

|                         |   |
|-------------------------|---|
| <b>JRPP No.</b>         | 2009STH012  |
| <b>DA No.</b>           | DA-2009/1189  |
| <b>Proposal</b>         | Integrated Development Construction of student accommodation building with associated site works and services |
| <b>Property</b>         | Lot 6 DP 843929<br>University of Wollongong<br>Northfields Avenue, KEIRAVILLE NSW 2500                        |
| <b>Applicant</b>        | University of Wollongong  |
| <b>Responsible Team</b> | City Wide Development (GH)  |

## **EXECUTIVE SUMMARY**

### **Reason for consideration by Joint Regional Planning Panel**

The application has been referred to the Joint Regional Planning Panel pursuant to clause 13 B (1) (a) of the State Environmental Planning Policy (Major Development) 2005 as the development has a capital investment value in excess of \$10 million. The proposed student accommodation building is also in excess of 13 metres in height and hence clause 13 C (b) of State Environmental Planning Policy (Major Development) 2005 also applies.

### **Proposal**

The proposal is for the construction of a student accommodation building including basement car parking with vehicular access from Robsons Road and associated site works and services within the University of Wollongong campus.

### **Permissibility**

The application was originally lodged with Council on 24 September 2009 and hence Wollongong Local Environmental Plan 1990 (WLEP 1990) is the relevant planning instrument under which the application must be primarily assessed.

The University of Wollongong site is zoned part 5(a) Special Uses Zone – ‘Education’ and part 7(a) Special Environmental Protection Zone pursuant to Wollongong Local Environmental Plan 1990 (WLEP 1990). The proposed student accommodation development is located wholly within the portion of the site zoned 5(a) Special Uses Zone – ‘Education’. The proposal falls within the definition of an "educational establishment" and is permissible in this zone with development consent.

The proposed development is also permissible under ‘Draft Wollongong Local Environmental Plan 2009’ which was an exhibited draft instrument during the assessment period of the application. Wollongong Local Environmental Plan 2009 was gazetted 26 February 2010 and zoned the University of Wollongong site to part Zone SP2 Infrastructure and part Zone E2 Environmental Conservation pursuant to this plan. The proposed development is located wholly within the portion of the site zoned SP2 Infrastructure and the purpose shown on the Land Zoning Map (Education Establishment) is permitted with consent, including any development that is ordinarily incidental or ancillary to development for that purpose.

### **Consultation**

The application was publicly notified in the local newspaper 'The Advertiser' for a period of over one (1) month as a “Nominated Integrated Development” since concurrent approval is required under Part 3 Section 91 of the Water Management Act 2000 - Controlled Activity Approval from the Department of Environment, Climate Change and Water (NSW Office of Water). Two (2) submissions were received.

## **Main Issues**

The main issues raised in the two (2) submissions received include: insufficient bicycle infrastructure, on-site car parking, and Council's public notification process including general matters relating to the property location and description.

## **RECOMMENDATION**

**It is recommended that approval be granted to DA-2009/1189 subject to the draft conditions of consent attached to this report.**

## **ASSESSMENT REPORT**

---

### **1 Background**

The subject site forms the University of Wollongong's main campus. More recently, the University has been undertaking new development and also redevelopment of existing buildings to cater for changing tertiary and technological demands. The proposed construction of the student accommodation building is an example of the University's continuing expansion of its facilities and services.

### **2 Site description**

The subject site is legally described as Lot 6 DP 843929 and is occupied by the University of Wollongong. The proposed student accommodation building and associated site works are located within the south-western car park area and open space precinct of the University campus grounds. The subject site has a total site area of 80.08 hectares.

The University of Wollongong's main campus site is in a managed state featuring extensive landscaping and tree cover within selected areas amongst a built landscape environment.

The development site is located approximately 30 metres from a natural watercourse located to the north and therefore the proposal is Integrated Development and requires approval under Part 3 Section 91 of the Water Management Act 2000 - Controlled Activity Approval from the Department of Environment, Climate Change and Water (New South Wales Office of Water).

Council records indicate that the overall site is affected by several constraints including flood hazard, bushfire hazard, heritage item, unstable land and filled land. However, these property affectations do not apply to the whole of the University land holding. The specific development site is not located within the vicinity of any known heritage items however the affected portion of the site is located adjacent to the Illawarra Escarpment and a bush fire prone affected area of the property. The flood affectation will be minimised through the proposed drainage works associated with the development.

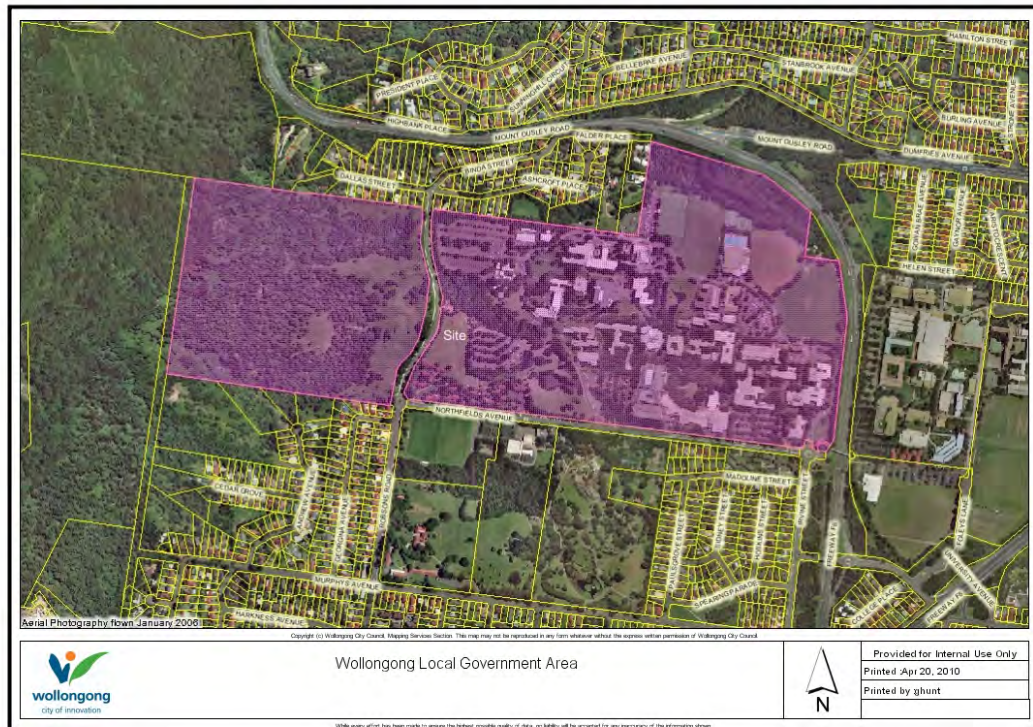


Figure 1: Aerial photograph



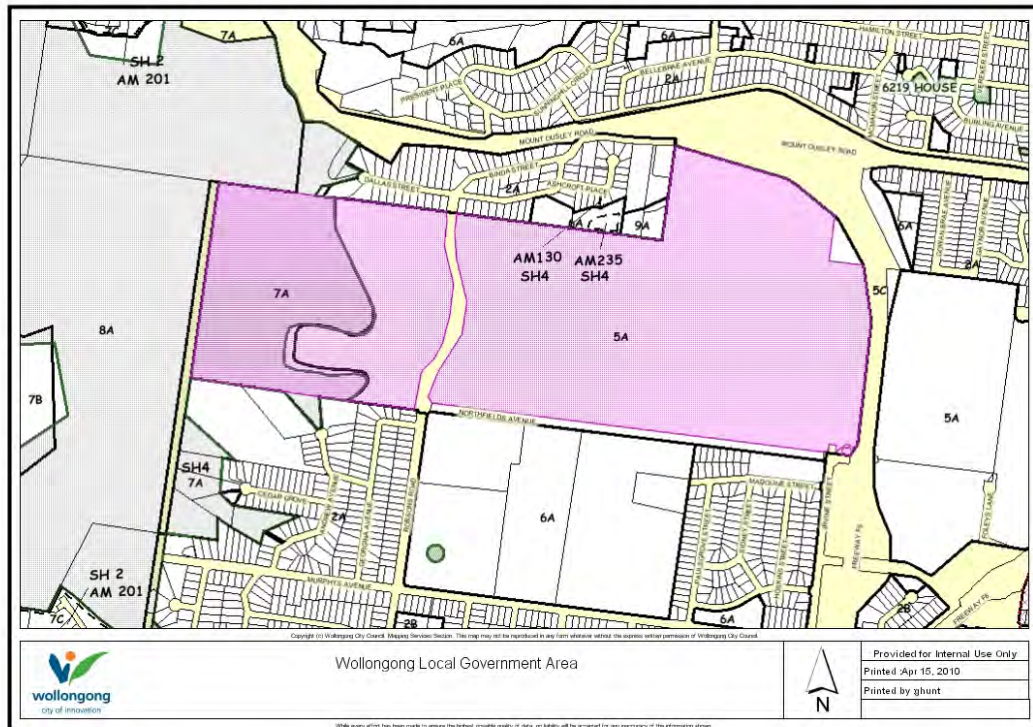


Figure 2: Wollongong Local Environmental Plan 1990 zoning map



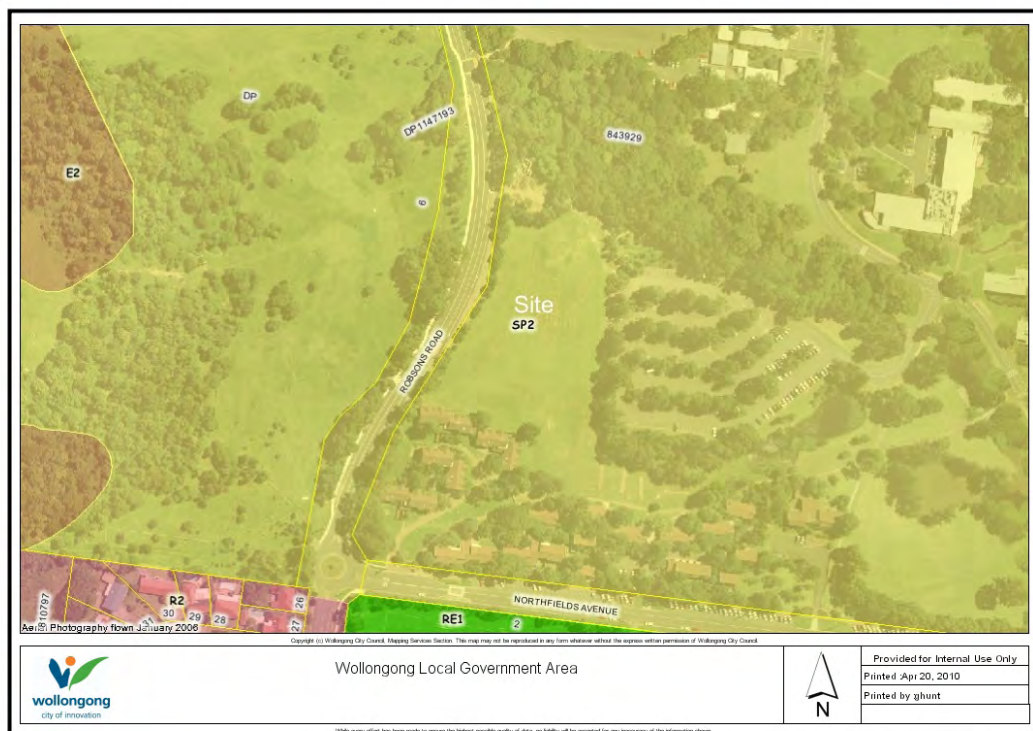
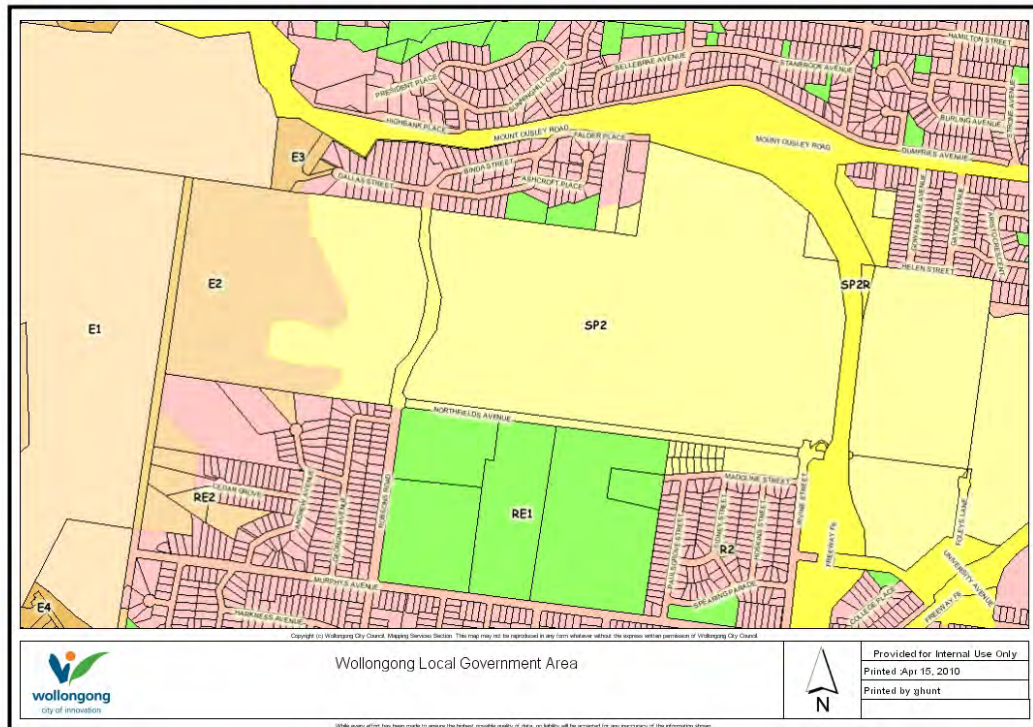


Figure 3: Wollongong Local Environmental Plan 2009 zoning map

### 3 Proposal

The proposal is for the construction of a student accommodation building with ancillary facilities and associated site works. The proposed building incorporates two basement carparking levels with vehicular access of Robsons Road.

The height of the proposed building varies due to the topography of the site and the architectural design elements.

The average building height is four storeys (height 14 metres to the roof ridge) with some components of the building being five storeys in height above ground level (height 17.2 metres to roof ridge).

The facility will provide self catered student accommodation with the following number of bed study rooms proposed:

- 84 x 4 bed units      336
  - 12 x 2 bed units      24
- 360 students

The student accommodation units are located generally to maximize the number of bed study rooms windows with a northern orientation. Views to the University of Wollongong campus, Botanic Gardens or Mount Keira are provided from all 4 bedroom units.

The ancillary facilities for the development include administration and communal areas. The development will also require service infrastructure, removal of some existing trees and other vegetation, modification to the existing south-western car park and the provision of 205 car parking spaces.

The project will be occupied in two (2) stages. Accommodation and facilities in the southern building (Block A) will be handed over and occupied as stage 1 prior to the remainder of the building being completed.

The Gross Floor Area of the development is as follows:

|   |                  |
|---|------------------|
| Units.                                  | 10,233 sqm       |
| Support / Communal and Ancillary Areas. | 1,773 sqm        |
| Circulation                             | <u>3,216 sqm</u> |
|   | 15,222 sqm       |
| Balconies                               | 1,241 sqm        |
| Carparking Basements                    | 6,509 sqm        |

#### Site Analysis

The design of the proposed student accommodation responds to the following site conditions:

- Setbacks for bushfire hazard and riparian corridors are provided.
- The building utilizes the topography of the site.
- The height of the building is lower at Robsons Road and increases as the site falls to the east.
- The majority of units have bed study rooms with northern orientation.
- The majority of units have living areas and balconies with views to the north and east.
- Timber screens are proposed to protect balconies from the wind.
- Direct pedestrian links are provided to the main campus.

#### 4 Environmental Planning and Assessment Act 1979

In determining a development application, the consent authority must take into consideration matters referred to in section 79C(1) of the EP&A Act 1979 as are of relevance to the development. The following table summarises the relevant matters of consideration under section 79C(1) and the significant matters are discussed in further detail further in the report.

##### Section 79C(1) of the Environmental Planning and Assessment Act 1979

###### (a)(i) any environmental planning instrument

###### State Environmental Planning Policies

- SEPP No. 55 – Remediation of Land
- SEPP No. 65 - Design Quality of Residential Flat Development
- SEPP (Infrastructure) 2007
- SEPP (Major Development) 2005
- Illawarra Regional Environmental Plan No. 1 (IREP No.1) 1986 (deemed SEPP 1 July 2009)

###### Regional Environmental Planning Policies

- Illawarra Regional Environmental Plan No. 1 (IREP No.1) 1986 (deemed SEPP 1 July 2009)

###### Regional Environmental Planning Policies

###### Local Environmental Planning Policies

- Wollongong Local Environmental Plan (WLEP) 1990
- Wollongong Local Environmental Plan (WLEP) 2009

Detailed assessment is provided below the table.

###### (a)(ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority

- Wollongong Local Environmental Plan (WLEP) 2009

###### (a)(iii) any development control plan

- Wollongong Section 94A Development Contributions Plan 2009
- DCP 49 Residential Development
- DCP 54 – Managing Flood Risk
- Geotechnical Development Control Plan

###### (a)(iiia) Any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under Section 93F

There are no planning agreements entered into or any draft agreement offered to enter into under S93F which affect the development.

###### (a)(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph)

CI92

The proposal does not involve demolition.

The site is not located on land to which the Government Coastal Policy applies however the NSW Coastal Policy 1997 only applies to the seaward part of the LGA.

## Section 79C(1) of the Environmental Planning and Assessment Act 1979

CI93 Fire safety and other considerations

### b) the likely impacts of development

#### Context and Setting:

The proposal is to be carried out on zoned land (Zone 5(a) Special Uses Zone – ‘Education’). The proposal is consistent with the zone objective of catering for the provision of public facilities and services. The proposal is also consistent with the requirements of Clause 15 of Wollongong Local Environmental Plan 1990.

#### Access, Transport and Traffic:

The proposed development was referred to the New South Wales Roads and Traffic Authority - Southern Regional Development Committee, the Wollongong Local Traffic Committee and to Council’s Traffic Division and following assessment the proposal was considered to be satisfactory with conditions.

In addition the applicant has stated that The University of Wollongong recently commissioned a Transport Strategy and Implementation Plan for the main campus.

The overall objectives of the Transport Strategy and Implementation:

- Improved bicycle facilities.
- Improvements to public transport
- Shuttle bus upgrade to North Wollongong Railway Station.
- Current proposals being developed for improved pedestrian and access links between the University of Wollongong main campus, Innovation Campus and Wollongong CBD.

#### Public Domain:

The proposal is not envisaged to impact upon the public domain as the University of Wollongong main campus site is well established.

#### Utilities:

The University of Wollongong site is connected to existing utility services however an upgrade of the current utility services will be required to meet the expected demand of the proposed development.

#### Heritage:

Located to the west of the site is the heritage listed escarpment core area. Council’s Heritage Officer was consulted regarding the impact of the proposed development upon the heritage listed escarpment area, however since the heritage listing is located on the western side of Robsons Road and not in the immediate vicinity of the development site the Council's Heritage Officer considers the proposed development to be satisfactory.

#### Other land resources:

The proposal is not envisaged to impact upon any valuable land resources.

#### Water:

The site is presently serviced by Sydney Water, which can be readily extended to meet the requirements of the proposed development.

The proposal is not envisaged to have unreasonable water consumption.



## Section 79C(1) of the Environmental Planning and Assessment Act 1979

### Soils:

The proposal is not envisaged to impact upon soils or involve contamination issues. Geotechnical matters relate predominantly to the western extremity of the University land holding. The application has been referred to Council's Geotechnical Engineer and found to be satisfactory subject to conditions.

### Air and Microclimate:

The proposal is not expected to have any negative impact on air or microclimate. The application has been referred to Council's Environment Division and found to be satisfactory subject to conditions.

### Flora and Fauna:

The submitted Arborist Report identifies trees within the development site. A number of trees are to be removed as they are within the building zone of the development. Council's Landscape Officer has assessed the proposal and has no objections to the proposed tree removal subject to conditions. The tree removal is not anticipated to significantly impact on fauna and compensatory planting will be undertaken. Council's Environment Division has no objections to the tree removal.

### Waste:

A condition will be attached to any consent granted that an appropriate receptacle be in place for any waste generated during the construction. Council's Environment Division has assessed the proposed development and has no objections subject to conditions.

### Energy:

The proposal is not envisaged to have unreasonable energy consumption. The building has been designed to incorporate a range of Ecological Sustainable design initiatives as described in the Statement of Environmental Effects.

### Noise and vibration:

The proposal is not expected to have any negative impact with regard to noise and/or vibration except for the construction period which would be subject to Council's standard conditions. Council's Environment Division has assessed the proposed development and has no objections subject to conditions.

### Natural hazards:

Council records indicate that the overall site is affected by several constraints including flood hazard, bushfire hazard, heritage item, unstable land and filled land. However, these property affectations do not apply to the whole of the University land holding. The specific development site is not located within the vicinity of any known heritage items however the site is located adjacent to the Illawarra Escarpment and a bush fire prone affected area of the property. The flood affectation will be minimised through the proposed drainage works associated with the development.

### Technological hazards:

Council records list the site as 'filled land affected' and 'unstable land affected' however there are no technological hazards affecting the site that would prevent the proposal.

Council's Geotechnical Engineer has assessed the proposed development and has no objections subject to conditions.

### Safety, Security and Crime Prevention:

This application has considered the minimisation of opportunities for criminal or antisocial behaviour. The application was referred to Council's SCAT Team for assessment on CPTED matters and was found to be satisfactory.

## Section 79C(1) of the Environmental Planning and Assessment Act 1979

### Social Impact:

The proposed development is expected to create a beneficial social impact by providing additional student accommodation for the University of Wollongong.

### Economic Impact:

The proposal is not expected to create any negative economic impact.

### Site Design and Internal Design:

The application requests consideration for a departure from the requirements of Clause 139 (2) (b) of Illawarra Regional Environmental Plan No.1 (IREP No.1) 1986 (Deemed SEPP) for the general maximum height limitation of 11 metres. The application was referred to the Department of Planning and the Director General has granted concurrence to the proposed building height above 11 metres.

A condition will be attached to any consent granted that all works are to be in compliance with the Building Code of Australia.

### Construction:

A condition will be attached to any consent granted that WorkCover be contacted for any demolition or use of any crane, hoist, plant or scaffolding. A condition will be attached to any consent granted that all works are to be in compliance with the Building Code of Australia.

### Cumulative Impacts:

The proposal is not expected to have any negative cumulative impacts.

## **c) the suitability of the site for development**

### Does the proposal fit in the locality?

The proposal is appropriate for the site and meets the objectives of the zone.

### Are the site attributes conducive to development?

There are no site constraints that would prevent the proposal.

## **d) any submissions made in accordance with this Act or the regulations**

The application was publicly notified in the local newspaper 'The Advertiser' for a period of over one (1) month as a "Nominated Integrated Development" since concurrent approval is required under Part 3 Section 91 of the Water Management Act 2000 - Controlled Activity Approval from the Department of Environment, Climate Change and Water (NSW Office of Water). Two (2) submissions were received.

### Submissions from public authorities

The Director General of the Department of Planning has granted concurrence to the proposed building height over 11 metres under Clause 139 (2) (b) of Illawarra Regional Environmental Plan No. 1 (IREP No.1) 1986 (Deemed SEPP).

The Department of Environment, Climate Change and Water (New South Wales Office of Water) has provided Integrated Development General Terms of Approval for works requiring a Controlled Activity under the Water Management Act 2000.

The New South Wales Rural Fire Service has provided Integrated Development General Terms of Approval under Section 100B of the 'Rural Fires Act 1997'.

The New South Wales Roads and Traffic Authority has provided the Southern Regional Development Committee meeting minutes under the SEPP (Infrastructure) 2007 for Integrated Development.

## Section 79C(1) of the Environmental Planning and Assessment Act 1979

### e) the public interest

The application is not expected to have any negative impacts on the environment or the amenity of the locality. It is considered appropriate with consideration to the zoning and the character of the area and is therefore considered to be in the public interest.

## 5 State Environmental Planning Policy # 55 – Remediation of Land

The site is not affected by contamination and hence the proposal satisfies State Environmental Plan Policy No.55.

## 6 State Environmental Planning Policy # 65 - Design Quality of Residential Flat Development

The following comments regarding the proposed development generally describes the applicant's statement of compliance with State Environmental Planning Policy No.65 (SEPP 65) Design Quality Principles which has been assessed by Council and is considered to be a satisfactory response to the Policy.

### 1 Context

*The proposed development:*

- *Is consistent with the scale and character of the existing University of Wollongong main campus development.*
- *Will define the student accommodation precinct and contribute to an enhanced sense of community for on site residents.*

### 2 Scale

- *The existing University of Wollongong main campus development consists of a range of buildings 3, 4 and 5 storeys in height and is of similar scale and bulk to the proposed development.*
- *The existing 'Kooloobong' student accommodation development located adjacent to the south consists of a combination of buildings 1, 2 and 3 storeys in height.*
- *The proposed development responds to the site topography and steps up the hill towards Robsons Road.*
- *The proposed development consists of a combination of 3, 4 and 5 storey components.*
- *The buildings facing Robsons Road are generally 3 storeys in scale when viewed from the road.*

### 3 Built Form

*The design of the proposed buildings incorporates the following elements:*

- *Structural and planning efficiency dictates the vertical alignment and repletion of units and functional areas.*
- *A base, middle and top is expressed to reduce the visual height of the four storey facades.*
- *Strong vertical elements are highlighted at the main entrances to the buildings.*
- *Sun shading elements are used to modulate the facades.*
- *The building is articulated in plan to maximise preferred views from balcony areas.*

#### **4 Density**

- *The proposed density is consistent with the density objectives of the University of Wollongong main campus which is less than 0.5:1.*

#### **5 Resource, Energy and Water Efficiency**

*Sustainability initiatives incorporated in the project include:*

- *Majority of buildings are on an east west axis and incorporate passive solar design principles.*
- *Buildings are naturally ventilated.*
- *Energy Management initiatives are incorporated in accordance with the University of Wollongong Design Standards.*
- *Rainwater harvesting of roof water.*
- *Separate grey-water and black-water waste piping.*
- *Grey-water harvesting system.*
- *Waste management and recycling programming.*
- *Bus service link to Wollongong CBD and local facilities.*
- *Bicycle storage and facilities.*
- *Energy efficient fixtures and fittings.*
- *Solar hot water systems (gas assisted) for hot water and space heating.*
- *Compliance with Section J Building Code of Australia requirements.*
- *Provision of an organic vegetable garden.*

#### **6 Landscape**

*The proposed landscaping will provide:*

- *Usable outdoor areas for passive and active recreation.*
- *Opportunities for formal and informal interaction.*
- *Screening and privacy to ground floor units.*
- *Access for persons with disabilities.*
- *Organic vegetable garden.*

*The maintenance of the landscaping will be undertaken by the University of Wollongong.*

#### **7 Amenity**

*The proposed development includes the following characteristics:*

- *Circulation within the building simple and legible.*
- *External views are available from foyers and stairs.*
- *Units are generously sized with functional layouts.*
- *Unit living areas open to balconies or terraces.*
- *Living and bed study areas are acoustically separated.*



- *Dedicated storage space is provided for most units.*
- *All bed study rooms and living areas are naturally ventilated.*
- *The majority of bed study rooms have a northern orientation.*

## **8 Safety and Security**

- *The principles of Safety by Design have been incorporated in the proposed development.*
- *External access routes and communal areas are well lit, open and visible from nearby units.*
- *An access control system will be utilised.*
- *Entrances and other critical areas will have CCTV coverage.*
- *Ground floor windows will have security screens.*

## **9 Social Dimensions**

- *The accommodation will cater for students from a diverse range of backgrounds, ages, nationalities and interests.*
- *Facilities such as Multipurpose Rooms and Student Lounges are provided to facilitate the University of Wollongong Accommodation Services support programmes for students.*
- *Pastoral care and student support services will be provided.*

## **10 Aesthetics**

- *The proposed development will contribute positively to the urban design character of the University of Wollongong main campus.*

## **7 State Environmental Planning Policy (Infrastructure) 2007**

Under the provisions of the SEPP (Infrastructure) an 'educational establishment' means a building or place used for education (including teaching), being:

- a school, or
- a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act.

### **Clause 28**

Development for any of the following purposes may be carried out by any person with consent on any of the following land:

- development for the purpose of educational establishments—on land on which there is an existing educational establishment.
- development for the purpose of the expansion of existing educational establishments—on land adjacent to the existing educational establishment.

The development is permissible with development consent as the development is for the purpose of an educational establishment on land on which there is an existing educational establishment.

## **8 State Environmental Planning Policy (Major Development) 2005**

The application is referred to the Joint Regional Planning Panel pursuant to clause 13 B (1) (a) of the State Environmental Planning Policy (Major Development) as the capital investment value exceeds \$10 million. The proposal is also referred to the Joint Regional Planning Panel given that the proposed

building is in excess of 13 metres in height as per clause 13 C (b) of the State Environmental Planning Policy (Major Development).

## **9 Wollongong Illawarra Regional Environmental Plan No.1 (IREP NO.1) 1986 (Deemed SEPP -1 July 2009)**

The aim of this plan is to maximise the opportunities for the people of the region and the State to meet their individual and community economic and social needs with particular reference to the way in which these needs are related to the allocation, availability, accessibility and management of the region's land resources.

The application requests consideration for a departure from the requirements of Clause 139 (2) (b) of Illawarra Regional Environmental Plan No. 1 (IREP No.1) 1986 (Deemed SEPP) for the general maximum height limitation of 11 metres.

The application was referred to the Department of Planning with the Director General granting concurrence to the proposed building height above 11 metres in the following correspondence comments dated 14 October 2009.

*"I refer to your request for the concurrence of the Director General of the Department of Planning for the above application in relation to clause 139 (2) (b) of Illawarra Regional Environmental Plan No.1.*

*I am pleased to advise that the Director General has decided to grant his concurrence to the proposed building height above 11 metres."*

The departure from the requirements of Clause 139 (2) (b) of the Illawarra Regional Environmental Plan No. 1 1986 is also supported by Council due to the proposed development being of similar bulk, scale and height as the existing University of Wollongong main campus development which consists of a range of buildings 3, 4 and 5 storeys in height.

## **10 Wollongong Local Environment Plan 1990**

The site is zoned part 5(a) Special Uses Zone 'Education' and part 7(a) Special Environmental Protection Zone pursuant to Wollongong Local Environmental Plan (WLEP) 1990. The proposal is located wholly within the eastern portion of the site zoned 5(a) Special Uses Zone 'Education'. The proposal is defined as an 'educational establishment' and is permissible with development consent upon the portion of site zoned 5(a) Special Uses Zone 'Education'.

### Clause 6 – Definitions

'Educational establishment' means a building or place used for education such as teaching, and includes the following:

- (a) a school
- (b) a tertiary institution, being a university, teachers' college, technical college, TAFE establishment, or other tertiary college providing formal education which is constituted by or under an Act,
- (c) an art gallery or museum, not used to sell the items displayed in the art gallery or museum.

whether or not accommodation for staff or students is provided and whether or not conducted for the purpose of gain;

### Clause 9 – Zone objectives and development control table

An 'educational establishment' is permissible in the 5(a) Special Uses Zone with development consent.

The objective of the 5 Special Uses Zone is:

*".....to cater for the provision of community and public facilities and services."*

The proposal is consistent with the objectives of the zone as the proposal will support services for the University of Wollongong.

### Clause 12. Floor space ratios

The site is zoned 5(a) Special Uses Zone 'Education' under Wollongong Local Environmental Plan (WLEP) 1990 and has no identified restriction regarding maximum floor space ratio.

### Clause 15. Development in Zone No. 5

Development may only be carried out with development consent on land within Zone No.5 for the purpose specified on the map. The land is specified for 'Education' use. The proposal is therefore consistent with the Clause 15.

### Clause 17. Development in Zone No 7(a), 7(b) or 7(d)

The University of Wollongong site is zoned part 5(a) Special Uses Zone – 'Education' and part 7(a) Special Environmental Protection Zone pursuant to Wollongong Local Environmental Plan 1990 (WLEP 1990). The proposed student accommodation development is located wholly within the portion of the site zoned 5(a) Special Uses Zone – 'Education' located on the eastern downhill side of Robsons Road.

The part 7(a) Special Environmental Protection Zone of the site is located on the uphill western side of the Robsons Road.

| Criteria  | Comment   |
|---|---|
| (1) In deciding whether to grant consent to a development application to carry out development of any land within Zone No 7 (a), 7 (b) or 7 (d), the Council shall:         |   |
| (a) consider the visual impact of the proposed development when viewed from a public place, and take such measures as will, in its opinion, minimise any visual impact, and | <p>The proposed development responds to the site topography and steps with the contours of the land on the eastern side of Robsons Road.</p> <p>The existing University of Wollongong main campus development consists of a range of buildings 3, 4 and 5 storeys in height and is of similar scale and bulk to the proposed development.</p>   |
| (b) be satisfied that the development minimises any detrimental impact on the environment by way of vegetation clearance, drainage pollution or bushfire risk.              | <p>The specific development site is not located within the 7(a) Special Environmental Protection Zone however the site is located adjacent to the Illawarra Escarpment and a bush fire prone affected area of the property which is located uphill and on the western side of Robsons Road.</p> <p>The flood affectation will be minimised through the proposed drainage works associated with the development located on the eastern side of Robsons Road.</p> |
| (2) The Council shall not grant development consent to an application to carry out development on land within Zone No 7 (a), 7 (b) or 7 (d) unless it is satisfied that:    |   |
| (a) the development will not have a detrimental effect on the   | The proposed development site is  |

| Criteria   | Comment   |
|--|---|
| rainforest or rainforest species, or   | located wholly within the existing established University of Wollongong's main campus grounds located on the eastern side of Robsons Road and is therefore not expected to have any detrimental impact upon rainforest or rainforest species.   |
| (b) any detrimental effect on the rainforest or rainforest species can be justified by other factors.  | Not Applicable  |
| (3) The Council shall not grant consent to the carrying out of development for the purposes of forestry on land within Zone No 7 (a) unless the Council is satisfied that the development will be so managed as not to have any long term detrimental effect on the rainforest or any species of local or regional significance. | Not Applicable  |
| (4) The Council shall not grant consent to the carrying out of development having the effect of bridging, obstructing or otherwise affecting waterways on land within Zone No 7 (a), 7 (b) or 7 (d) unless it is satisfied that reasonable opportunities for wildlife movement will be maintained.                               | The proposed development site is located wholly within the existing established University of Wollongong's main campus grounds located on the eastern side of Robsons Road and is therefore not expected to have any detrimental impact upon waterways and wildlife movement on land within the Zone No 7 (a) Special Environmental Protection Zone which is located uphill and on the western side of Robson Road. |
| (5) The Council must not grant consent to an application to carry out development on land within Zone No 7 (a), 7 (b) or 7 (d) which, in the opinion of the Council, will involve significant tree felling or vegetation clearance unless it is satisfied that:  |   |
| (a) the development will be so managed as not to have any long term detrimental impact on opportunities for wildlife movement, or  | The proposed development site is located wholly within the existing established University of Wollongong's main campus grounds located on the eastern side of Robsons Road and is therefore not expected to have any detrimental impact upon wildlife movement on land within the Zone No 7 (a) Special Environmental Protection Zone which is located uphill and on the western side of Robson Road.               |
| (b) any detrimental effect on opportunities for wildlife movement can be justified by other factors.   | Not Applicable  |
| 6. (Repealed)  |   |



#### Clause 26. Development in flood prone land

The development proposal was referred to Council's Infrastructure Design Division for assessment regarding stormwater drainage and flooding issues under Development Control Plan No.54 (Managing Flood Risk). The proposal was considered to be satisfactory subject to the imposition of certain conditions.

#### Clause 27. Protection of heritage items and heritage conservation areas

The site is located in proximity to the Illawarra Escarpment which is listed as a Heritage Item.

Draft Wollongong Local Environmental Plan 2009 identified the land as an "Archaeological Site". The Council's Heritage Officer was consulted regarding this matter and was found to be acceptable.

#### Clause 29A. Development affecting places or sites of known or potential Aboriginal heritage significance

The Council's Heritage Officer was consulted regarding this matter and was found to be acceptable.

#### Clause 29B. Development affecting known or potential archaeological sites of relics of non-Aboriginal heritage significance

The Council's Heritage Officer was consulted regarding this matter and was found to be acceptable.

#### Clause 29C. Development in the vicinity of a heritage items

The Council's Heritage Officer was consulted regarding this matter and was found to be acceptable.

#### Clause 30. Services

Servicing of the site has been taken into consideration in the application. Standard conditions would be imposed for a Section 73 Sydney Water Certificate, Integral Energy and Telecommunications service provider requirements to be satisfied prior to the issue of the Construction Certificate.

#### Clause 32. Consideration of certain applications

This clause relates to the visual and traffic impact aspects of developments in relation to main roads and to roads generally within the vicinity of the development. It is considered that the proposal is satisfactory in this regard following referral to the New South Wales Roads and Traffic Authority - Southern Regional Development Committee, the Wollongong Traffic Committee and Council's Infrastructure Traffic Division.

#### Clause 34. Tree preservation

Trees are proposed to be removed as part of this development. Council's Infrastructure Landscape Division and Council's Environment Division has assessed the proposed tree removal and has no objection subject to the imposition of certain conditions including compensatory plantings.

#### Clause 40 Suspension of certain laws etc.

This clause applies generally, but is not directly applicable to the proposal.

### **11 Wollongong Local Environmental Plan 2009**

Wollongong Local Environmental Plan 2009 was gazetted 26 February 2010 and zoned the University of Wollongong site to part Zone SP2 Infrastructure and part Zone E2 Environmental Conservation pursuant to this plan. The proposed development is located wholly within the portion of the site zoned SP2 Infrastructure and the purpose shown on the Land Zoning Map (Education Establishment) is permitted with consent, including any development that is ordinarily incidental or ancillary to development for that purpose.

However, this plan was an exhibited draft at the time that Development Application DA-2009/1189 was lodged with Council on 24 September 2009 and Wollongong Local Environmental Plan 2009 contains a savings provision in clause 1.8A, as follows:

*“1.8A Savings provision relating to pending development applications*

*If a development application has been made before the commencement of this Plan in relation to land to which this Plan applies and the application has not finally been determined before that commencement, the application must be determined as if this Plan had not commenced.”*

The exhibited draft objectives of the Zone SP2 Infrastructure are:

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
- To set aside land for the future provision of key infrastructure required to service development.
- To provide for key transport corridors.

The proposal is considered to be consistent with the objectives of the Zone SP2 under Draft Wollongong Local Environmental Plan 2009 as the proposal will support services for the University of Wollongong.

## 12 DCP 49 – Residential Development

### Section 13 – Residential Apartment Buildings

| <i>Controls/ objectives</i>       | <i>Comment</i>  | <i>Compliance</i> |
|-----------------------------------|---|-------------------|
| 13.1 Minimum Allotments Standards | Not applicable  | N/A               |
| 13.2 Density                      | <p>Satisfactory – The density of the University of Wollongong main campus is currently 0.3:1 based on usable site area. The ‘usable site area’ excludes University land west of Robsons Road. The proposed density when fully developed is anticipated to be less than 0.5:1 and this will include the proposed student accommodation building.</p> <p>The density is consistent with the main part of the campus and with future redevelopment of the existing adjoining ‘Kooloobong’ student accommodation precinct.</p> <p>The proposed student accommodation building is not adjoining existing external residential areas.</p> | Yes               |

|   |   |     |
|---|---|-----|
| 13.3 Building Height                            | <p>Satisfactory - The application requests consideration for a departure from the requirements of Clause 139 (2) (b) of Illawarra Regional Environmental Plan No. 1 (IREP No.1) 1986 (Deemed SEPP) for the general maximum height limitation of 11 metres.</p> <p>The application was referred to the Department of Planning with the Director General granting concurrence to the proposed building height above 11 metres in the following correspondence comments dated 14 October 2009.</p> <p><i>"I refer to your request for the concurrence of the Director General of the Department of Planning for the above application in relation to clause 139 (2) (b) of Illawarra Regional Environmental Plan No.1.</i></p> <p><i>I am pleased to advise that the Director General has decided to grant his concurrence to the proposed building height above 11 metres."</i></p> <p>The departure from the requirements of Clause 139 (2) (b) of the Illawarra Regional Environmental Plan No. 1 1986 is also supported by Council due to the proposed development being of similar bulk, scale and height as the existing University of Wollongong main campus development which consists of a range of buildings 3, 4 and 5 storeys in height.</p> | Yes |
| 13.4 Front Setbacks                             | <p>Satisfactory – Setbacks to Robsons Road are 4 metres which complies with Section 13.4 of Wollongong Development Control Plan No.49. The existing adjoining 'Kooloobong' student accommodation buildings are setback 4 metres from Robsons Road.</p>  | Yes |
| 13.5 Side and Rear Setbacks/Building Separation | Not applicable  | N/A |
| 13.6 Basements                                  | <p>Satisfactory – The basement parking levels are not visible from Robsons Road.</p> <p>The visual impact of the basement is minimised through the use of terraces, landscaping and building articulation.</p> <p>The basement will be protected from inundation in a 1:100 year flood event.</p>   | Yes |

|                                |   |     |
|--------------------------------|---|-----|
| 13.7 Built Form/Street Address | <p>Satisfactory - The frontage of the building to Robsons Road is well articulated and relates to the topography of the site.</p> <p>The boundary of the property will be defined with landscaped screening.</p> <p>A general public entrance located at the main courtyard level is provided. Other security controlled access locations are related to the relationship of the building with the University of Wollongong campus.</p>   | Yes |
| 13.8 Driveways                 | <p>Satisfactory – The driveways comply with the requirements of Section 13.8 of Development Control Plan No.49.</p> <p>Council’s Traffic Division has assessed the proposal and is considered satisfactory subject to conditions.</p>   | Yes |
| 13.9 Carparking                | <p>Satisfactory – The development provides for a total of 204 car parking spaces, 9 motorcycle parking spaces and 128 bicycle parking spaces</p> <p>The car parking provided on site replaces 85 spaces due to the modifications within the existing south western car park as a result of the proposal and overall the development parking will provide a net addition of 119 car parking spaces over the existing provision.</p> <p>It is confirmed that in this development proposal there is no interconnection provided between the 2 basement car parking levels and therefore no general through flow traffic is provided between the existing south western car park and the proposed student accommodation basement car park which proposes enter and exit via the new vehicular access off Robsons Road.</p> <p>The provision of the additional 119 parking spaces for the proposed 360 students for the development is a ratio of approximately 1 space per 3 students. The applicant has provided the following justification in support of the proposal:</p> <ul style="list-style-type: none"> <li>• <i>A significant number of the students are from overseas and do not own a vehicle.</i></li> <li>• <i>The students opt to be on campus to have access to recreation and social facilities on site,</i></li> <li>• <i>The campus has immediate access to the ‘Gong Shuttle’ which will transport students to the beach, train stations and central Wollongong locations.</i></li> <li>• <i>This is the same demand ratio as the Campus East Student Accommodation.</i></li> </ul> | Yes |



|                           |  |     |
|---------------------------|--|-----|
|                           | Council's Traffic Division has assessed the proposal and is considered satisfactory subject to conditions.   |     |
| 13.10 Landscaping         | <p>Satisfactory – The landscaping for the proposed development will be consistent with the high quality of landscaping established on the University of Wollongong campus.</p> <p>Council's Landscape Division has assessed the proposal and is considered satisfactory subject to conditions.</p>   | Yes |
| 13.11 Deep Soil Planting  | <p>Satisfactory – Deep soil planting areas are available on the site.</p> <p>Council's Landscape Division has assessed the proposal and is considered satisfactory subject to conditions.</p>  | Yes |
| 13.12 Communal Open Space | <p>Satisfactory – Communal open space of 5 sqm per dwelling is required.</p> <p>96 x 5 sqm = 480 sqm.</p> <p>This communal space will be provided in a 'Village Green' which is in excess of 1000 sqm.</p> <p>Additional open space is also available elsewhere on the University of Wollongong campus.</p>  | Yes |
| 13.13 Private Open Space  | <p>Satisfactory – Balconies comply with the requirement of 12 sqm area and minimum depth of 2.4 metres.</p> <p>For security reasons, there are no terrace areas at ground level on the exterior of the building. Terraces to the 'internal' courtyards of the building are treated as balconies with only minimal additional area provided. These spaces are well defined with planting and screens.</p> <p>Balconies open directly off living areas.</p> <p>The balconies to at least 70% of dwellings receive a minimum of 3 hours sunlight between 9.00am and 3.00pm on June 21. It is noted by the applicant that in student accommodation it is considered more critical for the bed study rooms to have optimum orientation in preference to living areas.</p> | Yes |

|                                |   |     |
|--------------------------------|---|-----|
| 13.14 Overshadowing            | Satisfactory – The proposed development will not overshadow the existing adjacent ‘Kooloobong’ student accommodation buildings.   | Yes |
| 13.15 Adaptable Housing        | <p>Satisfactory – It is proposed to provide three (3) of the four (4) bedroom units which can accommodate persons with a disability. A disabled compliant bathroom is proposed to be installed initially together with an additional separate pan and handbasin per unit.</p> <p>Six (6) of the two (2) bedroom units will also have a disabled compliant bathroom.</p> <p>Corridor widths and other access requirements will comply with AS 1428.1.</p> <p>Kitchen joinery and other installations will be capable of adaption to meet specific requirements.</p> <p>The units are accessible by lift.</p> | Yes |
| 13.16 Apartment Mix and Layout | <p>Satisfactory – This section is not generally applicable to student accommodation.</p> <p>2700mm ceiling height is provided to all habitable rooms.</p>   | Yes |
| 13.17 Solar Access             | <p>Satisfactory – The number of bed study rooms with access to a northern orientation is maximised.</p> <p>50% of the units have dual orientation.</p> <p>The number of single aspect units with a southern orientation only is less than 10%. It is noted by the applicant that these units will have views to the Botanic Gardens.</p>  | Yes |
| 13.18 Natural Ventilation      | <p>Satisfactory – The majority of Type 1 Units are cross ventilated via an openable window at the end of the main corridor.</p> <p>Type 2 Units have full cross ventilation through the units.</p>  | Yes |
| 13.19 Safety and Security      | <p>Satisfactory –The development complies with Section 13.19 Development Control Plan No.49.</p> <p>The principles of Safety by Design have been incorporated in the proposed development.</p> <p>External access routes and communal areas are well lit, open and visible from nearby units.</p> <p>An access control system will be utilised.</p> <p>Entrances and other critical areas will have CCTV</p>  | Yes |

|                              |  |     |
|------------------------------|--|-----|
|                              | coverage.<br>Ground floor windows will have security screens.  |     |
| 13.20 Storage                | Satisfactory – This section is not generally applicable to Student Accommodation.<br><br>Separate storage will however be provided for computer / electrical equipment, cartons, suitcases and items such as surfboards and the like.<br><br>Type 2 Units will have access to a store of 3 sqm each.<br><br>Other Units will share storage areas in Basement 1.<br><br>14 stores at 5 sqm each will be provided. | Yes |
| 13.21 Waste Management       | Satisfactory – Proposed Waste Management and Recycling systems comply with Section 13.21 of Development Control Plan No.49.  | Yes |
| 13.22 Site Facilities        | Satisfactory – All site facilities are effectively integrated into the development and are unobtrusive.  | Yes |
| 13.23 Fire Brigade Servicing | Satisfactory – The service can be serviced by fire brigade vehicles.   | Yes |

### 13 Wollongong Section 94A Development Contributions Plan 2009

The estimated cost of the proposed development works is \$38.4 million.

Under the Wollongong Section 94A Development Contributions Plan (2009), Clause 9(a) to 9(g) sets out exemptions specified in Directions issued by the Minister for Planning under Section 94E of the Environmental Planning and Assessment Act 1979. Section 94A cannot be imposed on development that meets these criteria.

In addition Council may grant a full or partial exemption for the following purposes Clause 9(k) an application for privately funded community infrastructure, such as education facilities, universities, and private hospitals.

To consider an exemption under Clause 9(k) Council requires a comprehensive submission arguing the case for exemption and including details of the mechanism ensuring that such development will remain in the form proposed in the future.

The applicant has provided a comprehensive submission requesting a Section 94A Development Contributions exemption and was referred to Council's Strategic Division for assessment by Council's Section 94A Officer.

The applicant's submission provided sufficient information detailing with the purpose of the proposed accommodation being limited to students of the University of Wollongong, ownership remaining with the

University of Wollongong and sufficient provision of services required for the intended residents so as not to increase demand on Council services. On this basis Council's Section 94A Officer is satisfied that a full exemption is warranted.

## 14 DCP 54 – Managing Flood Risk

The development proposal was referred to Council's Infrastructure Design Division for assessment regarding stormwater drainage and flooding under Development Control Plan No.54 (Managing Flood Risk) and was considered to be satisfactory with the imposition of certain conditions.

## 15 Geotechnical Development Control Plan

Council records list the site as 'filled land affected' and 'unstable land affected' however there are no technological hazards affecting the site that would prevent the proposal.

Council's Geotechnical Engineer has assessed the proposed development and has no objections subject to conditions.

## 16 Consultation

### 16.1 Notification Policy

The application was publicly notified in the local newspaper 'The Advertiser' for a period of over one (1) month as a "Nominated Integrated Development" since concurrent approval is required under Part 3 Section 91 of the Water Management Act 2000 - Controlled Activity Approval from the Department of Environment, Climate Change and Water (NSW Office of Water).

Two (2) submissions were received and the following comments are provided in relation to issues raised in the submissions.

| Issue                               | Comment   |
|-------------------------------------|---|
| Insufficient bicycle infrastructure | <p>Council's Traffic Division has assessed the matter of the provision of bicycle infrastructure and has provided the following comments:</p> <ul style="list-style-type: none"><li>• The bicycle parking for the proposal is above the bicycle parking required by Austroads Part 14 and is therefore considered acceptable.</li><li>• The development provides for a total of 128 bicycle parking spaces</li></ul>  |
| On-site car parking                 | <p>The development provides for a total of 204 car parking spaces, 9 motorcycle parking spaces and 128 bicycle parking spaces</p> <p>The car parking provided on site replaces 85 spaces due to the modifications within the existing south western car park as a result of the proposal and overall the development parking will provide a net addition of 119 car parking spaces over the existing provision.</p> <p>It is confirmed that in this development proposal there is no interconnection provided between the 2 basement car parking levels and therefore no general through flow traffic is provided between the existing south western car park and the proposed student accommodation basement car park which proposes enter and exit via the new vehicular access off Robsons Road.</p> |

| Issue  | Comment  |
|--|--|
|  | <p>The provision of the additional 119 parking spaces for the proposed 360 students for the development is a ratio of approximately 1 space per 3 students. The applicant has provided the following justification in support of the proposal:</p> <ul style="list-style-type: none"> <li>• <i>A significant number of the students are from overseas and do not own a vehicle.</i></li> <li>• <i>The students opt to be on campus to have access to recreation and social facilities on site,</i></li> <li>• <i>The campus has immediate access to the 'Gong Shuttle' which will transport students to the beach, train stations and central Wollongong locations.</i></li> <li>• <i>This is the same demand ratio as the Campus East Student Accommodation.</i></li> </ul> <p>• Council's Traffic Division has assessed the proposal and is considered satisfactory subject to conditions.</p>   |
| <p>Council's public notification process including general matters relating to the property location and description</p> | <p>Concern was raised regarding the Council's public notification process including general matters relating to the property location and description used to identify the proposed development site at the University of Wollongong main campus grounds.</p> <p>Council's property information records identify the site as Lot 6 DP 843929 Northfields Avenue, Keiraville NSW 2500 (Alternately known as: Lot 6 Mount Ousley Road, Keiraville NSW 2500). The University of Wollongong main campus grounds is an extremely large one (1) parcel of land consisting of 80.08 hectares which extends from the F6 Freeway - Mount Ousley Road located to both the east and the north-east of the site to the Illawarra Escarpment located to the west and adjoining the rear of various properties fronting Dallas Street, Ashcroft Place and Falder Place located to the north and extending to the entire length of Northfields Avenue located to the south of the site. In addition, Robsons Road bisects the site in a north to south direction.</p> <p>Given the extent of the University of Wollongong main campus grounds the Development Application was publicly notified in the local newspaper 'The Advertiser' for a period of over one (1) month as a "Nominated Integrated Development" and is consistent with the notification of other previous applications for the site.</p> |

## 16.2 Referral to Independent Hearing and Assessment Panel (IHAP)

The application has been assessed against Council's IHAP Charter selection criteria and does not require referral to IHAP due to the required referral to the Joint Regional Planning Panel (JRPP).



### 16.3 Internal consultation

#### Geotechnical

Satisfactory subject to conditions.

#### Stormwater Drainage

Satisfactory subject to conditions.

#### Landscaping

Satisfactory subject to conditions.

#### Traffic

Satisfactory subject to conditions.

#### Strategic

Satisfactory including Section 94A Exemption

#### Heritage

Satisfactory

#### Environment

Satisfactory subject to conditions.

#### SCAT

Satisfactory subject to conditions.

#### Community services

Satisfactory

#### Regulation and Enforcement (Civil Works within Road Reserve)

Satisfactory subject to conditions.

### 16.4 External consultation

#### New South Wales Rural Fire Service

The New South Wales Rural Fire Service has provided Integrated Development General Terms of Approval under Section 100B of the 'Rural Fires Act 1997'.

#### Department of Planning

The Director General of the Department of Planning has granted concurrence to the proposed building height over 11 metres under Clause 139 (2) (b) of Illawarra Regional Environmental Plan No. 1 (IREP No.1) 1986 (Deemed SEPP – 1 July 2009).

#### New South Wales Roads and Traffic Authority

The New South Wales Roads and Traffic Authority have provided the Southern Regional Development Committee meeting minutes under the SEPP (Infrastructure) 2007.

### The Department of Environment, Climate Change and Water (New South Wales Office of Water)

The Department of Environment, Climate Change and Water (New South Wales Office of Water) has provided Integrated Development General Terms of Approval for works requiring a Controlled Activity under the Water Management Act 2000.

## **CONCLUSION / RECOMMENDATION**

---

This application has been assessed having regard to the Heads of Consideration under Section 79C(1) of the Environmental Planning and Assessment Act 1979 and the provisions of all relevant controls and policies.

The proposed student accommodation building responds positively to the site topography and is of similar bulk, scale and height to the existing University of Wollongong main campus development. The landscaping for the development will be consistent with the high quality of landscaping established on the University's main campus and the proposed development will further define the student accommodation precinct by contributing to an enhanced sense of community for on site resident students.

The application received two (2) submissions from the public notification period and the matters raised in those submissions have been addressed in this report. In addition, all relevant referrals sent to external authorities and internal Council divisions have responded by raising no significant concerns and have provided satisfactory comments including conditions of development consent.

It is therefore recommended that approval be granted to DA-2009/1189 subject to the draft conditions of consent attached to this report.

## **ATTACHMENTS**

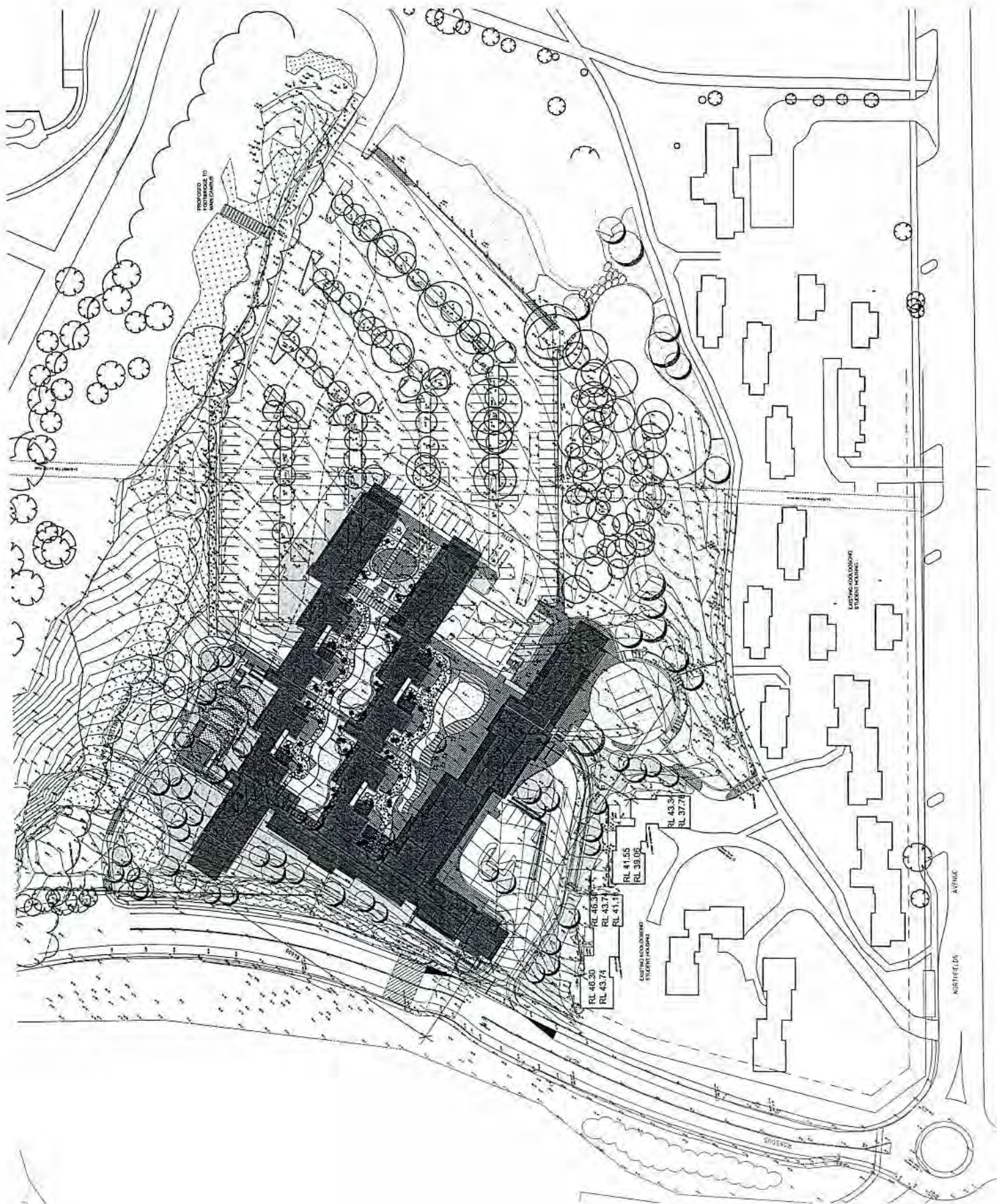
---

1. Existing Site Plan + Analysis
2. Site Plan
3. Elevations & Section Plans
5. Basement & Floor Plans
6. Landscape Plan
7. Stormwater Drainage Plan
8. Draft Conditions









# Site Plan

Scale: 1:500

0 10 20m



Student Accommodation  
Robsons Road, Keiraville  
University of Wollongong

18th September 2009

077 777 5411 Fax 077 777 5412

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS

18th September 2009

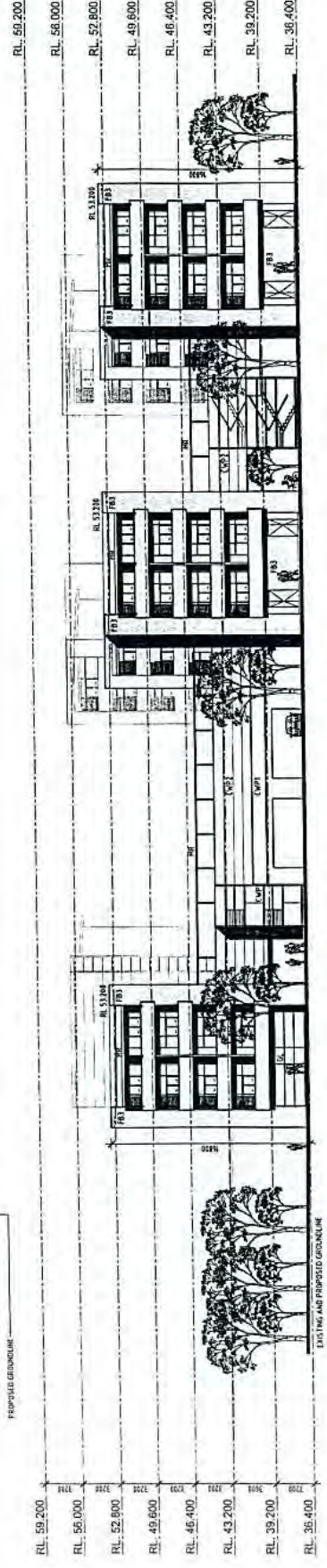
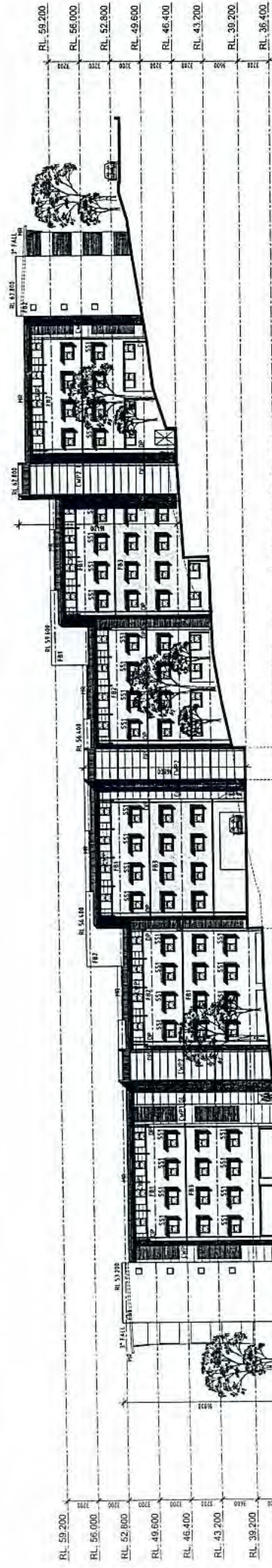
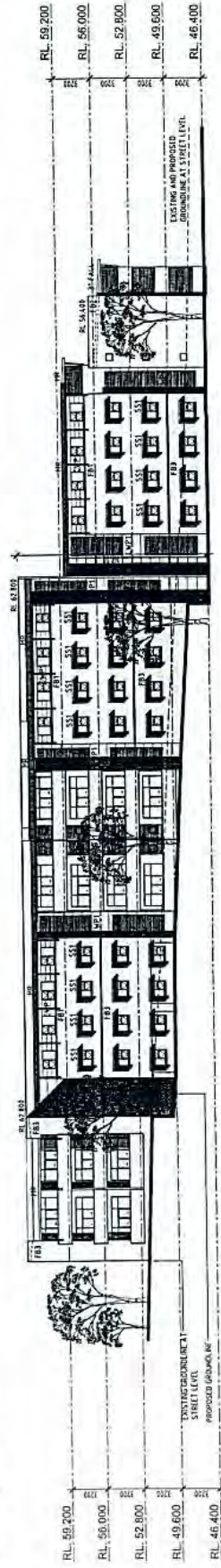
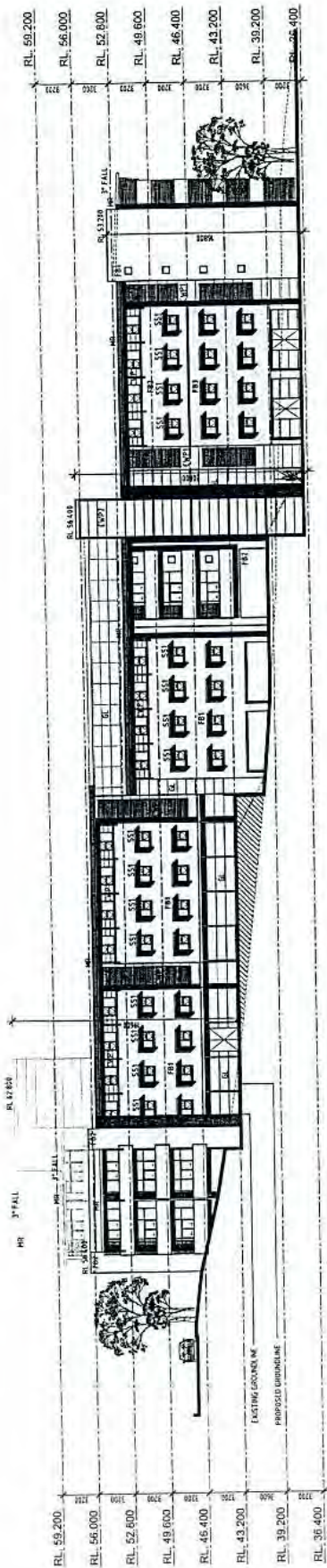
077 777 5411 Fax 077 777 5412

GRAHAM BELL BOWMAN ARCHITECTS



# LEGEND

|       |                       |
|-------|-----------------------|
| AP    | ACCESS PANEL          |
| AS    | ALUMINUM SCHEDING     |
| BW    | BLOCK WALL            |
| BW1   | BLOCK WALL (P-PANETI) |
| BW2   | BLOCK WALL (P-PANETI) |
| CL    | CLADDING              |
| CL1   | CLADDING (P-PANETI)   |
| CL2   | CLADDING (P-PANETI)   |
| CL3   | CLADDING (P-PANETI)   |
| CL4   | CLADDING (P-PANETI)   |
| CL5   | CLADDING (P-PANETI)   |
| CL6   | CLADDING (P-PANETI)   |
| CL7   | CLADDING (P-PANETI)   |
| CL8   | CLADDING (P-PANETI)   |
| CL9   | CLADDING (P-PANETI)   |
| CL10  | CLADDING (P-PANETI)   |
| CL11  | CLADDING (P-PANETI)   |
| CL12  | CLADDING (P-PANETI)   |
| CL13  | CLADDING (P-PANETI)   |
| CL14  | CLADDING (P-PANETI)   |
| CL15  | CLADDING (P-PANETI)   |
| CL16  | CLADDING (P-PANETI)   |
| CL17  | CLADDING (P-PANETI)   |
| CL18  | CLADDING (P-PANETI)   |
| CL19  | CLADDING (P-PANETI)   |
| CL20  | CLADDING (P-PANETI)   |
| CL21  | CLADDING (P-PANETI)   |
| CL22  | CLADDING (P-PANETI)   |
| CL23  | CLADDING (P-PANETI)   |
| CL24  | CLADDING (P-PANETI)   |
| CL25  | CLADDING (P-PANETI)   |
| CL26  | CLADDING (P-PANETI)   |
| CL27  | CLADDING (P-PANETI)   |
| CL28  | CLADDING (P-PANETI)   |
| CL29  | CLADDING (P-PANETI)   |
| CL30  | CLADDING (P-PANETI)   |
| CL31  | CLADDING (P-PANETI)   |
| CL32  | CLADDING (P-PANETI)   |
| CL33  | CLADDING (P-PANETI)   |
| CL34  | CLADDING (P-PANETI)   |
| CL35  | CLADDING (P-PANETI)   |
| CL36  | CLADDING (P-PANETI)   |
| CL37  | CLADDING (P-PANETI)   |
| CL38  | CLADDING (P-PANETI)   |
| CL39  | CLADDING (P-PANETI)   |
| CL40  | CLADDING (P-PANETI)   |
| CL41  | CLADDING (P-PANETI)   |
| CL42  | CLADDING (P-PANETI)   |
| CL43  | CLADDING (P-PANETI)   |
| CL44  | CLADDING (P-PANETI)   |
| CL45  | CLADDING (P-PANETI)   |
| CL46  | CLADDING (P-PANETI)   |
| CL47  | CLADDING (P-PANETI)   |
| CL48  | CLADDING (P-PANETI)   |
| CL49  | CLADDING (P-PANETI)   |
| CL50  | CLADDING (P-PANETI)   |
| CL51  | CLADDING (P-PANETI)   |
| CL52  | CLADDING (P-PANETI)   |
| CL53  | CLADDING (P-PANETI)   |
| CL54  | CLADDING (P-PANETI)   |
| CL55  | CLADDING (P-PANETI)   |
| CL56  | CLADDING (P-PANETI)   |
| CL57  | CLADDING (P-PANETI)   |
| CL58  | CLADDING (P-PANETI)   |
| CL59  | CLADDING (P-PANETI)   |
| CL60  | CLADDING (P-PANETI)   |
| CL61  | CLADDING (P-PANETI)   |
| CL62  | CLADDING (P-PANETI)   |
| CL63  | CLADDING (P-PANETI)   |
| CL64  | CLADDING (P-PANETI)   |
| CL65  | CLADDING (P-PANETI)   |
| CL66  | CLADDING (P-PANETI)   |
| CL67  | CLADDING (P-PANETI)   |
| CL68  | CLADDING (P-PANETI)   |
| CL69  | CLADDING (P-PANETI)   |
| CL70  | CLADDING (P-PANETI)   |
| CL71  | CLADDING (P-PANETI)   |
| CL72  | CLADDING (P-PANETI)   |
| CL73  | CLADDING (P-PANETI)   |
| CL74  | CLADDING (P-PANETI)   |
| CL75  | CLADDING (P-PANETI)   |
| CL76  | CLADDING (P-PANETI)   |
| CL77  | CLADDING (P-PANETI)   |
| CL78  | CLADDING (P-PANETI)   |
| CL79  | CLADDING (P-PANETI)   |
| CL80  | CLADDING (P-PANETI)   |
| CL81  | CLADDING (P-PANETI)   |
| CL82  | CLADDING (P-PANETI)   |
| CL83  | CLADDING (P-PANETI)   |
| CL84  | CLADDING (P-PANETI)   |
| CL85  | CLADDING (P-PANETI)   |
| CL86  | CLADDING (P-PANETI)   |
| CL87  | CLADDING (P-PANETI)   |
| CL88  | CLADDING (P-PANETI)   |
| CL89  | CLADDING (P-PANETI)   |
| CL90  | CLADDING (P-PANETI)   |
| CL91  | CLADDING (P-PANETI)   |
| CL92  | CLADDING (P-PANETI)   |
| CL93  | CLADDING (P-PANETI)   |
| CL94  | CLADDING (P-PANETI)   |
| CL95  | CLADDING (P-PANETI)   |
| CL96  | CLADDING (P-PANETI)   |
| CL97  | CLADDING (P-PANETI)   |
| CL98  | CLADDING (P-PANETI)   |
| CL99  | CLADDING (P-PANETI)   |
| CL100 | CLADDING (P-PANETI)   |



## Elevations



Student Accommodation  
Robsons Road, Keiraville  
University of Wollongong

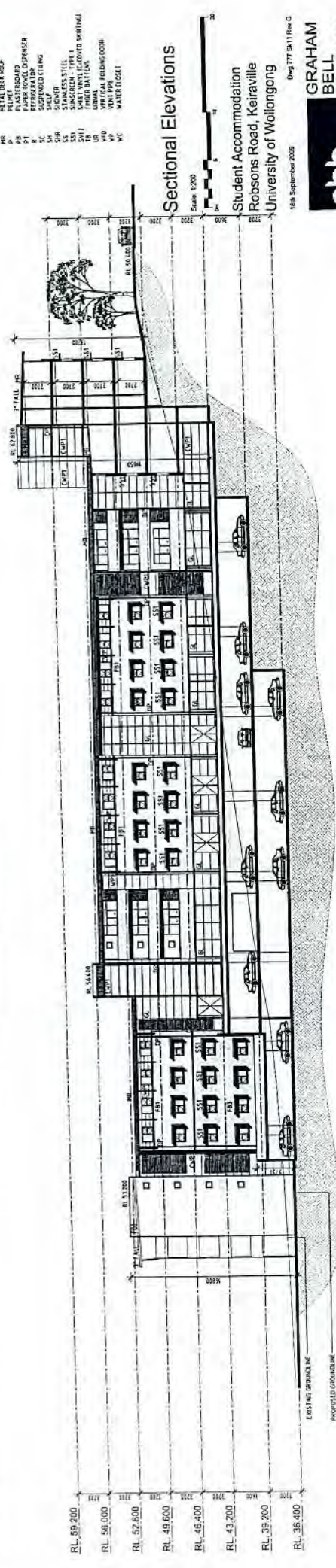
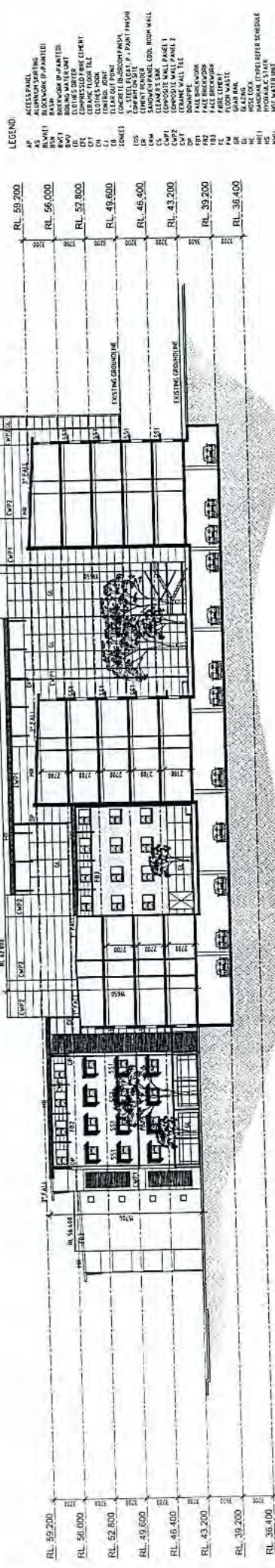
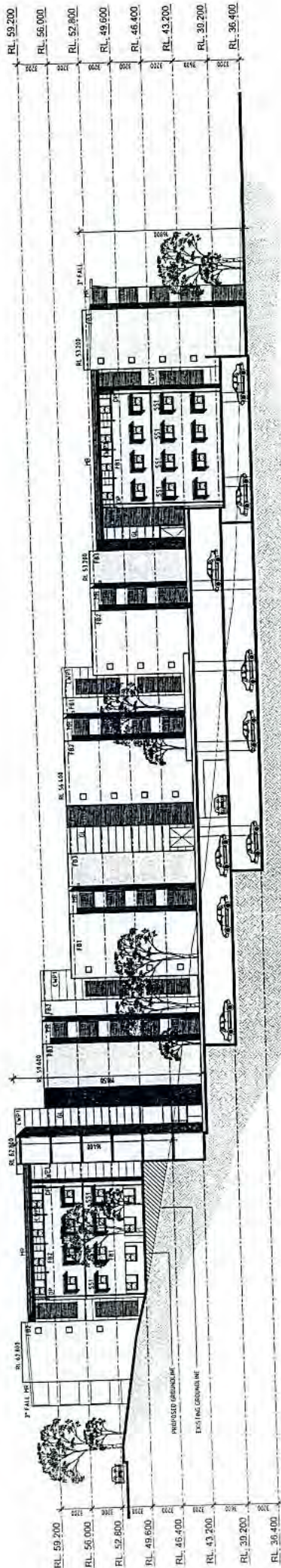
18th September 2009

Dwg 377 (a) (Rev. 0)

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS

Registered Architects (New South Wales, No. 4457)





- LEGEND**
- AP ACCESS PANEL
  - AS ALUMINUM SPOILING
  - BLU-1 BLU-1
  - B-1 B-1
  - B-2 B-2
  - B-3 B-3
  - B-4 B-4
  - B-5 B-5
  - B-6 B-6
  - B-7 B-7
  - B-8 B-8
  - B-9 B-9
  - B-10 B-10
  - B-11 B-11
  - B-12 B-12
  - B-13 B-13
  - B-14 B-14
  - B-15 B-15
  - B-16 B-16
  - B-17 B-17
  - B-18 B-18
  - B-19 B-19
  - B-20 B-20
  - B-21 B-21
  - B-22 B-22
  - B-23 B-23
  - B-24 B-24
  - B-25 B-25
  - B-26 B-26
  - B-27 B-27
  - B-28 B-28
  - B-29 B-29
  - B-30 B-30
  - B-31 B-31
  - B-32 B-32
  - B-33 B-33
  - B-34 B-34
  - B-35 B-35
  - B-36 B-36
  - B-37 B-37
  - B-38 B-38
  - B-39 B-39
  - B-40 B-40
  - B-41 B-41
  - B-42 B-42
  - B-43 B-43
  - B-44 B-44
  - B-45 B-45
  - B-46 B-46
  - B-47 B-47
  - B-48 B-48
  - B-49 B-49
  - B-50 B-50
  - B-51 B-51
  - B-52 B-52
  - B-53 B-53
  - B-54 B-54
  - B-55 B-55
  - B-56 B-56
  - B-57 B-57
  - B-58 B-58
  - B-59 B-59
  - B-60 B-60
  - B-61 B-61
  - B-62 B-62
  - B-63 B-63
  - B-64 B-64
  - B-65 B-65
  - B-66 B-66
  - B-67 B-67
  - B-68 B-68
  - B-69 B-69
  - B-70 B-70
  - B-71 B-71
  - B-72 B-72
  - B-73 B-73
  - B-74 B-74
  - B-75 B-75
  - B-76 B-76
  - B-77 B-77
  - B-78 B-78
  - B-79 B-79
  - B-80 B-80
  - B-81 B-81
  - B-82 B-82
  - B-83 B-83
  - B-84 B-84
  - B-85 B-85
  - B-86 B-86
  - B-87 B-87
  - B-88 B-88
  - B-89 B-89
  - B-90 B-90
  - B-91 B-91
  - B-92 B-92
  - B-93 B-93
  - B-94 B-94
  - B-95 B-95
  - B-96 B-96
  - B-97 B-97
  - B-98 B-98
  - B-99 B-99
  - B-100 B-100

**Sectional Elevations**

Scale 1:200

Student Accommodation  
Robsons Road, Keiraville  
University of Wollongong

14th September 2009

09g 777 5a 11 Rev. 0

**GRAHAM BELL BOWMAN ARCHITECTS**

Registered Architects: Terry Graham, No. 1241



The site plan illustrates the proposed development layout. The building footprint is divided into several functional zones: a central 'RECREATION ROOM' (R. 3A, 4, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 84

0321 0000

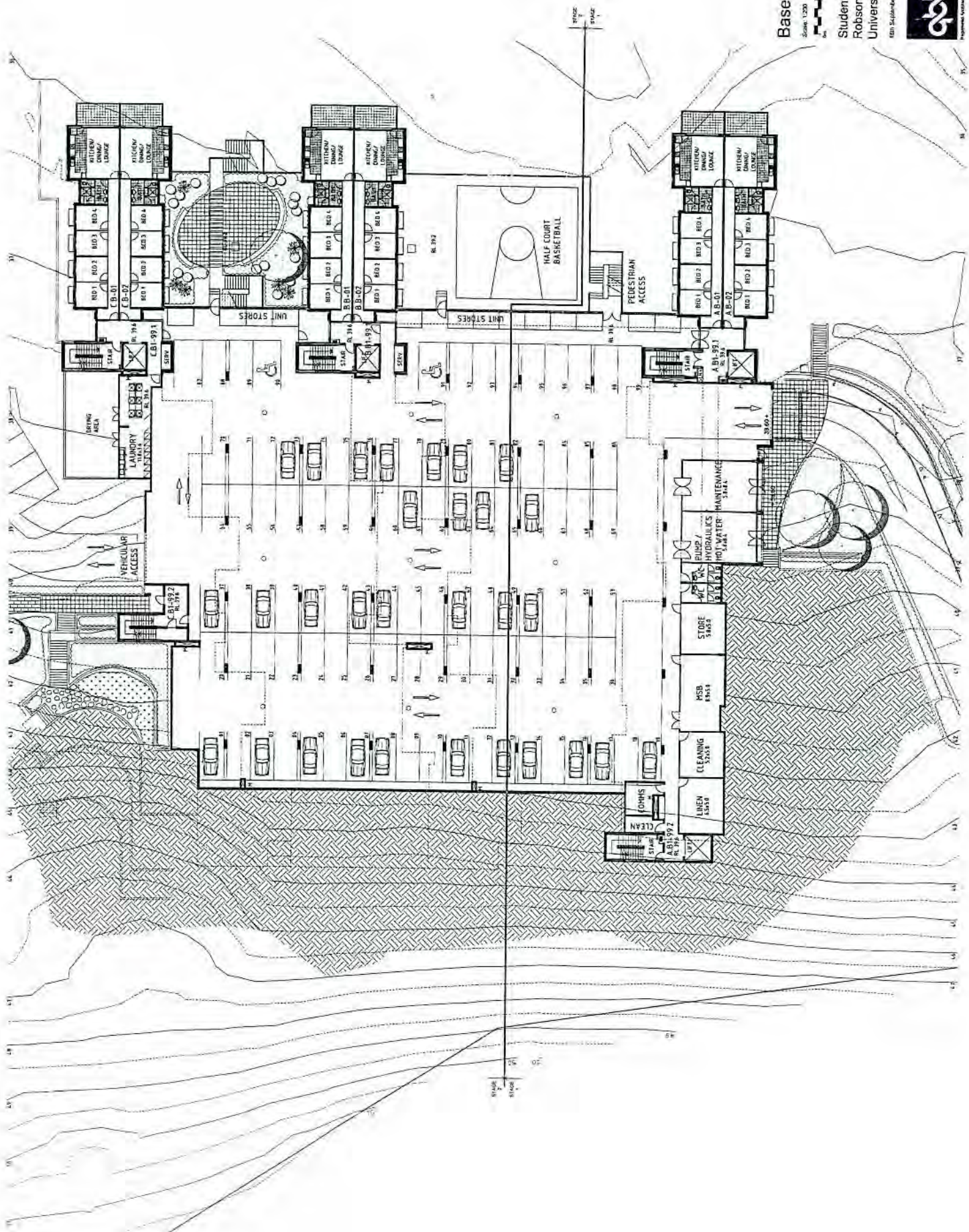
6th March 2010



GRAHAM  
BELL  
BOWMAN  
ARCHITECTS



|                             |       |
|-----------------------------|-------|
| SUPPLY TO ALUMINUM CLADDING | 1.00  |
| CONCRETE                    | 2.75  |
| PAINTS                      | 0.50  |
| GLASS                       | 1.50  |
| BRICKWORK                   | 1.50  |
| ROOFING                     | 1.50  |
| MECHANICAL                  | 1.50  |
| ELECTRICAL                  | 1.50  |
| PLUMBING                    | 1.50  |
| LANDSCAPE                   | 1.50  |
| TOTAL                       | 14.00 |



Basement 1 RL 39.600



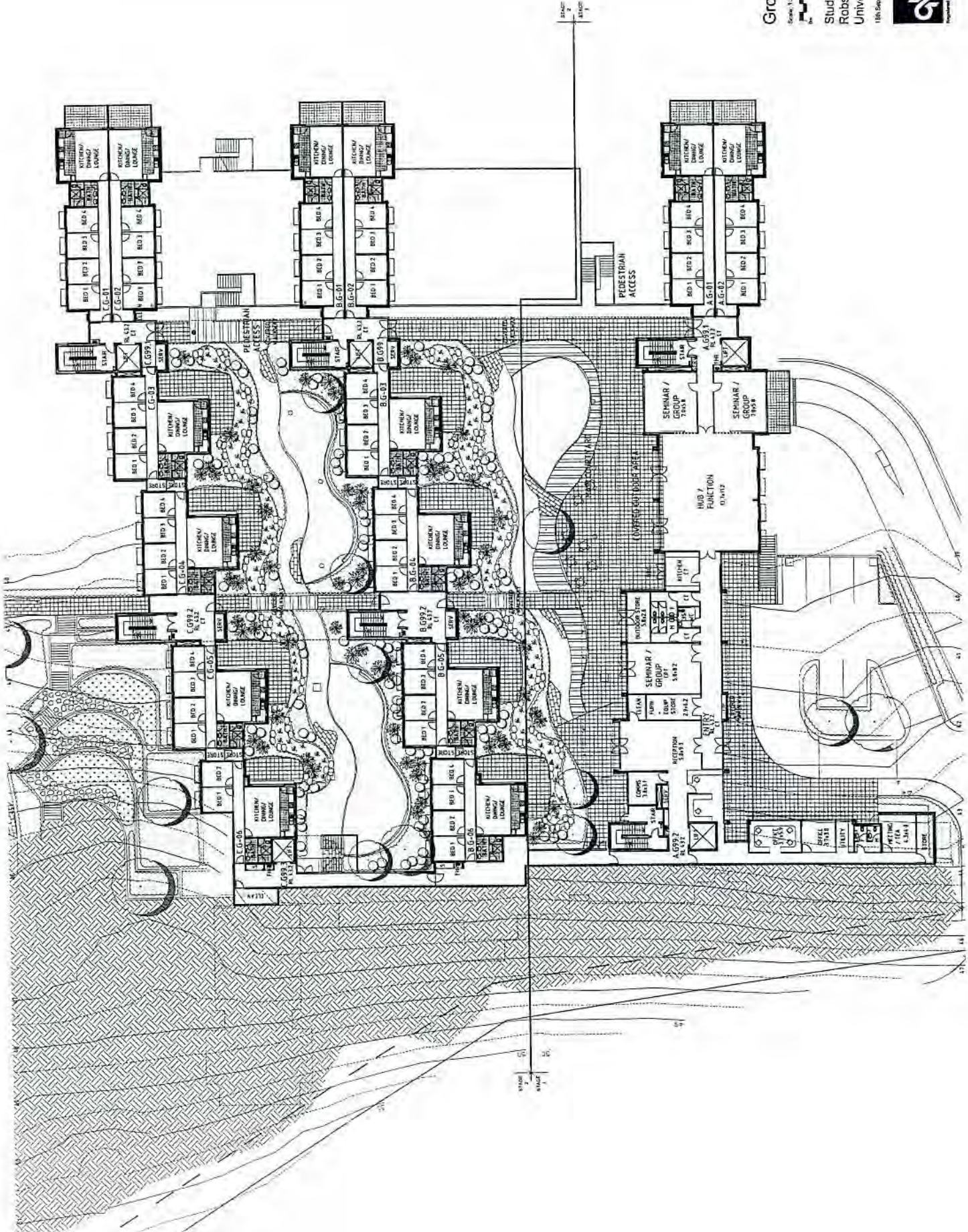
Student Accommodation  
Robbsons Road, Keiraville  
University of Wollongong

18th September 2008

  
 GRAHAM  
 BELL  
 BOWMAN  
 ARCHITECTS



|                       |                   |
|-----------------------|-------------------|
| 3. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 4. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 5. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 6. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 7. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 8. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 9. APPROXIMATE AREA   | 525m <sup>2</sup> |
| 10. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 11. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 12. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 13. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 14. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 15. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 16. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 17. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 18. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 19. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 20. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 21. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 22. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 23. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 24. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 25. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 26. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 27. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 28. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 29. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 30. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 31. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 32. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 33. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 34. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 35. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 36. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 37. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 38. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 39. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 40. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 41. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 42. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 43. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 44. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 45. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 46. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 47. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 48. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 49. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 50. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 51. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 52. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 53. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 54. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 55. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 56. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 57. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 58. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 59. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 60. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 61. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 62. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 63. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 64. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 65. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 66. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 67. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 68. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 69. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 70. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 71. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 72. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 73. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 74. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 75. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 76. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 77. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 78. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 79. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 80. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 81. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 82. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 83. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 84. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 85. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 86. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 87. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 88. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 89. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 90. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 91. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 92. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 93. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 94. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 95. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 96. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 97. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 98. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 99. APPROXIMATE AREA  | 525m <sup>2</sup> |
| 100. APPROXIMATE AREA | 525m <sup>2</sup> |



Ground Level RL 43.200

Scale: 1:200



Student Accommodation  
Robbsons Road, Keiraville  
University of Wollongong

18th September 2008

Drawn by: J. Bell

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS





|                   |       |
|-------------------|-------|
| REPORT AREA TOTAL | 180   |
| STAIRS & LIFT     | 500   |
| STAIRS            | 1,500 |
| TOTAL             | 2,100 |

|           |     |
|-----------|-----|
| BALCONIES | 75  |
| CANOPY    | 75  |
| TOTAL     | 150 |

Level 1 RL 46.400

Scale 1:200

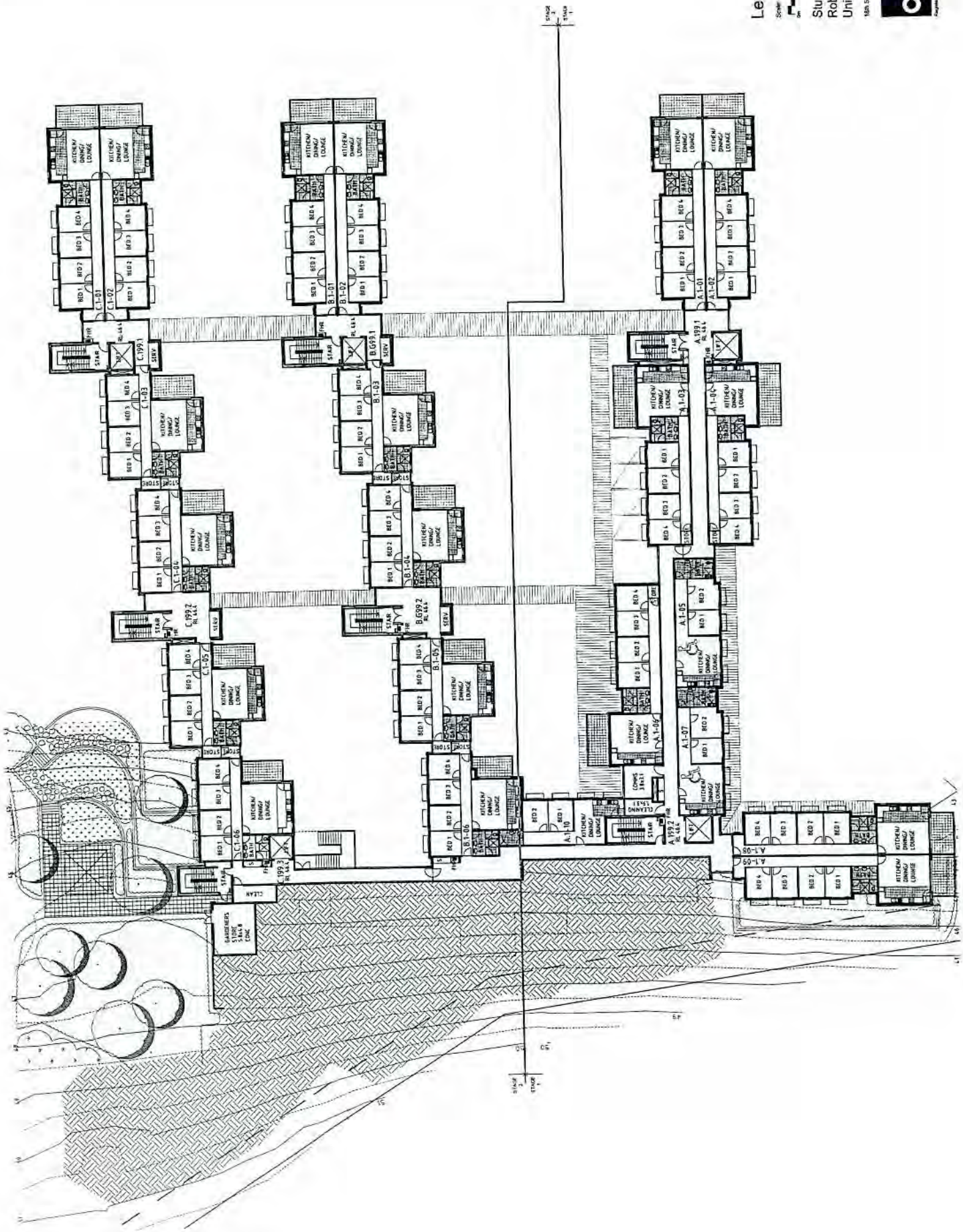


Student Accommodation  
Robsons Road, Keiraville  
University of Wollongong

18th September 2008  
Dwg 177 S415 Rev D

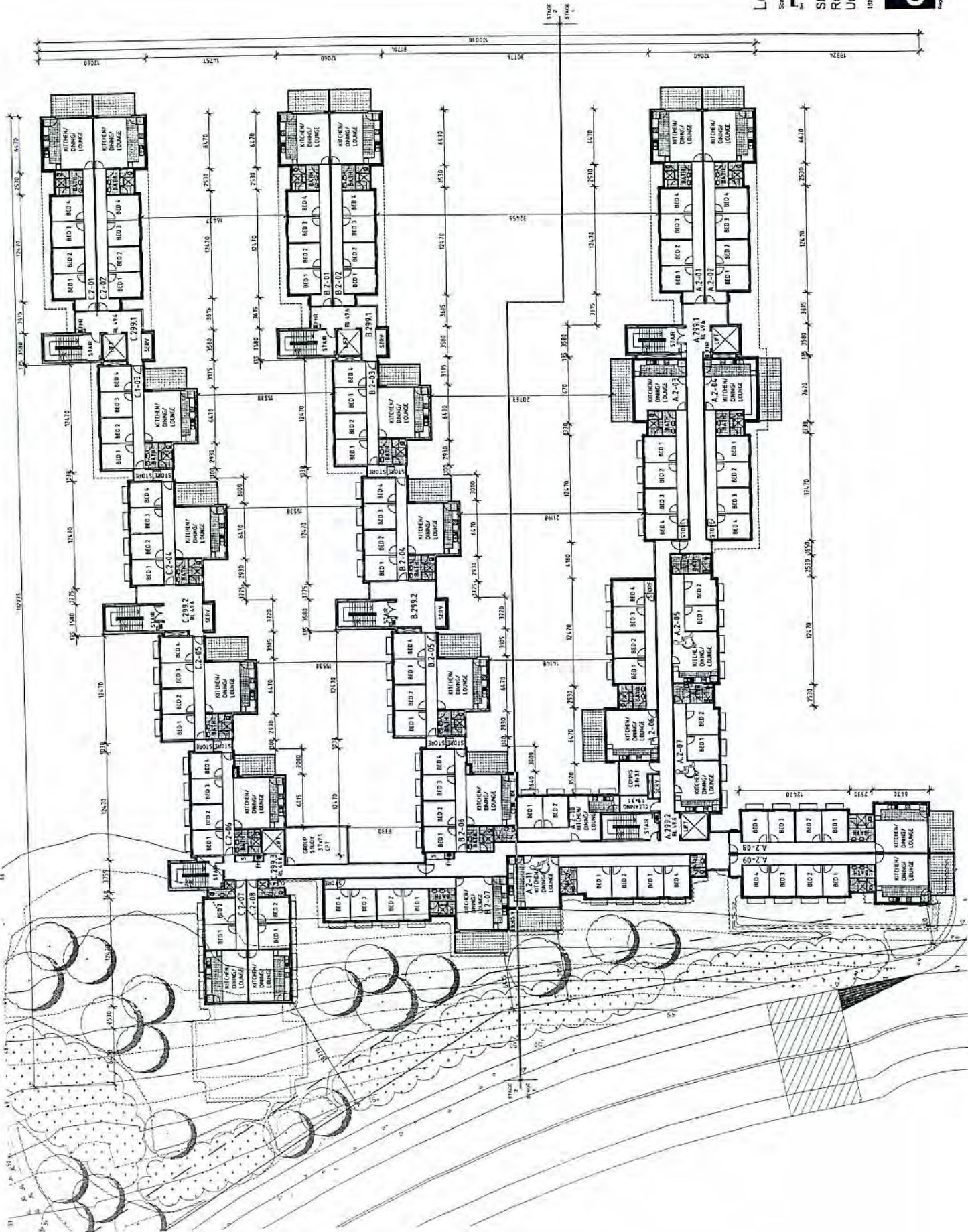
**GRAHAM BELL BOWMAN ARCHITECTS**

Registered Architects: Terry Graham, Neil Bell





|                         |        |
|-------------------------|--------|
| SUPPORT ALUMINUM CORNER | 5000   |
| CEILING                 | 7.480m |
| WALLS                   | 1.500m |
| TOTAL                   | 7.480m |
| WALLS                   | 1.500m |
| CEILING                 | 7.480m |
| TOTAL                   | 7.480m |



Level 2 RL 49.600

Scale 1:500



Student Accommodation  
Robsons Road, Kairaville  
University of Wollongong

18th September 2008

Dwg 177 5008 Rev G

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS

Engineers Australia - Very Good, No. 001



|                          |      |
|--------------------------|------|
| UNIVERSITY ACCOMMODATION | 484m |
| DISCLOSURE               | 484m |
| UNITS                    | 172m |
| TOTAL                    | 234m |
| BALCONIES                | 10m  |
| CAR PARKING              | -    |

Level 3 RL 52.800

Scale 1:200



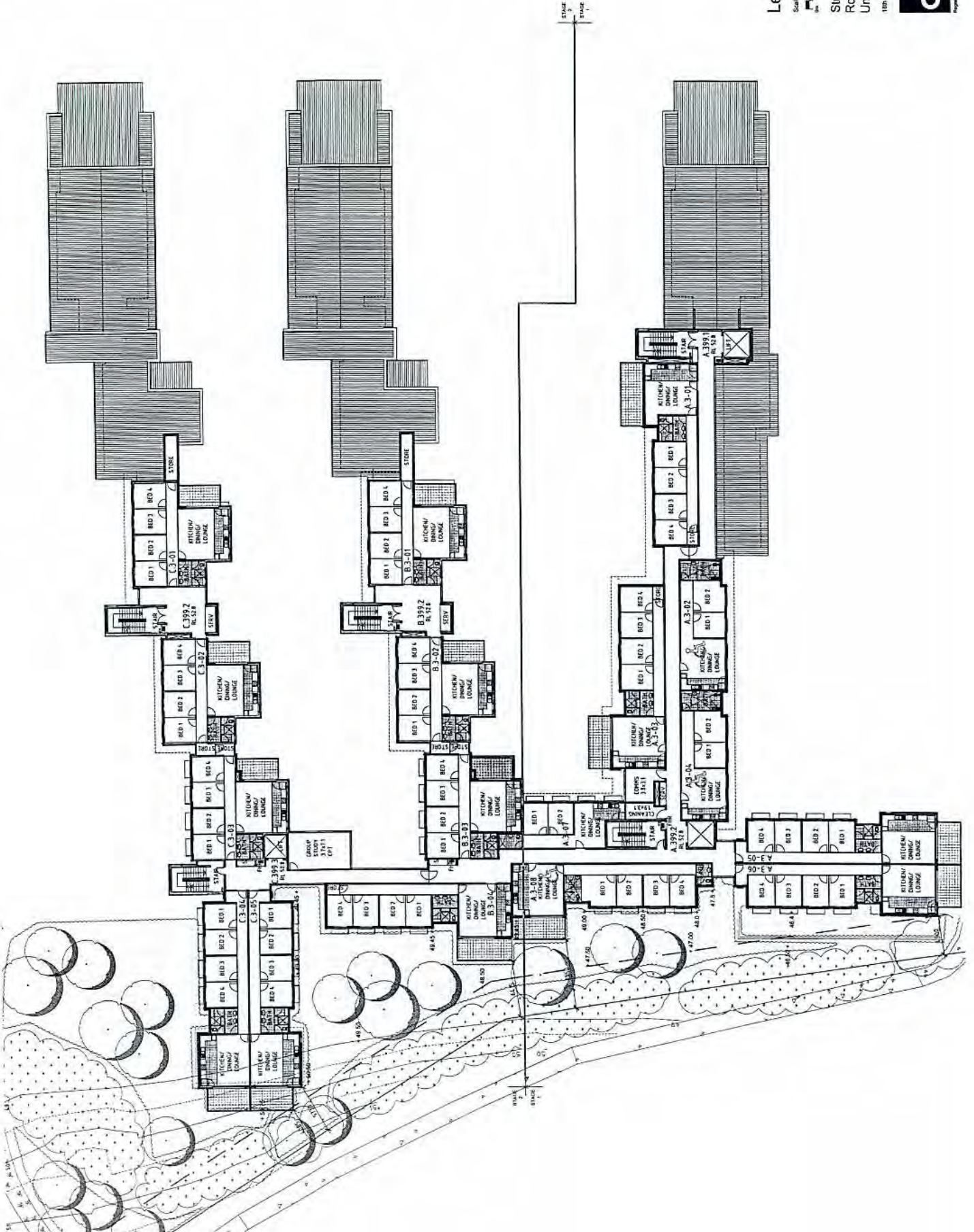
Student Accommodation  
Robbison Road, Keiraville  
University of Wollongong

10th September 2009

Doc 771 001 Rev 0

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS

Registered Architects' Firm (Surrey No. 021)



| PROPERTY ADDRESS | DATE   |
|------------------|--------|
| CIRCULATION      | 2 Year |
| UNITS            | 65000  |
| TOTAL            | 100000 |

| PROPERTY ADDRESS | DATE   |
|------------------|--------|
| CIRCULATION      | 2 Year |
| UNITS            | 65000  |
| TOTAL            | 100000 |

Level 4 RL 56.000

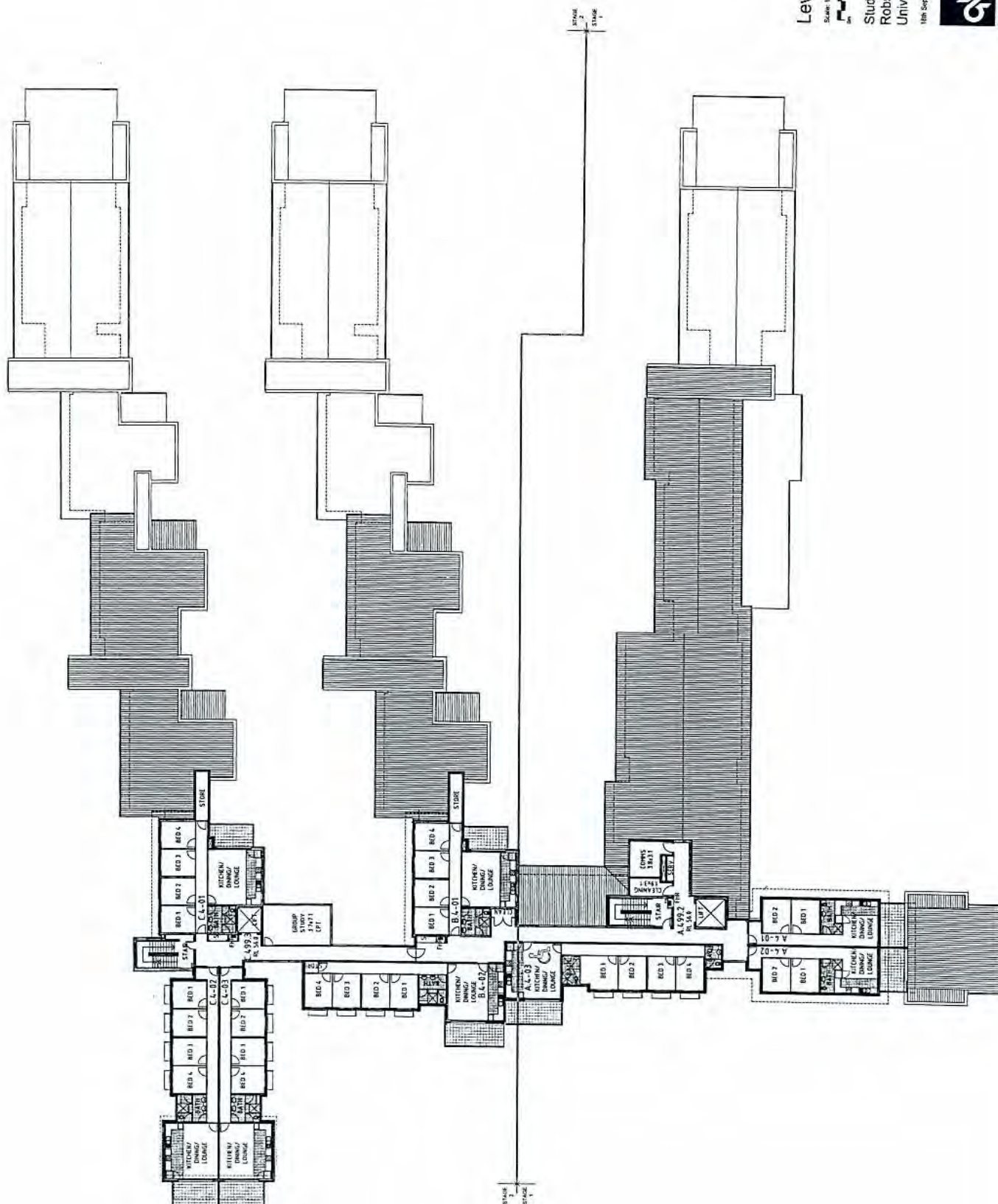
October 1, 2005



Student Accommodation  
Robsons Road, Keiraville  
University of Wollongong

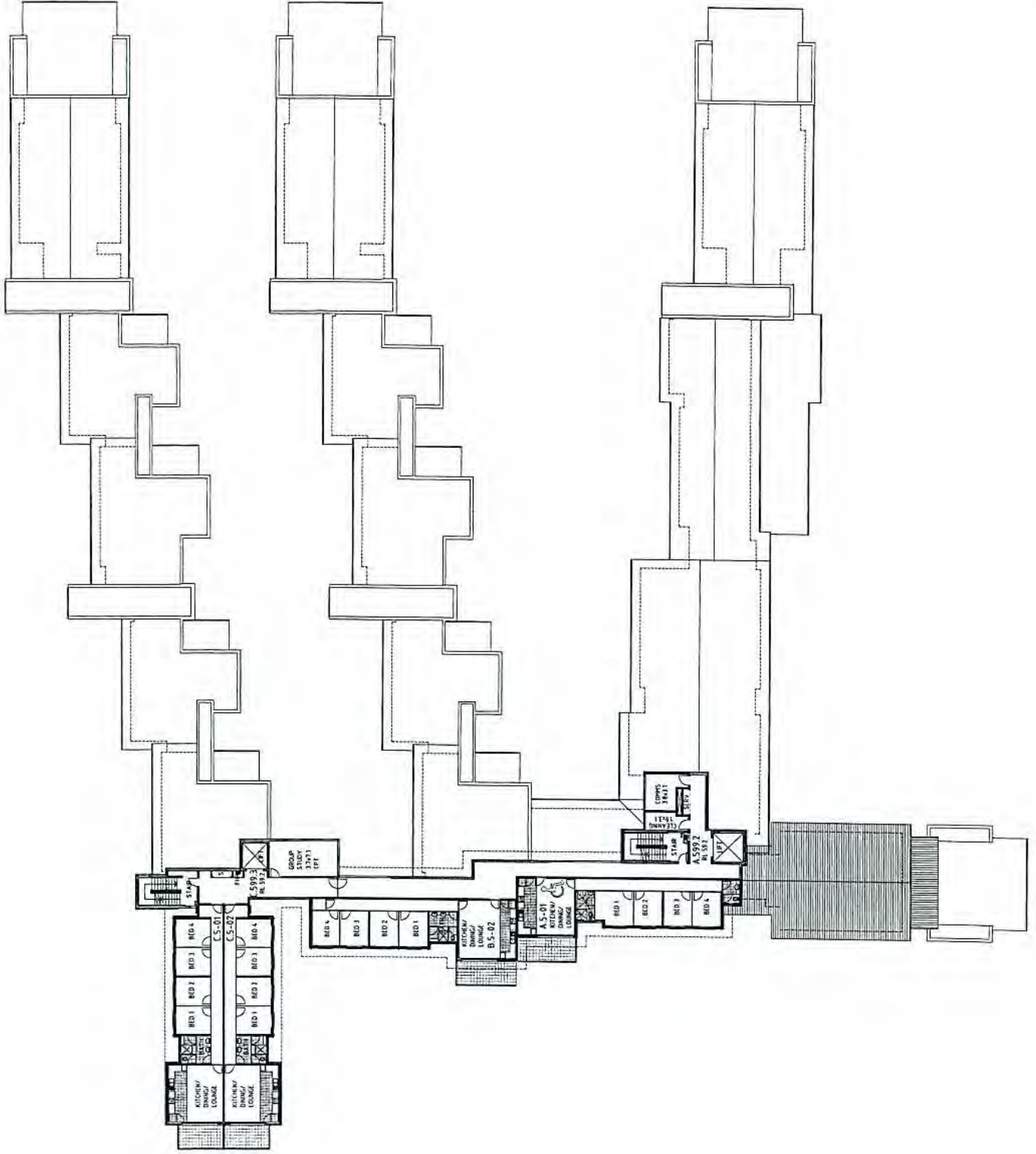
18th September 2000  
Dwg 777 SUBS Rev G

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS





|                |                   |
|----------------|-------------------|
| SUPPORT/COMMON | Area              |
| CIRCULATION    | 710m <sup>2</sup> |
| LOBBY          | 100m <sup>2</sup> |
| TOTAL          | 710m <sup>2</sup> |
| CAN PARKING    | -                 |
| BALCONIES      | 40m <sup>2</sup>  |



Level 5 RL 59.200

Scale 1:200



Student Accommodation  
Robsons Road, Keiraville  
University of Wollongong

16th September 2020

Doc 177 S00 Rev G

GRAHAM  
BELL  
BOWMAN  
ARCHITECTS



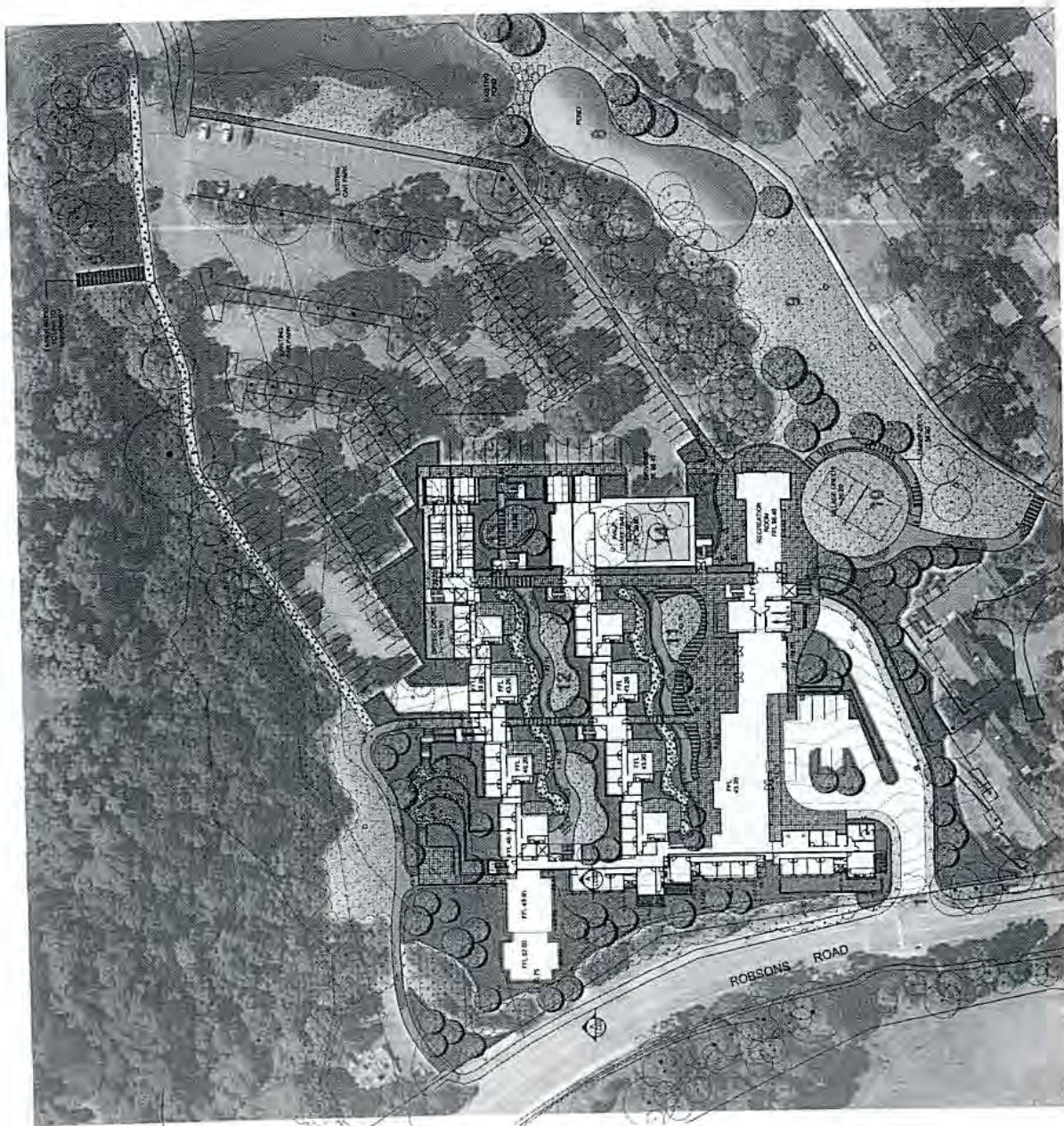


## LEGEND




















[illegible]

## DESIGN NOTES

- 1 VEHICLE ENTRY ON NEW HIGHWAY FROM ROSSBORO ROAD
- 2 EASTING VEGETATION TO ROSSBORO ROAD RETAINED WITH SHALBANE WALL & FENCED
- 3 EXISTING VEGETATION TO ROSSBORO ROAD RETAINED TO EDGE OF CREEK
- 4 TERRAZED VEGETABLE GARDENS
- 5 EXISTING CREEK
- 6 PROPOSED BRIDGE OVER CREEK
- 7 EXISTING POND
- 8 PROPOSED FENCE POSITION WITH ROCK WALK
- 9 EXISTING GRAVEL SNALE RETAINED
- 10 VILLAGE GREEN WITH GOLF WALL COURT AND SLATING TUNER DECK SURROUNDING
- 11 INTERNAL COURTYARD COURTESY WITH BRICK PAVING DECK, LAMIN WOOD ACCESS, ART
- 12 EXISTING BRICK PAVING WITH COLORED LAMIN WOOD, PAVED ACCESS, DRY
- 13 CONCRETE AND PRIVATE COURTYARD
- 14 VILLAGE COURT YARD WITH SLATING WALLS, PAVED TERRACE AND TERRACE DECK
- 15 1/2 BATH BUILDING COURT
- 16 NEW PATH TO ST. ADAMANT TO CAMPUS



## LEGEND

|   |  |
|---|--|
|    | SITE BOUNDARY  |
|    | EXISTING CONTOUR   |
|    | PROPOSED SPOT LEVEL  |
|    | EXISTING TALL TIRE RETAINING WALL TO REMAIN (REFER TO AIRBORNE REPORT) |
|    | EXISTING TIRE TO BE REMOVED AND TO PROVIDE SUPPORT                     |
|    | RETAINING WALL   |
|    | CONCRETE PAVING FOOTPATH   |
|    | LIFT PAVING  |
|    | EXISTING FOOTPATH  |
|    | NEW BRICK FOOTPATH   |
|    | RECONCRETE GRANITE FOOTPATH  |
|  | TIMBER DECK  |
|  | SHED STRUCTURE   |
|  | SANDSTONE CLADDING   |
|  | SEAT   |
|  | DRY CREEK BED  |
|  | EXISTING VEGETATION  |
|  | RETAINED MASS PLANTING BED   |
|  | GRASS SEED AREAS   |
|  | GRASS SWALE  |
|  | STORAGE UNIT   |

| Year | SA 3 (Percent) | SA 4 (Percent) | SA 5 (Percent) |
|------|----------------|----------------|----------------|
| 1990 | 1.0            | 1.0            | 1.0            |
| 1991 | 1.0            | 1.0            | 1.0            |
| 1992 | 1.0            | 1.0            | 1.0            |
| 1993 | 1.0            | 1.0            | 1.0            |
| 1994 | 1.0            | 1.0            | 1.0            |
| 1995 | 1.0            | 1.0            | 1.0            |
| 1996 | 1.0            | 1.0            | 1.0            |
| 1997 | 1.0            | 1.0            | 1.0            |
| 1998 | 1.0            | 1.0            | 1.0            |
| 1999 | 1.0            | 1.0            | 1.0            |
| 2000 | 1.0            | 1.0            | 1.0            |
| 2001 | 1.0            | 1.0            | 1.0            |
| 2002 | 1.0            | 1.0            | 1.0            |
| 2003 | 1.0            | 1.0            | 1.0            |
| 2004 | 1.0            | 1.0            | 1.0            |
| 2005 | 1.0            | 1.0            | 1.0            |
| 2006 | 1.0            | 1.0            | 1.0            |
| 2007 | 1.0            | 1.0            | 1.0            |
| 2008 | 1.0            | 1.0            | 1.0            |
| 2009 | 1.0            | 1.0            | 1.0            |
| 2010 | 1.0            | 1.0            | 1.0            |
| 2011 | 1.0            | 1.0            | 1.0            |
| 2012 | 1.0            | 1.0            | 1.0            |
| 2013 | 1.0            | 1.0            | 1.0            |
| 2014 | 1.0            | 1.0            | 1.0            |
| 2015 | 1.0            | 1.0            | 1.0            |
| 2016 | 1.0            | 1.0            | 1.0            |
| 2017 | 1.0            | 1.0            | 1.0            |
| 2018 | 1.0            | 1.0            | 1.0            |
| 2019 | 1.0            | 1.0            | 1.0            |
| 2020 | 1.0            | 1.0            | 1.0            |
| 2021 | 1.0            | 1.0            | 1.0            |
| 2022 | 1.0            | 1.0            | 1.0            |
| 2023 | 1.0            | 1.0            | 1.0            |
| 2024 | 1.0            | 1.0            | 1.0            |
| 2025 | 1.0            | 1.0            | 1.0            |
| 2026 | 1.0            | 1.0            | 1.0            |
| 2027 | 1.0            | 1.0            | 1.0            |
| 2028 | 1.0            | 1.0            | 1.0            |
| 2029 | 1.0            | 1.0            | 1.0            |
| 2030 | 1.0            | 1.0            | 1.0            |
| 2031 | 1.0            | 1.0            | 1.0            |
| 2032 | 1.0            | 1.0            | 1.0            |
| 2033 | 1.0            | 1.0            | 1.0            |
| 2034 | 1.0            | 1.0            | 1.0            |
| 2035 | 1.0            | 1.0            | 1.0            |
| 2036 | 1.0            | 1.0            | 1.0            |
| 2037 | 1.0            | 1.0            | 1.0            |
| 2038 | 1.0            | 1.0            | 1.0            |
| 2039 | 1.0            | 1.0            | 1.0            |
| 2040 | 1.0            | 1.0            | 1.0            |
| 2041 | 1.0            | 1.0            | 1.0            |
| 2042 | 1.0            | 1.0            | 1.0            |
| 2043 | 1.0            | 1.0            | 1.0            |
| 2044 | 1.0            | 1.0            | 1.0            |
| 2045 | 1.0            | 1.0            | 1.0            |
| 2046 | 1.0            | 1.0            | 1.0            |
| 2047 | 1.0            | 1.0            | 1.0            |
| 2048 | 1.0            | 1.0            | 1.0            |
| 2049 | 1.0            | 1.0            | 1.0            |
| 2050 | 1.0            | 1.0            | 1.0            |
| 2051 | 1.0            | 1.0            | 1.0            |
| 2052 | 1.0            | 1.0            | 1.0            |
| 2053 | 1.0            | 1.0            | 1.0            |
| 2054 | 1.0            | 1.0            | 1.0            |
| 2055 | 1.0            | 1.0            | 1.0            |
| 2056 | 1.0            | 1.0            | 1.0            |
| 2057 | 1.0            | 1.0            | 1.0            |
| 2058 | 1.0            | 1.0            | 1.0            |
| 2059 | 1.0            | 1.0            | 1.0            |
| 2060 | 1.0            | 1.0            | 1.0            |
| 2061 | 1.0            | 1.0            | 1.0            |
| 2062 | 1.0            | 1.0            | 1.0            |
| 2063 | 1.0            | 1.0            | 1.0            |
| 2064 | 1.0            | 1.0            | 1.0            |
| 2065 | 1.0            | 1.0            | 1.0            |
| 2066 | 1.0            | 1.0            | 1.0            |
| 2067 | 1.0            | 1.0            | 1.0            |
| 2068 | 1.0            | 1.0            | 1.0            |
| 2069 | 1.0            | 1.0            | 1.0            |
| 2070 | 1.0            | 1.0            | 1.0            |
| 2071 | 1.0            | 1.0            | 1.0            |
| 2072 | 1.0            | 1.0            | 1.0            |
| 2073 | 1.0            | 1.0            | 1.0            |
| 2074 | 1.0            | 1.0            | 1.0            |
| 2075 | 1.0            | 1.0            | 1.0            |
| 2076 | 1.0            | 1.0            | 1.0            |
| 2077 | 1.0            | 1.0            | 1.0            |
| 2078 | 1.0            | 1.0            | 1.0            |
| 2079 | 1.0            | 1.0            | 1.0            |
| 2080 | 1.0            | 1.0            | 1.0            |
| 2081 | 1.0            | 1.0            |                |

taylor  
brammer  
and  
associates  
llp

THE FIRST REPORT OF THE COMMISSIONER OF THE GENERAL LAND OFFICE

www.bjpharm.org.uk

Project: \_\_\_\_\_

Blakely Accounting/Debra Smith, Ph.D.  
University of Wisconsin

Landscapes Covered (Miles/Year)

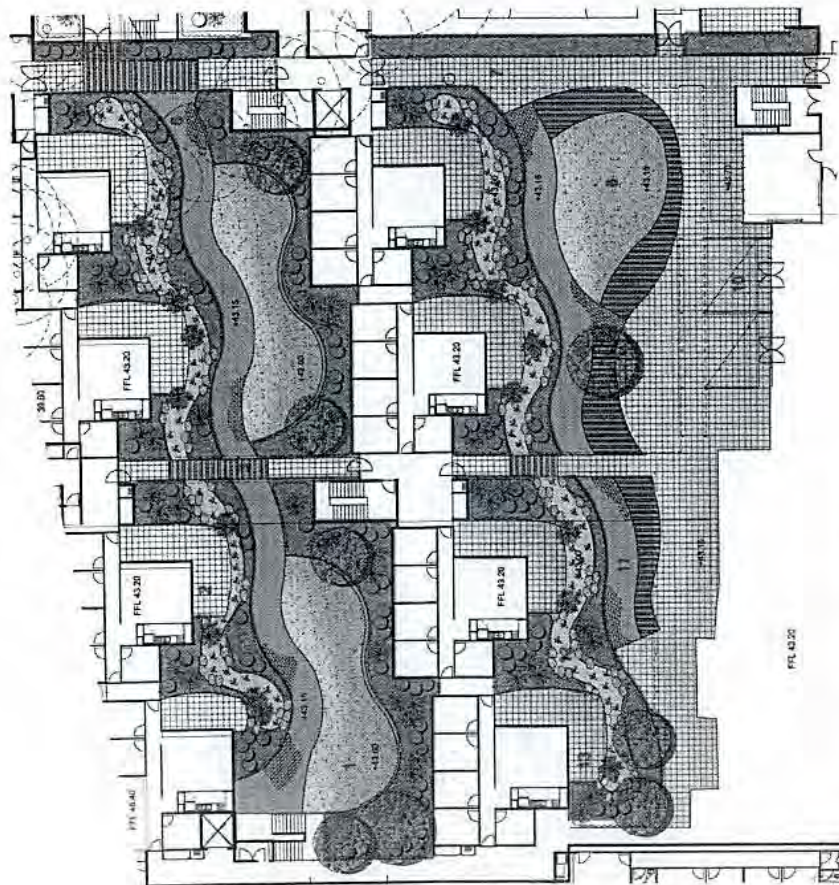
class

| Index no. | Accession no. | Authoring inst. | Remarks |
|-----------|---------------|-----------------|---------|
| 100       | 100           | 100             | 100     |

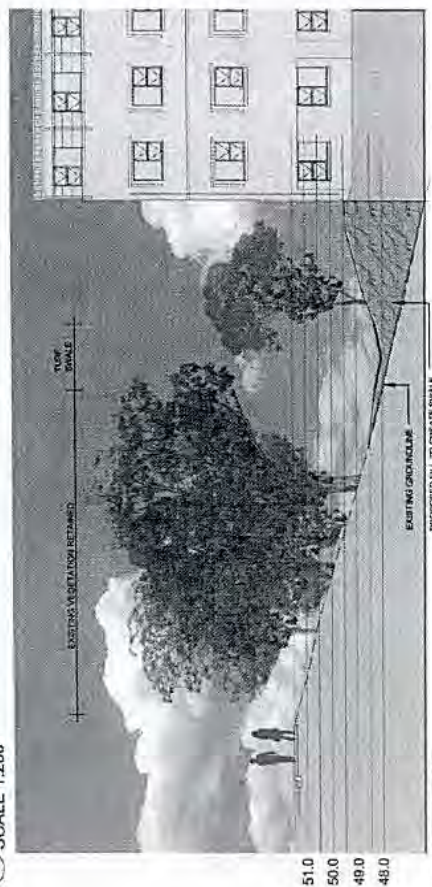
|      | Scale | 1.000000 | Clipped | # |
|------|-------|----------|---------|---|
| L6U1 |       |          |         |   |
| A    |       |          |         |   |

Copyright © 1993 Lawrence Erlbaum Associates, Inc. All rights reserved. No part of this book may be reproduced in any form or by any means without written permission from Lawrence Erlbaum Associates, Inc.





LANDSCAPE PLAN: INTERNAL COURTYARDS  
SCALE 1:200



SECTION AA  
SCALE 1:100

## DESIGN NOTES

- 1 GRADED LAWN CURVING INTO SITTING WALL.
- 2 PRIVATE TERRACES
- 3 TUNNEL BRIDGE UNDER COVERED WALKWAY
- 4 GLASS-CLAD BRIDGE TO PROVIDE PRIVACY TO UNITS
- 5 ENTRY CHIESS NEED TO DIFFERENTIATE PUBLIC FROM PRIVATE SPACE
- 6 PARKED WALKWAY
- 7 COVERED WALKWAY UPONG BUILDINGS
- 8 CENTRAL LAWN SPACE
- 9 CURVING DECK TO BE UTILIZED FOR SEATING
- 10 OUTDOOR COVERED SPACE FROM MULTIFUNCTION ROOM
- 11 PARKED WALKWAY
- 12 ENTRY CHIESS NEED TO DIFFERENTIATE PUBLIC FROM PRIVATE SPACE
- 13 PRIVATE TERRACE

## DESIGN THEMES



### FEATURE LAWN WITH TIMBER DECKING TO



### RAISED TIMBER DECKING THAT CAN BE UTILI



DRY CRACKS HEALS INSTANTLY THROUGH THE POOL



SCULPTURAL SEATING



**WILLIAMS**







## CONDITIONS FOR: DA-2009/1189

### **NSW Office of Water**

A Controlled Activity Approval for works must be obtained under the Water Management Act 2000 from the NSW Office of Water prior to work commencing.

The General Terms of Approval (GTA) conditions which the NSW Office of Water requires to be imposed as part of this Integrated Development Consent are:

### **Plans, standards and guidelines**

- 1 These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to DA-2009/1189 and provided by Council:

- i Site plan, map and/or surveys;
- ii Structural design and specifications;
- iii Vegetation Management Plan;
- iv Works Schedule;
- v Erosion and Sediment Control Plan;
- vi Landscape Concept Plan;
- vii Drainage Plans.

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.

- 2 Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) 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.

- 3 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 Water guidelines located at [www.dwe.nsw.gov.au/water\\_trade/rights\\_controlled.shtml](http://www.dwe.nsw.gov.au/water_trade/rights_controlled.shtml)

- i Vegetation Management Plans;
- ii Laying pipes and cables in watercourses;
- iii Riparian Corridors;
- iv In-stream works;
- v Outlet structures;
- vi Watercourse crossings.

- 4 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.

### **Disposal**

- 5 The consent holder must ensure that no materials or cleared vegetation that may obstruct flow, wash into the water body or cause damage to river banks are left on waterfront land other than in accordance with a plan approved by the NSW Office of Water.

### **Drainage and Stormwater**

- 6 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.
- 7 The consent holder must stabilise drain discharge points to prevent erosion in accordance with a plan approved by the NSW Office of Water.

### **Erosion Control**

- 8 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.

### **Excavation**

- 9 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.

### **New South Wales Rural Fire Service**

Conditions which the New South Wales Rural Fire Service requires to be imposed as part of this Integrated Development Consent are:

This response is to be deemed a bush fire safety authority as required under section 100B of the 'Rural Fires Act 1997' and is issued subject to the following numbered conditions:

### **Asset Protection Zones**

The intent of measures is to provide sufficient space for fire fighters and other emergency services personnel, ensuring radiant heat levels permit operations under critical conditions of radiant heat, smoke and embers, while supporting or evacuating occupants.

- 1 At the commencement of building works and in perpetuity the property around the building shall be managed as follows as outlined within Appendices 2 and 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones':
  - north for a distance of 30 metres as an asset protection zone;
  - west for a distance of 60 metres as an asset protection zone (APZ).

(Note: in forested areas a portion of the APZ may be maintained as an outer protection zone as specified in Table A2.7 of 'Planning for Bush Fire Protection 2006'.)

### **Water and Utilities**

The intent of measures is to minimise the risk of bush fire attack and provide protection for emergency services personnel, residents and others assisting fire fighting activities.

- 2 Water, electricity and gas are to comply with sections 4.1.3 and 4.2.7 of 'Planning for Bush Fire Protection 2006'.

### **Access**

The intent of measures for property access is to provide safe access to/from the public road system for fire fighters providing property protection during a bush fire and for occupants faced with evacuation.

- 3 Internal roads shall comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006'. An internal perimeter road is not required in this instance.

### **Evacuation and Emergency Management**

The intent of measures is to provide suitable emergency and evacuation (and relocation) arrangements for occupants of special fire protection purpose developments.

- 4 Arrangements for emergency and evacuation are to comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006'.

### **Design and Construction**

The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack.

- 5 New construction shall comply with Australian Standard AS3959-1999 'Construction of buildings in bush fire-prone areas' Level 1.

### **Landscaping**

- 6 Landscaping to the site is to comply with the principles of Appendix 5 of 'Planning for Bush Fire Protection 2006'.

The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006', visit the RFS web page at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au) and search under 'Planning for Bush Fire Protection, 2006'.

## **General Matters**

- 1 **Building Work - Compliance with the Building Code of Australia**

All building work must be carried out in compliance with the provisions of the Building Code of Australia.

- 2 **Construction Certificate**

A Construction Certificate must be obtained from Council or an Accredited Certifier prior to work commencing.

A Construction Certificate certifies that the provisions of Clauses 139-148 of the Environmental Planning and Assessment Amendment Regulations, 2000 have been satisfied, including compliance with all relevant conditions of Development Consent and the Building Code of Australia.

**Note:** The submission to Council of two (2) copies of all stamped Construction Certificate plans and supporting documentation is required within **two (2)** days from the date of issue of the Construction Certificate, in the event that the Construction Certificate is not issued by Council.

- 3 **Disability Discrimination Act 1992**

This consent does not imply or confer compliance with the requirements of the Disability Discrimination Act 1992.

It is the responsibility of the applicant to guarantee compliance with the requirements of the Disability Discrimination Act 1992. The current Australian Standard AS1428.1 – Design for Access and Mobility is recommended to be referred for specific design and construction requirements, in order to provide appropriate access to all persons within the building.

- 4 **Geotechnical**

Foundation systems are to be designed for Class H or P soils with all footings pierced to underlying bedrock as recommended by the geotechnical consultant. Other foundation systems may be acceptable if supported by appropriate geotechnical advice.

- 5 **Geotechnical Recommendations**

All work is to be in accordance with the geotechnical recommendations contained in the report dated 27 July 09 by Coffey Geotechnics and any subsequent geotechnical report required to address unanticipated conditions encountered during construction.

- 6 **Trees to be Removed**

The developer has permission to remove Trees No. Group 6, partial Group 7 (7/1 – 7/12), Group 10 and partial Group 11 (25/229-25/238, 25/17-25/288 and 25/190-25/194) as indicated

on the submitted arborist report by Moore Trees dated 25.11.09. No other trees or vegetation shall be removed without the prior written approval of Council.

7 **Trees to be Retained**

The developer must retain Trees No. Group 1, 2, 3 -5, partial Group 7 (excluding 7/1 – 7/12), Groups 8 and 9 as indicated on the submitted arborist report by Moore Trees dated 25.11.09. The developer must carry out all recommendations as indicated on the submitted arborist report by Moore Trees dated 25.11.09.

8 **Maintenance of Access to Adjoining Properties**

Access to all properties not the subject of this approval must be maintained at all times and any alteration to access to such properties, temporary or permanent, must not be commenced until such time as written evidence is submitted to Council or the Principal Certifying Authority indicating agreement by the affected property owners.

9 **Protection of Public Infrastructure**

Council must be notified in the event of any existing damage to any of its infrastructure such as the road, kerb and gutter, road shoulder, footpath, drainage structures and street trees fronting the development site, prior to commencement of any work.

Adequate protection must be provided for Council infrastructure prior to work commencing and during building operations.

Any damage to Council's assets shall be made good, prior to the issue of any Occupation Certificate or commencement of the operation.

10 **Occupation Certificate**

A final Occupation Certificate must be issued by the Principal Certifying Authority prior to occupation or use of the development. In issuing an Occupation Certificate, the Principal Certifying Authority must be satisfied that the requirements of Section 109H of the Environmental Planning and Assessment Act 1979, have been complied with as well as all of the conditions of the Development Consent.

## **Prior to the Issue of the Construction Certificate**

11 **Requirements of the NSW Office of Water – Part 3 s.91 of the Water Management Act 2000**

The submission of documentary evidence to the Principal Certifying Authority, confirming that the required Part 3 Approval under the Water Management Act 2000 has been issued by the NSW Office of Water for the development, prior to the issue of the Construction Certificate.

The Construction Certificate will not be issued over any part of the site requiring a Controlled Activity Approval until a copy of the Approval has been provided to Council.

12 **Fire Safety Schedule**

When issuing a Construction Certificate, a certifying authority must attach a Fire Safety Schedule specifying all of the fire safety measures required for the building to ensure the safety of persons in the building in the event of fire.

13 **Section 73 Compliance Certificate**

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 Coordinator. Please refer to the Building Developing and Plumbing section of the web site [www.sydneywater.com.au](http://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 Coordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design.



The Notice of Requirements must be submitted to the Principal Certifying Authority prior to issue of the construction certificate.

14     **Integral Energy Requirements**

The submission of documentary evidence from Integral Energy to the Principal Certifying Authority is required confirming that satisfactory arrangements have been made with Integral Energy for the provision of electricity supplies to the development, prior to the release of the Construction Certificate.

**Note:** Applications should be made to Customer Connections – South Coast, Integral Energy PO Box 6366, Blacktown 2148.

15     **Telecommunications**

The submission of documentary evidence from an approved telecommunications carrier to the Principal Certifying Authority confirming that underground telecommunication services are available for this development is required prior to the issue of the Construction Certificate.

16     **Disabled Access and Facilities**

The provision of disabled access throughout the development is required and shall be in compliance with the Building Code of Australia Part D3 “Access for People with Disabilities” and Australian Standard AS1428.1 (2001) - Design for Access and Mobility – Part 1 General Requirements for Access – Buildings. This requirement shall be reflected on the Construction Certificate plans.

17     In order to reduce the opportunities for “hiding places” the proposed landscaping must:

- 17.1     use shrubs/plants which are no higher than 1 metre.
- 17.2     the type of trees proposed must have a sufficiently high canopy, when fully grown, so that pedestrian vision is not impeded.
- 17.3     Be set back from the centre of the pathway.

This requirement shall be reflected on the Construction Certificate plans.

18     The development shall incorporate appropriate design measures to minimise any crime risk to students, residents, visitors or staff and motor vehicles within the car parking areas, including (but not limited to) the following:

- 18.1     Landscape treatment which allows visibility from the road way and other public areas;
- 18.2     Landscaping at ground level provided which is difficult or uncomfortable to hide in or traverse,
- 18.3     Provide clearly marked and sign posted visitor car parking signs (including security/intercom system);
- 18.4     Ensure that fire rated doors in the car park have a clear glass panel located no more than 1.5 m from the floor. The panel shall have a minimum dimension of 300 mm x 300 mm to allow visual surveillance within the stairwell and/or next room/space.

This requirement shall be reflected on the Construction Certificate plans.

19     The submission of documentary evidence to the Principal Certifying Authority from the NSW Fire Brigade, NSW Ambulance Service and the NSW Police Service verifying that each of the emergency service authorities are able to override the security system, in the event that a security intercom system is proposed to be installed within the development, prior to the release of the Construction Certificate.

20     The submission of final design details of proposed security systems to be installed within the development to the Principal Certifying Authority, in order to minimise crime and vandalism related matters is required, prior to the release of the Construction Certificate.

21     The full design details of the proposed floodlighting system and associated light spillage measures/devices for the development are required to be submitted to the Principal Certifying Authority for endorsement, prior to the release of the Construction Certificate. The proposed floodlighting system and associated light spillage measures shall be in general accordance with the requirements of Australian Standard AS4282 - Control of Obtrusive Effects of Outdoor

Lighting. The approved light spillage measures shall be installed on the floodlighting system, prior to the use or operation of the floodlighting system. The approved light spillage measures shall be maintained at all times.

- 22 The development shall provide suitable light spillage mitigation measures within the development to mitigate against any adverse light spillage impacts upon surrounding properties. This requirement shall be reflected on the Construction Certificate plans. The implementation of the approved light spillage mitigation measures is required prior to the use or occupation of the development.

23 **Scour Protection**

All stormwater outlets and overland flow paths must incorporate appropriate scour/erosion protection measures. The final details of the proposed scour protection measures shall be reflected on the Construction Certificate plans.

24 **Tank Overflows**

Overflows from the water storage tanks must be connected to the proposed on-site stormwater drainage system. This requirement shall be reflected on Construction Certificate plans.

25 **Basement Pump**

A pump system is to be installed in the event of stormwater from prolonged/extreme storm events entering the basement. This requirement shall be reflected on the Construction Certificate plans and supporting documentation.

26 **On-Site Detention – Design Criteria**

Each on-site stormwater detention facility must incorporate a minimum 900mm square lockable grate for access and maintenance purposes, provision for step irons where required, debris control screen and a suitably graded invert to prevent ponding. Also, details of the orifice plate including diameter of orifice and method of fixing shall be provided. These requirements shall be reflected on the Construction Certificate plans.

27 **On-Site Detention - Identification**

Details shall be provided of a corrosion resistant identification plaque for location on or close to the on-site detention (OSD) facility. The plaque shall include the following information:

- The structure is an OSD facility, being part of the stormwater drainage network, and is not to be tampered with.
- identification number [DA2009/1189]
- any specialist maintenance requirements.

28 **Accessway into Basin**

An all-weather stabilised accessway must be provided to the invert of the surface storage detention basin for maintenance purposes. Details of the accessway must be reflected on the Construction Certificate plans and supporting documentation.

29 **Orifice/Weir Calculations**

Orifice and weir calculations for each on-site detention facility must be provided to the Principal Certifying Authority for approval prior to the issue of the Construction Certificate.

30 **Drainage of Roof, Basement and Balconies**

The proposed method of draining the roof, basement and balconies must be included in the detailed drainage design and provided to the Principal Certifying Authority for approval prior to the issue of the Construction Certificate.

31 **Overland Flow Path Swales**

Details of each overland flow path swale and cut-off dish drain located west of the proposed building shall be provided with the detailed drainage design for the site. Note each swale/drain must be capable of catering for the runoff from a 1 in 100 year storm event from the contributing upslope catchment area. This area shall be free of any vegetation and/or structures that are likely to impede natural overland flow, or make provision for such obstructions, so there will be no adverse flood impacts to any adjoining buildings. These

requirements shall be reflected on the Construction Certificate plans and supporting documentation.

32 **Bicycle Parking**

The security level of the bicycle parking is to be is to comply with the most current version of Austroads Part 14. This requirement shall be reflected on the Construction Certificate plans.

33 **Access Off Robsons Road**

Approval from the City of Wollongong Traffic Committee shall be obtained for all regulatory works associated with the proposed access off Robsons Road, Keiraville. This requirement shall be met and all associated documentation submitted to Council prior to the release of the Construction Certificate.

34 **Parking Allocation**

The parking allocation for the proposal shall be clearly indicated on the construction certificate plans. Each parking space is to be clearly labelled for the user intended (e.g. unit 10, visitor or student parking). Details of such compliance are to be reflected on the Construction Certificate plans.

35 **Parking and Access**

The development shall make provision for a total of 204 car parking spaces, 9 motorcycle parking spaces and 128 bicycle parking spaces. This requirement shall be reflected on the Construction Certificate plans. Any change in above parking numbers shown on the approved DA plans shall be dealt with via a section 96 modification to the development. The approved parking spaces shall be maintained to the satisfaction of Council, at all times.

36 The parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking areas are to be in conformity with Australian Standard AS2890.1 (1993), except where amended by other conditions of this consent. Details of such compliance are to be reflected on the Construction Certificate plans.

37 Each disabled person's parking space must have a minimum dimension of 3.2 metres by 5.4 metres and be clearly marked and/or signposted, and be located to maximise accessibility to the building. A minimum 2.3 metres headroom height shall be provided throughout the car parking area to and from any proposed disabled/adaptable housing parking space and a minimum headroom of 2.5m over the disabled/ adaptable housing space. This requirement shall be reflected on the Construction Certificate plans.

38 The main entry point to the building shall be in accordance with Australian Standard 1428.1 - 2001 Design for Access and Mobility - Part 1 General Requirements for Access - Buildings. The proposed pedestrian ramps within the car parking areas shall incorporate gradients (with suitable landing intervals) in accordance with the Australian Standard. The final design of the pedestrian ramps, including ramp gradients shall be reflected on the Construction Certificate plans.

39 The designated loading/unloading facility shall be kept clear for that purpose at all times. The designated loading/unloading facility shall be shown on the Construction Certificate plans.

40 The provision of suitable barriers, line-marking and painted signage delineating vehicular flow movements within the car parking areas. These details shall be reflected on the Construction Certificate plans.

41 The car parking areas and internal access roads shall be separated from the landscaped bays by means of a kerb or concrete dwarf wall. All kerbs required to act as wheel stops shall have a maximum height of 100 mm above ground. These details shall be reflected on the Construction Certificate plans.

42 The car parking areas shall incorporate 'low impact' floodlighting to ameliorate any light spillage and/or glare impacts upon surrounding properties. The final design details of the proposed floodlighting system shall be reflected on the Construction Certificate plans. The erection of the floodlighting system shall be in accordance with the approved final design.

- 43 Ramps for internal parking areas shall be designed in accordance with AS2890.1 - Parking Facilities - Off Street Car Parking. This requirement shall be reflected on the Construction Certificate plans.
- 44 A minimum 2.2 metre headroom height shall be provided throughout the car parking and manoeuvring area. This requirement shall be reflected on the Construction Certificate plans.
- 45 Gradients of ramps and access driveways shall be provided in accordance with Australian Standard AS2890.1 (1993) - Off Street Car Parking. This requirement shall be reflected on the Construction Certificate plans.
- 46 **Security Roller Shutters for Basement Car Parking Areas**  
The installation of any security roller shutter for the basement car parking area shall not restrict access to any designated visitor or student car parking space. In the event that the approved visitor car parking spaces are located behind any proposed security roller shutter, an intercom system is required to be installed to enable visitor access into the basement car parking area. This requirement is to be reflected on the Construction Certificate plans and any supporting documentation for the endorsement of the Principal Certifying Authority prior to the release of the Construction Certificate.
- 47 Should a proposed Vehicular Crossing be located where it is likely to disturb or impact upon a utility installation (ie power pole, Telstra pit etc) written confirmation from the affected supplier that they have agreed to the proposed impacts shall be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.
- 48 The arrangements and costs associated with any adjustment to a public utility service shall be borne by the applicant/developer. Any adjustment, deletion and/or creation of public utility easements associated with the approved works are the responsibility of the applicant/developer. The submission of documentary evidence to the Principal Certifying Authority which confirms that satisfactory arrangements have been put in place regarding any adjustment to such services is required prior to the release of the Construction Certificate.
- 49 A change in driveway paving is required at the entrance threshold to clearly show motorists they are crossing a pedestrian area. The developer must construct the paving in accordance with the conditions, technical specifications and levels to be obtained from Council's Manager Works. This requirement shall be reflected on the Construction Certificate plans and any supporting documentation.
- 50 Any proposed structures adjacent to the driveway shall comply with the requirements of the latest version of Australian / New Zealand Standard AS/NZ 2890.1 to provide for adequate sight distance. This includes, but is not limited to, structures such as signs, letterboxes, retaining walls, dense planting etc. This requirement shall be reflected on the Construction Certificate plans.
- 51 The edge of the driveway must be provided with a hob to direct surface water flows to drainage pits and prevent any flows from entering buildings. This requirement shall be reflected on the Construction Certificate plans, prior to the release of the Construction Certificate.
- 52 Overflow paths must be provided to allow for flows of water in excess of the capacity of the pipe/drainage system draining the land, as well as from any detention storage on the land. Blocked pipe situations with 1 in 100 year ARI events must be incorporated in the design. Overflow paths must also be provided in low points and depressions. This requirement shall be reflected on the Construction Certificate plans prior to the release of the Construction Certificate.
- 53 The depth and location of all services (ie gas, water, sewer, electricity, telephone, traffic lights, etc) must be ascertained and reflected on the Construction Certificate plans and supporting documentation.
- 54 The developer must provide on-site detention storage for stormwater runoff from the development. The Site Storage Requirement (SSR) and Permissible Site Discharge (PSD) values for the site must be designed in accordance with Council's On-Site Stormwater Detention Code.

Details of the detention facility and SSR/PSD values must be submitted with the Construction Certificate application.

55 **Landscaping**

The submission of a final Landscape Plan in accordance with the requirements of Wollongong City Council Landscape Technical Policy No 98/4 and in accordance with the approved Landscape Plan (ie as part of this consent) for the approval by the Principal Certifying Authority, prior to the release of the Construction Certificate.

56 The provision of common tap(s) and/or an irrigation system is required to guarantee that all landscape works are adequately watered. The location of common taps and/or irrigation system must be indicated on the Landscape Plan for the Construction Certificate, as detailed in the Wollongong City Council Landscape Technical Policy No 98/4. This requirement shall be reflected on the Landscape Plan prior to the release of the Construction Certificate.

57 The submission of certification from a suitably qualified and experienced landscape designer and drainage consultant to the Principal Certifying Authority prior to the release of the Construction Certificate, confirming that the landscape plan and the drainage plan are compatible.

58 The implementation of a landscape maintenance program in accordance with the approved Landscape Plan for a minimum period of 12 months to ensure that all landscape work becomes well established by regular maintenance. Details of the program must be submitted with the Landscape Plan to the Principal Certifying Authority prior to release of the Construction Certificate.

59 **Engineering Plans and Specifications - Retaining Wall Structures**

The submission of engineering plans and supporting documentation of all proposed retaining walls to the Principal Certifying Authority for approval prior to the issue of the Construction Certificate. The retaining walls shall be designed by a suitably qualified and experienced civil and/or structural engineer. The required engineering plans and supporting documentation shall include the following where applicable:

- 59.1 A plan of the wall showing location and proximity to property boundaries;
- 59.2 an elevation of the wall showing ground levels, maximum height of the wall, materials to be used and details of the footing design and longitudinal steps that may be required along the length of the wall;
- 59.3 details of fencing or handrails to be erected on top of the wall;
- 59.4 sections of the wall showing wall and footing design, property boundaries and backfill material. Sections shall be provided at sufficient intervals to determine the impact of the wall on existing ground levels. The developer shall note that the retaining wall and footing structure must be contained wholly within the subject property;
- 59.5 the proposed method of subsurface and surface drainage, including water disposal;
- 59.6 reinforcing and joining details of the bends in the wall at the passing bay of the accessway;
- 59.7 the assumed traffic loading used by the engineer for the wall design.

60 **Dust Suppression Measures**

The submission of details of the proposed dust suppression measures for the demolition, excavation and construction phases of the development to the Principal Certifying Authority, prior to issue of the Construction Certificate.

61 **Dust Suppression Measures – Stockpile Management**

The preparation of suitable proposed dust suppression measures for stockpile management that will be implemented at times when weather conditions are conducive to dust generation impacts. The proposed dust suppression measures are required to be submitted to the Principal Certifying Authority, prior to the issue of the Construction Certificate.

62 **On-Site Detention – Structural Design**

The on-site detention facility must be designed to withstand loadings occurring from any combination of hydrostatic, earth, traffic and buoyancy forces. Details must be provided

demonstrating these requirements have been achieved prior to the issue of the Construction Certificate.

63     **On-Site Detention - Maintenance Schedule**

A maintenance schedule for each on-site stormwater detention system must be submitted with the Construction Certificate plans for the proposed development. The maintenance schedules must be in accordance with Council's On-Site Stormwater Detention Code.

## **Prior to the Commencement of Works**

64     **Appointment of Principal Certifying Authority**

Prior to commencement of work, the person having the benefit of the Development Consent and a Construction Certificate must:

- 64.1     Appoint a Principal Certifying Authority (PCA) and notify Council in writing of the appointment, irrespective of whether Council or an accredited private certifier is appointed (if Council is nominated as the PCA please use the attached form) and
- 64.2     notify Council in writing (on the attached form) of their intention to commence the erection of the building (at least two days notice is required).

The Principal Certifying Authority must determine when inspections and compliance certificates are required.

65     **Sign – Supervisor Contact Details**

Before commencement of any work, a sign must be erected in a prominent, visible position:

- 65.1     stating that unauthorised entry to the work site is not permitted;
- 65.2     showing the name, address and telephone number of the Principal Certifying Authority for the work; and
- 65.3     showing the name and address of the principal contractor in charge of the work site and a telephone number at which that person can be contacted at any time for business purposes.

This sign shall be maintained while the work is being carried out and removed upon the completion of the construction works.

66     **Site Management, Pedestrian and Traffic Management (Where Works are Proposed in or from a Public Road Reserve)**

The submission, as part of an application for a permit under Section 138 of the Roads Act 1993, of a Site Management, Pedestrian and Traffic Management Plan to Council's Manager Regulation and Enforcement for approval is required, prior to works commencing on the site. This plan shall address what measures will be implemented for the protection of adjoining properties, pedestrian safety and traffic management and shall be in compliance with the requirements of the latest versions of Australian Standard AS1742 - Traffic Control Devices for Works on Roads and the RTA Traffic Control at Worksites Manual.

This plan is required to maintain public safety, minimise disruption to pedestrian and vehicular traffic within this locality and to protect services, during demolition, excavation and construction phases of the development. This plan shall include the following aspects:

- 66.1     proposed ingress and egress points for vehicles to/from the construction site;
- 66.2     proposed protection of pedestrians, adjacent to the construction site;
- 66.3     proposed pedestrian management whilst vehicles are entering/exiting the construction site;
- 66.4     proposed measures to be implemented for the protection of all roads and footpath areas surrounding the construction site from building activities, crossings by heavy equipment, plant and materials delivery and static load from cranes, concrete pumps and the like;
- 66.5     proposed method of loading and unloading excavation machines, building materials formwork and the erection of any part of the structure within the site;

- 66.6 proposed areas within the site to be used for the storage of excavated material, construction materials and waste containers during the construction period;
- 66.7 proposed traffic control measures such as advanced warning signs, barricades, warning lights, after hours contact numbers etc are required to be displayed where works are in progress in any road reserve and shall be in accordance the latest versions of the NSW Roads and Traffic Authority's Specification - "Traffic Control at Work Sites Manual" and the Australian Standard AS1742. – "Manual of Uniform Traffic Control Devices" and accompanying field handbooks (SAA HB81);
- 66.8 proposed method of support of any excavation, adjacent to adjoining buildings or the road reserve. The proposed method of support is to be certified by an accredited certifier in Civil Engineering; and
- 66.9 proposed measures to be implemented, in order to ensure that no soil/excavated material is transported on wheels or tracks of vehicles or plant and deposited on the roadway.

The approved plan shall be implemented, prior to the commencement of any works upon the construction site.

**Note:** Any proposed works or placement of plant and equipment and/or materials within any road reserve will require the separate approval of Council, prior to the commencement of such works, pursuant to the provisions of the Roads Act 1993.

#### 67 **Permit to Enter and Exit Construction Site**

Any use of the footpath or road reserve for demolition or construction purposes requires Council approval under the Roads Act 1993.

Where it is proposed to carry out demolition activities or construction vehicles entering and leaving the site from a public road reserve and/or installation of a fence or hoarding, a permit must be obtained from Council's Regulation and Enforcement Division prior to the works commencing.

#### 68 **Pavement Design**

The pavement design for all access roads must be carried out by a qualified geotechnical/civil engineer in accordance with the 'Australian Road Research Board' design criteria and the version of the Wollongong City Council Subdivision Code which are current at the date of this consent. The pavement design must be submitted to Council's Manager Design and Technical Services for approval prior to the laying of any pavement material.

The wearing course must consist of an asphaltic concrete seal.

#### 69 **Compliance with Council's Subdivision Code**

All new civil engineering infrastructure works to be located within Council's road reserve must be designed and constructed in accordance with the version of the Wollongong City Council Subdivision Code current at the time of this consent.

#### 70 **Temporary Toilet/Closet Facilities**

Toilet facilities are to be provided at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Each toilet provided must be:

- 70.1 a standard flushing toilet; and
- 70.2 connected to either:
  - 70.2.1 the Sydney Water Corporation Ltd sewerage system or
  - 70.2.2 an accredited sewage management facility or
  - 70.2.3 an approved chemical closet.

The toilet facilities shall be provided on-site, prior to the commencement of any works.

71 **Hoardings (within any Public Road Reserve)**

The site must be enclosed with a suitable hoarding (type A or B) or security fence to satisfy the requirements of the latest versions of the Occupational Health and Safety Act, the Occupational Health and Safety Regulations and Australian Standard AS 2601. An application must be lodged and a permit obtained from Council's Regulation and Enforcement Division before the erection of any such hoarding or fence.

**Note:** No building or construction work must commence before the hoarding or fence is erected.

72 **Enclosure of the Site**

The site must be enclosed with a suitable security fence to prohibit unauthorised access, to be approved by the Principal Certifying Authority. No building work is to commence until the fence is erected.

73 **Consultation with NSW WorkCover Authority**

Prior to any work commencing on the site it is the responsibility of the owner to contact NSW WorkCover Authority in writing in respect to any demolition or use of any crane, hoist, plant or scaffolding.

74 **Supervision of Works and Notification to Council of Works in Road Reserve**

The work shall be supervised by a suitably qualified and experienced Civil Engineer, Registered Surveyor or Civil Engineering Foreman. The supervisor's name, address and contact details (including telephone number) shall be submitted to the Principal Certifying Authority and Council prior to the commencement of any works.

The submission of a written construction program and anticipated duration of the construction to Council is required prior to the commencement of any works within any public road reserve.

75 **Public Liability Insurance**

All contractors working in Council's road reserve and/or public reserve areas shall take out public liability insurance for a minimum amount of \$10 Million. The policy shall specifically indemnify Council from all claims arising from the execution of the works. Written evidence of this insurance shall be supplied to the Principal Certifying Authority and Council (in the event that Council is not the Principal Certifying Authority) prior to the commencement of any such works in any road reserve or public reserve area.

76 **Site Management Program – Sediment and Erosion Control Measures**

A site management program incorporating all sediment and erosion control measures (eg cleaning of sediment traps, fences, basins and maintenance of vegetative cover) is to be initiated prior to the commencement of any demolition, excavation or construction works and maintained throughout the demolition, excavation and construction phases of the development.

77 **Erosion and Sediment Control Measures**

Erosion and sediment control devices are to be installed prior to the commencement of any demolition, excavation or construction works upon the site. These devices are to be maintained throughout the entire demolition, excavation and construction phases of the development and for a minimum three (3) month period after the completion of the project, where necessary.

78 **All-weather Access**

An all-weather stabilised access point must be provided to the site to prevent sediment leaving the site as a result of vehicular movement. Vehicular movement should be limited to this single accessway.

79 **Erosion Controls – Vehicular Entry/Exit Points**

The vehicular entry/exits to the site must be protected from erosion and laid with a surface material which will not wash into the street drainage system or watercourse.



80      **Sediment Control Measures**

The developer must ensure that sediment-laden runoff from the site is controlled at all times subsequent to commencement of construction works. Sediment control measures must be maintained at all times and checked for adequacy at the conclusion of each day's work.

81      **Supervising Arborist – Tree Inspection and Installation of Tree Protection Measures**

Prior to the commencement of any demolition, excavation or construction works, the supervising arborist must certify in writing that tree protection measures have been inspected and installed in accordance with the arborist's recommendations and relevant conditions of this consent.

82      The depth and location of all services (ie stormwater, gas, water, sewer, electricity, telephone, etc) must be ascertained and reflected on the plans and supporting documentation issued for construction.

83      **Construction of Vehicular Crossing**

The applicant shall construct a new industrial type concrete crossing to service the development in accordance with Council's current policies and standards.

The applicant shall arrange, through Council's Regulation and Enforcement Division for a Council qualified concrete contractor to carry out the works.

A copy of the approval shall be submitted to the Principal Certifying Authority prior to works commencing. The entire length of any vehicular crossings must be constructed:

- a)      to Council's currently adopted standard drawings;
- b)      for the full width of the footpath; and
- c)      by one of Council's qualified concrete contractors at the developer's expense.

84      **Notification to Council of any Damage to Council's Infrastructure**

Council must be notified in the event of any existing damage to any of Council's infrastructure including, but not limited to the road, kerb and gutter, road shoulder, footpath, drainage structures and street trees fronting the development prior to the commencement of work. Adequate protection must be provided to Council infrastructure prior to work commencing and during the construction period. Any damage to Council's assets shall be restored in a satisfactory manner prior to the issue of the Occupation Certificate.

85      **Application for Occupation of Footpath/Roadway**

Any use of the footpath or road reserve for construction purposes requires Council approval under the Roads Act 1993. Where it is proposed to carry out activities such as, but not limited to the following:

- 85.1      carrying out demolition works
- 85.2      construction vehicles entering and leaving the site;
- 85.3      loading or unloading machinery/equipment/deliveries
- 85.4      installation of a fence or hoarding;
- 85.5      Carrying out survey or investigation work;
- 85.6      stand a mobile crane/plant/concrete pump/materials/waste storage containers within the public road reserve;
- 85.7      use part of Council's road/footpath area;
- 85.8      pump stormwater from the site to Council's stormwater drains;
- 85.9      removal of Street Trees;
- 85.10      installation of services, including water, sewer, gas, stormwater and power;
- 85.11      construction of new vehicular crossings or footpaths;
- 85.12      any activity which proposes an interruption to or alter the flow of pedestrian and or vehicular traffic

an application for occupation of footpath/roadway must be obtained from Council's Regulation and Enforcement Division, prior to the works commencing.

86 **Civil Works – Engineering Drawings**

The applicant shall submit a detail design plan for engineering works within the road reserve prior to the works commencing. The plan shall include line marking, blisters and traffic calming device details, survey levels to AHD and cross sections at all building entrance points and driveway designs complying with the latest versions of AS 1428.1, AS/NZS 2890.1, the Disability Discrimination Act and the AUSTROAD road design standards. These must be submitted as separate engineering drawings for assessment by Council's Manager Design and Technical Services.

The drawings must show all public utility underground lines, pits, poles, stormwater lines and pits. If any adjustments to public utilities are proposed the applicant must also submit documentary evidence that they have the consent of the owner of the public utility authority.

The drawings and surveys should include levels of existing infrastructure such as kerb and gutter, public utility, pits, poles and stormwater drainage structures as well as adjacent road carriageway and footpath levels and extend 20 metres past the limit of the development site.

## **During Demolition, Excavation or Construction**

87 **Stormwater to Existing**

Stormwater from the development must be piped to the existing on-site stormwater drainage system.

88 **On-Site Detention - Construction**

The on-site detention facilities must be constructed as part of Stage 1 of the total development.

89 **Pipe Connection**

All pipe connections to existing pipelines must be constructed in accordance with good engineering practice. The developer must ensure that the condition of the pipe is not compromised and that the service life of the pipe is not reduced as a result of the connection.

90 **Flood Warning Signs**

The developer must provide flood warning signs immediately adjacent to the location of the proposed surface storage detention basin.

91 **Stormwater Quality**

Stormwater runoff from car park lots must be directed to a filtration unit (bio-remediation swales, sand filtration system or wetland) to remove particulates, oil and grease, hydrocarbon and metals prior to discharge into the street drain or receiving waterways. The filtration unit can be incorporated within the OSD system with service access provision.

92 **Supervision of Engineering Works**

All engineering works associated with the development are to be carried out under the supervision of a practicing engineer.

93 **No Adverse Run-off Impacts on Adjoining Properties**

The design of the development shall ensure there are no adverse effects to adjoining buildings or proposed building footprint as a result of flood or stormwater run-off. Attention must be paid to ensure adequate protection for buildings against the ingress of surface run-off.

94 **Re-direction or Treatment of Stormwater Run-off**

Allowance must be made for surface run-off from adjoining land. Any redirection or treatment of that run-off must not adversely affect any other building.

95 **Forty Eight Hours Notice – Prior to Works Commencing in any Road Reserve**

The applicant shall consult with Wollongong City Council's Regulation and Enforcement Division, giving 48 hours notice to arrange an on-site meeting, prior to any works commencing in any road reserve (footpath/carriageway). The purpose of the meeting will be to discuss any relevant issues such as a schedule of inspections, the need for a road occupation or opening permit and the provision of a traffic control plan as part of the works.

96      **Redundant Crossings**

Any existing vehicular crossings rendered unnecessary by this development must be removed and the footpath and normal kerbing and guttering must be restored. This work shall be carried out by a Council qualified concrete contractor at the developer's expense.

97      **Protection of Public Places**

If the work involved in the erection or demolition of a building involves the enclosure of a public place or is likely to cause pedestrian/vehicular traffic in a public place to be obstructed or rendered inconvenient, or have the potential for conflict between pedestrians and vehicles:

- 97.1      A hoarding or fence must be erected between the work site and the public place;
- 97.2      an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place;
- 97.3      the work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in a public place;
- 97.4      safe pedestrian access must be maintained at all times;
- 97.5      any such hoarding, fence or awning is to be removed when the work has been completed.

98      **Temporary Road Closure(s)**

If a road closure is required an approval must be obtained from City of Wollongong Traffic Committee and Wollongong City Council.

**Note:** It may take up to 6 weeks for approval. An application for approval must include a Traffic Control Plan prepared by a suitably qualified person which is to include the date and times of closure and any other relevant information. The traffic control plan shall satisfy the requirements of the latest versions of Australian Standard AS1742 – Traffic Control Devices for Works on Roads and the RTA Traffic Control at Worksites Manual

99      **Prior approval from Council for any works in Road Reserve**

Approval, under Section 138 of the Roads Act must be obtained from Wollongong City Council's Regulation and Enforcement Division prior to any works commencing or any proposed interruption to pedestrian and/or vehicular traffic within the road reserve caused by the construction of this development. A traffic control plan prepared and implemented by a suitably qualified person must be submitted for approval and the appropriate fees paid, a minimum of five working days prior to the expected implementation. The traffic control plan shall satisfy the requirements of the latest versions of Australian Standard AS1742 – Traffic Control Devices for Works on Roads and the RTA Traffic Control at Worksites Manual.

**Note:** This includes temporary road closures for the delivery of materials, plant and equipment, concrete pours etc.

100      **Copy of Consent to be in Possession of Person carrying out Tree Removal**

The applicant/developer must ensure that any person carrying out tree removal/vegetation clearance is in possession of this development consent and/or the approved landscape plan, in respect to the trees/vegetation which have/has been given approval to be removed in accordance with this consent.

101      **Restricted Hours of Work (not domestic residential scale)**

The developer must not carry out any work other than emergency procedures to control dust or sediment laden runoff outside the hours of 7.00 am to 5.00 pm, Monday to Friday and 7 am to 1.00 pm Saturdays without the prior written consent of the Principal Certifying Authority and Council.

No work is permitted on public holidays, Sundays or the Saturday adjacent to public holidays on Mondays or Fridays.

Any request to vary these hours shall be submitted to the **Council** in writing detailing:

- 101.1      the variation in hours required;
- 101.2      the reason for that variation;

101.3 the type of work and machinery to be used.

**Note:** The developer is advised that other legislation may control the activities for which Council has granted consent including but not limited to the Protection of the Environment Operations Act 1997. Developers must note that EPA Environmental Noise manual restricts use of power tools (electronic or pneumatic) to between the hours of 7.00 am to 5.00 pm Mondays to Fridays and 8.00 am to 4.00 pm on Saturdays.

102 The developer must carry out work at all times in a manner which will not cause a nuisance, by the generation of unreasonable noise, dust or other activity, to the owners and/or occupiers of adjoining and adjacent land.

103 The lighting of the premises must be directed so as not to cause nuisance to the owners or occupiers of adjoining premises or to motorists on adjoining or nearby roads.

104 **Site Management**

Stockpiles of sand, gravel, soil and the like must be located to ensure that the material:

104.1 Does not spill onto the road pavement and

104.2 is not placed in drainage lines or watercourses and cannot be washed into these areas.

105 Vehicle access is to be controlled so as to prevent tracking of sediment onto adjoining roadways, particularly during wet weather or when the site has been affected by wet weather.

106 **Dust Suppression Measures**

Activities occurring during the construction phase of the development must be carried out in a manner that will minimise the generation of dust.

107 Trucks which are entering and leaving the premises and carrying loads must be sealed or covered at all times, except during loading and unloading.

108 All excavations and backfilling associated with the erection of a building must be executed safely and in accordance with appropriate professional standards.

109 All excavations and backfilling associated with the erection of a building must be properly guarded and protected to prevent them from being dangerous to life or property.

110 Any works involving asbestos are to be carried out in accordance with the WorkCover Authority's – Your Guide to Working with Asbestos, "*Guidelines for Practices Involving Asbestos Cement in Buildings*". Transportation and disposal of asbestos materials shall be in accordance with EPA requirements.

111 **Provision of Waste Receptacle**

The developer must provide an adequate receptacle to store all waste generated by the development, pending disposal. The receptacle must be regularly emptied and waste must not be allowed to lie or accumulate on the property other than in the receptacle. Consideration should be given to the source separation of recyclable and re-usable materials.

112 The building site must be kept free of rubbish at all times. All refuse capable of being wind blown must be kept in a suitable waste container.

113 **Civil Works – Final Construction Drawings**

Prior to any civil infrastructure construction works commencing within the road reserve, the applicant must submit, to Council's Manager Design and Technical Services, final construction drawings with specifications to ensure that the civil construction works can be built in accordance with Council's requirements.

114 **Compliance with Statutory Authorities / Government Departments**

Compliance with the requirements of any Statutory Authorities or Government Departments such as, but not limited to:

- NSW Workcover Authority;
- NSW Roads & Traffic Authority;

- NSW Environment Protection Authority;
- NSW Police Service; and
- NSW Fire Brigades.

## Prior to the Issue of the Occupation Certificate

### 115 **Completion of Engineering Works**

The completion of all engineering works in accordance with the conditions of this consent and any necessary work to make the construction effective to the satisfaction of Council's Manager Regulation and Enforcement. The total cost of all engineering works shall be fully borne by the applicant/developer and any damage to Council's assets shall be restored in a satisfactory manner, prior to the issue of the Occupation Certificate.

### 116 **Works-as-Executed Plans**

On completion of any civil infrastructure works, the applicant must submit, to Council's Manager Design and Technical Services, the Works-As-Executed plans for any works within any road reserve or other Council owned or controlled land. A certificate shall also be submitted by a registered surveyor confirming that the survey is a true and accurate record of all pipelines and associated structures required by the engineering works. The WAE plans shall also be certified by an accredited engineer indicating that construction works have been built in accordance with the conditions of development consent.

### 117 **Protection from Termites**

The building shall be protected from attack from subterranean termites in accordance with Australian Standard AS3660.1 (2000): Protection of Building from Subterranean Termites – New Buildings.

On completion of the installation of the barrier, the Principal Certifying Authority shall be furnished with a certificate from the person responsible stating that the barrier complies with AS 3660.1.

A durable notice shall be permanently fixed to the building in a prominent location, such as the meter box or the like indicating:

- 117.1 The method of protection;
- 117.2 the date of installation of the system;
- 117.3 where a chemical barrier is used, its life expectancy as listed on the National Registration Authority label;
- 117.4 recommended advice by the installer as to the scope and frequency of future inspections of the system on a regular basis by a suitably qualified and experienced pest/pest eradication consultant.

### 118 **Fire Safety Certificate**

A Fire Safety Certificate must be issued for the building prior to the issue of an Occupation Certificate. As soon as practicable after a Fire Safety Certificate is issued, the owner of the building to which it relates:

- 118.1 Must cause a copy of the certificate (together with a copy of the current fire safety schedule) to be given to the Commissioner of New South Wales Fire Brigades, and
- 118.2 must cause a further copy of the certificate (together with a copy of the current fire safety schedule) to be prominently displayed in the building.

### 119 **Drainage**

The developer must obtain a certificate of Hydraulic Compliance (using Council's M19 form) from a suitably qualified civil engineer, to confirm that all stormwater drainage and on-site detention works have been constructed in accordance with the approved plans. In addition, full works-as-executed plans, prepared and signed by a Registered Surveyor must be submitted. These plans and certification must satisfy all the requirements stated in the On-Site Stormwater

Detention and Drainage Design Codes. This information must be submitted to the Principal Certifying Authority prior to the issue of the final Occupation Certificate.

120 **Restriction on use – On-site Detention System**

The applicant must create a restriction on use under the Conveyancing Act 1919 over the on-site detention system. The following terms must be included in an appropriate instrument created under the Conveyancing Act 1919 for approval of Council:

“The registered proprietor of the lot burdened must not make or permit or suffer the making of any alterations to any on-site stormwater detention system on the lot(s) burdened without the prior consent in writing of the authority benefited. The expression ‘on-site stormwater detention system’ shall include all ancillary gutters, pipes, drains, walls, kerbs, pits, grates, tanks, chambers, basins and surfaces designed to temporarily detain stormwater as well as all surfaces graded to direct stormwater to those structures.

Name of the authority having the power to release, vary or modify the restriction referred to is Wollongong City Council.”

The instrument, showing the restriction, must be submitted to the Principal Certifying Authority for endorsement prior to the issue of the final Occupation Certificate and the use of the development.

121 **Retaining Wall Certification**

The submission of a certificate from a suitably qualified and experienced structural engineer or civil engineer to the Principal Certifying Authority is required, prior to the issue of the Occupation Certificate or commencement of the use. This certification is required to verify the structural adequacy of the retaining walls and that the retaining walls have been constructed in accordance with plans approved by the Principal Certifying Authority.

122 **Occupation Certificate**

A final Occupation Certificate must be issued by the Principal Certifying Authority prior to occupation or use of the development. In issuing an Occupation Certificate, the Principal Certifying Authority must be satisfied that the requirements of Section 109H of the Environmental Planning and Assessment Act 1979, have been complied with as well as all of the conditions of the Development Consent.

123 The developer must make compensatory provision for the trees required to be removed as a result of the development. In this regard, fifty (50) x 75 litre container mature plant stock shall be placed in the locations shown in the Landscape Concept Plan by Taylor Brammer Landscape Architects to supplement the car park planting islands. The suggested species are Illawarra rainforest species.

124 **Positive Covenant – On-Site Detention Maintenance Schedule**

A positive covenant shall be created under the Conveyancing Act 1919, requiring the property owner(s) to undertake maintenance in accordance with the Construction Certificate approved On-Site Stormwater Detention System and Maintenance Schedule (application number to be referenced).

The instrument, showing the positive covenant must be submitted to the Principal Certifying Authority for endorsement prior to the issue of the final Occupation Certificate and the use of the development.

125 **On-Site Detention – Structural Certification**

The submission of a certificate from a suitably qualified practising civil and/or structural engineer to the Principal Certifying Authority is required prior to the issue of the final Occupation Certificate. This certification is required to verify the structural adequacy of the on-site detention facility and that the facility has been constructed in accordance with the approved Construction Certificate plans.

## **Operational Phases of the Development/Use of the Site**

### **126 Waste Disposal, Storage and Servicing**

The developer must make adequate provision for the disposal, storage and the servicing of all operational waste, green waste and recycled materials.

### **127 Fire Safety Measures**

All new and existing fire safety measures shall be maintained in working condition, at all times.

### **128 Clothes Drying on Balconies/Terrace Areas Prohibited**

The use of the balconies/terrace areas for the external drying of clothes is strictly prohibited.

### **129 Loading/Unloading Operations/Activities**

All loading/unloading operations are to take place at all times wholly within the confines of the site.