Preferred Project Report

Moore Theological College

King Street, Newtown

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

September 2010 ■ 08142

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1.0 Introduction

An Environmental Assessment Report (EAR) for a concurrent Concept Plan and Stage 1 Project Application for the redevelopment of Moore Theological College was publicly exhibited for a period of 30 days between 24 November 2009 and 24 December 2009.

In total, six submissions were received in response to the public exhibition of the Concept Plan and Project Application. The following key issues were identified with the proposal:

- Height, Bulk and Scale
- Overshadowing
- Street Presentation and Activation
- Traffic and Parking

The proponent, Moore Theological College Council (MTCC), has reviewed and considered the submissions and, in accordance with section 75H(6) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), has responded to the issues raised. This Preferred Project Report (PPR) sets out the proponent's response to the issues raised, details a number of revisions to the Concept Plan and Project Application and includes a revised Statement of Commitments.

This PPR should be read in conjunction with the EAR dated November 2009 and forms part of the Concept Plan and Project Application.

2.0 Key Issues and Proponents Response

The following section provides a detailed response to the key issues raised by the Department of Planning (the Department) following its detailed review of the submissions. **Attachments 1** and **2** provide a detailed response to all the issues raised during the public exhibition period.

2.1 Height, Bulk and Scale

2.1.1 Issue

The Department considers that the built form of the proposal, specifically the height, bulk and scale of Buildings A1, B1, B2 and B3 requires further justification. In particular, it requested that MTC address:

- the apparent inconsistency in scale of the proposed development with the existing character of that section of King Street and Carillon Avenue; and
- the inconsistency with the height and FSR controls and built form guidelines suggested by City of Sydney's (CoS) Urban Design Report (UDR) for the area.

These concerns were also held by the CoS and the public submissions received from the Rubicon building.

The CoS also raised concern with the nexus between the College's needs and scale of the proposed development, noting that the development was physically excessive given the limited (present and future) student population.

The Department also requested further information relating to height, bulk and scale on a number of matters which have been addressed as part of the revised Architectural Drawings (see **Attachment 9**).

2.1.2 Proponent's Response

MTC has revised the design of the Concept Plan and Project Application to address the concerns raised with the height, bulk and scale of the exhibited project. In revising the design, MTC and its expert consultant team carefully considered the concerns raised by the Department, CoS and the public. The changes, which are detailed in Sections 4.2 and 5.2 of this report, address these concerns and demonstrate the Preferred Project:

- is consistent with the existing character of that section of King Street and Carillon Avenue;
- responds to the site's context and provides a more appropriate transition with the surrounding conservation areas;
- is generally in keeping with the built-form recommendations and desired future character of the locality setout in the UDR and recently released draft CoS comprehensive LEP; and
- will not have any adverse impacts on the amenity of residential properties along Campbell Street, including the Rubicon development in the form of view loss or overshadowing.

Further discussion of the merits of the changes and justification for the final proposed Concept Plan and Project Application is located in Sections 3.3 and 4.3.

Consistency with the Built Form Character

Whilst the proposed Concept Plan will result in a general increase in the height and scale across the MTC campus, this increase is necessary to achieve the balance between the conservation of the existing heritage, and where possible contributory buildings on the site, whilst providing the necessary floor space required by the College for its expansion.

In its submission, CoS did not support the general expansion of the College based on its location in a Conservation Area or the rationale that the site was appropriate for development on the basis that it is part of the institutional precinct to the north. We disagree with this position and are of the opinion that the site is actually situated in the transition zone between the two areas. This position is affirmed in the Sydney City Sub-Regional Strategy, as **Figure 1** shows; despite its location on King Street, the site is located within the Sydney Education and Health Precinct and is specifically identified for education purposes. Consequently, the Concept Plan has been designed to meet the broader strategic objectives of the Metropolitan Strategy and Sydney City Sub-Regional Strategy whilst providing an appropriate transition between the lower scale terraces and the larger institutional buildings.

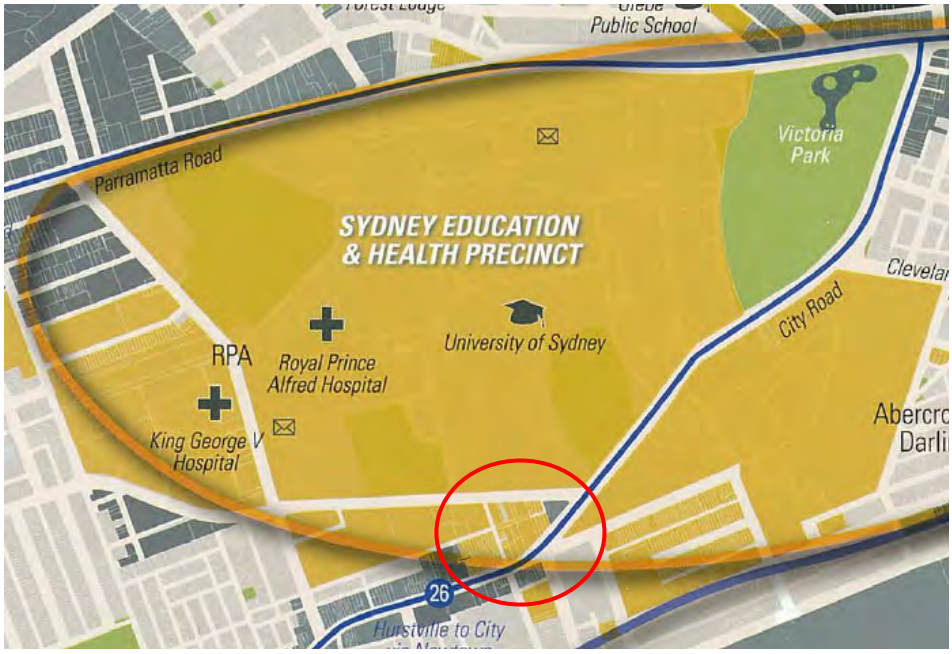


Figure 1 – The site's location within the Sydney Education and Health Precinct

Source: NSW Department of Planning

The CoS was also of the opinion that the site is part of an area characterised by small terrace housing. However, as shown in **Figure 2**, analysis into the height context demonstrates that the Precinct is not characterised by terrace housing and that there is a predominance of buildings greater than 2 storeys and that the building heights proposed are not out of context with the development in the surrounding area, which includes buildings as high as 9 storeys on both Carillon Avenue and King Street.

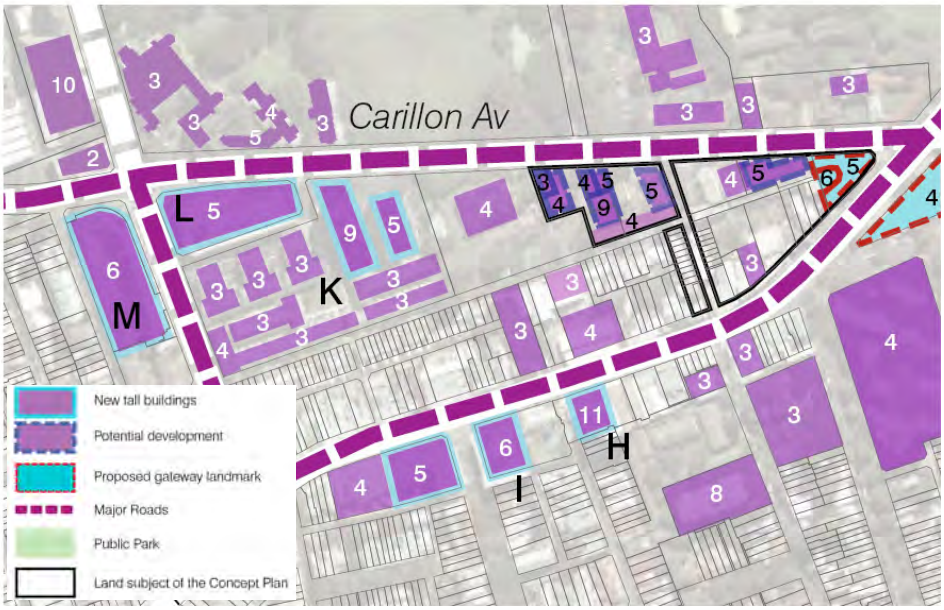


Figure 2 – Surrounding building height analysis

Source: AJ + C

As previously mentioned, MTC has made a number of changes to the exhibited Concept Plan to address the concerns raised with the compatibility of the proposal with the existing character of the area and the appropriateness of the transition between the development and the area. The changes will have the following effect on the development's compatibility and transition with the surrounding area:

- The reduction in bulk, height and scale of Building A1 will result in a more compatible building with the Victorian Streetscape of King Street whilst still providing the gateway building identified in CoS' UDR.
- The changes to Buildings A1 and A8, including the reduced height and bulk and introduction of the angled landscape setback, will result in the development being more compatible with the existing/established built form character along Carillon Avenue.
- The reduction in bulk and increased building separation between Buildings B1, B2 and B3 along Carillon Avenue will result in the development being more compatible with the built form character along Carillon Avenue.
- The reduction in height of Buildings B1 and B4 will create a better transition between the heritage buildings along Campbell Street and Newtown North Public School.
- The increased Building A8 upper level setback from 2.5m to 4m will provide a better transition with Deaconess House.

A revised Heritage Impact Statement (HIS) (see **Attachment 3**) has been prepared to assess the impact of the height, bulk and scale of the Preferred Project on the heritage buildings within the site and conservation area. The HIS concludes that the proposal will not impact on the heritage significance of the buildings within the site or the area.

Consistency with the Urban Design Report

Whilst the CoS' UDR character strategies heavily informed the design of the Concept Plan, in assessing the proposal's consistency with the numeric controls of the UDR, it should be noted that the Report was:

> *designed to provide Council with a deeper understanding of the urban character of each area… and to assist with developing appropriate and workable planning controls that can support the desired future character.*

As a result the recommendations made in the UDR should not be treated as LEP development standards which have come about as result of a full LEP making process. We are aware that Council has recently made their draft LEP maps publicly available. The maps are generally consistent with the UDR height and FSR recommendations but have not been publicly exhibited and therefore have no formal status.

Whilst the UDR did identify key sites for redevelopment, such as the gateway site at the corner of King Street and Carillon Avenue, the UDR generally takes the approach of transferring the existing physical built-form of the area into its recommended controls. Whilst this approach may be consistent with the CoS' future vision for the residential areas of Newtown, it is not considered appropriate on the MTC site, which under the Sydney City Sub-Regional Strategy forms part of the Sydney Education and Health Precinct.

In addition to this, the UDR recommendations do not acknowledge that the MTC land is under single ownership and the recommendations provide a variety of different heights and FSRs (based on what is currently there) on the multiple lots that make up the site, thereby inhibiting the potential to amalgamate the lots and holistically redevelop the land.

Consequently the controls recommended for the majority of the MTC site restrict any further expansion and were not the result of a site specific analysis. Furthermore, they were prepared prior to the release of the draft Sydney City Sub-Regional Strategy and do not take into consideration MTC's place within the Sydney Education and Health Precinct.

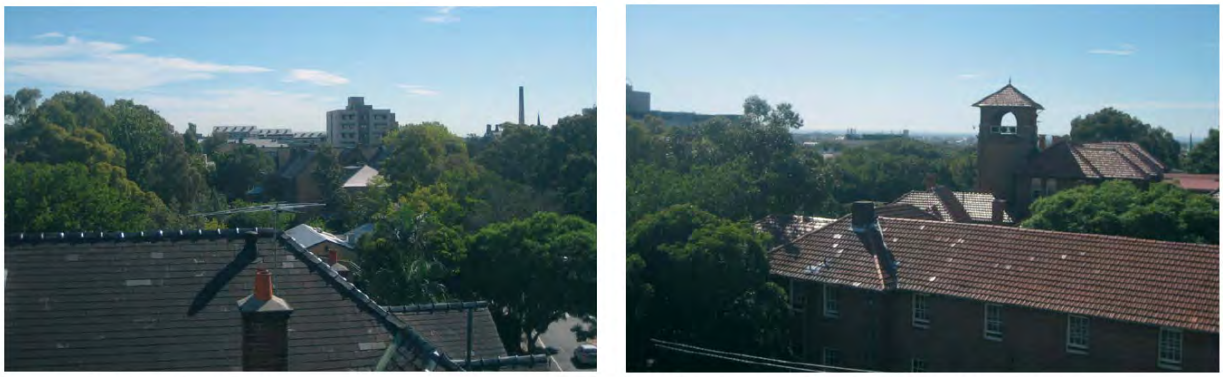
As a result, direct comparisons with the recommended FSR and height controls in the UDR are inappropriate as they only demonstrate the built form over one lot and not the entire development site.

Conversely AJ + C undertook a highly detailed analysis of the site (see the Urban Design Report submitted with the EAR), which informed the Concept Plan. The final scheme/proposal reflects the best development outcome on the site for both the locality, Region and MTC. The Concept Plan and Project Application should be assessed on their merits, rather than their numeric compliance with the UDRs recommendations.

Impact on Residential Amenity

The shadow diagrams and assessment at Section 2.2 and **Attachment 2**, demonstrate that the proposed scheme will not have any adverse overshadowing impacts on the adjoining properties, including the Rubicon development.

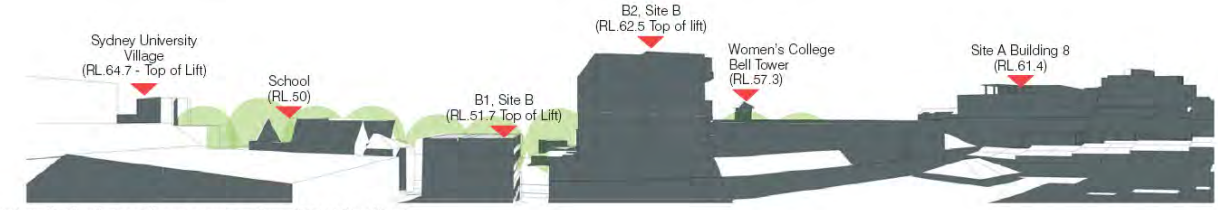
Further assessment has also been undertaken to address the concerns of Elizabeth Moore, a resident within the Rubicon development, who raised issue with the potential loss of outlook from her apartment. **Figure 3** illustrates the kind of views experienced from Ms Moore's apartment. **Figure 4** illustrates that the Concept Plan proposal once fully developed will have a minimal impact on the outlook experienced from Ms Moore's apartment (or other apartments within the Rubicon).



View of from Mary Andrews College RL 50.53

View of Women's College's bell tower taken from Mary Andrews College RL 50.53

Figure 3 – Existing views from Mary Andrews College



3D model view from north-east corner top floor of 53-57 King Street

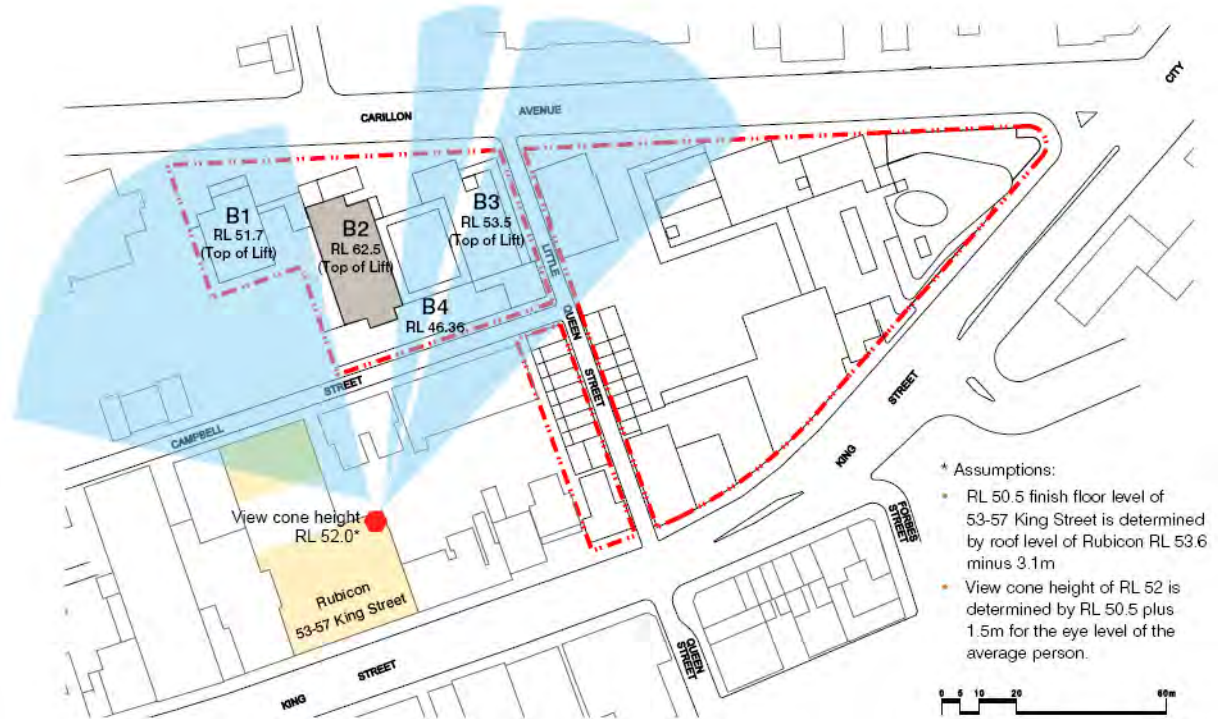


Figure 4 – Post development view analysis from the top-floor apartment within the Rubicon

Source: AJ + C

Nexus between College Needs and Scale of Development

The scale of the proposed Concept Plan is based on extensive research into the College's existing space shortfall and predicted growth. MTC has also benchmarked its predicted space requirements using the AAPPA's *Association of Higher Education Facilities Officers – Space Planning Guidelines, Edition 2*.

Consistent with the College's vision for ongoing expansion, historical analysis of the College's growth over the past 110 years (see **Figure 5**) illustrates that the predicted increase in size is not unfeasible. The College's current size and ability to expand is restricted by its existing facilitates distribution and built form which is outdated and constructed to serve a different purpose, hence necessitating the need for the subject Concept Plan.

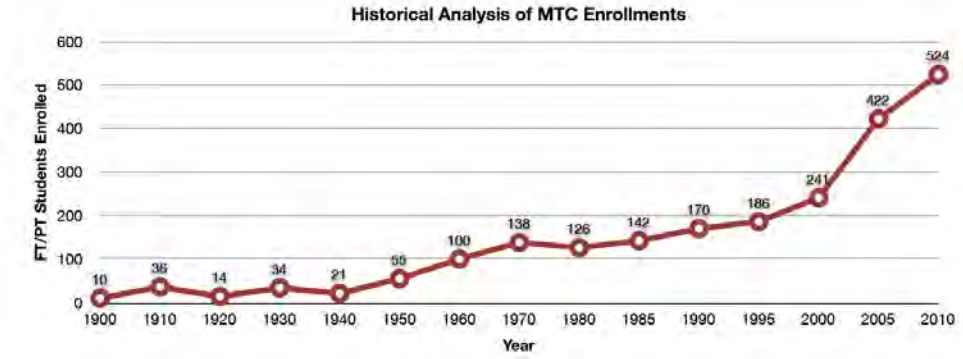


Figure 5 – MTC growth over the past 110 years

The quantum of proposed residential floor space is a result of the College's unique structure. MTC has a policy of being 'fully residential'. This means all students and teaching faculty and their families live on the campus. As the average student age is 30.5, approximately 30% of students are single and the remaining 70% of students are married and in most cases have children. The families living on the campus vary in size from a married couple to a married couple plus four children. The present proportions are:

Table 1 – Study of MTC student family sizes

No in Family	Proportion of Married Students
2	34%
3	20%
4	28%
5	12%
6	6%

For every married student or faculty member living on campus there are a further 2.4 people also living on campus associated with that person. As a result, one married student attending MTC or one faculty member requires housing for 3.4 people and thus the College requires a much greater quantum of residential than a standard tertiary institution which generally only has single students living on campus.

Since the late 1950s the College has purchased many houses adjacent to the campus but the stage has now been reached where almost all the suitable properties have been purchased. The growth in student numbers over the last 20 years (see **Figure 5**) has meant that the College still needs a large number of additional homes to fulfill its residential policy. Although the first planned construction project is for academic purposes most of the new space provided in the Concept Plan is for residential purposes.

Whilst the proposed library is larger than libraries associated with similar sized academic institutions, the proposed area is based on the specific requirements of the MTC book collection which is the largest of its kind in Australia and includes many rare and historical texts. Under the existing circumstances, MTC stores the majority of its books off-site at various storage locations. The proposed library has been allocated sufficient space, including the Automatic Storage Retrieval System (ASRS), to allow MTC to store its entire collection on-site at one accessible location.

Summary

The proposed height, bulk and scale of the Preferred Project, which has been modified to respond to the concerns raised during the exhibition process, are justified as the preceding assessment demonstrates that the proposal will:

- facilitate the achievement of State strategic goals of the site;
- be compatible with surrounding built form context and provides an appropriate transition to/with/between the surrounding conservation areas;
- allow for the ongoing physical conservation of the heritage items on the site and MTC's cultural association with those buildings;
- have no adverse impact on the heritage buildings within the site or the character of the conservation area; and
- not have any adverse impacts on the adjoining properties, specifically the Rubicon.

2.2 Overshadowing

2.2.1 Issue

The Department requested more detailed overshadowing analysis, particularly upon the building facades on the southern alignment of Campbell Street and the Newtown North Public School's playground.

2.2.2 Proponent's Response

Further detailed overshadowing analysis has been undertaken by AJ + C and is located at **Attachment 2**.

Campbell Street

As shown in **Figure 6** below, the development of Site B will result in minimal overshadowing on the facades of the buildings on the southern alignment of Campbell Street, including the Rubicon development. The analysis illustrates that on the winter solstice at 9am the proposed development's shadow will cover 75% of the Rubicon's northern facade, however, by 10am the shadow will only cover 25% of the facade, and by 11am the shadow will be negligible. As a result, the affectation of the shadow will only impact less than 30% of the Rubicon's Campbell Street façade for a 2 hour period in the morning on the shortest day of the year and is therefore considered to be of minimal impact. It is also noted that no shadow will be cast on the second Rubicon building addressing King Street or any of the private open space areas.

In considering ways to reduce the shadowing impact of the proposal on the Campbell Street terraces the height of Building B2 was reduced. However, the analysis showed that the reduction in height made no material difference to the shadow on the terraces, which is generated by Building B4. As a result no changes were made to the height of Building B2.

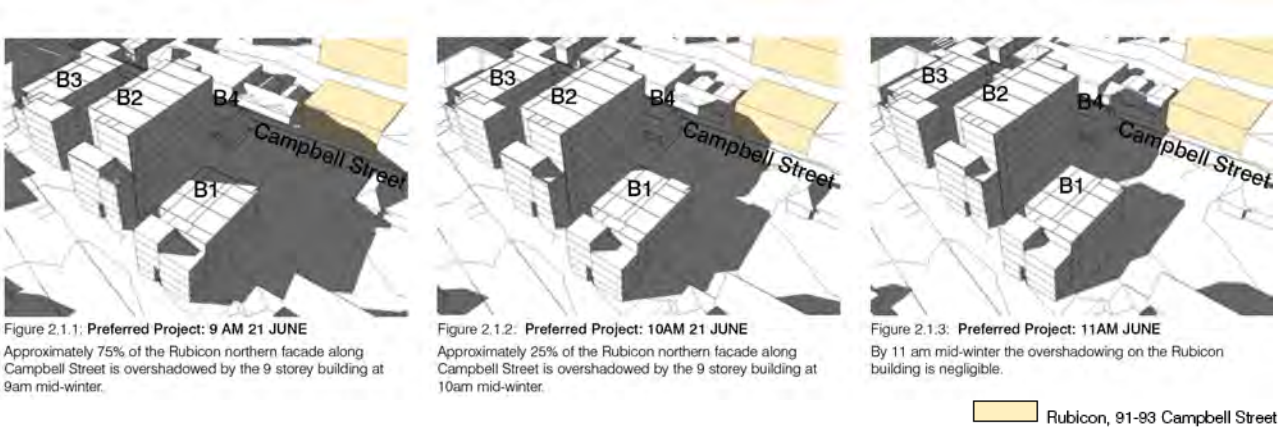


Figure 2.1.1: **Preferred Project: 9 AM 21 JUNE**
Approximately 75% of the Rubicon northern facade along Campbell Street is overshadowed by the 9 storey building at 9am mid-winter.

Figure 2.1.2: **Preferred Project: 10AM 21 JUNE**
Approximately 25% of the Rubicon northern facade along Campbell Street is overshadowed by the 9 storey building at 10am mid-winter.

Figure 2.1.3: **Preferred Project: 11AM JUNE**
By 11 am mid-winter the overshadowing on the Rubicon building is negligible.

Figure 6 – Overshadowing impacts on Rubicon on 21 June

Source: AJ+C

Newtown North Public School

In response to concerns regarding the overshadowing of Newtown North Public School's playground, the Concept Plan has been modified to reduce the height of Building B1 from 5 storeys to 4 storeys (see Section 3.0). The reduction in building height will result in significantly less shadow on the playground area of the school, as shown in **Figure 7** below. The land immediately to the south of Building B1 is used for on-grade parking.

The Preferred Project will result in a development that only overshadows approximately 20% of the School's playground area for a period of 2 hours in the morning on the shortest day of the year.

9 am on 21 June

10 am on 21 June

Figure 7 – Shadow impact on Newtown North Primary School on 21 June

Source: AJ+C

It should be noted that the School did not object to the proposal and is currently in the process of constructing a large Covered Outdoor Learning Area (see **Figure 8**) and already has a number of other covered shade areas (within the area of affectation) to protect the children from being exposed to direct sunlight. Any shadowing impacts in this part of the site are therefore mitigated by the placement of the cola in the playground.

Figure 8 – Construction of a COLA at Newtown North Public School

2.3 Street Presentation and Activation

2.3.1 Issue

The Department raised the following issues in regards to street presentation and activation:

- The library building does not provide sufficient street activation, particularly along King Street, or even a distinct pedestrian entrance.
- That consideration be given to the CoS request regarding integrating a bus shelter and awning in the King Street façade design of the library building.
- The continuous building form on Carillon Avenue (Buildings A1 and A8) appear excessively long and uncharacteristic of Carillon Avenue.

2.3.2 Proponent's Response

To address the issues regarding street presentation and activation MTC has made the following amendments to its proposal:

Ground Floor Activation

The administration uses initially proposed on the ground level have been relocated to the upper levels of the Resource and Research Building and in their place a research / library area has been moved to the ground level. Allocating the library at ground level, and the provision of a void area at ground level along King Street and Carillon Avenue to provide views from the street to multiple levels within the building in a similar way to the CoS' highly acclaimed Surry Hills Library, will provide greater activation at ground level and clearly show the purpose of the building, and the public nature of the space. A large ground level window has replaced the blank wall on the King Street side of the building's corner with Carillon Avenue (see **Attachment 9** and **Figure 15**).

The design of the Resource and Research Centre has been revised to now include a distinct pedestrian entrance (see **Attachment 9**).

Bus Stop

MTC explored the potential to provide an integrated bus shelter within the MTC site with the NSW Ministry of Transport and Infrastructure (MOTI). MOTI indicated that it would not be supportive of having the bus shelter on MTC land. As a result MTC requested the CoS to provide an example of what it envisaged for the bus stop. The CoS indicated that it was unable to suggest an example of a bus stop located on private land but indicated that the provision of an awning would be a suitable design outcome.

In response to this issue, MTC has revised the design of the preferred Project Application to incorporate an awning over the entrance on King Street in line with the request of CoS and the Department.

Continuous Building Form

To address concerns regarding the continuous building form on Carillon Avenue, Buildings A1 and A8 have been modified to reduce their bulk and mass as well provide a greater degree of modulation to break up the building form (see **Figure 9**). The Preferred Project design also reinforces the predominant angled landscape setback of Carillon Avenue. As a result, the Preferred Project is considered to provide a more compatible build form with the opposite side of Carillon Avenue as requested by the Department.

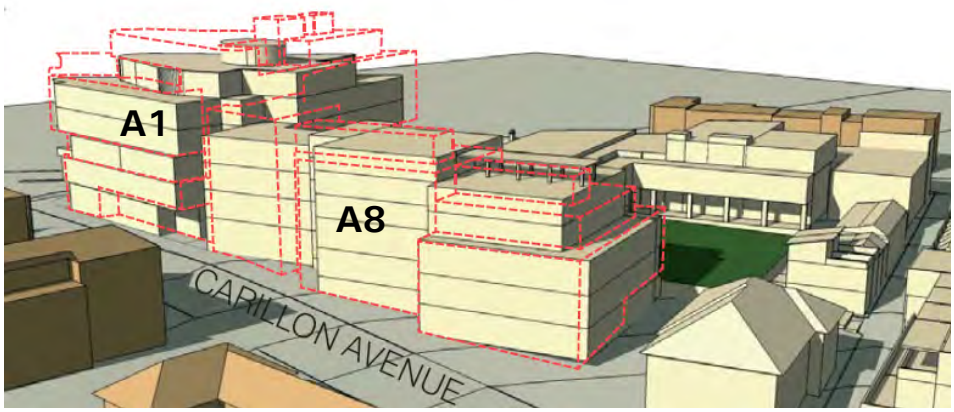


Figure 9 – Exhibited Concept Plan envelopes overlayed on the Preferred Project

Source: AJ + C

2.4 Traffic and Parking

2.4.1 Issue

The Department raised the following issues with the proposed traffic and parking arrangements:

- The justification for the proposed quantum of car spaces and its inconsistency with the number of spaces recommended by CoS.
- The need for the temporary car park given that 74 car spaces are proposed in the basement of the library building.
- The proposed temporary car park will detract from Carillon Avenue.
- Should the project growth of MTC not be achieved there is no certainty that the temporary car park will not become a long term development.
- The proposed entry / exit to the temporary car park on Campbell Street will result in unreasonable traffic impacts.

- The basement parking plans for the Concept Plan are inconsistent with the Project Application in terms of the layout and number of proposed spaces and the entry/exit ramp to the basement car park for Site A does not appear to be shown on the Basement 1 Plan for the Concept Plan.

2.4.2 Proponent's Response

Quantity of Car Parking

In response to concerns from the Department and CoS that there was an over provision of car parking on the site, a revised Traffic Report has been prepared to review the quantity of parking proposed.

The quantity of car parking required was reassessed in light of CoS' comments and in accordance Development Control Plan 11 (DCP 11). The Report concludes that Site A will require 144 parking spaces and Sites B and C will require 127 parking spaces.

The only variation to DCP 11's prescribed rate was in relation to the four and five bedroom dwellings, where the rate was increased from 1.2 spaces per unit (for 3+ bedroom units) to 2 spaces per unit. The variation is required as a byproduct of the unique nature of the tenants residing at MTC. The DCP is based on the assumption that a 4 and 5 bedroom unit will be occupied by two parents with children, however, at MTC the 4 and 5 bedroom units are likely to be occupied by 4 - 5 adults sharing the apartment. Therefore an allocation of 2 car spaces per 4/5 adults is considered a more appropriate rate for the specific development.

As a result of these findings, the preferred Concept Plan has been revised from the 340 spaces originally proposed to now contain a total of 270 car spaces. The change equates to a reduction of 70 car spaces.

The Traffic Report also provides a revised assessment of the traffic impacts. Whilst the Preferred Concept Plan has a reduced number of car spaces, the revised assessment has increased the estimated quantum of trips generated by those spaces following consideration of the comments raised by CoS. The findings of the assessment are similar to those levels estimated as part of the original assessment, however, no change in levels of service are expected at any intersection and delays are only marginally affected. Accordingly, the Report maintains its recommendation that no external road improvements are required.

Temporary Car Park

In response to the comments received from the CoS and other amendments to the design of the Resource and Research Centre, no basement car parking is proposed as part of the Preferred Project Application. However, the redevelopment of Project Application within Site A will result in the loss of 10 spaces currently located in the at-grade car park adjoining King Street (see **Figure 10**) and 10 spaces to the rear of 1 King Street. As there is currently an under provision of car parking on the site these spaces must be relocated elsewhere on the Campus during the interim period between construction of the Project Application and the Concept Plan basement car parking.

The logical place for the car spaces to be relocated is on the section of Site B which at this point in time is used for car parking approximately 16 cars (see **Figure 11**). The temporary car park will consolidate the two at-grade car parks, both of which detract from the heritage streetscapes, into one formalised car park. The car park will directly accommodate the loss of car parking on Site A and will not result in any additional car parking spaces on the Campus.

Figure 10 – Existing at-grade car park off King Street (Site A)

Figure 11 – Existing at-grade car park off Carillon Avenue (Site B)

The existing buildings on the temporary car park site (see **Figure 11**), which are noted to be 'contributory items', are structurally unsound and MTC was recently required by the CoS to undertake structural reinforcement of the buildings to ensure they do not collapse and cause public harm. As these buildings will be demolished as part of the Concept Plan, which is supported in the CoS submission (for buildings 30-32 Carillon Avenue) , their preemptive demolition to make way for the temporary car park is in the best interest of public safety.

It should be noted however that MTC investigated the possibility of retaining the facades of the buildings to screen the temporary car park. However, due to their lack of structural integrity, removal of the rest of the structures would in all likelihood result in the buildings collapsing during the construction works or at a later time, which represents a significant public safety risk.

To address concerns regarding the aesthetic impact of the temporary car park, MTC has revised its proposal to:

- retain 2 trees within the car park; and
- provide a palisade fence and landscaping along the Carillon Avenue frontage to screen the car park and complement the streetscape (as shown in **Figure 12**).

It is also noted that under the recently released draft LEP maps this section of Carillon Avenue is no longer identified as a heritage streetscape conservation area.

Figure 12 – Artist's impression of the proposed car park

Source: Irene Still

The temporary car park will be decommissioned following construction and completion of the Site A or Site B car park (which ever comes first). A commitment in relation to this matter has been incorporated into the Statement of Commitments. Whilst it is acknowledged that there is no certainty that the planned redevelopment of Site B will occur in the short term (although it should be noted that it is MTC intention to develop Site B as soon as possible), the proposed temporary car park will result in a public benefit in its own right for the following reasons:

- The Carillon Avenue streetscape will be enhanced through the provision of complementary fencing, landscaping and retention of the significant trees which will ameliorate the aesthetic impacts of the car park and result in an improved interim outcome for Carillon Avenue as pictured in **Figure 12**.
- By relocating the car park from King Street to Campbell Street / Carillon Avenue the development will specifically achieve the CoS UDR strategy to:

  Provide vehicle access to on–site parking from rear lanes, exclude all vehicle crossings fronting King Street.

And as a result will enhance King Street by removing a vehicle crossing and car park and provide a building which complements the heritage character rather than detracts from it.

The revised Traffic Report (see **Attachment 5**) has assessed the impact of the proposal on Campbell Street. It is estimated that the car park will generate less than 10 vehicles per hour. The assessment therefore concludes that the impact of the temporary car park will be negligible.

Therefore, on balance, the proposed temporary car park should be supported as:

- it will not result in any increase in parking provision on the Campus and is necessary to cope with the existing car parking demand generated by MTC;
- it will improve the King Street heritage streetscape by replacing an at-grade car park and vehicle crossing with a complementary building which was identified in the CoS UDR;
- MTC has revised its design to ameliorate the aesthetic impacts of the car park on Carillon Avenue by retaining the key existing trees and screening it with a landscaping and a fence which complements the existing street character; and
- it will have no adverse traffic impacts on Campbell Street or Carillon Avenue.

Other Matters

No basement car parking is now proposed as part of the Project Application. There are no inconsistencies between the basement parking plans for the Concept Plan and the Project Application.

3.0 Concept Plan Preferred Project

In direct response to the issues raised in submissions received during public exhibition of the proposal, MTC has amended the Concept Plan.

The architectural drawings of the revised development have been prepared by AJ+C and are located at **Attachment 9**. The following section outlines the scope of development for which Concept Plan approval is sought. Any instrument of approval issued by the Department should adopt the following description. Where inconsistencies exist between the description outlined in this PPR and the exhibited EAR, this PPR prevails.

3.1 Concept Plan Description

3.1.1 Concept Approval

The Concept Plan seeks approval for:

- broad land use distribution across the site;
- up to 27,500m^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 270 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 **Attachment 9**, proposes:

- demolition of:
  - Mary Andrews College (18-26 Carillon Avenue)
  - MTC Dining Hall (2-16 Carillon Avenue)
  - the 3 residential buildings on Site B (30-44 Carillon Avenue)
  - weatherboard child care centre (48 Carillon Avenue)
  - 2 x 2 storey terraces (3-5 King Street)
  - a 2 storey terrace (7 King Street)
  - the rear of residential terraces (9-11 King Street)
  - the rear of a mixed use building (21 King Street)
  - the rear of mixed use building (23-25 King Street)
- redevelopment of Site A including:
  - construction of a new 6 storey Resource and Research Centre (Building A1)
  - refurbishment of Buildings A3, A4, A5, A6 and A7
  - 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 (5 storeys)
  - Building B2 (9 storeys)
  - Building B3 (6 storeys)
  - Building B4 (4 storeys)
  - associated private open space

- conservation works, including rear single storey additions to the terraces on 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.

3.1.2 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 2**.

Table 2 – Buildings proposed to be demolished or partially demolished

Address	Description
18-26 Carillon Avenue	Residential College
2-16 Carillon Avenue	Dining Hall
3-5 King Street	2 x 2 storey terraces
7 King Street	2 storey terrace
9-11 King Street	Partial demolition to the rear of residential buildings
21 King Street	Partial demolition to the rear of mixed use buildings
23-25 King Street	Partial demolition to the rear of mixed use buildings
30-44 Carillon Avenue	3 residential buildings
48 Carillon Avenue	Weatherboard child care centre

3.1.3 Land Use Distribution and Built Form

Twelve new buildings are proposed to be constructed on Sites A and B, 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 **Attachment 9** and summarised in **Table 3** below.

Table 3 – New building overview

Building (see Figure 13)	GFA	Storeys	Land Use(s)
Site A			
Building A1	7476	6	Academic
Building A2	1156	2	Academic
Building A3	1354	2	Retail & Academic
Building A4	391	1-3	Retail & Academic
Building A5	572	2	Retail & Academic
Building A6	683	3	Retail & Academic
Building A7	666	2	Academic
Building A8	4769	5	Academic & Residential
Site B			
Building B1	1420	5	Residential
Building B2	4105	9	Residential
Building B3	2654	6	Residential
Building B4	1302	4	Residential

Building (see Figure 13)	GFA	Storeys	Land Use(s)
Site C			
Building C1	803	2	Residential
Building C2	158	1	Residential

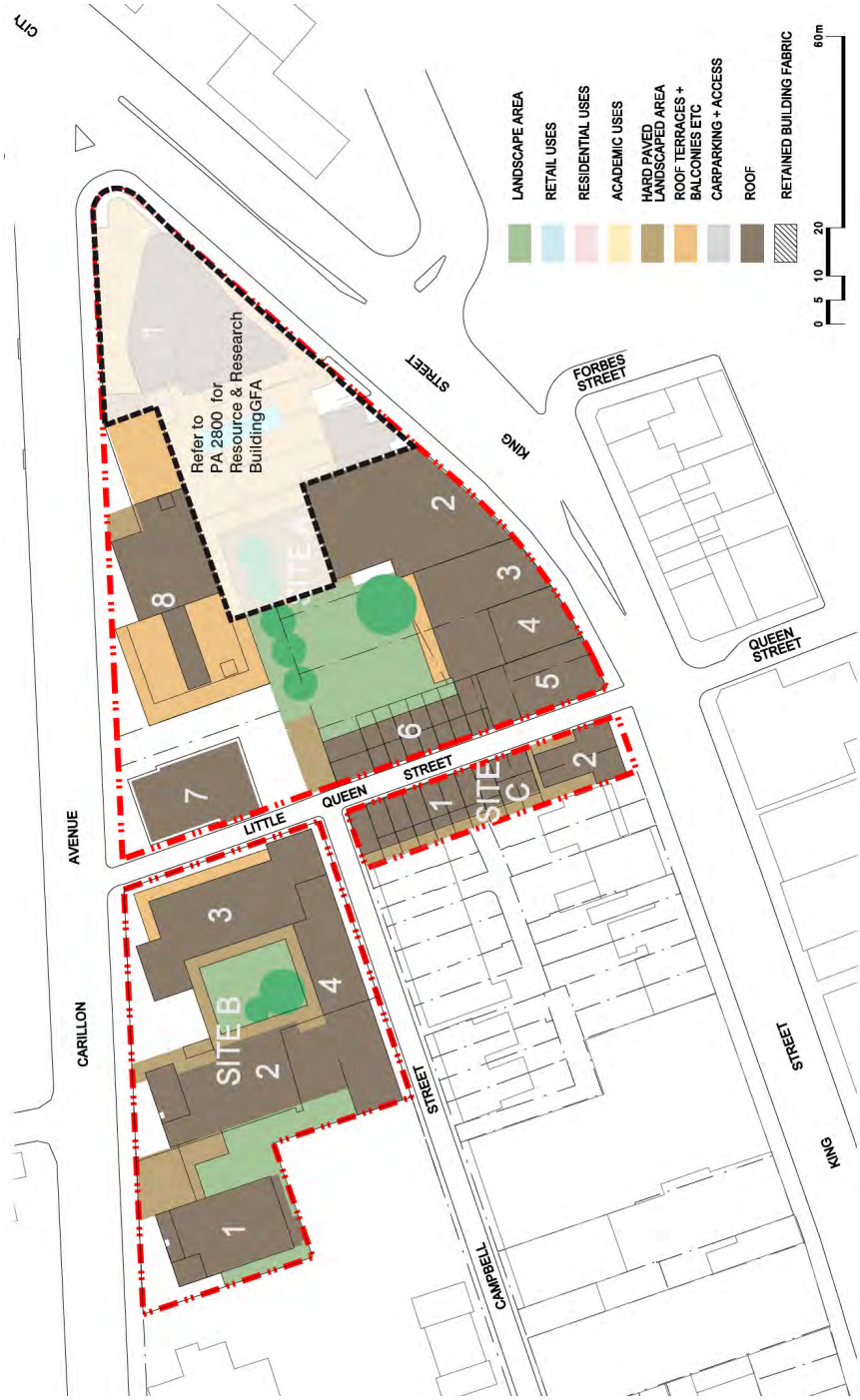


Figure 13 – Proposed Concept Plan

Source: AJ + C

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 **Attachment 9**.

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, A4, 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 and faculty 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 27,500m^2 of GFA is proposed to be provided, which will be distributed across the site as per the break down in **Table 4**.

Table 4 – Gross Floor Areas by use

Land Use		GFA (m^2)
Academic	Site A:	13,700
	Site B:	0
	Site C:	0
	Total:	**13,700**
Retail	Site A:	650
	Site B:	0
	Site C:	0
	Total:	**650**
Residential (Student Accommodation)	Site A:	2473
	Site B:	9481
	Site C:	961
	Total:	**12,915**
Total		**27,335**

Current planning and design for the Concept Plan suggest approximately 27,335m^2 of floor area will be required. A rounded up total GFA of 27,500m^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 revised to better respond to the built form context of the surrounding area. The maximum building heights (and the number of levels), are shown in **Table 5** below.

Table 5 – Proposed building heights

Building	Maximum Height (AHD)	Basement Levels	Above Ground Levels
Site A			
Building A1	71.1	2	6
Building A2		0	2
Building A3	55	0	3
Building A4		0	1
Building A5		0	2
Building A6		0	3
Building A7	50	0	2
Building A8	63.5	2	5
Site B			
Building B1	63	2	5
Building B2		2	9
Building B3		2	6
Building B4		2	5
Site C			
Building C1	50	0	2
Building C2		0	1

3.1.4 Student and Faculty Accommodation

A total of 104 dwellings (including 21 existing dwellings) are proposed as part of the provision of student and faculty accommodation for MTC.

An indicative break down of the proposed number and mix of dwellings on the site is shown in **Table 6** below. It should be noted that the units will in some cases be used as shared student housing.

Table 6 – Dwelling mix and distribution

	Site A	Site B	Site C	Total	Mix %
Terrace Dwelling	9	0	12	20	19.4
2 Bedroom Unit	0	0	0	0	0
3 Bedroom Unit	0	34	0	34	33.1
4 Bedroom Unit	0	20	0	20	19.4
5 Bedroom Unit	13	16	0	29	28.1
Total	**22**	**70**	**12**	**103**	

3.1.5 Open Space and Public Domain

As shown in the Landscape Drawings at **Attachment 6**, the Concept Plan will provide a wide range of open space and public domain improvements around the site.

3.1.6 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. The trees will be replaced and additional landscaping provided across the site as part of the Concept Plan (see **Attachment 6**).

3.1.7 Transport and Access

Car Parking

Two separate basement car parks are proposed as part of the Concept Plan, providing up to 270 car spaces on the site. The first car park is located on the two basement levels under Site A and will provide 100 car spaces. The second car park is located over two basement levels under Site B and will provide 170 car spaces. Access to both new car parking areas will be via Carillon Avenue.

Pedestrian and Bicycle Facilities

Bicycle parking in the order of 130 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.

3.1.8 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. After consultation with CoS' stormwater engineer it has been determined that the system in Carillon Avenue has issues with flooding. Therefore upon CoS' request it has been determined that the new Research and Resource development will drain to King Street to reduce the load on the Carillon Avenue system.

A new connection will be made to the existing CoS 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 the eastern end of Basement Level 1. The capacity of the on site detention structure is in accordance with CoS' 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.

3.1.9 Services and Infrastructure

Plans showing the proposed services and infrastructure arrangements are located as part of the architectural drawing set at Appendix Q of the EAR.

3.1.10 Indicative Project Staging

Approval Staging

A Staging Plan illustrating the indicative project staging is located at **Attachment 2**.

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, C);
- Stage 4: King Street Retail and Teaching Centre (Buildings A3, A4, and A5); and
- 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 undertake other functions while adjacent to a major building site.

The Concept Plan has been developed in a way that will facilitate construction 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 (post the Stage 1 library project application outlined in Section 4 of this PPR) 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 C) 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.

3.2 Key Changes

In response to the submissions made during the public exhibition process, MTC have made a number of changes to the Concept Plan which are detailed below.

3.2.1 Changes to Site A

The following are the key changes made to Site A (see **Figure 13**):

1. The height of the Resource and Research building has been reduced from an overall height of 7 storeys to 6 storeys, that is, a 5 storey street wall height with one storey setback.
2. The height of the Resource and Research Centre has an increased setback to the east with the two storey terraces of 9-11 King Street.
3. The bulk and mass of the Research and Resource building on Carillon Avenue has been reduced and modulated through:
   - the reinforcement of the predominant angled landscape setback of Carillon Avenue; and
   - a reduction in the height from 5 to 4 storeys (Building A8).
4. The upper level setback of the Dining Room Building has been increased from 2.5m to 4m to provide a better relationship to the scale of Deaconess House.

3.2.2 Changes to Site B

The following are the key changes made to Site B (see **Figure 14**):

5. The height of building B1 has been reduced by one storey to improve the solar access to Newtown North Public School.
6. The building separation distances between buildings have been increased along Carillon Avenue to reduce the mass and bulk.
7. The height of buildings along Campbell Street has been reduced by one storey to provide a better relationship with the terraces opposite and increased solar access.

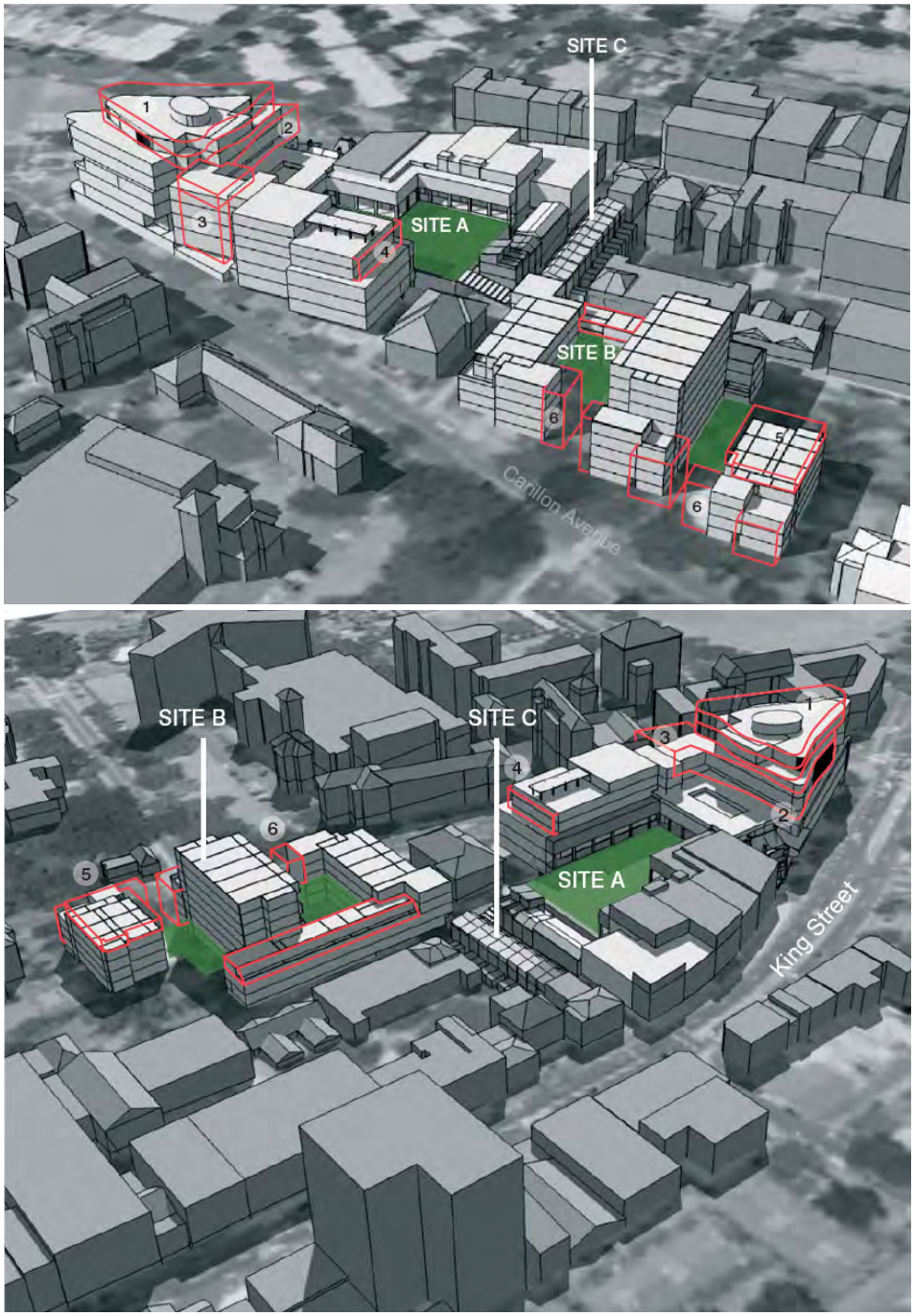


Figure 14 – 3D Model of the Preferred Project with the outline of the exhibited Concept Plan overlayed

Source: AJ + C

3.2.3 Numeric Overview

A numeric overview of the changes is shown in **Table 7**.

Table 7 – Numeric Overview of Changes

Building	GFA		Storeys		Land Use(s)
	EAR	PPR	EAR	PPR	
Site A					
Building A1	9059	7476	7	6	Academic
Building A2	1156	1156	2	2	Academic
Building A3	1354	1354	2	2	Retail & Academic
Building A4	391	391	1-3	1-3	Retail & Academic
Building A5	572	572	2	2	Retail & Academic
Building A6	768	683	3	3	Residential
Building A7	666	666	2	2	Academic
Building A8	4403	4769	6	5	Academic & Residential
Site B					
Building B1	2120	1420	6	5	Residential
Building B2	4449	4105	9	9	Residential
Building B3	2995	2654	6	6	Residential
Building B4	1312	1302	5	5	Residential
Site C					
Building C1	803	803	2	2	Residential
Building C2	158	158	1	1	Residential

3.3 Merits of Key Changes

As stated in the exhibited EAR, the Concept Plan for MTC represents a regionally significant development at an important higher educational establishment in the Sydney City Subregion's Education and Health Precinct. It is the result of long term and comprehensive planning for the future growth of MTC and will enable 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.

MTC has considered the issues raised during exhibition and has responded by making a number of key changes to the Concept Plan. The changes reflect a general reduction in the scale of the development and thus a reduction in adverse environmental effects in terms of bulk and scale, heritage and traffic. The changes, which have come about as result of the submissions made by the Department, CoS, agencies and the public, will have the following benefits:

- The reduction in height, bulk and scale in key locations across the Concept Plan will:
  - provide a greater transition in scale between the existing character of King Street and Carillon Avenue;
  - better reflect the CoS' desired future character of the locality whilst still meeting the academic needs of MTC; and
  - have no adverse impacts on the amenity of the residential properties along Campbell Street, including the Rubicon development.

- The changes to Building B1 will result in a significant reduction in the overshadowing of Newtown North Public School's Playground.
- The changes to Buildings A1 and A8 will break up the continuous building from, reduce the bulk and scale, and provide a more compatible built-form with the existing development along Carillon Avenue.
- The increased upper level setback of the Building A8 will provide a better relationship to the scale of Deaconess House. It should be noted that Mary Andrews House (which is proposed for demolition) is an existing 4-5 storey building directly adjacent to the proposed heritage item. Building A8 is located further away from the proposed heritage item and will therefore improve the heritage curtilage of Deaconess House.
- The removal of 70 car spaces will result in a more appropriate parking provision for the site and reduction in the traffic generated by the development.

4.0 Project Application Preferred Project

In accordance with its commitment to address the concerns of the Department, CoS and the public, MTC has modified the Project Application.

The architectural drawings of the revised development have been prepared by AJ+C and are located at **Attachment 9**. The following section outlines the scope of development for which Project Application approval is sought. Any instrument of approval issued by the Department should adopt the following description. Where inconsistencies exist between the description outlined in this PPR and the exhibited EAR, this PPR prevails.

4.1 Description of Preferred Project

This Project Application relates to the construction of a new 6 storey Resource and Research Centre and associated works within the Moore Theological Campus.

Project Application Approval is being sought for the following:

- site preparation works including:
  - demolition of the existing structures on the site;
  - removal of 10 trees;
  - excavation;
- construction of a 6 storey Resource and Research Centre including library, teaching and administration spaces, and 3 basement levels including an Automatic Storage Retrieval System (ASRS), library / archive / storage spaces, building plant, 40 bike spaces, and change rooms;
- associated landscaping and public domain works; and
- construction of a temporary car park containing 36 spaces on part of Site B.

4.1.1 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;
- at-grade car park fronting King Street;
- 3 – 7 King Street;
- Rear additions to 9 and 11 King Street;
- 84 – 86 Campbell Street; and
- 30 – 32 Carillon Avenue.

10 trees will also be removed as part of the proposed development.

4.1.2 Resource and Research Centre

The proposed Resource and Research Centre will consist of six 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 8** below. Architectural drawings showing the proposed works are located at **Attachment 9**.

Table 8 – Resource and Research Centre overview

Level	GFA (m^2)	Description
Basement 3	0	ASRS
Basement 2	0	ASRS, storage area, building plant
Basement 1	830	ASRS, library, change rooms, bicycle parking, amenities, building plant
Level 1	1,719	Lobby and atrium, library
Level 2	1,378	Library and teaching space
Level 3	871	Post graduate research and student centre
Level 4	1,075	Administration
Level 5	1,075	Faculty Research
Level 6	485	Seminar Rooms and building plant

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.

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. 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 9** below.

Table 9 – Library hours of operation

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

4.1.3 Temporary Car Park

It is proposed to provide a temporary at-grade car park to replace the existing car park located at 1 King Street and formalise the 16 car spaces currently provided on that part of Site B. In total the temporary car park will provide 36 car parking spaces (20 from Site A and 16 from the existing spaces) and will be demolished to make way for the Site B development.

Due to the change in levels across the site, the temporary car park will be divided into two sections with access via an entrance from Carillon Avenue to the lower car park and Campbell Street to the upper car park.

4.1.4 Landscaping and Public Domain

The landscape and public domain works, which are detailed in the Landscape Statement and plans at **Attachment 6**, 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.

4.1.5 Construction Staging

It is proposed to stage the construction process to ensure the work is undertaken in an efficient manner, with detailed design and documentation being undertaken concurrently with the initial demolition works.

To facilitate the staging of the construction process, it is proposed to stage the issuing of construction certificates. Five separate construction certificates are proposed, as detailed below:

- Stage 1A – a stacker plus provision of a side wing to existing 1 King Street building which is to be retained;
- Stage 1B – a triangular building (2 or 3 storeys high) connecting into the existing 1 King Street building which is to be retained;
- Stage 2 – allows for the demolition of 1 King Street and will more than likely have the same number of storeys as 1B;
- Stage 3 – construction of the atrium and connections to Knox centre and refurbishment of 9-11 King Street; and
- Stage 4 – construction of the upper floors of the library to provide a total proposed quantum of GFA.

It is anticipated that the Department will structure the Conditions of Approval in accordance with the staged Construction Certificate methodology outlined above.

4.2 Key Changes

In response to the submissions made during the public exhibition process, MTC have made the following key changes to the Project Application:

- reduction of the height of the Resource and Research Centre from 7 storeys to 6 storeys;
- reduction of the GFA from 9,059m^2 to 7,376m^2;
- removal of the basement car park containing 74 car spaces;
- removal of the partial demolition of the Moore College Dining Hall;
- provision of the ASRS within the basement; and
- revisions to the design of the Temporary Car Park.

An overview of the numeric changes to the Project Application are shown in **Table 10** below.

Table 10 – Numeric Overview of Changes

Building	Exhibited Project	Preferred Project
Building Height	7 Storeys RL 69.9 AHD	6 Storeys RL 66.1 AHD
Gross Floor Area	9,059 m^2	7,376 m^2
Car Parking	74	0
Temporary Car Parking	38	36

4.2.1 Site Preparation

The two storey part of the Moore College Dining Hall fronting Carillon Avenue will no longer be demolished as part of the Project Application. The building will be refurbished to provide additional emergency exit stairs and disabled access to entry from Carillon Avenue.

4.2.2 Resource and Research Centre

As shown in the Architectural Drawings at **Attachment 9**, the Resource and Research Centre has been redesigned to reduce its bulk and scale. The changes include reducing the height of the building by 1 storey and the GFA by 1,683m^2. The reduction in the building envelope is illustrated at **Figure 15** below.

A photomontage illustrating the change in the external appearance of the building is shown at **Figure 16**.

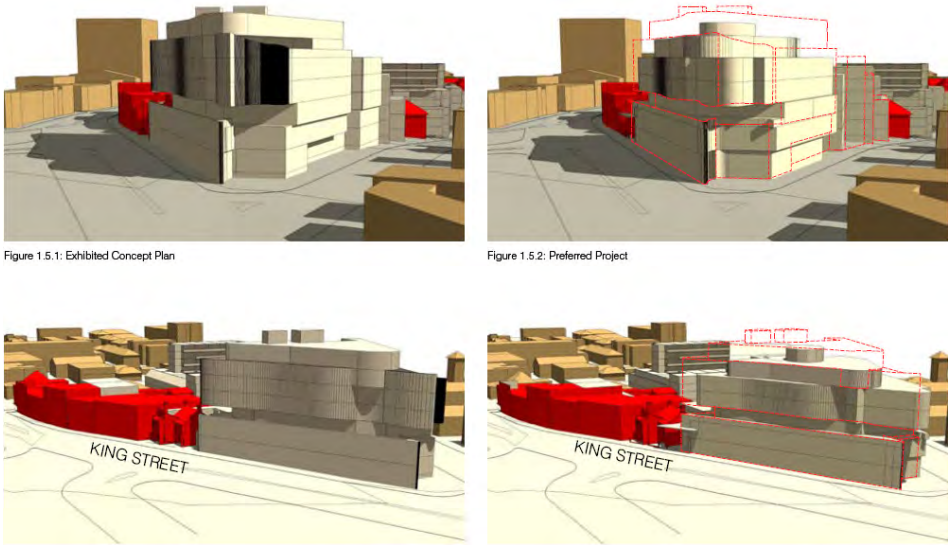


Figure 1.5.1: Exhibited Concept Plan

Figure 1.5.2: Preferred Project

Figure 15 – Proposed building envelope with exhibited envelope overlayed

Source: AJ + C

Exhibited Project

Preferred Project

Figure 16 – The exhibited and revised Resource and Research Centre

Source: AJ+C

In addition to the external changes to the building, the following key internal changes have been made:

- reallocation of the administration spaces and uses from Ground Level to Level 4 in order to provide more active uses at the ground level of the building;
- provision of a void area at ground level and basement level 1 along King Street and Carillon Avenue to provide views from the street to multiple levels within the building; and
- provision of ASRS within the basement of the building. A third basement level has been included to accommodate the ASRS.

4.2.3 Car Parking

The 74 car spaces proposed as part of the exhibited Project Application have been removed as part of the Preferred Project.

The temporary car park has been redesigned to address the concerns of the Department of Planning and CoS.

The Project Application will provide 40 secure bicycle spaces and associated change facilities.

4.2.4 Tree Removal

A total of 12 trees are now proposed for removal, resulting an additional 3 trees to be retained.

4.3 Merits of Key Changes

As stated in the EAR, the Project Application for the Resource and Research Centre will see a landmark building on a site identified for redevelopment as the gateway into Newtown in the CoS' Urban Design Report. MTC will make the $53 million Resource and Research Centre library publicly accessible for the use and enjoyment of the wider community.

MTC has considered the issues raised during exhibition and has responded by making a number of key changes to the Project Application. The changes reflect a general reduction in the scale of the development and thus a reduction in adverse environmental effects in terms of bulk and scale, heritage and traffic. The changes, which have come about as result of the submissions made by the CoS, agencies and public, will have the following benefits:

- The reduction in height, bulk and scale of the Resource and Research Centre will:
  - provide a more appropriate transition between the existing streetscape character of King Street and Carillon Avenue; and
  - better reflect the CoS' desired future character of the locality whilst still meeting the academic needs of MTC.
- The allocation of library uses at the ground and basement level and new distinct pedestrian entrance will enhance activation of King Street.
- The removal of the basement car parking proposed as part of the Project Application will result in a more appropriate parking provision for the site and reduction in the traffic generated by the development.
- The additional landscape embellishment and fencing around the temporary car park will mitigate any potential visual impacts on Carillon Avenue.

5.0 Final Concept Plan Statement of Commitments

In accordance with Part 3A of the *Environmental Planning and Assessment Act 1979*, the following are the commitments made by MTC to manage and minimise potential impacts arising from the proposal. These commitments replace the draft commitments included with the exhibited EAR.

5.1 Urban Design

- All student accommodation buildings that form part of future Project / Development 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.
- Future applications for rear additions to heritage items will be subservient to the main parts of the building.

5.2 Transport and Accessibility

- MTC makes the following commitments regarding construction traffic for future Project Applications:
  - All demolition and construction vehicles are to be contained within the site.
  - All vehicles will enter and exit the site in a forward direction.
  - All works/regulatory signposting associated with proposed development are to be at no cost to the RTA.
- MTC will be responsible for public utility adjustments/relocation works, as required by public utility authorities.
- 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.
- All swept paths will comply with AUSTROADS.
- Proposed turning areas will be kept clear of obstacles and parked cars.
- 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, Work Place Travel Plan, or Green Travel Plan which will aim to reduce private vehicular usage by 10% within 5 years of the commencement of occupation of the Research and Resource Centre.
- Bicycle spaces are proposed to be provided at a rate of 1 space per 20 staff/students during future Project and/or Development Applications.

5.3 Environmental Sustainable Development

MTC makes the commitment to the following ESD initiatives during future Project Applications for the site:

Indoor Environment Quality

- Natural ventilation will be promoted where possible for academic as well as residential buildings.
- Buildings will be designed to suit cross-ventilation to maximise the benefits of outdoor air flow.
- Facade designs will optimise daylight.
- Good levels of insulation will be provided in all roofs and external walls to prevent heat losses and make spaces more thermally comfortable.

Energy Conservation

- New buildings will achieve a minimum 4.5 Star NABERS equivalent and refurbished academic buildings will achieve a minimum 4 Star NABERS equivalent;
- All new residential buildings will target to achieve in excess of BASIX.
- All existing plant and services will be replaced with new efficient services in refurbished buildings.

Renewable Energy

- MTC will investigate the potential to incorporate:
  - photovoltaic (PV) panels for onsite electricity generation; and
  - solar hot water for the residential areas

Materials

- When selecting materials MTC will consider:
  - their environmental responsibility (e.g. Forest Stewardship Council certified timber, reduction in formaldehyde and use of PVC); and
  - the environmental credentials of material manufacturers considered (e.g. ISO certification and product stewardship arrangements).

Waste Management

- Waste management will be considered during demolition, construction and ongoing operations.
- Contractors will target a 90% reuse/ recycle rate of all waste generated during demolition and construction.
- Recycling facilities will be provided on site.

Water Conservation

- Water efficient fixtures and fittings will be installed in all new and refurbished buildings.
- Use of non-potable water sources will be investigated, including rainwater and on site bore water.

5.4 Heritage

MTC makes the following commitments in regards to heritage:

- A Heritage Interpretation Strategy will be prepared prior to the commencement of construction of the first Project Application (i.e. The Resource and Research Centre).
- Photographic archival recording will be undertaken prior to the commencement of any demolition works.
- Archaeological investigations will be undertaken prior to, or in conjunction with, ground disturbance of areas with historical archaeological potential.
- Excavation will be managed by a section 140 Application in accordance with the requirements of the *Heritage Act 1977* 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 in accordance with the Heritage Branch guidelines.
- Should unexpected or significant Indigenous remains not previously identified be discovered during excavation at the site, all works will cease and a nominated archaeologist and the Local Area Land Council will 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.
- A copy of the Conservation Management Strategy prepared by NBRS + Partners and dated September 2010 will be provided to the CoS and Department of Planning's Heritage Branch. A copy will also be kept on the premises of the College.
- All works will be undertaken in accordance with the Conservation Management Strategy for the site.

5.5 Geotechnical

MTC will undertake all the recommendations outlined in Appendix L of the Geotechnical Investigation submitted with the EAR.

5.6 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.

5.7 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 / Development 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.

5.8 Disabled Access

MTC commits to meeting the requirements of the *Disability Discrimination Act 1992* and where possible will exceed the requirements by incorporating additional facilities for people with disabilities.

5.9 Utilities

A formal application will be made to Sydney Water to connect the 225mm outlet pipe from site to the 450mm Sydney Water stormwater pipe.

6.0 Final Project Application Statement of Commitments

In accordance with Part 3A of the *Environmental Planning and Assessment Act 1979*, the following are the commitments made by MTC to manage and minimise potential impacts arising from the proposal. These commitments replace the draft commitments included with the exhibited EAR.

6.1 Transport and Accessibility

Given the 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.
- Access to King Street will be removed and replaced with kerb and guttering to match existing in accordance with RTA requirements.
- MTC will submit detailed design drawings and geotechnical reports relating to excavation of site and support structures to RTA for assessment.
- A Road Occupancy Licence will be obtained from the RTA for any road works that impact King Street
- Construction Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control to be prepared prior to issue of a CC.
- All works/regulatory signposting associated with proposed development to be at no cost to the RTA.

6.2 Temporary Car Park

MTC will cease to use the temporary car park on Site B following the full completion and occupation of the Site B or Site A car park, which ever is completed first.

6.3 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.

MTC commits to undertake the following actions during the construction and demolition process to minimise any adverse impacts:

- 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 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.

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.

6.4 Geotechnical

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

6.5 Structural Engineering

MTC will undertake the following recommendations to monitor the performance of the existing foundations during construction of the Project Application:

- 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.