

Part D: Concept Plan

5.0 Concept Plan

5.1 Introduction

The Concept Plan establishes the vision and planning and development framework which will be used by the consent authority to assess future development proposals within the UTS site. It articulates what the UTS is seeking to achieve for future development and sets the broad parameters for the development of the site.

This section of the document establishes the key development objectives and outcomes that underpin the development of the UTS site and recommends strategies to achieve these outcomes. These strategies result in actions which are detailed in the Statement of Commitments.

The Concept Plan vision for the site has been prepared by DEM and is supported by technical studies which are appended to this report.

The Concept Plan is a blueprint for the future development of the UTS site. It demonstrates, through a series of strategies how the components of the project can lead to the sustainable development of the site.

5.2 Concept Strategies / Vision

DEM, the Urban Design and Landscape Architects for the project produced the following Vision Statement for the Concept Design which subsequently guided the development of the Concept Plan.

'The UTS Kuring-gai campus site exists as testimony to the visionary work of architect David Don Turner and landscape architect Bruce Mackenzie. Turner and Mackenzie's approach was to harmoniously blend the built structures and the natural environment. They minimised the area occupied by buildings to ensure that as much as possible of the existing bushland was left intact. This approach guaranteed that the intrinsic qualities of the site - the landform indigenous plants and rock outcrops - were preserved and celebrated as integral components of the campus. The vision of Turner and Mackenzie produced a unique Australian campus that was visually reminiscent of the hilltop town in a bushland setting. The new vision for the UTS site builds upon the original design vision of Turner and Mackenzie. It respects the principle of a compact arrangement of buildings that maintains and enhances the existing bushland.'

The Indicative Development Scheme is structured to create:

- *A liveable and rewarding residential community*
- *A place which provides its people with a sense of purpose of culture, learning and opportunity; and*
- *A community which pushes the boundaries on ecological sustainable development for its individual buildings, parks and gardens. It is essential that through careful and considered management of change, the Indicative Development Scheme embraces both the original designer's concept of the hilltop town, and the design of a safe and attractive community.'*

Design principles to guide the development of the site have been developed in close consultation with the original site architects and consultant team. This has allowed for the incorporation of the original design principles for the site and key technical recommendations relating to heritage and conservation, bushfire, ecology, and tree assets.

The design principles prepared by DEM aim to:

- Ensure that the character of the development fits contextually into both its regional North Shore residential and local bushland landscapes;
- Retain the architecturally important elements of the existing built form and landscape interfaces;
- Use the bushland setting and significant buildings as a special focus for this residential community;
- Site buildings generally within developed areas to minimise impact on the existing bushland setting;
- Build on the original landscape concepts of containment by providing a defined contrast between bushland and urban intervention;
- Maintain existing community values and facilities, where appropriate;
- Provide development with a compact footprint allowing for good quality open spaces;
- Build upon the original architectural concept of an internal street by achieving connectivity through a safe and legible street and pedestrian circulation network;
- Emphasise connectivity through the street and pedestrian circulation, the overall massing and configuration of the buildings, and the public open space;
- Minimise new streets and hard landscaped areas;
- Maintain and enhance the bushland environment throughout the streets, parks and gardens using endemic species; and
- Further enhance the original vision of a hilltop town and provide a visually appropriate built form and 'roofscape'.

5.3 Consideration of Alternatives

The Concept Plan has been arrived at following several iterations and in response to consultation with the Kuring-gai Council, the local community and state agencies and the original architects of the campus buildings. The Options investigated included three broad considerations:

Option 1 – Do nothing

This option is considered to be an unfeasible alternative as:

- It would not resolve the educational issues experienced by the campus in relation to an inability to attract students and declining student numbers (refer to section 2.3.3 of this report)
- Would continue to promote students driving to university and adverse environmental impacts rather than going to the Broadway campus which is located at a transport hub
- Would result in 440 additional dwellings in other locations in Sydney, probably in the north-west and south-west sectors, which are well removed from existing infrastructure and service provisions

Option 2 – Retain main campus building

Option 2, the preferred option has been developed through an iterative process in response to discussions with the Department of Planning regarding the provision of open space and the overall density of development. This option will ensure the protection of the heritage significance of the main campus building, preservation of cultural linkages and ensure that the embodied energy in the main campus building could be utilised.

This option would:

- Allow for the consolidation of the Broadway campus which would resolve the educational issues with declining numbers and subsequent shortage of secondary maths and science teachers as discussed in section 2.3.3 of the report;
- Support and promote the “knowledge precinct” at the Broadway campus;
- Ensure that the transport hub at the Broadway campus would be utilised; and
- Ensure that 440 dwellings are located where adequate infrastructure and services are available and contribute to urban consolidation objectives of the State Government

Option 3 – Remove main campus building

- Demolition of the existing buildings and developing residential dwellings on land that had been already disturbed or developed in some form.

This option was set aside primarily in response to the heritage assessment undertaken by UTS consultants that identified the building of significance, due to its importance

‘at a State level for its strong Post War Brutalist architectural expression, its close and confident relationship between architecture and its bushland setting, its adoption of the internal street and compact organisational planning and the level of design continuity that came from the involvement of the original design architect in all major stages of development.

The college was conceived as an “Italian Hill Town”, set confidently on a prominent wooded ridgeline, designed to be viewed from a distance, while retaining the majority of the original bushland setting to the east, south and west, by the use of a compact building footprint.’

Based on this assessment, and the embodied energy that remains within the building it was decided that the existing university building would be retained.

The Concept Plan is based on Option 2 and providing higher building density in keeping with the original architectural principles, whilst maintaining as much natural vegetation and bushland as possible while recognising the valuable bushland character of the site. The rationale for the Concept Plan is included in the Site Analysis and Urban Design Principles report prepared by DEM Architect included in **Volume 3**.

This is achieved by focusing new development on previously disturbed areas, such as car parks, existing buildings and hard landscaping.

The Concept Plan shows the majority of the main campus buildings retained and adaptively re-used. This includes retention of the existing library and auditorium as well as the retention of educational uses and /or new commercial activities.

5.4 Concept Plan Application

The Concept Approval application submitted with this EAR seeks the Minister's approval for the general development concept for the UTS Kuring-gai site.

The key parameters for the future development of the site have been established as follows:

- Part demolition of existing campus buildings;
- Retention and adaptive reuse of the main campus building, a significant 20th century building, for continued education and commercial use, and including the existing auditorium and libraries;
- Identification of an Asset Protection Zone;
- New residential development on previously developed land including:
 - Building location and envelopes;
 - Building heights;
 - Location of streets;
 - Transport and parking facilities, including an expanded pedestrian network;
 - An overall FSR of approximately 0.46:1;
 - A Gross Floor Area (GFA) of approximately 95,471 m² consisting of proposed buildings and buildings to be retained;
 - The provision of a 6,970 m² publicly accessible 'Village Green' park ;
 - A range of dwelling types ranging from single dwellings and integrated town house dwellings to medium density apartment buildings;
 - Retention of 9.15 hectares or 44% of the site as undeveloped land.

The planning and design concept for the Scheme includes:

- Approximately 440 dwellings, in addition to the continuation of the main buildings for education use or their adaptive reuse for commercial purposes;
- Containment of new building generally within areas that have already been disturbed;
- Identification of an Asset Protection Zone;
- The 440 dwellings will include 10 single lot dwellings, 40 integrated dwellings or town houses and 390 apartments;
- A building height ranging from 2 storeys at the sites interface with residential areas, through to 3 and 4 storeys adjacent to Film Australia and around the existing sports oval. Residential flat buildings of 5 storeys will be located closer to the main campus building in keeping with existing heights;
- Car parking spaces for 587 vehicles plus 97 visitor car spaces; and
- A street and pedestrian network that extends and integrates with the existing street and footpaths.

The Concept Plan is described in the drawings prepared by DEM included in **Volume 3**. It is only these plans which describe the Concept Plan for which consent is sought. The other drawings are supporting material.

5.5 Capital Investment Value

The estimated capital value of the project is \$216 million, as per the indicative cost estimates prepared by The Page Kirkland Group.

5.6 Urban Structure

The Concept Plan principle of concentrating new development on previously disturbed or cleared areas means that total developed area will increase by approximately 1.3 ha or 6% and open space will reduce accordingly. See **Figure 15** for Concept Plan.



Figure 15 – Concept Plan

5.7 Land use

Land Use Mix

The proposed uses and amount of GFA are identified in the table below.

Table 8 - Site area and GFA by land use as a proportion of the site
(Source: DEM and ERM, 2007)

Existing use	Area (m ²)	Cover
Undeveloped area (bushland)	91,792 SA	44%
Developed area	116,218 SA	56%
- Roads, parking, hard surface	86,765 SA	32%
- Sports oval	15,535 SA	7%
- Building footprint	13,918 SA	7%
Site Area	208,010 SA	100%
Land Uses - proposed		
Residential	68,304 GFA	71.5%
Non Residential	27,167 GFA	28.5%
Total GFA	95,471 GFA	100%

The developed area will increase by around 1.3ha, which equates to around 6% of the site area. The additional development area is highlighted in **Figure 16**.



Figure 16 – Additional Development Areas (Source DEM)

5.8 Built Form

Dwelling Types

The Concept Plan indicates a yield of 440 dwellings, in addition to the continuation of the main buildings for education use or their adaptive reuse for commercial purposes. The location of dwelling types is described in **Figure 17**.

Table 9 – Concept Plan information

Indicative concept plan	Indicative area/ yield
New residential dwellings	440
- Single dwelling house lots (< 650 - 750m ²)	10
- Integrated/townhouse lots (< 350 - 400m ²)	40
- Apartment units	(390)
- 2 bed units	195
- 3 bed units	195

Based on household occupancy rates in Kuring-gai Open Space and Distribution Needs Survey (2000) this will provide for a residential population of approximately 831 people (assuming 3.12 persons/house and 1.86 persons/medium density unit).

A mix of dwelling types is proposed, including traditional lots for single dwellings, integrated small lots, and medium density residential apartment buildings.



Figure 17 – Dwelling Types (Source DEM)

Proposed FSR

The site area is 20.8 ha (or 208,010m²). The proposed GFA is approximately 95,471m² (including the existing buildings proposed to be retained). The FSR is 0.46:1, equivalent to a dwelling yield of per hectare is 21.15.

This density and FSR compares reasonably with the density of residential development in the suburb of Lindfield, over a smaller footprint of developable land and at the lower end of medium density development.

Height

The height and scale of the built form is consistent with, and no greater than the existing buildings. The design philosophy of the compact built form is continued in the new structures.

Small integrated housing lots and individual lots are located on the northern boundary of the site adjacent to the existing individual block homes of West Lindfield.

Increased height and density are located towards the centre of the site.

Buildings are stepped and staggered to reduce their visual bulk.

Height is controlled by the number of storeys as depicted in the Building Heights plan at **Figure 18**. For the purposes of this Concept plan, each storey is assumed to be 4.0m from floor to ceiling. Accordingly, a 5-storey (the highest proposed) will be 20m high when measured from ground level to the ceiling of the uppermost floor excluding plant rooms and lift over-runs.

Buildings are arranged to provide a strong built edge between the residential community and the existing bushland consistent with the original architectural and landscape philosophies.



Figure 18 – Building Heights (Source DEM)

View Analysis

The location and height of buildings proposed in the Concept Plan has been carefully considered to ensure that there is no, or very limited, impact on views and the existing skyline which is dominated by vegetation and the existing UTS buildings. The view line analysis is included in pages 42 to 49 of the Concept Plan document included in **Volume 3**.

Community

The Concept Plan has been carefully designed to locate new buildings on developed land, other than the additional 1.3 ha of land (equal to 6% of the site). The remainder of the site will be bushland generally accessible to the community in the same manner that exists. The buildings adjacent the bushland are arranged in a manner that provides a defined edge between the residential communities and their natural landscaped setting. Physical access between the residential community and the bushland is only achieved through defined access points and pathways between buildings.

In addition, the Concept Plan provides for a formally defined 'village green' equivalent to an area of 6,970 m². This provides a focus for the existing adjoining and incoming local community and to provide for an area of active recreation.

Asset Protection Zone

The location of new buildings and new uses within existing buildings has been determined by the identification of the Asset Protection Zone (APZ).²

The APZ acts as a buffer zone between the development and the bushland fire hazard. The APZ is measured from the edge of the unmanaged vegetation which is a source of fire hazard.

The primary purpose of an APZ is to ensure that a progressive reduction of bushfire fuels occurs between the bushfire hazard and any habitable structures.

The slope of the land over a distance of 100m from the indicative building lines in all directions has been assessed by Barry Eadie Consulting Pty Ltd. The slope has been assessed based on the gradient that will most significantly influence the fire behaviour of the site.

The slopes identified that influence bush fire behaviour are to the west, south and southeast, all of which range from 10-15° down-slope. A creek line in the southwest of the site where the slopes are greater than 18° down-slope will form part of the required Asset Protection Zone (APZ) and will be part of the Outer Protection Area (OPA).

For residential subdivision purposes the required APZ for forest vegetation with slopes of 10-15° down-slope may comprise a minimum 25m Inner Protection Area (IPA) and a maximum 25m Outer Protection Area (OPA).

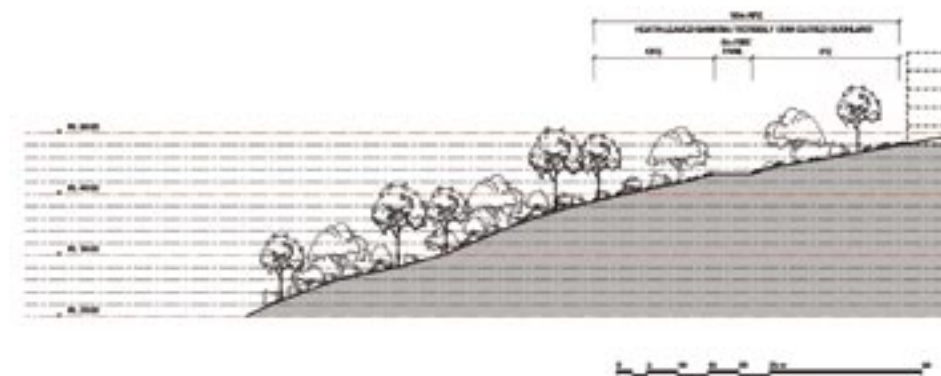


Figure 19 – Section showing APZ (Source DEM)

² 'The APZ is determined by the vegetation classification and the slope within the hazard. The APZ varies between residential subdivision and Special Fire Protection Purposes (schools, nursing homes, child care etc). **Planning for Bush Fire Protection 2006** states:

- *'An Inner Protection Area (IPA) should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a dwelling. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10 metres from any exposed window or door. Trees should have lower limbs removed up to a height of 2 metres above the ground.'*
- *'An Outer Protection Area (OPA) should provide a tree canopy cover of less than 30% and should have the understorey managed (mowed) to treat all shrubs and grasses on an annual basis in advance of the fire season (usually September).'*

Based on site investigation, the following APZ has been identified.

- A minimum 50m APZ is required around the western to the southern area of the perimeter of the proposed development on the site. The north eastern area of the site will also require a 50m APZ.
- The south-eastern area of the site has existing car parks and no proposed new development therefore these car park areas will provide the APZ.
- The existing University Campus Building will require an APZ subject to the proposed use of the building. Irrespective of any future use of this building the required APZ may not be possible to achieve due to the existing nature and location of the building. The APZ is shown in section in **Figure 19** and in plan **Figure 20**.



Figure 20 - Asset Protection Zone (Source DEM)

With any redevelopment, change of use or the retention of the current education use, any building improvements and the provision of defensible space around the southern portion of the building would greatly improve the level of protection from bush fire. The provision of the proposed fire trail and APZ in this area will immediately improve the current situation irrespective of any future use of the building. In addition, the area is manageable as the rock formations enable easy personnel access for the management of this area.

In relation to the distance from buildings on the UTS site, the assessment makes the following conclusions:

'Based upon the vegetation classification of forest and slopes in the order of 10 - 15° down slope within the hazard area, the applicable APZ for such a slope is 50m.

With the proposed widening of the existing fire trail to 4 metres in width (with a metre clearance on either side), the widened fire trail will form an ideal line to determine the boundary of the APZ. Only the inner 25m from any proposed dwellings would be required to comply with the requirements for an Inner Protection Area, with the balance of the APZ being an Outer Protection Area.

Much of the area close to the proposed buildings (within the IPA of the APZ) comprises a naturally rocky substrate that would restrict and slow the rate of spread of a fire. Understorey vegetation in these areas is sparse and accordingly the requirement to manage the APZ and minimise understorey fuel load is readily achievable.

It was also noted that tree canopies within the proposed APZ are not continuous and indeed were quite sparsely distributed. Accordingly it is envisaged that minimal tree pruning/removal would be required to achieve the objectives of an APZ.

The advice concludes 'that the bushfire risks presented by the site are manageable and full compliance with the current bushfire guidelines can readily be achieved for the proposed development layout. Furthermore the proposed new development is to be established only within the existing developed areas of the site and the retention of the existing main building is likely to be an important contributing factor towards bushfire management of this site as it will provide an effective fire barrier to proposed development north of the existing building.'

The advice was prepared in consultation with ERM on site, having regard to the significance of the flora and fauna that would be included in the APZ.

The management of the campus building and the APZ will be addressed in a Bush Fire Management Plan, as recommended by Barry Eadie Consulting Pty Ltd and which can only be prepared when an approval to the Concept Plan is granted.

Sustainable Development Considerations

The proposed Concept Plan has been developed on sound Environmental Sustainable Design (ESD) principles. The Concept Plan structure has been developed having regard to the topography, drainage patterns, site orientation and the existing infrastructure.

The medium density residential blocks have been sited to achieve good cross ventilation and to maximise solar access to habitable rooms and both public and private open space. Endemic species planting is proposed in the landscape planning.

The Concept Plan encourages the use of public transport by developing legible pedestrian links to the bus stop at the site entry and ensures the distance is no more than 400-500m.

Water sensitive urban design principles have been incorporated by way of bio-retention basins and swales to capture stormwater run-off to minimise the impact of stormwater entering the natural creek systems within and adjoining the site.

5.9 Open Space and Public Domain

Open Space

The Concept Plan provides for a variety of different spaces integrated into the pedestrian circulation pattern to ensure easy access. The open space includes publicly accessible open space, communal and private open space. The publicly accessible areas provide for active and passive recreation while the communal open space is intended to be for passive recreation. Different planting will define the differing nature of the spaces. Publicly accessible areas will include a less structured approach reflecting the surrounding natural growth. Communal and private spaces will incorporate a greater variety and mix of native species but still consistent with the bushland character of the site. **Figure 21** describes the range of communal space proposed.

As previously mentioned, the Concept Plan also provides for a formally defined 'village green' equivalent to an area of 6,970 m² to provide a focus for the existing adjoining and incoming local community and to provide for an area of active recreation.



Figure 21 – Active and passive open Space (Source DEM)

Streets

Typical street sections through the proposed extension to the access road adjoining single and integrated dwellings and medium density dwellings have been prepared. The road reserve, including footpath and landscaping and bio-retention swale is shown as being 17 metres. **Figure 22** shows a typical street section through proposed access roads.

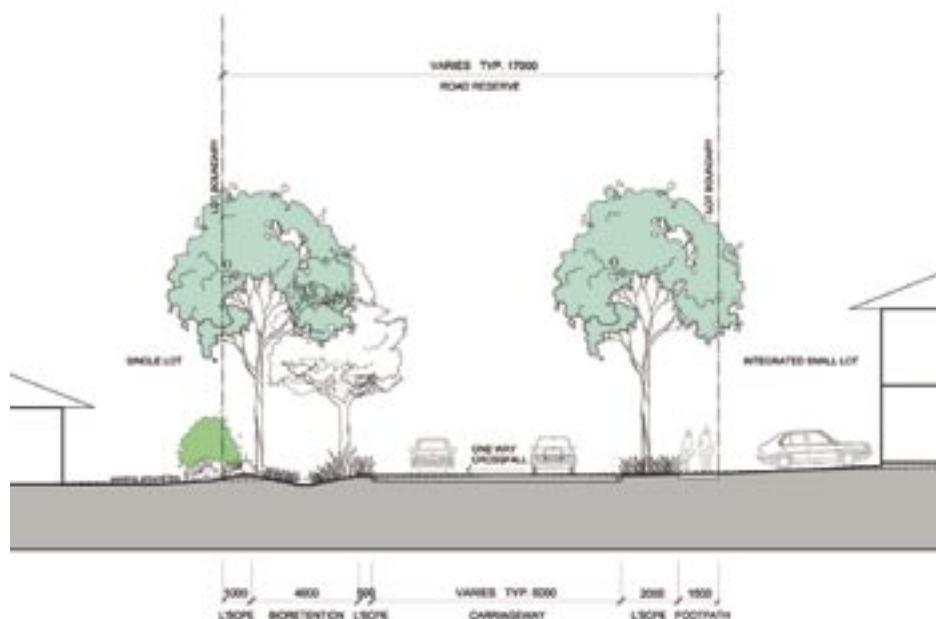


Figure 22 – Typical Street Section (Source DEM)

Pedestrian Connections

Pedestrian circulation has been derived from the original concept of the internal street incorporated into the campus. The proposed pedestrian network is shown in **Figure 23**. The internal street is extended into the courtyard spaces of the medium density dwellings and become an external garden walk.

The principles for pedestrian circulation integrated into the Concept Plan are the following:

- **Permeability:** The pedestrian network forms a 'lattice' with as few barriers as possible to pedestrian movement to encourage the use of public transport, recreation areas and community facilities;
- **Legibility:** The pedestrian network proposes a clear direction as well as a clear choice of routes;
- **Lighting:** All pathways are to be illuminated; and
- **Safety:** Opportunities to maximise passive surveillance of pedestrian movement from dwellings and the road carriageway is proposed by integration with the road network and lighting to ensure safety and security.

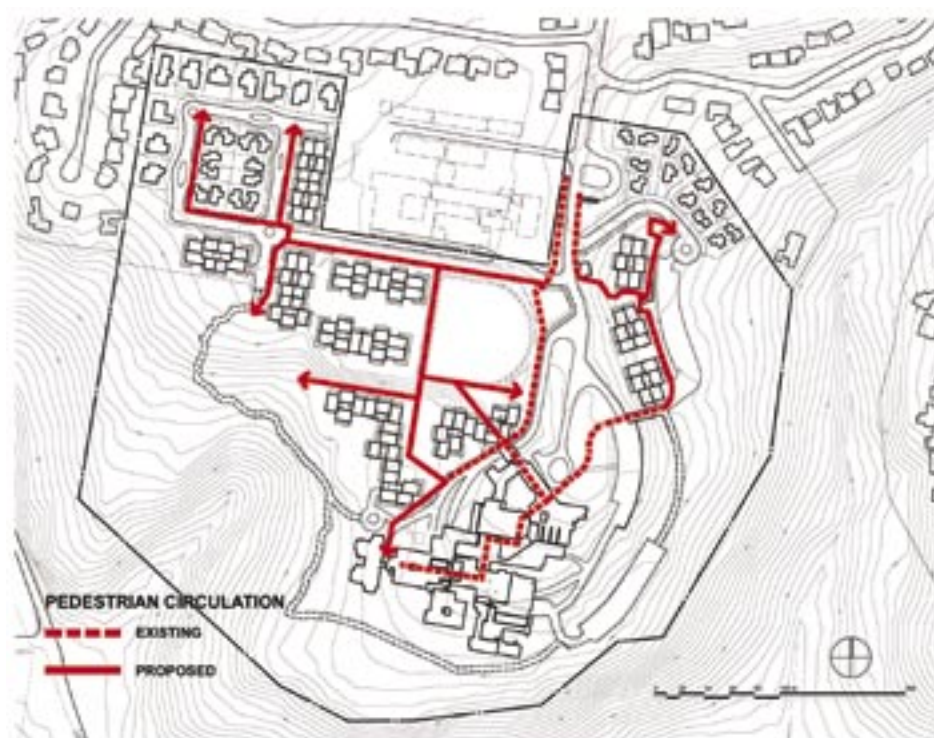


Figure 23 – Pedestrian Circulation (Source DEM)

5.10 Water Cycle Management

Water sensitive urban design principles have been incorporated by way of bio-retention basins and swales that capture and retain stormwater runoff to minimise the impact of uncontrolled storm water from entering the existing natural creek systems.

5.11 Access and Transport

Traffic Generation

The Concept Plan identifies that the existing pedestrian and vehicular access and circulation pattern can largely be adapted and reused to accommodate the introduction of new uses. Access will be retained from Eton Road and no new access is required or proposed. A fire trail will be included within the APZ to the south and west of the developed areas. See **Figure 24**.

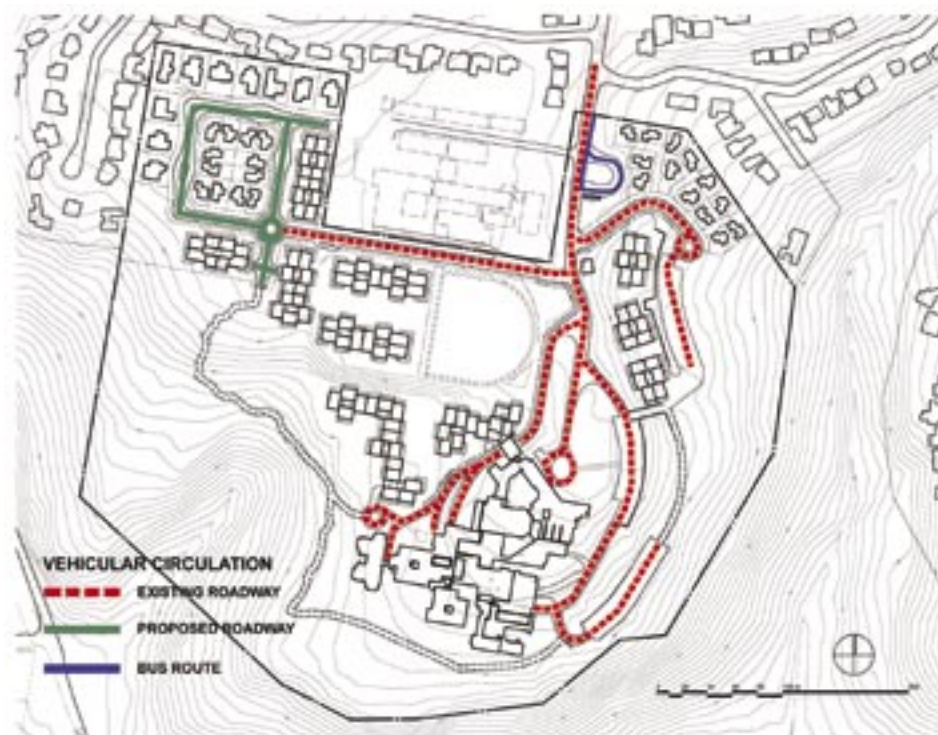


Figure 24 – Vehicular Circulation (Source DEM)

The Concept Plan has been arranged to provide access to all individual lots, medium density housing and potential reuse of the existing buildings' accommodation with minimal introduction of new roads. Additional new roads in the north-west sections of the site allow for emergency bushfire truck access as well as access to the new housing located in this corner of the site. Existing roads are maintained where possible, retaining their bushland character and natural edges. The only new roads in the existing north-west car park are constructed in a similar manner with natural rock cuttings used to define kerbing and street planting selected to enhance the bushland setting.

The existing road network allows for emergency vehicle access. The fire trail is located to provide emergency access to the perimeter of the developed area in accordance with current statutory requirements. Where possible, existing roads and car park areas are used to provide this access.

The maximum number of car spaces permissible under Kuring-gai Council's Car Parking DCP is described in **Tables 10** and **11**.

Residential Development

The parking requirement for the residential dwellings will be accommodated within each individual lot and/or within proximate designated parking areas. The parking requirements for the apartments will generally be accommodated in undercover car parks.

Table 10 – Maximum Permissible Car Parking Spaces - Residential

Type	Quantity	Rate	Total required
New residential dwellings	440		
- Single dwelling house lots	10	2/dwelling	20
- Integrated/townhouse lots	40	2/dwelling	80
- Apartment units	(390)		
-2 bed units	195	1/dwelling	195
-3 bed units	195	1.5/dwelling	292.5
- Visitor		1/4	97.5
Total Maximum			685

Non residential use

The parking requirements for the adaptive re-use of the main campus building will depend on the final mix of uses.

Four scenarios split between commercial and educational uses were tested as follows:

- Scenario 1 70% Commercial 30% Educational
- Scenario 2 90% Commercial 10% Educational
- Scenario 3 0% Commercial 100% Educational
- Scenario 4 100% Commercial 0% Educational

The different impacts on traffic and parking conditions between the scenarios were found to be marginal. For the purposes of assessing the effect of likely future traffic, estimates at the upper end of traffic generation have been attributed to the range of potential uses identified. The parking requirements for the adaptive re-use of the main campus building will depend on the ultimate mix of uses. The rates applied for education, gymnasium, library and auditorium have been pro rated from the traffic generation inbound for commercial use. The pro rata is based on the standard rate of 1 space per 33m² GFA for commercial use contained in the Kuring-gai Council's DCP. The pro rata calculation makes allowance for the co-use of parking reflecting the differing peak parking demands of the respective uses. The parking requirement has been determined conservatively. The RTA Guide to Traffic Generating Developments specifies provision of parking at a rate of 1 space per 40m² GFA for comparable uses which would equate to 347 spaces.

Table 11 – Maximum Permissible Car Parking Spaces – Non Residential

Type	Area GFA/Places	Rate GFA/Places	Total required
Commercial	8,218m ²	1/33m ²	249
Educational	913m ²	1/36m ²	26
Gymnasium	3,880m ²	1/70m ²	55
Childcare	68 places	1/4 places	17
Library	4,264m ²	1/105m ²	41
Auditorium	2,769m ²	1/93m ²	30
Total			417

Residents have identified the number of cars parked on the local street as a concern. The proposed development will improve parking conditions for existing residents as parking for new residences will be provided within the site.

Internal Road Network

The existing internal street network will be adapted and augmented for the proposed use. New internal streets will be limited to provide access to new development. The location of additional new roads is predominantly determined by the need to provide bushfire truck access. The existing access road will be maintained as will the bus turnaround loop.

The existing car parking areas that occur along the circulation road system and those that follow the contours around the eastern edge of the site will be maintained. New parking areas will be integrated into new development. For medium density dwellings and townhouses basement parking will be provided. The integrated and small lot housing and single dwellings car spaces will be provided on site.

External Road Network

Access to the site is provided via Eton Road only. A proposal for a secondary access via Lady Game Drive was previously approved by Kuring-gai Council, but this approval has since lapsed. Provision of a second road access connected directly to Lady Game Drive is not considered necessary for the following reasons:

- The proposed development generates less traffic than the University Campus (at full operational capacity).
- A second access would have little benefit during bushfire emergency as it traverses through an area of dense trees subject to fires. Emergency access is adequately provided via the main entry from Eton Road.
- A second access would not resolve traffic congestion at the Millwood Avenue, Fullers Road, Delhi Road and Lady Game Drive intersection.

Public Transport

The existing level of service is considered to be adequate for the incoming population and will not cause undue strain on the level of service provided.

Buses

Shorelink (Route 565) provides regular services between the site and Lindfield, Roseville and Chatswood train stations. This service operates every half hour from 6.30am to 9.35pm during weekdays, and hourly on weekends and is considered adequate for the proposed incoming population.

The University also provides a regular inter-campus service, linking the site directly to the UTS Broadway campus. It is recommended that this service be retained irrespective of the future use of the site as part of a sustainable transport initiative.

Trains

Trains can be accessed by either using the buses on route 565 or by walking some 20-25 minutes to Lindfield or Roseville train stations. These stations are on the North Shore rail line, and provide links to regional centres at Hornsby, Chatswood, North Sydney and Sydney.

Pedestrian and Bicycle Facilities

The proposed development will integrate with the existing network (see Concept Plan) at Volume 3.

5.12 Indicative Project Staging

Consideration will need to be given to the staging and delivery of the development of the Concept Plan. The staging of the development components will need to have regard to:

- Minimisation of construction impacts upon adjoining properties;
- Protection of existing public benefits and access;
- Construction access; and
- Timing of infrastructure provision.

A detailed project staging plan will be submitted with the first project application.

5.13 Infrastructure and Voluntary Planning Agreement

It is proposed that the residential component of the proposed development would comply with the relevant provisions of Ku-Ring-gai Council's Section 94 Contributions Plan.

In relation to the development and/or adaptive re-use of buildings not dealt with in these provisions a Voluntary Planning Agreement (VPA) will be negotiated with Ku-ring-gai Council and the Department of Planning. It is expected that this VPA would as far as practicable reflect or comply with Council's Section 94 Contributions Plan.