spread however arborist supervision during the works will be required as recommended in the arborist report.*

- *Tree 748/ Corymbia gummifera (Red Bloodwood) This small tree is located south-west of Building A. The proposed gravel path abuts the trunk of the tree. All works within the tree protection zone are to be hand dug under arborist supervision. The impacts are considered acceptable.*

- *A further 6 'high category' trees are to be retained and protected as part of the development - Trees 530, 531, 555, 557, 558, and 719.*

Pedestrian access (5.4 Edgelea UDG)

Access is to be provided from the western end of Road 2 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).

Response

Access from the western end of Road 2 has been indicated on the plans in accordance with this control. The proposed gravel path should be reconfigured to avoid trees and follow more closely the alignment line of existing trails. This is addressed by ***Condition 17****.*

Communal open space (2.1.11 Edgelea UDG, SEPP 65)

The SEPP requires the development to 'optimise useability, privacy and social opportunity, equitable access and respect for neighbour amenity' and provide 'quality public spaces that cater for desired recreational uses' (Principle 6 and 8, SEPP 65). At least 10% of the site area, or approximately 1100m^2 must be provided as communal open space with a minimum dimension of 5m. The communal open space should provide 'useable, attractive and accessible communal open space that adds to the amenity of the development and facilitates social interaction' (Objective 2, 2.1.11 Edgelea UDG).

The proposal provides an area of useable communal open space south of Building A (approximately 550m^2). The area includes a lawn area and an accessible viewing platform and BBQ area. The communal lawn area is well situated along the main accessible east/west path. In addition, there is a large area of almost level bushland located to the west of the communal lawn area, that is be managed as 'slashed grass' There are additional passive recreation opportunities available through the site and adjoining areas of bushland with the retention of bush tracks, however these areas are not accessible.

Response

The proposal provides sufficient useable and accessible communal open space relative to the scale of the development.

BASIX compliance

- *Common area landscape*

The BASIX certificate nominates 2617.6m^2 of indigenous or low water use species within the common area landscape for the site. The plan showing areas for BASIX calculation indicates low water areas in excess of this number. The nomination of podium areas within the BASIX certificate assumes that these areas will be irrigated albeit using much less water than that used for the areas nominated as lawn and non-indigenous/low

water use areas. To ensure adequate irrigation of the indigenous/low water use planting areas within the central podium area, the irrigation system is to utilise soil moisture sensors and associated regulators instead of the proposed automatic system. This is addressed by ***Condition 17****.*

- *Private area landscape*

The BASIX certificate describes the units of Building A or B and is consistent with the architectural and landscape plans.

Response

The certificate reflects the areas nominated on the landscape plan.

- *Stormwater plan*

The proposed pits are to have solid tops where they are located in the vicinity of grated strip drains in the entry paths to ground floor units on the northern side of Building A and the eastern side of Building B. This can be conditioned.

- *Landscape plan*

The hardworks plan should include drainage pits as shown on the stormwater plans.

To preserve existing vegetation and prevent an increased flow of runoff in the vicinity of Area B, the bush paths are not to encroach within 10 metres of the Darwinia biflora protection area - Conservation Area B. The path is to be relocated east of Tree 5000, 5001,5002 and 5003 and north of trees 748, 5033 and 5034. This is addressed by ***Condition 17****.*

- *Environmental site management plan*

The environmental site management plan is considered satisfactory.

- *Bush fire assessment*

The existing APZ are contained entirely within Lot 1. Further APZ works within Precinct 2 site are listed within the Bushfire Protection Assessment. The Bushfire Protection Assessment prepared by Eco Logical, dated 19 August 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, subject to conditions.

Engineering

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

Water management

The report by Bonacci references the Northrop Stormwater Plan and outlines a water management system comprising 80 cubic metres of rainwater retention and re-use, 128 cubic metres of on site detention and stormfilter cartridges for water treatment.

Discharge to a watercourse within the Precinct 2 site is proposed, with scour protection as required under the concept plan. The matter of whether the site should be classified as Location C or B is not really material. Direct discharge into a watercourse would seem to indicate Location B. The reduction in runoff days is just as important for Location B to protect the downstream waterways. The amended stormwater scheme adequately addresses this issue.

Traffic and parking

The subject development is for 88 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 (subdivision of the site), 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 2 development represents only 26% of the overall generation of the site and will not impact on the operation of critical intersections in the locality.

Some of the apartments have studies, however the floor plans indicate that a built-in desk is proposed, which would obstruct the use of the room as a bedroom, so the unit mix given in the documentation is accepted.

Parking is provided at the upper limit of the required range. The visitor space/ carwash bay has not been labelled, however this can be done on the Construction Certificate plans.

Waste management

A waste storage and collection area is shown just inside the entry, with sufficient space for the required number of containers. The area over the manoeuvring area is open so it is clear that there is adequate headroom for the small waste collection vehicle.

Construction traffic management

Precinct 2 is well within the Edgelea site, so construction worker parking is not likely to impact on residential streets outside the UTS site.

A detailed Construction Traffic Management Plan will be required before commencement of works on site. If the subdivision approved under DA0677/11 is registered before works start, Road 2 will be a public road. There may be a need for a Works Zone to be provided. It is considered that this can be determined by the builder when construction commences. A condition which outlines the procedure for obtaining a Works Zone is recommended ***Condition 10****.*

Construction vehicle routes will be similar to those for Precincts 1a, 3 and 4. This is acceptable.

Geotechnical investigation

Generally the site is underlain by massive sandstone stratum, however there is some deep filling to the east of the site associated with the old playing field. The report contains recommendations for excavation methods and support, as well as inspections during the course of the works.

The report recommends consultation with Screen Australia to determine any vibration –specific requirements. This recommendation was also made in regard to Precinct 1a, where the following note was added to the recommended conditions:

Consultation should be held with Screen Australia regarding any specific vibration tolerances for their specialised equipment, as recommended in the geotechnical report.

This note would be added to the recommended conditions for Precinct 2, as well as a requirement for a dilapidation survey of the building prior to commencement of works ***Conditions 6 and 7****.*

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 on 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 Darwina 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 Darwina biflora.

Ecological comments

Impacts upon trees

A review of the arborist report has identified that fifty-two (52) 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: Angophora costata (Smooth-barked Apple), Banksia serrata (Serrated Banksia), Banksia ericifolia, Eucalyptus piperita (Sydney Peppermint), Corymbia gummifera (Red Bloodwood), Eucalyptus haemastoma (Scribbly Gum), & Acacia parramattensis.

The following trees: 550, 732, 734 & 746 are proposed for removal, these trees contain hollows/fissures which may be utilised as suitable nesting/roosting site for native fauna.

Trees/vegetation which comprise part of threatened species habitats which are proposed to be removed for the construction of the residential flat buildings, basement parking, landscaping and associated works (fire asset protection zones) have already been considered and assessed as part of the concept approval.

Therefore, no ecological assessment or impact assessments (7-part test) are considered to be warranted under section 5a of the Environmental Protection & Assessment Act 1979.

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 17th August 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 more specifically to the south and west of the proposed building is managed in an appropriate manner to retain habitat/s for flora and fauna species.

Urban design

Council's Urban Design Consultant has assessed the development and 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 development proposal has been made with regards to the Edgelea Urban Design Guidelines (EUDG) which have already considered the question of what a suitable contextual response to this site should be. The proposal is generally in accordance with the EUDG master plan footprints, is generally consistent with the other UTS Ku-ring-gai proposals prepared by Architectus and Bates Smart and is considered to be a conceptually strong, diagrammatically clear and high quality proposal with a compelling landscape design.

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 basement protrudes out of the ground up to 2.4m (SOEE p18). This technically creates a fifth storey where only four storeys are permitted and is also non-compliant with EUDG 2.1.23.3 requiring that 'The basement car park must not project more than 1m above existing ground level to the floor immediately above.' However, this aspect has been addressed by raising the ground level adjacent to the building, the sectional treatment of which is considered to be well designed (Figure 21 SOEE p19). It is acknowledged that the stepping of the topography creates difficulty in meeting this control and it is considered that the proposal is reasonable in terms of the floor levels it intends to set. As the basement generally follows the line of the building above, and because the overall height does not exceed the maximum building height of 16m, this aspect is considered acceptable from an urban design perspective.

The proposed buildings each scale at approximately 75m in length and do not comply with EUDG 2.1.6.5 requiring that 'the continuous length of a single building on any elevation must not exceed 36m'. However, it is noted that the proposal closely follows the EUDG 1.4.2 building footprints which anticipates buildings of this length, and it is considered that the building is successfully recessed and articulated so as to reduce the apparent length of the building. This aspect is considered acceptable from an urban design perspective.

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 issue of the angled windows and small balconies projecting into the westernmost setback has been discussed previously and the projections are considered to be acceptable from an urban design point of view.

The issue of a including wayfinding strategy has responded to on p2 of the Landscape Response. The proposed bushland wayfinding signage appears to be well located where the bushwalking tracks meet the communal open space. These signs can convey information about the track and National Park to outbound

walkers as well as clarify the private ownership status of the communal open space to inbound walkers.

The issue of the letterbox location for Building B has been discussed previously. It is considered that the letterbox location is desirable from a resident point of view.

The issue of the size and dimension of the curved balconies has been discussed previously and the balconies are considered to be acceptable in this regard. One gas outlet and one water outlet should be provided within each primary private open space as per EUDG 2.1.10.11. This matter is addressed by **Condition 58**. The additional south-facing private balconies belonging, but separate, to units A202 and A302 are supported.

The issue of the dining room and kitchen widths of the L-shaped cross-through apartments is considered to be acceptable.

The issue of the basement car park extending beyond the building footprint is considered acceptable in this regard.

The issue of moving the 660L waste bins within the basement has been satisfactorily resolved with the introduction of a second 'waste hoist' between the eastern cores (see A-DA104). This will allow the movement of bins between the waste rooms and the loading bay collection area to occur without traversing the vehicular ramps.

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 total number and mix of units across the wider Ku-ring-gai UTS site has been provided in accordance with Concept Plan. This aspect 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 issues of solar access and cross ventilation have been satisfactorily resolved. The issue of internalised studies appears to remain, however are acceptable BCA requirements are satisfied. The design of the corridors has been described positively previously.

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 issue of the communal open space size appears to have been resolved with the expansion of the primary spaces (marked as '5', '8' and '10' on the Landscape Master Plan DA_14) to approximately 500m2 in area. This is considered sufficient to serve the population of the development well. The landscape design and integration with the surrounding bushland is acceptable.

The details of the netting behind the soccer goals has been described as 'Black Cyclone Mesh 4m Height above Sports Field' (Sections & Elevations DA_21). This detail is considered acceptable subject to the structure supporting the mesh also being black in colour and slender in proportion.

The issue of the communal clothesline location has been described previously and the location is considered to be acceptable. The compost location has been moved close to the driveway area and this location is also considered acceptable.

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.

The issue of building separation between Building A and Building B is considered to be adequate from an urban design point of view. The perceived privacy of the dining room and kitchen windows to the easternmost units of Building A will be improved by the landscaping proposed adjacent to the building (see Section JJ on Sections & Elevations DA_24). This aspect is considered to be acceptable.

The issue of solar access has been satisfactorily resolved with design changes that allow 62 of 88 (70%) units to achieve 3 hours of direct sunlight to both living rooms and private open spaces between 9am and 3pm on 21st June. Units A311 and A312 have been amended to include an adjustable louvre pergola over the balconies which allows sunlight to the private open spaces (this detail has been added to the roofs of all of the curved balconies and is considered to be a positive amendment). Units AG06 and A106 have been amended by converting the angled window projection into a balcony element which provides a small, but usable, private open space with direct sunlight to supplement the larger balcony in these apartments. Units BG07, B104, B107, B204 and B207 have been amended by reducing the overall unit depth (see below) such that the wintergarden can be internalised as living space and the apartment is still of a reasonable depth.

The issue of cross ventilation appears to have been resolved with design changes that allow 53 of 88 (60%) units to be cross ventilated, including four units (AG02, AG03, AG04, and AG05) which are cross ventilated through the use of a stack effect system via ventilation chimneys. The Natural Ventilation Analysis accompanying the application describes that the engineering of the stacks is premised on a worst case scenario 'still day' reliant solely on pressure and temperature difference to operate. This is the desired premise as it ensures the stack will work in all conditions. The effectiveness of the stack effect has been calculated utilising two mathematical equations. This aspect has been referred to an independent environmental engineer (PC Thomas of Team Catalyst) for a pro bono interpretation and comment. The environmental engineers' advice is that the equations are the correct formulae to use, however many of the assumptions that were used to solve the equations are not stated, including: the temperatures assumed; the coefficient of discharge assumed; the mean velocity of air through the space assumed; as well as any anticipated resistances in the system (for example fire dampers or fly screens). Provision of these figures would have enabled a quick and easy evaluation of the system performance. However, some preliminary modelling by the environmental engineer has confirmed that it is likely the stacks will work given that: the cross section appears adequate; the stack height (12m+) is twice the normal height and will perform very well; and standard variables are assumed. In this case, on balance, it is considered that the stacks are likely to provide performance adequate for these four units to be considered cross ventilated.

The issues of the unit depth of the L-shaped cross-through apartments in Building B has been resolved by shortening the dining rooms to an appropriate dimension, similar to the L-shaped cross-through apartments in Building A. This aspect is now considered to be acceptable.

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 issue of BCA non-compliances potentially affecting the layout of the building appears to have been adequately addressed. The fire engineering concept describes that these issues can be overcome through employment of features such as smoke curtains and smoke seals plus a combination of warning systems and fire equipment which do not affect the overall layout of the building. Issues addressed include: vertical separation of openings; extended exit travel distances; fire isolation of exits; separation of exits; and the atrium configuration. It is noted however, that these are 'potential' solutions and may or may not be employed at the Construction Certificate stage.

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 adaptable apartment design has been resolved through the provision of additional access advice. The Accessibility Review (p6) describes that bedrooms require a clearance of 1m to three sides of a queen size bed. The submitted Accessibility Review provided diagrams that demonstrate that this is achievable, except with a shortfall of 30mm to one of the bedrooms of the standard type. The Access Review (p6) considers that this is a minor non-compliance and will be a suitable solution. This aspect is now considered acceptable.

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 proposal is considered to be successfully articulated to present a domestic and human scale in line with EUDG 1.1.4.1 and the expression of the building is considered to be of high quality and to the satisfaction of EUDG 2.1.6.1 and 2.1.6.13.

EXTERNAL REFERRALS

Rural Fire Service

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 the Rural Fire Service. 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 has been recommended in **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.

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, through 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.	YES

	Provide barrier free access to at least 20 percent of dwellings in the development.	
Vehicle Access	Generally limit the width of driveways to a maximum of six metres.	YES
	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.	YES
	The back of a kitchen should be no more than 8 metres from a window.	YES
	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	YES

	- one-bedroom apartments 6m³ - two-bedroom apartments 8m³ - three plus bedroom apartments 10m³	
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

Natural Ventilation:

Consistent with the comments of Council's Urban Design Consultant, the proposed development achieves the minimum standard of 60% of units being naturally cross-ventilated. However, to achieve this standard, 4 units are fitted with natural ventilation stacks.

The stacks have been designed to provide a louvered opening into a ventilation duct situated at the rear of the kitchen of the 4 units (AG02, AG03, AG08 and AG09). A combination of differences in pressure and temperature between air in the ground floor apartments and air above the roof draws the air into tall ventilation chimneys which then extend above the building's roof. As the units ventilated in this manner are side by side on the ground floor, they are each fitted with an individual ventilation shaft, ensuring that no issues with fire safety and noise transmission arise.

Consistent with the comments of the Urban Design Consultant, this is an acceptable solution and the objectives of natural ventilation otherwise satisfied.

Ku-ring-gal Planning Scheme Ordinance 1971

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 for this site. However, on 21 December 2012, the NSW Department of Planning and Infrastructure approved an amendment to the KPSO which transferred these specialist controls from the SEPP to the KPSO.

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

26W Application of Part

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.

26Z1 Demolition requires development consent

The demolition of a building or work on land within the UTS Ku-ring-gai Campus site may be carried out only with development consent.

Consent is sought for demolition of the existing child care centre and maintenance sheds.

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 upon the site under the Height of Buildings Map referred to in Clause 26ZL.

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 current application seeks consent for 88 units. This is the fourth application for habitable floor space on site. A total of 23 units were approved by Council on 4 December 2012 as part of DA0270/12, a further 70 units were

approved by the JRPP on 21 February 2012, and 129 on 2 May 2013. These approvals combined with this proposal do not exceed the maximum dwelling threshold of 345 dwellings across the site.

Precinct	1 Bedroom	2 Bedroom	3 Bedroom	Total
1A	4	12	7	23
1B	-	-	-	-
1C	-	-	-	-
2	9	59	20	88
3	14	50	65	129
4	8	24	38	70
5	-	-	-	-
Total	35	145	130	**310**

Draft Ku-ring-gal Local Environmental Plan 2013

The Draft Ku-ring-gal Local Environmental Plan 2013 essentially seeks to convert the controls of the KPSO into a format and structure consistent with the Department of Planning and Infrastructure's Standard Instrument template.

As the redevelopment of the UTS site is facilitated through a Part 3A Concept Approval, the site benefits from specialist planning controls that apply only to the site. As mentioned earlier, these controls originated in the Major Projects SEPP and were migrated to the KPSO.

These controls and the extent of development facilitated by them carry over to the draft KLEP. Subsequently the proposed residential flat building is assessed as being satisfactory and consistent with the controls of the draft KLEP.

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 following conditions of the Concept Approval are relevant to the assessment of this application:

A1. Development description

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 building development within this part of the site is consistent with the scheme approved as part of the Concept Plan, with the proposed building location and footprints being 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 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 satisfies the Statement of Commitments and have appropriate regard to DCP 55 and 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 88 units on site. When this figure is added to 23 units approved under DA0270/12, the 70 units approved under DA0300/12, and the 129 units approved under DA0346/12 a total yield to date of 310 units (dwellings) has been proposed which is less than the maximum of 345 approved under the Concept Plan. In addition, Figure 1 referred to in Condition B3 sets a maximum of 96 dwellings in this Precinct. As only 88 units are proposed, the development is within its maximum yield and is assessed as being 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 9 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), DA0300/12 (which contained 10 x 1 bedroom units) and DA0346/12 (14 x 1 bedroom units). To date, 37 x 1 bedroom units have been proposed within 345 units, representing 10.7% of dwellings, satisfying the requirement in Condition B4.

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

Building B in this application is affected by this condition, with the Concept Approval requiring a 10m setback from the building to the sports oval. This setback has been complied with, satisfying Condition 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 demonstrate 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 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 adopted Urban Design Guidelines which apply to the site. A full assessment against the guidelines is provided further in this report.

POLICY PROVISIONS

As mentioned earlier in this 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:

Compliance with the Urban Design Guidelines

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
	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; ii) 9m between habitable / balconies and non-habitable rooms.	Yes
2.1.3 Building Setbacks and Site Coverage Controls – Precinct 2	1 Residential flat buildings in Precinct 2 must meet the minimum setback requirements shown below in Figures 2.1.3-3.	No
	2 Site coverage is to be a maximum of 75% of the site area.	Yes
	3 The deep soil landscaping area is to be a minimum of 25% of the site area.	Yes
	Note: buildings must not overshadow Darwinia biflora between the hours of 10am and 3pm.	Yes

Section	Requirement	Compliance
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.	Yes
	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
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
	3 Deep soil planting must be provided in common areas as a buffer between buildings.	Yes
	4 Driveways are not to dominate the street setback zone to maximise deep soil landscaping areas.	Yes
	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.*	Yes
	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.*	Yes
	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.	Yes
	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.	Yes
	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.	Yes
	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.	Yes

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></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</td></tr>
<tr><td rowspan="14">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>2 Building design is to emphasise strong horizontal massing and vertical articulation.</td><td>Yes</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td>4 No single wall plane is to exceed 81m^2 in area.</td><td>Yes</td></tr>
<tr><td>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.</td><td>No</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td>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).</td><td>N/A</td></tr>
<tr><td>9 Balconies that run the full length of the building façade are not permitted.</td><td>Yes</td></tr>
<tr><td>10 Blade walls are not to be the sole element used to provide articulation.</td><td>Yes</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td>12 Corner buildings are to address both street frontages.</td><td>N/A</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td rowspan="5">2.1.7 Building Entries</td><td>1 Provide access to and within all developments in accordance with the Disability Discrimination Act 1992.</td><td>Yes</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td>3 Buildings with frontages over 18m long must have multiple entries.</td><td>Yes</td></tr>
<tr><td>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.</td><td>Yes</td></tr>
<tr><td>5 All entry areas must be well lit and designed to avoid any concealment or entrapment areas. All light spill to apartments is prohibited.</td><td>Yes</td></tr>
</table>

Section	Requirement		Compliance
	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
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**		Yes
	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.	
	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.	Yes
	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.	Yes
	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.	Yes
	7	All front boundary treatment must be designed to highlight entrances.	Yes
	Rear boundary and fences to APZ		Yes
	8	Rear boundaries should be delineated where required by retaining bushland, rock outcrops and new retaining walls.	
	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.	Yes
	2	Ground level and podium level apartments are to have a private outdoor courtyard / terrace with a minimum (internal dimension) of 25m².	Yes
	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 Yes Yes
	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

Section	Requirement		Compliance
	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
	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

Section	Requirement		Compliance
	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
	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

Section	Requirement		Compliance
	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
	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.*	No
	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
	5 A space for temporary parking for service and removalist vehicles must be provided and clearly signposted.	Yes
	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.	Yes

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></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>
</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.	Yes
	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.	Yes
	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.	Yes
	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 and Slope	1 Development must demonstrate consideration of site topography, drainage, soil landscapes, flora, fauna and bushfire hazard.	Yes
	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.	Yes
	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

Section	Requirement		Compliance
	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.	Yes
	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
	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.	Yes
	9	Where additions and alterations are proposed, external materials and finishes must complement the existing building.	Yes
	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

Section	Requirement	Compliance
	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
	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.	Yes
	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

<table>
<tr><th>Section</th><th>Requirement</th><th>Compliance</th></tr>
<tr><td></td><td>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.</td><td>Yes</td></tr>
<tr><td>3.6 Vehicle Access</td><td>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).</td><td>Yes</td></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>
</table>

Section	Requirement		Compliance
3.8 Visitor Parking	1	All visitor parking spaces are to be provided on site and clearly marked.	Yes
	2	Visitor parking spaces must be conveniently located and must not be obstructed by security grilles or similar devices wherever possible.	Yes
	3	If visitor parking is located behind security grilles, an intercom system will be required for users to gain entry.	Yes
	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.	Yes
	5	For residential flat buildings, one visitor parking bay is to be provided with a tap, to make provision for on-site car washing.	Yes
3.9 Parking for People with a Disability	1	Accessible car parking spaces are to be level and have a continuous path of travel to the building's principal entrance or lift.	Yes
	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.	Yes
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

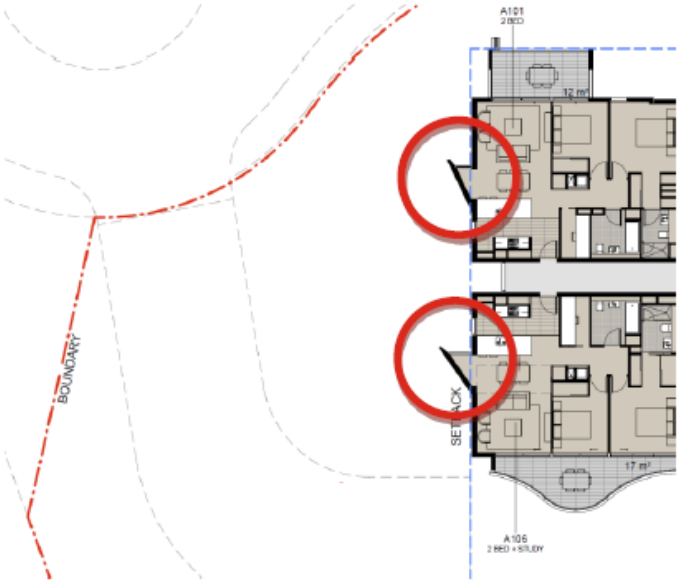
Section	Requirement	Compliance
	Access to collection point *Note: This does not apply to residential developments of 4 dwellings or less, which do not have an internal collection point.* 7 The location of the waste and recycling room must be conveniently accessible and have unimpeded access for both 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
	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.	Yes
	22 No compaction equipment is to be used for 120 and 240 litre bins.	Yes
	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.	Yes
	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.	Yes

<table>
<tr><th>Section</th><th colspan="2">Requirement</th><th>Compliance</th></tr>
<tr><td></td><td colspan="2">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 u</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 s</td></tr>
</table></td><td>Yes</td></tr>
<tr><td></td><td colspan="2">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 colspan="2">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 colspan="2">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 colspan="2">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 colspan="2">30 An area is to be nominated for on-site communal composting.</td><td>Yes</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td>5.1 Landscape Character</td><td colspan="2">1 Protect and retain existing significant trees and understorey where possible and introduce supplementary planting in clumps to reflect the natural bushland setting.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">2 Provide a clear definition between the built environment and the surrounding bushland.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">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.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">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.</td><td>Yes</td></tr>
<tr><td>5.6 Planting and Plant Schedules</td><td colspan="2">1 Fire retardant planting should be used in private and communal open spaces where possible.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">2 Exotic tree species should be incorporated within private courtyards and gardens to assist passive solar access control.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">3 Darwinia biflora communities are to be retained and protected.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">4 The planting of species listed in Council's Weed Management Policy as 'Urban Environmental Weeds' will not be permitted.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">5 Species used for planting or revegetation in or directly adjacent to areas with significant vegetation or habitat must be of local provenance.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">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)</td><td>Yes</td></tr>
<tr><td>5.7.1 Communal open space and common area adjoining the Asset Protection Zone (APZ) – Precincts 2, 3 and 4</td><td colspan="2">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.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">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.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">3 Where possible, turf areas are to be located on previously disturbed land and defined by stone edging and / or level changes.</td><td>Yes</td></tr>
<tr><td></td><td colspan="2">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.</td><td>Yes</td></tr>
<tr><td>5.7.2 Landscape treatment to</td><td colspan="2">1 Provide a maximum 1.5 metre high retaining wall along the eastern boundary of Precinct 2 between communal open space and the soccer field.</td><td>Yes</td></tr>
</table>

Section	Requirement		Compliance
interface between Precinct 2 and Soccer Field	2	Separate communal open space / common area and private open space by planting and providing a courtyard fence.	Yes
	3	Planting within the 10m building setback should be native and locally occurring native species in an informal layout.	Yes
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
	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

Setbacks:

In providing articulation and visual interest to the western end of Building A, a minor setback variation to the controls of Clause 2.1.3 of the UDG's to the upper floors (Levels 2, 3 and 4) has been proposed. The variation is associated with protruding kitchen windows as detailed in the below diagram.



The variation is acceptable as the protrusions are of no impact as they adjoin the APZ and also assist with light and ventilation to the units and break up the mass of the western wall when viewed from the street. It is noted that the protrusions do not create any building separation or deep soil issues.

Maximum building height / storeys and basement projection:

The development, due to prevailing site levels, technically results in a 6 storey building with regard to the definition of a storey contained within the UDGs. This is as a consequence of the upper level of the basement protruding more than 1m above the prevailing ground level.

The extent of variation is illustrated in the below diagram:

Both the Concept Approval and the UDGs limit the development in this section of the UTS Ku-ring-gai campus to 4 storeys, with this supplemented by a maximum building height of control of 16m under the KPSO.

Whilst non-complaint with the strict interpretation of the definitions applying to a storey, the development is assessed as being satisfactory as only 4 storeys of residential development is proposed and visible, despite a total of 6 storeys technically resulting. The 4 storeys of residential development is consistent with the prevailing conditions and scope of development envisaged under the Concept Approval and as mentioned earlier, the building is below the maximum building height pursuant of the special controls for this site contained within the KPSO.

Aside from being below the maximum building height control under the KPSO, the extent of basement above ground is disguised through significant landscape plantings that abut and surround the basement. Given that the site

falls significantly to the rear towards the APZ, this design feature essentially replicates the natural landscape form.

A subset variation to the number of storeys is the height of the basement above ground level. Both basement levels due to the undulating site levels are more than the 1m above ground level (with upto a 2.4m variation), exceeding the tolerance allowed for under the UDGs, which restrict protrusion to 1m.

For the above reasons, the proposed development is assessed as being satisfactory in this regard, particularly as the landscaping and natural landform integrate with the design levels of the building.

Length of building:

The UDGs restrict the length of a building to a maximum of 36m. This requirement is similar to the controls with otherwise apply to residential flat buildings in the Ku-ring-gai LGA under DCP 55.

The proposed development seeks to vary the control with longer buildings (up to 75m long). The variation to the building length control is acceptable on the basis that, whilst the two buildings exceed the maximum building length control, the building footprints (and subsequently their length) are consistent with the footprints of the approved Concept Plan for the site.

Were shorter buildings insisted upon to comply with the building length controls of the UDGs, the resultant modified building footprints would be inconsistent with the layout of the approved Concept Plan. Condition A2 of the Concept Approval necessitates the consistency that in part, purports this variation.

The UDGs (Clause 1.2) allow for departure to the controls where it can be demonstrated that the objectives of a particular control have been achieved. The objectives limiting the length of buildings to 36m are *…to promote buildings of high architectural quality that contribute to the distinctive Edgelea character and to create building facades that reduce the bulk and scale of the*

building….

As detailed within the comments of Council's Urban Design Consultant, the design of the development is successful in achieving the built outcome prompted by the objectives and relates positively to its setting and the adjoining UTS campus buildings.

Basement:

Following on from the protrusion of the basement above ground level, the basement has been designed in a manner that extends beyond the footprint of the building, contrary to the controls of Clause 2.1.23 of the UDG's.

The basement has been designed as an 'L' shape to sit beneath both buildings, however in providing for the necessary car spaces, service and plant areas has been extended beyond the building footprint at the south-western corner of Building A.

This encroachment is acceptable as it has been successfully integrated into the landscaping scheme associated with the development and screened from the adjoining APZ. Further, as the basement steps out from the rest of the building, the encroachments assist is breaking up the building as a compliant basement design at the point of encroachment would result in the appearance of a 5/6 storey building, where the non-compliant design results in the appearance from the rear of a 4/5 storey building.

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 that would ordinarily be applied to the development. It is noted that the mechanisms for the transfer of land referred to in Condition B13 has otherwise been covered within the associated Voluntary Planning Agreement under DA0677/11, which was endorsed 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

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

PUBLIC INTEREST

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 DA0391/13 for the construction of a residential flat development comprised of two buildings containing 88 units and 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
DA102 Issue D	Architectus	05/02/14
DA104 Issue D	Architectus	05/02/14
DA105 Issue D	Architectus	05/02/14
DA106 Issue D	Architectus	05/02/14
DA107 Issue D	Architectus	05/02/14
DA108 Issue D	Architectus	05/02/14
DA109 Issue D	Architetcus	05/02/14
DA110 Issue C	Architetcus	05/02/14

DA200 Issue D	Architetcus	05/02/14
DA201 Issue D	Architectus	05/02/14
DA202 Issue C	Architectus	05/02/14
DA203 Issue D	Architectus	05/02/14
DA204 Issue C	Architectus	05/02/14
DA210 Issue C	Architectus	05/02/14
DA211 Issue C	Architectus	05/02/14
DA920 Issue D	Architectus	05/02/14
DA950 Issue C	Architectus	05/02/14
DA951 Issue C	Architectus	05/02/14
DA952 Issue C	Architectus	05/02/14
DA953 Issue C	Architectus	05/02/14
DA955 Issue C	Architectus	05/02/14
DA956 Issue C	Architectus	05/02/14
DA980 Issue A	Architectus	07/04/14
DA10	Architectus	24/4/14
13-122_DA_15	Arcadia	02/04/14
13-122_DA_18	Arcadia	02/04/14
13-122_DA_22	Arcadia	02/04/14
13-122_DA_23	Arcadia	02/04/14
13-122_DA_24	Arcadia	02/04/14
13-122_DA_25	Arcadia	02/04/14
13-122_DA_26	Arcadia	02/04/14
13-122-300 Issue D	Arcadia	02/04/14
13-122-301 Issue D	Arcadia	02/04/14
13-122-302 Issue D	Arcadia	02/04/14
13-122-303 Issue D	Arcadia	02/04/14
13-122-304 Issue D	Arcadia	02/04/14
13-122-305 Issue D	Arcadia	02/04/14
13-122-306 Issue D	Arcadia	02/04/14
13-122-400 Issue D	Arcadia	02/04/14
13-122-401 Issue D	Arcadia	02/04/14
13-122-402 Issue D	Arcadia	02/04/14
13-122-403 Issue D	Arcadia	02/04/14

13-122-404 Issue D	Arcadia	02/04/14
13-122-405 Issue D	Arcadia	02/04/14
13-122-406 Issue D	Arcadia	02/04/14
13-122-501 Issue D	Arcadia	02/04/14
13-122-502 Issue D	Arcadia	02/04/14
13-122-503 Issue D	Arcadia	02/04/14
C005-P3	Bonacci	29.08.13
C015-T1	Bonacci	31.03.14
C035-P1	Bonacci	Aug.2013
C050-P2	Bonacci	29.08.13

Document(s)	**Dated**
Bush fire risk assessment and certification, prepared by Daniel Copland - Project No. 11GOSBUS-0152	14 April 2014
Accessibility Review of Proposal _03, prepared by Philip Chun – AN13-201680 APR_Precinct 2 DHA Edgelea Lindfield NSW Rev 03_20140406-JM_MB	6 April 2014

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 2 from Eton Road to Precinct 2 site access point.
- Adjoining soccer field

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. Dilapidation survey and report (private property)

Prior to the commencement of any demolition or excavation works on site, the Principal Certifying Authority shall be satisfied that a dilapidation report on the visible and structural condition of the adjoining gymnasium building and Film Australia buildings has been completed and submitted to Council.

The dilapidation report must include a photographic survey of adjoining properties detailing their physical condition, both internally and externally, including such items as walls ceilings, roof and structural members. The report must be completed by a consulting structural/geotechnical engineer as determined necessary by that professional based on the excavations for the

proposal and the recommendations of the submitted geotechnical report**.**

In the event that access for undertaking the dilapidation survey is denied by a property owner, the applicant must demonstrate in writing to the satisfaction of the Principal Certifying Authority that all reasonable steps have been taken to obtain access and advise the affected property owner of the reason for the survey and that these steps have failed.

Note: A copy of the dilapidation report is to be provided to Council prior to any excavation works been undertaken. The dilapidation report is for record keeping purposes only and may be used by an applicant or affected property owner to assist in any civil action required to resolve any dispute over damage to adjoining properties arising from works.

Reason: To record the structural condition of likely affected properties before works commence.

8. 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.

9. 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.

10. Work zone

If a works zone is proposed, the applicant must make a written application to the Ku-ring-gai Local Traffic Committee to install the work zone. Work zones are provided specifically for the set down and pick up of materials and not for the parking of private vehicles associated with the site. Work zones will generally not be approved where there is sufficient space on-site for the setting down and picking up of goods being taken to or from a construction site.

If the work zone is approved by the Local Traffic Committee, the applicant must obtain a written copy of the related resolution from the Ku-ring-gai Local Traffic Committee and submit this to the Principal Certifying Authority prior to commencement of any works on site.

Where approval of the work zone is resolved by the Committee, the necessary work zone signage shall be installed (at the cost of the applicant) and the adopted fee paid prior to commencement of any works on site. At the expiration of the work zone approval, the applicant is required to remove the work zone signs and reinstate any previous signs at their expense.

In the event the work zone is required for a period beyond that initially approved by the Traffic Committee, the applicant shall make a payment to Council for the extended period in accordance with Council's schedule of fees and charges for work zones prior to the extended period commencing.

Reason: To ensure that appropriate measures have been made for the operation of the site during the construction phase.

11. 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 1-4	Naturally Trees	11/12/12

The tree protection fencing shall be constructed of galvanised pipe at 2.4 metres 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

12. 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.

13. Fauna protection

Prior to works commencing and/or tree removal works a qualified ecologist shall investigate all trees for fauna occupation. In accordance with appropriate licensing requirements the ecologist shall supervise the relocation of any fauna found within the trees approved for removal.

The qualified ecologist must hold an Animal Ethics Permit from the Office of Environment & Heritage and a wildlife licence under section 132C of the National Parks and Wildlife Act 1974 issued by the Office of Environment and Heritage.

Evidence of engagement of the qualified ecologist and the required licensing must be provided to the Private Certifying Authority with a copy to Council prior to the trees being removed.

Reason: To ensure protection of native fauna species.

14. Project ecologist

A project ecologist shall be commissioned prior to the release of the relevant Construction Certificate to ensure all bushland/environmental protection measures are carried out in accordance with the conditions of consent.

The project ecologist shall have a minimum qualification of TAFE Certificate III in Bush Regeneration or Conservation and Land Management – Natural Area Restoration. He/she shall have at least 4 years experience in the management of native bushland in the Sydney region. Details of the arborist including name, business name and contact details shall be provided to the Principal Certifying Authority with a copy to Council.

Reason: To ensure the protection of existing biodiversity values of the site

15. 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.

16. 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:

17. Amendments to approved landscape plans

Prior to the issue of a relevant 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**
As per Cover Sheet, dwg no DA01 Issue C	Arcadia	02/04/2014

The following changes are required to the landscape plan:

1. The regular planting of trees along the site frontage is to be replaced with an informal planting arrangement consistent with the bushland character of the Road 2 streetscape design. The proposed planting of *Angophora costata (Sydney Red Gum)* shall be replaced with *Eucalyptus haemastoma* (Scribbly gum).

2. The hardworks plan(s) shall include drainage pits as shown on the stormwater plans.

3. To preserve existing vegetation and prevent an increased flow of runoff in the vicinity of Area B, the bush paths are not to encroach within 10 metres of the *Darwina biflora* protection area – conservation area B. The path is to be relocated to the east of Tree 5000, 5001, 5002 and 5003 and north trees 748, 5033 and 5034.

4. The specified automatic irrigation system to the podium area shall be substituted with a system that utilises moisture sensors and associated regulators, to ensure correct watering of the proposed indigenous / low water use plant species within all areas of the proposed podium (landscape specification notes dwg503/d, Arcadia, 02/04/14).

5. The proposed stormwater pits are to have solid tops where they are located in the vicinity of grated strip drains in the entry paths to ground floor units on the northern side of Building A and the eastern side of Building B.

Prior to the issue of the Construction Certificate, the Principal Certifying Authority shall be satisfied that the landscape plan has been amended are 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.

18. 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.

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 relevant 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 the 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 relevant 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 relevant Construction Certificate, the Certifying Authority shall be satisfied that the nominated adaptable units within the development application, AG08, AG09, BG02, A109, B102, A209, B202, A309, and B302 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. Excavation for services

Prior to the issue of the relevant 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.

23. Driveway grades – basement carparks

Prior to the issue of the relevant 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.

24. Basement car parking details

Prior to issue of the relevant 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.

25. 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 relevant Construction Certificate.

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

26. Car parking allocation

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

Resident car spaces	138
Visitor spaces	29
Total spaces	167

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. The spaces shall be painted nominating them as '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 relevant Construction Certificate.

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

27. Number of bicycle spaces

The basement car park shall be adapted to provide 28 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 the relevant Construction Certificate.

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

28. Utility provider requirements

Prior to issue of the relevant 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.

29. 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 relevant 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):

30. 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.

31. 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	14 April 2014

Prior to the issue of the relevant construction certificate, the principal certifying authority must be satisfied that the relevant 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:

32. 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.

33. 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 RMS 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.

34. 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.

35. 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, 15/04/14. 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.

36. 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.

37. 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.

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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.

44. 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.

45. 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.

46. Recycling of building materials

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.

47. 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.

48. 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.

49. 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.

50. 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.

51. 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 environmental site management plan, DWG A-DA920 Rev D, Architectus, 05/02/14	As per Program of arboricultural imput, Appendix 7, Arboricultural Impact Appraisal and Method Statement, Naturally Trees, 15/04/14.

Reason: To ensure protection of existing trees.

52. 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.

53. 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.

54. 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.

55. 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.

56. 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.

57. 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.

58. Balconies

The primary open space of each unit is to be provided with a gas outlet and a water outlet in accordance with 2.1.10.11 of the Edgelea Urban Design Guidelines.

Reason: To enhance the amenity of residents.

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

59. Easement for waste collection

Prior to issue of the final 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.

60. Maintenance of water quality measures

Prior to issue of the final 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.

61. Compliance with BASIX Certificate

Prior to the issue of the relevant Occupation Certificate, the Principal Certifying Authority shall be satisfied that all commitments listed in BASIX

Certificate No. 496353M_03 have been complied with.

Reason: Statutory requirement.

62. Clotheslines and clothes dryers

Prior to the issue of the relevant 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.

63. 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 the relevant 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.

64. Completion of landscape works

Prior to the release of the final 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.

65. Completion of tree works

Prior to the release of the final 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.

66. Accessibility

Prior to the issue of the relevant 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.

67. Retention and re-use positive covenant

Prior to issue of the final 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.

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

Prior to issue of the final 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.

69. Certification of drainage works

Prior to issue of the final 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.

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

Prior to issue of the final 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.

71. WAE plans for stormwater management and disposal

Prior to issue of the final 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.

72. Basement pump-out maintenance

Prior to issue of the final 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.

73. OSD positive covenant/restriction

Prior to issue of the final 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.

74. Sydney Water Section 73 Compliance Certificate

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

Reason: Statutory requirement.

75. Infrastructure repair

Prior to issue of the final 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.

76. Fire safety certificate

Prior to the issue of the relevant Occupation Certificate(s), 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:

77. 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 is to be protected and 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.

78. 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.

79. Waste services

The waste rooms at the bottom of the waste chute shall be serviced on a regular and at needs basis so as to ensure its continued function as designed.

Reason: To ensure the ongoing amenity of residents.

Signed

Adam Richardson	**Selwyn Segall**
Executive Assessment Officer	**Team Leader Development Assessment**
Corrie Swanepoel	**Michael Miocic**
Manager – Development Assessment	**Director – Development & Regulation**

Attachments:

Annexure A1 -Zoning Extract – 2014/115421
Annexure A2 - Objectors Map – 2014/115423
Annexure B- Minister's Concept Approval – 2012/147981
Annexure C - Statement of Commitments – 2013/043650
Annexure D - Site Plan – Sheet 3 – 2014/097801
Annexure E – Plan Level Basement 01 – Sheet 4 - 2014/097801

Annexure F - Plan Level Basement Level 02 – Sheet 5 – 2014/907801

Annexure G – Plan Ground Floor – Sheet 6 – 2014/097801

Annexure H - Plan First Floor – Sheet 7 – 2014/097801

Annexure I – Plan Second Floor – Sheet 8 – 2014/097801

Annexure J – Plan Third Floor – Sheet 9 – 2014/097801

Annexure K - Roof Plan – Sheet 10 – 2014/097801

Annexure L – North Elevation Building A& B – Sheet 11 – 2014/097801

Annexure M – East Elevation Building B – Sheet 12 – 2014/097801

Annexure N – East & West Elevation Building A- Sheet 13 – 2014/097801

Annexure O – South Elevation Building A & B – Sheet 14 2014/097801

Annexure P – West Elevation Building B – Sheet 15 - 2014/097801

Annexure Q – Section – Sheet 17 – 2014/097801

Annexure R - Landscape – Site and Context – Sheet 4 – 2014/097817

Annexure S - Landscape – Master Plan – Sheet 15 – 2014/097817