Environmental Assessment Report
Concept Plan and Project Application

Moore Theological College

King Street, Newtown

Submitted to
Department of Planning
On Behalf of Moore Theological College Council

November 2009 ■ 08142

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JBA Urban Planning Consultants Pty Ltd operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

This report has been prepared by: Michael Rowe

Signature  Date 11/11/09

This report has been reviewed by: Stephanie Ballango

Signature  Date 11/11/09

Statement of Validity

This Environmental Assessment has been prepared and submitted under Part 3A of the *Environmental Planning and Assessment Act* 1979 (as amended) by:

Environmental Assessment

Name	Stephanie Ballango
Qualifications	BSc (Applied Geography), MPIA
Company	JBA Urban Planning Consultants Pty Ltd
Address	Level 7, 77 Berry Street North Sydney NSW 2060
In respect of	Concept Plan and Project Application

Project Application

Applicant	Moore Theological College Council
Address	1 King Street, Newtown NSW 2042
Land to be developed	Moore Theological College, Newtown
Proposed development	Redevelopment of Moore Theological College as an educational establishment including ancillary student accommodation and retail uses.
Environmental Assessment	An Environmental Assessment (EA) is attached
Certificate	I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge: ▪ It is in accordance with the Environmental Planning and Assessment Act and Regulation. ▪ It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.
Signature	
Name	Stephanie Ballango
Date	11 November 2009

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Taylor Thomson Whitting

Executive Summary

Purpose of this Report

This submission to the Department of Planning comprises an Environmental Assessment for a Concept Plan and Project Application under Part 3A of the Environmental Planning and Assessment Act. It relates to the redevelopment of Moore Theological College (MTC).

This submission is in accordance with the Department's guidelines for Part 3A applications, and addresses the issues raised in the Director General's Requirements.

Overview of Project

The Concept Plan and Stage 1 Project Application for MTC represent a regionally significant development at an important higher educational establishment. It is the result of long term and comprehensive planning for the future growth of MTC. It enables MTC to address its shortfall in space for current and future students by increasing and upgrading its teaching and housing facilities to meet student demand.

The Concept Plan seeks approval for:

- the MTC concept design including land uses across the site;
- up to 31,000m^2 of GFA for an educational establishment including ancillary residential and retail uses;
- the building envelopes (above and below ground);
- pedestrian and vehicle access arrangements;
- a maximum of 340 car parking spaces to service the staff and resident students of MTC; and
- the open space and public domain concept including the removal of 34 trees.

The Project Application seeks approval for

- site preparation works including:
  - demolition of the existing structures on the site;
  - removal of 11 trees;
  - excavation;
- construction of a 7 storey Resource and Research Centre including library, teaching and administration spaces, and 2 basement levels including archive / storage spaces, and plant;
- construction of 2 levels of basement parking containing 170 car spaces, bike parking, and change rooms;
- construction of a vehicular access ramp to the basement car park from Carillon Avenue;
- associated landscaping and public domain works; and
- construction of a temporary car park containing 38 spaces on part of Site B to facilitate the staging of the development.

The Site

The Moore Theological College campus is located at the corner of King Street and Carillon Avenue in the suburb of Newtown within the City of Sydney local government area. The Concept Plan site is a 12,872m^2 wedge-shaped area comprising numerous allotments occupied by various educational, residential, campus, and administration buildings of varying architectural styles and ages currently associated with the College.

Planning Context

Three land use zones occur within the Concept Plan site, these zones comprise 2(b) Residential (Medium Density), 3 Business and 5 Special Uses (University). The proposal is permissible with consent and meets the objectives of the subject zones. A recently prepared Urban Design Report, commissioned by the City of Sydney, makes recommendations for the future Heights and FSRs on the site. This EAR has assessed the proposal against the current and recommended planning controls for the site and provided justification.

Environmental Impacts

The environmental impacts of the Concept Plan and Project Application are considered in Section 6.0 and 8.0 respectively. Overall, the proposed development will have minimal adverse environmental effects in terms of bulk and scale, heritage and traffic. Other environmental impacts can be effectively managed through all stages of the development via mechanisms referred to in this report and the draft Statement of Commitments. The assessment of the proposal demonstrates that it will result in positive economic, environmental and social benefits.

Conclusion

The development is considered to be in the public interest as State, regional and local needs will be met by effectively boosting the capacity of an existing, high quality tertiary institution. The proposed development will have minimal adverse environmental effects, all of which can be effectively managed. Given the environmental planning merits described above, it is requested that the Minister:

- approve the Concept Plan under Section 75O of the EP&A Act;
- approve the Project Application under 75J of the EP&A Act;
- determine under Section 75P(1)(a) of the EP&A Act that future development with a CIV of more than $5 million, be subject to Part 3A of the Act; and
- determine under Section 75P(1)(b) of the EP&A Act that future development with a CIV of less than $5 million, be subject to Part 4 of the Act.

1.0 Introduction

This Concept Plan and Project Application Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act). This is to fulfil the Environmental Assessment Requirements issued by the Director General for the preparation of an Environmental Assessment of a Concept Plan for the redevelopment of Moore Theological College (MTC), Newtown and Stage 1 Project Application for a new library building.

This EAR has been prepared by JBA Urban Planning Consultants Pty Ltd, for the proponent, Moore Theological College Council (MTCC) and is based on information provided by Allen Jack + Cottier (AJC) (**Appendix A**) and supporting technical documents provided by the expert consultant team.

This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Environmental Assessment Requirements under Part 3A of the EP&A Act. It should be read in conjunction with the information contained within and appended to this report.

1.1 Project Background

MTC currently has some 325 students studying full time at the Newtown campus and almost 5,000 students in over 50 countries studying by correspondence. The existing facilities are not adequate to meet the future needs of MTC, which is expected to increase by over 880 students and 100 staff over the next 25 years. In 2007, MTC invited four architectural firms to submit proposals to prepare a master plan for the Campus. Following this process AJC was selected to undertake the master planning exercise and explore options for expansion of the campus and its facilities.

On 22 December 2008, MTC requested that the Minister form the opinion that the redevelopment of the site constitutes a Major Project and is subject to Part 3A of the EP&A Act. At the same time, a request was made to the Minister to authorise the submission of a Concept Plan.

On 4 February 2009, in accordance with Section 75F of the EP&A Act, the Director-General of the Department of Planning issued the requirements for the preparation of an Environmental Assessment to accompany a Concept Plan and concurrent Stage 1 Project Application for the site. A copy of the Director General's Environmental Assessment Requirements and authorisation to lodge a Concept Plan is included in **Appendix B**.

1.2 Overview of Approval Sought

The Concept Plan seeks approval for:

- broad land use distribution across the site;
- up to 31,000m^2 of GFA for educational purposes including ancillary student accommodation and retail uses;
- building envelopes (above and below ground);
- pedestrian and vehicle access arrangements;
- a maximum of 340 car parking spaces to service the staff and resident students; and
- the open space and public domain concept including the removal of 34 trees.

The concurrent Stage 1 Project Application seeks approval for:

- site preparation works including:
  - demolition of existing structures on the eastern portion of the site;
  - removal of 11 trees;
  - excavation;
- construction of a 7 storey Resource and Research Centre including library, teaching and administration spaces, and 2 basement levels including archive / storage spaces, and associated plant;
- construction of 2 levels of basement parking containing 170 car spaces, bike parking, and change rooms;
- construction of a vehicular access ramp to the basement car park from Carillon Avenue;
- associated landscaping and public domain works; and
- construction of a temporary car park containing 38 spaces on part of Site B to facilitate the staging and decanting of the library building development.

1.3 Project Objectives and Need

The existing facilities are not adequate to meet the future needs of the College. To allow for the ongoing academic development of MTC the facilities must be expanded.

Therefore the objectives of the Concept Plan and Project Application are to:

- protect and enhance the future physical expansion and academic development of MTC;
- build on the special qualities of MTC;
- allow development flexibility within the certainty of a structured framework;
- enhance MTC's physical identity and address;
- conserve and enhance the heritage buildings on and in proximity to MTC site;
- strengthen access within and around the Campus;
- enhance the Campus environment; and
- engage with the community.

1.4 Alternatives

Religion and spirituality remain central aspects of Australian life and accordingly demand exists for the ongoing provision of national institutions that provide studies in theology, humanities, arts and social sciences.

In the context of the above, and at arriving at the proposal, MTC conducted an exhaustive study of all the possible alternatives for the proposal. Details are set out below.

Maintain Status Quo

If the College chose not to proceed with the Concept Plan and continued to rely on existing learning spaces and facilities on the site, the College's growth would be restricted within a few years due to learning space shortages. Student services would be limited to current levels, and further theology training and research would be constrained.

Different Locations

In 2007, MTC considered relocating its campus to the UTS Ku-Ring-Gai Campus, however ultimately the site was deemed inappropriate. Whilst other alternative locations have also been explored, the Newton Campus which the College has acquired sporadically since 1889, remains the preferred site.

The Newtown Campus is appropriate for consolidation and improvement. In particular:

- the campus is a major economic asset that benefits from significant, long term investment in educational infrastructure that could not be expanded or economically replicated at another location;
- it is located within a major existing higher education and institutional precinct;
- it is located close to a major bus and rail transport infrastructure; and
- existing infrastructure and utilities networks can be readily augmented to accommodate the proposed expansion.

Alternative Design Schemes

The Concept Plan represents a comprehensive design process that involved an informal design competition, and extensive master planning processes. The Concept Plan is the culmination of these processes and represents the best attributes of numerous concept designs which were considered for the site, including various architectural and built form designs, configurations of land uses across the site and different height and density proposals. Previous draft design layouts can be provided to the Department upon request.

1.5 Capital Investment Value

The estimated overall cost of works is $136,016,836 for the Concept Plan and $53,826,620 for the Project Application as detailed in the Quantity Surveyors Statement prepared by Altus Page Kirkland (**Appendix C**).

1.6 Director General's Environmental Assessment Requirements

Table 1 provides a detailed summary of the individual matters listed in the Director General's Environmental Assessment Requirements (DGRs) and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1 – Director General's Environmental Assessment Requirements

Director-General's Requirements	Report Location
General Requirements	
Executive Summary	Page vii
Description of the development proposal:	
- description of the site	Section 2.0
- design, construction, operation, maintenance, rehabilitation and staging	Section 5.0 and 7.0
- project objectives and need	Section 1.3
- consideration of alternatives to the proposal	Section 1.4
Assessment of key issues	Section 6.0 and 8.0
Conclusion and justification of suitability of the site for proposal	Section 11.0
Key Assessment Requirements	
Consideration of relevant EPI's policies and guidelines	Section 6.1
Built Form / Urban Design	Section 6.0 and 8.0
- view analysis	Section 6.4 & 8.2 and Appendix A
- details on landscaping and open space	Section 5.4 & 7.5 and Appendix F
- safety and security	Section 6.5
- detailed Stage 1 drawings	Appendix A
Environmental and Residential Amenity	Section 6.5
Transport and Accessibility	Section 6.7 & 8.4 and Appendix G
Ecological Sustainable Development	Section 6.9 & 8.6 and Appendix K
Heritage	Section 6.6 & 8.5 and Appendix I
Staging	Section 5.9
Construction and operational impacts	
- Geotechnical	Section 6.10 and Appendix L
- Contamination	Section 6.11 and Appendix M
- Noise and Vibration	Section 6.6 & 8.12 and Appendix N
- Excavation	Section 8.12
- Sediment and Erosion	Appendix Q
- Waste Management	Section 8.12
- Construction Management	Section 8.12
Disabled Access	Section 6.14 & 9.9 and Appendix J
Drainage, Stormwater and Groundwater Management	Section 5.7 and Appendix Q
Utilities / Services	Section 5.8 and Appendix Q
Developer Contributions	Section 5.10
Draft Statement of Commitments	Section 9.0 and 10.0

1.7 Project Team

An expert project team has been formed to deliver the project and includes:

Proponent	Moore Theological College Council
Architecture & Urban Design	Allen Jack + Cottier
Urban Planning	JBA Urban Planning Consultants
Landscape	Aspect Studios
Surveyor	Project Surveyors
Quantity Surveyor	Altus Page Kirkland
Civil & Structural Engineering	Taylor Thomson Whitting
Geotechnical	Jeffery and Katauskas
Water Cycle Management	Sparks and Partners
Sustainable Strategy Design	Cundall
Electrical Infrastructure	Cundall
Traffic and Transport	Traffix
Heritage	NBRS + Partners
Arborist	Footprint Green
Contamination	Environmental Investigation Services
Access	Access Associates
Acoustics	Acoustic Studio
BCA	Blackett Maguire + Goldsmith

2.0 Site Analysis

2.1 Site Location and Context

The Moore Theological College Campus is located in the suburb of Newtown within the City of Sydney local government area (LGA). The Concept Plan site has a northern boundary to Carillon Avenue, and southern boundary to King Street.

The site's locational context is shown at **Figure 1**. MTC is strategically located within the institutional hub comprising Sydney University and Royal Prince Alfred Hospital, with nearby access to UTS and Notre Dame University along with Broadway, and the CBD. North Newtown Primary School is located immediately west of the site (shaded orange in **Figure 1**).

2.2 Site Description

2.2.1 Concept Plan Site

Existing Development

The Concept Plan site is a 12,872m^2 wedge-shaped area comprising numerous allotments occupied by various educational, residential, campus, and administration buildings of varying architectural styles and ages. A survey plan showing the location and height of the existing development on the site is located **Appendix D**, whilst a site layout illustrating existing buildings on the site is at **Figure 2**.

For the purposes of this EAR, the MTC Campus has been divided into Site A, Site B and Site C as shown in **Figure 3**. It should be noted that the MTC campus extends outside of the area of the Concept Plan site, however these portions of the site are not proposed to be developed.

Site A makes up the majority of the MTC campus and currently comprises academic and administration spaces, as well as some residential buildings and small scale retail uses ancillary to MTC. The building distribution can be summarised as:

- a three storey brick library and administration building at the corner of Carillon Avenue and King Street (**Figure 4**);
- 3 x two storey residential semi detached buildings fronting King Street (**Figure 5**);
- a two storey academic building known as the Broughton Knox Centre fronting King Street (**Figure 6**);
- 3 x two/three storey mixed use buildings containing ground floor retail fronting King Street (**Figure 7**);
- a four storey residential college known as Mary Andrews College fronting Carillon Avenue (**Figure 8**);
- a three storey dining hall complex fronting Carillon Avenue (**Figure 9**);
- 7 x two storey residential terraces and 3 three storey fronting Little Queen Street (**Figure 10**); and
- a two storey building known as Deaconess House (**Figure 11**).

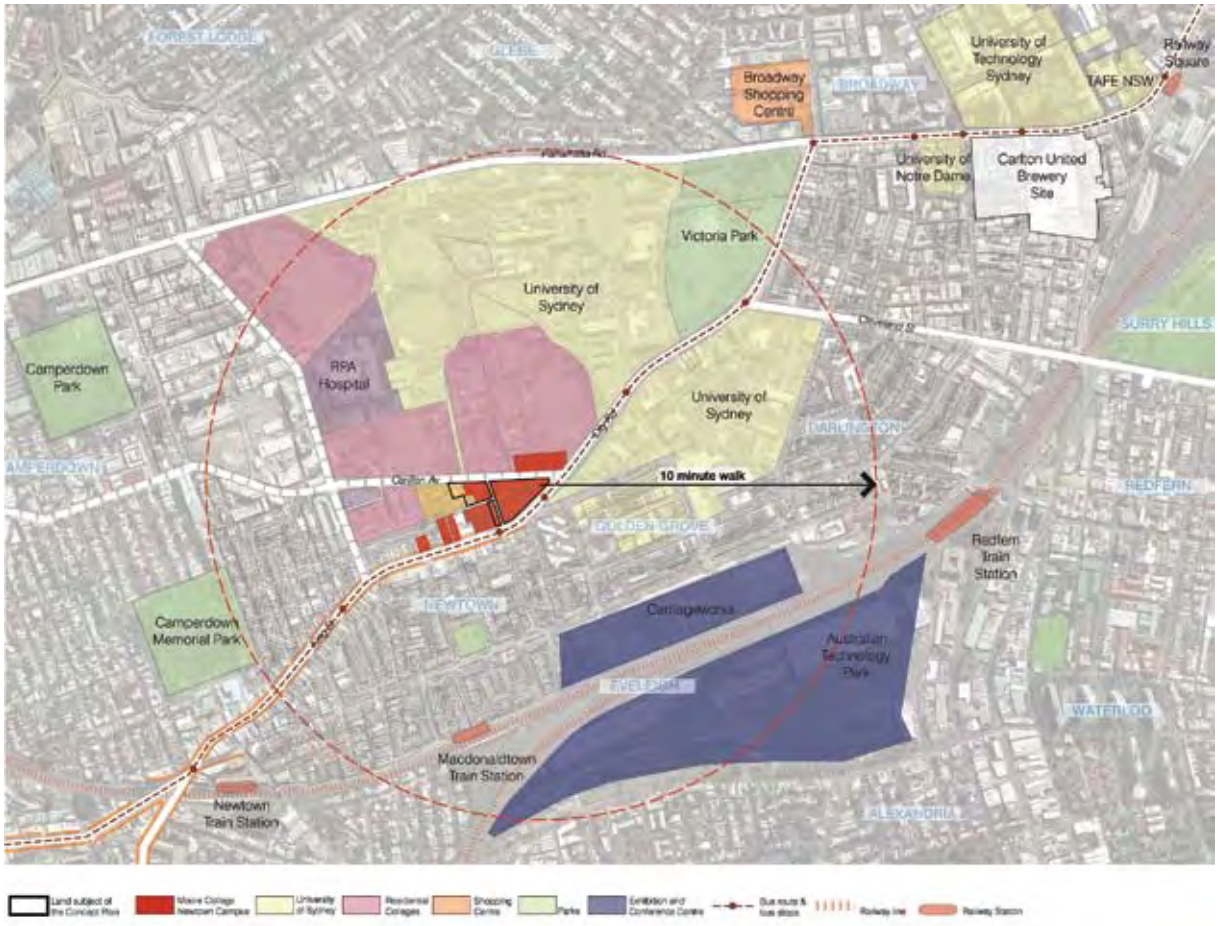

Figure 1 – Locality Plan
Source: AJC

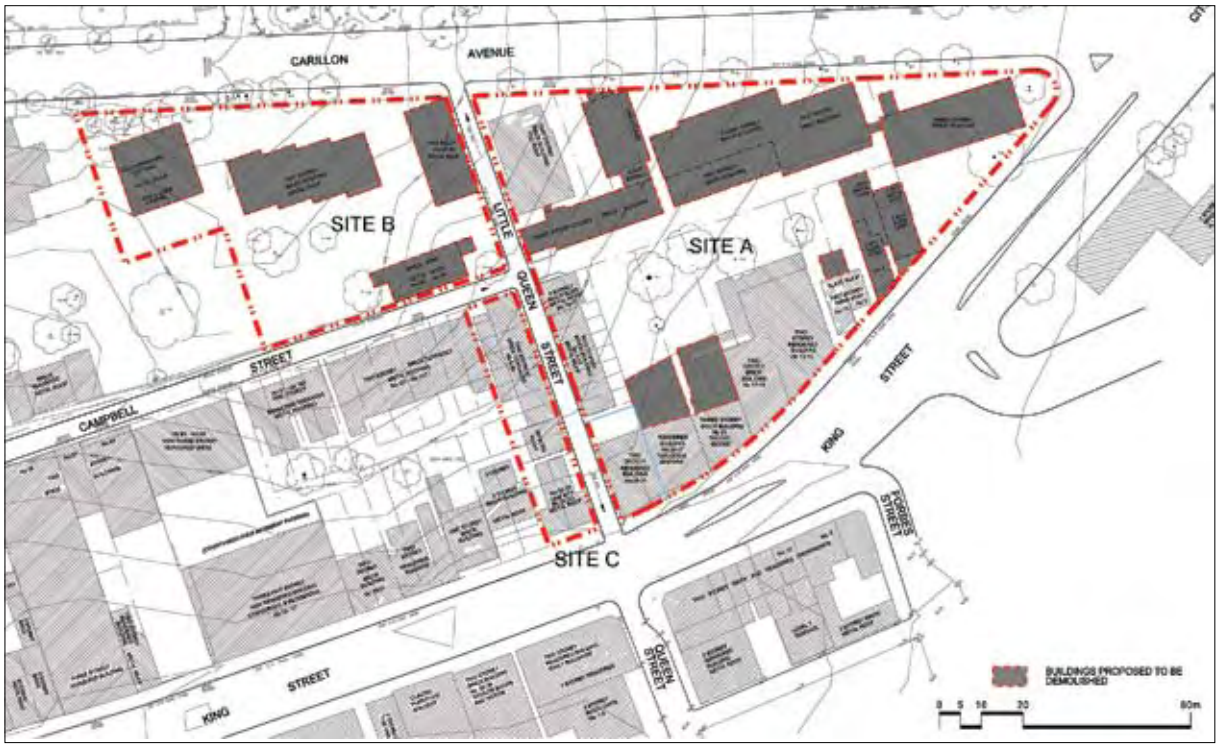

Figure 2 – Existing Site Plan
Source: AJC

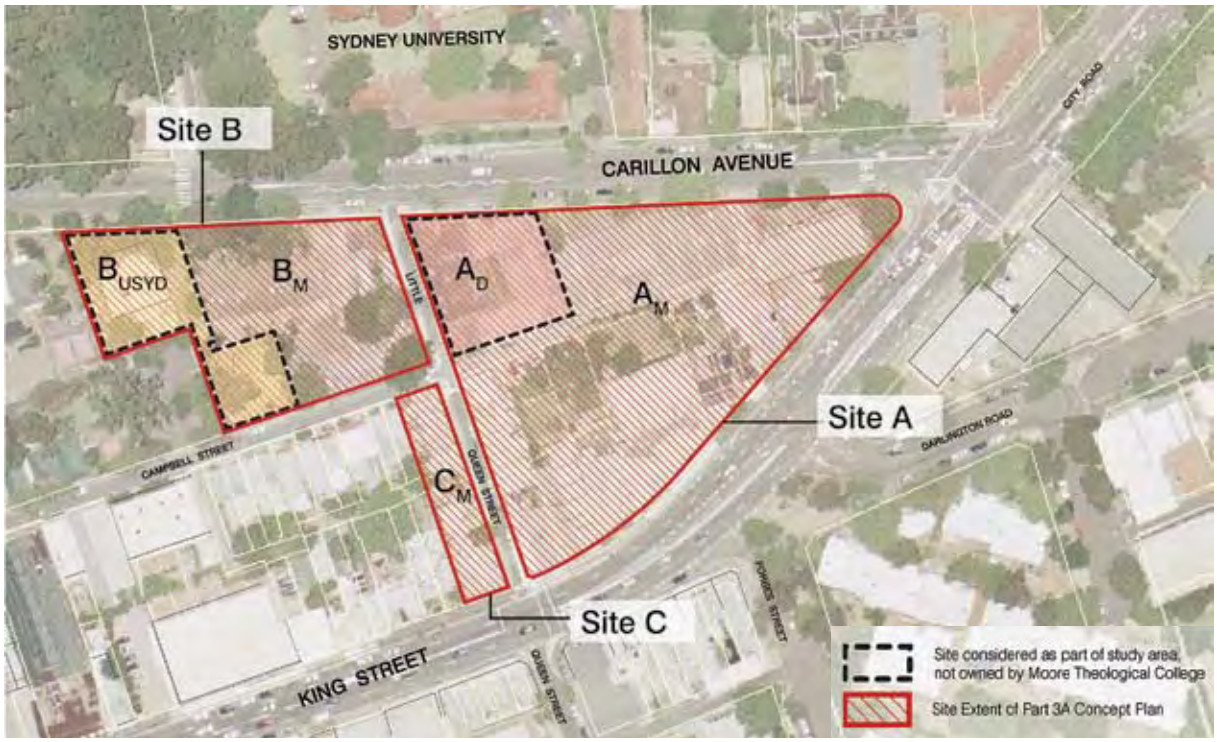

Figure 3 – Site Plan
Source: AJC

Figure 4 – The existing Library from King Street

Figure 5 – Semis along King Street

Figure 6 – The Broughton Knox Centre from King Street

Figure 7 – Buildings on the corner of King Street and Little Queen Street

Figure 8 – Mary Andrews College from Carillon Avenue

Figure 9 – The MTC Dining Hall from Carillon Avenue

Figure 10 – Terraces along Little Queen Street

Figure 11 – Deaconess House

Figure 12 – Internal lawn and car park

In addition to the buildings above, a lawn and parking area are located within the centre of Site A (see **Figure 12**). Vehicular access to the internal car park is located via Little Queen Street. Pedestrian access to Site A is available via all three of its frontages.

Site B consists of three residential buildings located on land owned by MTC (see **Figures 13 – 15**) and a single storey child care centre owned and operated by Sydney University (**Figure 16**).

Site C includes a row of 9 two storey terraces which front Little Queen Street (see **Figure 17**) and a 2 x single storey semi-detached dwellings on the corner with Little Queen Street and King Street (see **Figure 18**).

Figure 13 – Semi fronting Campbell Street

Figure 14 – Residential buildings from Campbell Street

Figure 15 – Semi fronting Carillon Avenue

Figure 16 – Child care centre on Carillon Avenue

Figure 17 – Terraces along Little Queen Street

Figure 18 – Semi fronting King Street

Landform and Vegetation

The site has a fall of 7m from the high point in the south east along the King Street frontage to the north western corner near North Newtown Public School. A survey plan is included at **Appendix D**.

There are isolated trees at the rear of the residential terraces and a small private open space area with some established trees within the centre of the teaching precinct. A tree survey is included at **Appendix E**.

Heritage

The site contains a number of locally listed heritage items, illustrated on **Figure 19** below. The site is also partially located within three Heritage Conservation Areas, under the South Sydney Local Environmental Plan 1998.

Figure 19 – Heritage items and contributory / neutral buildings
Source: AJC

2.2.2 Project Application Site

Existing Development

The land subject to the Project Application is a 2910m^2 triangular area located at the apex of Carillon Avenue and King Street within Site A of the Concept Plan area (see **Figure 3**). The site is occupied by a rectangular 3 storey red brick building which is currently used as the library and administration building and an at-grade car park (see **Figures 20-22**). The Project Application site also includes an area of Site B (1370m^2) which is located along the frontage of Little Queen Street between Campbell Street and Carillon Avenue. The Site B land is currently occupied by two pairs of semis, as pictured in **Figures 13** and **15** above.

Figure 20 – The site from Carillon Avenue

Figure 21 – The site from King Street

Figure 22 – The site from within Moore College

2.3 Land Ownership and Legal Description

The Concept Plan area is predominantly owned by MTCC including land that is the subject of the Project Application, although two properties that comprise the site are owned by The Church of England Deaconess Institution Sydney Limited and the University of Sydney.

Table 2 below identifies the land to which the Concept Plan applies, legal property description, current zoning and land owner. The MTC has obtained landowner's consent for those properties not within its ownership.

Table 2 – Schedule of land which is to be the subject of Part 3A application

Street Address	Property Details	Zoning	Owner
1 King Street, Newtown	Lot 100 DP 106825	3 Business	Moore Theological College Council
3-5 King Street, Newtown	Lot 1 DP 171499	5 Special Uses	Moore Theological College Council
7 King Street, Newtown	Lot 6 DP 664096	5 Special Uses	Moore Theological College Council
9 King Street, Newtown	Lot A DP 314368	5 Special Uses	Moore Theological College Council
11 King Street, Newtown	Lot B DP 314368	5 Special Uses	Moore Theological College Council
13-19 King Street, Newtown	Lot 17 DP 830070	5 Special Uses	Moore Theological College Council
21 King Street, Newtown (front)	Lot 27 DP 939363	5 Special Uses	Moore Theological College Council
21 King Street, Newtown (rear)	Lot 28 DP 939363	5 Special Uses	Moore Theological College Council
23-25 King Street, Newtown (front)	Lot 21 DP 1041490	5 Special Uses	Moore Theological College Council
23-25 King Street, Newtown (rear)	Lot 26 DP 939363	5 Special Uses	Moore Theological College Council
27-31 King Street, Newtown	Lot 18 DP 1041490	5 Special Uses	Moore Theological College Council
1A Little Queen Street, Newtown	Lot 19 DP 1041490	5 Special Uses	Moore Theological College Council
1 Little Queen Street, Newtown	Lot 20 DP 1041490	5 Special Uses	Moore Theological College Council
3 Little Queen Street, Newtown	Lot 22 DP 1117009	2(b) Residential	Moore Theological College Council
5 Little Queen Street, Newtown	Lot 23 DP 1117009	5 Special Uses	Moore Theological College Council
7 Little Queen Street, Newtown	Lot 24 DP 1117009	5 Special Uses	Moore Theological College Council
9 Little Queen Street, Newtown	Lot 25 DP 1117009	5 Special Uses	Moore Theological College Council
11 Little Queen Street, Newtown	Lot 26 DP 1117009	5 Special Uses	Moore Theological College Council
13 Little Queen Street, Newtown	Lot 27 DP 1117009	5 Special Uses	Moore Theological College Council
15-17 Little Queen Street, Newtown	Lot 28 DP 1117009	5 Special Uses	Moore Theological College Council
18-28 Carillon Avenue, Newtown	Lot 1 DP 456704 Lot 1 DP 66399 Lot 1 DP 66008	5 Special Uses	The Church of England Deaconess Institution Sydney Limited
2-16 Carillon Avenue, Newtown 19 Little Queen Street, Newtown	Lot 29 DP 1117009	5 Special Uses	Moore Theological College Council
30-44 Carillon Avenue, Newtown 84-86 Campbell Street, Newtown	Lot 1 DP 547291	5 Special Uses	Moore Theological College Council
48 Carillon Avenue, Newtown	Lot 102 DP 866098	5 Special Uses	The University of Sydney

2.4 Surrounding Development

Sydney University is the dominant land use in the locality and surrounds the MTC site to the north and east. The University's land holdings comprise primarily educational uses, however much of the Carillon Avenue frontage is characterised by residential properties and private colleges affiliated with the University (**Figure 23**). Like MTC, the University buildings comprise various architectural styles and ages. These include the St Andrews College and Women's College which are both over 100 years old and up to 5 storeys tall. Further west beyond the site, is the Sydney University Village which is nine storeys in height.

To the north west of the MTC is the Royal Prince Alfred Hospital. The Hospital also comprises a mixture of institutional and ancillary buildings with no common architectural style or theme across the Hospital campus and buildings up to 15 storeys tall (**Figure 24**).

Directly opposite the existing MTC Library on King Street is a series of buildings known as the University of Sydney Regiment site (**Figure 25**), MTC and the Regiment site form the entrance to Newtown and the beginning of King Street. King Street is characterised by various commercial and retail uses in predominantly shop top configuration (**Figure 26**), although there are some larger buildings including an 11 storey development (Alpha House) to the south west (**Figure 27**).

The western surrounds of the site are characterised by North Newtown Public School on Carillon Avenue (**Figure 28**) which is well patronised by children of the College's students. Attached terrace houses on narrow lots (**Figure 29**) and a child care centre are located adjacent to the Primary School.

Figure 23 – Sydney University 'Women's College'

Figure 24 – Royal Prince Alfred Hospital

Figure 25 – 96 City Road (the Regiment site)

Figure 26 – Alpha House (looking north)

Figure 27 – Development along King Street

Figure 28 – North Newtown Public School

Figure 29 – Campbell Street

2.5 Existing Transport Network

Surrounding Road Network

As shown in **Figure 30** the site is located at the intersection of King Street and Carillon Avenue. Key surrounding roads include:

- King Street – on the southern boundary of the site, is a wide, heavily trafficked State road (SH 1 – Princes Highway) that carries approximately 22,000 vehicles per day and forms a southerly link between the CBD and southern suburbs. It carries 3-4 traffic lanes and bus lanes in both directions.
- Missenden Road – a sub-arterial road located west of the site connects Parramatta Road to King Street. It functions as an important access road to RPA Hospital and Sydney University and accommodates in the order of 9,500 vehicles per day.
- Carillon Avenue – is the northern boundary of the site and carries 11,000 vehicles of traffic per day in 2 lanes of traffic from Missenden Road to the west and King Street to the east. Parallel parking is provided on both sides of the road. Carillon Avenue is the major access into the MTC site and Sydney University.
- Campbell Street (**Figure 29**) – is a local road that runs parallel to King Street and Carillon Avenue and partially traverses the site. It is a two way street that carries approximately 350 vehicles per day. Access to the MTC Site and Little Queen Street is via Campbell Street.
- Little Queen Street – is a local access road (a shared zone) that connects Carillon Avenue to King Street. It runs one-way northbound, north of Campbell Street (approximately 200 vehicles per day) and one way southbound south of Campbell Street (approximately 150 vehicles per day). It should be noted that the partial closure of Little Queen Street is proposed under the Concept Plan (discussed below).

Traffic signals control the King Street/Carillon Avenue and King Street/Little Queen Street intersections and pedestrian crossings in the vicinity of the site.

Car Parking Conditions

Limited on-site at-grade parking (approximately 26 spaces) are currently available for MTC students and staff. Additional timed spaces are available on streets surrounding the site. No dedicated service vehicle spaces are currently located on the site.

The Concept Plan provides an opportunity to reconcile the existing significant car parking shortage on the site, and provide new basement car parking to service the new student and staff accommodation.

Public Transport

The site is well serviced by existing public transport services. Buses operate along King Street 24 hours a day, stopping every 3-10 minutes during peak periods (depending on the bus route) and as frequently as every 30 minutes during non-peak periods. The site is directly serviced by the 352, 370, 422, 423, 426, and 428 routes which provide direct services to the Sydney CBD, Leichhardt, Bondi Junction, Marrickville Metro, Canterbury, Kingsgrove, Tempe, Campsie and Coogee. An assessment of the current capacity of the bus network indicates there is capacity on buses that pass by the site.

The site is also a 10 minute walk to Redfern, Macdonaldtown and Newtown Railway Stations and a 20 minute walk to Central Railway Station which provide connections to country and suburban trains 7 days a week. Long distance bus services are available on Eddy Avenue at Central Railway Station.

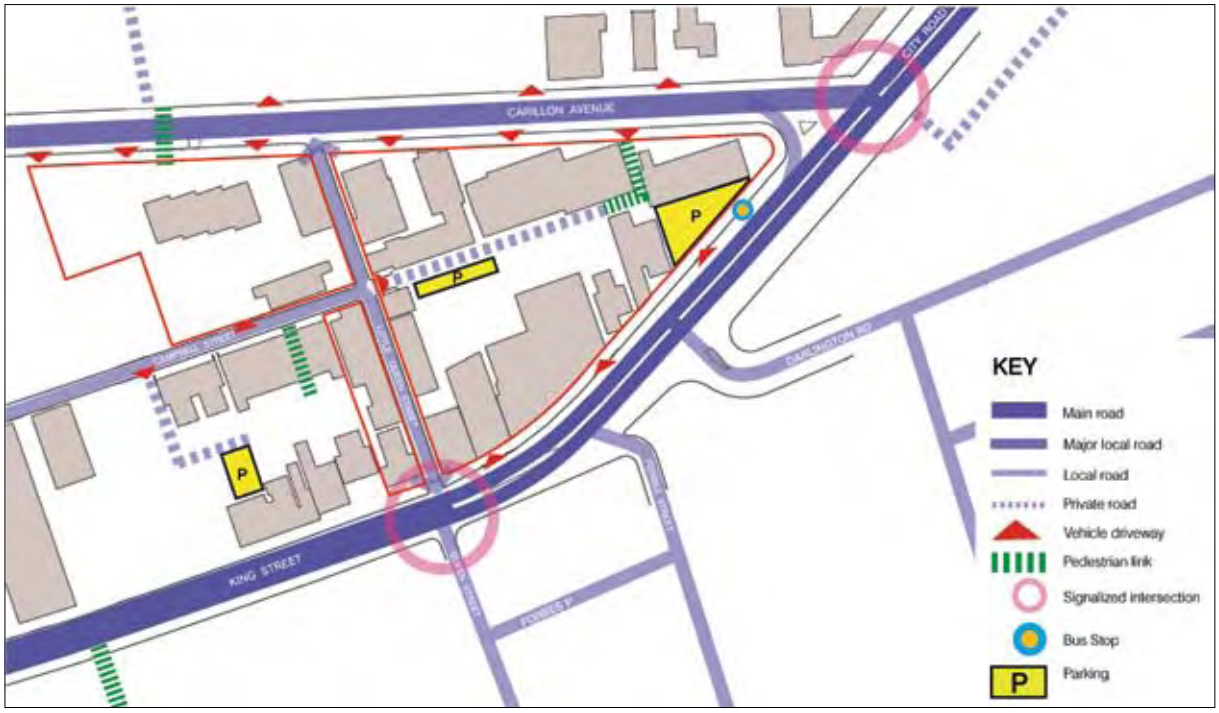

Figure 30 – Surrounding road network and existing site access
Source: AJC

3.0 Planning Framework and Context

3.1 Local Planning Instruments and Controls

South Sydney Local Environmental Plan 1998

The South Sydney Local Environmental Plan 1998 (SSLEP 1998) is the principal environmental planning instrument that applies to the site, and provides land use zonings, and local heritage listings for the site. Three land use zones (**Figure 31**) occur within the Concept Plan area, being:

- 2(b) Residential (Medium Density);
- 3 Business; and
- 5 Special Uses (University).

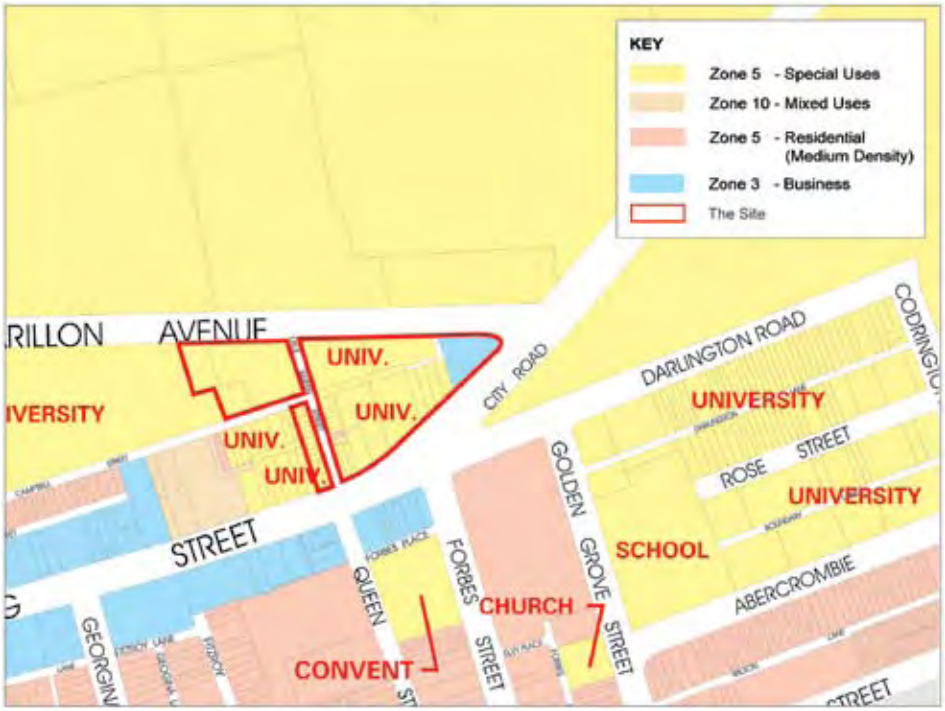

Figure 31 – South Sydney LEP 1998 Zoning

Local heritage items within the Concept Plan site listed under the South Sydney LEP are identified below:

- 6 Little Queen Street, Newtown;
- 8 Little Queen Street, Newtown;
- 10 Little Queen Street, Newtown;
- 12 Little Queen Street, Newtown;
- 14 Little Queen Street, Newtown;
- 16 Little Queen Street, Newtown; and
- 18 Little Queen Street, Newtown.

All land within the College also falls within one of 2 Heritage Conservation Areas identified under the South Sydney LEP:

- King Street Conservation Area – includes College properties with frontage to King Street, Newtown.
- Bligh and Camperdown Terrace Conservation Area – all other properties.

The heritage items and Heritage Conservation Areas are shown on **Figure 19**.

South Sydney Development Control Plan 1997: Urban Design

The purpose of the South Sydney Development Control Plan (SSDCP) is to provide detailed design and environmental standards and to the urban development objectives embodied in South Sydney LEP 1998.

The SSDCP does not prescribe any specific built form controls with the exception of 1 King Street, Newtown which has a maximum permissible FSR of 1.5:1. No specific height or density controls apply to the site.

City of Sydney Access Development Control Plan 2004

The Access DCP aims to provide equitable access within all new developments and ensure that substantial building work carried out on or intensified use of existing buildings provides upgraded levels of access and facilities for all people.

Development Control Plan No 11 – Transport Guidelines for Development 1996

DCP 11 sets guideline parking rates for a range of development types. The rates have generally been used to calculate the required quantum of car parking under the Concept Plan proposal.

The rate applicable to the subject Project Application for tertiary education establishments is 1 space per 2 staff plus an additional 1 space per 20 full time students. The DCP also requires that 1 bicycle space per 20 staff/students also be provided.

City of Sydney Heritage Development Control Plan 2006

The City of Sydney Heritage Development Control Plan 2006 (Heritage DCP) provides objectives and provisions for the development of buildings with heritage significance, either individually or as part of their street or area. The DCP aims to ensure that DAs for heritage items and works within heritage conservation areas and heritage streetscapes are assessed on the basis of heritage significance and desired heritage outcomes.

In addition to items of heritage significance and conservation areas being listed in the SSLEP, the DCP classifies existing buildings within Heritage Conservation Areas as having either a contributory, neutral or non-contributory status. The classification of most of the buildings within and around the MTC site fronting King Street are categorised as being contributory items and are shown at **Figure 19**.

The provisions of the DCP have been considered in Section 6.8 and **Appendix A**.

City of Sydney Section 94 Contributions Plan

The City of Sydney Development Contributions Plan 2006 applies to the site and provides that all forms of development are required to be levied. The Plan collects proportional levies on a per capita basis, which contribute towards pedestrian routes, traffic and transport improvements, open space, community facilities, and public domain/open space improvements.

3.2 State Planning Instruments and Controls

Environmental Planning and Assessment Act, 1979

Part 3A of the EP&A Act outlines the process for considering major project applications. In particular it outlines:

- what development constitutes a major project;
- the matters which the Minister must take into account when assessing a major project application;
- information which must be submitted with a major project application;
- the environmental assessment requirements for approval;
- public exhibition of major project applications;
- assessment report procedures; and
- appeals under Part 3A.

This document and appended materials are an Environmental Assessment Report for the purpose of this concurrent Concept Plan and Project Application under Part 3A of the EP&A Act.

State Environmental Planning Policy No.55 – Remediation of Land

SEPP 55 provides controls and guidelines for the remediation of contaminated land. In particular, this Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Clause 7 specifies that a consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is/can be suitable for the proposed development.

Section 6.1 discusses the proposal's compliance with SEPP 55, and concludes that all of the sites, the subject of this application can be made suitable for the proposed uses.

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

SEPP 65 applies to proposals seeking approval for residential flat buildings (RFBs) that propose more than three storeys and more than four dwellings. This EAR has applied the aims and objectives of SEPP 65 to the student and faculty accommodation buildings on the basis that they will live on site whilst studying at MTC.

All student accommodation buildings that form part of future Project Applications will be required to demonstrate compliance with the ten design principles in SEPP 65 and the Rules-of-Thumb in the Residential Flat Design Code.

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

A BASIX certificate will be required to be submitted for all the residential buildings that form part of the subsequent residential Development and/or Project Applications to demonstrate the required water and energy saving targets have been met.

State Environmental Planning Policy (Major Development) 2005

The Major Development SEPP identifies certain categories of development and certain specified sites that are subject to assessment and determination under Part 3A of the EP&A Act, for which the Minister for Planning is the approval authority.

As detailed in Section 1.1, the Concept Plan and Project Application was declared a Major Project under Clause 20 of Schedule 1 as a development for the purpose of teaching or research (including universities, TAFE or schools) that has a capital investment value of more than $30 million.

State Environmental Planning Policy (Infrastructure) 2007

The aim of this Policy is to facilitate the effective delivery of infrastructure across the State.

Under Clause 104 of the Infrastructure SEPP, the Roads and Traffic Authority (RTA) must be referred particular traffic generating proposals for consideration and comment. The proposed development exceeds the 75+ dwelling referral threshold identified in Schedule 3 of the Infrastructure SEPP and will therefore need to referred to the RTA under the provisions of this Policy.

3.3 Strategic Planning

The Metropolitan Strategy

"City of Cities: A Plan for Sydney's Future" (the Metropolitan Strategy for Sydney) was launched by the NSW Government in December 2005. It provides commentary and direction for the next 25-30 years at a regional level on issues such as land use, economic development, jobs, transport, innovation, centres and corridors, and residential areas within Sydney. It aims to accommodate 1.1 million additional residents and 500,000 new jobs over the period to 2031.

The Concept Plan and Stage 1 Project Application satisfy the Metropolitan Strategy objectives which aim to:

- promote City learning initiatives by facilitating development around research hubs;
- build Sydney's knowledge infrastructure;
- increase the quantity and affordability of housing; and
- provide fair access to housing, jobs, services and educational opportunities.

Draft Sydney City Subregional Strategy

The Draft Sydney City Subregional Strategy was released in July 2008. It is a key part of the implementation of the Metropolitan Strategy and is intended to guide land use planning in the City of Sydney local government area to 2031.

The Moore College Campus is located in the Sydney Education and Health Precinct. The strategy specifically aims to promote world class education facilities, and opportunities for renewal within the Precinct.

Sydney 2030

The Sustainable Sydney 2030 Plan (Sydney 2030) was released by the Council of the City of Sydney in March 2008. It represents the beginning of an ongoing commitment by the City of Sydney to achieve the vision and targets set for a green, global and connected city. It also intends to complement the draft Sydney City Subregional Strategy and will be used to inform Council's future comprehensive Local Environmental Plan.

Sydney 2030 establishes a vision for the future for the Sydney CBD that will be incorporated into Council's corporate plan, budgets and actions, with outcomes monitored and reviewed over time. Amongst other things, the vision proposes improved and increased affordable housing for students in Newtown, vibrant streets in Newtown, 'activity hubs' as civic focal points, and improved linkages between educational institutions and the innovative capacity of the City.

City of Sydney Urban Design Report

In 2007, the City of Sydney engaged the Government Architect's Office to undertake an urban design study for Chippendale, Camperdown, Darlington, West Redfern and North Newtown. The Urban Design Report (UDR) analyses the urban and built form of the area and like Sydney 2030 is intended to inform the preparation of Council's comprehensive Sydney Local Environmental Plan.

The vision for the future of Newtown is for a dynamic blend of traditional and contemporary buildings and shop fronts. King Street will continue to strengthen, and be supported by excellent public transport and streetscape upgrades. The initiatives relevant to the MTC Concept Plan proposal encourage:

- enhanced pocket parks and road closures;
- protection of heritage and contributory items by designing infill to respond to the height, massing and predominant horizontal and vertical proportions of existing buildings;
- large footprint additions to the rear of buildings fronting King Street to enable more realistic adaptive re–use;
- high quality design to the buildings on the gateway sites at the corner of King Street and Carillon Avenue; and
- enhanced network of laneways throughout the neighbourhood as alternative bicycle and pedestrian routes.

The UDR also identifies four 'significant sites' because of their important existing or potential role within the urban structure and contribution to neighbourhood character. 1 King Street, being the location of the Resource and Research Centre (ie: library) under the Stage 1 Project Application, has been identified in conjunction with University of Sydney Regiment site (96 City Road, on the opposite site of King Street) as one of these significant sites and is further identified as a 'gateway' site into Newtown when approaching from the north. The UDR sets out a vision and design principles for the site which are addressed in Section 6.2 of this EAR.

Based on the study, the UDR makes recommendations for the future draft LEP land use zones, heights, floor space ratios (FSR) and heritage items for the College site as shown on **Figures 32 – 35**.

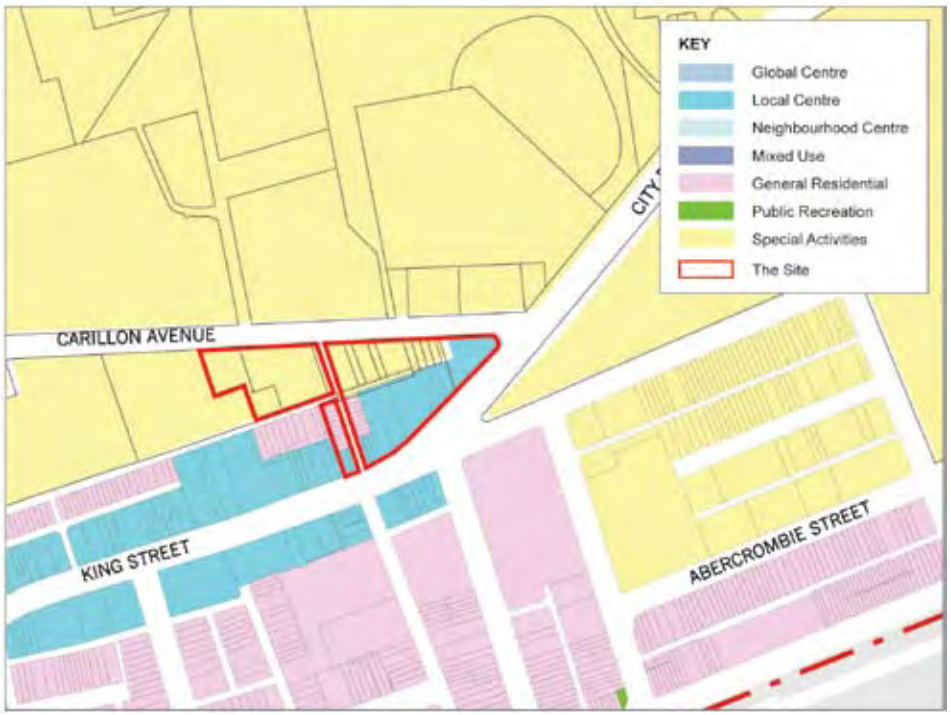

Figure 32 – Proposed land use zones

Figure 33 – Proposed maximum height controls

Figure 34 – Proposed maximum FSR controls

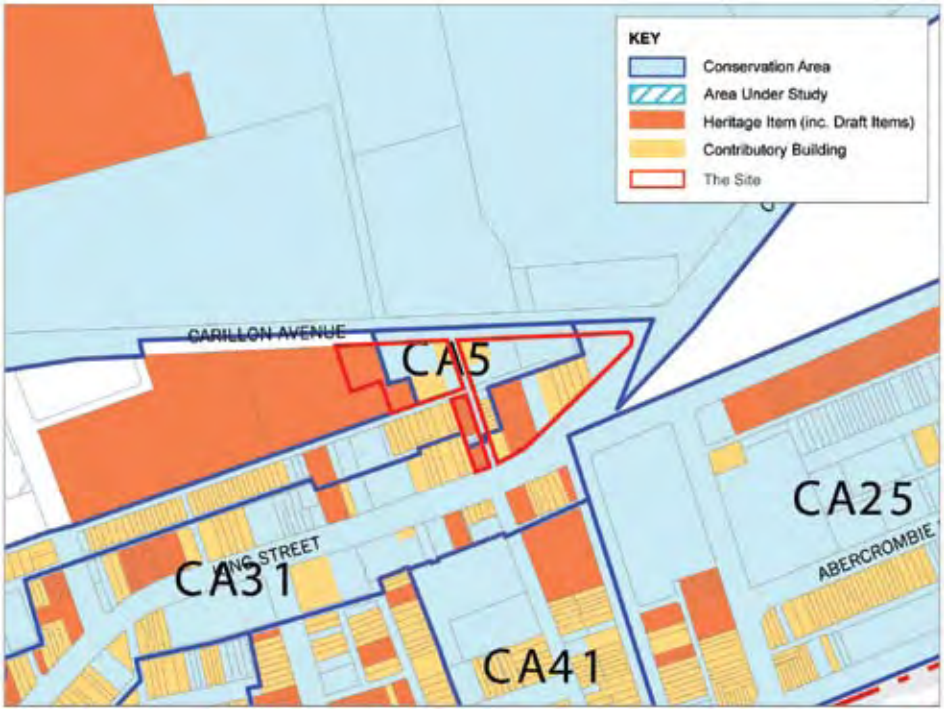

Figure 35 – Proposed heritage items

4.0 Consultation

In accordance with the Environmental Assessment Requirements issued by the Director-General for this project, consultation was undertaken with relevant local and State government authorities, service providers, existing staff at MTC and other stakeholders. This chapter summarises the consultation processes undertaken during the preparation of the proposal.

4.1 Council and Agency Consultation

MTC met with the City of Sydney Council (CoS) on two separate occasions to discuss the proposal as detailed in **Table 3** below.

Table 3 – Over view of consultation with City of Sydney

Date	Attended by	Issues Discussed
31 July 2009	- Geoff Bradley, Manager, CoS Public Domain Property - Doug Marr, Director of Property Planning, Moore College - Mark Louw, Director Architecture, AJC	The proposed Concept Plan and the potential closure of Little Queen Street.
19 August 2009	- Col Warne, Manager, Senior Traffic Engineer - Andy Aspden, Traffic Engineer - Doug Marr, Director of Property Planning, Moore College - Graham Pindar, Director, Traffix - Sacha Cole, Director, Aspect - Mark Louw, Director Architecture, AJC	The proposed Concept Plan and the potential closure of Little Queen Street.

MTC also approached City of Sydney's planning staff to present the proposal to Council's officers, however MTC was advised by email dated 10 June 2009, that:

> *"the Planning Assessments Branch of Council does not require a meeting with the applicant, for the purpose of pre-lodgement discussions associated with the Part 3A application relating to the above site".*

Agency Consultation

TRAFFIX, as the specialist responsible for the preparation of the traffic impact assessment, that comprises **Appendix G** of this EAR, engaged in consultation with relevant stakeholders.

NBRS + Partners also consulted with City of Sydney Council during preparation of their heritage reports (**Appendix I**).

Utility Providers

Consultation was undertaken with the relevant service/utility providers. The feedback from the consultation was integrated into the design of the proposal and is summarised in Section 5.8.

4.2 Other Stakeholders

Existing MTC Staff

Over the last few months, all employees of the College were invited to attend a one hour presentation on the College's draft proposal. In total, four separate employee briefing sessions were held during working hours to provide all employees with an opportunity to attend a briefing session that best suited their availability.

All briefing sessions followed a similar format with about half the time devoted to MTC representatives and the consultant team presenting the scheme and the remainder of the allocated time spent answering questions and receiving suggestions. Following the briefing sessions, all employees were given printed copies of the key pages of the draft Concept Plan and were invited to submit further comments. The key issues raised by the MTC staff were:

- the need for long term flexibility in the use of the spaces within MTC;
- the need for additional parking and loading facilities;
- the need to control parking to prevent outsider use;
- potential loss of existing housing for faculty and students;
- concerns over the visual presentation of the building; and
- concerns about excessive heat in the north facing sides of the buildings.

These matters have been addressed in the design of the proposal.

Full Time Students

All full time students and residents of the College were also invited to attend a presentation by MTC on the proposal. Like College staff, students were given the opportunity to attend one of four student briefing sessions held between 3 and 4 September 2009. Student briefing sessions followed a similar format to the staff sessions and comprised a presentation and discussion. The key issues raised by the students were:

- concern about loss of existing parking on Little Queen Street;
- the need for parking for young families; and
- the need for easy access for students moving house (houses change occupancy about every 2 years).

These matters have been addressed in the design of the proposal.

The University of Sydney

Representatives of MTC and AJC met with the University of Sydney's Colin Rockliff (Director, Campus Infrastructure Services) and his consultant team on 18 September 2009. All present on behalf of the University indicated support for the Concept Plan and Stage 1 Project Application and the University has since written a letter of support for the MTC proposal.

Other Neighbours

Separate individual briefings were provided to each of the following institutional neighbours of the College:

- the Principal – North Newtown Public School;
- the Warden – St Paul's College;
- the Principal and the Business Manager– The Womens' College; and
- three members of senior management – Campus Living Villages (Sydney University Village).

5.0 Concept Plan Description

5.1 Introduction

This chapter of the EAR outlines the Concept Plan and establishes the vision, and future planning and development framework for the MTC Campus. It articulates what MTC is seeking to achieve for the future of the Campus and establishes the key development objectives, broad parameters and fundamental outcomes that underpin the project. The strategies required to be implemented to achieve these outcomes are detailed in the draft Concept Plan Statement of Commitments at Section 9.0.

A Project Application for the first stage of the Concept Plan redevelopment (the Library) has been submitted concurrently with the Concept Plan. A description of the Project Application and subsequent environmental assessment is located at Sections 7.0 and 8.0 of this EAR respectively.

5.2 Design Principles

The Concept Plan seeks to address the environmental setting and technical challenges of the MTC site to deliver a world class theological educational campus. To this end, AJC has formulated a series of design principles that underpin the MTC Concept Plan:

Emphasise the MTC site as Newtown's gateway

- The beginning of King Street is to be signified with 'gateway' buildings of high architectural quality and expression (**Figure 36**). It is envisaged that together with the University of Sydney Regiment site that these two buildings will form a pair of 'twin' buildings to formalise the 'gateway' entry into Newtown.

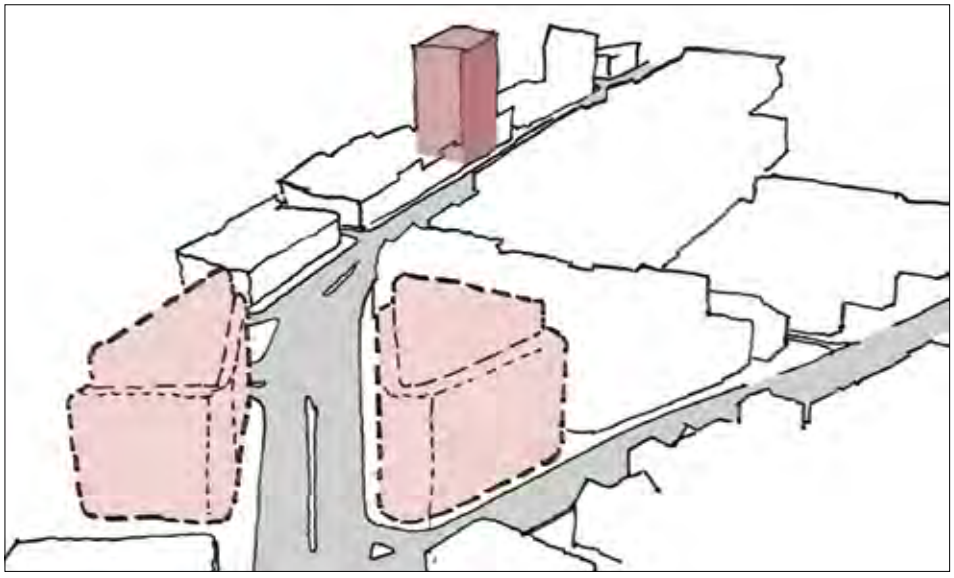

Figure 36 – Spatial relationship of the twin gateway buildings
Source: AJC

- Provide a public presence at 1 King Street for MTC.
- Create a landmark building at 1 King Street that ensures the library can be easily found by the public. Corner buildings have traditionally been the 'exceptions' in the urban fabric and as such the library building design should also depart from conventional design rules to enhance the legibility of a place by creating a landmark that helps with way-finding.
- Relocate the anchor focus of City Road from Alpha House to 1 King Street (i.e.: bring the focus forward as the viewer's eye currently naturally lands on Alpha House, a 9-11 storey building located on a local high point on King Street.

Building Height (**Figure 37**)

- Design new buildings to fit with the future context of the area.
- Locate taller buildings at the gateway to King Street.
- Locate taller building elements away from the street edge.
- Locate taller buildings at local low points to minimise their bulk and scale.

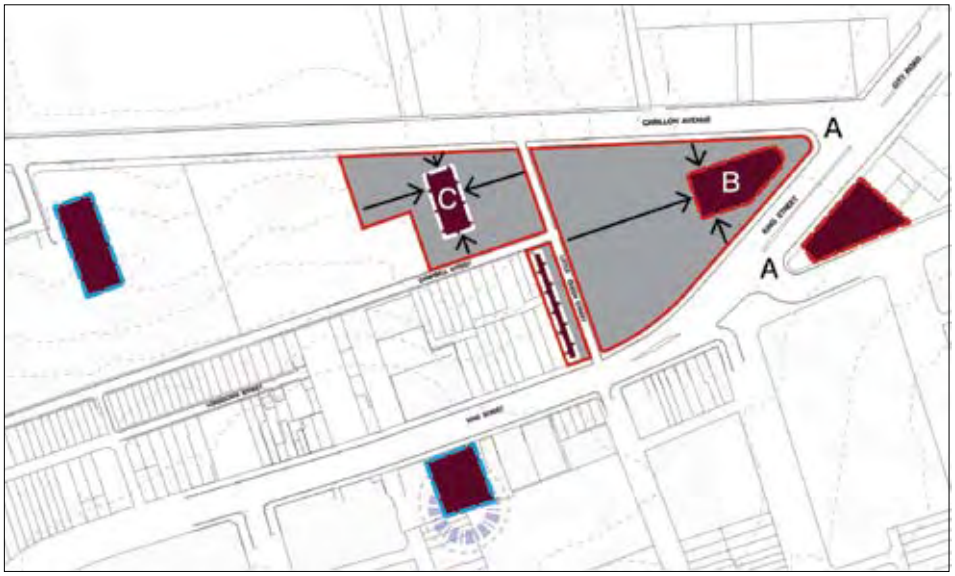

Figure 37 – Possible locations of taller buildings
Source: AJC

Heritage (**Figure 38**)

- Adaptively re-use buildings which are proposed to be retained on site for compatible uses.
- Retain existing facades of the contributory buildings fronting King Street.
- Provide a curtilage between new and heritage or contributory buildings.
- Ensure new buildings respect the scale of adjoining heritage and contributory buildings.
- Distinguish between the 'old' and the 'new' through a change in materials and forms.

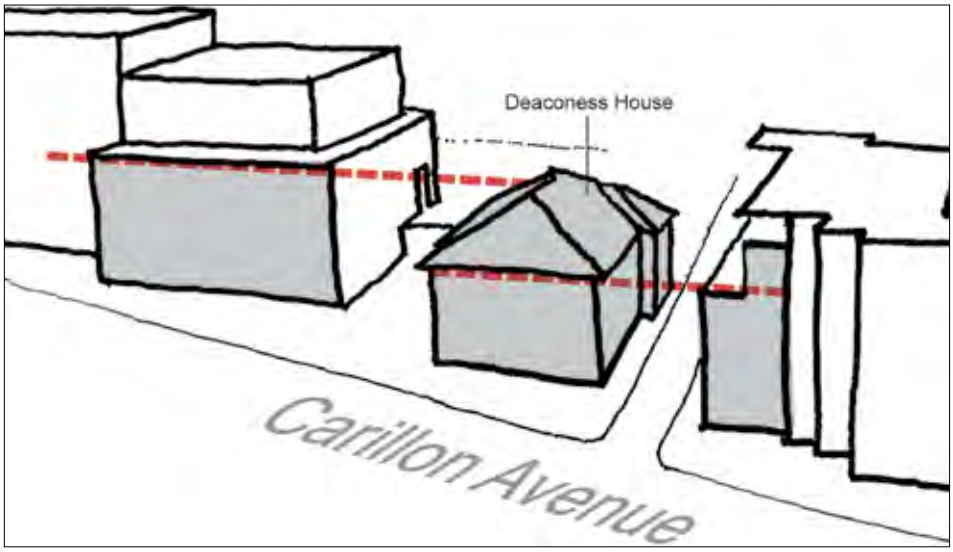

Figure 38 – New buildings relation to heritage items
Source: AJC

Open Space and Landscaping (**Figure 39**)

- Create a hierarchy of open space for the Campus that is flexible to accommodate a range of different functions at the Campus.
- Design open spaces as outdoor rooms that function as extensions to College built form.
- Provide roof terraces where possible as a means of increasing open spaces.
- Ensure all open spaces are accessible for people with disabilities or the mobility-impaired.
- Connect the primary open spaces of the Campus.

Figure 39 – Open space, landscaping and pedestrian through site links
Source: AJC

Streetscape (**Figures 40** and **41**)

- Acknowledge and interpret the character of King Street in designing new buildings with:
  - expression of the predominantly 2 storey street wall and parapet that characterises King Street;
  - a masonry base punctuated by large openings;
  - vertical articulation.
- Maintain the silhouette of parapets against the sky.
- Contribute to the landscape character of Carillon Avenue by positioning buildings at an angled landscape setback to the street.
- Locate the 'short-end' of buildings to address Carillon Avenue to minimise the scale and bulk of buildings.

Figure 40 – Setback responses to the differing streetscapes
Source: AJC

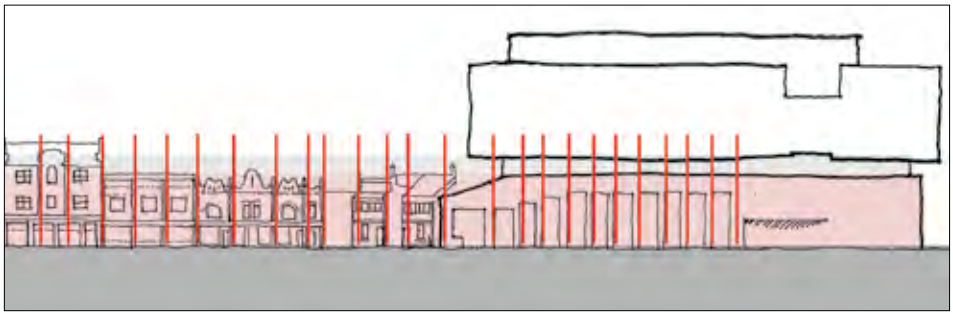

Figure 41 – Interpreting streetscapes along King Street
Source: AJC

Access & Movement (**Figure 42**)

- Locate the 'front door' to Moore College along King Street.
- Ensure residential lobbies can be clearly identified and have a street address.
- Provide level and easy access for people using prams and wheelchairs to common areas.
- Prohibit vehicular access from King Street.
- Consolidate parking underground to reduce on-street parking.
- Locate vehicular access along Carillon Avenue and limit vehicular entry points to underground car parks.

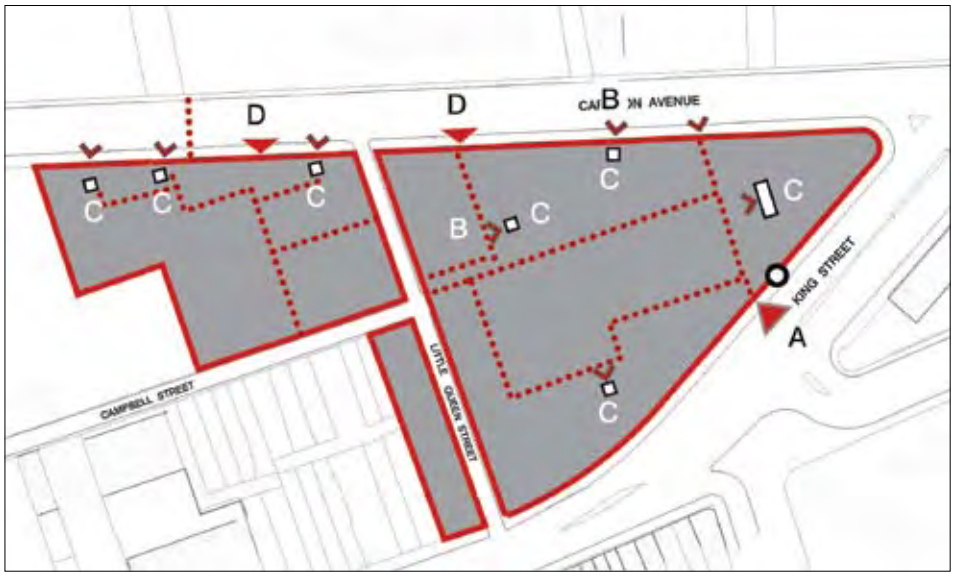

Figure 42 – Vehicular and Pedestrian Connections
Source: AJC

5.3 Concept Approval

Concept Approval is sought for:

- broad land use distribution across the site;
- up to 31,000m^2 of GFA for educational purposes including ancillary student accommodation and retail uses;
- building envelopes (above and below ground);
- pedestrian and vehicle access arrangements;
- a maximum of 340 car parking spaces to service the staff and resident students of MTC; and
- the open space and public domain concept including the removal of 34 trees.

More specifically, the MTC redevelopment as shown at **Appendix B** and **Figure 43**, proposes:

- demolition of:
  - Mary Andrews College (18-26 Carillon Avenue)
  - MTC Dining Hall (2-16 Carillon Avenue)
  - 7 x 2 storey terraces (1-13 Little Queen Street)
  - 2 x 2 storey terraces (3-5 King Street)
  - a 2 storey terrace (7 King Street)
  - mixed use building (27-31 King Street)
  - the rear of mixed use building (21-25 King Street)
  - the 4 residential buildings on Site B (30-44 Carillon Avenue)
  - weatherboard child care centre (48 Carillon Avenue)
- redevelopment of Site A including:
  - construction of a new 7 storey Resource and Research Centre (Building A1)
  - refurbishment of Buildings A3, A4, A5 and A7
  - construction of a new 3 storey residential terraces (Building A6)

  - construction of a new 5 storey residential college (Building A8)
  - construction of the college green and associate private outdoor recreation areas
  - entries and circulation thoroughfares (from King Street to Carillon Avenue)
- construction of 4 new residential college buildings at Site B including:
  - Building B1 (6 storeys)
  - Building B2 (9 storeys)
  - Building B3 (6 storeys)
  - Building B4 (4 storeys)
  - associated private open space
- conservation works to Site C for continued use as residential uses;
- construction of two associated basement car parks;
- construction of a temporary car park to support the staged development of Site A; and
- associated public domain improvements.

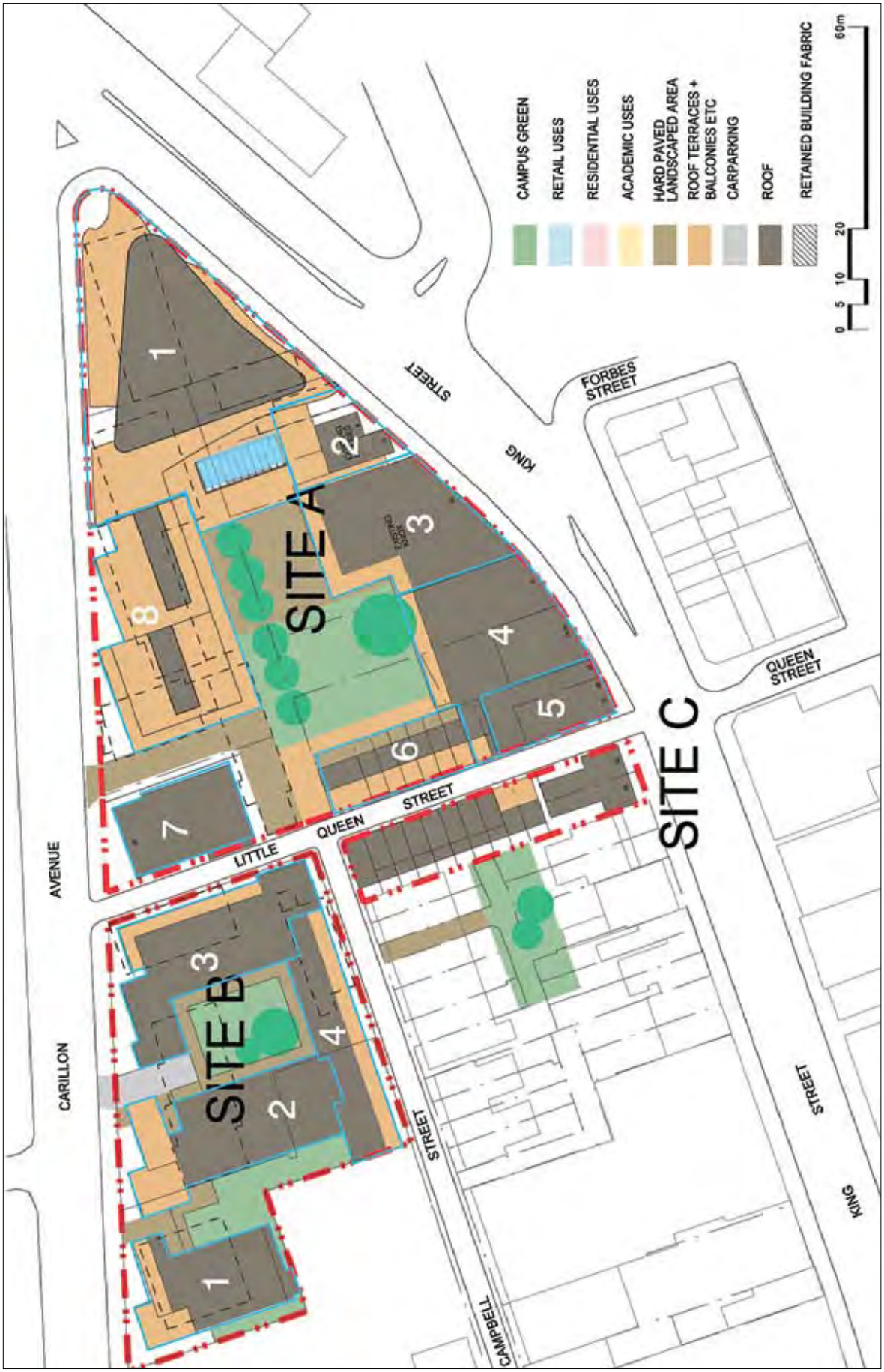

Figure 43 – MTC Concept Plan
Source: AJC

5.4 Demolition

To accommodate the proposed redevelopment of MTC, a number of existing structures on the site will be demolished. The structures are described in **Table 4** and shown on **Figure 44**.

Table 4 – Buildings proposed to be demolished

Address	Description
18-26 Carillon Avenue	Residential College
2-16 Carillon Avenue	Dining Hall
1-13 Little Queen Street	7 x 2 storey terraces
3-7 King Street	2 x 2 storey terraces
21-27 King Street	Partial demolition to the rear of mixed use buildings
30-44 Carillon Avenue	3 residential buildings and a child care centre
48 Carillon Avenue	Weatherboard child care centre

5.5 Land Use Distribution and Built Form

Twelve new buildings are proposed to be constructed on Sites A and B (see **Figure 45**), whilst the existing built form on Site C (being heritage items) will be retained. The proposed building envelopes and their intended use are shown on the Concept Plan drawings at **Appendix A** and summarised in **Table 5** below.

Table 5 – New Building Overview

Building	GFA	Storeys	Land Use(s)
Site A			
Building A1	9059	7	Academic
Building A2	1156	2	Academic
Building A3	1188	3	Retail & Academic
Building A4	189	1	Retail & Academic
Building A5	574	2	Retail & Academic
Building A6	768	3	Residential
Building A7	666	2	Academic
Building A8	4403	5	Academic & Residential
Site B			
Building B1	2120	6	Residential
Building B2	4449	9	Residential
Building B3	2995	6	Residential
Building B4	1312	5	Residential
Site C			
Building C1	844	2	Residential
Building C2	262	1	Residential

Figure 44 – Demolition Plan
Source: AJC

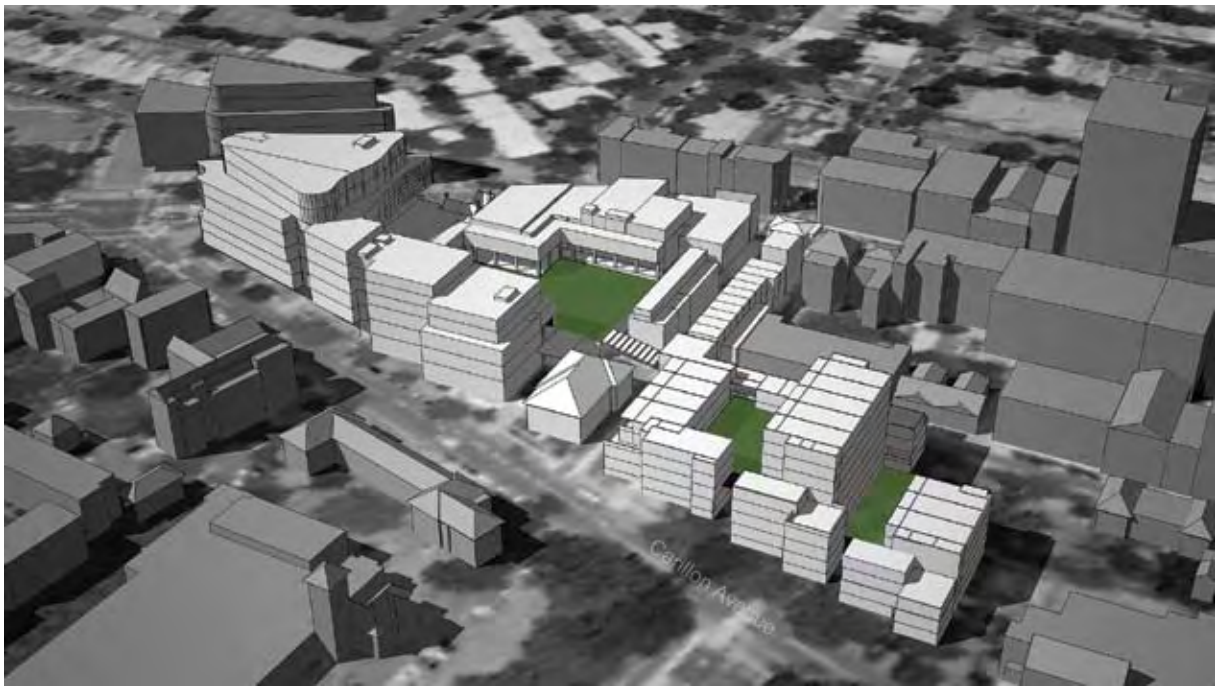

Figure 45 – Overall massing of the Concept Plan
Source: AJC

Land Use Distribution

The Concept Plan seeks expansion and augmentation of an existing educational establishment on the site. As part of the educational establishment, retail, private open space and residential student accommodation are proposed as ancillary land uses. The allocation of these uses across the site is shown on the Concept Plan drawings at **Appendix A**.

The proposed Concept Plan generally retains the existing distribution of land uses across the site. Academic uses are solely located within Site A (the eastern portion of the site) and will be predominantly located on the first two levels around a central College Green.

A new library is proposed to be constructed on the corner of King Street and Carillon Avenue, with teaching and office/administration uses located throughout Buildings A2, A3, A5, A7, and A8. Retail uses will be maintained at the ground level of Buildings A3, A4 and A5 to provide activation to the King Street frontage. Buildings A6 and the upper levels of A8 will continue to be used for student accommodation.

Sites B and C will also continue to be used for student accommodation. Two levels of basement car parking will be located under the residential buildings at Site B. Elevated open space areas will be located between Buildings B1, B2 and B3.

Gross Floor Area

Up to 31,000m^2 of GFA is proposed to be provided, which will be distributed across the site as per the break down in **Table 6**.

Table 6 – Gross Floor Areas by use

Land Use	GFA (m^2)	
Academic	Site A:	14,500
	Site B:	0
	Site C:	0
	Total:	14,500
Retail	Site A:	624
	Site B:	0
	Site C:	0
	Total:	624
Residential (Student Accommodation)	Site A:	3,260
	Site B:	11,186
	Site C:	1,106
	Total:	15,552
Total		30,676

Current planning and design for the Concept Plan suggest approximately 30,700m^2 of floor area will be required. A rounded up total GFA of 31,000m^2 is being sought to provide MTC with the contingency and flexibility it requires to undertake detailed design.

Building Heights

A range of buildings heights are proposed across the Campus which have been selected to respond to the built form context of the surrounding area. The maximum building heights (and the number of levels), are shown in **Table 7** below.

Table 7 – Proposed Building Heights

Building	Maximum Height (AHD)	Basement Levels	Above Ground Levels
Site A			
Building A1	77.5	2	7
Building A2		0	2
Building A3	55	2	3
Building A4		0	1
Building A5		0	2
Building A6		0	3
Building A7	50	0	2
Building A8	67.5	2	5
Site B			
Building B1	65.5	2	6
Building B2		2	9
Building B3		2	6
Building B4		2	4
Site C			
Building C1	50	0	2
Building C2		0	1

5.6 Student and Faculty Accommodation

A total of 108 dwellings are proposed as part of the provision of student and faculty accommodation for MTC.

MTC differs from most higher educational establishments, in that the majority of full time students live on the MTC campus. Furthermore, the average age of students is 30.4 years and many are married with families. Consequently, a diverse dwelling mix needs to be provided on the MTC Campus to accommodate both single students and students with families.

An indicative break down of the proposed number and mix of dwellings on the site is shown on **Table 8** below. It should be noted that the units will in some cases be used as shared student housing.

Table 8 – Dwelling Mix and Distribution

	Site A	Site B	Site C	Total	Mix %
Terrace Dwelling	9	0	9	18	16.7
2 Bedroom Unit	0	12	0	12	11.1
3 Bedroom Unit	0	29	0	29	26.9
4 Bedroom Unit	0	20	0	20	18.5
5 Bedroom Unit	13	16	0	29	26.9
Total	22	77	9	108	

5.7 Open Space and Public Domain

As shown on **Figure 46** below and detailed in the Landscape Drawings at **Appendix F**, the Concept Plan will provide a wide range of open space and public domain improvements around the site. The landscape concept comprises the College Green, children's play areas, college gardens, gathering spaces, passive recreation areas, buffer planting, pedestrian links and streetscape upgrades, each of which are described below. Indicative planting schedules for these areas have also been included at **Appendix F**.

Figure 46 – Landscape Concept
Source: Aspect Studios

The development will transform existing underutilised open space areas, which are used for car parking, such as the rear of the dwellings at Site B and the existing College Green (see **Figures 47** and **48**) into high quality landscaped open space areas.

Figure 47 – Existing informal car parking behind Site B

Figure 48 – Existing Open Space Areas used for Car Parking

College Green

The College Green will be a flexible open turf area for formal events, casual gatherings and lunch time use. The area is intended to also provide opportunities for small informal games / activities as well as a casual study space.

Carillon Avenue and King Street Streetscapes

A large emphasis will be placed on upgrading the Carillon Avenue and King Street streetscapes around the MTC site. The final design is likely to include:

- high quality paving to highlight entry points;
- tiles feature walls to provide element of public art, signifying entry points and accommodating way-finding signage;
- planting beds along the street frontage; and
- treating vehicular entries as shared zones to allow for pedestrian use of space.

College Gardens

The College Gardens will provide smaller, more intimate spaces for passive recreation and small gatherings. The gardens will be characterised by water features and highly detailed planted areas. Deciduous trees will be used to provide summer shade and allow for winter sun.

Private terraces

The ground floor apartments within Site B will have paved private landscaped zones. The private terraces will include areas for planting and low palisade fences at periphery for security and privacy.

5.8 Tree Removal

The proposed Concept Plan necessitates the removal of 34 trees and the relocation of 2 trees. The trees proposed for removal are predominantly located within the existing lawn area in the centre of Site A and at the rear of the residential buildings on Site B and are generally not visible from the public domain. A tree survey showing the trees on the site and those proposed to be removed are shown at **Appendix E**.

5.9 Transport and Access

Car Parking

The Concept Plan proposes to consolidate all parking within the site, through the transfer of surrounding on street and at-grade spaces presently across the site into new multi-level basement car parks. The consolidation of the car parks will result in the removal of 7 existing vehicle access points to the site, 3 of which are located off King Street. Limited service vehicle parking will also be provided.

Two separate basement car parks are proposed as part of the Concept Plan, providing up to 340 car spaces on the site.

The first car park is located on the first two basement levels under Site A and will provide 170 car spaces for the use of staff and students (and their families) living on campus.

The second car park is located over two basement levels under Site B and will provide 170 car spaces. The car park will be primarily used for students and their families living within the residences on Sites B and C.

Access to both new car parking areas will be via Carillon Avenue.

Pedestrian and Bicycle Facilities

Bicycle parking in the order of 40 spaces will be provided within the basement car parks and on campus. In addition to the secure parking areas, showers and change rooms will also be provided to further encourage students, staff and visitors to cycle to MTC.

5.10 Water Cycle Management

The site will be served by two stormwater systems, the first system is located to the north west of the site along Carillon Avenue, with the second system located to the north east of the site along King Street. Plans showing the proposed system are located at **Appendix Q**. After consultation with Council's stormwater engineer it has been determined that the system in Carillon Avenue has issues with flooding. Therefore upon Council's request it has been determined that the new development will drain to King Street to reduce the load on the Carillon Avenue system.

A new connection will be made to the existing Council kerb entry pit on King Street just south of Carillon Avenue. This new connection will be sized to accept the discharge from the on site detention system.

It is proposed to install an on site detention tank at high level at the eastern end of Basement Level 1. A rain water re-use tank is to be installed at the eastern end of Basement Level 2 directly under the OSD tank on Level 1. The capacity of the on site detention structure is in accordance with City of Sydney Council's guidelines and policies. Water from the re-use tank will be reticulated for landscape irrigation throughout the site. A sub soil drainage system will be provided throughout the basement levels.

5.11 Services and Infrastructure

Plans showing the proposed services and infrastructure arrangements are located as part of the architectural drawing set at **Appendix Q**. Further details regarding the proposed services are detailed below.

Potable Water

The nearest potable water supply for MTC campus is a DN150 main located in King Street. Consultation with Sydney Water has established that this supply is capable of servicing the completed MTC Concept Plan. A DN150 watermain is also located in Carillon Avenue and may also be used to provide water to the buildings.

In accordance with the requirements of Sydney Water and the New South Wales Fire Brigade, a fire hydrant system will be installed throughout the campus with a double testable check valve installed on the incoming supply.

Sewerage

As existing buildings are demolished, all redundant sewer connections will be disconnected at the main and sealed off. Where existing connections are to be retained to drain the site, these are to be protected during construction of the development.

Where required existing infrastructure will be upsized and designed to meet the requirements of the maximum future population of the development. All new infrastructure will be sized and designed to meet the requirements of the maximum future population of the development. Sydney Water will be consulted regarding proposed connections.

Gas

Natural gas for this development will be provided from either the DN50 medium pressure gas main in King Street, or the DN50 medium pressure gas main in Carillon Avenue. No existing Jemena gas main will be affected by this development.

Electricity

Cundall has undertaken an Electrical Infrastructure Review including a load assessment (see **Appendix H**) to determine the electrical infrastructure required to accommodate the future stages of MTC. The works will be undertaken as required as part of subsequent Project Applications.

5.12 Indicative Project Staging

Approval Staging

A Staging Plan illustrating the indicative project staging is located at **Appendix A**.

The stages are as follows:

- Stage 1: The Resource and Research Centre (Building A1)
- Stage 2: College Residential (Buildings B3 and B4)
- Stage 3: Refurbishment and upgrade of Little Queen Street Terraces (Buildings A6, C1, and C2)
- Stage 4: King Street Retail and Teaching Centre (Buildings A3, A4, and A5)
- Stage 5: Dining Hall and College Residential (The College Green and Buildings A7, A8, B1 and B2

Construction Staging

The staging of construction has and will continue to be determined by three key factors:

- the immediate need for specific new facilities;
- the availability of the necessary funding; and
- the ability of the College to continue teaching and other functions while adjacent to a major building site.

The Concept Plan has been developed in a way that will facilitate building in multiple stages over a period of years. In particular, the staging is designed to impose the minimum possible impact on staff and students whilst retaining full College operations and ensuring there is no additional car parking burden on local streets.

Subsequent construction will be subject to future Development and/or Project Applications depending on the three key factors identified above. Following the completion of the Resource and Research Centre, the College expects to commence building residences for teaching staff and students along the western side of Little Queen Street between Campbell Street and Carillon Avenue (B3) and along the northern side of Campbell Street (B4). Construction of additional residences on this site will occur as needed.

The existing houses on both sides of Little Queen Street between King Street and Campbell Street (A6 and C1) will, over time, be progressively upgraded for adaptive reuse, mostly as student family residences. Upgrading of existing residences will proceed at the rate of about two each year. It is expected that the more substantial building projects will be undertaken at about 3-5 year intervals.

The proposed retail facilities located on King Street near Little Queen Street (A4 and A5) will be developed as soon as the existing users of these properties can be relocated to new locations. The erection of the new teaching centre at the rear of the properties at 23-31 King Street (A3) will occur when further teaching space is required due to expected growth in student numbers. It is anticipated that the final phase of the Concept Plan will be the new building designed to replace the site of the existing Moore College Dining Hall (A8) on the south side of Carillon Avenue.

5.13 Developer Contributions

Part 3A projects are subject to Section 94 Contributions (Section 75R(4) of the EP& A Act). The City of Sydney Development Contributions Plan 2006 applies to the site and provides that all forms of development within the Western Precinct (being the Precinct within which the MTC site is situated) are required to be levied.

The Plan collects proportional levies on a per capita basis, which contribute towards pedestrian routes, traffic and transport improvements, open space, community facilities, and public domain/open space improvements.

The Moore Theological College site is subject to the following levies (**Table 9**):

Table 9 – Summary of City Of Sydney's Section 94 Contributions

Contribution Type	Per Resident	Per Worker	Bedsits and 1-bedroom dwellings	2 bedroom dwellings	3+ bedroom dwellings	Residents of a Non-Private Dwellings
Community Facilities	$524.40	$104.88	$681.72	$996.36	$1,363.44	$274.91
Public Domain	$748.45	$149.69	$972.98	$1,422.05	$1,945.96	$748.45
New Open Space	$6,144.52	$1,228.90	$7,987.88	$11,674.60	$15,975.76	$6,144.52
Accessibility	$61.43	$12.29	$79.86	$116.72	$159.72	$61.43
Management	$66.42	$13.28	$86.35	$126.20	$172.69	$66.42
TOTAL	$7,545.22	$1,509.04	$9,808.79	$14,335.93	$19,617.57	$7,295.73

The proposed dwelling mix identified in Section 4 and an 80 faculty and staff increase attracts approximately $1.87 million worth of Section 94 Contributions for community facilities, public domain, new open space, accessibility and Plan management as required by the Section 94 Contributions Plan. This quantum of developer contributions assumes a per capita rate of:

- 80 x the worker rate of $1,509; and
- per bedroom rate based on the dwelling mix identified in Section 3.1).

The expected demands on local infrastructure normally associated with commercial or residential development, and for which levies are collected under Council's Section 94 Plan, are not triggered by the proposed development. MTC requests that the Minister for Planning in approving the Concept Plan exempt the College from paying Section 94 Contributions consistent with Council's Policy for the reasons detailed below, being

- MTC's proposed scale and quantum of works in kind;
- Demand is not being created for all facility types Council's Section 94 Plan collects for;
- The College is a not-for-profit organisation and provides a community facility in its own right;
- Council's Section 94 Contributions Plan exempts certain developments from paying contributions on a merit basis; and
- The principles of the Department of Planning's Circular D6 can be readily applied to the MTC development.

Works in kind

Inspection of Council's Works Programme confirms the works proposed near the MTC site include ongoing library services at Newtown Library, proposed bicycle routes from the MTC site to Missenden Road, and up to 10 bicycle parking spaces near the MTC site (on King Street).

The Concept Plan (through future Project and Development Applications) proposes to deliver the following works-in-kind:

- construction of a new 7 storey publicly accessible Resource and Research Centre (ie: library) valued at almost $54 million which satisfies Council's requirements for libraries being to:
  - provide a cultural hub and focal point;
  - create functional and multi-purpose and accommodating a range of uses and activities;
  - provide access to the latest technology in a user friendly manner;
  - attract a wide range of users providing areas of relaxation, research, leisure and learning;
  - provide effective and efficient in the delivery of services;
  - meets community needs;
- $1.5 million worth of College Green, associate outdoor recreation areas and public domain improvements; and
- pedestrian and vehicle access arrangements, including off street car parking for up to 320 cars, new and augmented loading dock arrangements, bicycle parking facilities, potential car sharing facilities and implementation of a Work Travel Guide.

The Concept Plan will provide, at no cost to the public, almost all the facilities which are usually provided and funded by the City of Sydney Section 94 Contributions. Furthermore, the Resource and Research Centre will operate as a public library providing valuable benefits to the local and wider population.

The Concept Plan proposal is accordingly a self sufficient scheme that will provide a series of on-site and immediately surrounding public domain and traffic enhancements, and will also provide a world class publicly accessible theological library.

Demand for Facilities

It is noted that the Plan also collects levies for other forms of community facilities such as child care centres, Council offices, aquatic facilities and youth centres.

Council's Section 94 Contributions Plan states that levies paid to Council will be used to provide new public facilities to meet the expected demand, presumably by the existing and future resident and worker populations. Accordingly, Council cannot impose levies on a development unless there is an increased demand on local infrastructure being generated by the development. It is not considered that the MTC Concept Plan will increase or create new demand for these facilities:

- Child Care Centres – An existing child care centre is located west of the MTC which can continue to be used by residents, however most will live and be cared for on Campus, negating payment of Section 94 Contributions for child care services.
- Youth Centres – The average age of students is 30.4 years and includes students with young families. As such, MTC should not be required to contribute towards youth facilities given its student (and family) body will only have a nominal proportion of students who would fit into the 12-24 age bracket for which Council provides youth services.
- Council Office Locations – offices are already provided at Redfern, Erskineville and Glebe, suggesting an adequate supply of this facility type within close proximity to the MTC site.
- Aquatic Facilities – adequate provision of aquatic facilities exists in close proximity to the site, including the nearby Victoria Park Pool. Moore College students and staff also have full access to the sporting facilities of Sydney University.

Community Benefit and Merit Based Exemption

The proposal is for a theological college that will not only provide an important educational service, but train individuals who are involved in important community outreach and welfare services upon graduating. The students and staff of Moore College are actively involved in the local community in a variety of ways, particularly through North Newtown and Darlington Public Schools and a number of other local voluntary bodies.

Pursuant to Section 2.14 of the Council's Section 94 Contributions Plan, certain forms of development may seek an exemption from paying the contributions set out in the Plan. These include (amongst other criteria):

- Developments which provide a distinct community benefit on a not-for-profit basis; and
- Development by or for non-profit organisations which provide a distinct community benefit including but not limited to the provision of childcare services, out-reach services or the like, on a cooperative or not-for-profit basis.

Council's current Section 94 Contributions Plan should not apply to the development, noting that the proposal is considered to be exempt from payment of contributions under Clause 2.14 of the plan (being a charitable organisation reliant on grants, funding and donations).

It is anticipated that the relevant contributions plan will not be applied to its typical extent as for any regular or for-profit development. This is consistent with the Department's recent approach to the assessment and determination of similar facilities such as the University of New South Wales Student Housing and Macquarie University where these developments were not required to pay the full scope of developer contributions as part of these Part 3A project applications.

Department of Planning Circular D6

Consistent with the Department of Planning's Circular D6 for Crown Development and the general approach applied to projects providing improved educational facilities for the wider community, the drainage and site entrance works will be delivered as part of the project.

The College proposes to adopt the principles prescribed in the Department of Planning's Circular D6 for Crown Development and deliver the necessary drainage, surrounding public domain and site entrance works as part of the project. Whilst it is noted that the College does not constitute a Crown authority, the predominant use on the site is for an educational establishment which services for the wider community. Consistent with the Circular, monetary contributions are not deemed necessary for open space, community facilities, parking, local roads, or any other local physical or social infrastructure or service or any regional infrastructure.

6.0 Concept Plan Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Concept Plan proposal. It addresses the matters for consideration set out in the Director-General's Environmental Assessment Requirements (DGRs).

The draft Statement of Commitments (see Section 9.0) complements the findings of this section.

6.1 Consistency with Relevant Strategic and Statutory Plans and Policies

A summary of consistency with the strategic and statutory plans relevant to the project is located in **Table 10**. A detailed assessment against key statutory plans is located in Section 6.2.

Table 10 – Summary of Consistency with Key Strategic and Statutory Plans and Policies

Instrument / Strategy	Comments
Draft Sydney Subregional Strategy	This Concept Plan is consistent with the Strategy in that it will: - strengthen Sydney's Education and Health Precinct by providing a world class education facility; - promote learning city initiatives by facilitating development around an existing research hub; - increase the quantity and affordability of student housing; and - provide fair access to educational opportunities.
SEPP 65	Whilst the student and faculty accommodation is not intended to function as conventional private residential development, an assessment against the design principles has been undertaken as is provided below at Section 6.2.4.
SEPP 55	The Phase I Environmental Site Assessment prepared for the site demonstrates the site is suitable for the proposed development subject to the College adopting the recommendations set out within that report (see Section 6.10 and Appendix M).
SEPP (Infrastructure)	The project is to be referred to the RTA as required under Clause 104 of the SEPP.
South Sydney LEP 1998	The proposal is consistent with the land use zone objectives and is permissible with consent under the current zonings. A Conservation Management Strategy and Heritage Impact Statement are located at Appendix I.
South Sydney DCP 1997: Urban Design	Consideration of the development standards of SSDCP is detailed in Section 6.2.
City of Sydney Heritage DCP 2006	The Concept Plan will respect and complement heritage streetscapes in the vicinity of the site. It will continue the adaptive reuse of existing heritage buildings on the site. Further consideration of SSDCP is detailed in Section 6.8 and Appendix I.
DCP No 11 – Transport Guidelines for Development	The transport guidelines are addressed in Appendix G and summarised in Section 6.5.
City of Sydney Access DCP 2004	An Access Report is located at Appendix J.

6.2 Consistency with Development Controls

The site is not currently subject to any built form controls or development standards, with the exception of 1 King Street which is subject to a 1.5:1 FSR control under the SSDCP.

It is noted that under Section 75R(3) of the EP&A Act, major project applications are only required to comply with State Environmental Planning Policies, and other environmental planning policies (LEPs and REPs) to the extent that they dictate permissibility of land uses. DCP controls do not need to be complied. Nonetheless, the DGRs require the proposal to compare and justify any proposed departures with Council's existing and proposed heights and FSRs.

As outlined in Section 3.3, Council's Urban Design Study proposes a series of height and FSR controls which if adopted by the Council's comprehensive Local Environmental Plan would also apply to the MTC site. The height and FSR controls identified in the UDR have in most cases simply adopted the height controls of existing buildings and translated those heights and densities into recommended future height and FSR controls to be included into the comprehensive LEP. However, the recommended height and FSR controls if adopted will not allow for the future growth of MTC (or in fact other sites within Newtown), which is both necessary and entirely appropriate on the existing MTC campus.

The built form controls proposed by the Concept Plan (shown in the architectural plans and AJC Urban Design Report at **Appendix A**) have been designed to complement the site's locality whilst creating a learning environment and providing student housing that meets the future needs of MTC students and staff. The justification for the proposed height, FSR, setback and landscape controls is set out below in detail.

6.2.1 Height

Table 11 below provides a comparison between Council's existing and proposed UDR heights with the proposal.

Table 11 – Comparison between Existing, Recommended and Indicative Building Heights

Building	SSDCP 1998 Control* (m)	UDR Recommendation (m)	Indicative Concept Plan Height (m)
A1	N/A	18	30
A2	N/A	15	11
A3	N/A	15	10
A4	N/A	9	14
A5	N/A	12	12
A6	N/A	9	10
A7	N/A	15	13
A8	N/A	15	23
Site B	N/A	15	31
Site C	N/A	9	9

*SSDCP 1998 does not provide building height or FSR controls for sites marked N/A

Height – Site A

The tallest building on the MTC campus will be the Resource and Research Centre (Building A1). The site was chosen due to its strategic location at the corner of King Street and Carillon Avenue where it will form the gateway into Newtown. The importance of a landmark building on the site is recognised in Council's UDR which identifies the location as a significant site where a 'gateway' building of high architectural quality and expression should be located.

The proposed development exceeds the recommended maximum height of 18m (5 storeys) in the UDR by 11m. Whilst the proposed envelope exceeds the Council's recommended height control, the proposed height is considered appropriate for the site because:

- it allows for a landmark building to be constructed on a significant gateway site;
- the envelope allows for upper level setbacks and façade modulation which will minimise the impacts of the height;
- shadow cast by the building predominantly falls over King Street and will not have a negative affect on the amenity of any adjoining properties; and
- it fits within the existing and future built form character of the area which includes a number of taller buildings.

Furthermore, the concurrent Project Application for Building A1 (detailed in Section 8.0) demonstrates that despite not complying with the recommended UDR heights, through careful site analysis and inventive design, an appropriate and high quality design outcome that is sympathetic to the locality, can be achieved on the site.

The heights of the other buildings on Site A step up progressively from Little Queen Street to Building A1. Whilst the 23m tall Building A8 will also not comply with the UDR recommended height control of 15m, **Figure 49** illustrates that the proposed stepping heights, respond to the topography of the site and are in keeping with the existing and future built form character along Carillon Avenue which consists of other large academic colleges associated with Sydney University.

It should be noted that the Council's UDR states that the purpose for the 5 storey maximum height on Site A is to create an appropriate relationship to the neighbouring heritage items. The Heritage Impact Assessment at **Appendix I** demonstrates that the proposed envelopes have been designed to ensure that future development will not have any adverse impacts on the heritage items within or around MTC.

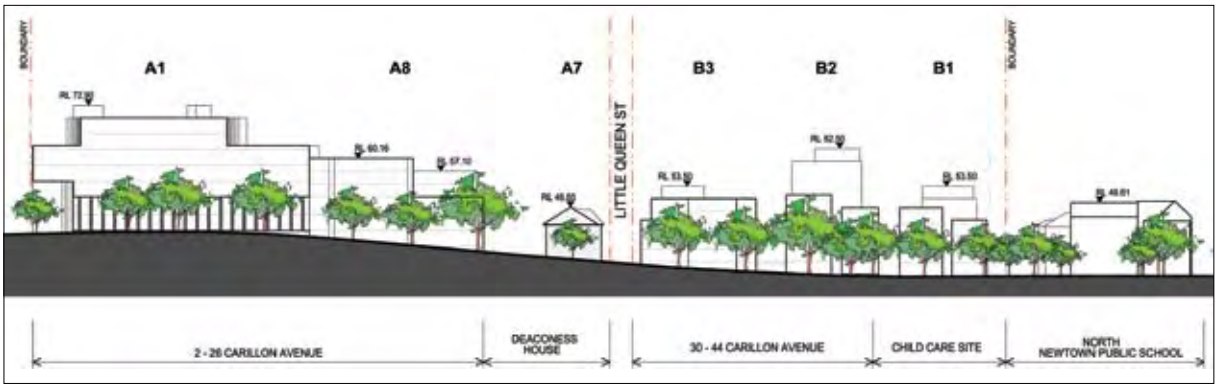

Figure 49 – North Elevation from Carillon Avenue
Source: AJC

Height – Site B

On Site B, the building heights gradually step from the heritage buildings along Little Queen Street to Building B2 which is the largest building on Site B. The 9 storey Building B2 will exceed the Council's UDR 15m height recommendation by 9m. The non-compliance with the UDR recommendation is again considered appropriate as:

- the tower is significantly set back behind the street edge parapet along both Carillon Avenue and King Street and the building height and bulk will therefore not be perceivable from the public domain;
- it is located in the middle of MTC campus and at the lowest part of the site in order to minimise the impact of the height;
- it is located behind the existing street tree canopy (**Figure 50**);
- the stepped building heights provide a gradual transition in scale from the King Street terraces up to the residential colleges along Carillon Avenue;
- it will not have any adverse impacts on the heritage items on or near the site; and
- the height of the building is similar to other residential colleges in the area and is likely to represent the future urban character of the area.

Figure 50 – Site B looking west along Carillon Avenue
Source: AJC

6.2.2 Density

The proposed GFA across Sites A, B and C have been developed with regards to the UDR recommend FSRs, whilst also recognising the College's long term vision for the site.

The UDR recommends a variety of future FSR controls ranging from 1.5:1–4:1 based on the existing lots on the site. Application of lot specific FSRs is not ideal given the small and narrow configuration of many of the lots that comprise the MTC site. Adopting Council's recommended FSR controls is unlikely to facilitate functional built form and individual properties may not actually ever be able to achieve the recommended controls if developed in isolation.

AJC has therefore recommended site or precinct based FSR controls to ensure MTC has the sufficient development capacity to expand and improve their facilities to meet the increasing student enrolments.

Direct FSR comparisons between proposed buildings against recommended controls are unhelpful in assessing the impact of density across the campus for the reasons outlined above. However, the site wide FSR of 2.3:1 falls well within the range provided by Council's UDR and is generally consistent with the UDR's recommendations and the density of the surrounding area.

Furthermore, the built form controls contained in the AJC Urban Design Report at **Appendix A** in conjunction with the subsequent Project Application process will ensure that adequate built form outcomes are achieved on the site through the proposed Concept Plan.

6.2.3 Street Frontage Heights and Setbacks

The street frontage heights throughout the Concept Plan area have been selected to relate to the height of the building interface with the street. The proposed street frontage heights are generally consistent with recommended UDR height controls and will achieve two outcomes:

- Retention of the intended street frontage scale (as envisaged by the Council's UDR); and
- An enhanced streetscape.

The proposed street setbacks will maintain and reinforce the existing setback character along the various site frontages. The zero street setback along King Street will commence from the corner with Carillon Avenue therefore enhancing the 'high street' character of the street where buildings are typically built to the street boundary. The zero street setback will then continue down Little Queen Street where it will maintain the existing residential character.

The proposed setbacks to Carillon Avenue will reinforce the 'valley road' character of the street by maintaining the angled landscaped setbacks. The landscaping within the setbacks will allow for the private domain to contribute to the overall landscape quality of the public domain.

In response to the surrounding built form the upper levels of new buildings will be designed to be setback from the street frontage height before achieving the overall building height. The proposed upper level setbacks are shown in the Urban Design Report at **Appendix A**.

Generous upper level setbacks are proposed to respond to sensitive areas such as the heritage buildings and facades within the campus and the surrounding residential uses. Any additions to the rear of the facades along King Street will be placed behind a generous upper level setback to ensure that the silhouettes of the skyline created by the parapets are retained. The buildings adjoining Deaconess House will have a maximum street wall height of 3m and then a minimum upper level setback of 2.5m to ensure the surrounding built form is not over bearing on the heritage buildings as shown on **Figure 51**. The building opposite the Campbell Street terraces will have a maximum street height of 2 storeys and an upper level setback of 3m as shown on **Figure 52**.

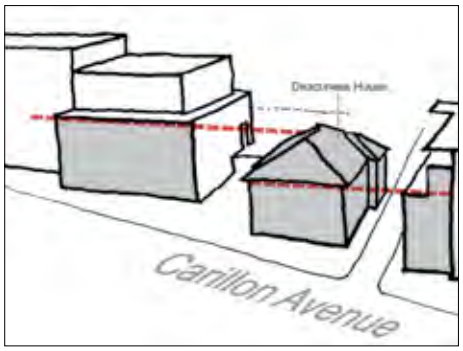

Figure 51 – Upper level setbacks near heritage and contributing items
Source: AJC

Figure 52 – Upper level setbacks near Campbell Street terraces
Source: AJC

In summary, despite some departures from Council's recommended controls, the MTC Concept Plan proposal is still consistent with the built form objectives of the UDR in that it will:

- protect the heritage items by providing an infill development that responds to the height, massing and predominant horizontal and vertical proportions of the existing urban character;
- provide a large footprint addition to the rear of buildings fronting King Street whilst retaining the original contributing facades
- remove the current vehicle crossing from King Street;
- provide a building envelope that is capable of delivering a high quality design for the gateway site at the corner of King Street and Carillon Avenue; and
- provide shopfronts and awnings facing King Street to increase pedestrian activity and amenity and unify the streetscape.

The proposed building heights and FSR controls will provide the necessary envelopes to allow MTC to expand whilst ensuring a high quality design outcome on the site which is sympathetic to the existing urban character of Newtown.

6.3 Design Quality of Student and Faculty Accommodation

To ensure a good design outcome for the student and faculty accommodation is achieved on the site the design of the Concept Plan has incorporated the 10 design principles set out in SEPP 65 into the proposed scheme.

It should be noted that the Concept Plan only seeks approval for building envelopes and not for the specific design of each building. Therefore further consideration of the design principles will be undertaken during the detailed design of the residential flat buildings as part of the future Project Applications on the site following approval of the Concept Plan.

Principle 1: Context

The proposed building envelopes will allow the future residential buildings on the site to contribute to the quality and identity of the area. The proposal reinforces the built form character of the area whilst delivering a sympathetic infill development on the site. A summary of the analysis undertaken in developing the design and it response to the context is located in the AJC Urban Design Report at **Appendix A.**

Principle 2: Scale

Section 6.2 and the Urban Design Report at **Appendix A** demonstrate that the proposal will provide an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. In particular the Section addresses how the proposed bulk and height needs will achieve the scale identified for the desired future character of the area in the UDR.

Principle 3: Built form

Section 6.2 and the Urban Design Report at **Appendix A** demonstrate that the proposed built form is appropriate for the site.

Principle 4: Density

Section 6.2 demonstrates that proposed density is appropriate in its context, in terms of floor space yields. The proposed GFA across the site generally comply with the UDRs recommended FSRs and the building envelopes are of a similar density to other residential colleges located in the area. It should be noted that the residential buildings will be used as student accommodation and that a dense community environment is an important cultural component of studying at MTC.

Principle 5: Resource, Energy and Water Efficiency

An ESD strategy has been prepared for the Concept Plan site (see **Appendix K**). The future Project Applications for the residential buildings will incorporate the elements of the Strategy to ensure that sustainability is incorporated into the design process of future development.

Principle 6: Landscape

As demonstrated in the landscape concept at **Appendix F** and summarised in Section 6.4, the open space areas and buildings operate as an integrated and sustainable system. The design of the landscape and open space areas will result in greater aesthetic quality and amenity for both occupants and the adjoining public domain.

Principle 7: Amenity

As detailed in the Urban Design Report at **Appendix A**, the development will provide good amenity through the physical, spatial and environmental quality of the design. Future development will be designed to optimise amenity through appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.

Principle 8: Safety and Security

As demonstrated in Section 6.4 the design of the Concept Plan will optimise safety and security, both internal to the development and for the public domain. In particular the design will maximise overlooking of public and communal spaces, maximise activity along the street frontages, provide clear and safe access points, provide appropriate lighting, and create clear definition between public and private spaces.

Principle 9: Social Dimensions and Housing Affordability

The housing is being provided for students and their families studying at MTC. The charges payable by MTC students for single or family accommodation is substantially lower than the market value of equivalent housing. Students at MTC also commonly rely on the donations and support of friends and family and would otherwise struggle to afford housing in the area, therefore the provision of housing on campus is essential in supporting their studies.

The indicative proposed unit mix has been selected to specifically cater for the needs of the students and their families. This includes providing smaller apartments for young families through to large multi bedroom apartments for larger families or which will be shared by single students attending the College.

Principle 10: Aesthetics

The appropriate composition of building elements, textures, materials and colours of the development will be incorporated into the detailed design of future Project Applications on the site. It should be noted that MTC is committed to providing a high level of aesthetic quality for the future buildings on the site which is evident in the design for the Stage 1 Project Application.

6.4 Visual Impact

The Concept Plan will result in the existing small and medium scale buildings and open space being replaced by a larger scale development. In particular, the new Resource and Research Centre (library) will create a significant built form at the corner of Carillon Avenue and King Street. In order to provide the required space for expansion a view analysis was undertaken as part of the master planning process to ensure that any future development was designed to minimise the visual impact of the development significant. View analysis diagrams and photo montages demonstrating this process are contained within AJC's Urban Design Report at **Appendix A**.

Whilst there are no sensitive visual receptors within the vicinity of the site, the Concept Plan will affect the commercial receptors along King Street and residential receptors directly viewing the site from the Sydney University colleges and Campbell Street. There are also a large number of transient receptors that pass the site when travelling along King Street.

The Concept Plan will result in a significant upgrade to the King Street and Carillon Avenue frontages of the site, replacing the current poor quality buildings with contemporary and sympathetic architecture. New public domain treatments and landscaping, multiple pedestrian entries to the site and active uses such as the Resource and Research Centre atrium and shopfronts will further embellish the Concept Plan's response. This will create improved views to the site from the public realm. Furthermore, the design along with the increased student and staff population, will create a much busier street scene along King Street which will result in a more interesting and active public domain. On balance, the visual outcome is considered appropriate.

6.5 Environmental and Residential Amenity

Solar Access and Overshadowing

The Concept Plan Shadow Diagrams at **Appendix A** illustrate that there will be very minor overshadowing impacts as a result of the proposal. The majority of the shadow cast by the proposed building envelopes will fall within the Concept Plan site or on the front facades of the adjoining terraces along Campbell Street, the majority of which are owned and occupied by MTC. The development will not cast any shadows on the private open space or internal living areas of any residential properties.

Site B will cast a shadow over an area of the North Newtown Primary School site in the mornings during the middle of winter. However, as the school is directly to the west it will not be overshadowed during the middle of the day or afternoon when the area would be most in use. Furthermore, the area is well vegetated and also includes existing covered outdoor playgrounds, therefore the impact of this shadow is considered negligible.

Visual and Acoustic Privacy

Providing visual and acoustic privacy to the future dwellings on the site and adjoining properties will be subject to the detailed design as part of the future applications for the site. However, the proposed building envelopes have been sited to provide varying orientations and adequate spaces/setbacks between adjoining residential uses to ensure that there are no visual or acoustic privacy issues in the subsequent stages of the development.

Wind Impacts

Wind analysis undertaken by Cundall (see **Appendix K**) indicate the predominant wind directions are from the south east and north east, with the strongest winds most likely to come from either a southerly or north easterly direction.

These predominant wind directions are likely to be beneficial to the buildings on site as they cut across the two main streets, King Street and Carillon Avenue. This means that the wind can be well utilised for natural ventilation purposes.

Direct wind from the east or west could potentially be an issue on Carillon Avenue which runs almost due east-west, however as the wind speeds from this direction are likely to be low, and the Concept Plan proposes angled setbacks this risk is likely to be limited.

Safety and Security

The Concept Plan has been designed with regard to the principles of Crime Prevention through Environmental Design (CPTED). Some of the key strategies to be implemented as part of the Concept Plan and future Project and/or Development Applications to ensure safety and security in and around the MTC campus will include:

- provide residential uses within the academic core to allow for 24 hour use and surveillance of the Campus;
- ensure all buildings have a street address and frontage;
- incorporate active frontages at street level in the form of entry lobbies, shopfronts,
- provide a clear visual connection into the ground level academic spaces;
- design appropriately lit foyers and entry lobbies for night-time use;
- create entry forecourts to the Campus that define public from private land and provides 'lines of defence';
- provide rooftop terraces and balconies to encourage passive surveillance over the streetscape and campus;
- improve the safety and surveillance of Carillon Avenue by ensuring that garden walls and fences do not exceed 1.2m in height; and
- clearly express the 'front door' of the Campus to ensure legibility.

6.6 Heritage

The site contains a number of items of local heritage significance. Accordingly, a Heritage Impact Statement (HIS) for the Concept Plan was prepared by Noel Bell Ridley Smith & Partners (NBRS) (see **Appendix I**). In addition, NBRS has prepared a Conservation Management Strategy for the Concept Plan which is appended at **Appendix I**.

The assessments covered the following:

- The potential impact of the proposal on non-indigenous heritage due to the demolition and / or alteration of items of heritage significance;
- The potential impact of the Concept Plan on the heritage significance of the locality; and
- The manner in which the project will enhance and interpret the historic associations of the place and respect the curtilage of significant places in the vicinity of the site.

6.6.1 European Heritage

As illustrated in **Figure 19**, the site includes the following items of local heritage significance (identified in bold text) or those which are identified as "contributory items" under the South Sydney LEP 1998, all are shown in **Figure 19**:

- 3-5 King Street;
- 7 King Street;
- 9 King Street;
- 11 King Street;
- 13-15 & 17-19 King Street (Knox Building);
- 21 King Street;
- 23-27 King Street;
- 29-31 King Street;
- 33-35 King Street;
- 2-16 Carillon Avenue;
- 18-28 Carillon Avenue;
- 30-44 Carillon Avenue;
- 84-86 Carillon Avenue;
- 1-13 Little Queen Street;
- 15-17 Little Queen Street;
- 2-4 Little Queen Street; and
- 6-20 Little Queen Street.

A small portion of the site was originally one of three early subdivisions which was granted in 1871 to Christopher Rolleston, Thomas Breillat, Stephen Brown and William Crane. The four men subdivided the site and sold the resulting 13 lots as residential lots in 1873.

The majority of the MTC site however, originally formed part of William Bligh's initial 1806 grant at Camperdown. The estate occupied up to 240 acres at its greatest extent, and was subdivided on many occasions and had many owners following Bligh's death in 1817. Since that time, the site has been occupied by commercial and retail premises and small terrace houses. From 1889, MTC has been purchasing land along King Street and Bligh Street (now Carillon Avenue) for its expanding educational institution.

Several of the buildings comprising the site are identified as either having local heritage significance in SSLEP 1998, or are considered to be contributory items. NBRS has undertaken a detailed assessment of the heritage significance of each of these buildings in the context of the proposed Concept Plan – summarised below. The assessment also considered impacts on the King Street streetscape.

- Exceptional Significance – no elements present on the site.
- High Significance – no elements present on the site.
- Moderate Significance – the following items are considered to be of moderate significance:
  - 9 King Street
  - 11 King Street
  - 33 King Street
  - 35 King Street
  - 28 Carillon Avenue (Deaconess House)
  - 6-20 Little Queen Street
  - 1-13 Little Queen Street
- Little Significance – the following items are considered to be exhibit little significance:
  - 1-7 King Street
  - 13-15 & 17-19 King Street (Knox Building)
  - 21-31 King Street
  - 2-16 Carillon Avenue
  - 18-26 Carillon Avenue
  - 30-44 Carillon Avenue & 84-86 Campbell Street
  - 15-17 Little Queen Street
  - 2-4 Little Queen Street

All buildings proposed to be demolished (identified in **Table 5**) are considered to have little heritage significance. 1-13 King Street (**Figure 53**), which are also proposed to be demolished, are listed as contributory items in Council's Conservation Area and are a portion of a slightly larger group of buildings (1-17 King Street) which NBRS + Partners have identified as exhibiting moderate significance.

Figure 53 – 1-13 Little Queen Street

However, MTC has a limited number of options to accommodate growth. Approximately 20,000m^2 of additional floor area is required to accommodate growth in student and staff numbers, teaching, cultural, recreational and research areas at the Newtown Campus.

In developing the Concept Plan alternative strategies were investigated for locating the major components of this floor area, including maximising floor area on the site behind the facades of the contributory items facing King Street. This strategy makes optimal use of the limited area available on the site.

The retention of all existing buildings and particularly 1-13 Little Queen Street would limit the achievement of this strategy and a number of the Concept Plan objectives. Specifically:

- it would not allow the quantum of floor area required on the site to be provided within the proposed height limit or within the number of floors appropriate for educational uses;
- connectivity across the Campus and between King Street and Carillon Avenue would not be achieved; and
- it would significantly inhibit the provision of modern cutting edge buildings that are appropriate for, and expressive of the teaching, research, studying and residing to be accommodated on the site.

It is strategically important for MTC that new buildings and in particular the "gateway" Resources and Research Centre have a modern image that will promote and contribute to the success of the College. The retention of non heritage items or less significant contributory items would be counter to this strategy.

Given the above considerations, it is considered acceptable to demolish buildings which have been identified as having low heritage significance in NBRS + Partners' Conservation Management Strategy. The need to provide contemporary educational facilities for future generations outweighs the heritage value of the less significant building present on the site, as well as the 1-13 Little Queen Street terraces.

To minimise impacts on the heritage significance of buildings on and around the site, MTC will implement the following measures:

- prepare an interpretation plan that communicates the heritage significance of relevant components of the site;
- undertake photographic archival recording prior to the commencement of demolition works; and
- undertake archaeological investigations in accordance with an Archaeological Research Design prior to, or in conjunction with, ground disturbance of areas with historical archaeological potential.

The above matters form part of the draft Statement of Commitments.

6.2.2 Excavation

The Concept Plan will result in excavation and construction on some parts of the site. An assessment of the archaeological potential of the entire site has been incorporated into the Conservation Management Strategy at **Appendix I**.

The assessment concludes that the structures proposed to be retained on Little Queen Street, at 33-35 King Street and beneath the former White Horse Hotel have the greatest potential to hold relics of significance. There is no evidence to suggest that the significance of relics elsewhere on the Concept Plan site is of local or State significance specific to this site relative to other late nineteenth inner suburban residential developments.

Due to the moderate archaeological potential of some of the site and the low potential of most of it, the report recommends that the excavation be managed by a Section 140 (Heritage Act) Application and monitoring of any proposed excavation with any relics of local or State significance retained on site and interpreted.

6.6.3 Aboriginal Heritage

Available evidence indicates that the Cadigal people occupied the land comprising the site prior to, and following, the arrival of European people in Sydney. These people were amongst the first to make contact with European settlers, and consequently encountered competition for land and resource use.

A search of the Aboriginal Heritage Information Management System (AHIMS) did not identify any Aboriginal objects or places. The long history of disturbance and construction on the site means the presence of relics is unlikely.

The proposed Concept Plan will result in significant and widespread disturbance across the site, including landscaping, and excavation for basements.

Although the assessment of significance conducted for the site has indicated there is little potential for any relics to remain on the site or in topsoil deposits, it is possible that some may remain. However, should any relics be uncovered, they are likely to be of low scientific or cultural significance. As a consequence, the Concept Plan would be unlikely to impact upon the indigenous cultural values of the site.

It is noted that future development of the site would not require a permit to disturb or destroy Aboriginal archaeology under Part 6 of the *National Parks and Wildlife Act 1974*.

Should unexpected or significant Indigenous remains not previously identified be discovered during excavation at the site, all works are to cease and a nominated archaeologist and the MLALC be contacted to assess the finds. In addition, pursuant to section 91 of the *National Parks and Wildlife Act 1974*, the Department of Environment and Climate Change and Water will also be notified of the discovery.

The above matters form part of the draft Statement of Commitments.

6.7 Transport and Accessibility

A detailed assessment of the impacts of the Concept Plan on the existing road and public transport network has been conducted by TRAFFIX (refer **Appendix G**). The Concept Plan proposes to increase the student capacity of the Campus by 380% and staff numbers by 250% over the next 10-25 years.

The assessment considers the current traffic conditions in the vicinity of the site, traffic impacts associated with the proposed development and cumulative impacts of the proposal and other developments in the locality, such as the Frasers development.

6.7.1 Traffic Generation

Morning (AM) peak hour traffic counts were undertaken at six locations in the vicinity of the site in April, 2009. The morning peak was considered more critical as that is when most students and staff are likely to coincide with the surrounding road networks peak period (whereas a more dispersed trip profile occurs during afternoon periods). Existing intersection operating conditions were also measured at the King Street/Carillon Avenue, King Street/Missenden Road and Carillon Avenue/Missenden Road intersections, with all intersections performing at a generally satisfactory Level of Service ("C" and "D") during the morning peak period. Little Queen Street experienced negligible volumes of traffic flow (maximum of 11 vehicles/hour onto Carillon Avenue).

The impact of the development on the nearby road network has been assessed in the context of the Concept Plan development. TRAFFIX modelled the performance of intersections in the vicinity of the site, including the cumulative impacts of traffic (refer **Appendix G**).

It is important to note that a large proportion of the existing student body that uses the MTC presently resides throughout the metropolitan area and commutes to the College via public transport or by private car.

The provision of on-site accommodation will eliminate these trips and accordingly the internalisation of trips will reduce travel demand.

Based on the travel patterns of current students, and the shift in the mix of full and part time students on the campus, it is expected the Concept Plan would generate an additional 90 student and staff vehicle trips during the AM peak period most of which would be attributed to Site A (i.e.: future administration and staff accommodation).

All three intersections modelled by TRAFFIX are anticipated to maintain the same level of service when traffic attributed to MTC is added to current conditions. Overall, the impact of the proposal on local traffic conditions is considered satisfactory.

6.7.2 Access and Internal Design Aspects

The Concept Plan is heavily reliant on the surrounding road system, which provides little opportunity for new accesses into the site. The Concept Plan proposes the following access arrangements:

- Site A – access is to be via a left in-left out 6m wide entry-exit driveway onto Carillon Avenue. The driveway will be located 75m west of the Carillon Avenue/King Street intersection and anticipated to accommodate 65 vehicle trips/hour during the AM peak;
- Site B – a 6m wide entry-exit driveway on Carillon Avenue approximately 170m west of the Carillon Avenue/King Street intersection. This exit-entry driveway is anticipated to experience a peak volume of 25 vehicle trips per hour during the AM peak;

- Truck access into Site A via the proposed plaza using a one-way flow through arrangement and managed by way of a Management Plan which will be prepared by the College; and
- Decommissioning of all other existing driveways and car park access ways onto Carillon Avenue and King Street. Kerb lines will be reinstated.

All driveways and internal arrangements will be designed to comply with AS2890.1 and AS2890.2.

All of the recommendations outlined in Appendix G regarding site access arrangements have been incorporated into the draft Statement of Commitments.

6.7.3 Public Transport

TRAFFIX has assessed the capacity of the existing bus network and, given the small increase in forecast demand, found there is capacity to accommodate the growth in passenger demand attributed to the Concept Plan. The expected increase in rail patronage attributed to the Concept Plan can be reasonably accommodated on existing CityRail services. The NSW Government is considering a number of ways to augment and improve the current capacity of the Sydney transport network. Moore College Campus students and staff would benefit from any of these improvements, should they eventuate.

MTC encourages its staff and students to use public transport and alternative means to access the site, and this will continue in the future.

While demand for public transport services generated by the Concept Plan can be readily accommodated within the existing network, TRAFFIX has recommended the following travel demand measures to encourage a lesser reliance on private car use:

- taxi services – the site is readily accessible by frequent taxi services and as such consideration should be given to the provision of a short taxi rank in Carillon Avenue adjacent to the site;
- car share and car pool arrangements – car share (such as GoGet) and ride share arrangements could form an integral policy adopted by the College to reduce car dependency for non-resident trips; and
- Transport Access Guide – a 10%reduction in private vehicular usage has been recommended by TRAFFIX as a realistic target that the College should aim to achieve.

These measures form part of the draft Statement of Commitments.

6.7.4 Emergency and Service Vehicle Access

Direct vehicle access for emergency vehicles to the site is available via Carillon Avenue, King Street, Campbell Street and Little Queen Street.

Existing arrangements for service vehicles will be rationalised. The existing on-street loading areas for garbage collection will remain, however the Concept Plan proposes to transfer all other existing on street demands from Sites A, B and C into a centralised 15 metre long loading area within Carillon Avenue adjacent to the main lobby serving the library.

A loading dock is also proposed within the central plaza to service Sites A, B and C which will be used in conjunction with the controlled use of Little Queen Street between King and Campbell Streets.

The new delivery facilities will accommodate a larger range of vehicles than the current arrangements and will generally facilitate the forward movement of vehicles to and from the site.

6.7.5 Pedestrian Connections

The assessment undertaken by TRAFFIX shows that the walking distances between the existing formal pedestrian crossings and the main entrances to buildings within the Campus are short.

There are signalised pedestrian crossings at King Street/Carillon Avenue, King Street/Little Queen Street and Carillon Avenue/Missenden Road in close proximity to the campus. These crossing points line up with present and future pedestrian routes, including in particular pedestrian and cycle routes towards RPA, Victoria Park, Sydney University, the City and Newtown CBDs and public transport linkages at the surrounding railway stations and Broadway bus stops.

While the Campbell Street/Little Queen Street intersection is the only street without formal pedestrian facilities, it is proposed to be partially closed and is currently the subject of a separate application with the City of Sydney Council as the relevant roads authority. The closure will further reduce traffic flows through the site negating the need for midblock crossings or other traffic control measures through the site.

The existing pedestrian and bicycle network linkages as well as pedestrian safety amenity in general will be improved through the following initiatives:

- removal of all existing at grade parking into basement car parking accessed via Carillon Avenue;
- introduction of a plaza within Site A to provide a gathering space and predominantly pedestrian zone;
- closure of Little Queen Street between King and Campbell Streets with use of bollards to provide emergency access if required;
- connectivity to all footpath networks connecting the site to bus services along King Street and Missenden Road; and
- Pedestrianisation of the road network within the site to enable staff and students to move freely within and through the site.

As demonstrated above the locality is well served with pedestrian crossings and additional crossings will not be necessary, as they would compromise traffic flow and are unlikely to be approved by the RTA.

6.7.6 Cycle Facilities

To further promote the use of public transport, walking and cycling to access the site, redevelopment as part of the Concept Plan will include adequate bicycle parking and end of trip facilities. Bicycle spaces are proposed to be provided at a rate of 1 space per 20 staff/students during future Project and/or Development Applications.

The provision of bicycle spaces and facilities have been incorporated into the draft Statement of Commitments.

6.7.7 Construction Traffic Management

The impacts of construction traffic will be controlled through Construction Traffic Management Plans prepared for individual Project and/or Development Applications.

Given that College's close proximity to major transit hubs and the existing high number of pedestrian movements in and around the Campus, Construction Traffic Management Plans will incorporate and be framed around the following principles:

- Truck parking areas, construction zones, crane usage and truck routes are to be identified.
- Pedestrian movements along footpaths are to be maintained at all times on major roads surrounding the site including Carillon Avenue and King Street.
- Trucks are to enter and leave the site in a forward direction unless accredited flag persons are in place to control traffic and pedestrians.
- Building Contractors are to maintain strict traffic management procedures including using traffic wardens to ensure the safety of road users and pedestrians.
- All vehicles carrying materials to or from the site are to have their loads covered with tarpaulins or similar covers.
- Openings in construction fencing at construction access driveways are to be managed and controlled by qualified site personnel.
- Pedestrian warning signs and flashing lights are to be erected adjacent to all construction access driveways.

The above principles have been incorporated into the draft Statement of Commitments.

6.8 Car Parking

TRAFFIX has adopted the following car parking rates (derived from the City of Sydney's DCP 11, existing car parking provision and College-specific assumptions based on existing demands) to calculate car parking demand for the Concept Plan proposal;

- Staff (administration and teaching) – 1 space per 90m^2;
- Students – 1 space per 80m^2;
- Retail – 1 space per 50m^2;
- Residential
  - 1 space per existing terrace
  - 0.8 spaces per 2 bedroom unit
  - 1.2 spaces per 3 bedroom unit
  - 2 spaces per 4+ bedroom unit
- Visitor spaces - 1 space per 5 residential dwellings

Disabled car parking will be provided at a rate of 3% (approximately 10 spaces).

It should be noted that all residential car parking will be located on Site B. Having regard to **Table 12** above, this results in residential spaces being transferred from Sites A and C to Site B and provides an opportunity for the College to provide an additional 15 spaces on Site A to cater for occasional higher student and staff peaks during special events and occasions. **Table 13** summarises the readjusted car parking provision.

Table 12 summarises the demand for car parking provision by use when the above rates are applied:

Table 12 – Proposed Car Parking Requirements

Use	Proposed Quantum (m^2)	Required Car Parking	Proposed Car Parking
Site A			
Staff (Teaching & Administration)	6,226	69	
Students (Library)	10,658	133	
Retail	624	13	
Residential	9 terraces	9	
	13 x five bedroom units	26	
Visitor Spaces	-	2.6	
Site A Subtotal	-	253	170
Site B			
Staff	0	0	
Students	0	0	
Retail	0	0	
Residential	12 x two bedroom units	9.6	
	29 x three bedroom units	34.8	
	20 x four bedroom unit	24	
	16 x five bedroom units	19.2	
Visitor spaces	-	13	
Site B Subtotal	-	101	161
Site C			
Staff	0	0	
Students	0	0	
Retail	0	0	
Residential			
9 terraces	Existing	9	
Visitor Spaces	0	0	
Site C Subtotal	-	9	9
TOTAL		363	340

Table 13 – Proposed Car Parking Allocation

Site	Proposed Car Parking
Site A	170
Site B	170
Site C	0
TOTAL	340

An assessment of demand for the on-site spaces indicates the proposed car parking provision can be provided and is in fact 6% less than what could ultimately be provided under the current planning controls. Given the proposed augmentation of student accommodation on site and the correlating reduction in trips to and from the site, the overall peak hour traffic generation associated with the use of the new car parking provision is relatively small.

6.9 Ecologically Sustainable Development

MTC commissioned Cundall to develop a series of ESD strategies to be implemented as part of the redevelopment of MTC. The report (see **Appendix K**) provides a broad range of initiatives, including:

- indoor environment quality
- energy conservation
- renewable energy
- materials
- waste management
- water conservation.

MTC has adopted a number of the recommendations put forward by the report which are reflected in the Draft Statement of Commitments at Section 10.0. The inclusion of these ESD measures will result in a development that has:

- a reduced impact on the environment through emissions reduction, resource depletion and waste to landfill;
- reduced operational costs for energy and water and future proofing the development against rising utility costs; and
- improved indoor environment to make the buildings a better place to work, study and live in.

It should also be noted that in a further attempt to reduce energy consumption on the Campus, MTC commissioned Cundall to undertake a Cogeneration Feasibility Study (see **Appendix P**). Unfortunately, the results of the Study demonstrated that Cogeneration will not be an economically feasible alternative for MTC to pursue.

6.10 Geotechnical Investigations

Jeffery and Katauskas Pty Ltd has undertaken a geotechnical investigation of the site to determine the site's suitability for the proposed Concept Plan proposal in terms of subgrade preparation, excavation and earthworks, retaining walls, footings, floor slabs, pavements and soil aggressivity (**Appendix L**).

Jeffery and Katauskas Pty Ltd's methodology comprised:

- identification of potential borehole locations based on accessibility and restrictions imposed by existing buildings and structures;
- drilling of 14 auger boreholes to depths ranging between 3.8-7.5m below existing surface levels (**Figure 54**), of which four (4) boreholes (7, 10, 12 and 13) were deepened to termination at depths between 7.0-10.33m;
- assessment of the soil samples' fill and strength using the Standard Penetration Test "N" values, supplemented by readings against recovered split tube clayey samples;
- laboratory analysis of selected soil samples for moisture content, Atterberg Limit, linear shrinkage and soil pH values;

- assessment of weathered rock samples and recovered rock cuttings collected during the auger penetration and subsequent laboratory moisture content tests;
- examination and correlation of cored bedrock using rock strength testing; and
- monitoring of groundwater in the boreholes during and on completion of the 14 individual boreholes.

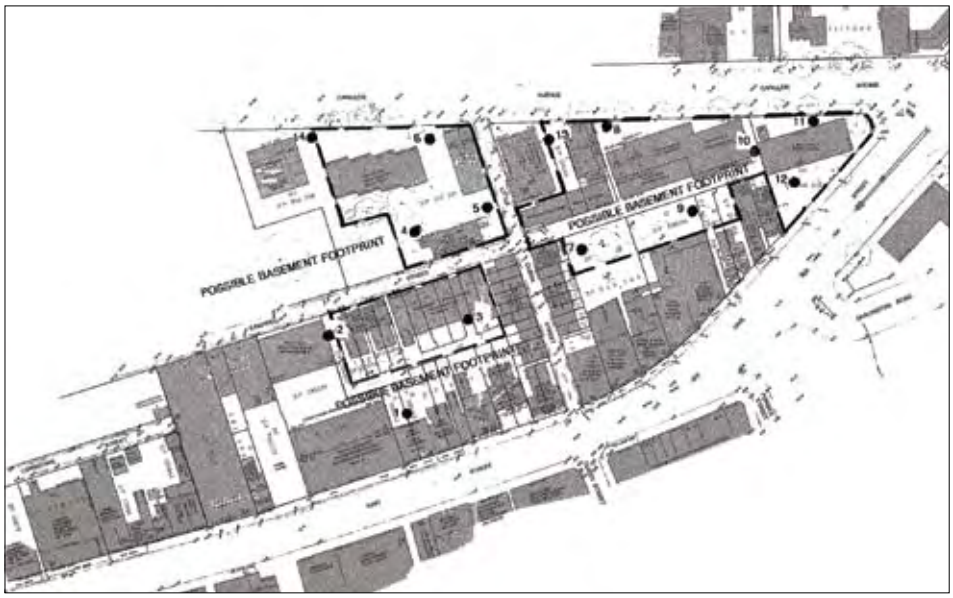

Figure 54 – Borehole Location Plan

Detailed borehole logs for each of the 14 drilled locations is provided at **Appendix L**. Typically, the borehole profiles revealed existing pavements, topsoil/fill, and shallow to moderately deep fill over residual silty clays and weathered bedrock. Bedrock was encountered between 1.4m-4.4m below existing levels. Groundwater seepage was encountered at Boreholes 1, 6, 9 and 14 at depths between 4.2m and 6.5m, whilst the remaining Boreholes were "dry" both during and upon completion of drilling.

Based on the subsurface investigations and laboratory results, Jeffrey and Katauskas Pty Ltd's Geotechnical Investigations Report contains detailed recommendations MTC should adopt during Stage 1 and subsequent construction phases of the proposal.

Recommendations have been made in relation to sub-grade preparation and excavation, excavation batters, fill earthworks, engineered fill, groundwater and drainage, shoring systems and retaining walls (including design parameters), excavation induced movements, footing design and construction (having regard to foundation materials), and floor slabs and pavement design and construction. Jeffrey and Katauskas Pty Ltd has also recommended further geotechnical work be undertaken to guide the proposed civil and structural design of future buildings envisaged by the Concept Plan.

All of the recommendations outlined in Appendix L have been incorporated into the draft Statement of Commitments.

6.11 Contamination

A Stage 1 Environmental Site Assessment (**Appendix M**) was undertaken by Environmental Investigation Services to investigate soil contamination conditions at the site in accordance with the relevant statutory guidelines. Based on the review of the historical site information and an inspection of the site and immediate surrounds, potential contamination in the proposed development area may be associated with the following:

- heavy metals associated with the use of No. 23-25 King Street as a galvanizing facility;
- hydrocarbon contamination associated with the use of No. 23-25 King Street as an automotive workshop;
- oil and grease associated with the former underground grease trap at No. 23-25 King Street;
- solvents associated with the use of No. 7 King Street for commercial printing and woodworks;
- contamination associated with the storage/use/spillage of chemicals/ materials used for various commercial/retail purposes at the sites;
- use of hazardous building material including asbestos and lead paint for the construction of buildings prior to 1990's; and
- contamination associated with historically imported fill material used to create the existing site levels.

To investigate the potential sources of contamination further, subsurface investigations were undertaken. The investigations encountered elevated concentrations of lead, total PAHs and P(a)P in some of the fill samples. Whilst below site assessment criteria, a soil sample also contained higher than normal concentrations of Nickel which the reports recommends should be investigated further. Asbestos was not detected within the samples, however many of the buildings on site were constructed prior to the 1990's and may contain hazardous building materials.

Based on the Stage 1 Environmental Site Assessment EIS conclude that the site can be made suitable for the proposed development provided that the following are undertaken:

- a detailed Stage 2 investigation to meet the NSW DECC (EPA) Sampling Design Guidelines. The Stage 2 investigation should include additional soil sampling in the vicinity of the boreholes BH102, BH103 and BH108 in order to identify the vertical and horizontal extent of contaminants encountered during the Stage 1 works;
- groundwater investigation in the vicinity of the boreholes BH102, BH103 and BH108 to assess the impact of soil contamination on groundwater conditions at the site;
- additional soil and groundwater investigation in the vicinity of BH111 in order to identify the extent of nickel contamination on the natural soils at the site;
- additional TCLP leachate analysis in order to provide a thorough waste classification for the disposal of fill and natural soil associated with the development;
- preparation of a remedial action plan (RAP) outlining the procedures to remediate the contaminants encountered at the site in order to render the site suitable for the proposed development; and
- preparation of a validation assessment report demonstrating the outcomes of the remediation works.

The above matters form part of the draft Statement of Commitments.

6.12 Water Cycle Management

Existing stormwater and drainage systems can accommodate expected flows from the new development, and will be augmented to provide connections to new buildings on the site.

6.13 Noise

To assess the impact of noise produced by the proposed development on the surrounding residential buildings and the impact of the existing ambient noise on MTC an Acoustic Amenity Report was prepared by Acoustic Studio (see **Appendix N**).

6.13.1 Noise Impacts from the College

It is not expected that the activities occurring as part of the day-to-day operation of the redeveloped college will create any significant noise impact on the surrounding area. Therefore the only potential noise sources will be mechanical systems associated with cooling and heating systems for the buildings.

Noise monitoring undertaken as part of the assessment observed that external ambient noise levels measured on site and around the site already exceed the recommended noise levels presented in the amenity criteria values set out in the Department of Environment, Climate Change and Water (DECCW) Industrial Noise Policy (INP). The exceedance is due to the high traffic noise from King Street and Carillon Avenue which run on either side of the site.

As the existing ambient noise levels exceed the recommended amenity criterion, corrected amenity criteria values were developed in accordance with the INP. As the selection of the mechanical systems will be subject to further detailed design the report recommends MTC adopt any or all of the following measures to ensure the proposal will not exceed the established noise limits:

- select appropriate quiet equipment;
- strategically locate noisy equipment away from sensitive areas;
- use of noise barriers, shielding or construction of acoustic enclosures;
- provide for in-duct noise attenuation; and
- ensure plant rooms be of masonry construction with internal sound absorptive treatment as required.

6.13.2 Noise Impacts on the College

A comparison of the surveyed external noise levels around the proposed site and the recommended external noise levels from the Environmental Criteria for Road Traffic Noise (ECRTN) shows that existing traffic noise levels already exceed the recommended noise levels for residential premises adjacent to existing arterial roads. However, MTC can address and reduce traffic noise impacts inside the College facilities if suitable traffic noise control measures are incorporated in the detailed design of the Project Applications.

Accordingly, the following noise control measures have been incorporated into the design of the Concept Plan and included in the draft Statement of Commitments:

- optimise architectural layout by strategically locating noise sensitive areas away from traffic noise sources;
- design the building envelopes to provide the required attenuation to achieve the internal design sound levels;
- provide mechanical ventilation to enable windows and doors of noise sensitive spaces to be closed;

- provide acoustic perimeter seals for windows and doors in noise sensitive spaces; and
- use of noise barriers around terraces and open spaces.

It is anticipated that by implementing the traffic noise mitigation measures above during the detail design stage there will be no adverse noise impact on MTC from existing traffic noise levels.

6.13.3 Construction Noise and Vibration Impacts

As the specific details regarding construction works are yet to be determined, a Construction Noise and Vibration Management Plan (CNVMP) has been prepared by Acoustic Studio (see **Appendix N**) to provide general recommendations and indicate best noise and vibration control practices to be observed by contractors during construction of MTC. Whilst there are a number of sensitive noise receivers on and in the proximity of MTC the CNVMP does not anticipate there to be any adverse construction noise or vibration impacts as a result of the proposed redevelopment.

The above matters form part of the draft Statement of Commitments.

6.14 Disabled Access

A Strategy for the Provision of Access for People with Disabilities has been prepared by Access Associates and is located at **Appendix J**. The report identifies key access issues within the Concept Plan site and makes a number of recommendations to ensure the future development meets the requirements of the Disability Discrimination Act.

The report concludes that compliance with statutory requirements, pertaining to site access, parking, continuous accessible paths of travel, vertical access, emergency evacuation and accessible sanitary facilities, can be readily achieved.

7.0 Project Application

7.1 Introduction

This Project Application relates to the construction of a new 7 storey Resource and Research Centre and associated works within the Moore Theological Campus (see **Figures 55** and **56**). The broader Campus development is discussed in detail in the Concept Plan at Section 5.0 of this report.

This section of the EAR should also be read in conjunction with the information contained within and appended to this report.

Project Application Approval is being sought for the following:

- site preparation works including:
  - demolition of the existing structures on the site;
  - removal of 11 trees;
  - excavation;
- construction of a 7 storey Resource and Research Centre including library, teaching and administration spaces, and 2 basement levels including archive / storage spaces, and plant;
- construction of 2 levels of basement parking containing 74 car spaces, bike parking, and change rooms;
- construction of a vehicular access ramp to the basement car park from Carillon Avenue;
- associated landscaping and public domain works; and
- construction of a temporary car park containing 38 spaces on part of Site B to facilitate the staging of the development.

Whilst it is the intention of MTC to construct Stage 1 in a single phase, the College may choose to stage the construction depending on finance and construction practicalities. In the event that this does occur, construction will commence from the King Street/Carillon Avenue apex to provide decanting space for some current College activities.

Figure 55 – South east elevation of proposed library
Source: AJC

Figure 56 – Proposed Resource and Research Centre
Source: AJC

7.2 Site Preparation

To accommodate the proposed development the following structures on the site are proposed to be demolished:

- the existing three storey Administration and Library Building at the corner of Carillon Avenue and King Street (see **Figure 21**);
- the two storey part of the Moore College Dining Hall fronting Carillon Avenue (see **Figure 9**);
- a car park containing 12 at-grade concrete car spaces fronting King Street (see **Figure 21**);
- the two terrace buildings fronting King Street (see **Figure 5**); and
- 84-86 Campbell Street (see **Figure 13**); and
- 30-32 Carillon Avenue (see **Figure 15**).

11 trees will also be removed as part of the proposed development. The trees to be removed are shown on the Tree Survey at **Appendix E**.

Following demolition and clearance of the Project Application site, the land will be excavated in preparation of the two basement car park and library levels.

7.3 Resource and Research Centre

The proposed Resource and Research Centre will consist of seven levels of library and teaching uses, and two basement levels for storage and archiving uses. A breakdown of each level and proposed use is shown in **Table 14** below. Architectural drawings showing the proposed works are located at **Appendix A**.

Table 14 – Resource and Research Centre overview

Level	Building Area (m^2)	Description
Basement 2	1,176	Lobby, storage area, building plant
Basement 1	1,177	Change rooms, lobby, admin / storage and archiving area, building plant
Level 1	2,001	Lobby and atrium, teaching space and admin area
Level 2	1,827	Library and teaching space
Level 3	1,410	Library and teaching space
Level 4	1,607	Library and teaching space
Level 5	1,607	Library and teaching space
Level 6	993	Library
Level 7	993	Library

The first two storeys will be constructed from a combination of precast concrete and stone/tile cladding. The use of masonry materials has been selected to complement the existing materials used along King Street. The upper levels of the building use a composition of glass, metal cladding and aluminium. A materials and board detailing the proposed finishes is located at **Appendix A**.

Pedestrian access will be available to the Level 1 lobby of the Resource and Research Centre from both sides of the development via Carillon Avenue and King Street. A staircase located at the corner of Carillon Avenue and King Street will provide direct access to the library area on Level 2. Internal access to the building will also be available via the College Green and existing campus buildings

The Library will be open to the general public during the week and at certain times will provide extended hours for MTC students. The proposed hours of operation for the MTC Library are shown in **Table 15** below.

Table 15 – Library hours of operation

Day	Moore College Students	General Public & Library Members
Monday	8am - 6pm	9am - 5pm
Tuesday	8am - 9pm	9am - 5pm
Wednesday	8am - 6pm	9am - 5pm
Thursday	8am - 9pm	9am - 5pm
Friday	8am - 5pm	9am - 5pm
Saturday	Closed	Closed
Sunday	Closed	Closed

7.4 Car Park

This Project Application seeks consent for construction of part of the Concept Plan basement car park partially located beneath the Resource and Research Centre, MTC Dining Hall and College Green. Consent for the construction of the remainder of the car park (96 spaces) will be included as part of a future Project Application for MTC.

The car park proposed as part of this Project Application contains 74 car spaces, bike storage, and change rooms as detailed in **Table 16** below. Both levels have direct access into the proposed Resource and Research Centre. Vehicular access to the car park will be provided to Basement 1 via an access ramp from Carillon Avenue.

The car spaces will be used by staff and for students which live on campus. A security gate will restrict access to the car park to the public.

Table 16 – Car Park Overview

Level	Area (m^2)	Spaces	Description
Basement 2	1320	40	Car park
Basement 1	1225	34	Car park, bike storage, change rooms

Temporary Car Park

Prior to starting demolition of the existing buildings on site A, the College proposes to demolish the derelict houses on Site B at 84-86 Campbell Street and 30-32 Carillon Avenue. These sites will then provide a temporary at-grade car park to replace the existing car park located at 1 King Street and to meet the additional parking needs of the new building until the associated underground car parking is available under the College Green. The temporary car park will provide 38 car parking spaces and will be demolished to make way for the Site B development. Access to the temporary car park will be available via an entrance from Carillon Avenue and Campbell Street.

7.5 Landscaping and Public Domain

The landscape and public domain works, which are detailed in the Landscape Statement and plans at **Appendix F**, comprises:

- planting and paving the building entry points including feature planting to highlight the prominent corner exposure at the intersection of King Street and Carillon Avenue;
- landscaping to the external courtyard located on the ground floor to the west of the Atrium;
- landscaping to the level 3 and level 6 external terraces; and
- new streetscape works to King Street and Carillon Avenue.

8.0 Project Application Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the Project Application proposal. It addresses the matters for consideration set out in the Director-General's Environmental Assessment Requirements (DGRs).

The draft Statement of Commitments complements the findings of this section.

8.1 Site Suitability

Redevelopment of the existing library is required given the current space shortages, outdated facilities and minimal relocation of existing uses to accommodate the new library building.

The proposed site has been specifically selected as it will create a gateway into Newtown when approaching from the north and form an anchor for the MTC Campus under the future Concept Plan. It is located at the apex of the Concept Plan site at the intersection of King Street/Carillon Avenue, and has high profile both in terms of its accessibility and exposure.

The site is not affected by any significant environmental constraints and has excellent access to Campus facilities including the proposed car parking structure and public transport connections along King Street. It is not located directly within the vicinity of any of the University of Sydney's site boundaries or private residential dwellings minimising any potential impact on adjoining properties outside of the MTC Campus. Development on the site will result in minimal environmental impact.

8.2 Built Form / Urban Design

The building envelope of the proposed Resource and Research Centre and its variation with the Council's UDR recommended height and FSR controls are assessed in Section 6.0. This section assesses the proposed design within that envelope and its impact on the surrounding area.

Bulk and Scale

The bulk and scale of the building has been minimised through the stepping of the built form, articulation of the façade and the selection of materials. The top two storeys have been set back substantially to have the appearance of a 5 storey building when viewed from the street. The proposed building will therefore achieve the design intent of the UDR recommendations which envisaged 5 storeys on the site.

A deep recess line separates the middle levels of the building from the 2 storey masonry base. The separation will create a striking architectural feature that articulates the building and breaks up the building bulk. The levels above the masonry podium, which were selected to reflect the existing built form along King Street, will be a composition of glass and metal materials which will create and manifest a lighter built form.

The design demonstrates that a well considered response to the site and its surroundings can achieve 7 storey building on the site and still deliver a quality built form outcome.

Urban Design

Due to the character of the surrounding development it is essential that the building be distinguished in form and architectural expression from the surrounding development whist still reflecting the predominant urban fabric. In order to achieve this, the building has been designed to:

- adopt the existing parapet heights along King Street;
- reflect the subdivision character of King Street through fine grained vertical articulation;
- complement the materials and finishes along King Street by using a masonry base for the first two storeys and glass in the upper levels;

The design demonstrates high architectural quality and expression that will achieve the UDR's future character vision for the site by "*creating a high quality distinctive entry to the King Street high street*".

As shown at **Figure 57** the modulated upper levels create architectural interest whilst also making provision for the future development of the University of Sydney Regiment site. By expressing the corner, the two buildings have the potential to form a pair of 'twin' buildings that will create a landmark 'gateway' into Newtown.

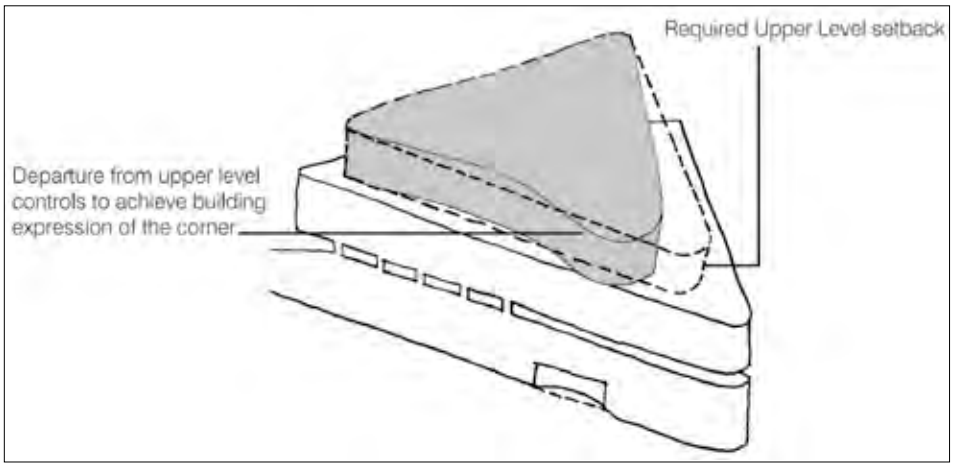

Figure 57 – Expression in building design
Source: AJC

Streetscape

The design of the Resource and Research Centre will contribute to enhancing the streetscape along King Street and Carillon Avenue by:

- creating a solid and consistent setback and street frontage height that integrates with the surrounding building facades;
- giving MTC a public image and identity within the area;
- increasing pedestrian amenity through replacing a dated building and at-grade car park with a new landmark building;
- providing a 2 storey sky-lit atrium to the Resource and Research Centre which will create an attractive and active use at ground level;
- retaining the buildings at 9-11 King Street which contribute to the streetscape; and
- providing greater pedestrian amenity for the bus stop in front of 1 King Street.

Visual Impact

The proposed development will create a significant built form at the corner of Carillon Avenue and King Street. The photomontages at **Appendix A** illustrate that the new building will have a positive visual impact as it:

- will contribute a landmark building to a significant gateway site at the entrance to King Street;
- will shift the focus of the vista from City Road away from Alpha House, the 11 storey building further up King Street, to the new Resource and Research Centre at the entrance; and
- will replace the existing non contributory 1960's red brick library and at-grade car park that currently front King Street.

8.3 Social and Economic Issues

The new Resource and Research Centre will provide a significant improvement to the existing MTC Campus. It will enhance the Campus's image as a premier theological research and education institution attracting both international and local students and staff of high calibre. Accordingly, it will have both a positive social and economic impact.

8.4 Transport, Access and Car Parking

Traffic Generation

As outlined in Section 6.7, the surrounding intersections modelled by TRAFFIX are anticipated to maintain the same level of service under the Concept Plan scenario. The library which is an existing facility and will not directly result in an increase in student or staff numbers is not considered a traffic generator.

The proposed Resource and Research Centre is not expected to have a significant impact on traffic movement along King Street, Carillon Avenue or other surrounding streets.

Access

The Project Application formalises the access arrangements into Site A and Site B as envisaged by the Concept Plan. As outlined in Section 6.7 and the draft Statement of Commitments, all driveways and internal arrangements will be designed to comply with AS2890.1 and AS2890.2 and are accordingly not considered to raise any adverse impacts to Carillon Avenue.

Car Parking

74 spaces are proposed to be provided as part of the Stage 1 Project Application which has been demonstrated to be an appropriate quantum of car parking for the nature of the development. To promote the use of public transport, walking and cycling to access the site, adequate bicycle parking and end of trip facilities will be provided.

Overall, the impact of the Stage 1 Project Application on local traffic conditions is considered satisfactory.

8.5 Heritage

European Heritage

Further detail is provided in the Heritage Assessment at **Appendix I**. The Project Application necessitates the demolition of items listed in Council's LEP as contributory items. As outlined in Section 6.6 of the Concept Plan assessment, NBRS + Partners has concluded the items to be demolished are generally of little heritage significance.

The Conservation Management Strategy prepared by NBRS + Partners which records those buildings to be demolished, will be made publicly available as an account of the buildings that were once located on the site (See Statements of Commitment).

Aboriginal Heritage

Given the long history of the site, which dates back to William Bligh, and the site's highly modified character, it is highly unlikely there are any Aboriginal heritage items or relics of significance present on the site.

The Statements of Commitment obligate the College to notify the Department of Environment, Climate Change and Water should any Aboriginal heritage items be discovered during excavation.

8.6 Ecologically Sustainable Development

ESD initiatives have been addressed in Section 6.9 and at **Appendix K** prepared by Cundall. The ESD Strategy for the MTC Resource and Research Centre was developed as part of the Concept Plan process and has been incorporated into the Draft Statement of Commitments. The elements of the Strategy that have been incorporated into the Project Application are the Indoor Environmental Quality, Energy Reduction, Water Conservation, Materials and Waste Management recommendations. The integration glass facades into the built form will allow for natural daylight into the building.

The BCA Report prepared by BM+G demonstrates how the proposal will meet the Deemed-to Satisfy (DTS) provisions of Section J of the BCA. Where compliance is not possible, alternative solutions have been recommended.

No green star rating guideline for an Education Building currently applies. The College is working towards achieving 'best practice' ESD outcomes over a range of environmental initiatives.

8.7 Access and Mobility

The Strategy for the Provision of Access for People with Disabilities at **Appendix J** demonstrates that the development has accessible paths of travel that are continuous throughout and that compliance with the relevant statutory requirements can be readily achieved.

8.8 BCA

A BCA Assessment was undertaken by Blacket Maguire + Goldsmith on the preliminary Project Application drawings against the deemed-to-satisfy provision of the Building Code of Australia (BCA) (see **Appendix O**). The report made a number of recommendations regarding key compliance issues which have been incorporated into the final design of the Resource and Research Centre. The Project Application is therefore capable of complying with the BCA.

8.9 Infrastructure and Utilities

Stormwater management, water supply, sewerage services and gas services have been addressed at the Engineering Drawings at **Appendix Q**. The drawings show that appropriate stormwater drainage, sewerage services, and water and gas supply can be provided to the new Resource and Research Centre.

8.10 Water Quality and Management

Details of the proposed stormwater drainage system, sediment and erosion control measures, sewer drainage and sanitary plumbing systems, water services and fire hydrant and hose reel services are attached at **Appendix Q**. Water management issues associated with the proposal have been addressed and ESD measures incorporated. As detailed above, existing drainage patterns do not affect the designated site for the new building.

8.11 BCA and Fire Safety

BCA and Fire Safety Issues are addressed in the BCA Reports prepared by BM+G and included at **Appendix O**.

The Fire Safety Strategy documents the proposal's compliance with the relevant provisions of the BCA, and recommends alternative solutions where the departures from the DTS provisions are proposed.

An assessment of the key features of the proposed Resource and Research Centre's design against the DTS provisions of Section C to H of the BCA has been undertaken. It concludes that the design is able to comply with the requirements of the BCA subject to resolution of certain design issues which can be addressed at the construction certificate stage. The recommendations of both reports have been incorporated into the Statements of Commitment.

8.12 Construction and Operational Impacts

8.12.1 Geotechnical

Several of the tested boreholes are within the Project Application Area. **Appendix L** contains a series of construction related recommendations for the College to adopt and implement to guide the proposed civil and structural design of the library building.

Those recommendations have been incorporated into the draft Statements of Commitment and will be incorporated into the Construction Management Plan for the site.

8.12.1 Contamination

A Stage 1 Environmental Site Assessment (**Appendix M**) was undertaken by Environmental Investigation Services to investigate soil contamination conditions at the site as part of the Concept Plan process. The report did not identify any contamination issues within the Project Application site but recommended further testing at Borehole 102 which is located near the boundary of the site. MTC has committed to undertake further testing as part of the Draft Concept Plan Statement of Commitments.

8.12.3 Noise & Vibration Impact

To assess the impact of noise produced by the Resource and Research Centre on the surrounding residential buildings and the impact of the existing ambient noise on the building an Acoustic Amenity Report was prepared by Acoustic Studio (see **Appendix N**).

Noise Impacts from the Centre

It is not expected that the activities occurring as part of the day-to-day operation of the Resource and Research Centre will create any significant noise impact on the surrounding area. Therefore the only potential noise sources will be mechanical systems associated with cooling and heating systems for the buildings.

Noise monitoring undertaken as part of the assessment observed that external ambient noise levels measured on site and around the site already exceed the recommended noise levels presented in the amenity criteria values set out in the DECCW INP. The exceedance is due to the high traffic noise from King Street and Carillon Avenue which run on either side of the site.

As the existing ambient noise levels exceed the recommended amenity criterion, corrected amenity criteria values were developed in accordance with the INP. As the selection of the mechanical systems will be subject to further detailed design the report recommends MTC adopt any or all of the following measures to ensure the proposal will not exceed the established noise limits:

- select appropriate quiet equipment;
- strategically locate noisy equipment away from sensitive areas;
- use of noise barriers, shielding or construction of acoustic enclosures;
- provide for in-duct noise attenuation; and
- ensure plant rooms be of masonry construction with internal sound absorptive treatment as required.

Noise Impacts on the Centre

Australian Standard AS2107:20001 recommends design noise levels within occupied spaces for a large range of building and occupancy types including educational buildings. During the detailed design stage detailed internal noise level limits will be developed for all the spaces within the Resource and Research Centre.

In order to meet the standard and minimise the impact of traffic noise from King Street and Carillon Avenue over the internal spaces of the Resource and Research Centre, the following noise mitigation measures are recommended:

- a composite façade consisting of masonry and glazing with a minimum acoustic performance of Rw 45 dB;
- mechanical ventilation in the Resource and Research Centre be provided to enable windows and doors facing noisy roads to be closed; and
- acoustic absorption be applied to the ceiling and soffits of outdoors terraces.

It is anticipated that by implementing the external noise mitigation measures above during the detail design stage there will be no adverse noise impact on the Resource and Research Centre.

Construction Noise and Vibration Impacts

As the specific details regarding construction works are yet to be determined, a Construction Noise and Vibration Management Plan (CNVMP) has been prepared by Acoustic Studio (see **Appendix N**) to provide general recommendations and indicate best noise and vibration control practices to be observed by contractors during construction of MTC. Whilst there are a number of sensitive noise receivers on and in the proximity of MTC the CNVMP does not anticipate there to be any adverse construction noise or vibration impacts as a result of the proposed redevelopment.

8.12.4 Construction Management

A detailed Construction Management Plan will be submitted to Department after a builder has been engaged at the construction stage of the project. It will address a range of construction issues to minimise impacts including noise and vibration, construction traffic, erosion and sediment controls, dust suppression, and further waste management details.

9.0 Draft Concept Plan Statement of Commitments

In accordance with the Director-General's Environmental Assessment Requirements, the proponent is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures on the site. The following are the commitments made by MTC to manage and minimise potential impacts arising from the Concept Plan.

9.1 Urban Design

- The development will be undertaken in accordance with the plans prepared by AJC dated October 2009.
- All student accommodation buildings that form part of future Project Applications will be required to demonstrate compliance with the ten design principles in SEPP 65 and the Rules-of-Thumb in the Residential Flat Design Code.

9.2 Transport and Accessibility

- Truck access into Site A will be via the proposed plaza using a one-way flow through arrangement and managed by way of a Management Plan which will be prepared by MTC.
- MTC will decommission any driveways and access arrangements which are not required for the development. Kerb lines will be reinstated.
- All driveways and internal arrangements will be designed to comply with AS2890.1 and AS2890.2.
- MTC will continue to encourage its staff and students to use public transport and alternative means to access the site.
- Within two years of the Concept Plan being approved, MTC will investigate opportunities to provide car share (such as GoGet) and ride share arrangements.
- Following completion of the Research and Resources Centre, MTC will prepare and implement a Transport Access Guide which will aim to reduce private vehicular usage by 10% within 5 years.
- A centralised 15 metre long loading area will be provided on Carillon Avenue. The loading area will be designed to comply with City of Sydney's engineering standards and will be prepared in consultation with Council.
- The existing pedestrian and bicycle network linkages as well as pedestrian safety amenity in general will be improved through the following initiatives:
  - removal of all existing at grade parking into basement car parking accessed via Carillon Avenue;
  - introduction of a plaza within Site A to provide a gathering space and predominantly pedestrian zone;
  - closure of Little Queen Street between King and Campbell Streets with use of bollards to provide emergency access if required;
  - connectivity to all footpath networks connecting the site to bus services along King Street and Missenden Road; and
  - Pedestrianisation of the road network within the site to enable staff and students to move freely within and through the site.
- Bicycle spaces are proposed to be provided at a rate of 1 space per 20 staff/ students during future Project and/or Development Applications.

9.3 Car Parking

Car parking will be provided at the following rates:

- Staff (administration and teaching) – 1 space per 90m^2;
- Students – 1 space per 80m^2;
- Retail – 1 space per 50m^2;
- Residential
  - 1 space per existing terrace
  - 0.8 spaces per 2 bedroom unit
  - 1.2 spaces per 3 bedroom unit
  - 2 spaces per 4+ bedroom unit
- Visitor spaces - 1 space per 5 residential dwellings; and
- Disabled car parking will be provided at a rate of 2-3% (approximately 10 spaces across Sites A and B).

9.4 Environmental Sustainable Development

MTC will, to the best of their endeavours, incorporate and augment the ESD measures recommended in the ESD Strategy located at Appendix K during future Project Applications for the site. The measures could include:

- Green construction management practices, including certified EMP, waste management, commissioning, handover and fine-tuning will be used.
- Green materials and products, including concrete, steel, floor coverings, composite wood, appliances, fixtures, paints, sealants and adhesives will be used in buildings.
- Use energy and water saving appliances, fittings and fixtures.
- Encourage students to utilise nearby public transport and pedestrian links.

9.5 Heritage

MTC makes the following commitments in regards to heritage:

- Prepare an interpretation plan that communicates the heritage significance of relevant components of the site.
- Undertake photographic archival recording prior to the commencement of demolition works.
- Undertake archaeological investigations in accordance with an Archaeological Research Design prior to, or in conjunction with, ground disturbance of areas with historical archaeological potential.
- Excavation will be managed by a Section 140 (Heritage Act) Application and ongoing monitoring of the work. Should any relics of local or State significance be discovered then the items will be retained on site and interpreted.
- Should unexpected or significant Indigenous remains not previously identified be discovered during excavation at the site, all works are to cease and a nominated archaeologist and the MLALC be contacted to assess the finds. In addition, pursuant to section 91 of the National Parks and Wildlife Act 1974, the Department of Environment and Climate Change and Water will also be notified of the discovery.

- Provide a copy of the Conservation Management Strategy prepared by NBRS + Partners and dated October 2009 to the City of Sydney Council and Department of Planning's Heritage Branch. A Copy will also be kept on the premises of the College.
- Undertake all works in accordance with the Conservation Management Strategy for the site.

9.6 Geotechnical

MTC will undertake all the recommendations outlined in **Appendix L** of the Geotechnical Investigation.

9.7 Contamination

In order to ensure the proposed site is suitable for development MTC commits to undertaking:

- A detailed Stage 2 investigation to meet the NSW DECC (EPA) Sampling Design Guidelines. The Stage 2 investigation will include additional soil sampling in the vicinity of the boreholes BH102, BH103 and BH108 in order to identify the vertical and horizontal extent of contaminants encountered during the Stage 1 works.
- Groundwater investigation in the vicinity of the boreholes BH102, BH103 and BH108 to assess the impact of soil contamination on groundwater conditions at the site.
- Additional soil and groundwater investigation in the vicinity of BH111 in order to identify the extent of nickel contamination on the natural soils at the site.
- Additional TCLP leachate analysis in order to provide a thorough waste classification for the disposal of fill and natural soil associated with the development.
- Preparation of a remedial action plan (RAP) outlining the procedures to remediate the contaminants encountered at the site in order to render the site suitable for the proposed development.
- Preparation of a validation assessment report demonstrating the outcomes of the remediation works.

9.8 Noise

As the selection of the mechanical systems will be subject to further detailed design, MTC will adopt the following measures as required to ensure the proposal will not exceed the established noise limits:

- select appropriate quiet equipment;
- strategically locate noisy equipment away from sensitive areas;
- use of noise barriers, shielding or construction of acoustic enclosures;
- provide for in-duct noise attenuation; and
- ensure plant rooms be of masonry construction with internal sound absorptive treatment as required.

To address and reduce traffic noise impacts inside the College facilities MTC will incorporate the following traffic noise control measures in to the detailed design of future Project Applications for the site:

- optimise architectural layout by strategically locating noise sensitive areas away from traffic noise sources;
- design the building envelopes to provide the required attenuation to achieve the internal design sound levels;
- provide mechanical ventilation to enable windows and doors of noise sensitive spaces to be closed;
- provide acoustic perimeter seals for windows and doors in noise sensitive spaces; and
- use of noise barriers around terraces and open spaces.

9.9 Disabled Access

MTC commits to meeting the requirements of the Disability Discrimination Act and where possible will exceed the requirements by incorporating additional facilities for people with disabilities.

10.0 Draft Project Application Statement of Commitments

In accordance with the Director-General's Environmental Assessment Requirements, the proponent is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures on the site. The following are the commitments made by MTC to manage and minimise potential impacts arising from the Project Application.

10.1 General

The development will be undertaken generally in accordance with the Environmental Assessment report dated October 2009 prepared by JBA Urban Planning Consultants (including accompanying Appendices) and drawings prepared by Allen Jack + Cottier architects.

MTC will obtain all relevant construction and compliance certificates as required by the *Environmental Planning and Assessment Act, 1979* and the *Environmental Planning and Assessment Regulation, 2000*.

10.2 Transport and Accessibility

Given that College's close proximity to major transit hubs and the existing high number of pedestrian movements in and around the Campus, Construction Traffic Management Plans will incorporate and be framed around the following principles:

- Truck parking areas, construction zones, crane usage and truck routes are to be identified.
- Pedestrian movements along footpaths are to be maintained at all times on major roads surrounding the site including Carillon Avenue and King Street.
- Trucks are to enter and leave the site in a forward direction unless accredited flag persons are in place to control traffic and pedestrians.
- Building Contractors are to maintain strict traffic management procedures including using traffic wardens to ensure the safety of road users and pedestrians.
- All vehicles carrying materials to or from the site are to have their loads covered with tarpaulins or similar covers.
- Openings in construction fencing at construction access driveways are to be managed and controlled by qualified site personnel.
- Pedestrian warning signs and flashing lights are to be erected adjacent to all construction access driveways.

Once operational, MTC will use best endeavours to encourage employees and students to use public transport, and thereby reduce the number of private vehicles using the site.

10.3 Temporary Car Park

MTC will cease to use the temporary car park on Site B following the full completion and occupation of the Concept Plan car parking on Site A.

10.4 Construction Management

Following the engagement of building contractor MTC will prepare a Construction Management Plan to address noise and vibration, construction traffic, erosion and sediment controls, dust suppression, and waste management. The plan will include the principles set out in this report to minimise construction impacts at different stages of the Construction process.

Hours of construction will be limited to 7.00am to 6.00pm Monday to Friday, and 7.00am to 3.00pm on Saturdays. There will be no work on Sundays and public holidays.

10.5 Geotechnical

MTC will undertake all the recommendations outlined in **Appendix L** of the Geotechnical Investigation.

10.6 Structural Engineering

The following recommendations will be implemented to monitor the performance of the existing foundations:

- Precise leveling of all columns will be undertaken to confirm that settlement caused by the additional loading is within design expectations.
- Settlement monitoring will be commenced prior to the redevelopment works to provide a datum. Ongoing monitoring will be carried out throughout the construction phases of the project.
- Further bore testing will be carried out adjacent to critical piles, and piling records reviewed, to confirm the individual increased load capacities of the piles.

10.7 Construction Management

The following will minimise any adverse impacts during the construction and demolition process:

- Recommendations in the Traffic Management Plan for Demolition and Construction Works will be adopted including engaging a traffic controller to manage all vehicle movements to the site via the UPN and providing relevant signage to alert pedestrians, public and private transport operators of the works.
- Noise and vibration associated with construction work will be monitored throughout the demolition and construction period and additional controls implemented if appropriate.
- Up to 90% of waste generated during works will be recycled.

11.0 Conclusion

The Concept Plan and Stage 1 Project Application for MTC represent a regionally significant development at an important higher educational establishment. It is the result of long term and comprehensive planning for the future growth of MTC. It enables the MTC to address its shortfall in space for current and future students by increasing and upgrading its teaching and housing facilities to meet student demand.

The assessment of the proposal has demonstrated that it will result in positive economic, environmental and social benefits. It utilises the existing urban campus that is suitable for intensification in a locality that has been earmarked for education and research in the Metropolitan Strategy for Sydney and Draft Sydney City Subregional Strategy.

The proposal represents a significant upgrade and enhancement of a dated educational facility that lacks a physical identity. The form, height and proportions of the proposal are appropriate given their response to the site and the character of development in the locality. The design for the Resource and Research Centre will see a landmark building on a site identified for redevelopment as the gateway into Newtown in the City of Sydney's Urban Design Report.

The public domain will be improved through active uses, removal of vehicle access across King Street, improved through site access, and landscaping. In addition to these benefits MTC will make the $53 million Resource and Research Centre library publicly accessible for the use and enjoyment of the wider community.

Overall, the proposed development will have minimal adverse environmental effects in terms of bulk and scale, heritage and traffic. Other environmental impacts can be effectively managed through all stages of the development via mechanisms referred to in this report and the draft Statement of Commitments.

The site is suitable for the proposed Concept Plan for the following reasons:

- It is currently occupied by a major tertiary education institution which can be vertically expanded.
- It is located in Sydney's Education and Health precinct.
- The site was identified for redevelopment in City of Sydney's Urban Design Report.
- It is in the immediate vicinity of significant and multiple public transport modes, and will have negligible impacts on the local road network.
- The existing utilities network can largely accommodate, or be reasonably augmented, to serve the new development.

The development is considered to be in the public interest as State, regional and local needs will be met by effectively boosting the capacity of an existing, high quality tertiary institution. The proposed development will have minimal adverse environmental effects, all of which can be effectively managed. Given the environmental planning merits described above, it is requested that the Minister:

- approve the Concept Plan under Section 75O of the EP&A Act;
- approve the Project Application under 75J of the EP&A Act;
- determine under Section 75P(1)(a) of the EP&A Act that future development with a CIV of more than $5 million, be subject to Part 3A of the Act; and
- determine under Section 75P(1)(b) of the EP&A Act that future development with a CIV of less than $5 million, be subject to Part 4 of the Act.