

JOINT REGIONAL PLANNING PANEL (Sydney East Region)

JRPP No	2012SYE038
DA Number	LDA2012/0114
Local Government Area	City of Ryde
Proposed Development	Construction of two residential towers (known as Buildings C and D), part construction of a new road and landscaping works.
Street Address	126 Herring Road, Macquarie Park
Applicant/Owner	Toga Macquarie Developments Pty Ltd
Number of Submissions	None
Recommendation	Approval with Conditions
Report by	Sandra Bailey, Team Leader Major Developments

Assessment Report and Recommendation

1. EXECUTIVE SUMMARY

The following report is an assessment of a development application for the construction of two residential towers known as Buildings C and D on 126 Herring Road, Macquarie Park. These buildings form part of an approved Concept Plan (MP09_0195) for a mixed use residential/retail development comprising 4 x 12 storey and 1 x 9 storey building envelopes with basement car parking, road works and landscaping.

Building C is part 12 and part 13 storeys, containing a total of 149 apartments consisting of 123 x 1 bedroom apartments and 26 x 2 bedroom apartments. Building D is 9 storeys and will contain 80 apartments consisting of 64 x 1 bedroom apartments and 16 x 2 bedroom apartments. Three levels of basement car parking will extend beneath both buildings and this will provide parking for 267 vehicles. The development also includes the construction of the western portion of a road that connects to Herring Road.

Building C and D comply with the subsequent modifications to the Concept Plan Approval and the applicant has provided information to satisfy the Statement of Commitments.

The development results in a number of variations in relation to the Residential Flat Design Code in respect to building depth, building separation, number of south facing apartments and the number of apartments that have access from a corridor. These variations are all minor and do not result in any unacceptable impacts.

During the notification period, Council received no submissions.

The development application is therefore recommended for approval subject to appropriate conditions of consent provided in Attachment 1 of this report.

2. APPLICATION DETAILS

Name of applicant: Toga Macquarie Developments Pty Ltd

Owner of site: Baptist Union of NSW

Estimated value of works: \$59,370,593

Disclosures: The applicant has included a list of political donations made since 2007. This list however does not include any political donations or gifts made to any local Councillor. A copy is available on file.

3. SITE DESCRIPTION

The subject site is located at 126 Herring Road, Macquarie Park. The site is located on the north western side of Herring Road, between Epping Road and University Avenue. Figure 1 demonstrates an aerial photograph of the site.



The legal description of the site is Lot B in DP 368446. A Draft Subdivision Plan for the site has been approved by NSW Department of Planning (MP09_0217 Mod 2). This draft plan subdivides the site into 10 allotments comprising 5 residential allotments, 1 community lot, 2 allotments for the future road and two other ancillary lots. This application relates to Lots 1, 8, 9 and 10 of the approved Draft Subdivision Plan. This is illustrated in Figure 2.

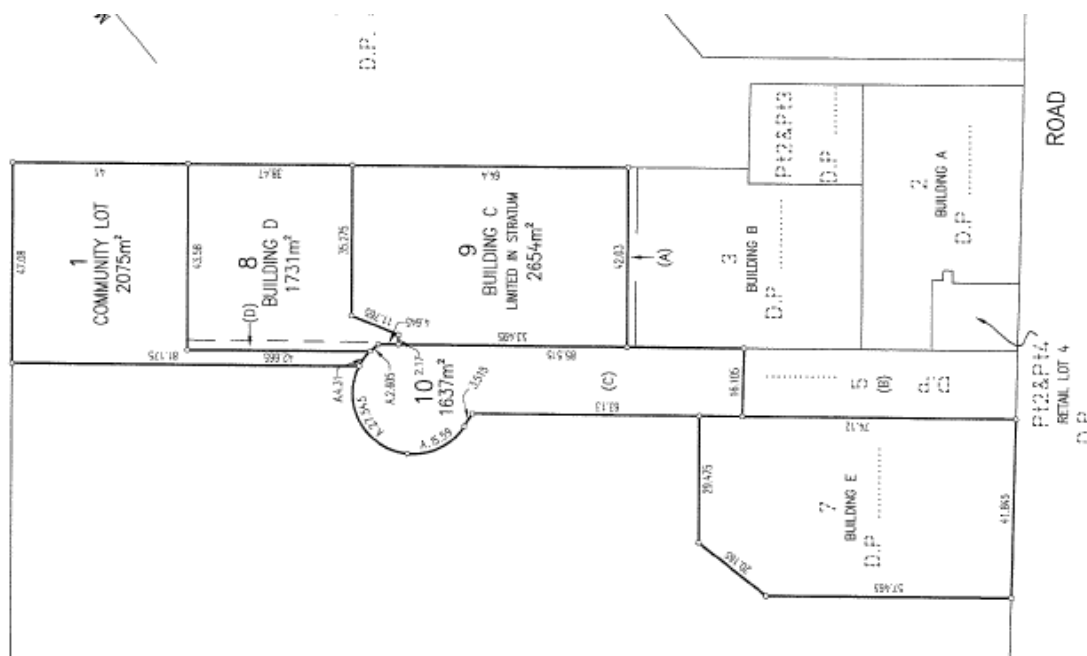


Figure 2. Approved Draft Subdivision Plan. The application relates to lots 1, 8, 9 and 10 in the draft plan.

To the west / north west of the site is Macquarie University including Dunmore Lane College. North east of the site is the Robert Menzies College - university housing. South east of the site opposite Herring Road is predominately 3 and 4 storey residential flat buildings. University Creek and the associated riparian zone crosses the rear of the site.

4. SITE DETAILS

Total site area – 8,097m².

Frontage to Herring Road – 120.02m

Frontage to new Type 3 Road – 65.055m

Northern boundary length – 143.87m

Western boundary length – 47.08m

5. PROPOSAL

The development application proposes the construction of two residential buildings known as Building C and Building D. These buildings are part of an approved Concept Plan for a mixed use residential/retail development

comprising 4 x 12 storey and 1 x 9 storey buildings with basement car parking, road works and landscaping. The location of Buildings C and D is demonstrated on Figure 3.

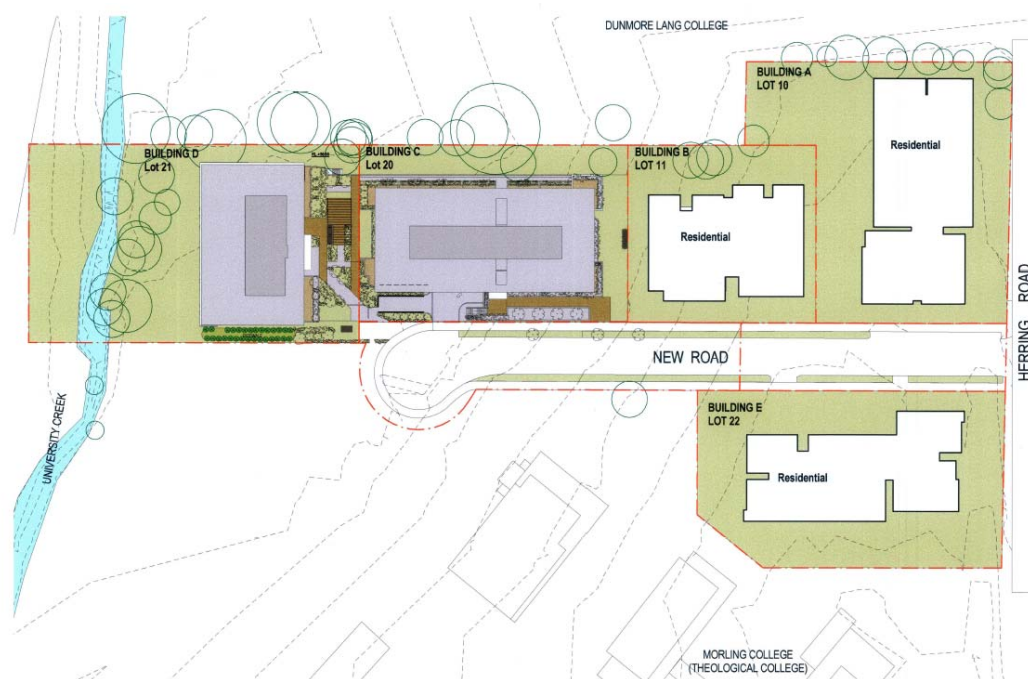


Figure 3. The above diagram shows the location and layout of the buildings approved in the Concept Plan Approval. Buildings C and D are coloured grey.

Building C is a part 12 and part 13 storey building and will contain a total of 149 apartments. The mix of residential accommodation includes 123 x 1 bedroom apartments and 26 x 2 bedroom apartments.

Building D is a 9 storey building and will contain 80 apartments. The mix of residential accommodation includes 64 x 1 bedroom apartments and 16 x 2 bedroom apartments.

Three levels of basement carparking extend beneath both of the buildings. A common entry to the basement is provided off the new road frontage to Building C. The basement will provide car parking for 267 vehicles and 95 bicycle parking spaces.

The development also includes the extension of a new road which provides access to the site from Herring Road. Part of this road has already been approved as part of a Project Application for Building A. This development application involves the construction of the western portion of the road. This road will provide access to Buildings C and D as well as providing a turning circle at the end of the road.

This development also includes landscaping of the site. The landscaping includes the riparian zone at the western end of the site as well as landscaping surrounding the buildings.

Figures 4 and 5 demonstrate photomontages of the proposed development.



Figure 4. Photomontage of Building C as viewed from the new road. Building D appears in the background.



Figure 5. Photomontage of Building D as viewed from the rear of the site. Building C is also visible in the background

6. BACKGROUND

Previous Approvals

On the 20 January 2011 The Deputy Director-General approved the following applications:

- **Concept Plan (MP09_0195)** for a mixed use residential / retail development comprising 4 x 12 storey and 1 x 9 storey building envelopes with basement car parking, road and landscaping.
- **Project Application (MP09_0217)** for staged subdivision into 7 allotments comprising 5 residential allotments and 2 road allotments for the access road.
- **Project Application (MP09_0218)** for the construction of a residential development including demolition and excavation. Construction of a 12 storey residential / retail building (Building A) providing 10,367m² of GFA, 123 dwellings and a 96m² retail tenancy. The approval also includes a 3 level basement car park for 152 cars and ancillary services and facilities, and the construction of the south-eastern portion of the new local public access road, footpath and cycleway off Herring Road.

On 11 July 2011, the Director General approved the following modification applications:

- **Concept Plan (MP09_0195 MOD 1)** for alterations to the building envelopes and gross floor areas for Buildings B, C, D and E in response to modification requirements of terms of conditions B1 and B2 of the original Concept Plan. This related to a reduction in the height of Building B from 15 storeys to 12 storeys, the requirement that adequate solar access to be provided to each Building and the provision of a pedestrian cycleway in the vicinity of Building B connecting the site with Macquarie University.
- **Project Application (MP09_0217 MOD 1)** for the addition of a notation for an access easement as required by conditions of consent and rectification of minor drafting errors.
- **Project Application (MP09_02 MOD 1)** for modifications to Building A to increase the number of units and gross floor area, modify the dwelling mix, and basement car park level and loading spaces, and minor façade changes.

On 13 March 2012, the Acting Director approved the following modification application:

- **Project Application (MP09_017 MOD 2)** for modifications to the Project Approval to change the subdivision type from Torrens Title to Community Title Subdivision.
- **Project Application (MP09_218 MOD 2)** for modifications to the configuration of the basement levels of Building A.

On 23 March 2012 the Acting Director approved the following modification:

- **Concept Plan (MP09_0195 MOD 2)** for modifications to the Concept Plan approval relating to Building C to provide seven additional residential units, increase the building height to part 12 and part 13 stories and provide an additional part level of parking.

On 10 April 2012 the Acting Director approved the following modification:

- **Project Application (MP09_0218 MOD 3)** for modifications to Building A to increase the number of units and modify the basement car park to provide bicycle parking and storage.

On 15 March 2012 the Joint Regional Planning Panel granted approval for the following:

- **Local Development Application 2011/0578 (2011SYE115)** for the construction of a 12 storey residential building (Building B) providing 8119m² of GFA and 117 dwellings. The approval also included a 3 level basement car park for 137 cars and associated landscaping.

The current application is based on the Concept Plan MP09_0195 and MP09_0195 MOD 2. A list of the applicable Conditions of Consent, Future

Environmental Assessment Requirements and Statement of Commitments from the Approved Concept Plan has been discussed below.

Conditions of Consent	Comment
A5 Determination of Future Applications. The determination of future applications for development is to be generally consistent with the terms of approval of the Concept Plan.	The proposed development is consistent with the terms of the Concept Plan MP09_0195MOD 2.
Future Environmental Assessment Requirements	
Flood Levels Future DAs shall comply with the Taylor Thomson Whitting Pty Ltd Consulting Engineers Road Works and Stormwater Report and consider and address any recommendations in relevant state policies at the time of lodgement of future applications to demonstrate the finished floor levels of the buildings will be above the probable maximum flood levels for the site.	University Creek flows from the southwest to the northeast at the rear of the site. Based on the available information Building D is located within a medium risk flood risk precinct. The applicant has provided information to demonstrate that the finished floor levels of both buildings will be above the probable maximum flood levels for the site.
Threatened Species All future development is to consider the <i>"Guidelines for developments adjoining land and water managed by DECCW, June 2010"</i> .	The guidelines referred to have been developed by DECCW to guide Councils when assessing DAs that adjoin land managed by DECCW. This includes lands acquired, reserved or dedicated under the National Parks and Wildlife Act 1974 or marine and estuarine protected areas. The site is not adjacent to one of these areas. The relevant issues required to be considered under the guidelines are erosion and sediment control, stormwater runoff, wastewater, management implications relating to pests, weeds and edge effects, visual, odour, noise, vibration, air quality and amenity impacts, threats to ecological connectivity and groundwater dependent ecosystems. Consideration of these issues has been given further in the body of the report under Section 8 and 9.
Loss of the Childcare Facility Consideration is to be given to the provision of a new child care centre with a minimum gross floor area of 300sqm at the ground floor level of Building E or in another appropriate location easily accessible to the public.	This is not applicable to the current development application. A child care centre would not be appropriate in building C or D as these buildings are not easily accessible to the public. This is a matter that will be considered as part of the assessment for Building E.
SEPP 65 Future DAs shall be consistent with the provisions of the SEPP 65 and the Residential Flat Design Code.	This matter has been addressed in detail. There are minor variations to the numeric requirements of the RFDC in respect to building height, building separation, number of apartments accessed off a corridor and the number of south facing apartments. These variations are minor and do not result in any

	adverse impacts. The variations and the reasons for supporting the variations are discussed in Section 8.7 of the report.
Landscaping Future DAs shall include detailed landscape plans demonstrating that sufficient deep soil can be provided for landscaping, particularly along street frontages.	The applicant has provided detailed landscaping plans. Where planting is provided over building, the plans demonstrate that adequate soil depth can be provided.
Travel Access Guide (TAG)/Green Travel Plan Future DAs shall provide details of any Travel Access Guide (TAG) / Green Travel Plan prior to the occupation of any building on site.	The applicant intends to provide residents and owners with a Travel Access Guide. This will include information such as: • A list of green travel options available in the area. • Information about the car share scheme. • Maps detailing the location of bike racks, train stations, bus stops and car share spaces. • Service details for bus and train. • Access arrangements for people with disabilities on public transport routes and at train stations. • Key visual landmarks for people on foot and unfamiliar with the area, closest cross street. • Estimated time of travel from the closest major centres or interchanges. • Telephone numbers and web addresses for public transport service providers. A condition of consent will be imposed to ensure that this occurs (see condition number 88).
Car Share Scheme Future DAs shall require the provision and implementation of a car share scheme utilising the carparking spaces nominated in the Concept Plan prior to the dedication of the internal road to Council.	The Concept Plan required 3 car parking spaces to be designated on the street as car share parking. These spaces have been shown on the plans. The applicant has submitted civil plans for the road which includes the 3 spaces for the car share scheme. In addition, a preliminary contract between the applicant and Go Get has been submitted. In its current form the contract involves the assignment of several functions to Council after the road has been dedicated. At this stage Council has not been involved in any discussions with the applicant about the contract. The applicant has been advised that Council will be required to be involved in the discussions and in all likelihood a report may need to be considered by Council before Council agrees to any contract. Given that the car share scheme does not need to be implemented until prior to the dedication of

	the internal road, this matter does not need to be finalised as part of this DA. It would however be necessary to include a condition on any consent for Building E to demonstrate the documentation of the car share scheme prior to the occupation of the final building.
Statement of Commitments	
Section 94 Contributions The form of the Section 94 Contribution for each building within the development will be either a monetary contribution or work in kind to be negotiated with the approval authority in accordance with the Section 94 Plan applying at the time. The Section 94 contributions will be made prior to the issue of the Occupation Certificate in respect of each building.	A works in kind agreement has not been negotiated with Council. Accordingly, a condition of consent will be imposed requiring a monetary contribution. This will be in accordance with Council's Section 94 Contribution Plan. Condition 82 has been imposed on the consent.
Dedication of New Access Road Construction of a Type 3 road which is to be dedicated to Council prior to the issue of the final Occupation Certificate for the 5 th building of the development.	Part of this application includes the construction of the new access road. This road will not however be dedicated to Council until the final Occupation Certificate for Building E. This will be a matter for a future application for Building E. However, as the road is being constructed with these buildings conditions have been imposed to advise the applicant of Council's requirements before the road is dedicated to Council. (See condition number 17 and 56).
Road Works The Type 3 road is to be constructed in accordance with the following dimensions: • 2 x 3m wide travelling lanes. • 2.5m wide parking lane on the northern side of the road. • 3.8m wide verge with footpath and landscaping on each side of the road. • A turning head at the western end of the road. The road construction is to correspond to the staged construction of the residential development.	The applicant has submitted plans which satisfy Council's requirements in terms of the width of the road. These plans also detail the public domain required for the Type 3 road. The plans fail to address all aspects of the Macquarie Park Public Domain Manual so a condition has been imposed to require further plans to be submitted. (See condition number 34). This matter has been the subject of continued discussion with the applicant.
Parking Provisions Parking is to be provided at the following rates: • 1 space per 1 or 2 bedroom unit. • 1 space per 6 units for visitors. In addition 3 car spaces on street are to be designated for car share parking. Car parking numbers are to be determined for each application.	The development proposes 229 apartments consisting of 1 and 2 bedroom apartments. Accordingly, the development is required to provide 229 resident car spaces and 38 visitor car spaces. The development complies with this requirement. A condition has been imposed on the consent to ensure compliance with this requirement. (See condition number 12).
Environmental Sustainability	The applicant has submitted a BASIX Certificate for each of the buildings.

The buildings are to be designed in accordance with the requirements of SEPP (BASIX).	Appropriate conditions will be imposed requiring compliance with the BASIX commitments as detailed within the Certificate. (See condition number 4).
Flora and Fauna The applicant agrees to the following: • Creating a riparian corridor along University Creek, including a 10m core riparian zone and a 10m vegetation buffer on the SE side of the creek, free from development. • Regeneration of core riparian zone and vegetation buffer, in accordance with the VMP. • Allow for temporary tree protection measures during construction as outlined with the VMP. • Hand trenching within the safety exclusion zones with a 12m radius x truck diameter at breast height to specific areas of the site, as outlined in the Arborist Report.	The applicant has provided a landscape plan which demonstrates the revegetation of the riparian zone including 10 metres on either side of the creek. The revegetation of the riparian zone will be in accordance with the Management Plan. (See condition number 2). A condition of consent has been imposed to ensure that the tree protection measures as outlined in the Tree Report prepared by Treescan Urban Forest Management are imposed. This will ensure the protection of those trees to be retained on the site. (See condition number 51).
Vegetation Management The applicant agrees to the following: • Preparation of a long-term management plan for the riparian corridor to be maintained in perpetuity. • Install and maintain sediment and erosion control measures prior to commencing work on each building. • Revegetation of the riparian corridor with locally indigenous species. • Implementation of a monitoring program for the weed removal and vegetation regeneration works that will commence at establishment of regeneration works and continue for the duration of the maintenance period. • Implementing the biodiversity offset strategy in Addendum 1 to the VMP.	The Vegetation Management Plan (VMP) includes a number of commitments for the revegetation and restoration of the riparian corridor and on going maintenance and monitoring program for 2 years. A condition of consent will be imposed to ensure that the recommendations of the VMP are implemented. (See condition number 2, 57 and 83). At the end of this 2 year period certification will be provided to demonstrate that the works in the riparian zone have been completed. The riparian zone will form part of Community Title property and will be maintained by the Community Association. The Community Association will most likely appoint an external landscape contractor for the maintenance of the riparian corridor and other landscaped areas of the site.
Crime Management and Safety The applicant has agreed to implement the following measures: • All street entries will have appropriate levels of lighting. • Lighting will be provided along the shared pedestrian/cycleway between Buildings B and C. • Where required, AS1158.3.1:1999 "Road	Many of these matters are demonstrated on the architectural and civil plans. Other matters have been addressed with conditions of consent. The matters that have not been addressed include: • Lighting to be provided along the shared pedestrian/cycleway between Buildings B and C. This matter was addressed as a condition on the consent for Building B. • A boundary fence to be provided along

Lighting” will be complied with. • The building entrances will be visible from the street and will not be obscured by landscaping. • Construction fencing will be erected along the southern side of the new internal street to secure the site in accordance with workplace safety requirements. • A boundary fence to be erected along the shared boundary with Macquarie University to ensure there is a clear delineation of space between the properties as well as to provide secure private domain areas for residents on site. • Access into the basement car parks to be controlled by installing physical barriers. • Pedestrian access to the building will be clearly defined by a direct pathway from the street. Access into the buildings to be controlled by electronic pass security devices and intercom for visitors. • The private open space to be secured from the public domain through landscape planting and fencing. • A maintenance program to be developed for each building. • Hardwearing materials to be utilised to minimise opportunities for vandalism.	the shared boundary with Macquarie University. The purpose of the fence was to provide secure private domain areas for the residents as well as a clear delineation of space between the properties. The applicant does not propose to provide this fence. The applicant has advised that the boundary between the site and the University will be clearly delineated by a change in levels between the University site and the subject site. The landscaping plan however does not show the clear delineation of the levels of land. As this was a statement of commitment by the applicant and was included as part of the Concept Plan Approval, it is proposed to include this as a condition. The condition however has been written in a way so that if Macquarie University advises the applicant in writing that they have no objections to the fence not being provided, it would not be necessary to provide the fencing. (See condition number 25).
Drainage and Stormwater The applicant agrees to install a stormwater management system in accordance with the plans prepared by Taylor Thomas Whitting. This is to include: • Stormwater pipe infrastructure within the new road. • Detention, re-use tanks and gross pollutant traps. • Stormwater collected to be discharged into University Creek and to pass through a first flush bioswale treatment system to filter low-flow discharge before being discharged.	The applicant has submitted civil plans which comply with this requirement.
Geotechnical and Groundwater Management The applicant agrees to the following: • All excavated material to be disposed of in accordance with current waste	These matters are all addressed by either conditions of consent or satisfying the requirements of the BCA with the exception of the last point relating to groundwater seepage. NSW Office of Water advised that

classification guidelines. • Temporary and permanent batter slopes to be designed in accordance with the Geotechnical Investigation report. • All footings to be inspected by a geotechnical engineer. • During construction, groundwater seepage to be controlled by perimeter drains connected to a 'sump and pump' dewatering system.	the geotechnical report submitted with the application did not indicate whether groundwater would be encountered or if dewatering would be required. Should additional investigations encounter significant qualities of groundwater, then the NSW Office of Water may require an authorisation to be obtained to permit dewatering as part of the development. NSW Office of Water have advised that the proposal must not incorporate the provision for the permanent or semi-permanent pumping of groundwater seepage from below-ground areas. A condition of consent has been imposed to reflect this requirement. (See condition number 10).
Construction Management The applicant is to prepare a Construction Management Plan prior to the issue of any Construction Certificate.	A condition of consent will be imposed to ensure a Construction Management Plan is submitted and approved by Council prior to the issue of any Construction Certificate. (See condition number 38).

7. APPLICABLE PLANNING CONTROLS

The following planning policies and controls are of relevance to the development:

- Section 5A of the Environmental Planning and Assessment Act, 1979
- State Environmental Planning Policy (Major Developments) 2005
- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development
- State Environmental Planning Policy (Building Sustainability Index: BASIX)
- State Environmental Planning Policy (Infrastructure) 2007
- Deemed SEPP – Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Ryde Local Environmental Plan 2010
- Draft Ryde Local Environmental Plan 2011 and
- Ryde Development Control Plan 2010.

8. PLANNING ASSESSMENT

8.1 Section 5A of the Environmental Planning and Assessment Act 1979

The applicant has provided a Flora and Fauna Assessment Report from Total Earth Care Pty Ltd. The following findings have been made in respect of the report:

- The property adjacent to the subject site contains Sydney Turpentine Ironbark Forest (STIF) which is identified as an Endangered Ecological Community. An Assessment of Significance under the EP&A Act has concluded that there is unlikely to be a significant impact on the STIF as a result of the proposal provided precautionary measures to protect the area are implemented during construction. This includes the use of temporary fencing to be installed around the construction area and machinery or materials storage areas to eliminate the potential for accidental damage to the STIF adjacent to the subject site. A condition of consent will be imposed to ensure that the protection measures as contained in the Tree Report prepared by Treescan are implemented. (See condition number 51).
- One endangered plant species was recorded on the site. This is a Wallangarra White Gum. This species does not occur naturally within the Sydney Basin and the tree is a planted specimen. The proposed development will have no impacts on this tree.
- One threatened fauna species was observed flying over the site during nocturnal surveys. This was a Grey-headed Flying Fox. The development will result in the removal of a few potential feed trees however this will be offset by the retention and enhancement of vegetation within the riparian zone, with an overall improvement of the habitat quality of the site in the long term.

The report has concluded that *“the potential impacts will not have a significant impact on the STIF and that a Species Impact Statement is not required. This report as well as the Vegetation Management Plan details actions to be taken to avoid, mitigate and compensate unavoidable impacts on flora and fauna species by improving or maintaining biodiversity values overall on the subject site, particularly by detailing measures to protect and rehabilitate the higher quality riparian zone habitat within the University Creek corridor that occurs on the site and connects with adjoining plant communities.”*

The above findings have been supported by Council’s Landscape Architect.

8.2 State Environmental Planning Policy (Major Developments) Amendment 2011

On 13 May 2011, State Environmental Planning Policy (Major Development) 2005 (SEPP Major Development) was amended by State Environmental Planning Policy (Major Development) Amendment 2011 (SEPP Amendment). The changes meant that proposals for residential, commercial and retail development or for coastal subdivision that were within the classes formerly included in the SEPP Major Development will now require a development application to be lodged with Council for assessment and determination under the appropriate provisions of Part 4 of the EP&A Act. Accordingly, it was necessary to lodge the DA for Buildings C and D.

In assessing development under Part 4 where there is an approved Concept Plan, the provisions of the SEPP Amendment will be relevant under section 79C of the EP&A Act.

In particular, the SEPP provides that, where there is an approved Concept Plan:

- Development within the terms of the Concept Plan can be carried out with consent.
- The development standards in the Concept Plan will have effect.
- A consent authority must not grant consent unless the development is generally consistent with the provisions of the Concept Plan Approval.
- Consent can be granted without complying with the requirements under any relevant environmental planning instrument or masterplan.

The proposal is generally consistent with the approved Concept Plan.

8.3 State Environmental Planning Policy (State and Regional Development) 2011

As the proposed development has a Capital Investment Value of \$59,370,593, the development application is required to be determined by the Joint Regional Planning Panel.

8.4 State Environmental Planning Policy No 55 – Remediation of Land

The requirements of State Planning Policy No. 55 – Remediation of Land apply to the subject site. In accordance with Clause 7 of SEPP 55, Council must consider if the land is contaminated, if it is contaminated, is it suitable for the proposed use and if it is not suitable, can it be remediated to a standard such that it will be made suitable for the proposed use.

A Phase 2 Contamination Assessment prepared by JBS Environmental Pty Ltd dated April 2012 was submitted with the development application. The report concludes as follows:

Based on the findings of the JBS Investigation the following conclusions are made:

- *The site in its current condition is considered suitable for the intended mixed residential with minimal soil access and commercial (retail) land uses without further investigation or need for long-term site management.*
- *Appropriate site management controls successfully implemented during development of the site for the intended landuses will adequately manage any unexpected finds through appropriate unexpected finds protocols.*

Council's Environmental Health Officer has raised no objections to this development subject to a condition of consent. (See condition number 67).

8.5 State Environmental Planning Policy (Infrastructure) 2007

Clause 104 Traffic Generating Development

Given that the development contains more than 200 car parking spaces, it is considered to be a traffic generating development. Before determining a DA for which this clause applies, the consent authority must:

- Take into consideration any submission that the RTA provides in response to that notice within 21 days after the notice was given (unless before the 21 days have passed, the RTA advises that it will not be making a submission), and
- Take into consideration any potential traffic safety, road congestion or parking implications of the development.

RMS (Formerly RTA) has advised that they raise no objections to the proposed development.

The issues in terms of potential traffic safety, road congestion and parking implications have been considered elsewhere in this report.

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

The development is identified under the Environmental Planning and Assessment Regulation 2000 as a BASIX Affected Building. As such, a BASIX Certificate has been prepared (No. 406083M and 407522M dated 3 July 2012) which provides the development with a satisfactory target rating.

Appropriate conditions will be imposed requiring compliance with the BASIX commitments detailed within the Certificate. (See condition number 4).

8.7 State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development

This policy aims to improve the design quality of residential flat development in NSW. It recognises that the design quality of residential flat developments is of significance for environmental planning for the State due to the economic, environmental, cultural and social benefits of high quality design.

The proposal has been assessed against the following matters relevant to SEPP 65 for consideration:

- Urban Design Review Panel;
- The 10 SEPP 65 Design Quality Principles; and
- The NSW Residential Flat Design Code guidelines.

Urban Design Review Panel

Council's Urban Design Review Panel reviewed the preliminary proposal on 3 August 2011. The Panel's comments have been detailed below. The comment provided by the Panel have been included in italics.

The Panel are generally supportive of the proposal. The form and massing is considered acceptable.

Ground Floor Plan

The Panel is concerned about the functionality and appearance of the ground plane between the two buildings. The architectural plans and the landscape plans do not match. In the architectural plans the desire line and sight line to the Building D entrance is slightly mis-aligned, such that a pedestrian on the street footpath who has just crossed the vehicle entry to Building C will have his or her view to the front door of Building D blocked by the proposed new landscaping. The landscape architect's drawing retains these view lines.

The Panel recommends that the whole area between the path to the main entry of Building D and the south west boundary (where three large trees are shown) be re-planned to:

- Provide a service/garbage/moving vehicle parking area and bin storage, with suitable screening and a pergola or similar roofed structure above the bin area so that it is not overlooked from units above.*
- Provide clear pathways for pedestrian access without loading and garbage obstructions.*
- Improve sight lines along the footpath to Building D, including location of fire hydrant boosters on axis with the footpath.*

Comment: The plans have been amended to improve the entry to Building D.

The Panel also recommends that if the footpath outside the bedroom of Unit D0009 is at the same level as the unit floor level, some landscaped separation between the bedroom window and the path should be provided.

Comment: The pathway is not at the same level as the floor level of the unit. The path is 0.8 metres below the floor level of the unit. The bottom of the window sill will be higher than eye height of someone standing on the pathway. Landscape separation is not considered necessary.

Unit Plans and Amenities

The Panel notes the following concerns and suggestions in relation to units design:

- Building C has two slots between the 01 and 02 unit line and the 11 and 12 unit line which runs up the full height of the building to provide light and air to bedrooms set deep within the building. These slots are too deep to provide good light and air. It is recommended that the 01 unit and the 12 unit be "flipped" so that bedrooms adjoin and the slot is substantially reduced in depth.*

Comment: The applicant has made no changes to the building slots. The units that rely on the slots are units 3 and 12 on each floor as demonstrated in the following diagram.



Figure 6. The above floor plan illustrates the slot that the Urban Design Review Plan have raised concerns with. This slot affects units 3 and 12 on the each floor.

The applicant has argued that the slots will provide privacy to the dwelling as well as ventilation. The Panel was suggesting that the configuration of the apartments could be changed so that these slots are reduced in size. This however may have an adverse impact on privacy. While it is agreed with the Panel that the ventilation to the rooms adjacent to the slot will be limited, it is acknowledged that each of the affected apartments are cross ventilated and have a dual aspect combined with a size that will allow flexibility in terms of layout. The slot also adds the articulation to the elevation. A change as suggested by the Panel would also increase the floor space resulting in the floor space exceeding the maximum permitted by the Concept Plan Approval. In these circumstances, no objections are raised to the retention of the slot.

- *Building D has a slot between the 01 and 02 unit line which run up the full height of the building. This slot is again too deep to provide good light and air to be bedrooms it serves. It is recommended that the planning of these units be re-examined to see if it is possible to reduce the depth of the slot.*

Comment: The apartment affected by this slot is apartment 2 on each level. The applicant has made no change to this building slot. For the same reasons as detailed above, no objection is raised.

- *Bedroom windows on the end walls of both buildings (the 03 and 10 unit lines in Building C and the 05 and 09 lines in Building D) are too small and high level which will not provide good amenity. The windows should be enlarged.*

Comment: The applicant originally increased the size of the bedroom window in unit 10 of Building C of each level. However, concerns were raised in terms of amenity for this room as the separation distances are less than required by the RFDC in respect of Buildings B and C. Accordingly, the high level window was retained at the request of the Assessment Officer.

The windows in the bedrooms of Building D have been amended to ensure acceptable sizes.

- *Internal studies in the 05, 06, 07, 08, 09 and 12 unit lines in Building C and 06, 07 and 08 lines in Building D appear to be capable of conversion into internalised bedrooms. This would result in an unacceptable internal amenity level. It is recommended that these unit plans be adjusted, possibly incorporating additional storage space to address this concern.*

Comment: The current plans have deleted the built in wardrobe and have proposed a fixed media desk in the spaces where the Panel have raised concerns. Although this may not prevent future tenants from converting this space into a bedroom, it is clear that the intent of this space is to be a study rather than a bedroom. No objections are raised to this solution.

Solar performance – NW Façade Building D

The Panel is concerned about the penetration of afternoon summer sun into the units adjoining the northwest façade of Building D (05, 06, 07, 08 and 09 lines). Assuming that detailed solar studies confirm this concern, fixed and or sliding/adjustable louvres are to be provided to all windows and balconies.

Comment: No changes have been made to the plans. The north west elevation also takes advantage of the views of the riparian zone and open space in the vicinity of the creek. The applicant has advised that the apartments satisfy the BASIX requirements and that any glare reductions could be addressed with curtains or blinds. As the proposed development is consistent with the Concept Plan Approval, no objection is raised.

Building Façade Articulation and Roof

The Panel is concerned that the proposed composition and articulation of some building facades and corners results in a perceived scale which is excessive for a residential building in this context. The concern is primarily with Building C, as seen in the right hand perspective on drawing DA09-001. Reducing the vertical interval of the continuous balustrade/spandrel beam from three stories to two stories may help address this concern.

The protruding flat roofs as seen in the perspectives on drawing DA09-001 also contribute to a sense of assertiveness which is not appropriate in this situation. Appropriate sun shading and weather protection to the top floor could be achieved in other smaller scale ways. It is understood that the Applicant's architects intend to further develop the roof form and the Panel supports this effort.

Comment: The applicant has not introduced any changes. Figure 7 illustrates the perspective that the Panel raised concerns with.



Figure 7. The above illustrates the perspective that the Urban Design Review Panel raised concerns with.

The intent of the facades in the current DA is to provide differences between the already approved buildings and the current proposal while the proposed development still complements the approved buildings. The applicant is of the view that reducing the balustrade/spandrel beams from 3 to 2 level intervals would have limited effect on the perceived bulk and scale and as such is not necessary. This issue was not raised in respect of any other of the perspectives presented to the Panel. It should also be noted that the perspectives are not necessarily proportionally correct. As the building is not located on a major street, such as Herring Road, the change is not considered warranted.

The roof projection is similar to what occurs on Building A and is also consistent with the Concept Plan Approval. No objection is raised to the roof form as proposed.

Communal Open Space

The Panel encourages the inclusion of low impact uses (ie seating, picnic tables, walking paths) within the riparian corridor and its vegetated buffer. It is important for the space to be integrated into and connected with the overall communal space and pathway system within the development to ensure it is appropriately maintained and valued. The Applicant noted this was the intent. However, it needs to be documented within the landscape plans.

Comment: The landscaping plan does not show any seating, picnic tables or walking paths in the riparian zone. The Concept Plan Approval required this area to be revegetated in accordance with the Vegetation Management Plan submitted for the site. This has been reflected on the landscaping plan. The

development does however connect this area with the overall community space. Conditions of consent have been recommended to ensure that the revegetation works occur in the riparian zone. The riparian zone will form part of Community Title property and will eventually be maintained by the Community Association.

SEPP 65 Design Quality Principles

There are 10 design quality principles identified within SEPP 65. The following table provides an assessment of the development proposed against the 10 design principles of the SEPP.

Planning Principle	Comment	Comply
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.	Contextually, the buildings are part of the five residential building envelopes approved by the Department of Planning under Part 3A. The proposed development is located adjacent to Macquarie University, in close proximity to the Macquarie Shopping Centre and the railway station with residential flat buildings of three to four storeys high to the south and east. Macquarie University, which abuts the northern boundary of the site, has a Concept Plan Approval for additional commercial and educational floor space with student accommodation with maximum building height of up to 28 storeys. The height of this development is consistent with recent approvals by the Department of Planning.	Yes
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 Concept Plan Approval for the residential buildings set the parameters in terms of scale and height. The proposed buildings are consistent with these controls. The future character of the area for medium to high density development has been established by the Macquarie University Concept Plan which range in height between 5 to 28 storeys. The height of this development provides a suitable scale transition between the taller buildings located to the north (Macquarie University) and lower developments to the south and east.	Yes
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	The built form is considered appropriate for the site and proposed use. The facades of the building will provide visual interest as well as articulation.	Yes

Planning Principle	Comment	Comply
of building elements.		
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 proposed residential density, being 229 units is considered appropriate. The site is located within the Macquarie Park Corridor with close access to retail/commercial and educational facilities and walking distance to public transport. The proposal therefore maximises residential density in relation to established facilities/services.	Yes
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 applicant has provided two BASIX Certificates (No. 406083M, 407522M both dated 3 July 2012) which indicates that the residential component of the buildings will meet the energy and water use targets set by the BASIX SEPP. A waste management plan has been submitted and is considered acceptable by Council's EHO. The design has also ensured the development will comply with the passive solar design principles, soil depth, cross ventilation and reuse of water as provided in the Residential Flat Design Code.	Yes
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 existing site's natural and cultural features in responsible and creative ways. It enhances the development's natural	The landscape design for Building C and D provides areas for communal open space for the occupants of the buildings. A range of plantings is proposed and considered suitable for the proposed use. The landscaping will also soften the appearance of the development. Planting within the front setback will breakdown/soften the development when viewed from the new road. The development has also proposed the	Yes

Planning Principle	Comment	Comply
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 useability, privacy and social opportunity, equitable access and respect for neighbours' amenity, and provide for practical establishment and long term management.	revegetation works within the riparian zone.	
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 design and orientation of the apartments allows for a sufficient level of amenity for occupants of the flat buildings and residents of surrounding properties. Apartments are practically laid out to provide for solar access, private open space, storage space and to minimise overlooking and noise impacts. The development complies with the controls contained in the Residential Flat Design Code in respect to apartment sizes, access to sunlight, ventilation, visual and acoustic privacy, storage layout and access requirements.	Yes
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	The proposal makes a positive contribution with respect to safety and security. Passive surveillance opportunities are provided with balconies and windows facing the new road and the communal open space areas. Entrance points are clearly identified and public and private space is clearly delineated through secure entrances and the use of perimeter planting.	Yes

Planning Principle	Comment	Comply
private spaces.		
Social Dimensions and Housing Affordability Good design responds 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 development will include the following housing mix: • 187 x 1 bedroom apartments; • 42 x 2 bedroom apartments. The development predominantly contains 1 bedroom apartments. Given that the site is located adjacent to Macquarie University this is considered appropriate. The smaller size apartments will provide for a range of affordable/student accommodation, addressing the need for provision of economic housing choice within an area with good public transport access, social and commercial facilities. Adaptable units are also proposed.	Yes
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 building aesthetics are considered appropriate. The development presents a contemporary design which is compatible with the existing approvals for Buildings A and B. The buildings have a distinctive back and front appearance with indentations to provide architectural interests.	Yes

Residential Flat Design Code

The SEPP also requires the Council to take into consideration the requirements of the Residential Flat Design Code. These matters have been raised in the following table.

Primary Development Control and Guidelines	Comments	Comply
Part 01 – Local Context		
Building Height Where there is an existing floor space ratio (FSR), test height controls against it to ensure a	Both buildings exceed the maximum height of 21.5m permitted under RLEP 2010. Buildings C and D have a height of 36.7m and 30.4m respectively. The maximum RL	No. Variation Acceptable.

Primary Development Control and Guidelines	Comments	Comply
good fit.	of both buildings will not exceed the building height stipulated under the approved Concept Plan. Based on the Concept Plan, the height of the buildings is considered to be satisfactory.	
Building Depth In general, an apartment building depth of 10-18 metres is appropriate. Developments that propose wider than 18m must demonstrate how satisfactory day lighting and natural ventilation are to be achieved.	The building depth is as follows: Building C – 17m to 22.4m Building D – 18.4m to 23.2m Although the buildings exceed the maximum building depth, they do not exceed the maximum depth permitted by the Concept Plan. Both buildings will provide satisfactory daylight and natural ventilation. These aspects are discussed in greater detail further in the report. As these aspects are satisfactory, no objection is raised to the variation.	No. Variation acceptable
Building Separation Building separation for buildings 5 to 8 storeys should be: -18m between habitable rooms / balconies -13m between habitable / balconies and non-habitable rooms -9m between non-habitable rooms. Building separation for buildings 9 storeys and above should be: -24m between habitable rooms/balconies -18m between habitable/balconies and non-habitable rooms -12m between non-habitable rooms. Developments that propose less distance must demonstrate that adequate daylight access, urban form and visual and acoustic privacy has been achieved.	Building separation has been considered for adjoining developments as well as buildings within the development. Building C and D is setback from the nearest building on the Morling College Site by 37m and 63m respectively. This distance will ensure adequate building separation. Building C and D are setback from the nearest building on the Dunmore Lang College site by at least 50m. The separation between the nearest building on the Macquarie University site and Building D is approximately 60m. The separation between Building C and approved Building B ranges from 13.468m to 15.768m. Where the development has proposed separation distances less than the recommendations of the RFDC, appropriate treatment has been provided to ensure adequate privacy is maintained. The separation between Building C and D ranges from 18.5m and 21.7m. This is considered to be adequate building separation.	No. Variation acceptable.
Street Setbacks Identify the desired streetscape character. In general, no part of the building should encroach into a setback area.	Both buildings will have a frontage to the proposed Type 3 road. Under the Ryde DCP 2010, the development is required to provide a 5m setback to this road. Building C is setback 7m to the road and Building D	Yes

Primary Development Control and Guidelines	Comments	Comply
	a minimum of 15m. Adequate planting will be provided in the setback to ensure the desired streetscape character.	
Side and Rear Setbacks Relate side setbacks to existing streetscape patterns. These controls should be developed in conjunction with building separation, open space and deep soil zone controls. In general, no part of the building should encroach into a setback area.	The Macquarie Park DCP requires the development to be setback 10m to the rear and 5m to the side boundaries. Based on the draft subdivision plan as contained in Figure 2, the front setback for Building C is to the new Type 3 road, the rear setback adjoins Dunmore Lang College and the side setbacks are adjacent to the lots for Building B and D. Building C complies with the required setbacks. Lot 8, which contains Building D doesn't have a traditional front setback due to its shape. Each of the boundaries can be considered as a side boundary. The building complies with the required setbacks of the DCP.	Yes
Floor Space Ratio Test the desired built form outcome against the proposed floor space ratio to ensure consistency with building height, building footprint, the three dimensional building envelope and open space requirements.	A maximum FSR of 2:1 is permitted on the site under RLEP. The development proposes a FSR of 2.02:1. This exceeds the Council's requirements however the proposal is consistent with the approval under Part 3A approval MP09-0195MOD 2.	No. Variation Acceptable.
Part 02 – Site Design		
Deep Soil Zones A minimum of 25% of the open space area of a site should be deep soil zone. Exceptions may be made in urban areas where sites are built out and there is no capacity for water infiltration.	The site has provided approximately 40% of the site area as deep soil. This is located within the rear 40m vegetation buffer to the creek and side setbacks. The development exceeds the requirements of the RFDC.	Yes
Fences and Walls Fences and walls are to respond to the identified architectural character for the street and area. They are also to delineate the private and public domain without compromising safety and security.	Minimal fencing or walls are proposed. Walls will be provided to screen the terrace areas of the apartments located on the lower ground floor of both buildings. These walls will delineate the private and public domain and are not likely to impact on safety or security. Adequate landscaping has been provided near the walls to soften the appearance of the walls.	Yes
Landscape Design Landscaping is to improve the amenity of open spaces as well as contribute to the streetscape character.	The landscape design is a continuation of the landscaping already approved on the site in the vicinity of Buildings A and B. Communal open space is proposed between Buildings C and D with appropriate landscaping provided. Landscaping will be added to the riparian zone which will also	Yes

Primary Development Control and Guidelines	Comments	Comply
	add to the landscape character of the site. The landscaping will also contribute to the streetscape character.	
Open Space The area of communal open space required should generally be at least between 25% and 30% of the site area. Where developments are unable to achieve the recommended communal open space, they must demonstrate that residential amenity is provided in the form of increased private open space and/or in a contribution to public open space.	The development has proposed a minimum of 40% of the site as landscaped area. The open space consists of communal open space between buildings as well as open space at the rear of the site in the vicinity of the creek. In addition, each apartment has been provided with a private balcony that will also enhance residential amenity.	Yes
Orientation Optimise solar access to living areas and associated private open spaces by orientating them to the north and contribute positively to the streetscape character.	Where possible the development has orientated as many units and balconies as possible to the north. The development complies with the solar access provisions of the RFDC.	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: • Shrubs - minimum soil depths 500 - 600mm	The landscape architect has confirmed that the development will comply with the required soil depth as identified in the RFDC.	Yes
Stormwater Management Reduce the volume impact of stormwater on infrastructure by retaining it on site.	The development has been assessed by Council's Development Engineer and is considered to be satisfactory subject to a number of conditions of consent. (See condition numbers 40, 41 and 42).	Yes
Safety Optimise the visibility, functionality and safety of building entrances. Improve the opportunities for casual surveillance and minimise opportunities for concealment.	Public and private space is clearly delineated through the use of fencing and landscaping elements. The proposed development is considered acceptable with respect to safety. The design provides for adequate passive surveillance of the streets, landscaped areas and communal spaces. Appropriate access control is provided throughout various parts of the development including the residential lobbies and the secure parking areas.	Yes

Primary Development Control and Guidelines	Comments	Comply
	Conditions of consent have been included to reflect appropriate safety and security measures. (See condition numbers 72, 73, 74, 75, 76, 77, 78, 79, 80 and 81).	
Visual Privacy The building separation requirements should be adopted.	Where the development does not comply with the required building separation requirements, the design has incorporated adequate measures to ensure that visual privacy will be retained. These measures include ensuring that the balconies/windows are offset to each other, screening to balconies and use of high sill windows.	Yes
Building Entry Ensure equal access to all. Developments are required to provide safe and secure access. The development should achieve clear lines of transition between the public street and shared private, circulation space and the apartment unit.	The development will provide equitable as well as safe and secure access to both buildings. The use of landscaping and fencing will ensure that the development will provide clear lines of transition between public and private areas.	Yes
Parking Determine the appropriate car parking numbers. Where possible underground car parking should be provided.	The Concept Plan Approval required car parking to be provided at the following rate: • 1 space per dwelling with 1 or 2 bedrooms; • 1.6 space per dwelling with 3 or more bedrooms; and • 1 space per 6 dwellings for visitors. A total of 229 apartments consisting of 1 and 2 bedrooms are proposed. The development is required to provide 229 resident car spaces and 38 visitor car spaces. The development complies with this requirement. All of the parking is located in basements.	Yes
Pedestrian Access Provide high quality accessible routes to public and semi-public areas of the building and the site. Maximise the number of accessible, visitable and adaptable apartments in the building.	The development will incorporate accessible routes in respect of the public areas. In addition, accessible access has been provided through out the development. The development has provided 23 adaptable apartments. This number complies with Council's DCP requirements.	Yes
Vehicle Access To ensure that the potential for pedestrian/vehicle conflicts is minimised. The width of driveways should be limited to 6 metres. Vehicular entries should	Vehicular access to both buildings is located from the new road adjacent to Building C. This is consistent with the Concept Plan Approval MP09_0195 MOD. 2. Council's Engineers have raised no objection to the location of the vehicular	Yes

Primary Development Control and Guidelines	Comments	Comply
be located away from main pedestrian entries and on secondary streets.	access point.	
Part 03 – Building Design		
Apartment Layout Single aspect apartments should be limited in depth to 8m from a window. The minimum sizes of the apartments should achieve the following; Studio – 38.5m ² 1 bedroom – 50m ² 2 bedroom – 70m ² 3 bedroom – 95m ²	All of the apartments exceed the minimum requirements. In Building C the apartment sizes are: • 1 bedroom apartment – 50m² to 70m². • 2 bedroom apartment 78m² to 89m². In Building D the apartment sizes are: • 1 bedroom apartment – 50m² to 71m². • 2 bedroom apartment 78m² to 82m². All kitchens are within 8m from a window or opening.	Yes
Apartment Mix The development should provide a variety of types.	Building C will contain 123 x 1 bedroom apartments and 26 x 2 bedroom apartments. Building D will contain 64 x 1 bedroom apartments and 16 x 2 bedroom apartments. Council's controls do not require a particular mix of apartment sizes. The mix as proposed will provide a variety of unit sizes within the development as well as the smaller sized apartments providing affordable student accommodation.	Yes
Balconies Where private open space is not provided, primary balconies with a minimum depth of 2 metres should be provided.	Each apartment is provided with a primary balcony that is accessed from the main living areas of the apartments. All balconies have a minimum depth of 2 metres.	Yes
Ceiling Heights The following recommended dimensions are measured from finished floor level (FFL) to finished ceiling level (FCL). • in general, 2.7m minimum for all habitable rooms on all floors, 2.4m is the preferred minimum for all non habitable rooms, however 2.25m is permitted.	Floor to ceiling heights are at least 2.7 metres for all residential dwellings.	Yes
Flexibility Provide apartment layouts which accommodate the changing use of rooms.	Both Buildings C and D include apartments with different layouts. These layouts are all generally flexible and will accommodate the changing use of rooms. Building C will contain 14 adaptable apartments and Building D will contain 9 adaptable apartments.	
Ground Floor Apartments Optimise the number of ground floor apartments with separate	All of the lower ground floor and ground floor apartments have access from a common entry rather than a separate entry.	Yes

Primary Development Control and Guidelines	Comments	Comply
entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site.	This is consistent with the Concept Plan Approval. At least 4 apartments on the ground floor and lower ground floor are adaptable apartments.	
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. Increase amenity and safety of circulation spaces by providing generous corridor widths and ceiling heights, appropriate levels of lighting including the use of natural daylight.	The number of apartments that will be accessed off a lift corridor in Building C and D will be 11 and 9 respectively. Despite the development not complying with the control, the corridors are able to demonstrate a high level of amenity with natural light being available to each corridor and the width of the corridors being 1.5m. No objection was raised by Council's Urban Design Review Panel.	No. Variation acceptable
Mixed Use The development is to choose a mix of uses that complement and reinforce the character, economics and function of the local area. The development must also have legible circulation systems.	Building C and D is entirely residential. This is consistent with the Concept Plan Approval. Given the location of the site adjacent to Macquarie University, this is considered appropriate.	Yes
Storage In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: • studio apartments - 6.0m ³ • one-bedroom apartments - 6.0m ³ • two-bedroom apartments - 8.0m ³ 50% of the above areas may allocated within each respective apartment while the remaining 50% is to be located within the car parking area.	Storage is provided in the unit as well as the basements. The development complies with the requirements of the RFDC.	Yes
Acoustic Privacy Apartments within a development are to be arranged to minimise noise transitions.	An Acoustic Report has been submitted which demonstrates that the building will achieve adequate acoustic privacy. The report has identified that at this stage no review has been undertaken of the mechanical plant items as details are not known at this stage. The report has recommended that a review of the mechanical plant should be undertaken at the Construction Certificate stage to determine if any acoustic treatments is	Yes

Primary Development Control and Guidelines	Comments	Comply
	required to ensure that the plant noise operates at an appropriate criteria. This has been imposed as a condition of consent. (See condition number 24).	
Daylight Access Living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of three hours direct sunlight between 9.00am and 3.00pm in mid winter. In dense urban areas a minimum of two hours may be acceptable. Limit the number of single aspect apartments with a southerly aspect to a maximum of 10% of the total units proposed.	Given the heights of the buildings approved under the Concept Plan, the site is considered to be in a dense urban area. 70% of apartments in Building C will receive at least 2 hours of direct sunlight. 78% of apartments in Building D will also receive direct sunlight. There are no single aspect apartments with a southerly aspect in Building D. Building C however contains 34 apartments with a southerly aspect. This equates to 14.8% of total apartments with a single southerly aspect. Given the approved Concept Plan and the orientation of the site, this cannot be avoided. No objection is raised to this variation.	No. Variation acceptable.
Natural Ventilation Building depths which support natural ventilation typically range from 10 to 18 metres. 60% of residential units should be naturally cross ventilated. 25% of kitchens should have access to natural ventilation.	Building C has naturally cross ventilation to 57% of the apartments. Building D proposes 66%. This equates to 61% of the apartments being naturally cross ventilated. Approximately 35% of the kitchens will have access to natural ventilation.	Yes
Awning Awnings are to encourage pedestrian activity on streets by providing awnings to retail strips.	The development does not propose any awnings on the buildings. This is consistent with the DCP for Macquarie Park.	Yes
Facades Facades are to be of appropriate scale, rhythm and proportion which responds to the building's use and the desired contextual character.	The design of the facades incorporates a number of different building elements including recessed balconies, louvres, slots and glazed balustrades. The building finishes will be rendered masonry/concrete with paint finish. The majority of the paint finish has a neutral colour palette however the development incorporates a range of contemporary colours to each building which will add interest to each building as well as assisting in building identification. This will also enhance the aesthetics of the building when viewed from the public domain.	Yes
Roof Design Roof design is to relate to the desired built form as well as the size and scale of the building.	The roof is well integrated with the overall building design. Materials, colours and finishes of the roof and top floor complement the overall aesthetics.	Yes
Energy Efficiency	The energy efficiency of the buildings is	

Primary Development Control and Guidelines	Comments	Comply
Incorporate passive solar design techniques to optimize heat storage in winter and heat transfer in summer. Improve the control of mechanical space heating and cooling.	consistent with the requirements under BASIX.	
Maintenance The design of the development is to ensure long life and ease of maintenance.	The proposal is considered to be acceptable in terms of building maintenance.	Yes
Waste Management A waste management plan is to be submitted with the development application.	A Waste Management Plan has been submitted with the DA.	Yes

8.8 Deemed State Environmental Planning Policy Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

Deemed SEPP Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 applies to the subject site and has been considered in this assessment.

The site is located within the designated hydrological catchment of Sydney Harbour and therefore is subject to the provisions of the above planning instrument. However, the site is not located on the foreshore or adjacent to the waterway and therefore, with the exception of the objective of improved water quality, the objectives of the planning instrument are not applicable to the proposed development. The objective of improved water quality is satisfied through compliance with the provisions of Part 8.2 of DCP 2010. The proposed development raises no other issues and otherwise satisfies the aims and objectives of the planning instrument.

8.9 Ryde Local Environmental Plan 2010

The following is an assessment of the proposed development against the applicable provisions from the Ryde Local Environmental Plan 2010.

Clause 2.3 Zone Objectives and Land Use Table

The site is zoned B4 – Mixed Use under Ryde LEP 2010. The use would be defined as a residential flat building. This use is permissible in the zoning with the consent of the consent authority.

The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone. The objectives for the B4 Mixed Use zone are as follows:

- To provide a mixture of compatible land uses.

- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To create vibrant, active and safe communities and economically sound employment centres.
- To create safe and attractive environments for pedestrians.
- To recognise topography, landscape setting and unique location in design and land-use.

The proposal meets the objectives of the zone though providing housing stock for a range of markets such as students and employees of the University and the Macquarie Park Corridor. The subject site is located within walking distance of bus services and retail and commercial services and is therefore considered to be a suitable location for this development. The development will provide active surveillance for residents and pedestrians with a walkway provided to Macquarie University.

Clause 4.3 Height of Buildings

The height of a building on this part of the site is not to exceed the maximum height of 21.5m.

Both of the proposed buildings significantly exceed the height control with Building C having a maximum height of 43m and Building D having a height of 31.4m. However the height of the buildings has already been approved as part of the Concept Plan Approval MP09_0195 MOD 2. In these circumstances consent can be granted without complying with the requirements of the RLEP 2010.

Clause 4.4 Floor Space Ratio

The floor space ratio of a building is not to exceed the maximum floor space ratio as specified on the Floor Space Ratio Map. The map identifies the site as having a 2:1 floor space ratio.

The development has proposed a FSR of 2.02:1. This slightly exceeds the Council's control however this requirement is superseded by the Part 3A approval. The modification to the Concept Plan Approval proposed a gross floor area of 10,755m² for Building C and 5,595m² for Building D. The development complies with these requirements.

Clause 5.10 (5) & 7 - Heritage Impact & Archaeological sites

Schedule 5 of RLEP 2010 lists the Macquarie University (Ruins) to the north of the site as a heritage item – local significant.

Council's Heritage Officer has confirmed that the proposal will have no impact on the heritage significance (as the ruins are located in the middle of the Macquarie University site, away from the subject site).

Clause 6.2 Earthworks

Development consent is required for the earthworks associated with the development. Before granting consent for earthworks, the consent authority must consider the following measures:

- The likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality.
- The effect of the proposed development on the likely future use or redevelopment of the land.
- The quality of the fill or the soil to be excavated, or both.
- The effect of the proposed development on the existing and likely amenity of adjoining properties.
- The source of any fill material and the destination of any excavated material.
- The likelihood of disturbing relics.
- Proximity to and potential for adverse impacts on any watercourse, drinking water catchment or environmentally sensitive area.

The proposed development includes excavation for a 3 level basement car park. Council's Development Engineer requires that a number of conditions be included on the consent to address engineering issues such as a sediment and erosion control plan to be submitted prior to the issue of a Construction Certificate. (See condition number 53).

The site is not known to contain any relics or any other item of heritage significance.

The development is considered satisfactory in respect of this clause.

Clause 6.6 Macquarie Park Corridor:

The site is located within the Macquarie Park Corridor and the objectives of the Macquarie Park Corridor are as follows:

- (a) To promote the corridor as a premium location for globally competitive businesses with strong links to the Macquarie University and research institutions and an enhanced sense of identity.
- (b) To implement the State Government's strategic objectives of integrating land use and transport, reducing car dependency and creating opportunities for employment in areas supported by public transport.
- (c) To guide the quality of future development in the corridor.
- (d) To ensure that the corridor is characterised by a high-quality, well-designed and safe environment that reflects the natural setting, with three accessible and vibrant railway station areas providing focal points.

- (e) To ensure that residential and business areas are better integrated and an improved lifestyle is created for all those who live, work and study in the area.

The proposal meets these objectives as it is consistent with the recent Concept Plan Approval for the site, which provides a mix of apartments to provide housing stock within the locality.

8.10 Draft Ryde Local Environmental Plan 2011

A Section 65 Certificate enabling the formal exhibition of Draft Local Environmental Plan 2011 was issued by the Department of Planning and Infrastructure on 23 April 2012. The Draft Plan is currently on public exhibition. Under this Draft LEP, the zoning of the property is B4 Mixed Use. The proposed development is permissible with consent within this zoning under the Draft LEP, and it is considered that the proposal is not contrary to the objectives of the Draft LEP or those of the proposed zoning.

8.11 City of Ryde DCP 2010

Council adopted City of Ryde DCP 2010 on 16 June 2009 and its provisions became effective on 30 June 2010. The following sections of DCP 2010 are relevant to the proposed development:

Part 4.5 of DCP 2010 – Macquarie Park Corridor

This part of the DCP provides a framework to guide future development in the Macquarie Park Corridor, North Ryde. The DCP specifies built form controls for all development within the Corridor and sets in place urban design guidelines to achieve the vision for Macquarie Park as a vibrant community, as a place to live, work and visit.

The DCP is divided into four sections. The first section is the structure plan and this sets out the broad framework for development within the Macquarie Park Corridor. The second section deals with special precincts and provides character statements, objectives and development controls for the areas. The third section of the DCP deals with controls applicable for the public domain. The final section contains controls in respect to the siting and planning design. The following table demonstrates the proposals compliance with these requirements.

Control	Comments
s3.0 – Structure Plan	
Street Network 1. Provide new public streets as shown in the Street Network Structure Plan. 2. New streets are to be dedicated to Council.	The Street Network Structure Plan requires new roads within the site which would have eventually connected up to existing roads and proposed roads in Macquarie University. The plan required 3 new local roads across the site.

Control	Comments
	However, due to the Concept Approval for Macquarie University, this street network cannot be achieved. The Department of Planning granted approval for one main access road on the site which terminates at the end of the site and a pedestrian/cycleway between Buildings B and C which will provide access and connectivity to the university. This DA includes the construction of half of the main road (the other half was approved under Project Application MP09_0218). The road will be dedicated to Council once the development of the whole site is completed. Council's Engineers have raised no objections to the design of this road subject to conditions that will be discussed further in the report.
Open Space Network 1. Provide public open space as shown in Figure 4.5.06 Open Space Network. 2. Refer to s5.1 for detailed information regarding the design requirements for each park. 3. Parks are to be in public ownership.	The site is not required to provide any public open space.
S4.0 – Special Precinct – Macquarie University Station Precinct	
S4.2.2 Public Domain	
Open Space 1. Existing trees are to be retained and protected, particularly within the College Creek Corridor.	The Concept Approval required the applicant to retain a riparian zone for a distance of 10m on either side of the creek. This has been achieved. The applicant has submitted a Tree Report which includes measures to be implemented that will protect the existing trees within the riparian zone during construction. An appropriate condition has also been included in the consent. (See condition number 57).
Site & Building Design Height 1. Development should comply with Figure 4.5.35 which indicates the maximum number of permissible storeys and supplements the height of buildings indicated on the Adopted LEP 2008 Height Controls (as per Adopted Amendment 1).	The building height indicated on the map is 8 storeys. Building C is part 12 and part 13 storeys and Building D is 9 storeys. This is consistent with the approval under Part 3A (MP09_0195 MOD 2).
Setback + Building Zone 1. Ensure that the critical building alignments shown in Figure 4.5.36 are provided. Critical building alignments are to be determined by setting out the minimum setback from the closest point to the	The development is required to provide a 5m minimum setback from the street boundary. Building C will be setback 7m from the new road and Building D will be setback a minimum of 15m. The development complies with this requirement.

Control	Comments
boundary along the street. This control is necessary to ensure a spatial consistency along streets in the context of irregular and unaligned property boundaries. At least 85% of the building frontage (on all levels) is to be built to this setback. 3. Underground carparking is not permitted to encroach into setback areas unless it can be demonstrated that the basement is designed to support significant mature trees and deep root planting. Refer to the Part Section Street Setbacks for setback controls on sites outside the area of this detail plan.	Underground car parking will encroach into this setback area. This is consistent with the Concept Plan Approval (MP09_0195 MOD 2). Despite the encroachment, planting will be provided in the setback area.
Public Domain Interface Vehicular Access + Parking 1. Driveways and vehicular crossings are not preferred along Herring Road, for the block south of Waterloo Road 2. Driveways and vehicular crossings are to be provided from secondary streets wherever possible. 3. Vehicle access should not ramp along boundary alignments facing a street or public open space.	Vehicular access is to be provided from the new road. This is consistent with the DCP requirements. The vehicular access will not ramp along the boundary alignment facing a street.
S5.0 Public Domain	
Type 3 Streets 1. Provide new Type 3 streets in accordance with street section and alignment details outlined in Figure 4.5.58. 2. Type 3 streets are defined by minimum 5m landscaped street setback. 3. Lighting, paving, street furniture and street tree planting are to be provided as required in the Macquarie Park Corridor Public Domain Technical Manual.	The applicant has submitted civil plans for the road construction. These plans are generally in accordance with Council's requirements as per the Macquarie Park Corridor Public Domain Technical Manual. The development has provided the minimum landscaped setback requirement. A condition of consent has been imposed to require the submission of further civil plans for this road prior to the issue of any Construction Certificate. (See condition number 34).
Cycle Strategy 1. Provide dedicated cycle access in accordance with Ryde Bicycle Strategy & Master Plan 2007. 2. Provide cycle/pedestrian paths as shown in Figure 4.5.78 of the Plan. 3. Provide lockable bicycle storage and end-of-trip facilities at train stations and within development.	The road is not identified as either a cycle or pedestrian path. Bicycle storage is proposed within the basement for 95 bicycles. This is consistent with Council's requirements.
Street Furniture, Paving and Street Lighting 1. Design and build streets in accordance with the details provided in the Macquarie Park Public Domain Technical Manual.	The applicant has submitted civil plans for the entire road construction. These plans are generally in accordance with the Macquarie Park Public Domain Technical Manual. The applicant has however been requested to

Control	Comments
2. Utilise paving materials, furniture and lighting standards as identified in the Macquarie Park Public Domain Technical Manual.	make some minor changes to the civil plans. It is proposed to include a condition on the consent to require the amended civil plans to be submitted to Council prior to the issue of any Construction Certificate. (See condition number 34).
Street Tree & Front Setback Tree Planting 1. Street trees and front setback must be provided in accordance with the Street Tree Key Plan in the Macquarie Park Public Domain Technical Manual, and their health guaranteed for a minimum of 5 years.	The landscaping plan does not adequately demonstrate the street trees to be provided. A condition of consent will be imposed to require the street trees to be included in accordance with the Macquarie Park Public Domain Technical Manual. (See condition number 34).
Community Facilities 1. Community facilities are to be provided as required by the Ryde City Council's Section 94 Plan.	Any development consent would include a condition requiring the payment of Section 94 Contributions. Part of this contribution will be towards the provision of community facilities. (See condition number 82).
Implementation – infrastructure, facilities and public domain improvements 1. Public land such as the road verge adjoining a development site is to be embellished and dedicated to Council as part of any new development. 2. The Access network being the roads and open space is to be dedicated to Council as part of a new development is to conform with LEP 2010 – Macquarie Park Corridor – Access Network. 3. New community and public domain space, roads, pedestrian ways and infrastructure, shall be dedicated to Council. Where this is not practicable, easements and rights of ways may be created.	Although the road is being constructed as part of this application, the road will not be dedicated to Council until the whole development of the site is completed. This will be prior to the issue of an Occupation Certificate for Building E. As the road does not connect with the rest of the Macquarie Park road network, it is not necessary to impose a condition requiring a right of way to be created over the road.
s6.0 – Site & Building Design	
6.1 – General Built Form Controls – Note: Many of the general built form controls are the same as the controls for the Macquarie University Station Precinct or as contained in the Residential Flat Design Code. It is only intended to address any new matters in this Section of the report.	
Site Planning & Staging 1. Sites are to be planned to allow for the future provision of new streets and open spaces in accordance with Ryde LEP 2008 Amendment 1 – Access Network. 2. Buildings are to be sited to address existing and new frontages in the following order of precedence: a) Primary frontages: These are located along existing streets (typically Type 1 or 2 streets).	Due to the approved Concept Plans for this general area of Macquarie Park, the development will not provide the new streets in accordance with the Access Network. The development does however incorporate a Type 3 road that was approved as part of the site specific Concept Plan. This new road would be considered a secondary frontage in terms of the DCP. Building C has been sited to address this

Control	Comments
b) Secondary frontages: these are generally existing, or new Type 2 or 3 streets. 3. Front door and street address is to be located on the primary frontage. Loading docks, vehicular access is not permitted to be located on the primary frontage unless it can be demonstrated that there is no alternative.	road. Due to the subdivision of the site in relation to the road, it is not possible to have Building D front this new road. The development has however provided a clear pathway to the entry of Building D.
Side & Rear Setbacks 1. Buildings are to be setback 10m from a rear and 5m from a side site boundary. 2. Basement car park structures should not encroach into the minimum required side or rear setback zone unless the structure can be designed to support mature trees and deep root planting.	The issue of setbacks has already been discussed under RFDC. The development has provided adequate side and rear setbacks.
Building Articulation 1. Facades are to be composed with an appropriate scale, rhythm and proportion, which respond to the building use and the desired character. 2. Façade design is to reflect and respond to the orientation of the site using elements such as sun shading and environmental controls where appropriate. 3. Building services such as roof plant and parking ventilation are to be coordinated and integrated with the overall façade and building design, and screened from view. Roof forms, building services and screening elements are to occur within the overall height control.	The facades have been designed to reflect the approved Buildings A and B and it is intended to use similar materials and finishes. The facades have included vertical as well as horizontal elements as well as articulation with the provision of balconies, solid walls and indents. The Urban Design Review Panel has reviewed the proposal and are generally supportive of the finishes.
Topography & Building Interface 1. Level changes across sites are to be resolved within the building footprint. 2. Where buildings are setback from the street boundary, entries are to be provided at street level wherever possible. 3. An accessible path of travel is to be provided from the street through the main entry door of all buildings. 4. Where necessary, stairs and ramps are to be integrated with the landscape design of front setbacks. 5. Publicly accessible open spaces under private ownership must be provided at footpath level.	The development has complied with these requirements. Where the basement extends above natural ground level, this has been treated with landscaping to assist in softening the appearance of the building. An accessible path of travel will be provided from the street to the entries of both buildings.

Control	Comments
Wind Impact 1. All applications for buildings over 5 storeys in height shall be accompanied with a wind environment statement. For buildings over 9 storeys and for any other building which may be considered as exposed building shall be accompanied by a wind tunnel study report.	A wind study report has not been submitted as part of this application. A Wind Tunnel Study was not required as part of the assessment process of the Part 3A application. It is considered that as the location, height and scale of the buildings have already been approved, the proposal does not necessitate the submission of a wind study.
6.3 – Services & Site Management	
Floodplain Management 1. All stormwater leaving the site, at any time, up to a 1-in-20 year stormwater event, is treated/filtered in accordance with ANZECC Guidelines for Urban Stormwater management. 2. Development must not increase peak stormwater flows for rainfall events of up to 1-in-2 year storm.	The development has been assessed by Council's Engineers and has been found to be satisfactory. (See the Referral section of the report for further information).
Stormwater Drainage 1. Development shall comply with the requirements outlined in the Stormwater Drainage Section of the DCP and is to provide a stormwater drainage system in accordance with the "major/minor" system concept set out in Australian Rainfall and Runoff.	The development has been assessed by Council's Engineers and has been found to be satisfactory. (See the Referral section of the report for further information).
Waste Management 1. All applications for demolition and development must be accompanied by a Waste Management Plan that specifies the type of waste to be produced and the proposed arrangements for ongoing waste management, collection and disposal.	A Waste Management Plan was submitted. This is considered satisfactory subject to conditions in respect of the bulky goods storage area, garbage chute area to be isolated and the management of the bins from the waste room to the street. (See conditions number 44 to 47).
Soil Management 1. Development is to be designed and constructed to integrate with the natural topography of the site to minimum the need for excessive sediment disturbance and prevent soil loss. 2. Effective soil management and maintenance practices are to be followed to prevent soil loss.	The development has been conditioned to ensure that appropriate sediment and erosion control measures will be implemented. (See condition number 53).
Site Facilities Residential 1. Provide either communal or individual laundry facilities to each dwelling and at least one external clothes drying area. Clothes drying is only permitted on	Each apartment has been provided with individual laundry facilities. Given that many of the balconies are glazed, it is proposed to include a condition on the consent that will prevent clothes drying on the balconies. (See condition number 102).

Control	Comments
balconies that are permanently screened from view from the public domain. 2. Provide storage to dwellings as required by the RFDC. 3. Lockable mail boxes are to be provided in a location visible from the public domain.	Storage has been provided to the apartments in accordance with the RFDC requirements. The main lobby area will have access to a separate mail area for collection of mail.
Vehicular Access 1. Vehicular access is not permitted along streets identified as 'Active Frontages'. 2. Where practicable, vehicle access is to be from secondary streets. 3. Potential pedestrian/vehicle conflict is to be minimised by: a) Limiting the width and number of vehicle access points. b) Ensuring clear site lines at pedestrian and vehicle crossings. c) Utilising traffic calming devices. d) Separating and clearly distinguishing between pedestrian and vehicular accessways. 4. The width of driveways is to be determined in accordance with the requirements of the DCP and Australian Standards.	Vehicular access will be from the new road. This road is not identified as an active frontage or a secondary street. Given that the road is a cul-de-sac rather than a connecting road, the number of pedestrians will be limited. The development however will limit the potential pedestrian vehicle conflict by designing an appropriate vehicular access to the buildings.
On-Site Parking 1. Safe and secure 24 hour access to car parking areas is to be provided for building users. 2. Parking areas are to be screened from view from the street, public domain and communal open space areas, using site planning and appropriate screen planting or structures. 3. Provide safe and direct access from parking areas to building entry points. 4. Basement parking areas should be located directly under building footprints to maximise opportunities for deep soil areas unless the structure can be designed to support mature plants and deep root plants. 5. Ventilation grills or screening devices of car park openings are to be integrated into the overall façade and landscape design of the development.	The parking will be provided in 3 basement levels. The access will ensure minimal impact on the streetscape. Access to the parking will be via a security gate. The basement beneath Building C will extend into the setback area however this was approved as part of the Concept Approval. The development will provide adequate on site car parking.

Part 7.2 Of DCP 2010 - Waste Minimisation and Management

A concept Waste Management Plan has been submitted with the development application. The information provided generally satisfies the requirements of this part of the DCP. The following issues have been raised by Council's Waste Officer:

- In each building an area has been allocated for the storage of bulky goods. From the plans it is not clear if this is separate to the waste storage area. A condition will be imposed requiring this area to be a separate room or a caged area. (See condition number 46).
- The residents of the units on the ground and lower ground floor will not have access to the garbage chute system. These residents will deposit their waste directly to the waste holding area. A condition of consent will be imposed so that the chute system can be isolated from the rest of the waste holding area to ensure that residents can not access this area. (See condition number 45).
- Concerns were raised that the size of the bin storage area on the street is not large enough to accommodate all of the bins. The applicant has advised that the recycling bins will be stored in the loading dock while the general waste bins are emptied. A care taker will then transfer the bins to ensure that the recycling bins can be emptied. This is an acceptable solution. A condition has been imposed to ensure that this occurs. (See condition number 103).

Part 8.1 of DCP 2010 - Construction Activities

The main construction issues relevant to this proposal will be managing water quality by preventing soil erosion, the management of construction traffic and parking of builder's vehicles, construction noise, dust and the like.

These matters have been addressed by way of appropriate conditions of consent.

Part 8.2 of DCP 2010 - Stormwater Management

Council's Development Engineer has reviewed the proposed development and advised that the stormwater design complies with the requirements of Part 8.2 of DCP 2010.

Part 9.2 of DCP 2010 - Access for People with Disabilities

The DCP requires that the residential buildings must provide an accessible path of travel to all units as well as the provision of 23 adaptable units. The applicant has provided an Access Review Report which demonstrates that the development will comply with the access requirements as well as providing 23 adaptable apartments. A condition of consent has been imposed to ensure that the development complies with the appropriate access standards. (See condition numbers 29 to 30).

Part 9.3 of DCP 2010 - Car Parking

The Concept Plan Approval required car parking to be provided at the following rate:

- 1 space per dwelling with 1 or 2 bedrooms;
- 1.6 space per dwelling with 3 or more bedrooms; and
- 1 space per 6 dwellings for visitors.

A total of 229 apartments consisting of 1 and 2 bedrooms are proposed. The development is required to provide 229 resident car spaces and 38 visitor car spaces. The development complies with this requirement.

Council's DCP requires parking to be provided at the following rate:

0.6 to 1 space per 1 bedroom dwelling;
0.9 to 1.2 spaces per 2 bedroom dwelling;
1.4 to 1.6 per 3 bedroom dwelling; and
1 space per 5 dwellings for visitor parking.

Based on the above rates the development would be required to provide car parking somewhere between 196 spaces and 284 car parking spaces. As the development provides 267 car parking spaces, it also complies with Council's requirements.

8012 Section 94 Development Contributions Plan 2007 (Amendment 2010)

Development Contributions Plan – 2007 (2010 Amendment) allows Council to impose a monetary contribution on developments that will contribute to increased demand for services as a result of increased development density / floor area.

The contributions that are payable with respect to the increased floor area are based on the following figures being inside Macquarie Park:

Contribution Plan	Contributions	Total
Community and Cultural Facilities	\$490,115.23	
Open Space and Recreation Facilities	\$1,966,099.05	
Civic and Urban Improvements	\$252,910.73	
Roads and Traffic Management Facilities	\$271,436.04	
Cycleways	\$34,964.70	
Stormwater Management Facilities	\$30,953.47	
Plan Administration	\$9,428.92	
Grand Total		\$3,055,908.14

Notes:

- The March 2012 rates have been applied to the development. Prior to the JRPP meeting the rates will increase due to the June CPI figures. An addendum to this report will be provided to the Panel members on the day of the Panel meeting to reflect the new Section 94 figures.

Condition 82 requiring the payment of a Section 94 contribution has been included in the recommendation of this report which will further be indexed at the time of payment if not paid in the same quarter. This condition has required the Section 94 Contribution to be paid prior to the issue of any Occupation Certificate for the buildings as this reflects the Statement of Commitments issued with the Concept Plan Approval.

9. LIKELY IMPACTS OF THE DEVELOPMENT

Many of the impacts associated with the proposed development have already been addressed in the report. Other likely impacts include:

9.1 Vehicular Access and Traffic Generation

Vehicular access is proposed via the new road from Herring Road as approved in the Concept Plan. The initial part of the road is being constructed from Herring Road in association with the construction of Building A. As part of this development application, the road is being extended to provide access to Buildings C and D as well as a turning circle for vehicles at the western end of the road. The road will have a 16.1m reserve width, including two three metre travel lanes, a 2.5m parking lane on one side and a 3.8m footpath/verge on both sides of the road.

The development proposes a shared driveway to the basements of Buildings C and D. The ramp to the basement and the parking layout will comply with the requirements of AS2890.1.

The new road connection with Herring Road will be left in / left out due to a median in Herring Road. There is however a roundabout in the vicinity of the site that will permit vehicles to turn around as necessary.

The development is likely to generate approximately 70 vehicles per hour two-way during peak hours. This figure is based on previous RTA figures. This generation rate is consistent with the Concept Plan Approval and is unlikely to have a significant impact on the existing road network.

9.2 Flooding Issues

University Creek flows from the southwest to the northeast at the rear of the site. Based on the available information Building D is located within the medium risk flood risk precinct. The building structure has been designed as masonry and/or reinforced concrete for zones which are below the 100 year flood level plus 500mm freeboard. Council's Engineers have recommended a condition on the consent requiring information from a structural engineer confirming that the building structure is able to withstand the forces of floodwaters having regard to hydrostatic pressure, hydrodynamic pressure, the impact of debris and buoyancy forces up to and including a 100 year flood plus freeboard. (See condition number 42).

Council's Engineers also required that the basement car park must be protected from inundation by the 100 year flood and that an adequate warning system be provided in the basement below the 20 year flood level. The applicant has confirmed that the entries to the basement car park are set above the 100 year flood level plus 500mm freeboard. The applicant also advised that a warning system will be implemented however no details were proposed. These matters have been addressed as a condition of consent. (See condition number 42).

9.3 Water Quality

Water quality treatment is proposed to be provided in the development. The treatment measures include rainwater tanks, stormwater detention tanks, gross pollutant trap as well as a first flush bio-swale treatment. These measures will ensure that the water quality will achieve a reduction in the pollution rates which will limit the impact of the proposed development on downstream water quality.

10. SUITABILITY OF THE SITE FOR THE DEVELOPMENT

The subject site is considered suitable for the proposed development for the reasons outlined below.

The site is zoned B4 – Mixed Use under the Ryde LEP 2010, which permits the proposed development. In addition a Concept Plan Approval has been granted for the site and the development is consistent with this approval.

The proposed development is considered suitable for the subject site with respect to traffic and transport impacts. In addition the development will not adversely impact on the amenity of the area.

11. THE PUBLIC INTEREST

The development is considered to be in the public interest as it is consistent with the Concept Plan Approval.

12. REFERRALS

External Referrals

Roads and Maritime Services

No objections have been raised to the proposed development.

NSW Office of Water

The NSW Office of Water has provided their General Terms of Approval which have been included in the conditions of consent (see conditions 18, 109 to 122). The NSW Office of Water has also provided the following comment:

The geotechnical report did not indicate whether groundwater would be encountered or if dewatering would be required. Should such additional investigations encounter significant quantities of groundwater, then the NSW

Office of Water may require an authorization to be obtained to permit dewatering as part of the development. Please note that the proposal must not incorporate provision for the permanent or semi-permanent pumping of groundwater seepage from below-ground areas.

This matter has been discussed with NOW and it is proposed to include this as an advisory condition.

NSW Police

NSW Police have raised no objections to the development. The comments from NSW Police are summarized below:

- **Surveillance:** A number of recommendations have been made to ensure appropriate levels of surveillance throughout the development, including the use of CCTV security cameras, security mirrors at blind corners and a security roller door at the car park entry. These recommendations have been included as Conditions of Consent where necessary. (See conditions 72 to 74).
- **Lighting:** A recommendation for the lighting and control of lighting of all common areas, car parking and stairs was made. This recommendation has been imposed as conditions together with painting of the walls and ceiling of the car park area to be a light colour. (See condition number 75).
- **Territorial reinforcement:** Recommendations are made regarding the types of signage to be provided throughout the development to assist in crime avoidance. The recommended signage has been imposed as Conditions of Consent. (See condition numbers 98 and 99).
- **Environmental maintenance:** A recommendation is made requiring a regular maintenance plan together with graffiti management plan be prepared. Condition of Consent has been imposed to reflect these requirements. (See condition number 101).
- **Access control:** Specific access control recommendations were made to ensure appropriate locking systems, electronic security access and parking access were installed to minimise intrusion into the development. These recommendations have been imposed as considered necessary as part of the Conditions of Consent. (See condition numbers 78, 79, 80 and 81).

Internal Referrals

Development Engineer: No objections subject to conditions of consent. (See condition numbers 13 to 17, 34 to 42, 53 to 56, 89 to 93).

Environmental Health Officer: No objections subject to conditions of consent. (See condition numbers 43 to 48, 94 to 96, 103 to 108).

Traffic Engineer: No objections subject to conditions of consent. (See condition number 17).

Consultant Landscape Architect: No objections subject to conditions of consent. (See condition numbers 2,51, 52 and 57).

Infrastructure Integration (Flooding): No objections subject to conditions of consent. (See condition number 42).

13. PUBLIC NOTIFICATION AND SUBMISSIONS

The proposed development was notified and advertised in accordance with Development Control Plan 2010 – Part 2.1, Notification of Development Applications. The application was advertised on 16 May 2012 in the Ryde City View insert in the Northern District Times. Notification of the proposal was from 15 May 2012 until 15 June 2012. During this period, no submissions were received.

14. CONCLUSION

The development is a part of the overall redevelopment of the site, known as Macquarie Central. The proposed buildings are part of a total of five (5) residential flat buildings approved on the site.

The overall development has been designed with a high degree of amenity for future occupants in terms of access to public transport, education facilities, commercial and shopping centre & recreational facilities.

The proposal is consistent with the Part 3A concept approval. The architectural design and finishing of the buildings are in keeping with the approved Building A and B located east of Building C.

Although a number of the numerically based “Rules of Thumb” from the Residential Flat Design Code have not been met, such as building depth and building separation, this is a result of the predetermined layout and orientation of the residential buildings as part of the Part 3A approval.

The application has demonstrated that the level of amenity in terms of solar access, communal public space, storage, privacy & energy efficiency can be met and the proposal can be supported subject to conditions.

It is recommended that the application be approved subject to conditions.

15. RECOMMENDATIONS

A. Pursuant to Section 80 of the Environmental Planning and Assessment Act, 1979, the following is recommended:

- (a) That the Sydney East Region Joint Regional Planning Panel grant consent to development application LDA2012/0114 for the construction of two residential flat buildings known as Buildings C and D at 126 Herring Road, Macquarie Park subject to the conditions of consent in Attachment 1 of this report.

B. That a copy of the development consent be forwarded to the Roads and Maritime Services and NSW Office of Water.

Report prepared by:

Sandra Bailey
Team Leader Major Developments

Report approved by:

Liz Coad
Manager Assessment

Dominic Johnson
Group Manager – Environment and Planning

ATTACHMENT 1

CONDITIONS OF CONSENT

GENERAL

The following conditions of consent included in this Part identify the requirements, terms and limitations imposed on this development.

1. **Approved Plans/Documents.** Except where otherwise provided in this consent, the development is to be carried out strictly in accordance with the following plans (stamped approved by Council) and support documents:

Document Description	Date	Plan No/Reference
Cover Sheet	20/6/12	DA00-000 Issue C
Site Plan	20/6/12	DA00-001 Issue C
Basement B3 Plan	20/6/12	DA01-001 Issue G
Basement B2 Plan	20/6/12	DA01-002 Issue H
Basement B1 Plan	20/6/12	DA01-003 Issue I
Building C – Lower Ground Building D - Ground	20/6/12	DA01-004 Issue J
Building C – Ground Floor Building D – Level 01	20/6/12	DA01-005 Issue F
Building C – Level 1 Building D – Level 2	20/6/12	DA01-006 Issue F
Building C – Level 2 and 6 Building D – Level 3,6,7,8	20/6/12	DA01-007 Issue F
Building C – Level 3,5,7,8 Building D – Level 5,9	20/6/12	DA01-008 Issue F
Building C – Level 9 (roof Blg D) Building D – Roof Level	20/6/12	DA01-013 Issue F
Building C – Level 10 and 11	20/6/12	DA01-014 Issue F
Building C – Level 12	20/6/12	DA01-016 Issue F
Building C – Roof Level	20/6/12	DA01-017 Issue E
Gross Floor Area	20/6/12	DA01-018 Issue C
North-East Elevation	20/6/12	DA02-001 Issue E
South-West Elevation	20/6/12	DA02-002 Issue D
Building C Elevations	20/6/12	DA02-003 Issue D
Building D Elevations	20/6/12	Da02-004 Issue E
Longitudinal Section	20/6/12	DA03-001 Issue E
Cross Sections	20/6/12	DA03-002 Issue E
Detail Sections 1-2	20/6/12	DA03-010 Issue C
Detail Sections 3-4	20/6/12	DA03-011 Issue D
Perspective Views	20/6/12	DA09-001 Issue C
Type G_2 Bedroom Adaptable Apartments	20/6/12	DA9-004 Issue C
Type H_12 Bedroom Adaptable	20/6/12	A9-003 Issue C

Apartment		
Adaptable – Type L	20/6/12	DA9.005 Issue C
Introduction	22/5/12	L2 Rev B
Landscape Plan	22/5/12	L3 Rev B
Landscape Structure Plan	20/12/11	L4 Rev A
Courtyard Landscape Plan	20/5/12	L5 Rev C
Podium and Entry Landscape Plan	20/12/11	L6 Rev A
Section A Building D	20/12/11	L7 Rev A
Section B Building C	20/12/11	L8 Rev A
Section C C and D Courtyard	20/12/11	L9 Rev A
Section D Courtyard	20/12/11	L10 Rev A
Section E Building C Podium	20/12/11	L11 Rev A
Section F and G Building C Podium	20/12/11	L12 Rev A
Section H Building C	20/12/11	L13 Rev A
Restoration Planting	20/5/12	L14 Rev B
Character and Ambience	20/12/11	L15 Rev A
Podium and Bioswale Planting	20/12/11	L16 Rev A
Specification Notes	20/12/11	L17 Rev A

2. **Recommendations of the Vegetation Management Plan.** The recommendations provided in the Vegetation Management Plan prepared by Total Earth Care Pty Ltd dated September 2010 relating to the creek corridor and restoration zones are to take precedence over the specifications provided on the approved landscaping plan.
3. **Building Code of Australia.** All building works approved by this consent must be carried out in accordance with the requirements of the Building Code of Australia.
4. **BASIX.** Compliance with all commitments listed in BASIX Certificate(s) numbered 406083M and 407522M, dated 3 July 2012.
5. **Support for neighbouring buildings.** If the development involves excavation that extends below the base of the footings of a building on adjoining land, the person having the benefit of the development consent must, at the person's own expense:
 - (a) Protect and support the adjoining premises from possible damage from the excavation, and
 - (b) Where necessary, underpin the adjoining premises to prevent any such damage, in accordance with relevant Australian Standards.
6. **Hours of work.** Building activities (including demolition) may only be carried out between 7.00am and 7.00pm Monday to Friday (other than public holidays) and between 8.00am and 4.00pm on Saturday. No building activities are to be carried out at any time on a Sunday or a public holiday.

7. **Hoardings.**
 - (a) A hoarding or fence must be erected between the work site and any adjoining public place.
 - (b) Any hoarding, fence or awning erected pursuant this consent is to be removed when the work has been completed.
8. **Public space.** The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances, without prior approval from Council.
9. **Public Utilities.** Compliance with the requirements (including financial costs) of any relevant utility provider (e.g. Energy Australia, Sydney Water, Telstra, RTA, Council etc) in relation to any connections, works, repairs, relocation, replacements and/or adjustments to public infrastructure or services affected by the development.
10. Deleted.
11. **Storage Facility:** Each apartment is to be provided with sufficient storage area as shown on Attachment H – SEPP 65 Schedules dated 6 June 2012. Details to be provided on the Construction Certificate plans.
12. **Parking/bicycle Spaces:** Two hundred and sixty seven (267) parking spaces are to be provided for Building C and D, with two hundred & twenty nine (229) spaces for residents and thirty eight (38) for visitor parking. The car parking spaces are to be clearly linemarked with the visitor spaces clearly marked "Visitor Parking". Ninety-five (95) bicycle spaces are to be provided within the development. The bicycle parking spaces are to be available to residents as well as visitors to the site. Details to be shown on the Construction Certificate plans.
13. **Design and Construction Standards.** All engineering plans and work shall be carried out in accordance with the requirements as outlined within Council's publication *Environmental Standards Development Criteria 1999 and City of Ryde Development Control Plan 2010 Section 8* except as amended by other conditions.
14. **Service Alterations.** All mains, services, poles, etc., which require alteration shall be altered at the applicant's expense.
15. **Restoration.** Public areas must be maintained in a safe condition at all times. Restoration of disturbed road and footway areas for the purpose of connection to public utilities will be carried out by Council following submission of a permit application and payment of appropriate fees. Repairs of damage to any public stormwater drainage facility will be carried out by Council following receipt of payment. Restoration of any disused gutter crossings will be carried out by Council following receipt of the relevant payment.

16. **Road Opening Permit.** The applicant shall apply for a road-opening permit where a new pipeline is proposed to be constructed within or across the footpath. Additional road opening permits and fees may be necessary where there are connections to public utility services (e.g. telephone, electricity, sewer, water or gas) are required within the road reserve. No drainage work shall be carried out on the footpath without this permit being paid and a copy kept on the site.
17. **Road Dedication** The dedication of lots 5 and 10 as public road in the subdivision plan approved as part of Concept Plan Approval MP09_0219 Mod 2 is to be at no cost to Council. The dedication is to occur prior to the issue of an Occupation Certificate for Building E in accordance with Concept Plan Approval MP09_0195. Prior to the dedication to Council, the following information and inspections will be required:
- Submission to Council of a Works-As-Executed Drawing for the dedicated road prepared by a registered surveyor.
 - Pre acceptance inspection by Council engineer and proprietor of the land to identify any possible defects that may require rectification, prior to acceptance of the road by Council.
 - Assets that are to be dedicated to Council must be in asset plan form (ie drawing plan layers e.g. Road Layer, Street Furniture Layer et cetera) to Council's satisfaction.
 - Survey Recovery Markers are to be installed within the road reserve as directed by Council's Surveyor.

PRIOR TO CONSTRUCTION CERTIFICATE

A Construction Certificate must be obtained from a Principal Certifying Authority to carry out the relevant building works approved under this consent. All conditions in this Section of the consent must be complied with before a Construction Certificate can be issued.

Council Officers can provide these services and further information can be obtained from Council's Customer Service Centre on 9952 8222.

Unless an alternative approval authority is specified (eg Council or government agency), the Principal Certifying Authority is responsible for determining compliance with the conditions in this Section of the consent.

Details of compliance with the conditions, including plans, supporting documents or other written evidence must be submitted to the Principal Certifying Authority.

18. **Controlled Activity Approval.** A Construction Certificate is not to be issued over any part of the site requiring a Controlled Activity Approval until a copy of the Controlled Activity Approval has been provided to the Principal Certifying Authority and Council.

19. **Compliance with Australian Standards.** The development is required to be carried out in accordance with all relevant Australian Standards. Details demonstrating compliance with the relevant Australian Standard are to be submitted to the Principal Certifying Authority prior to the issue of the **Construction Certificate**.
20. **Structural Certification.** The applicant must engage a qualified practising structural engineer to provide structural certification in accordance with relevant BCA requirements prior to the release of the **Construction Certificate**.
21. **Security deposit.** The Council must be provided with security for the purposes of section 80A(6) of the *Environmental Planning and Assessment Act 1979* in a sum determined by reference to Council's Management Plan prior to the release of the **Construction Certificate**. (category: other buildings with delivery of bricks or concrete or machine excavation).
22. **Fees.** The following fees must be paid to Council in accordance with Council's Management Plan prior to the release of the **Construction Certificate**:
 - (a) Infrastructure Restoration and Administration Fee
 - (b) Enforcement Levy
23. **Long Service Levy.** Documentary evidence of payment of the Long Service Levy under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 is to be submitted to the Principal Certifying Authority prior to the issuing of the **Construction Certificate**.
24. **Mechanical Plant.** Prior to the issue of a Occupation Certificate it will be necessary to undertake a detailed assessment of all external mechanical plant. This assessment is to ensure that the plant noise does not exceed the acoustic criteria as outlined in Section 6.2 of the DA Noise Assessment Report by Acoustic Logic dated 22 May 2012. The assessment is also to determine any acoustic treatments that will be required to ensure acceptable acoustic levels. Details are to be submitted to the certifying authority prior to Occupation Certificate.
25. **Fencing.** If the existing fence on the shared boundary with Macquarie University is found to be in a dilapidated state a new fence will be required to be erected at the cost of the applicant. This fencing is to be erected along the shared boundary with Macquarie University. This fencing is not to exceed a height of 1.8 metres and it is not to adversely impact on the overland flow path of University Creek. The boundary fence is to be provided unless Macquarie University advise in writing that the fencing is not necessary. Details of the fencing is to be provided to Council prior to the issue of an Occupation Certificate. Alternatively, written evidence from Macquarie University is to be provided prior to the issue of an Occupation Certificate that the fence is not required.

26. **Encroachments:** The development is to be constructed wholly within the boundaries of the site. No portion of the proposed structure shall encroach onto the adjoining properties. Any encroachments onto Macquarie University's property during the course of the construction works (such as rock anchoring and cranes swing) will require a written agreement from Macquarie University or a court order prior to the associated activity commencing.
27. **Survey:** A dilapidation survey is to be undertaken that addresses all properties (including any public place) that may be affected by the construction work. A copy of the survey is to be submitted to the PCA (*and Council, if Council is not the PCA*).
28. **Glare & Reflectivity:** Roofing and other external materials must be of low glare and reflectivity. Details of finished external surface materials, including colours and texture must be provided to the Principal Certifying Authority. The roof material is to be finished in a non reflective surface.
29. **Disabled access:** Prior to the issue of a Construction Certificate, a report is to be provided from a suitably qualified access consultant to verify that the Construction Certificate Drawings fully comply with Development Control Plan 2010 – Access for People with Disabilities, the Building Code of Australia and Australian Standards AS1428.1, AS4299, AS1735.12 and AS2890.6. The report is to be provided to the PCA and Council (if Council is not the PCA).
30. **Adaptable Units:** A total of 23 adaptable units are to be provided within Buildings C and D. These apartments are to comply with all of the spatial requirements as outlined in DCP 2010 Part 9.2 and AS4299. Details demonstrating compliance is to be provided on the Construction Certificate plans. Prior to the issue of the Construction Certificate, a suitably qualified access consultant is to certify that the development achieves the spatial requirements of DCP 2010 Part 9.2 and AS4299.
31. **Design verification:** Prior to a Construction Certificate being issued with respect to this development, the Principle Certifying Authority is to be provided with a written Design Verification from a qualified designer. This statement must include verification from the designer that the plans and specification achieve or improve the design quality of the development to which this consent relates, having regard to the design quality principles set out in Part 2 of *State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development*. This condition is imposed in accordance with Clause 143 of the *Environmental Planning and Assessment Regulation 2000*.
32. **Service infrastructure/utilities:** All service infrastructure/utilities including fire hydrants, gas meters and the like shall be located within the building envelope. Where this is not possible and subject to Council approval such infrastructure shall be located on the subject site and

appropriately screened from view. Details of all service infrastructure/utilities are to be approved prior to the issue of the Construction Certificate.

33. **BASIX Details to be included on the Construction Certificate:** The Construction Certificate plans and specifications are to detail all of the 'CC plan' commitments of the BASIX Certificate.
34. **Public Road & Drainage Construction.** To facilitate access and stormwater disposal from the subject site, detailed engineering plans for the proposed type 3 new road are to be submitted to Council for approval prior to the issue of any construction certificate. The plans shall incorporate, but not be limited to the following:
- a. The road formation and makeup including provision of public infrastructures etc shall comply with the Macquarie Park Corridor DCP & Macquarie Park Public Domain Technical Manual.
 - b. Planting of trees within the parking lane of the road pavement is not permitted. Accordingly, the landscaping plans shall be amended to reflect this requirement.
 - c. Footway trees location and extent of granite footpath are to be in accordance with Section 2.3 of the Macquarie Park Public Domain Technical Manual.
 - d. Street Lighting on Multifunction Poles shall be provided in accordance with Section 5 of the Macquarie Park Public Domain Technical Manual. Additionally, utility mains to be installed in the footway allocations in accordance with the 2007 NSW Streets Opening Conference Guides to Codes & Practices for Streets Opening.
 - e. The road design shall ensure a heavy rigid vehicle (HRV) as defined under AS 2890.2-2002 can enter and leave the new type 3 road in a forward direction.
 - f. Provision shall be made for an underground piped drainage system designed for a minimum 1:20 year ARI storm event with facility for the treatment of contaminated runoff and capture of gross pollutants from the proposed public road.
 - g. The works shall be designed by a chartered and experienced Civil Engineer in accordance with City of Ryde *Environmental Standards - Development Criteria* - 1999 Section 4 – Public Civil works.

Revised detailed engineering plans as per marked up copies dated and sent to TOGA on 26 June 2012 are to be submitted to Council for approval. Engineering plans assessment and works inspection fees for the above works, in accordance with Council's Management Plan are to be paid, prior to written approval being issued by Council.

35. **Maintenance Bond.** To ensure satisfactory performance of the completed external road and drainage works, a maintenance period of six (6) months shall apply to all external engineering works completed in

relation to this application. The performance period shall commence from Council's Compliance Certificate issue date.

The applicant shall be liable for any part of the work which fails to perform in a satisfactory manner as outlined in Council's standard specification. A bond in the form of a cash deposit or Bank Guarantee of \$15,000 shall be lodged with City of Ryde prior to issue of the Construction Certificate to guarantee this requirement will be met. The bond will only be refunded when the works are determined to be satisfactory to Council after the expiry of the six (6) months maintenance period.

36. **Driveway Grades.** The maximum grade of all internal driveways and vehicular ramps etc shall comply with relevant section of AS 2890.1 & AS2890.2 where applicable. Detailed engineering plans including engineering certification indicating compliance with this condition are to be submitted with the Construction Certificate application.
37. **Car Parking.** All internal driveways, vehicle turning areas, grades, parking space dimensions, headroom clearance etc shall be designed to comply with relevant sections of Australian Standards AS 2890 where applicable. Additionally, the shared areas and bollard located between the disabled spaces shall be installed in accordance with AS 2890.6-2009.

Detailed engineering plans including engineering certification confirming compliance with this condition is to be submitted with the Construction Certificate application.

38. **Traffic Management.** Traffic management plans must be prepared and procedures must be in place and practised during the construction period to ensure safety and minimise construction traffic conflict on adjoining pedestrian and vehicular traffic movement. These procedures and systems must be in accordance with AS 1742.3 1985 and the RMS's Manual – "Traffic Control at Work Sites" where applicable.

Accordingly, a detailed plan of traffic management prepared by a traffic engineer including certification indicating compliance are to be submitted with the Construction Certificate application.

39. **Dilapidation Report.** To determine the extent of restoration works that may be required, the applicant shall submit to Council a pre and post construction dilapidation report on the status of existing public infrastructures in the vicinity of the proposed development. The report is to include photographic records, description and location of any existing observable defects of the following infrastructure and others where applicable:

- a) Road pavement.
- b) Kerb and gutter.

- c) Constructed footpath.
- d) Drainage pits.
- e) Traffic signs.
- f) Any other relevant infrastructure.

These reports shall be submitted to Council's development engineer, prior to the issue of the Construction and Occupation Certificate. The report shall be used by Council as Roads Authority under the Roads Act to assess whether restoration works are required prior to the issue of the Occupation Certificate. All restoration works deemed necessary by Council's development engineer are to be completed to Council satisfaction prior to the issue of Occupation Certificate

40. **Stormwater Runoff.** Stormwater runoff from site shall be collected and piped to Council's underground drainage system via an On-site detention (OSD) system designed in accordance with the City of Ryde, Development Control Plan 2010: - Part 8.2; Stormwater Management. The design shall incorporate but not be limited to the following:
- a. Building C & D shall be provided with a minimum 62 and 58 cubic metres OSD system incorporating a suitably sized orifice plate to restrict discharge from the building C & D to a maximum of 52 and 28 l/s in a 1 in 100 year critical duration storm event respectively.
 - b. The design shall ensure back water flow will not occur or influence the functioning of the outlet pipe from the OSD tank for all storm events and durations, including preventing the ingress of overland flows into the OSD tank.
 - c. All gutters, downpipes and pipeline conveying stormwater runoff to the OSD tank are to be designed for the 1 in 100 year, 5 minute duration storm event.

Accordingly, detailed engineering plans including certification from a chartered civil engineer with NPER registration with Engineers Australia indicating compliance with this condition are to be submitted for approval with the Construction Certificate application.

41. **Water Sensitive Urban Design.** The Water Sensitive Urban Design (WSUD) treatment train (comprising of rainwater tanks, bio-retention, bio swale, gross pollutant traps etc.) proposed for the subject site shall be designed to ensure a post development pollutant removal target as set out below will be achieved:
- a. 90% Reduction in gross pollutants
 - b. 85% Reduction in total suspended solids
 - c. 60% Reduction in Total Phosphorous
 - d. 45 % Reduction in Total Nitrogen

Detailed engineering plans including certification indicating compliance with this condition are to be submitted with the Construction Certificate application

42. **Engineering Certification.** Certification shall be obtained from a chartered structural/civil engineer with NPER registration with Engineers Australia, confirming the following:
 - a. The building has been structurally designed to withstand the hydrostatic, hydrodynamic pressure and the impact of debris and buoyancy forces due to floodwaters for all storm events up to and including the PMF storm event.
 - b. All building components located below the 1 in 100 year ARI flood plus 500mm freeboard have been designed to be flood compatible.
 - c. The basement carpark has been designed to prevent inundation by floods equal to or greater than the 1 in 100 year flood.
 - d. An appropriate emergency warning system comprising of elements such as signage and exits etc must be made available to warn and evacuate occupants of imminent basement inundation.
43. The applicant must contact the Wastewater Source Control Branch of Sydney Water Corporation on Tel. 13 11 10 to determine whether a Trade Waste Permit is required before discharging any trade wastewater to the sewerage system.
44. **Waste Storage.** A waste storage and recycling room must be provided on the Ground Floor of each building. The waste storage and recycling rooms must comply with Schedule 4.2 of Part 7.2 of the City of Ryde Development Control Plan 2010. Full details must be submitted with the Construction Certificate Plans.
45. **Waste Storage.** The area where the garbage chutes discharge into the waste storage and recycling rooms must be physically separated from the rest of the room and be kept secured to prevent access by residents. Details are to be submitted on the Construction Certificate Plans.
46. **Bulky Goods Storage Area.** A separate room or caged area must be provided in a convenient location on the premises for the storage of bulky discarded items such as furniture and white goods. Instructive signage is to be provided to advise residents on how to use this area. Full details are to be submitted on the Construction Certificate plans.
47. **Waste Collection Point.** The waste collection point must be located adjacent to the kerbside in a position that is convenient for servicing. The point must be large enough for the bins to be lined up on the kerbside. Details to be submitted on the Construction Certificate Plans.
48. **Mechanical Ventilation.** Details of all proposed mechanical ventilation systems must be submitted to the Principal Certifying Authority for approval prior to installation. Such details must include:

- (a) Plans and specifications of the mechanical ventilation systems;
- (b) A site survey plan showing the location of all proposed air intakes exhaust outlets and cooling towers, and any existing cooling towers, air intakes, exhaust outlets and natural ventilation openings in the vicinity; and
- (c) A certificate from a professional mechanical services engineer certifying that the mechanical ventilation systems will comply with the *Building Code of Australia* and setting out the basis on which the certificate is given and the extent to which the certifier has relied upon relevant specifications, rules, codes of practice or other publications

PRIOR TO COMMENCEMENT OF CONSTRUCTION

Prior to the commencement of any demolition, excavation, or building work the following conditions in this Part of the Consent must be satisfied, and all relevant requirements complied with at all times during the operation of this consent.

49. Site Sign

- (a) A sign must be erected in a prominent position on site, prior to the commencement of construction:
 - (i) showing the name, address and telephone number of the Principal Certifying Authority for the work,
 - (ii) showing the name of the principal contractor (if any) or the person responsible for the works and a telephone number on which that person may be contacted outside working hours, and
 - (iii) stating that unauthorised entry to the work site is prohibited.
- (b) Any such sign must be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.

50. Safety fencing. The site must be fenced prior to the commencement of construction, and throughout demolition and/or excavation and must comply with WorkCover New South Wales requirements and be a minimum of 1.8m in height.

51. Tree Protection Measures. The tree protection measures as outlined in the Tree Report by Treescan Urban Forest Management and dated March 2010 are to be implemented prior to construction and maintained throughout the construction period.

52. Site Arborist. In accordance with the recommendations contained in the Tree Report referred to in condition 46, a site arborist is to be appointed. Council and the PCA is to be notified, in writing, of the name, contact details and qualifications of the Consultant Arborist appointed to the site. Should these details change during the course of works, or the appointed Consultant Arborist alter, Council and the PCA is to be

notified, in writing, within seven working days. Prior to any construction commencing, the site arborist is to confirm that all tree protection measures in the Tree Report have been implemented.

53. **Erosion and Sediment Control Plan.** An *Erosion and Sediment Control Plan (ESCP)* shall be prepared by a suitably qualified consultant in accordance with the guidelines set out in the manual “*Managing Urban Stormwater, Soils and Construction*” prepared by the Landcom. These devices shall be maintained during the construction works and replaced where considered necessary.

The following details are to be included in drawings accompanying the *Erosion and Sediment Control Plan*

- (a) Existing and final contours
 - (b) The location of all earthworks, including roads, areas of cut and fill
 - (c) Location of all impervious areas
 - (d) Location and design criteria of erosion and sediment control structures,
 - (e) Location and description of existing vegetation
 - (f) Site access point/s and means of limiting material leaving the site
 - (g) Location of proposed vegetated buffer strips
 - (h) Location of critical areas (drainage lines, water bodies and unstable slopes)
 - (i) Location of stockpiles
 - (j) Means of diversion of uncontaminated upper catchment around disturbed areas
 - (k) Procedures for maintenance of erosion and sediment controls
 - (l) Details for any staging of works
 - (m) Details and procedures for dust control.
54. **Compliance Certificate.** A Compliance Certificate should be obtained confirming that the constructed erosion and sediment control measures comply with the construction plan and City of Ryde, Development Control Plan 2010: - Part 8.1; Construction Activities.
55. **Vehicle Footpath Crossings.** Concrete footpath crossings shall be constructed at all locations where vehicles cross the footpath, to protect it from damage resulting from the vehicle traffic. The location, design and construction shall conform to the requirements of Council where applicable. Crossings are to be constructed in plain reinforced concrete and finished levels shall conform with property alignment levels issued by Council's Public Works Division. Kerbs shall not be returned to the alignment line. Bridge and pipe crossings will not be permitted.
56. **Pre-Construction Meeting.** A pre construction meeting shall be organised with Council's engineer in relation to establishment of a program of inspections to be carried out by Council's engineer in relation to the proposed new road to be dedicated to Council.
57. **Riparian Zone.** Prior to any works commencing within the riparian zone, the vegetation management measures as detailed in Section 6 of the

Vegetation Management Plan (VPA) prepared by Total Earth Care Pty Ltd and dated September 2010 are to be implemented. Prior to any construction commencing, the site arborist is to confirm that the applicable recommendations in the Vegetation Management Plan have been implemented.

DURING CONSTRUCTION

Unless otherwise specified, the following conditions in this Part of the consent must be complied with at all times during the construction period. Where applicable, the requirements under previous Parts of the consent must be implemented and maintained at all times during the construction period.

58. **Critical stage inspections.** The person having the benefit of this consent is required to notify the Principal Certifying Authority during construction to ensure that the critical stage inspections are undertaken, as required under clause 162A(4) of the *Environmental Planning and Assessment Regulation 2000*.
59. **Construction noise.** The L_{10} noise level measured for a period of not less than 15 minutes while demolition and construction work is in progress must not exceed the background noise level by more than 20 dB(A) at the nearest affected residential premises.
60. **Impact to adjoining or nearby properties:** The construction of the development and preparation of the site, including operation of vehicles, must be conducted so as to avoid unreasonable noise or vibration and not cause interference to adjoining or nearby occupations.
61. **Sediment/dust control.** No sediment, dust, soil or similar material shall leave the site during construction work.
62. **Use of fill/excavated material.** Excavated material must not be reused on the property except as follows:
 - (a) Fill is allowed under this consent;
 - (b) The material constitutes Virgin Excavated Natural Material as defined in the *Protection of the Environment Operations Act 1997*;
 - (c) the material is reused only to the extent that fill is allowed by the consent.
63. **Construction materials.** All materials associated with construction must be retained within the site.
64. **Site Facilities**

The following facilities must be provided on the site:

 - (a) toilet facilities in accordance with WorkCover NSW requirements, at a ratio of one toilet per every 20 employees, and
 - (b) a garbage receptacle for food scraps and papers, with a tight fitting lid.

65. **Site maintenance.** The applicant must ensure that:
- (a) approved sediment and erosion control measures are installed and maintained during the construction period;
 - (b) building materials and equipment are stored wholly within the work site unless an approval to store them elsewhere is held;
 - (c) the site is clear of waste and debris at the completion of the works.
66. **Riparian Zone.** All works within the riparian zone are to be carried out in accordance with the measures contained in the Vegetation Management Plan.
67. **Land Contamination.** Council and the Principal Certifying Authority (if Council is not the PCA) must be notified as soon as practicable if any information is discovered during demolition or construction work that has the potential to alter previous conclusions about site contamination.
68. **Regulated Systems.** All air-handling and water systems regulated under the *Public Health Act 1991* must be installed, operated and maintained in accordance with the requirements of the *Public Health (Microbial Control) Regulation 2000*.
69. **Plumbing and Drainage Work.** All plumbing and drainage work must be carried out in accordance with the requirements of Sydney Water Corporation.
70. **Water Pollution.** Only clean unpolluted water is permitted to enter Council's stormwater drainage system.
71. **Duty to Notify Pollution Incidents.** Pollution incidents causing or threatening harm to the environment must be reported immediately to all relevant authorities in accordance with Section 148 of the Protection of the Environment Operations Act 1997.
72. **CCTV Cameras:** CCTV cameras will be required to be installed in the following locations:
- The ground floor lobby and lifts
 - The car park entry/exit points.
- Digital technology will be required to be used to record images from the camera and this is to be located in a secure location. The surveillance equipment will need to be able to zoom in and out on a person without losing focus. It must be maintained in working order at all times and installed by a qualified and reputable company.
73. **Security Mirrors:** Security mirrors are to be installed within corridors and on blind corners to enable users to see around blind corners if deemed necessary.
74. **Car parking security.** Vehicular entry to residential parking and visitor's parking areas is to be through a secured roller shutter with an intercom system for visitor's access. The doors are to be controlled by locksets

such as remote or card operating electronic lock sets. The phasing of the roller door needs to minimise the opportunity for unauthorised pedestrian access after a vehicle enters/exits the car park.

75. **Lighting:** Lighting is to be provided around the site and all lighting is to comply with the following requirements:
- Lighting is to be designed and installed in accordance with the relevant Australian and New Zealand Lighting Standards.
 - A Lighting Maintenance Policy is required to outline the maintenance, monitoring and operation of lighting.
 - To reduce power consumption and comply with the relevant Australian and New Zealand Standards for Lighting, car park lighting is to be interfaced with motion detectors.
 - Lighting is to be provided to all common areas including all car parking levels, stairs and access corridors and communal gardens.
 - Lighting is to be automatically controlled by time clocks and where appropriate, sensors for energy efficiency and a controlled environment for residents.
76. **Graffiti:** All surfaces on the street level that are not glass should use graffiti resistant paints and/or other surfaces that discourage graffiti.
77. **Security:** To enhance the physical security of doors, all glass doors are to be laminated and the main entry/exit doors to individual units on the ground floor, including balcony doors and fire exit doors to the development are to be fitted with a single cylinder lockset (Australian and New Zealand Standard - Lock Sets), which comply with the Building Code of Australia. Windows to individual units on the ground floor should also be fitted with key operated locksets (Australia and New Zealand Standard - Lock Sets) to restrict unauthorized access to the unit.
78. **Audio Intercom System:** Intercom facilities should be incorporated into these entry/exit points to enable residents to communicate and identify with people prior to admitting them to the development. An auxiliary lock set should also be incorporated into the design of each of the entry/exit points to enable emergency services to access the development particularly in emergency situations.
79. **Balcony doors to units.** Balcony doors to units are to be fitted with keyed locks at ground floor levels and snib locks on all other levels to restrict unauthorised access to units.
80. **Unit windows.** The windows to individual units are to be fitted with keyed locks at ground floor and snib locks on all other levels to restrict unauthorised access to units.

81. **Lift access and security.** Electronic access controls are to be installed on the lift. The equipment should include card readers to restrict access to the level a resident resides on, to the car parking levels and to the Ground Floor.

PRIOR TO OCCUPATION CERTIFICATE

An Occupation Certificate must be obtained from a Principal Certifying Authority prior to commencement of occupation of any part of the development, or prior to the commencement of a change of use of a building.

Prior to issue, the Principal Certifying Authority must ensure that all works are completed in compliance with the approved construction certificate plans and all conditions of this Development Consent.

Unless an alternative approval authority is specified (eg Council or government agency), the Principal Certifying Authority is responsible for determining compliance with conditions in this Part of the consent. Details to demonstrate compliance with all conditions, including plans, documentation, or other written evidence must be submitted to the Principal Certifying Authority.

82. **Section 94.** A monetary contribution for the services in Column A and for the amount in Column B shall be made to Council prior to the issue of any Occupation Certificate:

A – Contribution Type	B – Contribution Amount
Community & Cultural Facilities	\$490,115.23
Open Space & Recreation Facilities	\$1,966,099.05
Civic & Urban Improvements	\$252,910.73
Roads & Traffic Management Facilities	\$271,436.04
Cycleways	\$34,964.70
Stormwater Management Facilities	\$30,953.47
Plan Administration	\$9,428.92
The total contribution is	\$3,055,908.14

These are contributions under the provisions of Section 94 of the Environmental Planning and Assessment Act, 1979 as specified in Section 94 Development Contributions Plan 2007 (2010 Amendment) adopted by City of Ryde on 16 March 2011.

The above amounts are current at the date of this consent, and are subject to **quarterly** adjustment for inflation on the basis of the contribution rates that are applicable at time of payment. Such adjustment for inflation is by reference to the Consumer Price Index published by the Australian Bureau of Statistics (Catalogue No 5206.0) – and may result in contribution amounts that differ from those shown above.

A copy of the Section 94 Development Contributions Plan may be inspected at the Ryde Planning and Business Centre, 1 Pope Street Ryde (corner Pope and Devlin Streets, within Top Ryde City Shopping Centre) or on Council's website <http://www.ryde.nsw.gov.au>.

83. **Landscaping.** All landscaping works approved by condition 1 with the exception of the works within the riparian zone are to be completed prior to the issue of the final Occupation Certificate. Certification from an appropriately qualified person is to be provided to Council and the PCA that all work within the riparian zone has been completed in accordance with the recommended actions in the Vegetation Management Plan prior to the issue of any Occupation Certificate for the final building that forms part of Concept Plan Approval MP09_0195.
84. **BASIX Commitments:** Prior to the issue of the Occupation Certificate, the Principle Certifying Authority is to ensure that the BASIX commitments have been implemented in accordance with the approved BASIX Certificate. Note: Certificates from suitably qualified persons are to be submitted to the Principle Certifying Authority (if Council is the PCA) verifying that all BASIX commitments listed have been fulfilled in accordance with the BASIX Certificate.
85. **Design Verification:** Prior to an Occupation Certificate being issued to authorise a person to commence occupation or use of a residential flat building, the Principal Certifying Authority (PCA) is to be provided with a Design Verification from a qualified designer. The statement must include verification from a qualified designer that the residential flat development achieves the design quality of the development shown on plans and specifications in respect to any Construction Certificate issued, having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development. This condition is imposed in accordance with Clause 154 of the *Environmental Planning and Assessment Regulations 2000*.
86. **Fire safety matters.** At the completion of all works, a Fire Safety Certificate must be prepared, which references all the Essential Fire Safety Measures applicable and the relative standards of Performance (as per Schedule of Fire Safety Measures). This certificate must be prominently displayed in the building and copies must be sent to Council and the NSW Fire Brigade.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of the Interim/Final Occupation Certificate.

Each year the Owners must send to the Council and the NSW Fire Brigade an annual Fire Safety Statement which confirms that all the

Essential Fire Safety Measures continue to perform to the original design standard.

87. **Sydney Water – Section 73.** A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. Application must be made through an authorised Water Servicing Co-ordinator. Please refer to the Building Developing and Plumbing section of the web site www.sydneywater.com.au then refer to “Water Servicing Coordinator” under “Developing Your Land” or telephone 13 20 92 for assistance.

Following application a “Notice of Requirements” will advise of water and sewer infrastructure to be built and charges to be paid. Please make early contact with the Co-ordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design.

Details demonstrating compliance are to be submitted to the Principal Certifying Authority prior to the issue of any Interim/Final Occupation Certificate.

88. **Travel Access Guide.** A Travel Access Guide / Green Travel Plan is to be prepared and a copy of the guide / plan is to be submitted to Council prior to any Occupation Certificate being issued. A copy of the guide / plan is to be given to residents and owners of each apartment. The guide / plan is to include the following information:
- o A list of green travel options available in the area.
 - o Information about the car share scheme.
 - o Maps detailing the location of bike racks, train stations, bus stops and car share spaces.
 - o Service details for bus and train.
 - o Access arrangements for people with disabilities on public transport routes and at train stations.
 - o Key visual landmarks for people on foot and unfamiliar with the area, closest cross street.
 - o Estimated time of travel from the closest major centres or interchanges.
 - o Telephone numbers and web addresses for public transport service providers.
89. **Creation of Drainage Easement** The creation of stormwater drainage easement(s) where required in favour of Council over applicable private properties to legalize discharge over private land downstream. The easement width shall conform to DCP 2010 part 8.2 Stormwater Management.

90. **Compliance Certificates – Engineering.** Compliance Certificates should be obtained for the following (If Council is appointed the Principal Certifying Authority [PCA] then the appropriate inspection fee is to be paid to Council) and **submitted to the PCA**:
- Confirming that all vehicular footway and gutter (layback) crossings are constructed in accordance with the construction plan requirements and Ryde City Council's *Environmental Standards Development Criteria – 1999 section 4*.
 - Confirming that the driveway is constructed in accordance with the construction plan requirements and Ryde City Development Control Plan 2010: - Part 8.3; Driveways.
 - Confirming that the constructed internal car park and associated drainage complies with AS 2890, the construction plan requirements and Ryde City Council's *Environmental Standards Development Criteria – 1999 section 4 and Development Control Plan 2010: - Part 8.2; Stormwater Management*
 - Confirming that the site drainage system (including the on-site detention storage system) servicing the development complies with the construction plan requirements and City of Ryde, Development Control Plan 2010: - Part 8.2; Stormwater Management.
 - Confirming that the Water Sensitive Urban Design treatment train installed at the site will have ability to treat and achieve the post development pollutant loading reduction percentage target as designed and specified in this consent
 - Confirming that after completion of all construction work and landscaping, all areas adjacent the site, the site drainage system (including the on-site detention system), and the trunk drainage system immediately downstream of the subject site (next pit), have been cleaned of all sand, silt, old formwork, and other debris.
 - From Council confirming that all external works in the existing and including new public roads have been completed to Council's satisfaction.
91. **On-Site Stormwater Detention System - Marker Plate.** Each on-site detention system basin shall be indicated on the site by fixing a marker plate. This plate is to be of minimum size: 100mm x 75mm and is to be made from non-corrosive metal or 4mm thick laminated plastic. It is to be fixed in a prominent position to the nearest concrete or permanent surface or access grate. The wording on the marker plate is described in City of Ryde, Development Control Plan 2010: - Part 8.2; Stormwater Management. An approved plate may be purchased from Council's Customer Service Centre on presentation of a completed City of Ryde OSD certification form.
92. **Work-as-Executed Plan.** A Work-as-Executed plan prepared by a Registered Surveyor for the site stormwater drainage and on-site stormwater detention system including the WSUD treatment train if one has been constructed. The WAE plan **is to be submitted to the Principal Certifying Authority (PCA)** and to Ryde City Council if Council is not the nominated PCA. Additionally, if there are proposed

interallotment drainage easements on the subject property, a **Certificate from a Registered Surveyor is to be submitted to the PCA** certifying that the subject drainage line/s and pits servicing those lines lie wholly within the proposed easements.

93. **Positive Covenant, OSD & WSUD Treatment Train.** The creation of a Positive Covenant under Section 88 of the Conveyancing Act 1919, burdening the property with the requirement to maintain the On-site stormwater detention system and the Water Sensitive Urban Design Treatment Train on the property. The terms of the instruments are to be generally in accordance with the Council's draft terms of Section 88E instrument for Maintenance of Stormwater Detention Systems and to the satisfaction of Council.
94. **Connection to Sewer.** All sanitary fixtures must be connected to the sewerage system by gravity flow and documentary evidence of compliance must be submitted to the Principal Certifying Authority before the issue of an **Occupation Certificate**.
95. **Mechanical ventilation systems.** Where any mechanical ventilation systems have been installed a certificate from a professional mechanical services engineer certifying that the systems comply with the approved plans and specifications must be submitted to the Principal Certifying Authority before the issue of an **Occupation Certificate**.
96. **Waste Management.** An adequate number of suitable waste containers must be provided on the premises for the storage of all wastes likely to be generated between collections. Wastes for recycling must be stored in separate bins or containers. Arrangements must be made with Council for the provision of waste collection services **before occupation commences**.
97. **Landscape Maintenance Plan.** A Landscape Maintenance Plan is required prior to the issue of an Occupation Certificate. The Landscape Maintenance Plan should include the following requirements:
 - a. Regular maintenance and trimming of shrubs and plantings.
 - b. Shrubs and plantings being appropriately maintained to allow for clear lines of sight over the shrubs from pathways and pedestrians areas, and to avoid any plantings being used as a natural ladder to gain access to any higher parts of the building.
 - c. All other trees on the site are to be appropriately pruned, trimmed and maintained so that passive surveillance is not compromised and there is no opportunity for climbing of trees to gain access to balconies or units.
 - d. Long term maintenance of the riparian zone.

98. **Street/house numbering:** To assist with way finding for emergency services, numbering of street numbers, building numbers, levels of the building and unit numbers should be clearly displayed. Street numbering is to be designed to be visible from the street. Council must be contacted in relation to any specific requirements for street numbering. All letterboxes and house numbering are to be designed and constructed to be accessible from the public way.
99. **Safety and warning signage:** The following safety and warning signs are to be installed prior to the issue of an Occupation Certificate:
- 'Signage (if required) outlining any applicable restrictions in private communal or semi-private communal spaces.
 - Way finding signage in basement car parking levels to locations including residential parking, residential visitor's parking, commercial parking, lifts and exits.
 - '*These doors are to be used for emergency purposes only*' on fire exit doors.
100. **Fire Exit Doors.** Fire exit doors are to be fitted with single cylinder locksets (Australian and New Zealand Standard – Lock Sets) to restrict unauthorised access to the development. Fire exit doors directly accessible from the public domain are to be fitted with metal covering plates to prevent forced entry and manipulation of locks.
101. **Site Maintenance Plan:** A Site Maintenance Plan is required to ensure regular maintenance and monitoring of security devices (including CCTV cameras, security communications devices, graffiti removal and card readers) and lighting, lighting and signage. This is to be established prior to the issue of an Occupation Certificate.

OPERATIONAL

102. **Use of Balconies.** At no time are the balconies to be used for clothes drying.
103. **Management of Waste Areas.** Staff or contractors must be employed to:
- (a) Take the recyclables from the service compartments to the waste storage and recycling room on the Ground Floor of the building.
 - (b) Change the waste containers beneath the garbage chutes to ensure that there is no spillage or overflow.
 - (c) Take the waste containers from waste storage and recycling rooms to the container emptying point for servicing and return the containers to the waste storage and recycling rooms after servicing.
 - (d) Clean and maintain the waste storage and handling facilities.

104. **Management of Waste Areas.** All waste storage areas must be maintained in a clean and tidy condition at all times.
105. **Air Pollution.** The use of the premises, including any plant or equipment installed on the premises, must not cause the emission of smoke, soot, dust, solid particles, gases, fumes, vapours, mists, odours or other air impurities that are a nuisance or danger to health.
106. **Noise Pollution.** The use of the premises must not cause the emission of 'offensive noise' as defined in the *Protection of the Environment Operations Act 1997*.
107. **Plant or other Equipment.** The operation of any plant or equipment installed on the premises must not cause:
- (a) The emission of noise that exceeds the background noise level by more than 5dBA when measured at the most affected noise sensitive location in the vicinity. Modifying factor corrections must be applied for tonal, impulsive, low frequency or intermittent noise in accordance with the New South Wales Industrial Noise Policy (EPA, 2000).
 - (b) An internal noise level in any adjoining occupancy that exceeds the recommended design sound levels specified in Australian/New Zealand Standard AS/NZS 2107:2000 *Acoustics – Recommended design sound levels and reverberation times for building interiors*.
 - (c) The transmission of vibration to any place of different occupancy.
108. **Acoustic Report.** A report from a qualified acoustical consultant demonstrating compliance with the above noise criteria must be submitted if requested by Council.

General Terms of Approval issued by NSW Office of Water

Plans, standards and guidelines

109. These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to DA2012/0114 and provided by Council:
- i. Site plan, map and/or surveys.
- Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.
110. Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CM) under the Water Management Act from the NSW Office of Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the river identified.

111. The consent holder must prepare or commission the preparation of:
- (i) Vegetation Management Plan
 - (ii) Erosion and Sediment Control Plan
 - (iii) Soil and Water Management Plan
112. All plans must be prepared by a suitably qualified person and submitted to the NSW Office of Water for approval prior to any controlled activity commencing. The following plans must be prepared in accordance with the NSW Office of Waters guidelines located at www.water.nsw.gov.au/Water-Licensing/Approvals/default.aspx
- (i) Vegetation Management Plans
 - (ii) Riparian Corridors
 - (iii) Outlet structures
113. The consent holder must (i) carry out any controlled activity in accordance with approved plans and (ii) construct and/or implement any controlled activity by or under the direct supervision of a suitably qualified professional and (iii) when required, provide a certificate of completion to the NSW Office of Water.
114. The consent holder must reinstate waterfront land affected by the carrying out of any controlled activity in accordance with a plan or design approved by the NSW Office of Water.
- Reporting Requirements**
115. The consent holder must use a suitably qualified person to monitor the progress, completion, performance of works, rehabilitation and maintenance and report to the NSW Office of Water as required.
116. The consent holder must not locate ramps, stairs, access ways, cycle paths, pedestrian paths or any other non-vehicular form of access way in a riparian corridor other than in accordance with a plan approved by the NSW Office of Water.
117. The consent holder must ensure that no materials or cleared vegetation that may (i) obstruct flow, (ii) wash into the water body, or (iii) cause damage to river banks; are left on waterfront land other than in accordance with a plan approved by the NSW Office of Water.
118. The consent holder is to ensure that all drainage works (i) capture and convey runoffs, discharges and flood flows to low flow water level in accordance with a plan approved by the NSW Office of Water; and (ii) do not obstruct the flow of water other than in accordance with a plan approved by the NSW Office of Water.
119. The consent holder must stabilise drain discharge points to prevent erosion in accordance with a plan approved by the NSW Office of Water.
120. The consent holder must establish all erosion and sediment control works and water diversion structures in accordance with a plan approved by the NSW Office of Water. These works and structures must be

inspected and maintained throughout the working period and must not be removed until the site has been fully stabilised.

121. The consent holder must ensure that no excavation is undertaken on waterfront land other than in accordance with a plan approved by the NSW Office of Water.
122. The consent holder must establish a riparian corridor along University Creek in accordance with a plan approved by the NSW Office of Water.