



Planning &  
Infrastructure

**MAJOR PROJECT ASSESSMENT:  
Graythwaite Concept Plan and Stage 1  
Project Application  
North Sydney  
(MP10\_0149 & MP10\_150)**



Director-General's  
Environmental Assessment Report  
Section 75I of the  
*Environmental Planning and Assessment Act 1979*

September 2012

## ABBREVIATIONS

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|                  |  |
|------------------|--|
| CIV              | Capital Investment Value   |
| Department       | Department of Planning & Infrastructure                              |
| DGRs             | Director-General's Requirements                                      |
| Director-General | Director-General of the Department of Planning & Infrastructure      |
| EA               | Environmental Assessment   |
| EP&A Act         | <i>Environmental Planning and Assessment Act 1979</i>                |
| EP&A Regulation  | Environmental Planning and Assessment Regulation 2000                |
| EPI              | Environmental Planning Instrument                                    |
| MD SEPP          | State Environmental Planning Policy (Major Development) 2005         |
| Minister         | Minister for Planning & Infrastructure                               |
| PAC              | Planning Assessment Commission                                       |
| Part 3A          | Part 3A of the <i>Environmental Planning and Assessment Act 1979</i> |
| PEA              | Preliminary Environmental Assessment                                 |
| PPR              | Preferred Project Report   |
| Proponent        | Sydney Church of England Grammar School (Shore)                      |
| RtS              | Response to Submissions  |

Cover Picture: View of Graythwaite House and West Building from colonnade fronting the East Building.

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NSW Government  
Department of Planning & Infrastructure

## EXECUTIVE SUMMARY

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This report is an assessment of an application by Sydney Church of England Grammar School (Shore, the proponent), seeking concept plan approval and concurrent stage 1 project approval for the extension of Shore school campus onto the Graythwaite site pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Shore purchased the Graythwaite site in November 2009 from the State government with the objective of integrating it with the existing Shore School campus. The site of the concept plan and stage 1 project application comprises the Graythwaite site and part of the adjoining Shore school campus at Edward Street, Union Street, William Street and Hunter Crescent in North Sydney. The site is located within the North Sydney Local Government Area.

The concept plan seeks approval for: the use of the Graythwaite site as an educational establishment, being an extension of the existing Shore school campus; conservation, refurbishment and adaptive reuse of existing buildings, including Graythwaite House and the Coach House; demolition of the Ward Building and other minor demolition works; building envelopes for three new buildings on site with a combined GFA of 6,076 sqm; refurbishment and adaptive re-use of the Tom O'Neill Centre in stage 1 and its demolition and construction of a replacement building in stage 3; potential to accommodate up to 450 additional students and 45 additional staff; pedestrian and vehicular access arrangements including a new student pick-up facility, 48 car parking spaces and a school bus stop on William Street; landscaping; site works and services; and phasing of the concept plan across three stages.

The concurrent stage 1 project application seeks approval for: the use of the Graythwaite site as an educational establishment, being an extension of the existing Shore school campus; conservation, refurbishment and adaptive reuse of Graythwaite House, the Coach House and Tom O'Neill Centre; demolition works; seven at-grade car parking spaces; drainage and stormwater works; and landscaping.

The capital investment value (CIV) of the concept plan is **\$42.9 Million** and the CIV of the concurrent stage 1 project application is **\$12.2 Million**. The concept plan will create approximately 250 full time equivalent construction jobs, and 45 full time equivalent operational jobs. The stage 1 project application will create approximately 52 full time equivalent construction jobs, however no additional operational jobs will be created.

The Graythwaite site is zoned Special Uses (Hospital) and the existing Shore school campus is zoned Special Uses (School) under North Sydney Local Environmental Plan 2001 (NSLEP 2001). The proposed development is not permissible within the Graythwaite site under the NSLEP 2008, but is permissible in the existing Shore school campus under NSLEP 2008. However, under clause 28(2)(b) of State Environmental Planning Policy (Infrastructure) 2007, the proposal is permissible within the Graythwaite site.

The proponent originally lodged an EA (original EA) with the department which was exhibited from Thursday 27 January 2011 until Monday 14 March 2011 (46 days). During the exhibition of the original EA, the department received seven submissions from public authorities, including a submission from North Sydney Council, which objected to the proposal, and 151 submissions from the general public, of which 144 (95 %) objected to the proposal. Issues raised in submissions related to vegetation removal, traffic

congestion and parking, public inquiry requests, building design, community consultation, heritage and conservation management plan, noise, privacy, public access, drainage, lack of public benefit. Subsequent to the exhibition of the original EA, the department informed the proponent of a number of key issues which it considered required further consideration, including extent of community consultation, bulk and scale, noise and traffic arrangements.

Subsequent to the exhibition of the original EA, the proponent prepared and lodged a revised EA that replaced the original EA and included amendments to the project and additional information in response to issues raised during the exhibition of the original EA and key issues raised by the department. The additional information and amendments to the project included a Conservation Management Plan endorsed by the Heritage Council of NSW and revised Planning Parameters Report, a redesigned proposed building envelope, revised plans and specialist reports, reduced student and staff population growth, photomontages, and a new pick-up facility connecting Union Street to Hunter Crescent.

The department exhibited the revised EA from Wednesday 9 November 2011 until Friday 9 December 2011 (30 days). During the exhibition of the revised EA, the department received six submissions from public authorities, including a submission from North Sydney Council which objected to the proposal. Additionally, the department received 183 submissions from the general public, of which 79 (43 %) objected to the project and 95 (52 %) supported the project (with 5 % offering general comment). Issues raised in submissions related to tree removal, noise, traffic and parking, student population growth, heritage, setbacks, height of buildings, extent of community consultation, basis for submission of a revised EA, impacts to the environment, and public benefit.

On 9 March 2012, the proponent submitted a PPR which included a response to submissions, additional traffic information, including a preferred student pick-up facility option, additional information regarding the height of proposed buildings, a revised Planning Parameters Report, and a revised Statement of Commitments.

The department has assessed the merits of the proposal described in the revised EA and PPR and considers that the key issues relate to built form, residential amenity, heritage, traffic, accessibility and transport, stormwater and drainage, BCA compliance, student population growth, noise, flora and fauna, ESD, railway line corridor, developer contributions and public interest. These issues have been assessed in detail and the department is satisfied that they can be adequately mitigated and managed to ensure an acceptable level of environmental performance pursuant to section 75J of the EP&A Act. The department has recommended a range of conditions to ensure this occurs.

The department is satisfied the site is suitable for the proposed use and that the proposal is consistent with the Metropolitan Plan for Sydney 2036 and the Draft Inner North Subregional Strategy.

The department therefore considers the proposal to be in the public interest and the concept plan and concurrent stage 1 project application should be approved, subject to modifications and conditions.

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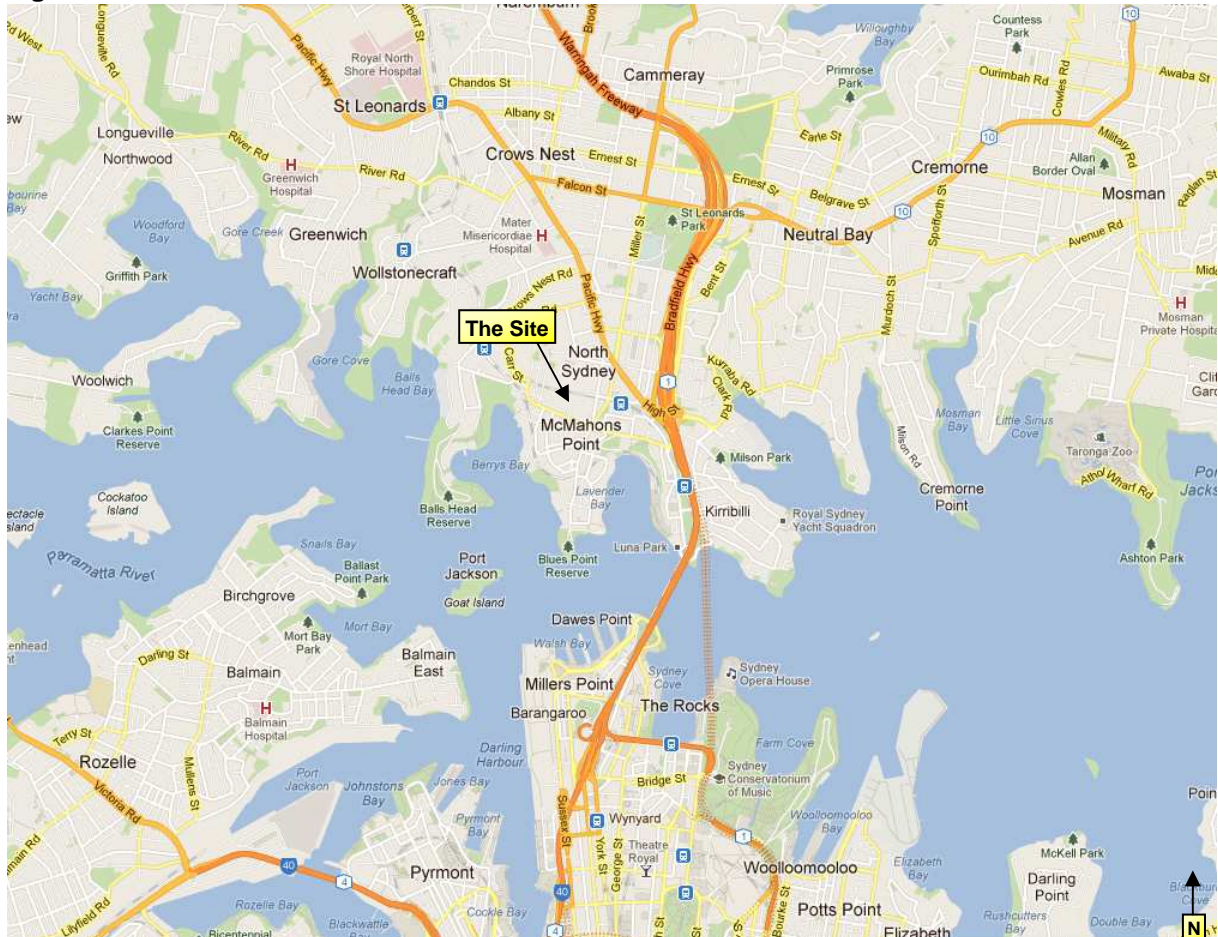


## 1. BACKGROUND

### 1.1. The Site

The site is located at Edward Street, Union Street, William Street and Hunter Crescent, North Sydney, in the North Sydney Local Government Area. The site comprises the Graythwaite site and part of the adjoining Sydney Church of England Grammar School (Shore) school campus and is shown in Figures 1 and 2.

**Figure 1: Site Location**



The site is legally described as Lot 2 in DP539853 and Part of Lot 1 in DP 120268, and includes the Graythwaite site and part of the existing Shore senior school campus where a proposed building envelope overlaps the eastern boundary of the Graythwaite site into the existing Shore senior school campus.

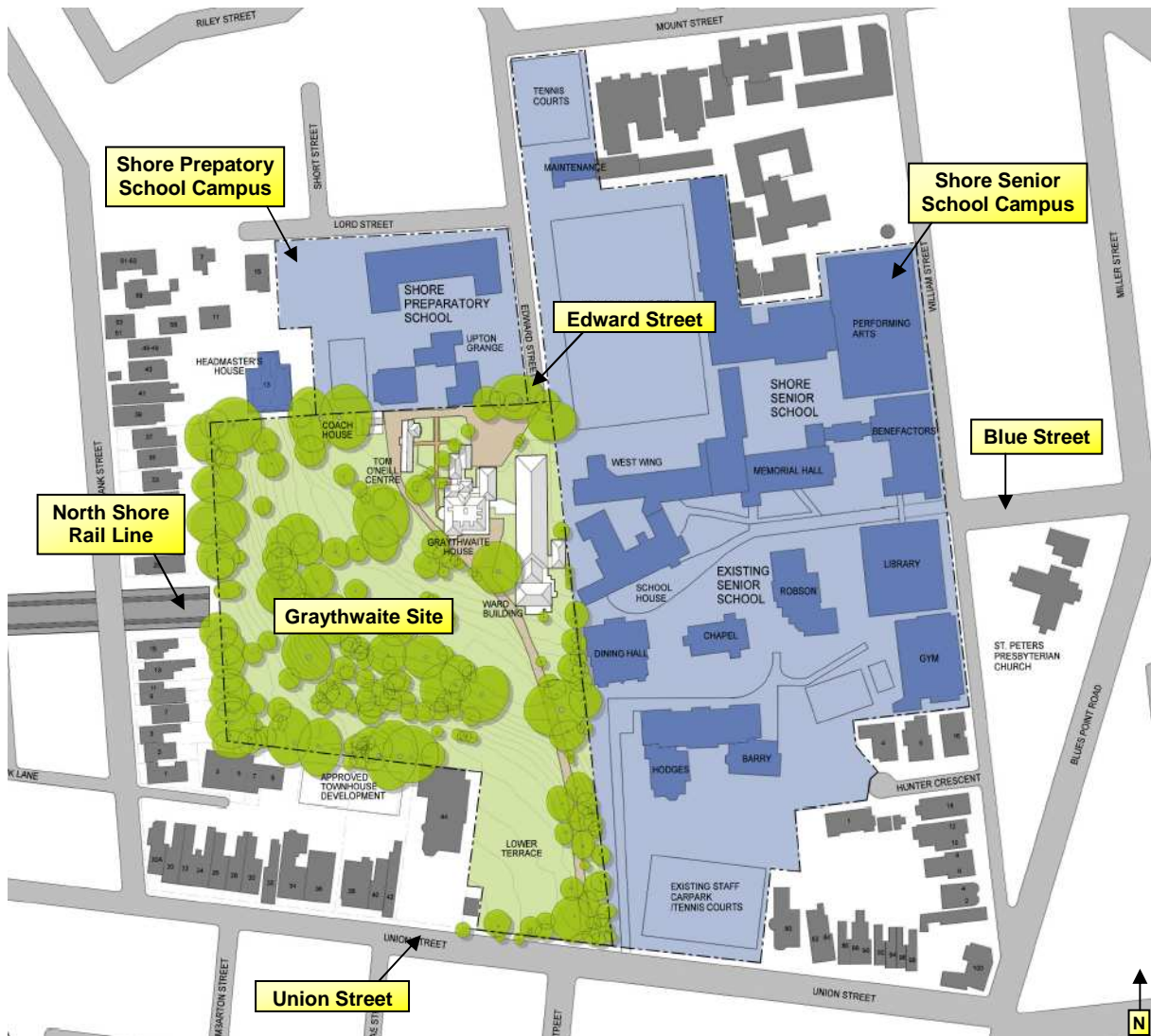
The proposal also includes a vehicular pick-up facility in the south of the existing Shore senior school campus which links Union Street to Hunter Crescent. The pick-up facility comprises the following additional allotments:

- Lot 1 in DP 539853
- Lot D in DP 975970
- Lot 3 in DP75717
- Lot 1 in DP 570826
- Lot 1 in DP 60719
- Lot 1 in DP 57339
- Lot C in DP 975970
- Lot 3 in DP 570829
- Lot 2 in DP 18725
- Lot 3 in DP 18725

## 1.2. Existing Site Features

The Graythwaite site (shaded green) and the existing Shore school campus (shaded blue) are shown below in Figure 2.

**Figure 2:** Graythwaite Site and Shore school campus



The Graythwaite site consists of a single irregular shaped allotment with a total area of 2.7 ha and shares a common boundary with the existing Shore senior school campus in the east and the existing Shore preparatory school campus in the north (see Figure 2). The Graythwaite site also has frontages to Union Street and Edward Street and is traversed by the North Shore Rail Line corridor tunnel in an east-west direction approximately in the centre of the site.

The site is located in close proximity to public transport services with the North Sydney Train Station and bus services located along Blue Street approximately 170 m east of the existing Shore senior school campus boundary.

Four existing buildings currently occupy the Graythwaite site, being the Graythwaite House Complex (which includes Graythwaite House, kitchen wing, former stables, west annex, and a link with the Ward Building), the Coach House, the Tom O'Neill Centre and the Ward Building. The remainder of the site comprises a variety of mature vegetation including an informal avenue of planting along the driveway from Union Street and



Morton Bay Figs along the west and south site boundaries and terraced embankments within the site.

The topography of Graythwaite slopes towards the south-west and includes a number of open grassed areas and landscaped embankments which are known as the lower, middle and upper terraces. The four existing buildings are located in the upper terrace in the north-eastern corner of the site.

The Graythwaite site is listed as a heritage item on the State Heritage Register, North Sydney Local Environmental Plan 2001, the National Trust Register and the Register of National Estate. The existing Graythwaite site layout and site photos are shown in Figures 3 to 11.

**Figure 3: Existing Graythwaite Site Layout and Buildings**





**Figure 4: Graythwaite House (Looking S-W)**



**Figure 5: Graythwaite House (Looking N)**



**Figure 6: Ward Building (Looking E)**



**Figure 7: Ward Building (Looking N)**



**Figure 8: Coach House (Looking N)**



**Figure 9: Tom O'Neill Centre (looking E)**



**Figure 10: Middle Terrace (looking S)**



**Figure 11: Union Street Driveway (looking S)**



### 1.3. Surrounding Development

The Graythwaite site and the existing Shore senior school campus are located amongst a mix of educational, low and medium density residential, light industrial and commercial land uses which are detailed below:

- To the north of the Graythwaite site is the Shore preparatory school campus and the Shore School Headmasters House, beyond which, are dwelling houses facing Lord Street.
- To the east of the Graythwaite site is the existing Shore senior school campus. Further to the east is William Street, which is fronted by medium density residential developments, St Peters Presbyterian Church North Sydney and a number of commercial developments.
- To the south of the Graythwaite site is Union Street and residential dwellings, including two heritage listed residential dwellings, and an electrical substation. Further to the south, beyond Union Street, are a number of residential dwellings, small shops and light industrial land uses.
- To the west of the Graythwaite site are dwelling houses facing Bank Street and Bank Lane and the North Shore Rail Line Corridor.

### 1.4. Strategic Context

#### NSW 2021

NSW 2021 is the NSW Government's strategic business plan, setting priorities for action and guiding resource allocation. The plan seeks to rebuild the economy, return quality services, renovate infrastructure, strengthen our local environment and communities and restore accountability. The proposed development would contribute to a number of important priorities and targets, including the following:

- improve education and learning outcomes for children
- increase business investment and employment
- encourage job growth in centres close to where people live and provide access to public transport.

#### Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 vision seeks to create a sustainable, affordable, liveable, equitable and networked city that supports the continued economic growth of Sydney and enhances its standing as a global city. The proposed development will satisfy the Metropolitan Plan objectives to:

- build Sydney's knowledge infrastructure
- provide fair access to housing, jobs, services and educational opportunities
- ensure appropriate services are located near transport, jobs and housing.

#### Inner North Subregion Draft Subregional Strategy

The Draft Inner North Subregional Strategy identifies an employment capacity target of 60,100 new jobs within the subregion by 2031 with 15,000 of those new jobs being in North Sydney. The proposal will contribute towards the employment capacity target for the subregion through the provision of approximately 250 full time equivalent construction jobs and 45 full time equivalent operational jobs.

### 1.5. Site History

The Graythwaite site has an extensive history dating back to the 1830s, when the site was owned by Thomas Walker and known as "Euroka". Walker established Euroka Cottage in 1833 on the upper terrace of the site to capture views over Sydney harbour.

Edwin Sayers later purchased the property in 1853 and added a large two storey stone wing to the west of Euroka Cottage in 1859.

Thomas Allwright Dibbs purchased the property in 1873 and his brother George Dibbs redeveloped the house into its current form in 1874. This included demolition of the original c1883 Euroka Cottage to construct a new two storey stone building with attic rooms, widow's walk and the remodelling of Sayer's 1859 west wing addition. Thomas Dibbs occupied the house in 1882 and renamed it "Graythwaite" after the ancestral home of his wife, Tryphena, Graythwaite Hall in Cumbria. Additionally, the Coach House was constructed c1883, around the same time that Dibbs built the adjoining 'Kailoa' on Union Street.

After Australian troops landed at Gallipoli in April 1915, Dibbs donated Graythwaite to the NSW Government as a convalescent home for soldiers and sailors. The gift was accepted by the NSW Government on 1st October 1915 and the property was formally transferred to the Crown, who handed the property onto care of the NSW branch of the Australian Red Cross Society. In 1916, the Red Cross altered Graythwaite for use as a convalescent home.

In 1918, Graythwaite became an Anzac Hostel with the Red Cross caring for permanently disabled veterans. The change in role necessitated the construction of the Ward Building. During this period, additional building works were carried out on the site to serve its hospital functions, including the construction of a brick billiard room and laundry building known as the Tom O'Neill Centre.

The management of Graythwaite was transferred from the Australian Red Cross Society to the Home of Peace Hospitals (which became Hope Healthcare in 1994 and then Hammond Care in 2008) for community geriatric use in 1980 and up until 2009. During this period the landscape setting and fabric of many of the buildings, structures and landscape features deteriorated. The NSW Health first proposed the sale of Graythwaite in 1995, however, the proposal to sell the property and reinvest the proceeds into a rehabilitation facility at Ryde was only later upheld in the Supreme Court in 2008.

Shore purchased the Graythwaite site in November 2009 from the NSW Government with the objective of integrating it with the existing Shore School campus. The profits from the sale of Graythwaite were reinvested into the Graythwaite Rehabilitation Centre at Ryde Hospital, which was approved by the department on 22 April 2012 (MP10\_0179).



## 2. PROPOSED PROJECT

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### 2.1. Project Background and Evolution

The project is a transitional Part 3A project under schedule 6A of the EP&A Act. The concept plan proposed in the original EA comprised the use of the Graythwaite site for educational purposes, conservation and adaptive reuse of existing buildings, demolition works, building envelopes for new buildings with a combined GFA of 6,477.20 sqm, pedestrian and vehicular access arrangements and 48 car parking spaces, capacity or potential to accommodate up to about 500 additional students and 50 additional staff, landscape concept including removal of 80 trees, and completion of the concept plan works in three stages. The building envelopes for the three new buildings proposed in the original EA comprised the following:

- North Building – one storey, including a basement level, with a GFA of 175 sqm and a maximum height of 4 m above ground level
- East Building – three storeys and two basement levels containing a GFA of 3,219.70 sqm, 41 car parking spaces and a maximum height of 10 m above ground level
- West Building – two to three storey building which steps down following the topography of the site containing a GFA of 3,082.50 sqm and a maximum height of 14 m above ground level

The department exhibited the original EA from Thursday 27 January 2011 until Monday 14 March 2011 (46 days).

During the exhibition of the original EA, the department received seven submissions from public authorities, including a submission from North Sydney Council which objected to the proposal. Additionally, the department received 151 submissions from the general public, of which 144 (95 %) objected to the proposal. Issues raised in submissions related to concerns with vegetation removal, traffic congestion and parking, requests for a public inquiry, concerns with building height, bulk and scale (in particular the West Building), extent of community consultation, concerns with heritage impact and conservation management plan, noise impacts, privacy impacts, public access, drainage impacts and lack of public benefit. The department also informed the proponent of a number of key issues which it considered required further consideration, including community consultation, bulk and scale of the West Building, noise and traffic arrangements.

Subsequent to the exhibition, the department also met with local residents, the proponent, and members of the Heritage Branch of OEH to discuss key issues with the proposal, including heritage, built form, and traffic and transport arrangements. The residents also presented design suggestions for the West Building which they considered would alleviate concerns regarding bulk, scale, and visual and acoustic privacy. The resident's design suggestions included a reduced building footprint, a 30 m setback from the western boundary and a maximum building height of 8.5 m above ground level for the West Building.

#### Conservation Management Plan

The Heritage Council of NSW (Heritage Council) initially considered the proponent's Conservation Management Plan (CMP) (which accompanied the original EA) at its meeting on 2 February 2011 (during the exhibition of the original EA), and resolved that it was not in a position to endorse the CMP in its current form. It required further information to address the following:

- The impacts of sight lines on all new structures
- The impacts on landscape and setting of Graythwaite
- Consideration of views to and from the site.

Subsequent to the Heritage Council's meeting, the proponent made revisions to the CMP. The Heritage Council considered the revised CMP on 1 June 2011 and resolved that the Heritage Council endorse the CMP, subject to the inclusion of the following additional provisions:

- New development on the north west slope should be of a scale and modulation which reflects the scale and modulation of existing buildings within the upper terrace of the Graythwaite site.
- New development should be predominantly two storeys in height, reflect the sloping topography and not present a dominant visual impression of a multi-storey building when viewed from significant vantage points.
- The total footprint of new development on the north west slope should be broken up to ensure new buildings do not appear as large monolithic structures.

The proponent revised the CMP to include the abovementioned additional provisions and the Heritage Council endorsed the final version of the CMP on the 14 June 2011.

#### Submission of revised EA

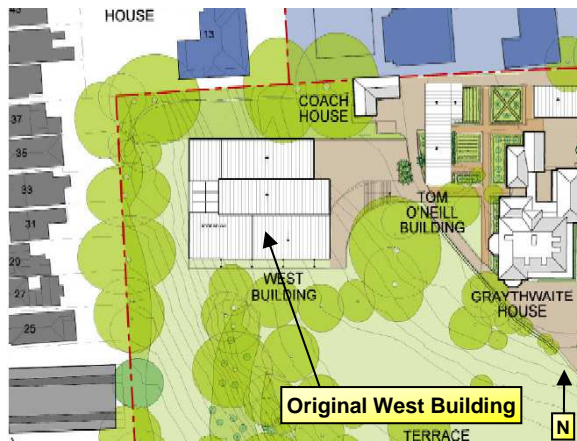
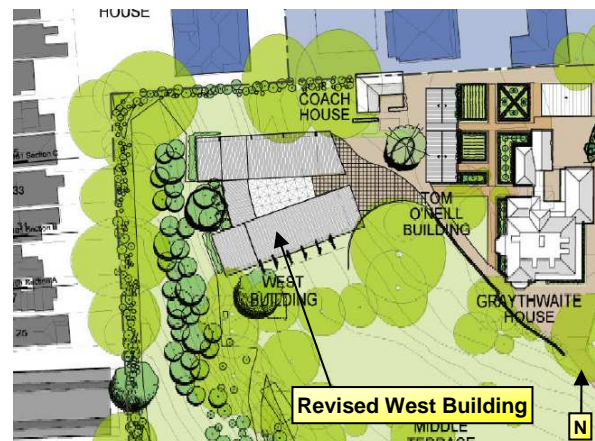
In response to issues raised by the department, other government authorities and the general public during and subsequent to the exhibition of the original EA, the proponent prepared and lodged a revised EA which included amendments to the project and additional information. The revised EA was reconsidered for adequacy against the DGRs.

The additional information and amendments in the revised EA included a CMP endorsed by the Heritage Council, revised West Building envelope, reduced student and staff population growth, a new pick-up facility connecting Union Street to Hunter Crescent, and revised plans, specialist reports and photomontages. No changes were proposed in relation to the East Building and North Building envelopes under the revised EA.

A comparison of the proposal described in the original EA with the proposal described in the revised EA is provided in Table 4. Additionally, a comparison of the West Building footprint from the original EA with the footprint in the revised EA is provided in Figures 15 and 16.

**Table 4:** Comparison of original project (Original EA) with revised project (Revised EA)

| Concept Plan   |  |  |  |
|--|--|--|--|
| Element  | Original EA  | Revised EA   | Change   |
| New GFA (excluding the building to replace the Tom O'Neill Centre) | 6,477.20 sqm   | 6,075.80 sqm   | - 401 sqm (change in West Building)  |
| Student Population   | <ul style="list-style-type: none"> <li>• 500 students</li> <li>• 50 staff</li> </ul> | <ul style="list-style-type: none"> <li>• 450 students</li> <li>• 45 staff</li> </ul> | <ul style="list-style-type: none"> <li>• reduction of 50 students</li> <li>• reduction of 5 staff</li> </ul> |
| Parking Spaces   | 48 spaces  | 48 spaces  | No change  |
| Pick-up Arrangement  | As existing  | New pick-up facility   | New pick-up facility   |
| West Building  |  |  |  |
| Element  | Original EA  | Revised EA   | Change   |
| GFA  | 3,082.5 sqm  | 2,681.1 sqm  | - 401 sqm  |
| Setback  | 16.8 to 18.6 m   | 20.8m to 27.8 m  | + 4 m  |
| Maximum Height   | 14 m   | 12 m   | - 2 m  |
| Height at western interface  | 10.6 m   | 8.5 m  | - 2.1 m  |

**Figure 15: Original West Building (Original EA)****Figure 16: Revised West Building (Revised EA)**

The proposed West Building envelope in the revised EA includes a reduced GFA from 3,082.5 sqm to 2,681.1 sqm (reduction of 401 sqm), an increased setback from the western side boundary from 16.8 to 18.6 m, to 20.8 m to 27.8 m (an increase of 4 m or more), and a reduced maximum height from 14 m to 12 m (reduction of 2 m). The proponent also reduced the height of the building at the western edge of the building footprint which faces the rear of houses along Bank Street from 10.6 m to 8.5 m (reduction of 2.1 m). In addition to revising the proposed West Building envelope, the proponent included additional landscaping along the western boundary of the Graythwaite site to create a vegetation buffer/screening between housing along Bank Street and the proposed West Building.

The proponent also included a student vehicular pick-up facility in stage 2 of the concept plan to address issues raised regarding the growth in student population and the associated traffic and parking issues. The department considers that the proposed pick-up facility can form part of the overall traffic and transport elements of the concept plan under 75B(3) of the EP&A Act (related development).

The department's consideration of the concept plan and concurrent stage 1 project application as described in the revised EA and PPR is assessed in section 5 of this report.

## 2.2. Project Description

The proposal, as described in the revised EA and revised by the Preferred Project Report, sought approval of a concept plan and concurrent stage 1 project application for the extension of the Shore school campus onto the Graythwaite site.

### 2.2.1. Concept Plan

The key components of the concept plan as proposed are listed in Table 1.

**Table 1: Key Concept Plan Components**

| Aspect               | Description  |
|----------------------|--|
| Concept Plan Summary | <ul style="list-style-type: none"> <li>• use of the Graythwaite site and buildings as an educational establishment, being an extension to the adjoining Shore school campus</li> <li>• conservation, refurbishment and adaptive reuse of Graythwaite House and the Coach House</li> <li>• demolition of the Ward Building</li> <li>• construction of three new buildings (East Building, North Building and West Building) on the site with a combined GFA of 6,076 sqm</li> </ul> |



| <b>Aspect</b>  | <b>Description</b>  |
|--|---|
|  | <ul style="list-style-type: none"> <li>• refurbishment and adaptive reuse of the Tom O'Neill Centre in stage 1, and its demolition and construction of a new replacement building in stage 3</li> <li>• pedestrian and vehicular access arrangements including a new student pick-up facility and 48 car parking spaces</li> <li>• capacity or potential to accommodate up to 450 additional students and 45 additional staff</li> <li>• landscaping</li> <li>• completion of the concept plan across 3 stages.</li> </ul>  |
| <i>Stage 1 (for which concurrent project approval is also sought)</i>              | <ul style="list-style-type: none"> <li>• use of the Graythwaite site as play and recreation space</li> <li>• conservation and refurbishment of Graythwaite House Complex, Coach House, Tom O'Neill Centre and associated garden areas</li> <li>• drainage and stormwater improvements, site levelling and landscaping of the site</li> <li>• transport, traffic, parking and access improvements to the Graythwaite site and adjoining Shore senior school campus (over 3 stages)</li> <li>• miscellaneous works including site fencing and gates</li> <li>• no increase in student or staff population</li> <li>• increased planting along the western side boundary adjoining Bank Street houses which would have an interface with the West Building (west building part of stage 3).</li> </ul>   |
| <i>Stage 2 (anticipated to commence in 5-8 years subject to further approval)</i>  | <ul style="list-style-type: none"> <li>• construction of two (2) new buildings with a combined GFA of 3,394.7 sqm including: <ul style="list-style-type: none"> <li>○ North Building (to the north of Graythwaite House Complex) <ul style="list-style-type: none"> <li>▪ 1 storey, including a basement level with a GFA of 175 sqm</li> </ul> </li> <li>○ East Building (to the east of Graythwaite House) <ul style="list-style-type: none"> <li>▪ 3 stories with a GFA of 3,219.70 sqm</li> <li>▪ 2 basement levels containing 41 car parking spaces</li> </ul> </li> </ul> </li> <li>• Demolition of the Ward Building to the east of Graythwaite House</li> <li>• Construction of a new student pick up facility on the existing Shore senior school campus linking Union Street to Hunter Crescent</li> <li>• Capacity or potential to accommodate up to 100 additional students and 10 additional staff.</li> </ul> |
| <i>Stage 3 (anticipated to commence in 8-10 years subject to further approval)</i> | <ul style="list-style-type: none"> <li>• Construction of the West Building, to the west of Graythwaite House, comprising a new 2 – 4 storey building with a GFA of 2,681.10 sqm</li> <li>• Capacity or potential to accommodate 350 additional students and 35 additional staff</li> <li>• Demolition of the Tom O'Neill Centre and construction of a replacement building of a similar height and footprint to the former building.</li> </ul>   |

A breakdown of the GFA of existing buildings to be retained on site and proposed new buildings under the concept plan is shown in Table 2.

**Table 2: Breakdown of existing and proposed GFA under the Concept Plan**

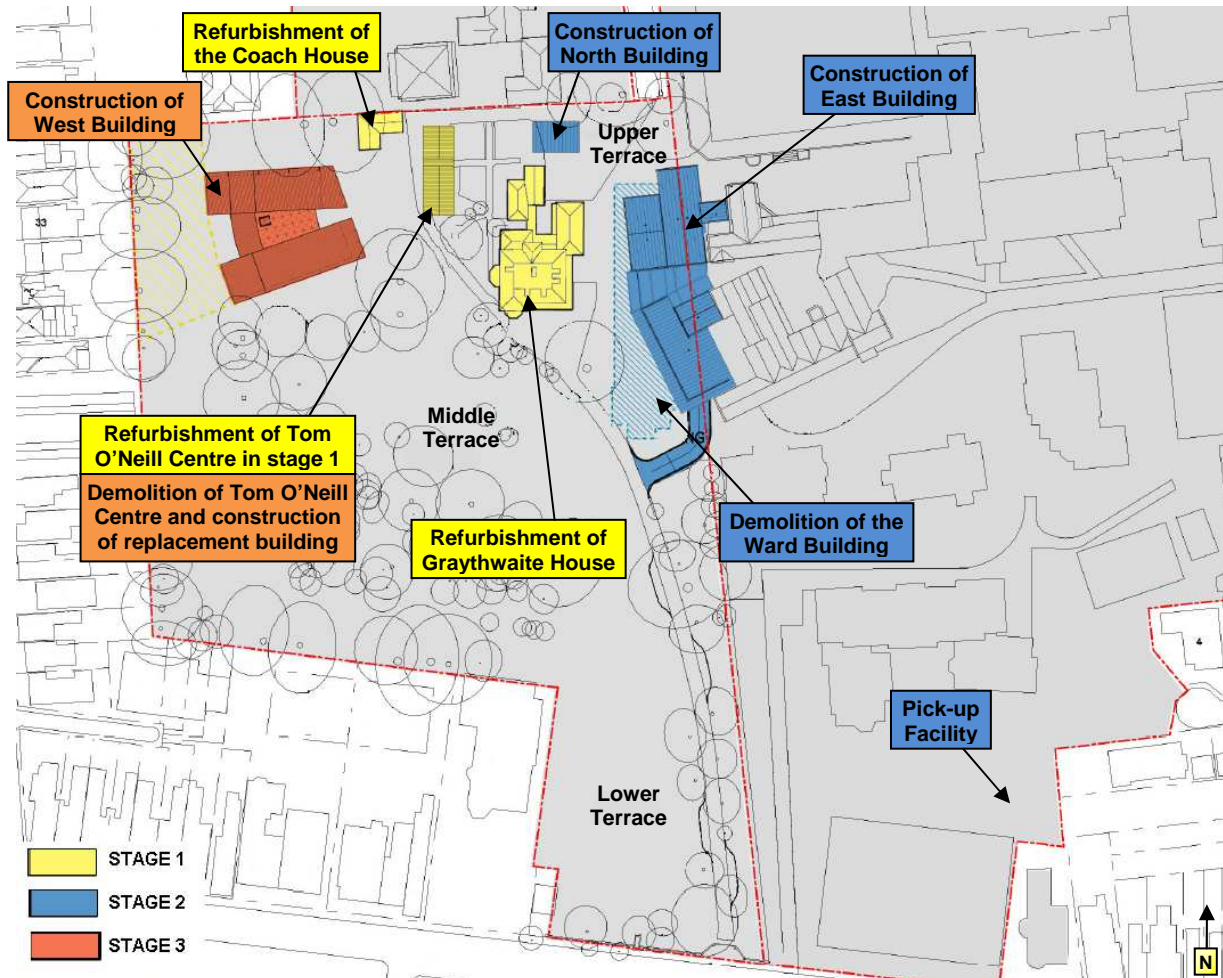
| <b>Buildings</b>                 | <b>Existing GFA (sqm)</b> | <b>GFA Retained / New GFA</b> |
|----------------------------------|---------------------------|-------------------------------|
| Graythwaite House (existing)     | 974.10 sqm                | 873.80 sqm                    |
| Coach House (existing)           | 130.30 sqm                | 130.3 sqm                     |
| Tom O'Neill (existing)           | 113.10 sqm                | 113.10 sqm                    |
| Ward Building (existing)         | 1031.10 sqm               | -                             |
| West Building (new)              |                           | 2,681.10 sqm                  |
| East Building (new)              |                           | 3,219.70 sqm                  |
| North Building (new)             |                           | 175 sqm                       |
| <b>Total</b>                     | <b>2,248.60 sqm</b>       | <b>7,193.00 sqm</b>           |
| <b>Net Increase 4,944.40 sqm</b> |                           |                               |

The concept plan and concurrent stage 1 project application proposes that the Tom O'Neill Centre be refurbished and adapted for school use in stage 1. In stage 3 of the

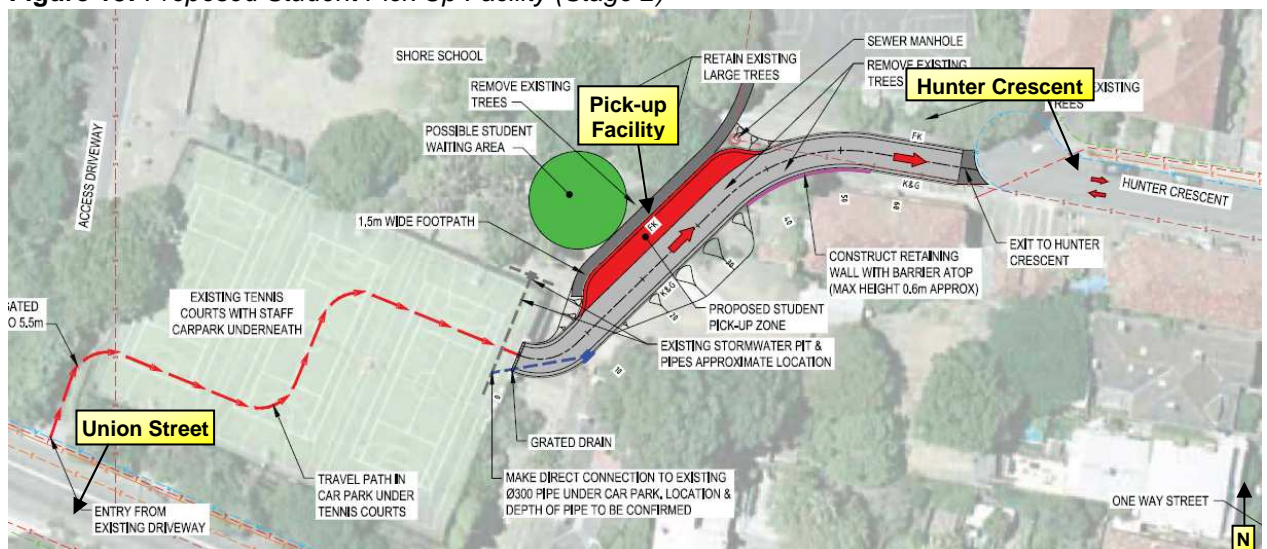
concept plan, it is proposed that the Tom O'Neill Centre will be demolished and replaced with a building of similar height, scale and footprint.

Additionally, stage 2 of the concept plan proposes the construction of a new student pick up facility on the existing Shore senior school campus linking Union Street to Hunter Crescent. The layout and staging of the concept plan is shown in Figure 12 and the proposed new pick-up facility (stage 2 of concept plan) is shown in Figure 13.

**Figure 12: Concept Plan and Staging Breakdown**



**Figure 13: Proposed Student Pick Up Facility (Stage 2)**



## 2.1.2 Stage 1 Project Application

Concurrent project approval is sought for stage 1 of the concept plan. The key components of the concurrent stage 1 project application are listed in Table 3 and the stage 1 project application layout is shown in Figure 14.

**Table 3: Key Stage 1 Project Application Components**

| <b>Aspect</b>                  | <b>Description</b>   |
|--------------------------------|--|
| <i>Stage 1 Project Summary</i> | <ul style="list-style-type: none"> <li>• Use of the Graythwaite site and buildings as an educational establishment, being an extension to the adjoining Shore school campus</li> <li>• Conservation and refurbishment of Graythwaite House, the Coach House, Tom O'Neill Centre and associated garden area</li> <li>• Minor demolition works</li> <li>• Drainage and stormwater improvements, site levelling and landscaping (particularly on the middle and lower terraces) including tree retention, removal and transplantation</li> <li>• Use of the Graythwaite middle and lower terraces as a play and educational space</li> <li>• Transport, traffic, parking and access improvements to the Graythwaite site and existing Shore school campus</li> <li>• Miscellaneous works including site fencing and lighting (to Graythwaite House and the driveway)</li> <li>• No increase in student or staff population</li> <li>• Landscape works along the western side boundary adjoining properties that have an interface with the West Building (west building part of stage 3)</li> </ul>   |
| <i>Conservation</i>            | <ul style="list-style-type: none"> <li>• Conservation and refurbishment of Graythwaite House for staff administration and meeting rooms, including: <ul style="list-style-type: none"> <li>◦ minor partial demolition of various elements that were added to Graythwaite House in 1915-1916 and during the 1980s</li> <li>◦ exterior repair and reconstruction of historic fabric including sandstone, timber door, window, verandah and roof joinery, cast iron, slate roofing and rainwater goods</li> <li>◦ Construction of glazed link and new lift to the rear (north) of Graythwaite house</li> <li>◦ Interior alterations and refurbishment works, including new staff office fitouts, joinery, WCs and new finishes and fittings generally</li> </ul> </li> <li>• Conservation and refurbishment of the Coach House for staff administration and caretaker's residence comprising: <ul style="list-style-type: none"> <li>◦ Exterior repair and reconstruction of historic fabric including brickwork, timber door, window and roof joinery</li> <li>◦ New verandah structure to replace the existing (non-original) verandah</li> <li>◦ Renewal of roofing and rainwater facilities</li> <li>◦ Interior alterations and refurbishment works, including new staff office fitout, joinery, WCs, kitchen, laundry, bedrooms and fixtures and fittings generally.</li> </ul> </li> <li>• Adaption and refurbishment of the former Tom O'Neill Centre for multi-purpose student activities, comprising: <ul style="list-style-type: none"> <li>◦ Exterior repair works to brickwork, timber door, window and roof joinery</li> <li>◦ Renewal of roofing and rainwater facilities</li> <li>◦ Interior alterations and refurbishment works including new WCs; kitchenette and new finishes and fittings generally</li> <li>◦ Minor alterations at the northern end to achieve a suitable teaching space</li> <li>◦ New entrance at the north elevation.</li> </ul> </li> </ul> |
| <i>Demolition</i>              | <ul style="list-style-type: none"> <li>• Minor partial demolition comprising elements that were added to Graythwaite House in 1915-1916 (including the lavatory block on the northern side of the building and associated passageways), internal fabric of low significance and intrusive linking structures constructed</li> </ul>  |

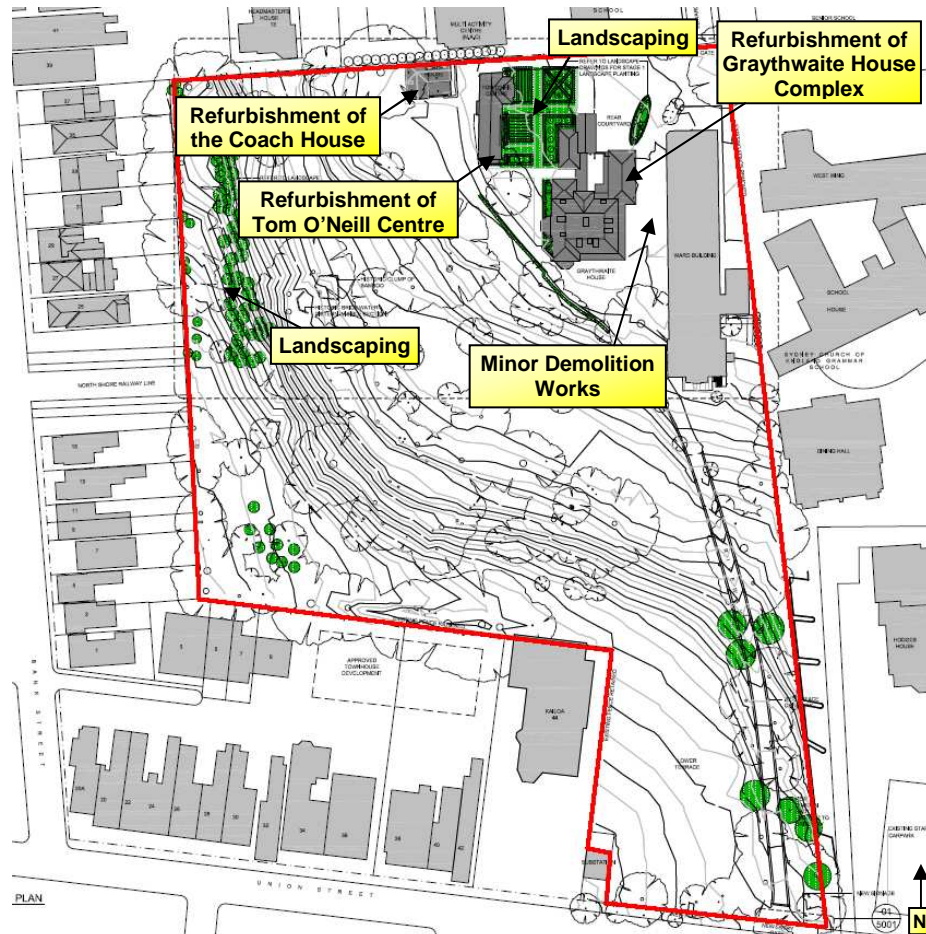


| <b>Aspect</b>                               | <b>Description</b>   |
|---|--|
|   | during the 1980s. Minor demolition will also take place in the Coach House and the Tom O'Neill Centre to facilitate adaptive reuse of these buildings.   |
| <i>Landscaping</i>                          | <ul style="list-style-type: none"> <li>• Reinterpretation of the formal gardens in the immediate vicinity of Graythwaite House, including the relocation and/or removal of plant material that is inconsistent with the period of the house, reinstatement of the garden consistent with the overall conservation guidelines.</li> <li>• New bonded gravel surface over part of the existing asphalt to the south of Graythwaite House.</li> <li>• Tree retention and removal.</li> <li>• Restoration of existing turf in the vicinity of Graythwaite House.</li> <li>• Retention of the park like setting of the broader grounds with removal of weed infestations and unrelated modern plantings which diminish the impact of the historic features of the grounds.</li> <li>• The broader grounds will form an educational resource for the school in the teaching of natural systems and plant identification for the subjects of Science and Geography. The broad grassed areas will be used for informal recreation by the pupils of the school, in particular for lunch and morning breaks.</li> <li>• Re-surfacing of the main driveway.</li> <li>• Landscaping works along the western side boundary adjoining properties that have an interface with the West Building.</li> </ul> |
| <i>Uses and Population</i>                  | <ul style="list-style-type: none"> <li>• There is no proposed increase in student population or staff in stage 1. However, stage 1 proposes the use of the entire Graythwaite site as an educational facility, and the existing buildings and ground within the Graythwaite site will be occupied by existing Shore staff and students (Graythwaite House Complex to be used for administration and museum purposes (not teaching) and a caretaker will reside in The Coach House). The typical operational hours of the School are 8.00 am to 5.00 pm Monday to Friday. Some staff and student boarders live on the present Shore school campus. These staff and student residents will have access to the Graythwaite site outside of the typical operational hours.</li> </ul>  |
| <i>Recreational use of the grounds</i>      | <ul style="list-style-type: none"> <li>• Use of the lower and middle terraces as a recreation and play space, including: <ul style="list-style-type: none"> <li>○ Supervised use of the middle terrace (south of Graythwaite House) by up to 100 Preparatory School students (9 to 12 year olds) during recess and lunch time.</li> <li>○ Supervised use of the lower terrace by up to 100 Senior School students during lunch time. The Senior School will not use the middle terrace during breaks.</li> <li>○ Other uses include community events, fire drills, cadet field work, limited athletics and scientific purposes, and leisure games.</li> </ul> </li> </ul>  |
| <i>Drainage and stormwater improvements</i> | <ul style="list-style-type: none"> <li>• Construct an underground stormwater drainage system including an underground stormwater drainage line running under the western side of the current access driveway and connecting to the existing stormwater drainage pit in Union Street. This drainage system will provide immediate connection for the downpipes from Graythwaite House, the Tom O'Neill Centre and the Coach House and will include surface drainage pits along the access driveway.</li> <li>• Construct a subsoil drainage system on the northern side of Graythwaite House to capture groundwater and prevent inundation of the basement. New downpipes and a drainage pit, within the internal courtyard, will be constructed to prevent any surface stormwater entering the basement level. A basement drain will also be constructed to prevent any build up of groundwater in the basement of the House.</li> <li>• Construction of networks of subsoil drains to allow drainage of the waterlogged areas and management of any underground springs. The sizing and location of these networks will be designed in conjunction with</li> </ul>  |

| Aspect                                 | Description   |
|--|---|
|  | the Landscape Architect and the Arborist to ensure that the existing heritage planting and any new plantings will be able to be sustained without the need for an artificial watering system (if possible).   |
| Transport, traffic, parking and access | <ul style="list-style-type: none"> <li>Six visitor parking spaces to the south of Graythwaite House.</li> <li>One space to serve the caretaker's residence in the Coach House.</li> <li>Vehicular access to the site via the existing driveway to Union Street (with improvements proposed to the driveway).</li> <li>Secondary vehicular access to the site via Edward Street.</li> </ul>  |
| Fencing, signage and lighting          | <ul style="list-style-type: none"> <li>The existing fencing and gates to Union Street will be removed and replaced by a new fence and gate. The gate comprises four pillars, faced with sandstone with two pedestrian gates and one vehicular gate (4m wide) erected between the pillars. The design of the Union Street gate and fence is based on early photographs of the site.</li> <li>A 'Graythwaite – Shore School' sign to be erected at both the Union Street and Edward Street gates, and some small path-finding signs along the drive and in the environs of Graythwaite House.</li> <li>Lighting located at the Edward and Union Street Gates, main driveway, pedestrian routes and the landscaped grounds to provide security and to ensure good visibility for both vehicles and pedestrians. Graythwaite House will be lit at night, from concealed sources.</li> </ul> |

For the stage 1 project, approval is sought to proceed to construction. For stage 2 and 3 of the concept plan, separate development applications (or State Significant Development applications) will be required under Part 4 of the EP&A Act. North Sydney Council is likely to be the consent authority for stage 2 and 3 of the concept plan.

**Figure 14: Stage 1 Project Application**



### 2.3. Project Need and Justification

Graythwaite is listed as a heritage item on the State Heritage Register (SHR), North Sydney Local Environmental Plan 2001, the National Trust Register and the Register of National Estate. The principal buildings and grounds of Graythwaite are currently in a poor state of repair after years of neglect. The proposed development would facilitate a viable new use of the site and conserve the heritage values of the buildings and grounds in the long term.

Additionally, the proposed development is consistent with the Metropolitan Plan for Sydney 2036 and the Draft Inner North Subregional Strategy as the proposal will satisfy the Metropolitan Plan objectives to build Sydney's knowledge infrastructure, provide fair access to housing, jobs, services and educational opportunities, and ensure appropriate services are located near transport, jobs and housing. It will contribute towards meeting the employment capacity target of 60,100 new jobs within the subregion by 2031, with 15,000 of those new jobs being in North Sydney through the provision of 250 full time equivalent construction jobs and 45 full time equivalent operational jobs

## 3. STATUTORY CONTEXT

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### 3.1. Major Project

On 30 September 2010, the Deputy Director-General, Development Assessment and Systems Performance, as delegate for the then Minister for Planning declared the Graythwaite proposal a major project under Part 3A of the EP&A Act and also authorised the submission of a concept plan. The project was declared under schedule 1, clause 20 of the State Environmental Planning Policy (Major Development) 2005 as an educational establishment worth more than \$30 million.

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and pursuant to Schedule 6A of the EP&A Act, continues to apply to transitional Part 3A projects. Director-General's environmental assessment requirements (DGRs) were issued in respect of this project prior to 1 October 2011, and the project is therefore a transitional Part 3A project. Consequently, this report has been prepared in accordance with the requirements of Part 3A and the Regulations, and the Minister for Planning and Infrastructure (or his delegate) may approve or disapprove of carrying out the concept plan under section 75O of the EP&A Act and / or the stage 1 project application under section 75J of the EP&A Act.

### 3.2. Delegation

Under the EP&A Act the Minister is the approval authority for Part 3A Projects. However, as more than 25 submissions were received by way of objection to the concept plan and stage 1 project application, and North Sydney Council has lodged a submission objecting to the proposal, the application will be referred to the Planning Assessment Commission for determination in accordance with the Minister's Instrument of Delegation, dated 14 September 2011.

### 3.3. Permissibility

#### North Sydney Local Environmental Plan 2001

Under the North Sydney Local Environmental Plan 2001 (NSLEP 2001) the proposal is not permissible in the Graythwaite site (zoned Special Use Zone (Hospital)) and is

permissible in the existing Shore senior school campus (zoned Special Use Zone (School)).

However under clause 28(2)(b) of State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP), development for the purpose of the expansion of an existing educational establishment, on land adjacent to the existing educational establishment, is permissible. As the proposal comprises the use of Graythwaite as an educational establishment, being an extension of the adjoining existing Shore school campus, the proposal is permissible on the Graythwaite site under the Infrastructure SEPP.

Pursuant to clause 32 of NSLEP 2001, the Special Use Zone (which includes the Graythwaite site and Shore school campus) is subject to the objectives, permissible uses and development standards that apply to land adjoining the site, and land directly across the road from the site. Where a special use site adjoins more than one zone, the applicable objectives, permissible uses and development standards that apply to the special use site are the most restricted development standards. The Residential A2 Zone contains the most restricted development standards of all zones adjoining the Graythwaite site and Shore school campus, which therefore apply to the Graythwaite site and Shore school campus. Accordingly, a maximum building height of 8.5 m, and a building height control of 1.8 metres above existing ground level, and projected at an angle of 45 degrees, at all points from each of the boundaries of the site applies to the Residential A2 Zone, and therefore applies to the Graythwaite site and Shore school campus. The acceptability of departures from the height limit is discussed in section 5.2.1 of this report.

#### Draft North Sydney Local Environmental Plan 2009

Under the Draft North Sydney Local Environmental Plan 2009 (DNSLEP 2009), the Graythwaite site and existing Shore School campus is proposed to be zoned SP2 Infrastructure "Educational Establishment" and the proposal would be permissible in this zone. Additionally, under the DNSLEP 2009, the Graythwaite site would be subject to a building height limit of 8.5 m.

### **3.4. Environmental Planning Instruments**

Under Sections 75I(2)(d) and 75I(2)(e) of the EP&A Act, the Director-General's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project, and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project. The instruments that would otherwise be applicable include:

- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy No 19 - Bushland in Urban Areas
- State Environmental Planning Policy No 55 – Remediation of Land
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- North Sydney Local Environmental Plan 2001
- North Sydney Draft Local Environmental Plan 2009

The department's consideration of the concept plan and concurrent stage 1 project application against the abovementioned EPIs is provided in Appendix D. On the



basis of this assessment, the department is satisfied that the proposal is generally consistent with the provisions of all of the relevant EPI's. Consideration of variation from the height control in NSLEP 2001 is discussed in section 5.2.1 of this report.

### 3.5. Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act. The relevant objects are:

- (a) *to encourage:*
  - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
  - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
  - (iii) *the protection, provision and co-ordination of communication and utility services,*
  - (iv) *the provision of land for public purposes,*
  - (v) *the provision and co-ordination of community services and facilities, and*
  - (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
  - (vii) *ecologically sustainable development, and*
  - (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The department has considered the objects of the EP&A Act, and determined that the application is consistent with the relevant objects. The detailed assessment of the application in relation to these relevant objects is provided in section 5 of this report.

### 3.6. Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle,*
- (b) *inter-generational equity,*
- (c) *conservation of biological diversity and ecological integrity,*
- (d) *improved valuation, pricing and incentive mechanisms.*

Detailed assessment of the economic and environmental issues associated with the concept plan and concurrent stage 1 project application is provided in section 5 of this report. On the basis of this assessment, the department is satisfied that the proposal encourages ESD, in accordance with the objects of the EP&A Act.

### 3.7. Statement of Compliance

In accordance with section 75I(2)(g) of the EP&A Act, the department is satisfied that the Director-General's environmental assessment requirements have been complied with. However, as of 1 October 2011, Section 75I(2)(g) of the EP&A Act does not apply to, or in respect of, transitional Part 3A projects.

## 4. CONSULTATION AND SUBMISSIONS

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### 4.1. Exhibition (Revised EA)

Under section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment of an application publicly available for at least 30 days. After accepting the revised EA, the department publicly exhibited it from 9 November 2011 until 9 December 2011 (30 days) on the department's website, and at the Department of Planning and Infrastructure Information Centre and North Sydney Council. The department also advertised the public exhibition in the Sydney Morning Herald, Daily Telegraph and Mosman Daily on 9 November 2011 and notified landholders, local community groups and relevant State and local government authorities in writing.

The department received 189 submissions during the exhibition of the revised EA - 6 submissions from public authorities and 183 submissions from the general public and special interest groups. A summary of the issues raised in submissions is provided below.

### 4.2. Public Authority Submissions

The department received 6 submissions from public authorities. North Sydney Council's submission objected to the proposal, however, none of the other public authority submissions objected, instead providing general comments as summarised below. The department's consideration of key issues raised in submissions is contained in Section 5 of this report. Appropriate conditions of approval have been recommended where requested by agencies.

#### North Sydney Council

North Sydney Council (council) objected to the proposal, and provided some general comments and recommendations as summarised below:

- Council identified that the project has been expanded under the revised EA to include a significant part of the Shore school campus, and that it was unclear as to whether the enlargement of the site can be accommodated by the original application. Council also identified that it was unclear whether the provisions of Part 3A facilitate the submission of a revised EA as post exhibition actions (the submission of a revised EA was addressed in section 2.2 of this report).
- Council recommended that the assessment and determination of the application should be postponed until:
  - the proposed 41 space car park under the new East Building be deleted because the proposed provision of car parking exceeds the DCP control
  - the proposal be amended to provide a formal pick-up/drop-off facility for the Preparatory School and Senior School on site (the pick-up facility is only for pick-up of preparatory students)
  - a formal bus zone be provided on site which can accommodate 11 buses.
- Council identified that the proposed development does not satisfy objective (b) of the Special Uses Zone as it does not minimise adverse impacts on adjoining

residential dwellings, including acoustic privacy, visual impact, and traffic and parking impacts.

- Council identified that the proposal does not comply with the 8.5 m height limit under both the NSLEP 2001 and the DNSLEP 2009, with the proposed 12 m high West Building being located adjacent to residential dwelling houses. It considered the West Building remains unsatisfactory with regard to acoustic privacy and visual impact on the adjoining low density residential dwellings in Bank Street.
- Council identified that insufficient information has been submitted in relation to the East Building in order to facilitate a detailed assessment of potential impacts on Graythwaite mansion.
- Council identified that they are opposed to the lower terrace of the Union Street being used in any way for a bus car park. (Note: not proposed as part of application, as confirmed by the proponent)
- Council identified that the streets surrounding the Shore school should be regarded as residential streets and prefers the advice from council's traffic engineer who reviewed the original EA over that of the traffic consultant who reviewed the revised EA.

Council also provided a submission on the Preferred Project Report that maintained the same objections to the proposal from its submission provided during the exhibition of the revised EA. Council also recommend that the proposal not be approved until the proponent has demonstrated that all traffic generation, including cars and buses, can be accommodated on the site.

#### Heritage Council of NSW

The Heritage Council endorsed the CMP for the Graythwaite site on 14 June 2011. The Heritage Council raised no objection to the proposal during the exhibition of the revised EA, however provided some general comments and recommendations as summarised below:

- The revised concept plan satisfactorily addresses the endorsed CMP policies and as such is acceptable on heritage grounds.
- Any detailed plans prepared for the subsequent stages of the concept plan should ensure that careful consideration is given to articulation, modulation and detail in relation to Graythwaite and the Upper Terrace area generally.
- The Heritage Branch, on behalf of the Heritage Council recommended that the proponent's Statement of Commitments regarding archaeology be amended to state "Should any Aboriginal objects or deposits be found on site, all works in the vicinity should cease and the Office of Environment and Heritage should be contacted immediately" and "Should any unexpected historic archaeology be located on site all works in the vicinity should cease and a suitably qualified archaeologist should be contacted to assess the find and determine appropriate mitigation strategies. If the finds are assessed as 'relics' as defined by the Heritage Act 1977, the Heritage Council must be notified in accordance with Section 146 of the Act."
- The Heritage Branch recommended that the proponent's Statement of Commitments regarding heritage be amended to state "Future applications for detailed design will be in accordance with the Planning Parameters Document (by Tanners Architects)."
- The Heritage Branch recommended that the Planning Parameters Document include specific guidelines to ensure that the State Heritage Register curtilage

boundary is clearly visible on the site through appropriate landscaping, fencing or other interpretive treatment.

- The Heritage Branch concurred with the recommendation from the Casey & Low report accompanying the revised EA, which recommended that an archaeological assessment be undertaken for the Shore school campus, and the recommendations from the assessment form part of the detailed design and construction of the East Building.

#### Office of Environment and Heritage

The Office of Environment and Heritage (OEH) raised no objection to the proposal, however provided some general comments and recommendations as summarised below:

- OEH supports the inclusion of the recommendations of the Flora and Fauna Report dated June 2011 and the proponent's Statement of Commitments for the concept plan.
- OEH recommends that the proponent amend the Statement of Commitments for the stage 1 project application to include a commitment to implement the recommendations and mitigation measures contained in the Flora and Fauna Report.
- OEH recommends that an additional Statement of Commitment or condition of approval be included for both concept plan and stage 1 project application, which states that prior to any demolition of roofs, a suitably qualified ecologist will ensure that there are no Eastern Bent-wing Bats hibernating in the roofs. If hibernating bats are found, works are not to commence on the building until after the hibernation period.

#### RailCorp

RailCorp raised no objection to the proposal and did not provide any general comments. However, RailCorp identified that they wish to review and comment on the future detailed stages of the development when they are submitted for approval with the relevant consent authority.

#### Roads and Maritime Services

Roads and Maritime Services raised no objection to the proposal and provided no general comments.

#### Sydney Water

Sydney Water raised no objection to the proposal and identified that the existing water and waste water network in the vicinity of the site has capacity to service the development.

### **4.3. Public Submissions**

A total of 183 submissions were received from the public during the exhibition of the revised EA, including submissions from the following special interest groups:

- North Sydney Council Union Precinct
- North Sydney Council Edward Precinct
- North Sydney Council Lavender Bay Precinct
- The Save Graythwaite Community Group
- The SAD@ Graythwaite Community Group
- Shore Old Boys Union Committee
- Shore Association



Of the 183 public submissions, 79 (43%) objected to the project, 95 (52%) supported the project and 9 (5%) did not object but provided general comments. The key issues raised in public submissions opposing the proposal are listed in Table 5.

**Table 5:** Summary of Issues of concern raised in Public Submissions

| Issue   | Proportion of submissions (%) |
|---|-------------------------------|
| Adverse impacts on traffic and parking            | 44%                           |
| Growth in student population                      | 18%                           |
| Height of buildings (exceeding planning controls) | 15%                           |
| Building setbacks                                 | 8%                            |
| Noise (construction and operational)              | 7%                            |
| Tree removal                                      | 5%                            |
| Lack of community consultation                    | 5%                            |
| Impacts to environment and ecology                | 5%                            |
| Over development                                  | 4%                            |
| Lack of public benefit                            | 2%                            |
| Impacts on heritage                               | 2%                            |
| Compliance of revised EA with DGR's               | 2%                            |
| Reason for submission of revised EA               | 2%                            |

Submissions that supported the proposal were on the basis of the restoration of significant heritage buildings, the provision of additional educational facilities and the preservation of green space.

DGR's compliance and the submission of a revised EA were addressed in section 2.2 of this report. The department has considered the issues raised in submissions in its assessment of the proposal and in Section 5 of this report.

#### 4.4. Proponent's Preferred Project Report

The proponent provided a Preferred Project Report (PPR) on 9 March 2012 in response to the issues raised in submissions (see Appendix C).

The PPR was accompanied by a response to submissions (both public and agency), a supplementary transport report, additional building height information, PPR consultation documentation, stormwater information, a revised Planning Parameters Report and revised Statement of Commitments. The PPR and supplementary traffic report identified a preferred student pick-up facility option with associated supporting documentation. The pick-up facility comprises the construction of an internal road linking Union Street to Hunter Crescent utilising existing driveways at Union Street and Hunter Crescent. The pick-up facility also includes a pick-up zone to accommodate a minimum four vehicles adjacent to a designated student waiting area and on-site queuing for approximately 16 vehicles.

## 5. ASSESSMENT

The department considers the key issues for the concept plan and stage 1 project application to be:

- Built Form
- Environmental Residential Amenity
- Student Population Growth
- Heritage
- Traffic, Accessibility and Transport
- Stormwater and Drainage
- BCA Compliance
- Noise
- Flora and Fauna
- Ecologically Sustainable Development
- Railway Line Corridor
- Developer Contributions
- The Public Interest

### 5.1. Built Form

#### 5.1.1. Height, Bulk and Scale

The concept plan includes envelopes for three new buildings for educational purposes, including the East Building, North Building and West Building. Additionally, the Tom O'Neill Centre is proposed to be refurbished in stage 1, and demolished and then replaced with a building of similar height, bulk and scale in stage 3 of the concept plan. The layout of the proposed new buildings is shown in Figure 17, and a breakdown of the stores and GFA of each building is provided in Table 6.

**Figure 17: Graythwaite Concept Plan**



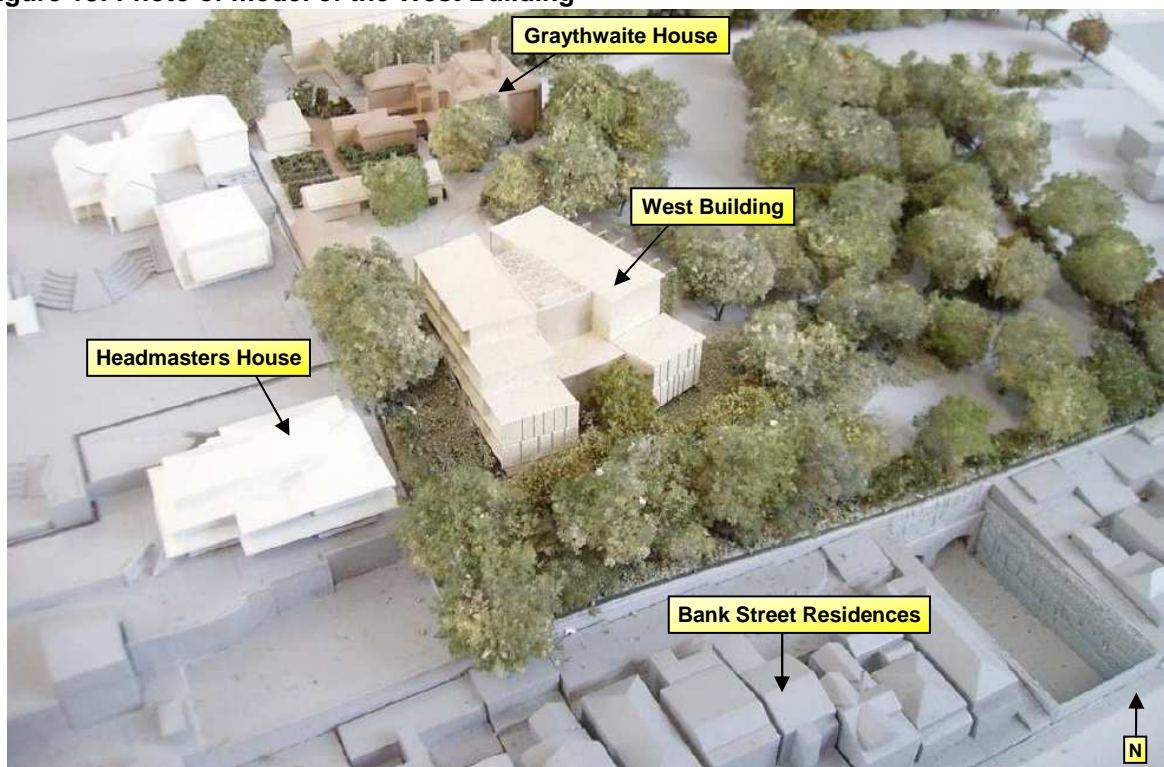
**Table 6: Breakdown of proposed new buildings**

| Building                                      | Storeys                          | GFA   |
|---|----------------------------------|---|
| East Building                                 | 3 storeys with 2 basement levels | 3,219.7 sqm   |
| North Building                                | 1 storey with 1 basement level   | 175 sqm   |
| West Building                                 | 2 – 4 storeys                    | 2,681.10 sqm  |
| Replacement Tom O'Neill Centre                | 1 storey                         | Approximately the same as Tom O'Neill Centre (113.10 sqm) |
| Total GFA of new buildings under concept plan |                                  | 6,188.9 sqm   |

**West Building**

The proposed West Building envelope (West Building) is located to the west of Graythwaite House and the Tom O'Neill Centre, and to the south-west of the Coach House. The building is setback between 20.8 m to 27.8 m from the western site boundary and has a GFA of 2,681.10 sqm. The building comprises two to four storeys, with the top two levels sited towards the eastern edge of the building footprint, and the bottom two levels partially underground. As a result, the building height steps down following the fall in topography of the site to the west (also see sections in Figures 23 and 24).

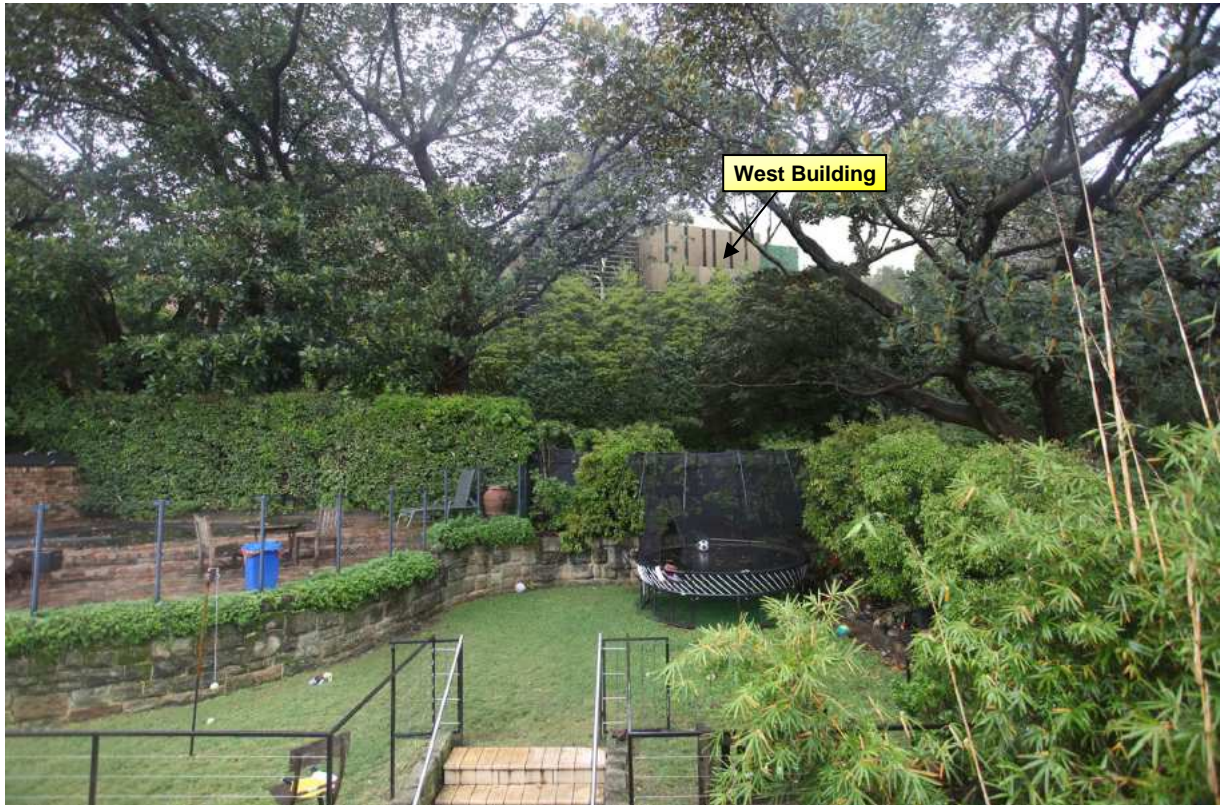
The building has a maximum height of 12 m above ground level approximately in the centre of the building footprint, however, the building has a maximum building height of 8.5 m at the western edge of the building footprint, which interfaces with housing along Bank Street. The western elevation of the building presents the ends of the north and south educational use areas of the building, which are connected by a central circulation area. The western edge of the central circulation area has been recessed back from the western edge of the building footprint, creating a void to break up the built form of the building when viewed from the west. Additionally, the recession of the upper floors away from the western edge of the building footprint reduces the viewable height of the building from the west. A photo of a model of the West Building is shown in Figure 18.

**Figure 18: Photo of model of the West Building**



The stage 1 project application includes the retention of established Morton Bay Figs and additional vegetation planting and landscaping between the proposed West Building and the western site boundary. The proponent identified that the inclusion of additional vegetation and landscaping in stage 1 will allow time for it to establish and form an extensive visual buffer between the West Building and houses on Bank Street, prior to its anticipated construction in 8 – 10 years time (subject to gaining further development approval for its detailed design). A photomontage of the West Building from the rear of 31 Bank Street (including the proposed additional vegetation and landscaping), is provided in Figure 19.

**Figure 19: Photomontage of the West Building from the rear of 31 Bank Street**



The height, bulk and scale of the West Building was a key issue raised in submissions, particularly from residents in Bank Street. Additionally, North Sydney Council considered that the West Building would have an adverse visual impact on the low density residential dwellings on Bank Street, regardless of the existing and proposed future landscaping, as a result of the exceedance of NSLEP 2001 8.5 m height limit. The issue of height is assessed in section 5.1.2 of this report.

The department considers that the scale of the West Building is comparable with a number of other existing school buildings in the existing Shore school campus, including the School House Building (2 – 3 storeys) and the Dining Hall Building (2 – 3 storeys). The department also notes that the building is significantly smaller in scale than a number of other existing school buildings on the eastern side of the existing school campus fronting William Street, such as the seven storey Benefactors Building.

The department notes that the West Building has been moved further away from the western boundary (setback between 16.8 to 18.6 m in the original EA) and the



envelope redesigned in response to issues raised during the exhibition of the original EA.

The department considers that the stepping down of the building towards the west, as well as the 20 to 27 m setbacks from the western side boundary and overall design of the building envelope has broken up the built form of the building and reduces potential visual impacts of the building on houses in Bank Street.

The department acknowledges that the higher land elevation at the location of the West Building compared to Bank Street properties has the potential to exacerbate visual impacts of the bulk and scale of the building on Bank Street houses. However, it is considered that the proposed additional vegetation planting and landscaping along the western site boundary is a practical solution to reducing potential visual impacts of the building. Filtered views of the building will continue to remain from the rear of houses in Bank Street, however, this is considered to be inevitable for any building located in this area given its elevated position within the landscape. The department does not consider these residual views of the building as unreasonable given it is a highly urbanised locality. The department also acknowledges the constrained nature of the site, which provides limited opportunities for new development on the land due to heritage considerations, existing vegetation and the topography of the site. To ensure the additional vegetation planting and landscaping along the western site boundary is maintained, the department has recommended a condition for the proponent to prepare and implement a vegetation management plan, which will need to detail the ongoing weed control measures, vegetation maintenance, monitoring and reporting measures.

Accordingly, the department considers that, subject to the implementation of the proposed additional vegetation screening and the recommended conditions, the West Building will not result in any significant or unreasonable visual impacts on surrounding residential areas.

### East Building

The proposed East Building envelope (East Building) is located to the east of Graythwaite House and extends beyond the eastern boundary of the Graythwaite site into the adjoining Shore school campus. The building is three storeys in height, with a maximum height of 10.5 m above ground level and a GFA of 3,219.7 sqm. Additionally, the East Building includes two basement levels for car parking, educational use, store areas and plant areas.

The northern portion of the East Building is set back against the existing West Wing building, forming a physical link between the two buildings. Additionally, the southern portion of the building has been sited so that it skews back towards the east of Graythwaite House and is set back against the existing School House building, with a central courtyard space created between the two buildings. The department notes that the design layout of the East Building reinstates significant views of Graythwaite House from the driveway off Union Street.

At ground level, the building is divided centrally by an east-west pedestrian link, which provides walking access for students between the existing shore school campus and the Graythwaite site. Additionally, the two levels above are also divided by open circulation space. The separation of the building on all three levels enables

the framing of views from the existing school campus, through the building, to the eastern elevation of Graythwaite House. The ground floor of the proposed East Building envelope with the central east-west pedestrian link is illustrated in Figure 20.

**Figure 20: East Building Ground Floor**



The department considers that the scale of the proposed East Building is comparable with the adjoining School House Building (two to three storeys) and the West Wing Building (two storeys), and would form a natural extension of these existing buildings. Additionally, the top floor (second level) of the East Building comprises a reduced floorplate that is located on the eastern side of the building footprint, which reduces the viewable height of the building when viewed from the west, and when viewed against Graythwaite House.

The department notes that the East Building is sited centrally within the combined Graythwaite site, and existing Shore senior school and preparatory school campuses, and accordingly, there is significant separation distance between the building and the nearest surrounding residential dwelling houses on Bank Street Union Street, Edward Street and Lord Street. Additionally, the department notes that site topography, existing and proposed vegetation, and existing and proposed buildings would substantially block the majority of views of the East Building from surrounding residential areas.

Accordingly, the department considers that the East Building will not result in any significant visual impacts on surrounding residential areas, and the department

considers that the design and layout of the East Building will facilitate improved views from the south and west towards Graythwaite House

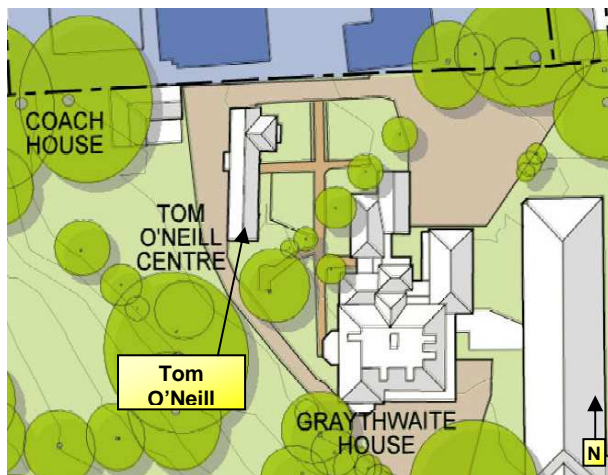
### North Building

The proposed North Building envelope (North Building) is located to the north of Graythwaite House and comprises one above ground storey and one basement level, with a maximum height of 4 m above ground level and a GFA of 175 sqm. The department considers that the building is significantly smaller in scale than a number of other existing and proposed new buildings within the Graythwaite site, including the Graythwaite House (two storeys), proposed East Building (three storeys), and the proposed West Building (two to four storeys). Like the East Building, the North Building is considered to be well separated from surrounding residential areas and the site topography, existing and proposed vegetation, and existing and proposed buildings within the Graythwaite site would substantially block the majority of views from surrounding residential areas to the North Building. Accordingly, the department does not consider that the North Building will result in any significant visual impacts on surrounding residential areas.

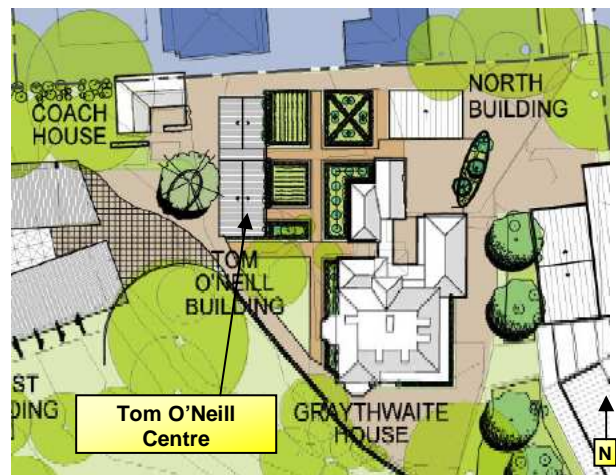
### Tom O'Neill Centre

The envelope for the building proposed to replace the Tom O'Neill Centre is to be of a similar height, bulk and scale to the existing structure, however, the new building is proposed to extend further to the north to align with the northern edge of the proposed North Building, and will define the western edge of the formal garden. The building also incorporates an east-west pedestrian link through the building to link the formal garden area with the west of the site. The Tom O'Neill centre and the proposed replacement building footprint (stage 3 of the concept plan) is shown below in Figure 21 and Figure 22.

**Figure 21:** Tom O'Neill Centre to be refurbished in Stage 1



**Figure 22:** Tom O'Neill Centre Replacement in Stage 3



The department considers that the proposed building envelope will result in a structure that is significantly separated from surrounding residential development and will not result in any additional visual impacts than from the existing building.

### **5.1.2 North Sydney LEP 2001 (Height Limit)**

The Graythwaite site and the existing Shore school campus are both zoned Special Use under NSLEP2001, and there are no specific development standards applying to

development within the Special Use Zone. However, under clause 34 of the NSLEP 2001, a building must not be erected within the special uses zone unless:

- it is consistent with the objectives, permissible uses that apply to the land adjoining the site and land directly across a road from the site
- the building complies with the relevant development standards, for the particular type of building, that apply to the land adjoining the site and land directly across a road from the site.

Where a special use site adjoins more than one zone, the applicable objectives, permissible uses and development standards that apply to the special use site are the most restrictive development standards. The Residential A2 Zone contains the most restrictive development standards of all zones adjoining the Graythwaite site, therefore, the objectives, permissible uses and development standards of the Residential A2 Zone are relevant considerations for development within the Graythwaite site.

The objectives of the Residential A2 Zone include:

- maintain lower scale residential neighbourhoods of mainly detached and duplex housing
- assist in the conservation of heritage and other sensitive areas
- encourage the retention of existing contributory items or neutral items in conservation areas
- promote affordable housing
- minimise the impact of non-residential uses and ensure these are in character with the zone.

The department notes that the educational use of the site is permissible in the Residential A2 Zone, and considers that the proposal is consistent with the objectives of assisting in the conservation of heritage and other sensitive areas (the department's assessment of heritage impacts is contained in section 5.3 of this report).

A maximum building height of 8.5 m and a building height plane control of 1.8 metres above existing ground level, and projected at an angle of 45 degrees, at all points from each of the boundaries of the site, applies to the Residential A2 Zone and accordingly applies to the Graythwaite site and Shore school campus. As the proposal comprises the extension of Shore school campus onto the Graythwaite site, the boundary from where the building height plane control applies is taken to be the boundary of the combined sites.

Whilst the Minister or delegate is not bound by the provisions of any environmental planning instrument for transitional Part 3A projects, such as the 8.5 m height limit under NSLEP 2001, the DGRs and Section 75I (2) (e) of the EP&A Act require the proponent to address such standards and provisions and the department to duly consider them on merit.

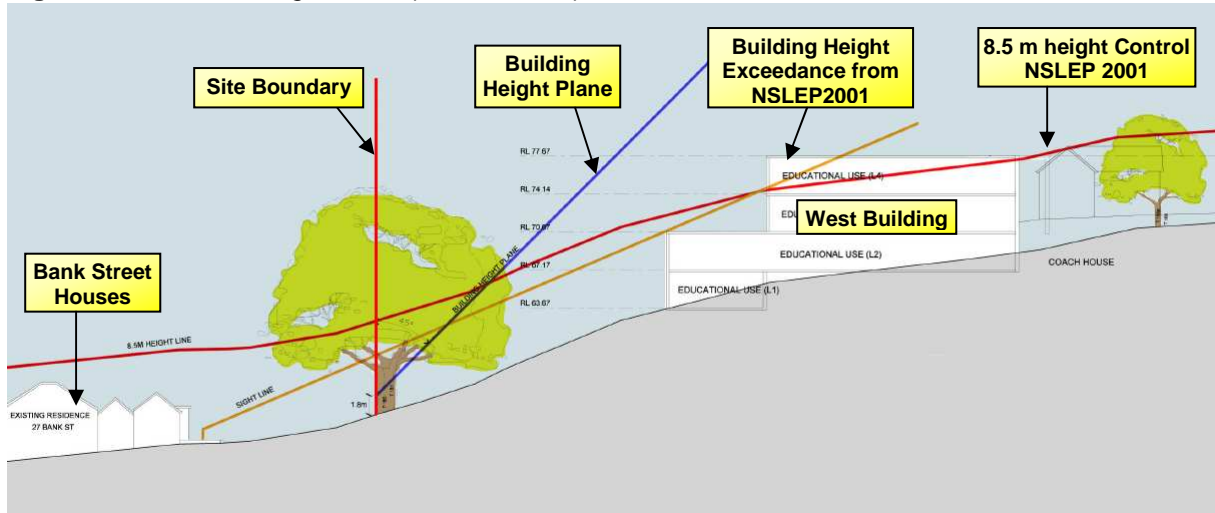
The proposed East Building and West Building exceed the maximum building height control of 8.5 m, however no new buildings will exceed the height plane control. Whilst both the East Building and West Building exceed the 8.5 m building height control, only the height of the West Building, being the building closest to any



residential dwellings (houses on Bank Street), has been highlighted as a key issue in submissions by the general public and council.

The West Building has a maximum indicative height of 12 m, which exceeds the NSLEP2001 height control limit by 3.5 m. A section of the West Building as sited on the Graythwaite site is shown in Figure 23, which illustrates the exceedance of the 8.5 m height limit.

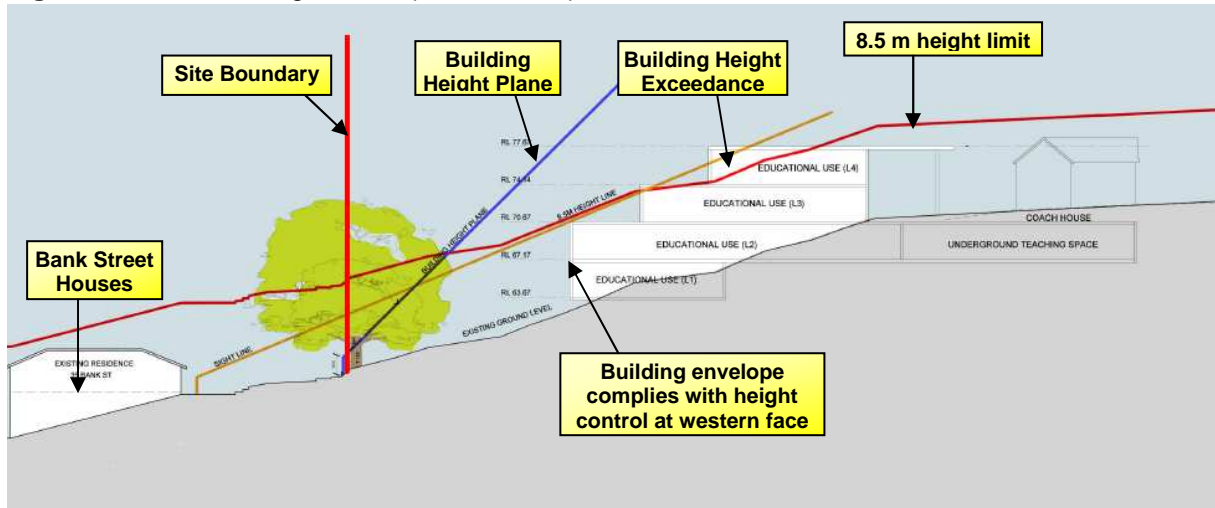
**Figure 23: West Building Section (southern end)**



The department notes that the development standards of the Residential A2 Zone are reflective of the existing low density surrounding residential land uses, and do not contemplate large educational establishments, such as that proposed in the concept plan and concurrent stage 1 project application.

In addition, the 8.5 m height limit in the NSLEP2001 is a 'blanket' control that applies to all "Special Use" sites, which coincidentally adjoin the Residential A2 Zone. The concept plan assessment process is in effect a more detailed strategic assessment of the appropriate height controls for the site, and if approved, will prevail over the LEP for any future development applications.

When considering the relative merit of the proposal against the 8.5 m building height control, visual impacts and amenity impacts associated with the development on the adjoining residential properties are key issues. The department has considered the visual impacts of the West Building in section 5.1.1 of this report, and on the basis of this assessment, the department considered that, subject to the implementation of the proposed additional vegetation screening and recommended conditions, the West Building will not result in any significant or unreasonable visual impacts on adjacent residential properties in Bank Street.

**Figure 24: West Building Section (northern end)**

As illustrated in Figure 24, the West Building complies with the building height control at the western face of the building, which adjoins the rear of properties along Bank Street. The building envelope is 8.5 m at this most critical location (in terms of residential impacts) on the site. The height exceedance occurs approximately in the centre of the building footprint and occurs where the building is stepping down following the fall in topography of the site.

The East Building has a maximum building height of 10 m above ground level, which exceeds the height control limit by 1.5 m. The department has considered the visual impacts of the East Building in section 5.1.1 of this report. Based on this assessment, the department considers that the East Building is significantly removed from surrounding residential development and that the site topography, existing and proposed vegetation, and existing and proposed buildings would substantially block the majority of views of the East Building from surrounding residential areas. Accordingly, the minor exceedance of 1.5 m is unlikely to result in any significant visual or amenity impacts.

The department has considered the issue of exceedance of the building height control of NSLEP 2001 on merit and has concluded that the height of the West Building and East Building are justified for the following reasons:

- the educational use of the site is permissible in the Residential A2 Zone
- the proposal is consistent with the Residential A2 Zone objective of assisting in the conservation of heritage and other sensitive areas
- the design, layout and setback of the West Building, as well as the additional vegetation and landscaping along the western boundary of the Graythwaite site combine to reduce the potential visual and amenity impacts of the West Building on dwelling houses on Bank Street
- the western face of the West Building, which adjoins the rear of properties along Bank Street, has a building envelope height that complies with the 8.5 m height limit
- the West Building exceedance of the height control occurs centrally within the building footprint, and is partly a result of the stepping down of the building following the fall in topography of the site
- all proposed new buildings are significantly below the height plane control of NSLEP 2001

- the East Building results in only a minor exceedance of the height control (1.5 m), and is significantly removed from the surrounding residential development.
- the site topography, existing and proposed vegetation, and existing and proposed school buildings would block the majority of views of the East Building from surrounding residential areas, therefore, the height exceedance is unlikely to result in any significant visual or amenity impacts
- the Graythwaite site is constrained by heritage considerations, existing vegetation and topography, and accordingly, there are limited other locations for new development within the site.

## 5.2. Environmental Residential Amenity

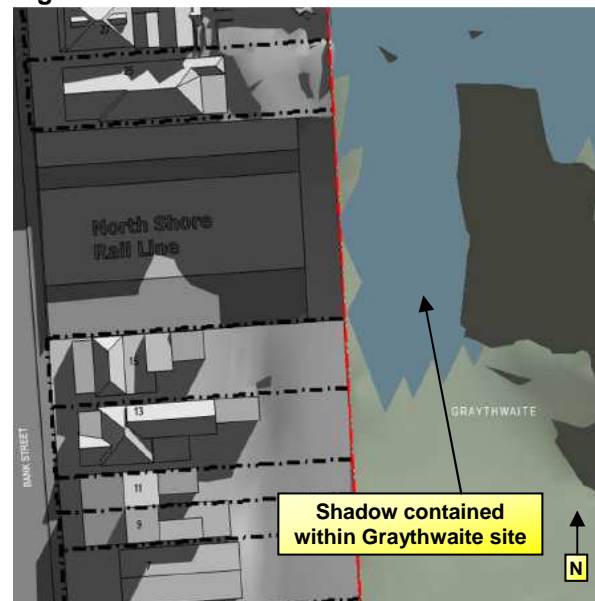
### 5.2.1 Overshadowing

The proposed West Building envelope is the only building envelope under the concept plan that has the potential to overshadow adjoining residential dwellings in Bank Street. During March, September and December, the proposed West Building will not overshadow any adjoining properties. However, during the mid-winter period, the West Building will cast additional shadows on residential properties along Bank Street between 7:55 am to 9:30 am, as shown in Figures 24 and 25.

**Figure 24: June 9:00 am**



**Figure 25: June 9:30 am**



Existing Shadow (casts by existing site topography within the Graythwaite site)

New Shadow (Cast By West Building)

The revised EA identifies that at 9.00 am in June, the proposed West Building will cast additional shadows on 7, 9, 11, 13, 15 and 25 Bank Street (as well as the North Shore Rail Line), and by 9:30 am, the shadow cast from the West Building will be confined to the Graythwaite site.

The department notes that the majority of the additional shadow cast by the West Building falls within shadows cast by existing trees to be retained as part of the proposal. Additionally, the department notes that from 9:00 am onwards, any shadow cast from the West Building will be predominantly confined to the rear yards of residential allotments along Bank Street, as opposed to the dwellings themselves. Therefore, the dwelling houses along Bank Street will retain full solar access (minus

existing shadows cast by vegetation within the Graythwaite site) from 9:00 am onwards.

Accordingly, the department considers that the shadow impacts from the West Building are minimal given they will occur until 9:30 am within the mid-winter period only, and will not result in any unreasonable loss of solar access or amenity for residences on Bank Street throughout the rest of the day.

### **5.2.2 Privacy**

The proposed West Building envelope is the only building envelope under the concept plan that has the potential to impact on the privacy of adjoining residential dwellings, in particular, properties in Bank Street. The Planning Parameters Report, which accompanied the revised EA, identifies a number of privacy protection provisions which are to be included in the detailed design for the future development application for the West Building. The privacy protection provisions include raised sill heights, fixed louvers/screens and/or obscure glazing for windows or openings facing the west.

The revised EA also identifies that the central circulation area which connects the north and south educational use areas of the West Building will be enclosed, and any windows facing west will be designed to direct views out to the horizon and not down to the adjoining Bank Street dwellings. Landscaped window screening devices are also proposed along the southern elevation of the West Building to obstruct angled views to the south-west (towards houses in Bank Street).

In addition to the above privacy provisions, the department notes that the West Building is setback between 20.8 m to 27.8 m from the western side boundary of the Graythwaite site and that this setback area will be "out of bounds" to students and not used as a play or recreation area. The stage 1 project application also includes the retention of established Morton Bay Figs and additional vegetation planting and landscaping between the proposed West Building and the western site boundary, which will form an extensive visual buffer.

Council's submission provided on the revised EA and PPR advanced the view that the proposed development does not satisfy objective (b) of the Special Use Zone, namely, to minimise the impact of the use of that land on adjoining land. Specifically, council considered that the proposal does not minimise adverse impacts on adjoining residential development, including acoustic privacy and visual impact.

The proponent's statement of commitments identifies that future applications will be generally in accordance with the Planning Parameters Report, which requires the implementation of the identified privacy provisions in any future application for the West Building.

As the West Building is currently only proposed in concept, the department considers that the specific privacy measures to be included in the building need to be considered further as part of the detailed design in the future development application. Accordingly, the department has recommended a future assessment requirement for the proponent to further consider visual and acoustic privacy in relation to the adjoining Bank Street residences as part of the detailed design and future development application (in stage 3 of the concept plan).



The department is satisfied that the privacy of surrounding residential areas will be protected subject to the implementation of measures detailed in the Planning Parameters Report, and by the proponent addressing the future assessment requirements in the detailed design of the future application for the West Building. Acoustic privacy and potential operation noise impacts from the West Building are addressed in section 5.7 of this report.

### **5.3. Student and Staff Population Growth**

Shore has a current student population of 1,430 students, which comprises 240 preparatory school students, and 1,190 senior school students (including 198 boarders). Additionally, Shore has 240 permanent staff (including boarding staff) and up to 150 casual staff who are employed from time to time.

The concept plan includes a total growth in student population of 450 students and 45 staff across three stages, as follows:

- stage 1 - No increase in student or staff population
- stage 2 – 100 additional students and 10 staff (either 100 preparatory school students or 100 senior school students) (East Building)
- stage 3 – 350 students and 35 staff (350 senior school students) (West Building)

The concept plan represents a total proposed increase in student population of 31.5 per cent and a total proposed increase in staff population of 18.8 per cent.

The growth in student and staff population is to be accommodated predominantly within two buildings across two stages under the concept plan, namely, the East Building in stage 2 (GFA of 3,219.7 sqm), and the West Building in stage 3 (GFA of 2,681sqm).

Despite the East Building comprising more GFA than the West Building, the majority of the proposed student and staff growth is proposed to occur in stage 3 of the concept plan. The proponent identified that it is envisaged that the East Building would facilitate the upgrading of current student and staff services such as a new medical centre, canteen, clothing shop, and drama space, with a lesser emphasis on classroom space. Conversely, it is envisaged that the West Building would primarily facilitate classroom space, hence the larger portion of student and staff population growth within stage 3. The proponent also identified that the provision of extra building space under the concept plan may not lead to an immediate increase in student population, as it may be accompanied by some refurbishment works of existing classroom areas within the existing school campus, which would require the decanting of students and teaching spaces from existing buildings into the new buildings within the Graythwaite site, prior to any growth in school population occurring. The proponent identified that whilst the concept plan proposed the above total increase in student and staff population, the future applications for stages 2 and 3 of the concept plan will provide specific details and composition of student and staff populations.

The growth in student and staff population was an issue raised in submissions from the general public and council, particularly regarding the potential increase in traffic impacts attributed to the growth in student and staff population.

The department notes that the acquisition of the Graythwaite site by Shore school, adds an additional 2.7 ha to the existing 5.3 ha comprising the combined existing Shore preparatory school and senior school campuses. The department also recognises the need to facilitate the adaptive re-use of the site and to facilitate development to generate investment to conserve the significant buildings, setting and grounds of the Graythwaite site in the long term. The department is satisfied that the progressive growth in students can be accommodated within the expanded school campus and new buildings under the concept plan. The department's assessment of the associated traffic generated by the increase in student and staff population has been assessed in section 5.5 of this report.

## 5.4. Heritage

A Conservation Management Plan (CMP) endorsed by the Heritage Council of NSW on 14 June 2011, and a Heritage Impact Statement (HIS) prepared by Tanner Architects accompanied the revised EA.

### 5.4.1 Heritage Context

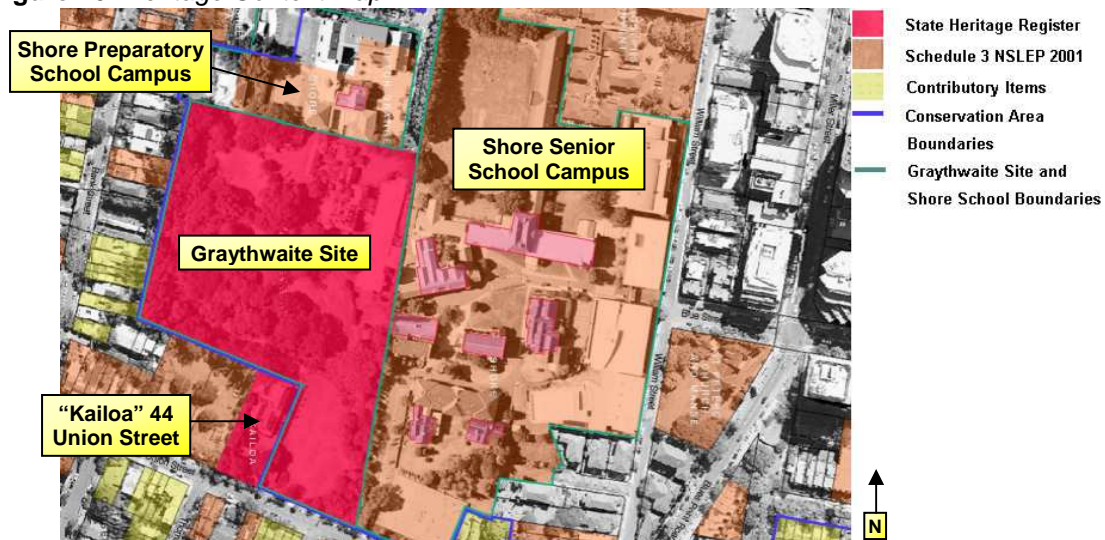
The Graythwaite site is listed as a heritage item on the State Heritage Register (SHR), NSLEP 2001, the National Trust Register and the Register of the National Estate.

The existing Shore school campus, and three existing buildings within the campus, namely, Shore School Chapel, 'Holtermann's Tower Replica' and Upton Grange, are listed as local heritage items in NSLEP 2001.

Additionally, a number of other heritage items and heritage conservation areas are located in the vicinity of the site, including:

- Kailoa at 44 Union Street (listed on the SHR and NSLEP 2001)
- 20a – 44 Union Street (listed in NSLEP 2001)
- 70 – 76 Union Street (listed in NSLEP 2001)
- 17 – 21 Bank Street (listed in NSLEP 2001)
- 27 – 29 Bank Street (listed in NSLEP 2001)
- the Bank Street Group (listed in NSLEP 2001)
- Union / Bank / Thomas Street Heritage Conservation Areas.

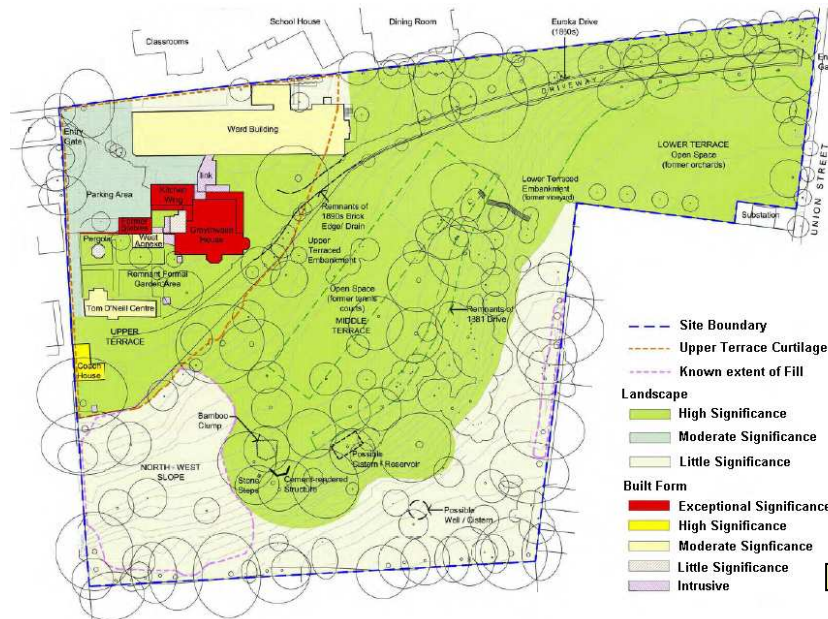
**Figure 26: Heritage Context Map**



The CMP includes a breakdown of the significance of existing buildings, structures and landscape elements within the site, as shown in Figure 27. The heritage significance of existing buildings is as follows:

- Graythwaite House, Kitchen Wing and Stables Building – Exceptional
- The Coach House - High
- Massage Room/Doctors Room, also known as the West Annex – Moderate
- Former Tom O'Neill Centre and the Ward Building - Moderate
- 1916 Lavatory Addition to Graythwaite House – Little
- Link structures - Intrusive

**Figure 27: Built form and landscape Heritage Significance Map**



#### 5.4.2 Change of Use

The concept plan and concurrent stage 1 project application proposes the use of the Graythwaite site for educational purposes, and the following uses for each existing building to be retained:

- Graythwaite Complex
  - Graythwaite House and Kitchen Wing – Administration
  - Stables Building – Museum
  - West Annex – WC's
- The Coach House – Office and Residential Functions
- Tom O'Neill Centre (in stage 1) – Teaching Purposes

The proposed use of the Graythwaite site for educational purposes is acknowledged in the CMP, and policies have been included to guide future development to ensure the heritage significance is maintained, whilst also accommodating the needs of expanding school facilities. The department considers that the proposed uses of each building and the overall use of the site for educational purposes under the concept plan and stage 1 project application is consistent with the adaptive re-use policies in the CMP.

#### 5.4.3 Demolition

The concept plan proposes the future demolition of the Ward Building (in stage 2) and the Tom O'Neill Centre (in stage 3), which are both items of moderate heritage

significance for their contribution to the long-term functioning of Graythwaite as a hostel for invalided soldiers, and then as an aged care facility.

Whilst no objection was made regarding the proposed demolition of the Ward Building, North Sydney Council identified that the Tom O'Neill Centre has moderate heritage significance and should be retained.

Policy 92 of the CMP identifies that the demolition or removal of buildings and structures that make only a little or moderate contribution to the heritage significance of the Graythwaite site may occur, provided there is no substantial adverse impact on the heritage significance of the site. Additionally, policies 41 and 44 of the CMP provide that the Tom O'Neill Centre and the Ward Building may be demolished subject to satisfying the archival recording and site interpretation policies in the CMP.

The HIS identifies that the integrity of both buildings has been adversely affected by the considerable alterations that have occurred in the past, and both buildings would be difficult to adapt for teaching purposes given their narrow floor plan and configurations. The Ward Building is also contaminated with hazardous materials including asbestos fibre cement sheeting and lead paint, and its removal would enhance the immediate setting of Graythwaite House and facilitate a new physical and visual connection with the existing Shore school campus, which is a key element of the site's adaptive re-use.

The HIS also identifies that the heritage significance of both the Ward Building and the Tom O'Neill Centre is embodied in their historical role in the functioning of the Graythwaite site as a hostel for invalid soldiers and then as an aged care facility. The HIS also identified that their social and historic significance could be better communicated through site interpretation and archival recording prior to any demolition of the buildings. The HIS recommends that a site interpretation plan be prepared, and that archival recording be undertaken prior to demolition of these buildings.

The Heritage Council identified that the concept plan satisfactorily addresses the CMP policies and is acceptable on heritage grounds, and raised no specific objection to the proposed demolition of the Tom O'Neill Centre.

The department notes that the removal of the Ward Building and Tom O'Neil Centre is permitted under policies 44 and 41 of the CMP respectively, and that the Heritage Council has raised no objection to the proposed future demolition of both buildings. The department also acknowledges that both buildings have undergone significant alterations in the past and the removal of the Ward Building would enhance the immediate setting of Graythwaite House and would reinstate significant views towards Graythwaite House from the driveway. The department also notes that the proponent's Statement of Commitments in the concept plan includes the implementation of recommendations in the HIS, including the preparation of a site interpretation plan and archival recoding of the buildings prior to demolition.

Accordingly, the department considers the future demolition of the Ward Building and Tom O'Neill Centre to be acceptable, and that the implementation of recommendations in the HIS will result in the continued communication of the



historical role of the Graythwaite site as a hostel for invalid soldiers, and then as an aged care facility.

#### 5.4.4 Minor Demolition, Refurbishment and Minor Additions to Existing Buildings

##### Minor demolition

The stage 1 project application proposes minor demolition to intrusive elements within the Graythwaite House Complex, including the lavatory block, linking structures between Graythwaite House, West Annex and the Ward Building, and removal of fabric of moderate heritage significance within each of the existing buildings to be retained. Stage 2 of the concept plan also includes minor demolition of the entry/stair hall in the northwest corner of the West Wing Building to facilitate construction of a physical link with the East Building.

The department considers that the stage 1 minor demolition works are sympathetic to the heritage significance of the site and will enhance the contribution that each building makes to the overall heritage significance of the site, and are consistent with the relevant CMP policies. The department also considers that the minor demolition works and future removal of the entry/stair hall on the West Wing Building in stage 2 will not result in any unreasonable heritage impacts.

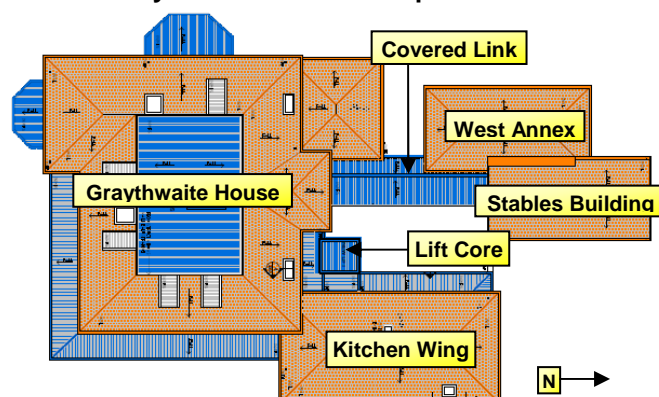
##### Refurbishment

The concept plan and stage 1 project application also include extensive conservation and refurbishment works to the Graythwaite House Complex, Tom O'Neill Centre and the Coach House, including repainting, re-roofing/ recladding, fire upgrades and services (electricity, telecommunications, air-conditioning and water). The department notes that the conservation works are based on retained evidence of original materials, paint schemes, photographic and documentary evidence and are consistent with the CMP policies for each existing building and the repair policies in section 6.5.1 of the CMP.

##### Minor additions

The stage 1 project application proposes a new covered link between the rear of Graythwaite House and the West Annex, and the installation of a lift at the south end of the courtyard to facilitate access to toilet facilities and the first floor of Graythwaite House and the Kitchen Wing. The top of the proposed lift core protrudes above the gutter line of the first level of Graythwaite House. The proposed covered link and lift core are identified in Figure 28.

**Figure 28: Minor Additions to Graythwaite House Complex**



Whilst no objection was raised regarding the covered link to the West Annex, council recommended that the proposed lift height be lowered to be no higher than the gutter line of the house, and be sensitively designed to minimise impact on the heritage item. No objection was raised to the lift core from the Heritage Council.

Policies 77, 78 and 79 of the CMP provide for alterations and additions to existing buildings. Policy 77 identifies that a new lift may be provided to the north of Graythwaite House in the service yard to meet access requirements, providing the design and material of the lift, while modern, respects the architecture of Graythwaite House, Kitchen Wing, Stables Building and service yard.

The proponent responded to council in the PPR by identifying that the lift has been sited to minimise heritage impact at the rear (north) of Graythwaite House, consistent with policies in the CMP, and will not result in any impact to the principal façades of the building. The proponent also identified that the height of the lift core has been determined by the minimum headroom required for the shaft at the first floor. It was also identified that relocating the lift core inside Graythwaite House would likely result in substantial adverse physical impacts on the significant internal spaces and fabric, and was therefore not considered as an option.

The department considers that both the lift core and covered link are provided for under the policies in the CMP, and have been designed and sited to be subservient to the surrounding significant structures. The department also considers that the minor protrusion of the lift core above the gutter line is a functional requirement of the lift itself, and is not visible from the primary view points (from the south and the east) and only partially visible from the west and north. Additionally, the department considers that the scale, form, materials, colours and details of these minor additions would not detract from the significant character of the House Complex. Accordingly and notwithstanding the limited ability to lower the height of the lift core, the department considers that both minor additions are acceptable on heritage grounds.

#### **5.4.5 New buildings adjacent to heritage items**

The concept plan includes the construction of three new buildings (East Building, North Building and West Building) as well as a building to replace the Tom O'Neill Centre.

##### **East Building**

Policy 88 of the CMP identifies that new development to the east of Graythwaite House should be consistent with the policies for new development in the CMP, and:

- sited to retain the primary vista of Graythwaite House from the driveway
- different in scale and height to the Graythwaite House Complex (the height of the majority a new building in this location should not exceed the eaves height of the main part of Graythwaite House)
- designed to respect and complement the Graythwaite House Complex in its character, scale, form, siting, use of materials and colour and architectural detailing.

The proposed East Building is sited over the current location of the Ward Building (to be demolished in stage 2) to the east of Graythwaite House and extends beyond the boundary of the Graythwaite site into the existing Shore school campus. The height of the East Building is generally lower than the eaves of Graythwaite House, with the

exception of the top floor, which is recessed back from the western edge that interfaces with Graythwaite House. Additionally, the layout of the southern end of the building skews back to the east, which results in the reinstatement of significant views of Graythwaite House from the driveway. The design of the building also includes an east-west pedestrian through connection, which facilitates the framing of views of Graythwaite House from the East.

Council's submissions provided on the revised EA and PPR identified that insufficient information has been submitted in relation to the proposed East Building in order to facilitate a detailed assessment of potential impacts on Graythwaite House Complex. The Heritage Council raised no objection to the East Building in its submission.

Approval is sought for the East Building envelope in concept only. It has been designed in a manner consistent with policy 88 of the CMP, and would result in a positive heritage outcome through the reinstatement of significant views of Graythwaite House from the driveway. Notwithstanding, the department considers that detailed design of the East Building, including the character, scale, form, siting, use of materials, colour and architectural detailing requires further consideration of the potential impacts on the heritage significance of the Graythwaite site as part of any future development application for its approval. Accordingly, the department has recommended a future assessment requirement to ensure this occurs.

In addition to considering the heritage significance of the Graythwaite site itself, the East Building is sited partially within the existing Shore school campus, which is identified as an item of local heritage significance in NSLEP 2001. The East Building is sited in close proximity to the "remnants of Holtermann's Tower" (which forms part of the School House Building) and is listed as an item of local heritage significance in NSLEP 2001. The department notes that the siting of the East Building will not impact on the primary views of the School House Building from the south and the east. Additionally, the East Building will require minor demolition of the entry/stair hall in the northwest corner of the West Wing Building to facilitate construction of a physical link with the East Building. Whilst the West Wing Building itself is not listed as a heritage item, it contributes to the overall heritage significance to the Shore school campus (which is listed as an item of local heritage significance in schedule 3 of the NSLEP 2001). The East Building does not impact on the principal elevation of the West Wing Building from the north, however, it will block views of the building from the west. This minor loss of views of the West Wing Building will not result in any significant impact to the heritage significance of the existing Shore school campus. Accordingly, the department considers that the East Building is acceptable on heritage grounds, subject to further consideration at the detailed design stage as required by the recommended future assessment requirements.

#### North Building

Policy 89 of the CMP identifies that new development to the north of Graythwaite House should be consistent with the policies for new development in the CMP, and:

- allow sufficient separation from Graythwaite House Complex, including the Kitchen Wing and Stables Building to enable the complex to be understood as a distinct detached form
- be no more than two storeys in height

- be designed to respect and complement Graythwaite House Complex in its character, scale, form, siting, use of materials and colour and architectural detailing
- not negatively impact significant trees in the vicinity.

The North Building is sited to the north of the Graythwaite House Complex and comprises one above ground storey, and will not require the removal of any significant trees. The department considers that the siting of the building allows the continued reading of the Graythwaite House Complex as a distinct detached form, and therefore the North Building is considered to be consistent with policy 89 of the CMP. The future character, scale, form, siting, use of materials and colour and architectural detailing of the North Building will be considered further as part of the detailed design and future development application, in accordance with the department's recommended future assessment requirements.

### West Building

Policy 84 of the CMP identifies that new development within the north-west slope should ensure that the visual dominance of Graythwaite House and its setting is maintained by conforming with the following:

- new development within the north west slope should be of a scale and modulation of existing buildings within the upper terrace of the Graythwaite Site
- the height of new buildings not exceed the height of the first floor cornice moulding of Graythwaite House
- new development to be predominantly two storeys in height, reflect the sloping topography and not present a dominant visual impression of a multi-storey building when viewed from significant vantage points
- the total footprint of new development on the north west slope should be broken up to ensure that new buildings do not appear as large monolithic structures
- an appropriate curtilage (and setting) to be maintained around the Coach House
- new buildings are sited clear of the canopy and root zones of significant trees on the site boundaries and on the terraced embankments.

The West Building is sited to the west of Graythwaite House on the north west slope and comprises four storeys which step down following the fall in topography of the site to the west. The maximum height of the West Building does not exceed the first floor cornice moulding of Graythwaite House at RL 77.67. The stepping down of the building to the west reduces the apparent scale of the building from key surrounding vantage points, including, from the upper terrace and from the middle terrace.

The north and south educational areas are connected by central circulation space that breaks up the built form of the building. The location of the building is clear of the canopy and root zone of significant trees to be retained along the western boundary of the Graythwaite site. Accordingly, the department considers that the West Building has been designed in a manner consistent with policy 84 of the CMP. Notwithstanding, future character, scale, form, siting, use of materials and colour and architectural detailing of the West Building will be considered further as part of the detailed design, and future development application, in accordance with the departments recommended future assessment requirements.



### Tom O'Neill Centre

Policy 86 of the CMP identifies that, should the Tom O'Neill Centre be demolished, then any new building should be single storey in height and sited in the same or similar location and have a similar general footprint. The building to replace the Tom O'Neill Centre in stage 3 of the concept plan is to be a single-storey building, with a similar footprint, scale and massing as the existing building. The department considers that this building will not result in any significant impact to the heritage significance of the site, however, the character, scale, form, siting, use of materials and colour and architectural detailing of the building should be considered further as part of the detailed design and future development application. The department has recommended a future assessment requirement to ensure this occurs.

### Surrounding Heritage Context

The West Building is the only building under the concept plan that has potential to impact on heritage items outside the Graythwaite site and Shore school campus. However, the West Building has been sited with a setback of 20.8 m to 27.8 m from the western boundary of the Graythwaite site, and is to be significantly screened by vegetation, and accordingly, is not anticipated to impact on any significant views to and from other heritage items in the vicinity of the site. Consequently, the department does not consider that the new buildings under the concept plan will result in any impacts to heritage items in the vicinity of the site.

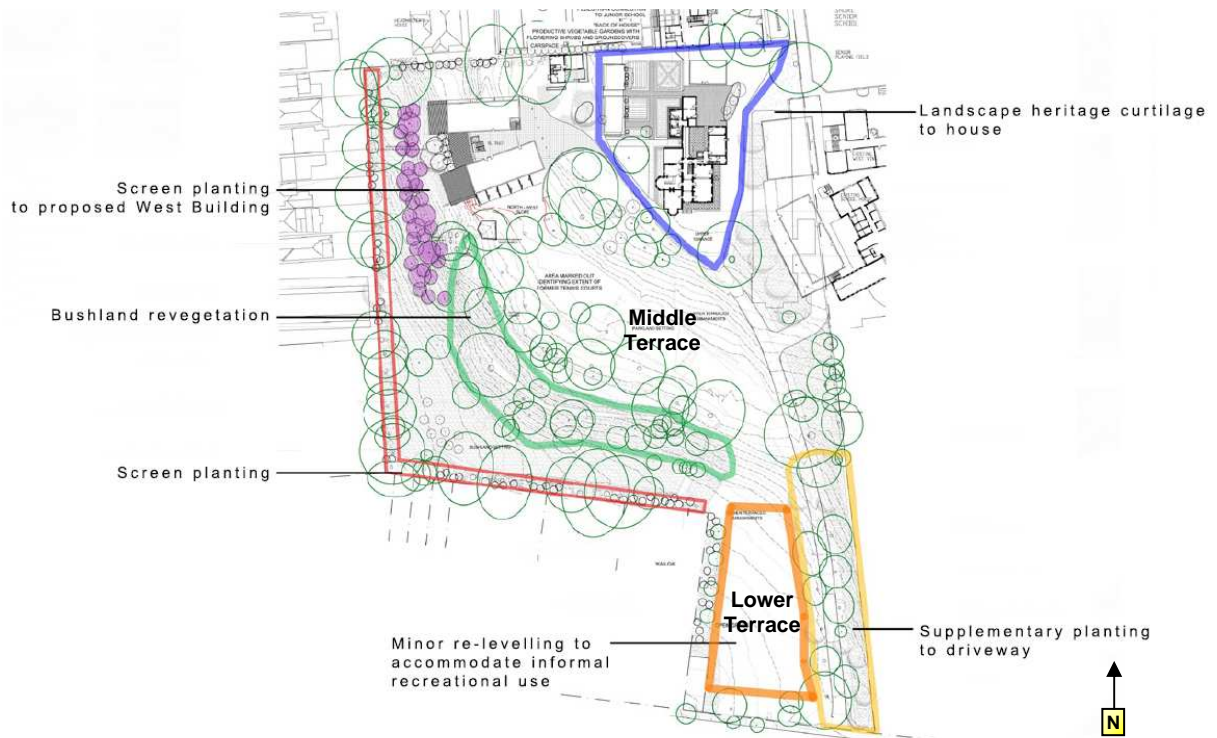
The Heritage Council identified that the concept plan, including the construction of new buildings, satisfactorily addressed the endorsed CMP policies.

#### **5.4.6 Landscaping and tree removal**

The CMP provided a breakdown of the heritage significance of landscaped elements and trees within the Graythwaite site. The landscaped elements of high cultural heritage significance include the terraced landforms (upper, middle and lower terraces) and corresponding slopes between terraces, open spaces areas associated with the former tennis court and former orchard uses, and the garden adjacent to the Graythwaite House Complex. Additionally, the main entrance drive alignment, remnants of the former Euroka drive to the former Water Reserve alignment, and formed brick drain acting as an edging to the drive associated with the Dibbs family are all elements of high heritage significance.

The concept plan and stage 1 project application propose significant landscape improvements throughout the site, including the re-establishment of a suitable curtilage in the immediate grounds of the Graythwaite House Complex and re-interpretation of the formal gardens to the immediate periphery of Graythwaite House. The proposed landscaping also includes the progressive removal of weed species, re-turfing and the additional vegetation planting along the western side boundary associated with the West Building. The HIS submitted in support of the concept plan and stage 1 project application identifies that the proposed new landscaping is informed by historical photography and is intended to reinforce the residential character and form of the site and house while acknowledging its later institutional uses. Key elements of the landscaping are identified in Figure 29.

### Figure 29: Key Landscape Components



The CMP also includes a map of the heritage significance of existing trees within the Graythwaite site, which is identified in Figure 30.

### Figure 30: Tree Heritage Significance Map



The concept plan and stage 1 project application proposes the retention of 135 trees, transplantation of 7 species and removal of 98 trees (being 58 weed species, 16 inconsistent species, five minor vegetation, three garden escape, four colonisers, two poor quality, one unstable *Ficus Rubiginosa f. glabrescens* (Port Jackson Fig) and nine within proposed building footprints or landscape works).

All trees identified as being of exceptional and high heritage significance on the Graythwaite site are proposed to be retained, with the exception of one Port Jackson Fig. This tree is of high heritage significance due to its association with the Dibbs family occupation of the site, however, its removal is proposed due to instability and poor health. The HIS identifies that the tree will be replaced with a tree of the same species in the same location, consistent with the policies in the CMP.

In addition to the above, four *Washingtonia robusta* (Washington Palms) of moderate heritage significance are proposed to be relocated from their current location in front of Graythwaite House to a new location further to the west on the embankment between the upper and middle terraces. The proponent identified that the relocation of the palms is intended to enhance the heritage values of the site by providing unimpeded views of the front façade of Graythwaite House from the south.

Council questioned the necessity and benefit of relocating palms in its submissions on the revised EA and again in the PPR.

The department considers that the proposed landscaping and tree removal/transplantation is consistent with the conservation policies in the CMP (in particular policies 96 – 100 of the CMP). Additionally, the department considers that the relocation of the palms will result in an improved heritage outcome for Graythwaite House, and that their transplantation on site will maintain evidence of the hospital era plantings within the site.

#### **5.4.7 New Fence and Gates**

The stage 1 project application includes a new fence and gate along the Union Street boundary of the Graythwaite site, as well as a new gate at the Edward Street entry to the Graythwaite site. The proposed fence is 1.8 m in height and consists of timber pickets on a sandstone plinth, and the new gates will be hung on masonry piers. The height of the front fence was an issue raised in submissions from the general public, in particular, the potential impediment of views of the terraces and Graythwaite House from the Union Street footpath.

Policy 121 of the CMP identifies that new security fencing and gates on the Union Street boundary of the Graythwaite site should be designed to enhance Graythwaite's distinctive late nineteenth/early twentieth century presentation, and that the design should be based on historic evidence. The policy also identifies that the new fencing and gates should also continue to allow views in to the site from Union Street.

Council's DCP 2002 Area Character Statement identifies that fences for the Graythwaite site are to be no higher than 1 metre to provide views of Graythwaite House from Union Street. Council raised no objection to the height of the fence on Union Street, despite the exceedance of the DCP fence height control, and identified that it supported the proposed fence as it was based on historical evidence.

The department acknowledges that the design of the fence and gates is based on historical evidence, and considers that the design incorporates visual permeability through the spacing of timber pickets, which will continue to allow views of the Graythwaite site from Union Street. Accordingly, the department considers that the fencing and gates have been designed in accordance with Policy 121 of the CMP, and no design revision is warranted.

#### **5.4.8 BCA Compliance**

The revised EA included a BCA Report prepared by Davis Langdon (BCA report) and Fire Safety Engineering Assessment of Alternative Solutions (FSEAAS). The BCA report specifies that the existing Graythwaite House Complex, Tom O'Neill Centre and the Coach House do not comply with the "Deemed to Satisfy" provisions of the BCA. The BCA report identifies that strict compliance with BCA requirements would require whole or part destruction of the fabric of significant buildings and is not appropriate on the basis that heritage significance should take precedence. Accordingly, alternative solutions using fire-engineered principles are proposed to be implemented in each of the buildings to ensure an appropriate level of fire and life safety for the building is achieved. The BCA report identifies that the alternative solutions are to comply with the performance requirements of the BCA and are to be subject to a fire engineering analysis prior to issue of a construction certificate. The BCA report also itemises the clauses of the BCA for which an alternative solution is required.

Council identified that the resolution of the alternative solutions for fire and BCA upgrades prior to construction certificate was satisfactory, subject to the imposition of conditions ensuring that a suitably qualified heritage architect be engaged to work with a BCA consultant and fire engineer to resolve the detailed design of BCA upgrades and to ensure the heritage fabric is retained. Additionally, council identified that fire fighting equipment, and egress detection systems are to be located sympathetically with regard to the character of the building and should be designed to have the least impact to significant fabrics whilst also having proper regard to fire safety requirements.

The department is satisfied that, subject to the recommendations in the BCA Report and the FSEAAS, appropriate alternative solutions can be adapted as part of the detailed design and construction certificate phase to attain compliance with the performance requirements of the BCA. Notwithstanding, to ensure that the fabric of significant heritage buildings is also retained, in accordance with council's recommendation, the department has recommended the imposition of a condition for a suitably qualified heritage architect to be engaged to work with a BCA consultant and fire engineer to resolve the detailed design of BCA upgrades and ensure the heritage fabric is retained.

#### **5.4.9 Aboriginal Heritage**

An aboriginal heritage assessment (AHA) is included in the CMP which identifies that no registered aboriginal sites exist on the Graythwaite site or in the vicinity of the site. The AHA identifies that the Graythwaite site has been extensively modified since European settlement, and it is not considered that there is any archaeological potential for intact or substantial aboriginal heritage deposits on the site. Notwithstanding, the department has imposed a condition which identifies that,



should any aboriginal objects be discovered during any future works on the site, excavation and disturbance of the area should stop immediately and, and may only be resumed following written consent being obtained from the National Parks and Wildlife Service.

#### **5.4.10 Heritage Impact Conclusion**

The department recognises the need for the use of the Graythwaite site to generate investment and conserve the heritage values of Graythwaite House in its setting in the long term, in a manner consistent with the endorsed CMP for the site. The CMP identifies that the adaptive re-use of the site for educational purposes is an appropriate use of the site. The department considers that implementation of the concept plan and stage 1 project application for the use of the site for educational purposes and the development of educational buildings would achieve an appropriate balance between the need to retain and conserve a place of State (and local) heritage significance, and the need for change to facilitate a viable new use of the Graythwaite site.

The department considers that the proposed demolition works, new building works and landscape works proposed in the concept plan reasonably satisfy the CMP policies, including the key policies relating to demolition, development footprint, building height and conservation outcomes. Notwithstanding, the character, scale, form, siting, use of materials and colour and architectural detailing of the proposed new buildings require further consideration at the detailed design and future development application stage to ensure they complement, and do not detract from, the existing character of the significant buildings, landscape and setting of the Graythwaite site.

#### **5.5. Traffic, Accessibility and Transport**

Traffic impacts on the surrounding local road network, the operation of the proposed pick-up facility, car parking and on street bus facilities were key issues raised in submissions by North Sydney Council and the general public. Given the substantial level of concern raised in submissions regarding traffic management and impacts, the department sought further advice from traffic consultants SMEC, in the form of a review of all traffic and transport related documentation provided by the proponent, as well as review of key traffic and transport issues raised in submissions. The proponent provided a further traffic report in response to SMEC's initial review, and SMEC provided further advice regarding the response provided by the proponent.

The following traffic, accessibility and transport documentation was submitted by the proponent to support the application:

- a Traffic and Accessibility Impact Assessment Report by Halcrow dated 4 October 2011 (TAIA Report) - submitted as part of the revised EA
- a PPR Transport Report by Halcrow dated 7 March 2012 (PPR Transport Report) – submitted as part of the PPR
- a Transport Response to Submissions Report by GTA Consultants dated 12 June 2012 (Response to PPR Submissions Report) – submitted in response to submissions on the PPR
- a Memorandum by GTA Consultants dated 25 June 2012 (Pick-up Memorandum) – submitted in response to a query regarding the proposed head room clearance of the existing car park.

- a Traffic and Transport Matters Report by GTA Consultants dated 21 August 2012 (GTA Traffic and Transport Matters Report) – submitted in response to SMEC's review of traffic and transport documentation.

### 5.5.1 Traffic Generation

The proponent's Halcrow TAIA Report provided an analysis of the existing road network in the vicinity of the site, including a traffic flow analysis and SIDRA analysis of key approach route intersections. The surrounding road network traffic flow data used in the traffic flow analysis was generated from traffic counts and surveys undertaken during a school weekday (ie, not a weekend or school holiday period). The traffic flow analysis identified that the weekday peak periods for the surrounding road network occurred between 7:30 – 8:30 am (AM peak hour period) and between 3:00pm and 4:00pm (PM peak hour period).

The traffic flow analysis also included a two-way traffic flow breakdown for the AM and PM peak hour periods for the surrounding road network. The roads included in the traffic flow analysis, and results of the traffic flow analysis are shown in Figure 31 and Table 7.

**Figure 31: Roads Surveyed for TAIA Report Traffic Flow Analysis**



**Table 7: Traffic Flow Analysis – Two Way Peak Hour Flows (Vehicles / Hour)**

| Location                                     | AM Peak Hour (7:30-8:30am) | PM Peak Hour (3:00-4:00pm) |
|--|----------------------------|----------------------------|
| William St, south of Blue St / School Access | 134                        | 62                         |
| William St, north of Blue St / School Access | 244                        | 87                         |
| Miller St, south of Blue St                  | 897                        | 871                        |
| Miller St, north of Blue St                  | 1210                       | 1128                       |
| Blue St, east of William St                  | 222                        | 61                         |
| Blue St, east of Miller St                   | 557                        | 536                        |
| Union Street, west of Chuter St              | 413                        | 355                        |
| Union Street, east of School Access          | 477                        | 408                        |
| Blues Point Rd, south of Union St            | 457                        | 536                        |
| Blues Point Rd, north of Union St            | 905                        | 854                        |
| Lavender St, east of Blues Point Rd          | 793                        | 592                        |
| Chuter St, south of Union St                 | 59                         | 22                         |
| School Access, north of Union Street         | 75                         | 55                         |
| Edward Street, south of Lord St              | 257                        | 95                         |
| Edward Street, south of Mount St             | 287                        | 111                        |
| Edward Street, north of Mount St             | 298                        | 147                        |
| Lord St, west of Edward St                   | 47                         | 13                         |
| Mount St, east of Edward Street              | 221                        | 122                        |

The traffic flow analysis identified that, with the exception of Blues Point Rd, south of Union Street, the road network in the vicinity of the site carries more traffic in the AM peak hour period compared to the PM peak hour period. The additional traffic flows experienced in the AM peak hour period is a result of the School's morning peak period coinciding with the general commuter peak period, whilst the School's afternoon peak period occurs prior to the general commuter peak period. In addition, the traffic surveys indicated a higher private vehicle modal slip for students/staff travelling to school in the morning (46 per cent by private vehicle), compared with students/staff travelling from school in the afternoon (33 per cent by private vehicle), which is partly attributed to students travelling by school bus to the school's sporting facilities in Northbridge in the afternoon.

The TAIR also included a SIDRA analysis of seven key approach route intersections in the vicinity of the site, including:

- Edward Street / Mount Street
- Edward Street / Lord Street
- William Street / Blue Street
- Union Street / Chuter Street
- Union Street / School Access
- Union Street / Blues Point Road
- Blue Street / Miller Street

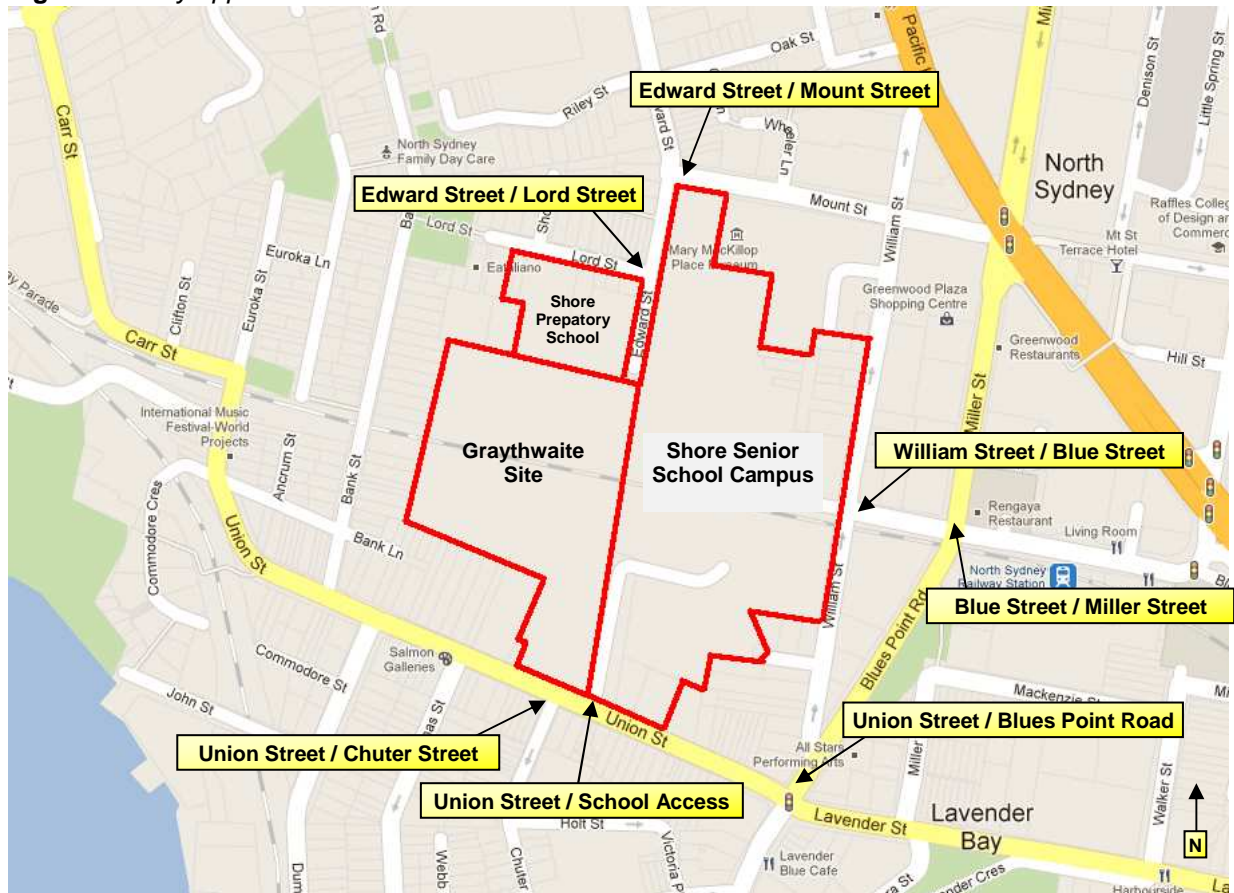
The SIDRA analysis included two traffic scenarios, including:

- The existing traffic level of the surrounding road network (existing)
- The existing traffic level of the surrounding road network plus traffic generated by the development (existing + proposed)

The SIDRA analysis was taken from the traffic report that accompanied the original EA, and consequently, it was based on an increase in school population of 400 additional senior school students, 100 additional preparatory students and 50 additional staff.

The key approach route intersections included in the SIDRA analysis are identified in Figure 32 and the findings of the SIDRA analysis are identified in Table 8.

**Figure 32: Key approach route intersections**



**Table 8: SIDRA Analysis (from Original EA)**

| Intersection                    | Peak Period | Existing Intersection Delay | Existing + Proposed Intersection Delay | Existing Level of Service | Existing + Proposed Level of Service |
|---------------------------------|-------------|-----------------------------|--|---------------------------|--------------------------------------|
| Edward Street / Mount Street    | AM          | 6                           | 6                                      | A                         | A                                    |
|                                 | PM          | 8                           | 15                                     | A                         | B                                    |
| Edward Street / Lord Street     | AM          | 5                           | 6                                      | A                         | A                                    |
|                                 | PM          | 6                           | 8                                      | A                         | A                                    |
| William Street / Blue Street    | AM          | 6                           | 7                                      | A                         | A                                    |
|                                 | PM          | 6                           | 6                                      | A                         | A                                    |
| Union Street / Chuter Street    | AM          | 6                           | 6                                      | A                         | A                                    |
|                                 | PM          | 6                           | 6                                      | A                         | A                                    |
| Union Street / School Access    | AM          | 6                           | 6                                      | A                         | A                                    |
|                                 | PM          | 6                           | 6                                      | A                         | A                                    |
| Union Street / Blues Point Road | AM          | 26                          | 27                                     | B                         | B                                    |
|                                 | PM          | 25                          | 26                                     | B                         | B                                    |
| Blue Street / Miller Street     | AM          | 27                          | 33                                     | B                         | C                                    |
|                                 | PM          | 17                          | 18                                     | B                         | B                                    |

The SIDRA analysis identified that, during the PM peak hour period, the Edward Street / Mount Street intersection will decrease from a level of service A 'good operation', to a level of service B 'good with acceptable delays & space capacity'. Additionally the SIDRA analysis identified that during the AM peak hour period, the Blue Street / Miller Street intersection will decrease from a level of service B 'good with acceptable delays & space capacity', to a level of service C 'satisfactory'.



The department notes that the proposed increase in school population under the revised EA is less than the original EA, and therefore the associated traffic generating potential of the proposal under the revised EA will be less than that projected in the SIDRA analysis. Specifically, the total estimated vehicle trips per peak period has reduced from 309 in the original EA to 285 under the revised EA (reduction of 8%).

Council's submissions on the revised EA included comments from an independent traffic consultant (Colston Budd Hunt and Kafes) which identified that the surrounding road network can accommodate the proposed additional vehicle movements associated with the development. Notwithstanding, council's submission also identified that the council prefers the advice from council's traffic engineer (who also commented on the original EA) over the advice of the council's external traffic consultant. Council's traffic engineer acknowledged that the surrounding road network could generally accommodate the proposed additional vehicle movements associated with the proposal, however, identified that the proposal would result in an exceedance of the local street environmental capacity performance standards detailed in the RMS Guide to Traffic Generating Development (RMS Guideline) at William Street and Edward Street.

Independent advice from SMEC identified that the full traffic generating potential of the proposal has been analysed by the proponent and that the SIDRA intersection analysis has been undertaken correctly. SMEC also confirmed that the traffic generated by the proposal could be accommodated on the surrounding road network.

The department supports the findings from SMEC, and considers that the minor reduction in level of service as a consequence of the development will not result in any substantial impacts to the operation of the surrounding road network. Additionally, all key approach route intersections will continue to operate at or above a level of service C 'satisfactory with spare capacity'. Furthermore, the department does not consider that strict application of the environmental capacity performance standards in the RMS Guideline is appropriate, as the performance standards only provide an indication of the level of traffic beyond which amenity may be affected. Additionally, the RMS Guideline identifies that a departure from this standard may be accommodated to a degree. The RMS raised no objection to the proposal in its submission on the application.

The department also notes that no additional traffic will result as a consequence of the concurrent stage 1 project application as there is no proposed growth in student or staff population. Stages 2 and 3 of the concept plan will each be the subject of further applications and the traffic issues associated with each of these stages will be assessed as part of future applications.

### **5.5.2. Parking**

The Concept Plan proposes the construction of 48 car parking spaces on the Graythwaite site, however four existing spaces in the existing Shore school campus will be removed to accommodate the pick-up facility in stage 2. A breakdown of the car parking in the existing Shore school campus and car parking proposed in the concept plan is provided in Table 9.

**Table 9: Car Parking**

| <b>Concept Plan Car Parking</b>  |   | <b>Total</b> |
|--|---|--------------|
| Stage 1  | <ul style="list-style-type: none"> <li>6 at grade car parking space to the south of Graythwaite House (for visitor car parking)</li> <li>1 additional staff car parking space near the coach house (for the caretaker)</li> </ul> | +7           |
| Stage 2  | 41 staff car parking spaces in the basement of the East Building  | +41          |
| Stage 3  | No change to car parking  | 0            |
| Total  |   | +48          |
| Total staff car parking (excluding visitor spaces)   |   | +42          |
| <b>Existing School Campus Car Parking</b>  |   | <b>Total</b> |
| Existing Shore school campus car parking   |   | 151          |
| Existing Shore school campus car parking (minus 4 spaces being removed to accommodate the pick-up facility in Stage 2) |   | 147          |
| <b>Existing School Campus + Concept Plan</b>   |   | <b>Total</b> |
| Shore school campus car parking (147 spaces) plus total staff car parking under concept plan (42 spaces)               |   | 189          |

As the proposal is for the use of the Graythwaite site as an educational establishment, being an extension of the existing Shore school campus, the department considers that car parking should be considered in the context of the combined existing Shore school campus and the Graythwaite site (as opposed to separate sites with separate car parking provisions).

North Sydney Council Development Control Plan 2006 (NSDCP 2006) includes a maximum car parking provision for educational establishments of 1 space per 6 staff. Shore school currently has 240 permanent staff (including boarding staff) and up to 150 casual staff who are employed from time to time. The concept plan proposes an increase of 45 permanent staff. Table 10 identifies the existing and proposed car parking provisions on the site against the NSDCP 2006 car parking control.

**Table 10: Car parking provision against NSDCP 2006**

| <b>Existing Shore School</b>                     |                      |   |  |                                 |
|--|----------------------|---|--|---------------------------------|
|  | <b>Staff Numbers</b> | <b>Allowable car parking under NSDCP 2006</b> | <b>Existing Provision of Staff Car Parking</b> | <b>Exceedance of NSDCP 2006</b> |
| Existing Permanent Staff                         | 240                  | 40  | 151  | Exceedance of 111 spaces        |
| Existing Permanent + Casual Staff                | 390                  | 65  | 151  | Exceedance of 86 spaces         |
| <b>Existing Shore School + Concept Plan</b>      |                      |   |  |                                 |
|  | <b>Staff Numbers</b> | <b>Allowable car parking under NSDCP 2006</b> | <b>Proposed Provision of Staff Car Parking</b> | <b>Exceedance of NSDCP 2006</b> |
| Existing Permanent + Concept Plan Staff          | 285                  | 47.5 (rounded to 48)                          | 189  | Exceedance of 141 spaces        |
| Existing Permanent + Casual + Concept Plan Staff | 435                  | 72.5 (rounded to 73)                          | 189  | Exceedance of 116               |

As identified in the above table, both the existing car parking provision, and the proposed car parking provision under the concept plan represent a significant exceedance of the NSDCP 2006 car parking control. Specifically, upon completion of the concept plan, the combined Shore school site (including the Graythwaite site) would accommodate 189 car parking spaces, which is 116 spaces over the 73 spaces permitted under NSDCP 2006 when taking into account casual staff, or 141

spaces over the 48 spaces permitted under NSDCP 2006 when not taking into account casual staff.

Whilst no objections were raised regarding the at-grade visitor car parking and caretaker car park proposed in stage 1, council and a number of public submissions objected to the provision of the proposed new additional 41 basement car parks in the stage 2 East Building.

The proponent has identified that the existing Graythwaite site currently accommodates seven formal car parking spaces, and space for a further 18 cars in an informal car parking arrangement on the existing asphalt areas surrounding Graythwaite House. The proponent has identified an "existing use rights" claim on the existing car parking on the Graythwaite site. Additionally, the proponent has identified that the provision of 48 spaces in the concept plan responds to the concerns raised regarding the demand for on-street car parking in the locality. The proponent has also identified that the additional car parking in the East Building will offset the loss of four spaces to accommodate the pick-up facility. In contrast to the above, the proponent has also identified that a shift in travel behaviour is required for the existing and future school population, which is to be achieved through a commitment to prepare and implement a Workplace (Green) Travel Plan (intended to increase the modal split of non-car travel modes by staff and students (public transport, walking and cycling)).

SMEC identified that the proposed provision of car parking under the concept plan would result in a significant exceedance of the NSDCP 2006 control. SMEC advised that the determination of car parking requirements should be made taking into account both state and local government policies.

The department has considered the proposed provision of car parking, and recommends that the 41 car parking spaces under the East Building not be approved for the following reasons:

- the proposed car parking provision significantly exceeds NSDCP 2006
- the site is highly accessible by public transport with North Sydney train station and bus services located approximately 170 m to the east of the site
- The excessive provision of car parking above the NSDCP 2006 car parking control encourages staff private vehicle travel
- The excessive provision of car parking is inconsistent with the goals established in NSW 2021 to grow patronage on public transport
- The provision of car parking is inconsistent with the state government's "Integrated Land Use and Transport" policy, which aims to reduce growth in the number and length of private car journeys and to make walking, cycling and public transport use more attractive
- The excessive provision of staff car parking is inconsistent with the proponent's commitment to prepare and implement a Workplace (Green) Travel Plan to increase non-car travel mode.

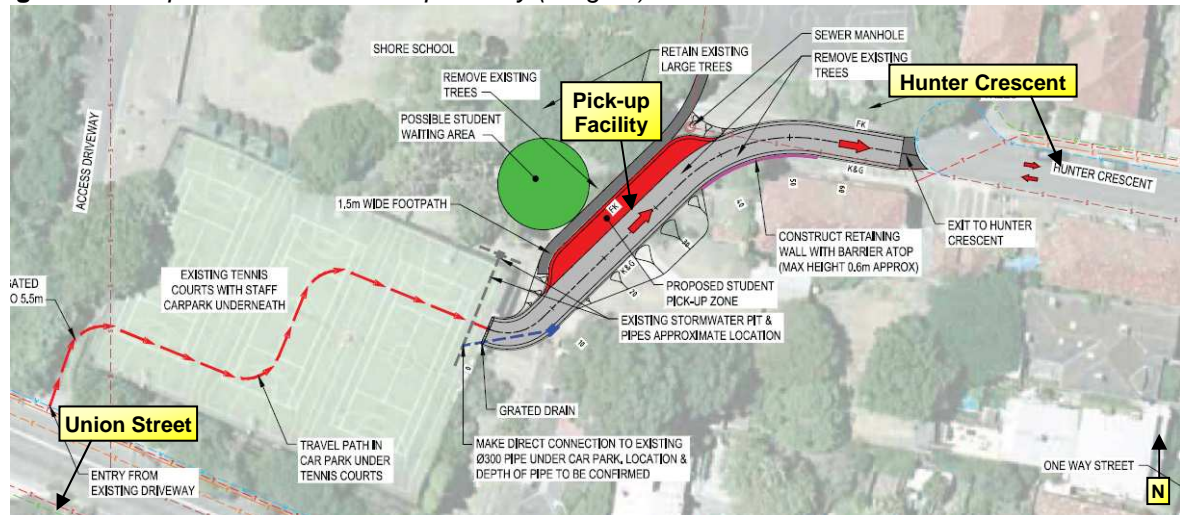
### **5.5.3. Pick-up Facility**

A new vehicular student pick-up facility within the existing Shore senior school campus connecting Union Street to Hunter Crescent is proposed in the concept plan. The revised EA initially provided a variety of pick-up options at different locations

within the existing Shore school campus and Graythwaite site. This was reduced to one preferred option in the PPR.

The student pick-up facility comprises the construction of an internal road linking Union Street to Hunter Crescent via the existing covered car parking area (under a raised tennis court). The pick-up facility includes a pick-up zone accommodating up to four cars adjacent to a designated student waiting area, and is shown in Figure 13.

**Figure 13: Proposed Student Pick Up Facility (Stage 2)**



The proposed new pick-up facility is to be used in addition to the existing drop off / pick-up facility in Edward Street, and is to accommodate the additional demand for pick-up facilities associated with the potential growth in preparatory school students in stage 2 (up to 100 additional students).

The pick-up facility is not proposed to be used as a drop-off in the morning, which will continue to be accommodated with the existing Edward Street facility. The proponent identified that drop-off activity is spread over a one and a half hour period before school, whereas pick-up activity has a high demand over a 15 minute period immediately after school, and that the existing Edward Street facility has enough capacity to accommodate the additional preparatory school drop-offs in the morning. Additionally, the proponent identified that use of the facility for preparatory student drop-offs in the morning would coincide with the morning peak period of the surrounding road network, and that drop off use is not proposed as the surrounding residents had expressed concern about additional traffic on Union Street in peak periods.

The facility is not proposed to be used by senior school students (drop-off or pick-up). The proponent identified that the school does not wish to potentially encourage increased private motor vehicle use by all parents. Additionally the proponent identified that a higher proportion of senior school students commute by public transport in the morning than preparatory school students, and parents who currently drop off senior school students have adequate alternative locations that are suitable for more mature children. The proponent also identified that the majority of senior students travelling directly home do so via public bus and train facilities at North Sydney Train Station, or alternatively, travel to the school's sporting facilities at Northbridge via school buses from Mount Street.



Submissions from North Sydney Council and the general public on the revised EA and PPR raised concern with the operation of the pick-up facility and the potential traffic congestion impacts on the surrounding road network. Additionally, concern was raised regarding the ability of Union Street to handle right turn movements into the pick-up facility driveway, the potential for car queuing to extend onto Union Street, and the capacity of the pick-up zone being four cars. A submission from a resident included a report by a traffic consultant (McLaren Traffic Engineering), which raised concerns with the queuing theory and operation of the pick-up facility.

The department sought independent advice from SMEC in relation to the proposed pick-up facility. SMEC initially raised some concerns regarding the split of preparatory student pick-ups between the new pick-up facility and the existing drop off / pick-up facility in Edward Street, as well as concerns regarding the contingency and sensitivity analysis applied to the traffic assessment. The proponent provided a response to SMEC's initial concerns and SMEC subsequently advised that the traffic and transport concerns have been satisfactorily addressed by the proponent, and that SMEC is generally satisfied with the operation of the proposed facility.

The department supports the findings from SMEC, and is satisfied that the pick-up facility will adequately cater for the additional demand for preparatory student pick-up associated with the growth in school population, and that the operation of the pick-up facility will not result in any substantial impacts to the operation of the surrounding road network. Notwithstanding, the department notes that the pick-up facility is currently only proposed in concept, and that the operation of the pick-up facility exclusively for preparatory school students is an issue that needs to be considered further as part of the detailed design and future application for stage 2. Accordingly, the department has recommended a number of future environmental assessment requirement requiring the future application for the pick-up facility to be accompanied by a traffic report and management plan to limit the use of the facility exclusively to preparatory students.

#### **5.5.4. Bus Pick-Up**

Shore currently utilises a bus stop along Mount Street in the afternoon period to transfer students between North Sydney and Shore's sporting grounds at Northbridge. The existing Mount Street bus stop is also utilised by other buses, including buses associated with the Mary Mackillop Place Museum. The concept plan proposes to retain afternoon use of the existing Mount Street bus stop, include an additional bus stop on William Street, and utilise existing public bus facilities in Blue Street at North Sydney Railway station. Students travelling directly home by public transport use the public bus and train facilities on Blue Street, North Sydney.

The proponent's TAIA Report identified that the school currently operates a maximum fleet of five buses at any one time from the existing Mount Street facility, providing some eight trips in the afternoon (some buses make two trips). The TAIA Report identified that the additional students under the concept plan (under stage 2 and stage 3) would increase the demand from 8 trips to 10 trips per afternoon, however, it is unlikely that additional buses would be required (with the five buses making two trips), and therefore, in practice, there is unlikely to be any additional demand for kerb side bus parking as a result of the concept plan.

However, council has identified that the number of bus stops currently utilised by the School on Mount Street may be reduced to accommodate the demands of Mary Mackillop Place Museum. The concept plan proposes that an additional bus stop be provided in William Street, north of Blue Street, and that the existing public bus facilities in Blue Street at North Sydney Railway station be utilised to offset the potential loss of bus facilities in Mount Street. The proposed new William Street bus stop would require the removal of some time restricted and metered on-street parking spaces during the afternoon operation of the bus stop. The proponent identified that the removal of Mount Street bus spaces without the provision of replacement spaces would exacerbate the existing situation, and that the proposed afternoon William Street bus stop should be considered regardless of any increased demand for bus facilities generated from the additional students under the concept plan.

Council's submissions on the revised EA included comments from an independent traffic consultant (Colston Budd Hunt and Kafes) which identified that William Street is the most appropriate location for additional bus operations at the site. Additionally, the external traffic consultant recommended that the future applications under the concept plan should include a bus zone in William Street to service the school during the afternoon (subject to North Sydney Traffic Committee approval). Notwithstanding, council's submission also identified that the council prefers the advice from council's traffic engineer (who commented on the original EA) over the advice of the council's external traffic consultant. Council's traffic engineer identified that the existing school buses in Mount Street already cause significant congestion issues, and that the proponent should provide a formal on-site bus zone to manage and accommodate 11 buses. The recommendation for on-site bus facilities was reiterated in council's submission on the PPR, and council advised that the North Sydney Traffic Committee would be unlikely to support the provision of the William Street bus stop given it would reduce the provision of on-street car parking in the locality. The operation of the existing Mount Street bus stop and the proposed William Street bus facility were also key issues raised in submissions by the general public.

The department sought advice from SMEC in relation to the proposed afternoon bus stop in William Street, as well as the potential to use the existing public bus stop at Blue Street, North Sydney. SMEC initially considered that the proponent had not adequately demonstrated why bus facilities could not be accommodated within the school campus, however, upon review of the proponent's additional information regarding the constraints of the site, SMEC concurred with the proponent that accommodating buses on site would not be feasible without significant changes to the buildings and topography. Subsequently, SMEC supported the provision of the William Street bus facility to offset the potential loss of bus facilities in Mount Street and to accommodate the additional demand generated by the growth in school population under the concept plan. SMEC also identified that any use of the existing public bus facilities in Blue Street should be assessed as part of the detailed design and future application for stage 2 of the concept plan.

The proponent has provided a detailed site analysis outlining a number of significant heritage, topographical and building constraints impeding the provision of on-site bus pick-up facilities. Specifically, the proponent identified that including bus facilities on the lower terrace of the Graythwaite site, or utilising the historic driveway would have detrimental impacts to the heritage significance of the site. Additionally, the proponent identified that bus entry via Edward Street would require significant road

widening, which in turn would impact on existing services, pavements, trees, residential car parking and the operation of the Edward Street pick-up / drop-off facility. The proponent also identified that bus entry via Blue Street is not feasible as the internal road is too narrow and leads to a dead end.

The department supports the findings from SMEC and considers that the provision of on site bus facilities is not feasible given the current constraints of the existing school campus and Graythwaite site.

The department supports the provision of an additional afternoon bus stop at William Street, however the specific length and capacity of the facility is an issue that needs to be addressed as part of the detailed design and future application for stage 2 in consultation with relevant transport authorities. The department also notes that the William Street bus stop will only be required in the afternoon (between approximately 3 pm to 4 pm), and therefore the bus stop area could be retained as metered on street parking spaces outside of these times, which would maintain the supply of car parking in the locality outside school bus use. However, the department considers that any loss of car parking as a result of the William Street bus stop will need to be addressed as part of the future application, including consideration of any compensation requirements for council as a result of any loss in car parking revenue. The department has recommended a future environmental assessment requirement to ensure this occurs.

Accordingly, the department recommends that the William Street bus facility and the potential use of Blue Street public bus facilities be approved in principle as part of the concept plan, subject to addressing the future environmental assessment requirements.

## **5.6. Stormwater and Drainage**

An Integrated Water Management Plan and Concept Stormwater Management Plan by ACOR Consultants Pty Ltd (from the original EA), as well as an addendum Integrated Water Management Plan and revised Stormwater Management Plan accompanied the revised EA. The addendum Integrated Water Management Plan and revised Stormwater Management Plan included a response to council's issues raised during the exhibition of the original EA.

The stage 1 project application includes an underground stormwater drainage system which provides connection with the downpipes of existing buildings, and connections for the proposed new buildings, with the existing stormwater drainage pit in Union Street. Additionally, the proposed drainage system includes networks of subsoil drains to facilitate the management of water logged areas and underground springs throughout the site. The existing drainage system comprises downpipes from existing buildings connecting with an underground drainage system, which discharges into a vegetated area to the south of the internal driveway (within the Graythwaite site).

During the exhibition of the original EA, council raised concern with the removal of the current subsoil drainage systems and replacement within the proposed underground stormwater system, in particular, the potential impacts of altering the subsoil moisture levels and the potential impacts on large mature trees throughout the site. Additionally, council raised concern with the draining of other water logged areas of the site with the underground stormwater system, and recommend that a

landscape alternative be implemented instead. Council's concerns were maintained in its submission on the revised EA, and again in its submission on the PPR.

The addendum Integrated Water Management Plan identifies that the existing drainage system results in detrimental impacts on the existing buildings as a result of the current uncontrolled stormwater and groundwater ingress into the buildings and basement areas, which compromises the structural integrity, general conditions and amenity of the existing buildings. Accordingly, the proposed underground stormwater drainage system intends to facilitate the diversion of these groundwater flows and ensure the functioning and protection of existing buildings (buildings to be retained) in the long term, as well as the general management of drainage through the remainder of the site.

The department notes that the revised Stormwater Management Plan incorporates some ground water infiltration as part of the future construction of the West Building in response to council's concerns regarding potential reduced ground water flows to the existing trees in this location. The addendum Integrated Water Management Plan also identifies that future applications for new buildings under the concept plan will include water tanks, to collect rain water for irrigation, re-use for toilet flushing, and to minimise use of potable water in accordance with water sensitive urban design principles.

The department notes that 77 per cent of the Graythwaite site will remain as landscaped area under the concept plan and a substantial portion of the rainfall that falls on the site will continue to be absorbed through the significant permeable landscaped areas, and therefore the groundwater moisture levels are unlikely to be significantly impacted. Additionally, the department considers that whilst the existing drainage system contributes partly towards the ground moisture levels in certain areas of the site, the implementation of a new system is a necessary part of the overall adaptive re-use of the site, conservation of significant buildings, and the general management of drainage throughout the site. The department also considers that the inclusion of rain water tanks in new buildings under the concept plan demonstrates sustainable water re-use on site, including for irrigation of vegetation on site. Accordingly, the department does not consider that further design revisions to the proposed Concept Stormwater Management Plan are warranted.

## **5.7. Noise**

The following noise and vibration documentation by SLR Consulting Australia Pty Ltd accompanied the revised EA:

- Construction Noise Impact Statement (CNIS)
- Acoustics Impact Assessment Report (AIA Report)
- Addendum to the Acoustics Impact Assessment Report (Addendum to AIA Report)

### **5.7.1 Stage 1 Construction Noise and Vibration**

#### Noise

Noise will be generated during the minor demolition works, construction and refurbishment works in the stage 1 projects application. The CNIS identifies that the noise will be generated from the following works:

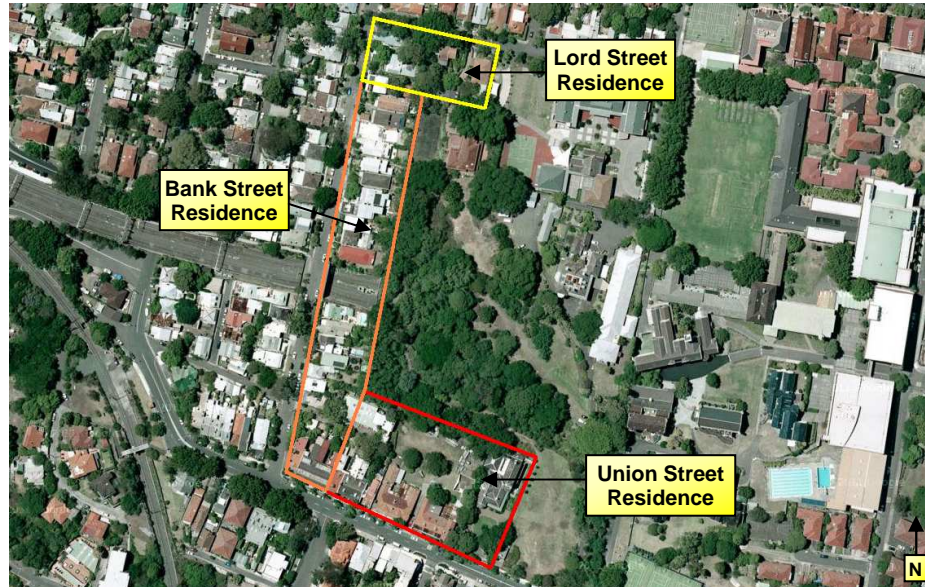
- the demolition of Graythwaite House roof and linking structures



- minor demolition of internal fabric of low significance and refurbishment of Graythwaite House, the Coach House and Tom O'Neill Centre
- the installation of drainage pipes from Graythwaite House to Union street, with some drainage pipes in the terraces.

The CNIS identifies that the nearest sensitive residential receivers are located along Bank Street, Union Street and Lord Street, which are identified in Figure 31.

**Figure 31: Location of the Nearest Sensitive Residential Receivers.**



The CNIS establishes noise management levels from for each of the surrounding residential areas from noise logging conducted within the site in accordance with the Office of Environment and Heritage's Interim Construction Noise Guideline (ICN Guideline). The noise management levels are summarised in Table 7 below.

**Table 7: Noise Management Levels**

| Receiver               | LA90 Background Noise Levels (RBL) - Daytime | Construction NMLs – LAeq (15 minute) |                       |
|------------------------|--|--------------------------------------|-----------------------|
|                        |  | Noise Affected (RBL + 10 dBA)        | Highly Noise Affected |
| Union Street Residence | 42 dBA                                       | 52 dBA                               | 75 dBA                |
| Bank Street Residences | 40 dBA                                       | 50 dBA                               | 75 dBA                |
| Lord Street Residences | 42 dBA                                       | 52 dBA                               | 75 dBA                |

The CNIS also provided predicted LAeq(15 minute) noise levels at the surrounding residential areas based on the maximum sound power levels from equipment and distances between the construction site and the nearest sensitive receivers, which are presented in Table 8.

**Table 8: Construction Noise Predictions**

| Receiver                | Type of Building | Distance from the site (m) | Predicted LAeq (15 minute) Noise Level (dBA) |                       | Noise Criteria LAeq (15 minute) (dBA) |                       |
|-------------------------|------------------|----------------------------|--|-----------------------|---------------------------------------|-----------------------|
|                         |                  |                            | Demolition and Earth Works                   | Building Construction | Noise Affected                        | Highly Noise Affected |
| Union Street Residences | Residential      | 76 – 100                   | 61 – 66                                      | 60 – 61               | 52 dBA                                | 75 dBA                |
| Bank Street Residences  | Residential      | 20 – 100                   | 60 – 74                                      | 63 – 72               | 50 dBA                                | 75 dBA                |
| Lord Street Residences  | Residential      | 50 – 120                   | 58 – 66                                      | 60 – 65               | 52 dBA                                | 75 dBA                |
| Shore                   | School           | 5 – 20                     | 76 – 88                                      | 76 – 82               | 65 dBA                                |                       |

The construction noise predictions in Table 8 identify that the Noise Management Levels are predicted to be exceeded by up to 24 dBA at the nearest affected residential receivers, however, no exceedances are predicted to reach the “highly noise affected” criteria from the ICN Guideline.

Where predicted or measured noise levels exceed the noise management levels, the ICN Guideline recommends that the proponent should apply all feasible and reasonable work practices in order to minimise noise. Such measures may include the use of low noise power tools or hydraulic or electrically controlled equipment instead of petrol or pneumatic equipment, use of temporary noise barriers as well as limiting noisy activities to provide respite to surrounding residents.

### Vibration

The CNIS also identifies that the demolition, refurbishment, construction and drainage excavation activities in the stage 1 project application have the potential to generate vibration at surrounding residential receivers which can result in cosmetic damage to adjoining buildings and human discomfort. The CNIS provided a breakdown of safe working distances from intensive plant equipment in accordance with British Standard 6472:1992 – Guide to evaluation of human exposure to vibration in buildings\*, AS 2187.2–1993 Explosives—Storage transport and use, and British Standard 7385-1:1990 Evaluation and measurement of vibration in buildings, in accordance with the OEH's Assessing Vibration, a technical guideline, which is provided in Table 9.

**Table 9: Construction Noise Predictions**

| Plant Item              | Rating / Description           | Indicative Working Distance |                          |
|-------------------------|--------------------------------|-----------------------------|--------------------------|
|                         |                                | Cosmetic Damage (BS 7385)   | Human Response (BS 6472) |
| Vibratory Roller        | <50kN(Typically 1-2 tonnes)    | 5 m                         | 15 m to 20 m             |
|                         | <100kN(Typically 2-4 tonnes)   | 6 m                         | 20 m                     |
|                         | <200kN(Typically 4-6 tonnes)   | 12 m                        | 40 m                     |
|                         | <300kN(Typically 7-13 tonnes)  | 15 m                        | 100 m                    |
|                         | <300kN(Typically 13-18 tonnes) | 20 m                        | 100 m                    |
|                         | <300kN(Typically >18 tonnes)   | 25 m                        | 100 m                    |
| Small Hydraulic Hammer  | (300 kg – 5 to 12t excavator)  | 2 m                         | 7 m                      |
| Medium Hydraulic Hammer | (900 kg – 12 to 18t excavator) | 7 m                         | 23 m                     |
| Large Hydraulic Hammer  | (1600 kg – 18 to 34 excavator) | 22 m                        | 73 m                     |
| Vibratory Pile Driver   | Sheet piles                    | 2 m to 20 m                 | 20 m                     |
| Pile Boring             | <=800mm                        | 2 m (nominal)               | N/A                      |
| Jackhammer              | Hand held                      | 1 m (nominal)               | Avoid contact            |

The CNIS notes that the actual safe working distances will vary depending on the particular item of plant and the local geotechnical conditions, and recommends that vibration monitoring is undertaken throughout the duration of works to confirm the safe working distances for use of plant items.

Additionally, regarding the human response to vibration, the CNIS identifies that construction activities and vibration emissions are intermittent in nature and for these reasons, higher vibration levels, occurring over shorter periods may be allowed.

\* As identified in OEH's "Assessing Vibration: a technical Guideline", the British Standard contains the most recent advances in vibration evaluation.

### Conclusion

To ensure that the amenity of surrounding residential development is protected throughout the construction works and to mitigate any noise and vibration impacts to adjoining development, the department has recommended a condition in the stage 1 project approval that the proponent prepare a Construction Management Plan, which will detail noise and vibration management. This will need to address all requirements contained in the ICN Guideline, including:

- identification of specific activities that will be carried out and associated noise sources
- identification of all potentially affected sensitive receivers
- noise and vibration monitoring reporting and response procedures
- description of specific mitigation treatments, procedures and management measures.

Additionally, the recommended conditions require that the noise and vibration management section of the Construction Management Plan address the relevant provisions of Australian Standard 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites.

The department has also recommended that the hours of construction work be restricted to the hours of 8am – 1pm on Saturdays to minimise weekend noise impacts from truck movements in the surrounding streets.

Stage 2 and stage 3 of the concept plan will each be the subject of future applications. The construction noise and vibration impacts associated with these future stages will be the subject of further detailed assessment. The department has recommended a number of future noise and vibration environmental assessment requirements which are required to be addressed as part of these future applications.

### **5.7.2 Concept Plan and Stage 1 Operational Noise**

Operational noise from the development will result from mechanical plant equipment on buildings (new and existing buildings), student and staff vocalisations whilst in the upper, lower and middle terraces of the Graythwaite site, student and staff activities within existing and new buildings, and school bells.

#### Mechanical Plant

The Office of Environment and Heritage Industrial Noise Policy guideline (INP) establishes criteria for controlling noise impacts from mechanical plant equipment in new buildings. The AIA Report established intrusive and amenity criterion for the adjoining Bank Street residences and the Union Street residences based on noise monitoring undertaken within the Graythwaite site and the INP which are presented in Table 10.

**Table 10: Intrusive and Amenity Criterion**

| <b>Criteria for project specific noise emission to nearby residences on Bank Street</b> |   |  |   |  |
|---|---|--|---|--|
| <b>Time of day</b>  | <b>Noise Level dBA re 20 µPA</b>                      |  |   |  |
|   | <b>Acceptable Noise Level for urban area (period)</b> | <b>Background Level from noise loggers (LA<sub>90</sub>(15minute))</b> | <b>INP Criteria</b>   |  |
|   |   |  | <b>Intrusive (LA<sub>eq</sub>(15minute) criteria for new sources)</b> | <b>Amenity (LA<sub>eq</sub>(period) criterion for new sources)</b> |
| Day   | 60  | 42   | <b>47</b>   | 60   |
| Evening   | 50  | 38   | <b>43</b>   | 50   |
| Night   | 45  | 34   | <b>39</b>   | 45   |

| Criteria for project specific noise emission to nearby residences on Union Street |  |   |   |  |
|---|--|---|---|--|
| Time of day   | Noise Level dBA re 20 $\mu$ PA                 |   |   |  |
|   | Acceptable Noise Level for urban area (period) | Measured Rating Background Level from noise loggers (LA <sub>90(15minute)</sub> ) | INP Criteria  |  |
|   |  |   | Intrusive (LA <sub>eq(15minute)</sub> criteria for new sources) | Amenity (LA <sub>eq(period)</sub> criterion for new sources) |
| Day   | 60   | 42  | 47  | 60   |
| Evening   | 50   | 36  | 41  | 50   |
| Night   | 45   | 34  | 39  | 45   |

As the proposed operational hours of the development are from 8:00 am to 5:00 pm, the relevant criteria for the development is the daytime criterion of 47 dBA. However, if mechanical plant in buildings (both existing and proposed) is intended to operate on a 24 hour basis, then the night time criterion of 39 dBA will be the relevant criterion. The AIA report identifies that the selection of mechanical plant in future buildings under the concept plan has not been made, however, the report identifies that the implementation of measures such as barriers, silencers, acoustically lined duct works can be used to ensure that the operation of mechanical plant will not adversely impact residential properties.

The department has recommended a condition in the stage 1 project approval that mechanical plant comply with the criteria established in Table 10, and that noise associated with the operation of any plant or machinery shall not give rise to "offensive noise" as defined in the Protection of the Environment Operations Act 1997, and that the sound pressure level at any residential property must not exceed the (LA<sub>90, 15 min</sub>) noise level by more than 5dB(A) as well as satisfying the Building Code of Australia and Australian Standard AS 1668. Accordingly, during the night time period (between 10 pm and 7 am) noise from mechanical plant is not to exceed 39 dBA at any residential property. Further to this requirement, noise from mechanical plant associated with the development must not be audible in any habitable room in any residential property between the hours of 12.00 midnight and 7.00 am.

Additionally the department has recommended a future assessment requirement in the concept plan approval that future applications for new buildings under the concept plan demonstrate that mechanical plant will comply with the criteria established in Table 10, and provide details of any specific noise attenuation methods associated with mechanical plant.

#### Noise emissions from students and staff on the lower and middle terraces

The AIA report provided an assessment of noise impacts associated with student and staff vocalisations whilst occupying the lower and middle terraces in the Graythwaite site during recess and lunch times. The AIA report identified that there is no specific noise criteria for the assessment of noise from outdoor areas within schools. However, the AIA report established noise criteria based on the Technical Guideline for Child Care Centre Noise Assessment from the Association of Australian Acoustical Consultants (AAAC) and calculated resultant noise impacts for Bank Street residences and Union Street residences, which are identified in Table 11 over.



**Table 11: Noise Criteria from AAAC and predicted noise levels.**

| Time Period                   | AAAC recommendation<br>$L_{eq}(15\text{minute})$ | Background Level from noise loggers ( $LA_{90}(15\text{minute})$ )            | AAAC Criteria | Predicted Noise levels |
|-------------------------------|--|---|---------------|------------------------|
| Up to 2 hours (total) per day | Exceed background level by 10 dBA                | 42 dBA (daytime background level for Bank Street and Union Street residences) | 52 dBA        | 51 dBA – Bank Street   |
|                               |  |   |               | 54 dBA – Union Street  |
| More than 2 hours per day     | Exceed background level by 5 dBA                 | 42 dBA (daytime background level for Bank Street and Union Street residences) | 47 dBA        | 51 dBA – Bank Street   |
|                               |  |   |               | 54 dBA – Union Street  |

The above analysis identifies that the predicted noise levels will comply with the 'up to 2 hour' AAAC criteria for Bank Street residences, but will exceed the criteria for Union Street residences by 2 dBA (54 dBA). However, the predicted noise levels will exceed the 'more than 2 hours per day' criteria by 4 dBA at Bank Street (51 dBA) residences and 7 dBA at Union Street residences (54 dBA).

The AIA report identified that the predicted noise levels were conservative and did not take into consideration the shielding afforded by the topography of the site or intervening building structures. The AIA also identifies the shielding afforded by property number 44 Union Street 'Kialoa' would attenuate noise a further 10 dBA to the rear gardens of the nearest affected residence in Union Street. The AIA report also identifies that the noise experienced within 'Kialoa' could potentially be mitigated to comply with the 'up to 2 hour' AAAC criteria (52 dBA) through the construction of a 2 m fence along the boundary with the Graythwaite site (however this would require further assessment of potential heritage impacts).

Noise impacts from the student and staff use of the lower and middle terrace was also a key issue raised in submissions from the adjoining residences.

The department notes that there are no specific noise guidelines in relation to the assessment of noise from student and staff noise in outdoor areas in educational establishments, and that consideration of the AAAC guide has been used by the proponent as general guide to assess the potential impacts on surrounding residential areas.

The department has considered the predicted noise impacts from students and staff using the middle and lower terraces of the Graythwaite site on merit, and concludes that strict compliance with noise criteria in the AAAC guide is not warranted for the following reasons:

- there are no specific noise guidelines in relation to noise from student and staff noise in outdoor areas in educational establishments
- the AAAC guide has been used as background to the assessment of potential noise impacts only
- the noise from staff and students using the terraces occurs generally for short periods throughout the day during recess and lunch times, within school hours
- schools in residential areas are common coexisting land uses and the nature of noise from staff and students using the terraces is not considered to result in any substantial impacts to the amenity of adjoining residents
- educational establishments provide a wider community benefit

- the educational use of the site is permissible within the site and is permissible in the adjoining Residential A2 zone.

*Student, staff activities and school bells within existing and proposed new buildings*

The nearest potentially affected residential receivers of noise from staff and student activity within new buildings are residences along Bank Street. The West Building is set back between 20.8 m to 27.8 m from the western site boundary adjoining Bank Street residents. The AIA report identified that there is no specific noise criteria for the assessment of noise from student and staff activity within school buildings. Notwithstanding the AIA report established a noise criterion of 47 dbA from background information in the AAAC guide and the INP. The AIA report identified that the predicted noise levels from the West Building would not exceed the criterion of 47 dBA. The noise assessment was based on the assumption that windows would be closed on the southern, western and northern facades of the building. The AIA identified that it is likely that with appropriately orientated windows on the West Building, windows could remain open during normal teaching activity and remain below the noise criterion. The AIA report also identified that the internal use of a school bell in the West Building would comply with the noise criterion of 47 dBA at residential receivers along Bank Street.

Potential noise impacts from other proposed buildings under the concept plan (such as the East Building, North Building, and the building to replace the Tom O'Neill Centre) were not assessed as part of the concept plan given the significant separation distances of these buildings from surrounding residential areas, and the unlikelihood of noise from these buildings resulting in impacts on surrounding residential receivers.

The department has recommended a future assessment requirement for noise generated from all buildings proposed under the concept plan to be considered as part of the detailed design and future applications, including, consideration of the orientation of windows and their management, and investigation into alternative ventilation systems to ensure the amenity of surrounding residential receivers can be maintained.

### **5.7.3 Rail Line Corridor Noise and Vibration Impacts**

The Graythwaite site is traversed by the North Shore Rail Line corridor tunnel in an east-west direction approximately in the centre of the site. The AIA Report provided an assessment of airborne noise, ground borne noise and ground borne vibration impacts from the rail corridor in accordance with the Department of Planning and Infrastructure's Interim Guideline for Development Near Rail Corridors and Busy Roads (2008) (Rail Guideline).

*Ground borne noise*

The Rail Guideline recommends a maximum ground borne noise level (calculated as  $L_{max}$  (slow) for 95% of rail pass-by events) of 40 dBA for educational institutions. The AIA Report details noise and vibration monitoring undertaken within the Graythwaite site, as well as providing predicted ground borne noise levels within new buildings under the concept plan, which are identified in Table 12 over.

**Table 12: Predicted ground borne noise levels from rail corridor (noise levels in new buildings)**

| Noise Levels            | Frequency (HZ) – Noise Levels (dBA) |     |      |    |    |    |    |     |     |     |     |     |     |           |
|-------------------------|-------------------------------------|-----|------|----|----|----|----|-----|-----|-----|-----|-----|-----|-----------|
|                         | 20                                  | 25  | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 | 200 | 250 | 315 | dBA       |
| L <sub>max</sub> (slow) | -30                                 | -20 | -13  | 0  | 13 | 23 | 28 | 29  | 19  | 18  | 16  | 10  | 4   | <b>33</b> |

The predicted noise levels in the above table indicate that the new buildings under the concept plan will comply with the rail guideline's maximum 40 dBA limit for ground borne noise (from the rail corridor).

#### Air borne noise

The Rail Guideline recommends a maximum airborne noise level (calculated as L<sub>eq</sub>(9h)(night) and L<sub>eq</sub>(15h)(day)) of 40 dBA for educational institutions. The AIA Report provided predicted daytime external airborne rail noise levels at the façade locations of the proposed buildings in the concept plan, which are provided in table 13.

**Table 13: Predicted daytime external airborne railway noise levels at the proposed buildings.**

| Building                                      | External Noise Level<br>LA <sub>eq</sub> (period) | Internal Noise Level<br>LA <sub>eq</sub> (period) | Internal Noise Level with Window Open<br>LA <sub>eq</sub> (period) |
|---|---|---|--|
| West Building (south and west facing facades) | 54  | 34  | 44   |
| West Building (north and east facing facades) | <50   | <30   | <40  |
| Graythwaite                                   | <45   | <25   | <35  |
| North Building                                | <45   | <25   | <35  |
| East Building                                 | <45   | <25   | <35  |

The above table indicates that the predicted noise levels comply at all proposed new buildings (with windows closed). However, with windows open, the south and west facing facades of the West Building would exceed the Rail Guideline's maximum 40 dBA limit for air borne noise by 4 dBA (44 dBA).

The Rail Guideline identifies that if internal noise levels with windows or doors open exceed the criterion by more than 10 dBA, the design of the ventilation for these rooms should be such that occupants can leave windows closed, if they so desire, and also to meet the ventilation requirements of the Building Code of Australia.

As the noise levels in the West Building do not exceed the criterion by more than 10 dBA, the proponent is not required to incorporate alternative ventilation design to allow windows to remain closed. Notwithstanding, as identified in section 5.7.2 of this report, the proponent will be required to investigate alternative ventilation as part of the detailed design and future applications to ensure the amenity of surrounding residential receivers is maintained.

#### Rail Vibration

The Rail Guideline also identifies that vibration levels, such as the intermittent vibration emitted by trains, should comply with the criteria identified in Assessing Vibration: a technical guideline (DECC 2006) (vibration guideline). The vibration guideline is based on the guidelines contained in *BS 6472–1992, Evaluation of human exposure to vibration in buildings (1–80 Hz)*. The AIA Report provided a breakdown of the acceptable daytime and night time intermittent vibrations values based on the BS 6472–1992, which is provided in Table 14 over.

**Table 14: Acceptable Vibration Dose Values for Intermittent Vibration (dB re 10<sup>-9</sup> mm/s)**

| Location | Daytime (7 am – 10 pm) |               | Night time (10 pm – 7am) |               |
|----------|------------------------|---------------|--------------------------|---------------|
|          | Preferred Value        | Maximum Value | Preferred Value          | Maximum Value |
| Schools  | 112 dB                 | 118 dB        | 112 dB                   | 118 dB        |

The AIA Report identifies that rail noise and vibration monitoring was undertaken within the Graythwaite site, which identified a maximum vibration level of 93 dB re 1nm/s, which is below the 112 dB (preferred) and 118 db (maximum) daytime and night time criteria for intermittent vibration under BS 6472–1992.

#### 5.7.4 Concept Plan and Stage 1 Traffic Noise

The Addendum to AIA Report provided an assessment of the potential noise impacts associated with the increase in traffic volumes on surrounding streets under the concept plan, potential noise impacts of cars accessing the Union Street driveway and car parking on the Graythwaite site, and the operation of the proposed pick up facility. The AIA Report identified that the predicted traffic noise impacts at the worst affected surrounding streets, namely, Union Street and Hunter Crescent, as well as the noise impacts associated with vehicles accessing the Graythwaite site from the Union Street access, will be in accordance with the acceptable criteria under the Office of Environment and Heritage's Road Noise Policy (RNP).

The AIA Report identifies that noise impacts from the operation of the pick-up facility on residential properties in Hunter Crescent will result from both vehicles entering and existing the facility as well as noise from student vocalisation whilst waiting in the designated waiting area. The AIA Report identified that, without mitigation, the predicted noise levels from the operation of the pick-up facility at the worst affected residential properties in Hunter Crescent would be in the order of 59 dB(A)  $L_{eq,15 \text{ minute}}$ . Consequently, the AIA Report has proposed the construction of a 2.5 m barrier separating the pick-up facility from the worst affected residential properties in Hunter Crescent. The AIA Report identified that, with the construction of the barrier, the predicted noise level at the worst affected residential properties in Hunter Crescent from student vocalisations would be 42 dB(A)  $L_{eq,15 \text{ minute}}$  (which is well below the AAAC criteria discussed in section 5.8.2 of this report (52 dB(A)  $L_{eq,15 \text{ minute}}$ )), and the predicted noise level from vehicles entering and exiting the facility would be 47 dB(A)  $L_{eq,15 \text{ minute}}$  (which meets the day time criterion of 47 dB(A) under the INP).

The department is satisfied that, subject to the mitigation measure identified in the AIA Report, the operation of the pick-up facility can comply with the relevant noise criteria at the worst affected residential properties in Hunter Crescent. Notwithstanding, the pick-up facility is currently only proposed in concept, and will be subject to further detailed design and assessment. The department has recommended a future assessment requirement that the noise associated with the operation of the pick-up facility be considered further as part of the detailed design and that appropriate mitigation measures be considered as part of the future application to ensure it will not result in any significant amenity impacts to nearby residential properties in Hunter Crescent.

#### 5.8. Flora and Fauna

A flora and fauna assessment prepared by Cumberland Ecology (flora and fauna report) accompanied the revised EA and provided an assessment of a variety of flora and fauna detected on site, and fauna likely to occur on the site, including

amphibians species, reptiles, birds and mammals. The flora and fauna report identified that no threatened flora species under the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the NSW Threatened Species Conservation Act 1995 (TSA Act) were detected within the subject site. The flora and fauna report also identifies that none of the vegetation present within the site is representative of any native vegetation communities, and none of the vegetation present within the subject site would meet the criteria for any of the EPBC Act or TSC Act listed Critically Endangered Ecological Communities or Endangered Ecological Communities known to occur in the wider locality.

Notwithstanding, the flora and fauna report identified the presence of two mammal species on site, namely, the Eastern Bentwing-bat, which is listed as vulnerable under the TSC Act, and signs of the Grey-headed Flying-fox (*Pteropus poliocephalus*), which is listed as vulnerable under both the EPBC Act and the TSC Act.

Specifically, the flora and fauna report identified that an anabat device had recorded calls at dusk adjacent to existing buildings, which indicated that a small number of individual Eastern Bentwing-bats were likely to utilise the roofs of existing buildings within the subject site as winter roost habitat. The flora and fauna report identified that the proposed refurbishment of some existing buildings within the subject site has the potential to impact on winter roosting habitat for a small number of Eastern Bentwing-bats. The flora and fauna report included a seven part test which identified that the proposed development is not likely to have a significant impact on the Eastern Bentwing-bat and therefore, the equivalent of a Species Impact Statement is not required for this species.

Additionally, the flora and fauna report identified that signs of the Grey-headed Flying-fox (*Pteropus poliocephalus*) were evident within the site. The subject site provides forage for the Grey-headed Flying-fox in the form of fruiting figs and Camphor Laurel, and blossoming Angophora and Eucalyptus. The flora and fauna report included a seven part test of significance for the Grey-headed Flying-fox which identified that the proposed development on the subject site is not likely to have a significant impact on this species and therefore the equivalent of a Species Impact Statement is not required.

Whilst the flora and fauna report identified that the proposed development would not have a significant impact on either the Eastern Bentwing-bats or the Grey-headed Flying-fox, it was acknowledged that any development within the subject site would result in a minor loss of habitat for these species, as well as other common native and introduced fauna. Accordingly, a number of mitigation measures were proposed to minimise the impact of the proposal on these species, including:

- Allow potentially occurring microbats and other fauna to vacate the buildings prior to demolition, including careful removal of the roof of a building to allow species to escape during the following nights (which would reduce the suitability of the buildings as habitats, and discourage animals from returning, prior to proceeding with the remaining demolition of buildings).
- Implement a fauna trapping program prior to the commencement of work to remove fauna that currently occupy the buildings destined for demolition or reconstruction. A trained ecologist/fauna handler should be on call during demolition to aid in the safe removal of any additional fauna still present within



the building or to handle injured wildlife. Additionally, if any animals are spotted trying to exit the buildings by demolition contractors, work should temporarily stop to allow the animal to reach a safe position.

- Any removal of dense weedy growth should be replaced with similar dense native understorey species to retain shelter and breeding habitat for small birds at the site. Additionally, vegetation within the site should be managed to ensure the quality of vegetation is maintained and improved.

The proponent included the recommendations of the flora and fauna report in the concept plan Statement of Commitments. During the exhibition of the revised EA, the Office of Environment and Heritage identified that they supported the inclusion of the recommendations in the flora and fauna report, and requested they also be included in the stage 1 project application's Statement of Commitments. Additionally, OEH recommended that, prior to any demolition of roofs, a suitably qualified ecologist should ensure that there is no Eastern Bent-wing Bats hibernating in the roofs. If hibernating bats are found, works are not to commence on the building until after the hibernation period.

The proponent submitted revised Statement of Commitments for the concept plan and stage 1 project application, in accordance with the recommendations of OEH, as part of the preferred project report.

The department considers that, subject to the statement of commitments of the concept plan and the stage 1 project application, the proposal will not have any significant impact to any vulnerable species listed in the TSC Act or EPBC Act.

### **5.9. Ecologically Sustainable Development**

An Indicative ESD Assessment (ESD report) and an Indicative Green Star Assessment (Greenstar Report) by Heggies Pty Ltd accompanied the revised EA. The ESD Report provided an assessment of ESD measures in the concept plan and the Greenstar Report provided an assessment of ESD measures in the stage 1 project application.

The ESD report identified a number of ESD measures that could be included in proposed new buildings under the concept plan, including:

- passive and active energy saving measures such as operable windows to enhance natural ventilation where appropriate (subject to consideration of noise impacts), and mechanical ventilation systems for selected spaces to provide adequate outside air rates to promote a healthy indoor environment
- north facing glazing to enhance solar access
- naturally ventilated corridors (open galleries)(subject to consideration of noise impacts)
- retention of existing trees and provision of additional green wall landscaping for the West Building to provide an environmentally friendly contribution to the proposed development.

The Greenstar Report identified that the Coach House and Tom O'Neill Centre are not eligible for Green Star Rating, however, recommended rating Graythwaite House using Green Star (office design V3 rating tool). The Greenstar Report proposed a number of ESD recommendations for Graythwaite House to achieve an overall weighted score of 55, equivalent to a Four Star Green Star Rating, including:

- lining the inside of the roof with a minimum R3.0 insulation
- building user guides to provide information on the design features and ensure that they are used efficiently
- preparation of an environmental management plan (EMP) in accordance with Section 4 of the NSW Environmental Management System guidelines (1998)
- a lighting system incorporating high frequency ballasts and limiting electric lighting levels to 400 Lux
- on-site rainwater collection for irrigation and toilet flushing to be constructed in stage 2 of development
- external cycling facilities
- water efficient bathroom and kitchen fittings;
- low VOC paint, carpet, sealant and adhesives where appropriate;
- dedicated waste storage area for the separation, collection and recycling of consumables with good access for all building users and for collection by recycling companies.

The department acknowledges that opportunities for ESD are limited in respect of the heritage buildings, however, all options are available for consideration in the proposed new education buildings under the concept plan. The department also notes that a number of existing ESD elements are already in place for the proposal, as detailed below:

- the proposed development is close proximity to public transport nodes, including North Sydney Train Station and surrounding bus services
- existing buildings to be retained incorporate passive and active energy saving measures, such as operable windows to enhance natural ventilation
- the majority of building structures are to be retained
- the majority of existing trees are to be retained and additional landscape provided.

The department considers that the existing ESD measurements in place, and the proposed ESD measures to be included in the refurbishment works in the stage 1 project application adequately incorporate the principles of ESD in accordance with the objects of the EP&A Act. Notwithstanding, the department considers that the ESD measures for new buildings under the concept plan should be addressed further at the detailed design stage, and has recommended a future assessment requirement to ensure this occurs.

#### **5.10. Railway Line Corridor**

The Graythwaite site is traversed by the North Shore Rail Line corridor tunnel in an east-west direction approximately in the centre of the site. The rail tunnel emerges to the surface at the western edge of the Graythwaite site. Noise impacts associated with the rail corridor have been assessed in section 5.8 of this report.

Pursuant to clause 86, Division 15 of the Infrastructure SEPP, development within or above a rail corridor which involves penetration of ground to a depth of at least 2 m below ground level requires consultation with the rail authority. The buildings proposed in the concept plan will include penetration of the ground to a depth of more than 2m, however, the works in the stage 1 project application will not result in any significant ground penetration works. The revised EA identified that, as part of the detailed design and approval process for all new buildings under the concept plan, the specialist expertise of a surveyor, geotechnical, structural and acoustic

engineer will be sought to ensure the development meets the necessary compliance criteria.

The department consulted RailCorp during the exhibition of the revised EA. RailCorp's submission provided no comments on the concept plan or stage 1 project application, however, requested that they be consulted on the detailed design of future stages of the development under the concept plan, when they are submitted to the relevant consent authority.

In accordance with RailCorp's recommendation, to ensure that the detailed design of future buildings under the concept plan have due consideration of the rail corridor tunnel, the department has recommended a future environmental assessment requirement for the proponent to consult with the RailCorp prior to lodgment of future stages under the concept plan which involve penetration of the ground surface by more than 2m.

### **5.11. Developer Contributions**

North Sydney Section 94 Contributions Plan 2003 applies to all land within the North Sydney LGA. The proposed concept plan and stage 1 project application is for the extension of Shore school campus onto the Graythwaite site. Educational establishments are not levied under North Sydney Section 94 Contributions Plan 2003, and consequently the proposal is not subject to any developer contributions.

### **5.12. The Public Interest**

The proposal will result in the refurbishment and conservation of heritage listed Graythwaite House and its setting, as well as the Coach House in the long term. The educational use of the site is considered appropriate, and the proposed improvements in additional educational facilities will result in improved educational services to the wider community. In accordance with the proponent's Statement of Commitments, the proponent will make the Graythwaite site available to the community at nominated times throughout the year, for example, during Heritage Week. The proposal will also provide for a significant investment in the locality of approximately \$42 million, and will create approximately 250 full time equivalent construction jobs, and 45 full time equivalent operational jobs. Given that identified residual impacts associated with the development can be mitigated and managed, the department therefore considers the proposal in the public interest.

## **6. CONCLUSION**

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The proposal has been the subject of extensive consultation with the local community and relevant government authorities, including a number of on-site public meetings with the community. A considerable effort has been made by the proponent to ensure that the issues raised by the community, the department and council have been addressed.

The department has reviewed the environmental assessment and duly considered advice from public authorities as well as issues raised in public submissions in accordance with section 75I(2) of the EP&A Act. All relevant environmental issues associated with the proposal have been extensively assessed.

The development is consistent with the strategic objectives for the area, being consistent with the Metropolitan Plan for Sydney 2036 and the draft Inner North Subregion Draft Subregional Strategy.

The proposal is generally consistent with the requirements of the relevant planning instruments, policies and objectives. Whilst the proposal presents some minor deviation to the height controls in NSLEP2001, detailed justification of this departure has been documented and is accepted by the department. The department is of the view that the recommended conditions and implementation of measures detailed in the proponent's revised EA and appendices, PPR and appendices and the Statement of Commitments will adequately mitigate the environmental impacts of the proposal.

On balance, the department considers the site to be suitable for the proposed development and that the concept plan and concurrent stage 1 project application is in the public interest. Accordingly, the department recommends that the concept plan and concurrent stage 1 project application be approved, subject to conditions.

## 7. RECOMMENDATION

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It is recommended that the Planning Assessment Commission:

- a) **Consider** the findings and recommendations of this report
- b) **Approve** the concept plan application (MP10\_0149), subject to modifications, under section 750(1) of the EP&A Act, having considered all relevant matters in accordance with (a) above
- c) **Approve** the Stage 1 Project Application (MP10\_0150), subject to conditions, under section 75J(1) of the EP&A Act, having considered all relevant matters in accordance with (a) above
- d) **Determine** that under section 75P(1)(b) that the future stages of the development be subject to the provisions of, and be determined under Part 4 of the EP&A Act
- e) **Determine** that under Section 75P(2)(c) the environmental assessment requirements for future stages are outlined in Schedule 3 of the concept approval
- f) **Sign** the attached Instruments of Approval (**TAG A & B**)



Heather Warton  
**Director**  
**Metropolitan and Regional Projects North**

11/9/12



Chris Wilson  
**Executive Director**  
**Metropolitan and Regional Projects North**

11.9.12



Richard Pearson  
**Deputy Director-General**  
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**Systems Performance**

17/9/12