planning consultants

Staging Report

St Luke's Grammar School – Senior School Campus

210 Headland Road and 800 Pittwater Road, Dee Why and 224 Headland Road, North Curl Curl

Prepared for: St Luke's Grammar School and The Anglican Schools Corporation
May 2020

PO Box 230 Pennant Hills NSW 1715 | P 02 9980 6933 | www.dfpplanning.com.au

Printed:	13 May 2020
File Name:	20180C St Luke's Grammar School/Reports/20180C.Staging.docx
Project Manager:	Amy Cropley
Client:	St Luke's Grammar School and The Anglican Schools Corporation
Project Number:	20180C

Document Control

Version	Prepared By	Reviewed By	Issued To	Date
Draft	A Cropley	S Earp	Client	29 November 2019
Final Draft	E. Robertshaw	A. Cropley	Client	30 April 2020
Final	E. Robertshaw	A. Cropley	DPIE	13 May 2020

11 Dartford Road, Thornleigh NSW 2120
207/506 Miller Street, Cammeray NSW 2062

PO Box 230
Pennant Hills NSW 1715

t: 02 9980 6933
e: dfp@dfpplanning.com.au

DFP Planning Pty Limited
ACN 002 263 998

www.dfpplanning.com.au

Contents

Contents

Figures

1 Introduction

1.1 Purpose of this Report

DFP Planning (DFP) has been commissioned by The Anglican Schools Corporation (TASC) and St Luke's Grammar School (the School) to prepare a Staging Report to accompany a development application (DA) to the NSW Department of Planning, Industry and Environment (DPIE) for the proposed development of a new Senior School Campus for St Luke's Grammar School at 800 Pittwater Road, Dee Why and a new Sports Centre at 224 Headland Road, North Curl Curl. The existing school campus is located at 210 Headland Road, Dee Why.

The proposed development is for an educational establishment with a Capital Investment Value (CIV) of more than $20 million and accordingly, is deemed to be State Significant Development (SSD) pursuant to Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (the SRD SEPP).

On 3 May 2019, the Secretary of the DPIE issued Secretary's Environmental Assessment Requirements (the SEARs), which were reissued on 1 July 2019 for SSD Application No. SSD-10291. The SEARs included the requirement to:

> ***6. Staging***
>
> *Provide any details regarding the staging of the proposed development (if any).*

This Staging Report has been prepared to provide details regarding the staging of the proposal including the identification of the potential environmental impacts associated with each stage of the proposed development and a description of the measures proposed to mitigate any potential adverse impacts for each stage.

1.2 Methodology

This Staging Report has been prepared to address the SEARs and should be read in conjunction with the Environmental Impact Statement (EIS) prepared by DFP. The Staging Report relies on the following information:

- Architectural Design Report prepared by Tonkin Zuliakha Greer (TZG) Architects.
- Architectural drawings prepared by TZG Architects.
- Landscape Architectural drawings prepared by Spackman Mossop Michaels (SMM).
- Accessibility Report prepared by Funktion.
- Traffic and Parking Assessment Report prepared by Varga Traffic Planning.
- Preliminary Construction Traffic Management Plan prepared by Varga Traffic Planning.
- Social Impact Assessment prepared by Sarah George Consulting.
- Biodiversity Development Assessment Report prepared by EcoLogical Australia.
- Demolition & Construction Waste Management Plan prepared by Waste Audit.
- Operational Waste Management Plan prepared by Waste Audit.
- Environmental Noise Assessment prepared by Day Design Pty Ltd.
- Traffic Noise Intrusion Assessment prepared by Day Design Pty Ltd.
- Construction Noise and Vibration Assessment prepared by Day Design Pty Ltd.
- Heritage Impact Statement prepared by City Plan.
- Operational Plan of Management for St Luke's Grammar School.
- Preliminary Construction Management Plan prepared by Midson Group Pty Ltd.

1 Introduction

1.3 Site Description

The site is located in the coastal suburbs of Dee Why and North Curl Curl within the Northern Beaches Local Government Area (**Figure 1**).

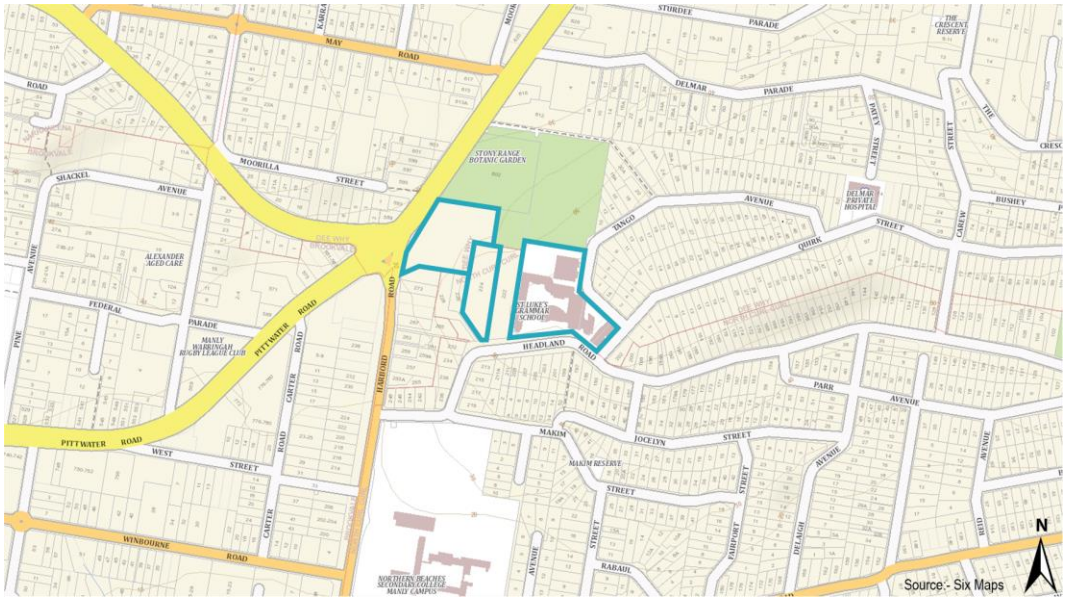

Figure 1 Site Location

The site comprises a total of four (4) allotments being Lot 2112 Deposited Plan (DP) 752038; Lot 100 DP 1251179; Lot 6 DP 523299; and Strata Plan (SP) 45082. The lots are irregularly shaped and have frontages to Pittwater Road, Headland Road, Quirk Street and Tango Avenue (**Figure 2**).

Figure 2 Aerial photograph

210 Headland Road, Dee Why

210 Headland Road comprises the existing St Luke's Grammar School Dee Why campus. St Luke's Grammar School is an independent Anglican co-educational school catering for students from pre-kindergarten to Year 12. Current improvements on this part of the school site include junior, middle and senior school buildings, along with a multi-purpose hall, playing courts, grass areas and off-street parking (approximately 133 parking spaces). A new four (4) storey junior school building is currently under construction at the eastern end of the site.

1 Introduction

224 Headland Road, North Curl Curl

224 Headland Road is a light industrial complex containing seven (7) industrial units. Unit 7 is approved for use as a sports training facility. Units 1, 2, 3, 4, 5 and 6 are used as storage. Northern Beaches Council (Council) granted development consent (DA 2019/0977) on 21 February 2020 to the use of Units 3 and 4 as a sports training facility. Access to the industrial complex is via a shared vehicular crossover with 222 Headland Road. Existing on-site parking is located along the site's western boundary.

800 Pittwater Road, Dee Why

800 Pittwater Road is an existing three (3) storey mixed-use building containing five (5) tenancies:

- Units 1 and 3: "Fitness First" gymnasium and ancillary facilities;
- Units 2 and 4: "Officeworks" retail premises; and
- Unit 5: "I-Med" health services facility.

Main vehicular access to the site is from Harbord Road. There is also pedestrian access to the site in the north-west corner close to Stony Range Botanic Garden. Existing vehicular parking on site includes a basement carpark along with at grade parking on the building forecourt. There is a large loading dock on the southern side of the building.

Surrounding Development

The immediate surrounding locality is characterised by large retail, commercial and light industrial development fronting Pittwater Road. Directly north of the site is the Stony Range Regional Botanic Garden. Directly south of the site are general industrial premises. East of the site is the low-density residential suburb of Dee Why.

A detailed description of the site and its surrounds is provided in the EIS.

1.4 Project Description

The proposed development comprises alterations and additions to the existing building at 800 Pittwater Road and 224 Headland Road. No physical works are proposed to the existing school campus at 210 Headland Road.

224 Headland Road, North Curl Curl

The scope of works for 224 Headland Road comprises alterations and additions to provide:

- Two (2) x Basketball courts;
- 1 x Half sized basketball court;
- Gymnasium;
- School uniform shop;
- Amended parking layout including bus turning circle and student parking; and
- New vertical circulation (comprising lift and stair) between 800 Pittwater Road and 224 Headland Road.

224 Headland Road will be for the use of all students attending St Luke's Grammar School.

800 Pittwater Road, Dee Why

The scope of works at 800 Pittwater Road comprises the development of a new senior school campus (Years 10 – 12) for 600 students including:

- Science and Maths Precinct;
- Arts Precinct;
- Design and Technology Precinct;

1 Introduction

- Humanities Precinct;
- Wellness Precinct (including 25 metre indoor pool);
- Administration and Staff facilities;
- Social Hubs, Library Hubs and Study Hubs;
- Assembly Theatre (700 seats);
- Drama Theatre (220 seats);
- Café and Atrium;
- Staff and student parking;
- Drop-off / pick-up zone that can accommodate up to 10 vehicles; and
- New landscaping including multi-purpose court.

Staging

The development is required to be staged to accommodate existing lease agreements. The work is proposed to be undertaken in three (3) stages as follows:

- Stage 1: 224 Headland Road;
- Stage 2: Units 1, 3 and 5 (Fitness First and I-Med), 800 Pittwater Road; and
- Stage 3: Units 2 and 4 (Officeworks), 800 Pittwater Road.

The location of each of the stages is illustrated in **Figure 3**. The Staging Plan is part of the Architectural Plan set which is included at **Appendix 6** to the EIS.

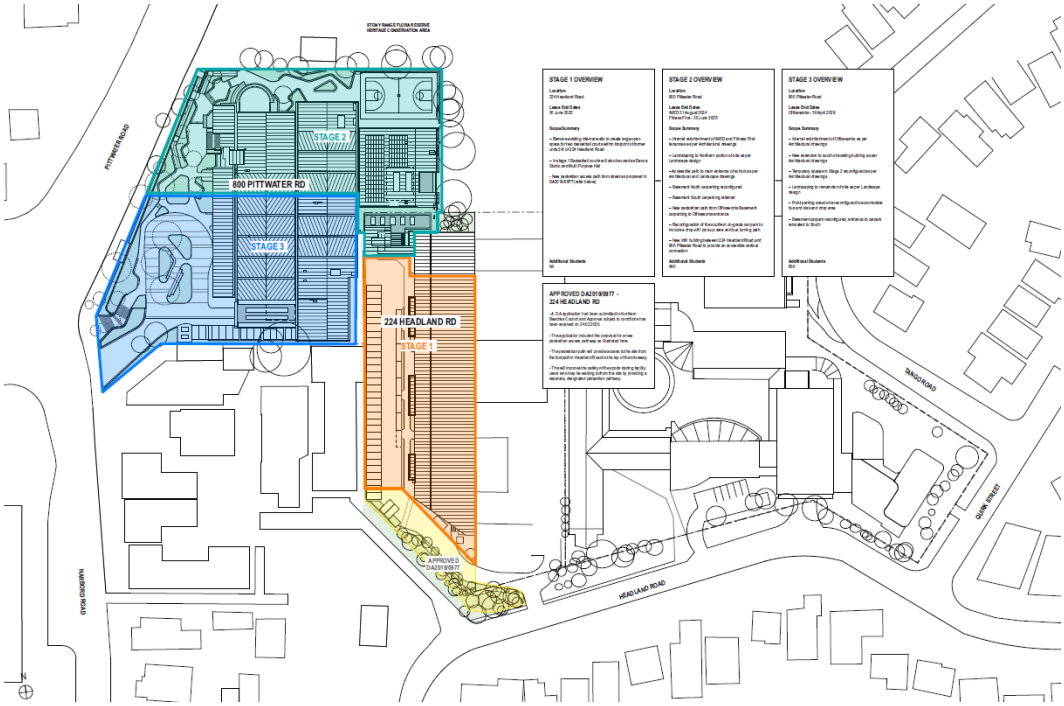

Figure 3 Staging Plan

2 Stage 1: 224 Headland Road

2.1 Description of Stage 1 works: 224 Headland Road

The Stage 1 works comprise alterations and additions to the existing industrial unit building at 224 Headland Road for use as a Sports Centre for the school. The works comprise:

- Demolition of internal walls, stairs, mezzanine level, fittings and fixtures;
- Removal of existing car parking line marking and concrete planter boxes;
- Internal alterations and additions to construct two (2) full size basketball courts with dance/exercise floor;
- Installation of new lift at southern end of building to provide access to school uniform store on a mezzanine level;
- New external works including new concrete paver footpath, new line marking for 41 car spaces including two (2) accessible spaces; and
- New landscaping works relating to 224 Headland Road include raised planter beds containing a mix of endemic and native plants.

The Stage 1 works will not result in an increase in existing staff or student numbers.

2.2 Environmental Impacts

The following environmental impacts have been identified during Stage 1:

- Traffic and Parking;
- School Operations;
- Retail Tenant Operations;
- Building Code of Australia;
- Access;
- Noise and Vibration;
- Construction Management;
- Stormwater;
- Waste Management;
- Heritage; and
- Cumulative impacts.

2.2.1 Traffic and Parking

Access

Vehicular access to 224 Headland Road is via a steep driveway from Headland Road. This driveway is shared with 222 Headland Road.

No changes are proposed to this vehicular access. A new path and stairs will be constructed to provide pedestrian access from Headland Road. The path and stairs were approved as part of a separate development application to Northern Beaches Council (DA 2019/0877) on 22 February 2020.

Parking

There are currently 45 car parking spaces (including one (1) accessible car parking space) located at 224 Headland Road. The number of spaces will be reduced by four (4) spaces to 41 spaces (including 2 accessible spaces). This parking is to be used by Year 12 students.

Occasionally, it might be necessary to transport students to the sports courts by bus. This will be undertaken using a minibus such as a Toyota Coaster or similar sized community bus. Swept turning path analysis undertaken by Varga Traffic Planning confirms that these

minibuses can be accommodated at both sites, and that they will be able to enter and exit both sites in a forward direction.

Traffic

Traffic surveys were undertaken of the existing site access driveway at 224 Headland Road by Varga Traffic Planning. Based on this, there are currently a total of 201 vehicles per day generated by the existing uses on the site between 6am and 6pm on weekdays. This includes 23 vehicle movements between 7:30am and 8:30am (AM school peak) and 16 vehicle movements between 3:00pm and 4:00pm (PM school peak).

The community use of the basketball courts on an after-school hours basis is expected to be used by 10 persons per court. With a vehicle occupancy of 1.2 persons per vehicle the basketball courts are expected to generate approximately 33 vehicles per hour (vph) between 4pm-7pm.

Whilst, the use of 224 Headland Road as a sports centre (for school and community use) is anticipated to increase the number of vehicle movements during the AM and PM school peak periods (by 18 vph during the AM school peak and 25 vph in PM school peak)), overall, the number of vehicle movements is expected to decrease from 201 vehicles per day to 78 vehicles per day. This is a reduction in the overall volume of traffic generated by uses on the site and therefore are unlikely to impact on traffic movements associated with businesses located at 222 Headland Road.

2.2.2 School Operations

224 Headland Road is proposed to be used a sports centre for all students at St Luke's Grammar School. In addition, the sports centre will be made available for hire by local schools and sporting groups. The proposed hours of operation for the facility are between 7am and 9pm Monday to Friday and 7am to 5pm on Saturday.

Students from Kindergarten to Year 5 will be transported to the facility by bus. Students in Years 6 – 12 will walk to the site from the 210 Headland Campus.

2.2.3 Operation of existing businesses

The Stage 1 works are not anticipated to impact on the existing operations of the tenants at 800 Pittwater Road.

224 Headland Road shares an access driveway with 222 Headland Road. As noted above, the use of 224 Headland Road as a sports centre will not result in any changes to the current access arrangements from Headland Road. Furthermore, the use of 224 Headland Road as a sports centre associated with the school is unlikely to impact on the operation of businesses located within 222 Headland Road.

2.2.4 Building Code of Australia

A Building Code of Australia Design Compliance Review has been undertaken by Group DLA.

2.2.5 Access

An Access Review has been prepared by Funktion in relation to the proposed Stage 1 works at 224 Headland Road. The Access Review concludes that the proposed Stage 1 works are capable of achieving compliance with the relevant accessibility provisions of the Disability (Access to Premises – Buildings) Standards, Building Code of Australia and Australian Standards on Access and Mobility.

The Access Review also notes that an operational management strategy will be required to be prepared in relation to emergency egress from 224 Headland Road for people or a sensory or mobility impairment. This will require a performance solution to meet the Premises Standards and BCA Part D3.2 (Access to Buildings).

2 Stage 1: 224 Headland Road

2.2.6 Noise and Vibration

An Environmental Noise Assessment (ENA) has been prepared by Day Design to provide an assessment of the noise generated by the school's operation to the potential impacts on the acoustic amenity of adjoining and nearby receivers as a result of the Stage 1 development, the traffic noise impacts of the Stage 1 use and the construction noise impacts associated with the Stage 1 works.

Operation of Stage 1

The adjoining land uses comprise recreational uses as well as industrial uses. There are also nearby residential uses which have also been taken into consideration in terms of potential acoustic impacts. Day Design adopted different noise level criteria depending on the nature of the land use that could potentially be affected. Day Design also assumed that the courts would operate at full capacity (assumed to be 200 students) during the recess and lunch periods. This use has also been considered in the context of the existing school operations.

From an operational perspective, Day Design concluded that use of the building on 224 Headland Road for the purposes of sports courts would satisfy the relevant noise criteria level (based on the nature of use of the receptor) and the use of 224 Headland Road for this purpose was therefore acceptable and no specific acoustic attenuation measures are required with respect to the operation of Stage 1 of the development.

Traffic Noise Impacts

The Traffic Noise Intrusion Assessment (TNIA) prepared by Day Design assessed the potential impacts of traffic noise from Pittwater Road and Warringah Road impacting on the operations of 224 Headland Road. That assessment identified that the road traffic noise would impact on the western façade of the building on 224 Headland Road in relation to any office space or staff lounge area.

In terms of mitigating traffic noise impacts, Day Design recommends the construction of a 1.8m high sound barrier along the full length of the western boundary of 800 Pittwater Road. Other than the sports courts and gymnasium, as well as associated amenities and a training facility on the mezzanine level at the northern end of the building, a uniform shop at the southern end of the building is the only non-sport related use in Stage 1.

It is not practical or possible to provide the acoustic wall along the western edge of 800 Pittwater Road as part of the Stage 1 works. Given that the uniform shop is the only non-sport related use and the acoustic attenuation benefit of the acoustic wall is only 1dB(A), it is considered that there will be no adverse acoustic impacts on users of the Stage 1 development as a result of traffic noise, subject to all glazing of the building on 224 Headland Road comprising 5mm glass with acoustic seals and a minimum Rw rating of 28, as recommended by Day Design.

2.2.7 Construction Management

General

As previously noted, the development is proposed to be undertaken in three stages to manage existing leases. Stage 1 demolition works will involve demolition of internal walls, stairs, mezzanine level, fittings and fixtures, together with demolition of internal stairs and removal of existing car parking line marking and concrete planter boxes.

Stage 1 construction works include:

- Internal alterations and additions to construct two (2) full size basketball courts with dance/exercise floor;
- Installation of new lift at southern end of building to provide access to school uniform store on a mezzanine level;
- New external works including new concrete paver footpath; and
- New landscaping.

2 Stage 1: 224 Headland Road

During these works the existing sports courts and gymnasium and the training facility will not be functional.

A preliminary construction management plan (CMP) has been prepared by Midson Group Pty Ltd. The preliminary CMP provides a framework to guide the demolition, excavation and construction phases of work in order to ensure impacts are minimised. In relation to the Stage 1 works there is no excavation; the Stage 1 works comprise two phases – demolition and construction.

The preliminary CMP references other reports, including the preliminary construction traffic management plan (CTMP) and construction noise and vibration assessment, are requires that all works be undertaken in accordance with the recommendations of those reports/assessments.

Traffic

According to the preliminary construction traffic management plan (preliminary CTMP) prepared by Varga Traffic Planning (**Appendix 26** to EIS), all loading and unloading of construction vehicles associated with the Stage 1 works will occur on site.

An average peak of 6 truck movements per day are expected during the 3 month construction period for Stage 1.

The preliminary CTMP also includes a plan showing the indicative heavy vehicle routes to and from the site for the Stage 1 works. Vehicles will access/egress the site via Headland Road and then turn right at the intersection of Headland Road and Harbord Road. At the intersection of Harbord Road/Pittwater Road/Warringah Road, vehicles would then use either of these two arterial roads to access/egress the site.

The number of traffic movements associated with the construction of Stage 1 will be significantly less than the traffic generated by existing uses within 224 Headland Road and therefore impacts on vehicles accessing businesses located at 222 Headland Road are unlikely to be impacted

Noise and Vibration

Day Design has prepared a construction noise and vibration management plan which identifies the relevant noise and vibration levels based on the location and type of receiver.

The main sources of noise during the Stage 1 phase will be associated with demolition and construction activities, including noise associated with construction traffic.

Based on Day Design's assumptions with respect to the duration of activities associated with the Stage 1 works and the equipment that will be used during the demolition and construction phases, Day Design predict that the noise from these activities will, at times, exceed the management noise levels at two residential receivers, the adjoining Stony Range Botanic Garden and the adjoining industrial strata development at 222 Headland Road.

Day Design has recommended noise controls to be incorporated in a construction management plan and implemented during construction to minimise the noise impacts associated with these activities. These include:

- Limiting the duration of noise generating activities to 2 -3 hours in order to provide respite to affected receivers.
- Following the noise management controls as detailed in AS2436:2010 and the EPA's *Interim Construction Noise Guideline*.
- Implementing work practices which will minimise noise emissions.
- Locating vehicular entrances to work sites away from residences, if practicable.
- Limiting access to work sites before 7am.

- Appointing a community liaison officer to maintain open communication with the community.

Demolition and Construction

A Demolition & Construction Waste Management Plan (DCWMP) has been prepared by Waste Audit & Consultancy Services (Aust) Pty Ltd to provide guidance on the management of general waste and recyclable materials that will be generated during the demolition and construction phases. The DCWMP provides a review against the requirements of Australian Standard *AS2601-2001: The Demolition of Structures* and Section 143 of the *Protection of the Environment Operations Act 1997*.

Demolition waste from the Stage 1 activities on 224 Headland Road will generally comprise bricks, concrete, metals, plasterboard and general waste. The DCWMP estimates that there could be approximately 370m^3 of waste materials generated as part of the Stage 1 demolition works. The majority of this material will be sent off site for recycling/reuse elsewhere.

Construction waste will generally comprise used pallets, paper/cardboard recycling, timber offcuts and general waste. The DCWMP estimates that a total volume of 23m^3 of waste materials could be generated during construction. Of this, approximately 20m^3 (or 87%) will be capable of being reused on or off site or recycled off site at a specialised facility.

Principles for the demolition work plan have been identified as part of the DCWMP. Appropriate locations for materials, recycling and waste stockpiles will be identified as part of the final Construction Management Plan to be prepared by the appointed contractor(s).

2.2.8 Stormwater

The existing stormwater system for 224 Headland Road, comprises a combination of in-ground and suspended pipe and pit system. This network runs from the most northern part of the carpark, towards the south and discharges into a kerb inlet pit on Headland Road. The existing overland flow path generally follows the existing in-ground stormwater system.

Given that the existing building and car park will remain on this site, no changes to the existing stormwater drainage for 224 Headland Road is required.

2.2.9 Operational Waste Management

An Operational Waste Management Plan (OWMP) has been prepared by Waste Audit & Consultancy Services (Aust) Pty Ltd to provide guidance on the management of operational general waste and recyclable materials. The OWMP identifies three streams for operational waste and recycling:

- General Waste;
- Cardboard & paper recycling; and
- Co-mingled recycling (all mixed plastic bottles and containers, glass bottles and steel and aluminium cans).

The following waste generation rates have been based on typical waste and recycling generation rates for the specific educational uses which will be provided as part of the Stage 1 works:

- Basketball Courts / Gym:
  - General Waste = 110.2 litres/day;
  - Paper/Cardboard recycling = 66.1 litres/day;
  - Co-mingled Recycling = 44 litres/day;
- Clothing Store:
  - General Waste = 3.9 litres/day;
  - Paper/Cardboard recycling = 5.2 litres/day; and

- Co-mingled Recycling = 1.3 litres/day.

Based on the above waste generation rates, the operation of 224 Headland Road (Stage 1) will require:

- 1 x 1100L bin for general waste to be collected twice a week;
- 1 x 660L bin for paper /cardboard recycling to be completed twice a week; and
- 1 x 660L bin for co-mingled recycling to be collected once a week.

A dedicated bin storage enclosure (approximately 12m^2) is to be located in the carpark. The enclosure will be screened. Waste removal will be undertaken by a specialist contractor.

No dedicated storage facility for bulky or reusable waste will provided as it will be removed subject to special arrangements with the waste contractor. The waste contractor will also undertake regular bin washing.

Designated bins will be located throughout 224 Headland Road for the use of staff and students. The purpose of the designated bins will be clearly identified, whether for general waste, paper / cardboard recycling or commingled recycling. Cleaners will collect the material daily and transfer to the bulk waste bins within the storage area. The specialist waste contractor will then service the bins in accordance with the schedule.

2.2.10 Heritage

A Heritage Impact Statement (HIS) has been prepared by City Plan in relation to the proposed development. 224 Headland Road is not a heritage item under Warringah Local Environmental Plan 2011 (the LEP). However, it located within the vicinity of items of local heritage significance:

- Item I49 ‘Former Wormald Building (front entrance, tower and curved former canteen only)’ 800 Pittwater Road, Dee Why;
- Item I5 ‘Bus Shelter’ 800 Pittwater Road, Dee Why; and
- Item C6 ‘Stony Range Flora Reserve’ 802 Pittwater Road, Dee Why.

The HIS notes that the works at 224 Headland Road are predominately internal and do not impact any heritage significant fabric. In addition, the overall built form and building envelope of 224 Headland Road will be maintained, therefore there will be no impacts to any views to or from the heritage items.

2.2.11 Cumulative

The cumulative impacts associated with the construction and operation of the Stage 1 component of the proposed works are considered to be negligible.

The construction works, in terms of both traffic and noise, are unlikely to impact on existing businesses operating in the vicinity of the site, including those businesses operating from 222 Headland Road. Potential noise impacts during the construction period on nearby residential receivers and on the adjoining Stony Ridge recreation area are capable of being managed.

The operation of the sports courts and uniform shop, including traffic movements associated with the use of the building for these purposes, is unlikely to result in any additional impacts compared to the current operation, and might in fact result in reduced impacts, particularly in terms of traffic generation.

2.3 Summary of Mitigation Measures – Stage 1

Subject to the implementation of the recommended mitigation measures as detailed in Section 6 of the Construction Noise and Vibration Management Plan, no other specific mitigation measures are considered necessary with respect to the operation of the sports courts in the existing building located on 224 Headland Road.

2 Stage 1: 224 Headland Road

A 40 km/h school speed limit already exists around the perimeter of the school site along Headland Road, Quirk Street and Tango Avenue. It is anticipated that the 40 km/h school zone speed limit in Headland Road will be extended towards the west to incorporate the entrance to the vehicular and pedestrian entrances to the sports centre proposed at 224 Headland Road.

3 Stage 2: 800 Pittwater Road

3.1 Description of Stage 2

The Stage 2 works are located within Units 1, 3 and 5 of the existing building located on 800 Pittwater Road. These units are currently occupied by I-MED (a medical centre) and Fitness First (gymnasium). The works comprise:

- Demolition and removal of existing tenancy fitouts (I-MED and Fitness First) including demolition of existing Fitness First swimming pool;
- Demolition of part of the existing basement carparking along with northern carpark access ramp;
- Reconfiguration of basement carpark to provide a total of 73 spaces (including 2 accessible spaces);
- New internal fitout of northern portion of 800 Pittwater Road as a Senior School campus for St Luke's Grammar School comprising:
    - Ground Floor (Level 1): School Entry, administration and staff offices, café; general learning areas, multi-purpose area, and new Wellness Precinct including 25 metre internal swimming pool along with male and female amenities and change rooms;
    - First Floor (Level 2): Humanities Precinct, library and Wellness Precinct;
    - Second Floor (Level 3): General learning areas, Visual Arts Precinct, and Design and Technology Precinct;
    - Third Floor (Level 4): Roof terrace;
    - Fourth Floor (Level 5): Access to 224 Headland Road;
- Construction of new vertical circulation (lift and stairs) between 800 Pittwater Road and 224 Headland Road;
- New roof to part of the building including sawtooth elements;
- New landscaping of northern portion of site including new sports court;
- New acoustic wall to Pittwater Road;
- Reconfiguration of southern on-grade carpark to provide drop-off / pick-up area for students (equivalent to 7 spaces) along with 51 carparking spaces (including 1 accessible spaces);
- New electrical substation adjacent to southern boundary; and
- New access pathways from Pittwater Road and Harbord Road to Officeworks Entry.

No works are proposed to the Officeworks tenancy.

At the completion of the Stage 2 works it is anticipated that there will be 360 Senior School students and 36 full time equivalent (FTE) staff located within Stage 2 at 800 Pittwater Road. These numbers are expected to grow to 480 students and 48 FTE staff by 2030. This full capacity of Stage 2 will not be realised until Stage 3 has been completed.

3.2 Environmental Impacts

The following environmental impacts are identified during Stage 1:

- Traffic and Parking;
- School Operations;
- Retail Tenant Operations;
- Building Code of Australia;

- Access;
- Noise and Vibration;
- Construction Management;
- Stormwater;
- Waste Management;
- Heritage; and
- Cumulative.

3.2.1 Traffic and Parking

Access

The existing vehicular access to 800 Pittwater Road is proposed to be retained. The existing access comprises a two-way entry/exit driveway off the Harbord Road site frontage and has been designed to accommodate 12.5m long HRV rigid trucks and includes a traffic island inside the property boundary which separates the entry and exit movements. A raised concrete central median island in Harbord Road restricts turning movements to/from the site to left-in/left-out movements only.

A new pedestrian entrance is proposed at the south-western corner of the site, directly opposite the signalised pedestrian crossings at the Pittwater Road/Harbord Road intersection to better integrate the senior campus with public transport services on Pittwater Road, and to encourage walking to school.

The new pedestrian entrance will be constructed as an interim arrangement in Stage 2 and will then be upgraded in Stage 3. It will provide the safest and shortest possible route between the senior campus and the existing bi-directional bus stops located in Pittwater Road.

The existing pedestrian gate located at the north-western corner of 800 Pittwater Road will be retained. This will provide the shortest possible walking route between the senior campus and the BLine service bus stops located further to the north in Pittwater Road, near Howard Street. This pedestrian-only gate is separated from road traffic on Pittwater Road by a 2m high concrete embankment topped by a pedestrian fence which extends along the site frontage and further to the north beyond the site to the car park entrance to the Stony Range Regional Botanic Gardens.

A major component of the Stage 2 works is the provision of a lift and stairs between 800 Pittwater Road and 224 Headland Road. The level difference between the two sites is in the order of 20m. Provision of this vertical circulation link will facilitate use of the sports facilities to be provided in Stage 1 (on 224 Headland Road) by senior school students.

Access between 224 Headland Road and 800 Pittwater Road will be controlled by way of a security swipe card.

Parking

There is currently a total of 182 parking spaces at 800 Pittwater Road. This comprises 94 car parking spaces in the basement carpark (including two (2) accessible car parking spaces) and 88 on-grade car parking spaces (including two (2) accessible car parking spaces).

The following parking is provided at 800 Pittwater Road as part of Stage 2:

- 73 basement carparking spaces (including two (2) accessible spaces);
- 51 at-grade car parking spaces (including one (1) accessible space) and
- 7 pick-up / drop-off spaces.

Analysis of the survey data indicates that a drop-off/pick-up capacity of 2 to 4 cars will be required in Stage 2, however 7 spaces will be provided.

3 Stage 2: 800 Pittwater Road

The total number of spaces to be provided at 800 Pittwater Road as part of the Stage 2 development is 131 car parking spaces. Forty of these spaces will be for the use of Officeworks and the remaining 91 spaces will be for drop-off/pick-up (7 spaces), visitors (9 spaces), staff (60 spaces) and Year 12 students (15 spaces). The 40 spaces for Officeworks will be located at-grade.

Although car parking on the senior campus site will be reduced from 182 spaces at present, to 131 spaces whilst Office Works remains on the site, the car parking provision is consistent with RMS requirements.

Deliveries to the senior school campus will be undertaken using the drop-off/pick-up bay in Stage 2 (at times when the bay is not in use).

All vehicular access and circulation arrangements proposed on the senior school campus site have been designed to accommodate the swept turning path/manoeuvring requirements of large 12.5m long HRV rigid trucks, consistent with the servicing arrangements for the existing uses of the site.

Traffic

Varga Traffic Planning (Varga) surveys of the existing two way traffic flows using the site access driveway to 800 Pittwater Road demonstrated that during the AM school peak period (7.30am – 8.30am) there was 170 vph (92 vph IN and 72 vph OUT). During the PM school peak period (3.00pm – 4.00pm) there was a total of 244 vph using the access driveway (131 vph IN and 113 vph OUT).

And during the 12 hour period from 6.00am to 6.00pm the total two way traffic flows using the existing access driveway was 2,931 vehicle movements, including 17 heavy vehicle movements.

Varga has estimated that (in terms of vehicles per hour/student) senior students (i.e. Years 10 – 12) generate 0.172 vehicles/student in the AM school peak and 0.086 vehicles/student in the PM school peak.

Based on a total of 360 senior students in Stage 2, this equates to 62 vph in the AM school peak and 31 vph in the PM school peak.

60 staff car parking space and 15 spaces for senior students will also be provided with the basement parking to be provided as part of the Stage 2 works.

Varga has estimated that, following the completion of Stage 2 works, there will be an increase of 96 vph during the AM school peak (compared to the existing uses on the site) and a decrease by 80 vph during the PM school peak.

As noted previously, the school proposes to make the swimming pool on the senior campus site, and the basketball courts on the sports centre site available for community uses on an after-school hours basis. Parking for these community uses will be allocated on 800 Pittwater Road.

It is anticipated that 3 swim school classes and squad training sessions may be held in the pool. Assuming a vehicle occupancy of 1.2 swim/squad students per vehicle, the swim school/squad training could be expected to generate approximately 85 vehicles per hour (in and out combined) between 4pm-7pm. Varga notes that the existing uses of the site would typically generate more than 300 vph (in and out combined) at those times and therefore the proposed community uses do not represent a more intensive use of the site in traffic terms compared to the existing uses.

Notwithstanding the increase in traffic generation during the AM school peak, compared to the existing daily traffic flows of 2,931 vehicles per day generated by the existing uses of the site between 6am-6pm, the Stage 2 development is expected to result in a significant reduction in the overall daily traffic generation potential of the site.

3 Stage 2: 800 Pittwater Road

Green Travel

A new bicycle parking facility is proposed adjacent to the new drop-off/pick-up facility for the use of senior students and staff. End-of-trip facilities are proposed adjacent to the reconstructed swimming pool, with separate showers/change rooms for students and staff.

3.2.2 School Operations

800 Pittwater Road will function as a campus for senior school students (Years 10 -12). Following the completion of the Stage 2 works in 2026, there will be a total of 360 students and 36 FTE staff. This is expected to grow to 480 students and 48 FTE staff by 2030.

Class times for senior school students will be generally 8:30am to 3:20pm however, some specialist classes may occur outside of these times.

3.2.3 Retail Tenant Operations

The Officeworks lease is not due to expire until April 2029. The current store opening hours are:

- Monday – Friday: 7am – 9pm;
- Saturday: 8am – 7pm; and
- Sunday: 9am – 7pm.

The Stage 2 works have been designed to facilitate the ongoing operation of Officeworks during the demolition, construction and operation of Stage 2. Key measures include:

- Provision of pedestrian access from Harbord Road and Pittwater to Officeworks entry;
- Maintenance of existing vehicular access to site from Harbord Road;
- Maintenance of a minimum of 40 car parking spaces (including 2 accessible spaces) for the use of Officeworks customers (as per Condition 9 of DA 96/362);
- Maintenance of Officeworks loading area adjacent to the southern boundary of the site; and
- Existing Officeworks signage is to be retained.

Fencing is proposed to be provided to the senior school campus to provide security for the school and there will be no access to the basement carpark for Officeworks customers.

3.2.4 Building Code of Australia

The BCA Design Compliance Review provides an assessment of the works against the relevant provisions of the BCA and confirms that the works are capable of compliance.

3.2.5 Access

The Access Review prepared by Funktion provides a review of the proposed Stage 2 works. The Access Review concludes that the Stage 2 works are capable of complying with the accessibility provisions of the BCA, relevant Australian Standards and the Disability (Access to Premises – Buildings) Standards.

3.2.6 Noise and Vibration

Use of Stage 2 – Operational Noise

Day Design has considered the potential noise associated with the use of Stage 2 for the purposes of a senior school campus.

Based on 320 students being within the outdoor play areas at any one time, the predicted noise levels will be well below the acceptable noise criterion at all noise receiver locations.

In addition, the cumulative noise levels from the classrooms (general learning areas) and mechanical plant will also be below the acceptable noise levels and are therefore acceptable.

From an operational perspective, noise associated with the use of the outdoor play areas will be the source of most noise associated with the development. The use of the outdoor play areas will not occur at the same time as students are within the classrooms

The cumulative noise levels associated with the use of the car parking areas on 800 Pittwater Road and 224 Headland Road by staff, students and visitors are predicted to be below the acceptable noise criterion at all receptor locations.

In order to ensure the school operations do not impact on the Officeworks tenancy which will remain operational whilst Stage 2 is used as a senior school campus, the acoustic consultant has recommended that the common wall between the Stage 2 development and Officeworks is maintained. If noise transfer does occur, this wall might need to be acoustically treated.

Traffic Noise Impacts

The Traffic Noise Intrusion Assessment (TNIA) prepared by Day Design assessed the potential impacts of traffic noise from Pittwater Road and Warringah Road impacting on the operations of 800 Pittwater Road.

That assessment found that a 1.8m high sound barrier will be required to be provided along the entire length of the western boundary of the ground level play area. This wall will not be able to be built in its entirety until the school is able to occupy the Officeworks tenancy – Stage 3 of the works.

Even with installation of the acoustic wall, additional treatments will be required in order to achieve acceptable noise levels (as a result of traffic noise) with the building. These treatments will include use of glazing that achieves the required sound reduction index.

3.2.7 Construction Management

General

The preliminary construction management plan (CMP) prepared by Midson Group Pty Ltd provides a framework to guide the demolition, excavation and construction phases of work in order to ensure impacts are minimised.

Stage 2 works involve excavation, demolition and construction. It is anticipated that the Stage 2 works will take approximately 6 months.

Traffic

According to the preliminary construction traffic management plan (preliminary CTMP) prepared by Varga Traffic Planning (**Appendix 26** to EIS), all loading and unloading of construction vehicles associated with the Stage 2 works will occur on site.

Trucks will enter and exit the sites from Harbord Road via the existing site access driveway in a forward direction.

All materials will be stored on site. At no time are materials to be stored on Pittwater Road, Harbord Road or any other road or Council property. Loading and unloading will be undertaken within the site, around the northern perimeter of the building, within a safe work site compound which will be fenced-off. This will allow the Officeworks tenancy and access to the Officeworks car park to be maintained at all times.

A new pedestrian pathway from the Office Works basement parking area is to be constructed, connecting the Office Works car parking area in the basement to the Office Works store entrance. The at-grade car park, fronting Pittwater Road will be reconfigured to accommodate car parking for Officeworks as well as a school drop-off/pick-up area.

Haulage routes to and from the site will avoid light traffic roads and those subject to load or height limits. Heavy vehicle movements during school peak periods will also be avoided, where possible. Truck loading/unloading will also be timed to avoid peak drop-off/pick-up periods.

3 Stage 2: 800 Pittwater Road

It is anticipated that an average peak of 10 truck movements per day will occur during the construction of Stage 2. Given the volumes of traffic utilising the roads which will be used as the main access routes to the Stage 2 construction site, it is considered that these movements will not result in adverse impacts on the road network or the operation of intersections in the vicinity of the site.

Noise and Vibration

Day Design has prepared a construction noise and vibration management plan which identifies the relevant noise and vibration levels based on the location and type of receiver.

The main sources of noise during the Stage 2 phase will be associated with excavation, demolition and construction activities, including noise associated with construction traffic. The main source of vibration will occur during the excavation phase of works.

Day Design estimates that during the demolition and excavation work phases of Stage 2 the predicted noise levels will exceed the acceptable noise criteria by 7dB(A) at two Stage 2 development site receptor locations (R7 (589 Pittwater Road) and R9 (Units 2 and 4, 800 Pittwater Road - Officeworks), 14dB(A) at receptor locations R1 (Stony Range Regional Park) and R2 (10 Tango Avenue) and up to 26dB(A) at location R10 (224 Headland Road).

During the construction phase of work, the noise levels are predicted to exceed the acceptable criteria by up to 2dB(A) at receptors R7 and R9, by 8dB(A) at R1 and R2 and by 21dB(A) at R10. However, these exceedances can be mitigated by implementation of recommended noise control measures.

In relation vibration impacts, Day Design notes that it is not yet known if any rock hammering or breaking will be required. However, given the distances from neighbouring development to any potential rock hammering locations, Day Design recommends that ground borne vibration monitoring be undertaken.

Demolition and Construction

The DCWMP does not distinguish between the Stages 2 and 3 works in terms of the generation of waste materials during demolition and construction. However, it is noted that there will be considerable excavation required during Stage 2 to construct the new vertical circulation between 800 Pittwater Road and 224 Headland Road and some additional excavation associated with the provision of the pool in Stage 2.

A total of 4,750m3 of excavated material will be required to be removed from the site.

Demolition waste from 800 Pittwater Road will generally comprise excavated materials, bricks, concrete, miscellaneous general waste, metals and plasterboard. The DCWMP identifies a total volume of 6,805m^3 of materials that will be required to be demolished during Stages 2 and 3. Approximately 6,405m^3 (equivalent to 94%) will be able to be reused (on or off-site) or recycled.

Construction waste will generally comprise used pallets, paper/cardboard recycling, timber offcuts, plasterboard offcuts and excess concrete. The DCWMP identifies a total volume of 85m^3 of waste materials during the construction of Stages 2 and 3. Approximately 80m^3 will be capable of being reused on or off site or recycled off site at a specialised facility.

3.2.8 Stormwater

As part of the Stage 2 on 800 Pittwater Road, the existing external car park to the north and west of the building will be converted into outdoor play areas. The car park to the south will be reconfigured and the underground car park will be extended.

For the Stage 2 works, stormwater runoff will be captured and conveyed predominantly via the existing in-ground stormwater pit and pipe network to one of the existing underground OSD tanks located in the carparking area. The existing OSD tanks to be retained to service Stage 2.

3 Stage 2: 800 Pittwater Road

3.2.9 Operational Waste Management

The OWMP identifies the following waste generation rates for educational establishments:

- Teaching / Office / Support / Administration:
  - General Waste = 10L/Day per 100m^2 of GFA;
  - Paper/Cardboard recycling = 7L/Day per 100m^2 of GFA;
  - Co-mingled recycling = 3L/Day per 100m;
- Café (for student and staff only):
  - General Waste = 10L/Day per 100m^2 of GFA;
  - Paper/Cardboard recycling = 6L/Day per 100m^2 of GFA; and
  - Co-mingled recycling = 3L/Day per 100m^2 of GFA.

Based on the above waste generation rates, the operation of Stage 2 will require:

- 2 x 1,100L bins for general waste to be collected three times a week;
- 2 x 1,100L bins for paper/cardboard recycling to be collected twice a week; and
- 2 x 660L bins for co-mingled recycling to be collected twice a week.

A temporary bin storage area for Stage 2 has been identified at the southern site boundary, adjacent to the Officeworks loading dock.

Three-stream bins will be located across the campus for staff and students to dispose of waste. These bins will be transferred by cleaning staff to the temporary bin storage location before it is collected by the waste contractor in accordance with the agreed schedule.

The largest truck expected to access the site will be a medium sized rigid truck for garbage collection. This vehicle will service the site on an after-hours basis only when the school is closed, consistent with the existing garbage collection arrangements at the existing school campus.

3.2.10 Heritage

The Stage 2 works at 800 Pittwater Road are located within the physical and visual curtilage of the front entrance, clock tower and curved canteen of the former Wormald building . During Stage 2, the works are predominately internal, along with works to the northern elevation and part of the western façade. These works comprise the removal of non-significant heritage fabric and maintenance of all elements that have historic and architectural significance. As noted in the HIS prepared by CityPlan, the Stage 2 works are considered to be acceptable from a heritage perspective.

The HIS notes in relation to the new vertical circulation component linking 224 Headland Road and 800 Pittwater Road that:

> *It is noted however that vertical additions are proposed to the rear (south-east) of the Former Wormald building to provide a lift well, staircase and connection between the two subject buildings. This addition has been positioned so as to be minimally visible when viewed from the west, preserving the clock tower's visual prominence and reducing impact to the heritage significance of the Former Wormald building's western façade. Further, the connection and works will be made to non-significant fabric and thereby considered overall to have no adverse impact to heritage significance.*

The HIS makes the following recommendations:

- Photographic Archival Recording:
  - *A built heritage specialist is to develop an archival record (before, during and after) of areas implicated by the works in accordance with the Heritage Division of the NSW Office of Environment & Heritage guidelines Photographic recording of Heritage Items Using Film or Digital Capture (2006).*
- Heritage Interpretation:

- *A built heritage specialist is to develop a heritage interpretation plan for the proposed development in accordance with the Heritage Division of the NSW Office of Environment & Heritage publications, Interpreting Heritage Places and Items (2005) and Heritage Interpretation Policy (2005).*

- Monitoring;
  - *The built heritage specialist is to be on site during all critical processes that require specialist knowledge and methodology. Should any discoveries be made apparent during the absence of the built heritage specialist, they are to be notified immediately and work in that area is to cease.*
  - *The built heritage specialist is to undertake regular inspections to suit the works. Timing and frequency to be agreed with the contractor.*
  - *The built heritage specialist is to monitor the works and ensure that compliance conditions pertaining to heritage fabric are met.*
  - *All new work associated with heritage fabric to be discreetly dated as such.*
  - *All junctions between new and original fabric to be reversible and easily identifiable as such.*
- Preparation of a Schedule of Conservation Works:
  - *A built heritage specialist is to develop a schedule of conservation works that identifies the works required to remedy issues identified, as well guide repairs, restoration or reconstruction. The schedule of conservation works should be prepared in accordance with the NSW Office of Environment & Heritage Maintenance Series.*

These recommendations are to be implemented prior to the commencement of Stage 2.

3.2.11 Social Impacts and CPTED considerations

The Stage 2 works include areas for recreation for students on the site, including an indoor pool; social hubs; classrooms and library facilities all of which will contribute to the health and wellbeing of students.

The proposed senior campus at 800 Pittwater Road will distribute the school population over two sites, thereby reducing the intensity of use of the site at 210 Headland Road. This is likely result in a consequential reduction of traffic on Headland Road, with senior students being dropped off, and collected directly on site at 800 Pittwater Road. This reduction in traffic on Headland Road is likely to generate some positive impacts in terms of the health and wellbeing of the local community in accessing properties during peak school drop off and pick up times.

There may be some short-term health impacts generated in the demolition and construction of parts of the building at 800 Pittwater Road, as a result of dust and noise. The extent and duration of these impacts can be addressed through conditions of consent around hours of construction.

To enable the continued use of the Officeworks premises the potential crossover of uses on the site has been considered. To manage these uses, short term access control and territorial reinforcements, over and above those to be included in the final overall development will need to be included to ensure the safety of students and to prevent access to by non-authorised visitors to the school.

Given the location of the Officeworks store at the southern part of the site, access control and territorial reinforcement will be easier to achieve, with Officeworks staff and customers being directed to, and only have access to the southern part of the site.

Due to the cross-over of uses on the site at 800 Pittwater Road there will be opportunities for natural surveillance from the school uses, to the Officeworks site, and onto both Pittwater Road, and Harbord Road.

During after school hours, access will only be allowed via secure points on the site at 800 Pittwater Road, including the main entrance/ administration spaces.

3 Stage 2: 800 Pittwater Road

Access via the vertical connection link between 224 Headland Road and 800 Pittwater Road will be controlled as the access to the vertical connection will be through the main foyer. The foyer will be monitored by CCTV and access to the lift and the lift lobby will be controlled by key pad or swipe access.

Fencing to the northern and eastern boundaries of 800 Pittwater Road (where it adjoins the Stony Ridge Botanical Gardens) is proposed to be upgraded. The fencing will comprise a new vertical timber fence which allow views into the park land. The two existing gates are proposed to be maintained to connect the school grounds with the Gardens, and to assist in the waste removal from the Gardens. These gates will be locked and access will be controlled to prevent access to the site from the Garden, and from the Senior Campus to the gardens.

To delineate the access to the school, as opposed to the public access to the Officeworks tenancy, temporary secure fencing will be erected which will stay in place until the Stage 3 component of the development is able to be occupied. Directional signage will also be utilised to guide Officeworks users to that part of the site, and to identify the access to the school.

Clear pathways from the Officeworks car parking area, to the store entrance, will be provided to clearly indicate access to that use, as distinct from the school uses on 800 Pittwater Road.

3.2.12 Biodiversity

Although no threatened flora or fauna species were recorded on or within the development site, the site at 800 Pittwater Road adjoins the Stony Ridge Botanic Gardens which contains vegetation mapped as *Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast* plant community type (PCT).

The development has been assessed as not having any Serious and Irreversible Impacts (SAII).

The combined Stage 2/Stage 3 development will result in the removal of 0.035ha (350m^2) of planted native vegetation. This vegetation is representative of the PCT found on the adjoining Stony Ridge Botanic Garden. The Stage 2 work will result in removal of approximately 95m^2 of this vegetation generally in the location of the new vertical circulation (lift and stairs) link with 224 Headland Road.

Offsetting will be required in relation to the removal of native vegetation. The total credits required for the loss of 0.035ha is 1 credit. An assessment of the Stage 2 loss of approximately 95m^2 has not been calculated as a separate credit.

The planted vegetation impacted by the proposed works has not been mapped as Native Vegetation under the DCP. Overhanging branches from Stony Range Regional Botanic Gardens along the northern boundary has been mapped as Native Vegetation. The proposed works will not directly impact this vegetation.

Indirect impacts on vegetation on the adjoining site (Stony Ridge Botanical Garden) will generally occur during the construction phase of Stage 2. The only indirect impact on fauna that has been assessed as having the potential to occur during the construction and/or operation of Stage 2 is the potential for native fauna to be struck by moving vehicles.

The biodiversity assessment prepared by Ecological Australia includes recommended measures to mitigate and minimise these indirect impacts. These measures will be able to be implemented during the construction and operational phases of Stage 2.

3.2.13 Cumulative

Construction

It is considered that appropriate management practices can be implemented to ensure the construction works associated with Stage 2 do not impact on the operations of the existing Officeworks.

There are not expected to be any additional impacts associated with construction traffic movements as a result of construction of Stage 2, other than those which have already been

assessed. The construction traffic generated as a result of the Stage 2 works will not impact on the operation of intersections in the vicinity of the site or the surrounding road network.

Operation

The use of part of the building at 800 Pittwater Road for the purposes of a senior school campus for 360 students has been assessed as being capable of operating without impacting on the amenity or operations of nearby businesses and residents, including Officeworks, subject to the implemented of recommended management measures including separation of accesses, delineation of car parking, management of loading/unloading areas, waste storage and collection and installation of way finding signage.

In terms of noise generation, whilst there has been no assessment of the combined/cumulative noise impacts associated with the operation of Stage 1 and Stage 2 together., it is considered that the cumulative impacts of these two stages operating simultaneously (even if they operate simultaneously with the existing school on 210 Headland Road), will be will be within acceptable limits, given that these stages and the existing school are separated by distance and height.

As noted above, in terms of traffic generation, the relocation of senior school students from the existing campus at 210 Headland Road will have beneficial results in terms of traffic movements on roads in the vicinity of the existing school particularly during the peak drop off/pick up times.

3.3 Summary of Mitigation Measures – Stage 2

Whilst strict application of Technical Direction TDT2003/RS02 suggests that a 40 km/h School Zone speed limit would be required on all four approaches to the Pittwater Road/Harbor Road intersection, the need to implement a 40 km/h School Zone speed limit as a result of the use of 800 Pittwater Road for the purposes of a school is mitigated by the following factors:

- the pedestrian-only gate located at the north-western corner of the site frontage provides pedestrian access to the public footpath only. It is not possible for pedestrians on the footpath to access the road pavement due to the 2m high concrete retaining wall topped by a pedestrian fence
- the pedestrian entrance proposed on the south-western corner of the site in Harbord Road will be located directly opposite the signalised pedestrian crossings at the Pittwater Road/Harbord Road intersection which provide access to the bi-directional bus stops for regular bus services on Pittwater Road.

Therefore, whilst generally use of a new site for the purposes of a school might justify 40km/hour signage, in this instance it is not considered warranted.

Mitigation measures to be implemented during construction are detailed in Section 6 of the Construction Noise and Vibration Management Plan. Subject to the implementation of these measures, the construction noise impacts are capable of being managed such that impacts on adjoining and nearby businesses and residents are unlikely to unacceptable.

In order to ensure the school operations do not impact on the Officeworks tenancy which will remain operational whilst Stage 2 is used as a senior school campus, the acoustic consultant has recommended that the common wall between the Stage 2 development and Officeworks is maintained. If noise transfer does occur, this wall might need to be acoustically treated.

From a site management perspective, the Social Impact Assessment includes a number of recommendations to be implemented to ensure conflicts between the operation of the school and Officeworks are minimised.

4 Stage 3: 800 Pittwater Road

4.1 Description of Stage 3

The Stage 3 works are predominately located within Units 2 and 4 at 800 Pittwater Road, however there will be some works across the site. Units 2 and 4 are currently occupied by Officeworks. This is the final stage of works and the works comprise:

- Demolition and removal of existing tenancy fitout within Units 2 and 4;
- Demolition and removal of temporary fitout within Stage 2;
- Reconfiguration of southern portion of basement parking including relocation of carpark entry to southern side of building. There will be a total of 76 spaces (including 2 accessible spaces) located in the basement;
- Construction of new southern extension to building (four (4) storeys equivalent);
- Internal fitout of 800 Pittwater Road as Senior School campus for St Luke's Grammar School comprising:
    - Ground Floor (Level 1): Administration area and staff rooms, Auditorium, Chapel, Village Centre, Café, Theatre and Performing Arts Precinct, Wellness Precinct and staff and student amenities;
    - First Floor (Level 2): Library; Humanities Precinct; Media Centre; Wellness Precinct, Roof Terrace above curved 'former Canteen' and staff and student amenities;
    - Second Floor (Level 3): Visual Arts Precinct, Maths Precinct, Science Precinct, Design and Technology Precinct, Roof Terrace above southern extension and staff and student amenities;
    - Third Floor (Level 4): No change from Stage 2;
    - Fourth Floor (Level 5): No change from Stage 2;
- New sawtooth roof to southern portion of building;
- Landscaping to southern portion of site;
- Extension of acoustic wall along full length of Pittwater Road frontage of the site;
- New pedestrian entry and stairs from Harbord Road;
- Removal of the existing pylon sign and new signage for the school; and
- Reconfiguration of driveway entry and forecourt to provide 15 pick-up and drop-off spaces and a bus turning area.

Upon completion of Stages 2 and 3 (at 800 Pittwater Road), the school enrolment will increase from 1,022 students to 1,600 students and 160 FTE staff to be distributed on the site as follows:

- The new senior campus will ultimately accommodate 600 Year 10-12 senior school students only.
- The existing school campus at 210 Headland Road will accommodate 1,000 pre-school to Year 9 students, with 100 full-time equivalent staff.

The maximum enrolment of 1,600 students is not expected to be achieved before 2030.

4.2 Environmental Impacts

- Traffic and Parking;
- School Operations;
- Retail Tenant Operations;

- Building Code of Australia;
- Access;
- Noise and Vibration;
- Construction Management;
- Stormwater;
- Waste Management;
- Heritage;
- Social Impacts;
- Biodiversity; and
- Cumulative.

4.2.1 Traffic and Parking

Access

The existing ingress/egress driveway from Harbord Road to 800 Pittwater Road will be retained upon development of Stage 3.

Parking

A total of 76 car parking spaces will be located in the basement following completion of Stage 3. This includes two (2) accessible car parking spaces. There will also be a total of 15 at grade car parking spaces at the completion of Stage 3 located adjacent to the southern boundary.

The servicing needs of the proposed senior school campus are expected to be minimal, and will primarily comprise light commercial vehicles such as stationary deliveries. Upon completion of Stage 3, deliveries to the senior school campus will be undertaken using the Officeworks loading area.

Consistent with RMS requests, car parking on the senior campus site will be reduced from 182 spaces at present, to 131 spaces in Stage 2 (i.e. whilst Office Works remains on the site). In Stage 3, a total of 91 spaces will be provided on 800 Pittwater Road upon completion of the senior campus.

Analysis of the survey data indicates that a drop-off/pick-up capacity of 2 to 4 cars will be required in Stage 2, increasing to 3 to 5 cars in Stage 3.

The drop-off/pick-up facility proposed on the senior campus will have a capacity of 7 spaces in Stage 2, increasing to 12 spaces in Stage 3.

Queueing for a further 5 cars is provided on the driveway approaching the drop-off/ pick-up bay in both stages without impeding other traffic flows entering the site, and without extending beyond the property boundary.

Thus the drop-off/pick-up bay proposed on the senior campus site at the completion of Stage 3 will substantially exceed projected future demands at all times.

Traffic

Varga Traffic Planning estimates that at the completion of Stages 2 and 3 (on 800 Pittwater Road) there will be a total of 600 senior school students. This will result in 103 drop-offs during AM school peak and 52 pick-ups during the PM school peak.

The daily traffic generation potential of the proposed senior school campus upon completion of Stage 3 is expected to be 508 vehicles per day (including student and staff parking) plus a further 232 vehicles per day associated with the community uses of the swimming pool and basketball courts, yielding a cumulative daily traffic generation potential of 740 vehicles per day.

4 Stage 3: 800 Pittwater Road

Varga Traffic Planning estimates that the existing uses on 800 Pittwater Road (i.e. Office Works, I-MED Imaging and Fitness First gymnasium/swimming pool) generate a daily traffic flow of 2,931 vehicles per day (between 6am-6pm).

The proposed senior school campus development (i.e. Stages 2 and 3 combined) will result in a substantial reduction in the daily traffic generation potential of the site to approximately 740 vehicles per day, compared to the current uses.

Traffic flows during the morning school peak hour will increase by 96 vph (two-way) when compared with the existing uses of the site, and afternoon school peak traffic flows will decrease by 80 vph (two-way) when compared with the existing uses of the site.

Before/after SIDRA capacity analysis of the Pittwater Road/Harbord Road/Warringah Road and Harbord Road/Headland Road intersections has found that both intersections will continue to operate at current Levels of Service, with minimal increases in total average delays upon completion of the senior school campus on 800 Pittwater Road. Further analysis has found that the Pittwater Road/Harbord Road/Warringah Road intersection would also continue to operate at current Levels of Service and with minimal delays, if a 40 km/h School Zone speed limit was implemented on all four approaches to the intersection.

SIDRA capacity analysis of the proposed site access driveways has confirmed that both driveways will operate at Level of Service “A” and with minimal delays during the school peak hours.

Overall, because the use of 800 Pittwater Road as a senior school campus will result in significantly reduced traffic generation from this site.

Green Travel

The bicycle parking facility will be relocated in Stage 3. End-of-trip facilities will be provided as per the Stage 2 development, adjacent to the reconstructed swimming pool, with separate showers/change rooms for students and staff.

4.2.2 School Operations

At the completion of Stage 3, 800 Pittwater Road will function as a campus for 600 senior school students (Years 10 -12). There will be a total of 48 FTE staff on the senior school campus.

Class times for senior school students will be generally 8:30am to 3:20pm however, some specialist classes may occur outside of these times.

4.2.3 Retail Tenant Operations

There will be no retail tenants at 800 Pittwater Road in Stage 3.

4.2.4 Building Code of Australia

The BCA Design Compliance Review indicates that the development is capable of compliance with the BCA.

4.2.5 Access

The Access Review prepared by Funktion concludes that the Stage 3 works are capable of complying with the accessibility provisions of the BCA, relevant Australian Standards and the Disability (Access to Premises – Buildings) Standards.

4.2.6 Noise and Vibration

Use of Stages 2 and 3 – Operational Noise

Day Design has assessed the likely noise generation from the use of 800 Pittwater Road as a senior school campus for 600 students. They estimate that , on average, the outdoor play areas will be used by a maximum of 400 students at any one time, with 100 students on the

external hard court area, 100 students within the northern outdoor area and 200 students using the western outdoor area.

Based on these assumptions, the noise generation at all receptor locations will be within acceptable limits.

In relation to use of the enclosed basketball courts (during recess and lunch times) and the auditorium operating at full capacity during recess and lunch times and also during assemblies and evening performances, noise generation will be within acceptable limits at receptor locations.

Similarly, use of the car parking areas on 800 Pittwater Road by students, staff and visitors will also be within acceptable limits.

Traffic Noise Impacts

The cessation of use of part of the building on 800 Pittwater Road by Officeworks, will allow for the completion of the acoustic wall along the Pittwater Road frontage of the site. This, together with implementation of the recommended construction methods, will ensure the internal areas of the building are protected from traffic noise and noise levels within the building are within acceptable limits.

4.2.7 Construction Management

General

Stage 3 works will not be able to be undertaken until Officeworks have vacated the site. Once this occurs, the school will have full use of the site. However, construction works will need to have regard to the safety of staff and students occupying Stage 2 during the construction of Stage 3.

Construction of Stage 3 will be undertaken in two phases.

Phase 1 works will be confined to that part of the building on 800 Pittwater Road previously occupied by Officeworks and will include creation of a new entry to the basement car park (to the south of the building) and creation of new garbage room, maintenance room and store room to the south of the building. The existing entry to Officeworks will be converted to a storeroom and the pedestrian ramp area will be enclosed to create additional storage areas.

The existing at grade car parking area to the west of the Officeworks tenancy will be converted to outdoor play space with a loop road for drop off/pick up of students to the south of the outdoor play areas.

The temporary pedestrian access from the Pittwater Road/Harbord Road intersection will be reconfigured a permanent access path and stairs and the existing pathway will be removed, and this area will be landscaped. During this period access via this pathway will not be available, however the pedestrian access to Pittwater Road at the northern part of 800 Pittwater Road will be retained as will the access via the stairs/lift from 224 Headland Road.

The acoustic wall along the Pittwater Road frontage will also be completed as part of the Phase 1 works.

From a timing perspective and to ensure access to the basement car park is maintained, the removal of the existing access and removal of at grade car parking area in front of the Officeworks tenancy will not occur until the alternative access and modifications to the basement car park have been completed. and occur within a work site compound to be established along the southern side of the building, in the area previously occupied by the Officeworks loading dock.

Phase 1 of Stage 3 including the alterations and additions to the Officeworks tenancy will need to be completed before the Phase 2 works can be undertaken.

4 Stage 3: 800 Pittwater Road

Phase 2 works of Stage 3 will essentially involve removal of the temporary uses on the ground floor and refitting of these spaces to create the auditorium (in the area previously created as a multi purpose area, temporary classrooms and temporary seminar room in Stage 2), relocation of the student/staff café area (and conversion of the space occupied by these uses in Stage 2 to a gallery/Chapel hub) and reconfiguration of the ground floor office spaces.

On the first floor, an area used as a temporary classroom in Stage 2 will be enlarged for use as a temporary classroom and the temporary bridge across the void above the student reception area will be removed.

It will not be possible for much of the Stage 2 ground floor to be usable during the Stage 3/Phase 2 works and therefore, the Phase 2 works will not be able to be undertaken until the internal works in Phase 1 are completed.

Traffic

During the Phase 1 works of Stage 3, the drop-off/pick-up area established in Stage 2 will remain in operation, and vehicular access to the basement car parking area will continue to be provided via the existing ramp which is located at the front of the building.

In Phase 2 vehicular access to the basement car parking area will be relocated to the new driveway located on the southern side of the building to enable the final drop-off/pick-up facility in front of the school to be constructed. It is envisaged that this final phase of work will be undertaken during school holidays.

Noise and Vibration

The Stage 3 works will involve demolition, excavation and construction.

The demolition and removal of the existing building elements will involve use of excavators, rock hammers and trucks used for transporting waste from the site.

The construction activities will occur over a longer period of time than the demolition and excavation works and will involve the use of heavy vehicles, power tools, and generators and compressors. Although the works will occur over a longer period, they will be less intensive compared to the noise generated as a result of the demolition and excavation works as they will be dispersed across the site.

Day Design estimates that there will be periods where the noise generated as a result of the demolition and excavation activities will exceed acceptable standards at some receptor locations, including the two nominated residential receptors and the Stony Ridge Botanical Gardens, as well as the Stage 2 component of the senior school campus.

Day Design has advised that these exceedances can be mitigated by implementation of recommended noise control measures.

In relation vibration impacts, Day Design notes that given the distances from neighbouring development to any potential rock hammering locations, if rock hammering is required, ground borne vibration monitoring should be undertaken.

Demolition & Construction

As noted in Section 3.2.7, the DCWMP does not distinguish between Stages 2 and 3. However, the waste generated as a result of the Stage 3 works is anticipated to be much less than generated during Stage 2. Stage 2 works have been designed so to minimise the amount of temporary works that are required to be demolished or removed as part of Stage 3.

4.2.8 Stormwater

For the Stage 3 works the inground pit and pipe system will predominantly be new infrastructure located and sized to suit the reconfigured carpark.

For Stage 3 of the school, the proposed works will include replacement of the existing loading bay with new carparking spaces and a new entrance into the existing basement carpark by

lowering the existing surface level. This work conflicts with the existing loading bay OSD tank and as such this tank will be demolished. To achieve Council's OSD requirements, the underground OSD tank, which is in the carpark area to the west of the building, will be extended to provide a larger tank servicing the overall catchment. A 183m³ OSD storage system has been designed to ensure post-development discharge is less than or equal to that of pre-development discharge.

In accordance with Council's DCP, the project civil engineers, Northrop, have assumed that the pre-development site is fully pervious (notwithstanding that this is not the case in this instance). The OSD tank has been designed such that the peak flows under proposed conditions can be appropriately managed to ensure that the peak stormwater flows do not exceed the pre-development conditions.

In order to meet Council's water quality targets, the proposed water quality treatment train includes proprietary stormfilters and proprietary pit baskets.

Pit baskets have been provided as a pre-treatment to target the pollutant reduction of gross pollutants, litter, grit, sediments and associated oils prior to stormwater discharging into OSD tank where the stormfilters provide tertiary treatment.

4.2.9 Operational Waste Management

The OWMP identifies the following waste generation rates for educational establishments:

- Teaching / Office / Support / Administration:
  - General Waste = 10L/Day per 100m^2 of GFA;
  - Paper/Cardboard recycling = 7L/Day per 100m^2 of GFA;
  - Commingled recycling = 3L/Day per 100m;
- Café:
  - General Waste = 10L/Day per 100m^2 of GFA;
  - Paper/Cardboard recycling = 6L/Day per 100m^2 of GFA; and
  - Commingled recycling = 3L/Day per 100m^2 of GFA.

Based on the above waste generation rates, the operation of the senior school on 800 Pittwater Road will require:

- 4 x 1100L bins for general waste to be collected three times a week;
- 4 x 1100l bins for paper/cardboard recycling to be collected twice a week; and
- 4 x 660l bins for co-mingled recycling to be collected twice a week.

The bin storage area will be located within the basement adjacent to the relocated car park entry, to the south of the building. The room has adequate space for circulation between bins and for bin movement in and out of the room. In addition, there is an area for bulky and/or reusable waste, along with a dedicated bin wash area.

Three-stream bins will be located across the campus for staff and students to dispose of waste. This waste will be transferred by cleaning staff to the temporary bin storage location before it is collected by the waste contractor in accordance with the agreed schedule.

4.2.10 Heritage

The Stage 3 works comprises works within the physical and visual curtilage of the heritage elements. The works include the removal of intrusive fabric from the Pittwater (western) façade of the building and replacement with a new façade that aims to interpret the historical aesthetic of the former factory façade in the fenestration pattern. The works also include the introduction of a new roof form. The HIS notes that:

These works to the western facade are considered to be sympathetic and compatible as the proposed design developed with reference to historical imagery to better restore the Former Wormald building to its former aesthetic. The new design interprets the solidity and fenestration patterns of the original factory façade. Overall, it is considered that the works to the western façade will provide a better heritage outcome with no adverse impact to the identified heritage significance of the former Wormald building.

The additions to the south of the existing building are also considered to be acceptable from a heritage perspective.

The proposed acoustic wall has been designed to maintain views to the former Wormald Building.

The proposed new signage and palette of materials and finishes is also acceptable from a heritage perspective.

4.2.11 Social Impacts

Upon completion of Stage 3 (and the removal of the Officeworks tenancy from 800 Pittwater Road), access arrangements to the senior school campus with be formalised and finalised.

The main pedestrian entry from Pittwater Road/Harbord Road will be formalised and new signage identifying the use of the site as a school will be provided. The access arrangements are considered safe, with convenient access provided to the campus which would deter students crossing in the middle of the road. It has therefore been determined that a School Zone along Pittwater Road is not considered necessary.

The completion of school for 1,600 students will provide construction employment opportunities through the construction of the new senior school building and the fit out of the Senior Campus and Sports Hall, but also operational jobs through the employment of additional teaching staff, support staff; café staff etc.

4.2.12 Biodiversity

Although no threatened flora or fauna species were recorded on or within the development site, the site at 800 Pittwater Road adjoins the Stony Ridge Botanic Gardens which contains vegetation mapped as *Smooth-barked Apple - Red Bloodwood open forest on enriched sandstone slopes around Sydney and the Central Coast* plant community type (PCT).

The development has been assessed as not having any Serious and Irreversible Impacts (SAII).

The combined Stage 2/Stage 3 development will result in the removal of 0.035ha (350m^2) of planted native vegetation. This vegetation is representative of the PCT found on the adjoining Stony Ridge Botanic Garden. The Stage 3 work will result in removal of approximately 255m^2 of this vegetation generally along the Pittwater Road frontage of the site, as well as two patches of vegetation adjoining the southern and eastern boundaries.

Offsetting will be required in relation to the removal of native vegetation. The total credits required for the loss of 0.035ha is 1 credit. This is the total native vegetation loss across both Stage 2 and Stage 3.

The planted vegetation impacted by the proposed works has not been mapped as Native Vegetation under the DCP.

Indirect impacts on vegetation on the adjoining site (Stony Ridge Botanical Garden) could occur during the construction phase of Stage 3. The only indirect impact on fauna that has been assessed as having the potential to occur is the potential for native fauna to be struck by moving vehicles.

The biodiversity assessment prepared by Ecological Australia includes recommended measures to mitigate and minimise these indirect impacts. These measures will be able to be implemented during the construction of Stage 3 and the operation of a senior school campus on 800 Pittwater Road.

4.2.13 Cumulative

Traffic

Even though there will be less students on the existing school campus at 210 Headland Road at the completion of Stage 3 (1,000 K- Y9 students, compared to the existing enrolment of 1,092 K – Y12 students), the daily traffic generation potential of the existing school campus upon completion of Stage 3 is expected to increase.

The likely future daily traffic generation of this site is 1,215 vehicles taking account the change in student mix proposed at the existing school campus. This compares with the existing daily traffic flow of 1,126 vehicles per day generated by the existing uses of the existing school campus. The change in student mix proposed at the existing school campus is therefore expected to result in an increase in the daily traffic generation potential of the site of 89 vehicle trips per day. This is because, students in K – Y9 generate more vehicle trips compared to senior school students.

The capacity analysis of nearby intersections and the surrounding road network confirms that the proposed expansion of St Luke's Grammar School will not have any unacceptable traffic implications in terms of road network capacity. Accordingly, there will not be any road upgrades or intersection improvements required as a consequence of the development proposal.

Noise

There will be some noise emissions from the proposed senior school campus at 800 Pittwater Road, and from the sports centre at 224 Headland Road. These emissions will be largely limited to hours of operation of the uses on the sites. The noise emissions from 800 Pittwater Road are unlikely to be significant in the context of the site's location on Pittwater Road, and the noise generated by traffic on that road.

As the site at 224 Headland Road is already utilised, in part, as a sports centre, the expanded sports centre, and noise emissions from it, are unlikely to be significantly different to the existing situation. 222 Headland Road is a complex of industrial units and as such, any noise emissions from the sports centre are unlikely to be significant in the context of an industrial unit complex.

Given the redistribution of students across the sites as a result of the proposed senior campus at 800 Pittwater Road, it is likely that noise emissions from the current school site at 210 Headland Road will be reduced, representing a positive social impact for neighbouring properties.

Noise will also be generated during the demolition and construction phases of the project. The acoustic assessment includes a number of recommendations to mitigate noise impacts that could occur during the demolition and construction phases of work.

Amenity

Relocation of the senior students from the existing campus at 210 Headland Road to a dedicated senior campus at 800 Pittwater Road is likely to reduce some of the impacts identified by local residents associated with traffic and parking around school drop off, and pick up times.

This redistribution of students, and resultant redistribution of traffic and demand for parking is considered to be a positive social impact in terms of resident amenity.

Economic

The change of use of 800 Pittwater Road from a retail/commercial/recreational use to a school use will result in small changes to the local economy through the removal of the commercial and retail uses currently occupying the site including Officeworks and the Gymnasium. Changes to site uses are not unexpected or unusual when commercial operators lease

buildings and the resultant impacts on the local economy are unlikely to be significant. As the proposed development will be staged, any resultant impacts on the local economy brought about by the change of use on the site at 800 Pittwater Road will not be experienced at one time, with leases expiring at different times (iMed – August 2024; Fitness First – June 2025; and Officeworks – April 2029). The short term, negative impacts of the change of use of the site at 800 Pittwater Road are unlikely to be significant.

Public Benefits

The proposed alterations and additions to St Luke's Grammar School will result in a number of public benefits, including:

- Provision of a modern education facility for the existing and future senior school population.
- Re-distribution of students from the existing school campus at 210 Headland Road and an associated reduction in traffic, parking and noise impacts associated with this site.
- The provision of employment opportunities in the construction and operation of the proposed senior campus and associated uses (e.g. Café, dance studio, pool etc).
- Improvements to the existing site, and the presentation of the site to the street including extensive landscaping.
- Restoration of heritage features of the building on 800 Pittwater Road.

4.3 Summary of Mitigation Measures – Stage 3

Mitigation measures to be implemented during construction are detailed in Section 6 of the Construction Noise and Vibration Management Plan. Subject to the implementation of these measures, the construction noise impacts are capable of being managed such that impacts on adjoining and nearby businesses and residents are unlikely to unacceptable.

The Stage 3 works will be required to be undertaken in phases to ensure the existing senior school campus can continue to function whilst alteration and additions are being undertaken to the Officeworks tenancy.

The completion of Stage 3 will result in a modern educational facility capable of accommodating 1,600 students from K – Year 12.

Due to existing leasing arrangements, the works at 800 Pittwater Road are required to be undertaken in stages. It is possible for the works to be staged without adversely impacting on the operation of other tenants on the site (in the case of 800 Pittwater Road) and on adjoining and nearby businesses and residents.

5 Conclusion

This Staging Report has been prepared on behalf of TASC and the School to provide details of the proposed staging of the proposed development of a new Senior School campus at 800 Pittwater Road, Dee Why and new Sports Centre at 224 Headland Road, North Curl Curl. The educational establishment development is proposed to be undertaken in three (3) stages, as follows:

- Stage 1: 224 Headland Road;
- Stage 2: Units 1, 3 and 5, 800 Pittwater Road; and
- Stage 3: Units 2 and 4, 800 Pittwater Road.

The Staging Report provides an assessment of the potential environmental impacts of the proposed development at each stage of the works. The Staging Report concludes that, subject to the implementation of the recommended mitigation measures, the works are able to be undertaken in a manner which will allow for the continued operation of other tenants on the site (in the case of 800 Pittwater Road) and will ensure impacts on adjoining and nearby businesses and residents are appropriately managed during both the construction phases of work and once the school is operational.