NSW GOVERNMENT | Planning & Environment

STATE SIGNIFICANT DEVELOPMENT ASSESSMENT REPORT: St Catherine's School Campus Master Plan and Stage 1 Research, Performing Arts and Aquatic Centre (SSD 6339)

Secretary's Environmental Assessment Report
Section 89H of the *Environmental Planning and Assessment Act 1979*

December 2015

ABBREVIATIONS

Applicant	St Catherine's School
CIV	Capital Investment Value
Consent	Development Consent
Council	Waverley Council
Department	Department of Planning and Environment
DJSC	Dame Joan Sutherland Centre
EIS	Environmental Impact Statement
EPA	Environmental Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPI	Environmental Planning Instrument
JBH	Jane Barker Hall
LEP	Waverly Local Environmental Plan 2012
Minister	Minister for Planning
OEH	Office of Environment and Heritage
RMS	Roads and Maritime Services
RPAC	Research, Performing Arts and Aquatic Centre
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning and Environment
SEPP	State Environmental Planning Policy
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development

Cover Photograph: View of the Research, Performing Arts and Aquatic Centre from Macpherson Street (*Source: PD Mayoh Pty Ltd)*

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EXECUTIVE SUMMARY

This report is an assessment of a State significant development application lodged by Robinson Urban Planning, on behalf of St Catherine's School (the applicant). The application seeks approval for the staged redevelopment of the school and concurrent approval for Stage 1. Stage 1 comprises the construction and operation of the Research, Performing Arts and Aquatic Centre (RPAC) and an increase in overall student and staff population at 26 Albion Street, Waverley.

The project has a capital investment value (CIV) of approximately $62.5 million and will generate 10 operational jobs and 94 construction jobs.

The development is State significant development under clause 15 of Schedule 1 to the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP), as it is a development for the purposes of an educational establishment and has a CIV of more than $30 million.

The site is zoned SP2 Infrastructure (Educational establishment) under the Waverley Local Environmental Plan 2012 and the development is permissible in the zone.

The proposal was exhibited from 2 October 2014 until 5 December 2014. The Department received submissions from Waverley Council, Randwick Council, Roads and Maritime Services (RMS), Transport for NSW and the NSW Police. A total of 218 submissions were received from the public. The matters raised in the submissions included: car parking impacts; traffic impacts; drop-off/pick-up issues; adequacy of the sustainable transport plan; impacts from extended operating hours of the pool; commercialisation of facilities; loss of landscaping and open space; increased number and size of events; built form and amenity impacts (Stage 1); perceived overdevelopment of the site; consistency with the local context; and potential breach of current student population cap.

The applicant provided a Response to Submissions, which included:

- introduction of a range of behavioural and travel strategies to reduce private car usage by both students (carpooling, promoting public transport and augmented minibus service) and staff (carpooling, subsidised public transport, active transport and encouraging cycling for staff);
- deletion of external event use of the auditorium and scheduling of major events to avoid aquatic centre activities;
- promotion of before and after school activities to disperse peak traffic generation and mitigate impacts from the increased capacity of the aquatic centre facilities;
- restricting 'learn to swim' lessons to avoid school and commuter peaks and to coincide with the period of low resident demand for on-street parking;
- staggering finish times for students in different school years to improve pick-up arrangements;
- utilising on-site car parking for events and for the aquatic centre use on the weekend;
- commitment to prepare a detailed Operational Transport Management Plan (OTMP);
- deletion of the proposed shuttle bus service for events; and
- further justification demonstrating that an off-street drop-off/pick-up zone is not feasible given existing site constraints.

The Department has assessed the merits of the proposal and has found the key issues associated with the project include: traffic and parking impacts; built from and urban design; environmental and residential amenity; and community use of facilities.

The applicant has committed to preparing an OTMP and implementing behavioural and travel strategies to reduce private car usage. The implementation of these strategies would

reduce traffic and car parking demand below existing conditions. The applicant has also proposed a number of changes to the Macpherson Street drop-off/pick-up zone, which would improve traffic flow and safety issues. The length of the drop-off/pick-up zone on Macpherson Street would be lengthened and traffic controllers would be located at all drop-off/pick-up zones to facilitate movements through the zone and improve safety. The Department's independent traffic consultant reviewed the proposed measures and concluded that the measures were reasonable, however, further detail would be required before any commencement of use of new facilities or increase in student population. The Department has included conditions regarding the preparation, implementation, monitoring and review of the plan to ensure that the mode shifts are achieved.

The Department has also recommended that the increase in student population not occur until the physical improvements to Macpherson Street and operational improvements in the OTMP are delivered.

In regard to impacts on on-street car parking, the Department is of the opinion that the proposed measures, including making on-site spaces available for events and for aquatic centre users on the weekend, would contribute to mitigating parking impacts. However, in addition to these measures, the Department has also recommended the following conditions to manage traffic and parking impacts associated with the use of the aquatic centre and auditorium/hall:

- evening events to commence after 6:30 pm to allow for residents to return home prior to the event;
- 'learn to swim' classes with external attendees must not commence until after the school pick-up period;
- limitation on use of the facility by external participants in the evening; and
- the basement car park to be made available for aquatic centre users in the evening.

The Department considers the proposed building envelopes are acceptable and appropriate within the context of the site and the relevant streetscapes. The building envelopes are generally consistent with the respective surrounding built form. Whilst the proposal would result in exceedances of development standards relating to building heights and floorspace controls, the Department is of the opinion that strict compliance with these standards is unreasonable in this instance given that the site is dominated by existing buildings that are taller than the 9.5 metre height control and current floorspace is well over the floor space ratio control, and amenity impacts from the development are satisfactory.

The Department is satisfied that the residual impacts of the proposed development have been addressed in the Environmental Impact Statement and Response to Submissions, and can be adequately managed through the recommended conditions.

The Department considers the application is consistent with the objects of the EP&A Act (including ecologically sustainable development), State priorities and A Plan for Growing Sydney. The Department is satisfied that the subject site is suitable for the proposed development as it would deliver additional quality school places and would provide additional employment opportunities. The Department therefore considers the development would be in the public interest and recommends that the staged State significant development application and concurrent Stage 1 be approved, subject to conditions.

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1. BACKGROUND AND PROPOSED DEVELOPMENT

1.1 Background

Robinson Urban Planning, on behalf of St Catherine's School, proposes the staged redevelopment of the school campus located at 26 Albion Street, Waverley. The application also seeks approval for Stage 1 works including the construction and operation of the Research, Performing Arts and Aquatic Centre (RPAC).

St Catherine's School is an all-girls school and caters for students from Kindergarten to Year 12. The school population at lodgement of the application was 970 students. The Department has been advised that this has increased to 993 since the lodgement of the application and enrolment has reached approximately 1,050 for 2016.

1.2 Site Description

The site has an area of 22,290 sqm and is located within the suburb of Waverley (refer to **Figure 1**). The site is bounded by Bronte Road and residential properties to the north; Leichhardt Street, Leichhardt Lane and residential properties to the east; Macpherson Street to the south; and Albion Street to the west (refer to **Figure 2**).

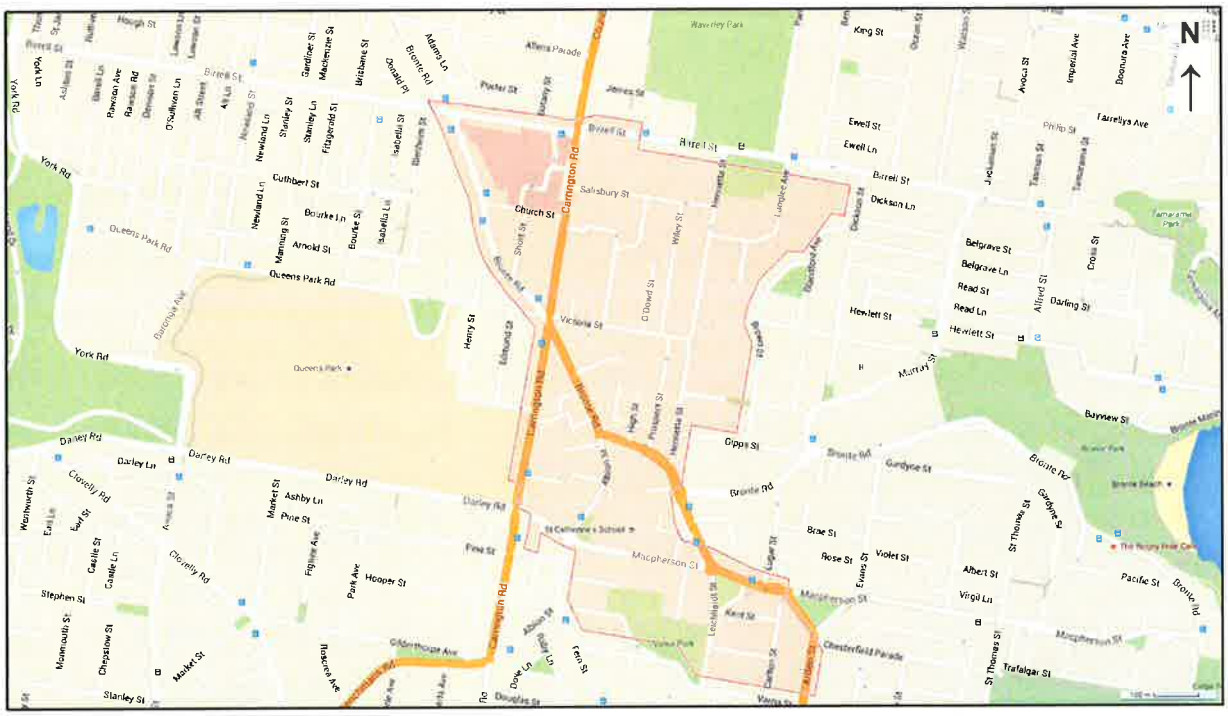

Figure 1: Project Location *(Source: Google)*

Figure 2: School Campus *(Source: nearmaps)*

The site is comprised of multiple lots and the legal description of the site is:

- 26 Albion Street (Lot 560 DP1138118 and Lot 1 DP80046);
- 2 Macpherson Street (Lots 12 and 13 DP2049);
- 323 Bronte Road (Lot A DP318719);
- 325 Bronte Road (Lot B DP318719);
- 1 Leichhardt Street (Lot C DP318719); and
- 315-317 Bronte Road (Lot 117 DP1161589).

Parts of the site have been used for education purposes since 1859 and the school campus has progressively expanded with acquisition of surrounding land, including residential dwellings and a former hospital building. The first school building, now known as the Administration Building, is identified as one of the heritage significant buildings on the site.

Notable extensions to the school include:
1945 - re-use of the 1885 'La Vincompte' residence for school purposes (Junior School);
1960 - re-use of the 1891 'St Johns' residence for school purposes;
1960 - construction of Jane Barker Hall (JBH);
1968 - construction of the Lenthall Science Building;
1968 - construction of the Isabel Hall Wing (later reconstructed in 2006);
1987 - construction of The Maccallum Junior School;
1987 - construction of J-Block;
2002 - construction of the Dame Joan Sutherland Centre (DJSC);

2002 - construction of the Jo Karaolis Sports Centre; and
2011 - construction of the Nan Hind Centre.

Currently, the campus is occupied by education buildings varying between single and four storeys in height, recreation areas and two residential dwellings, one of which is the Headmistress' Residence (refer to **Figure 3**).

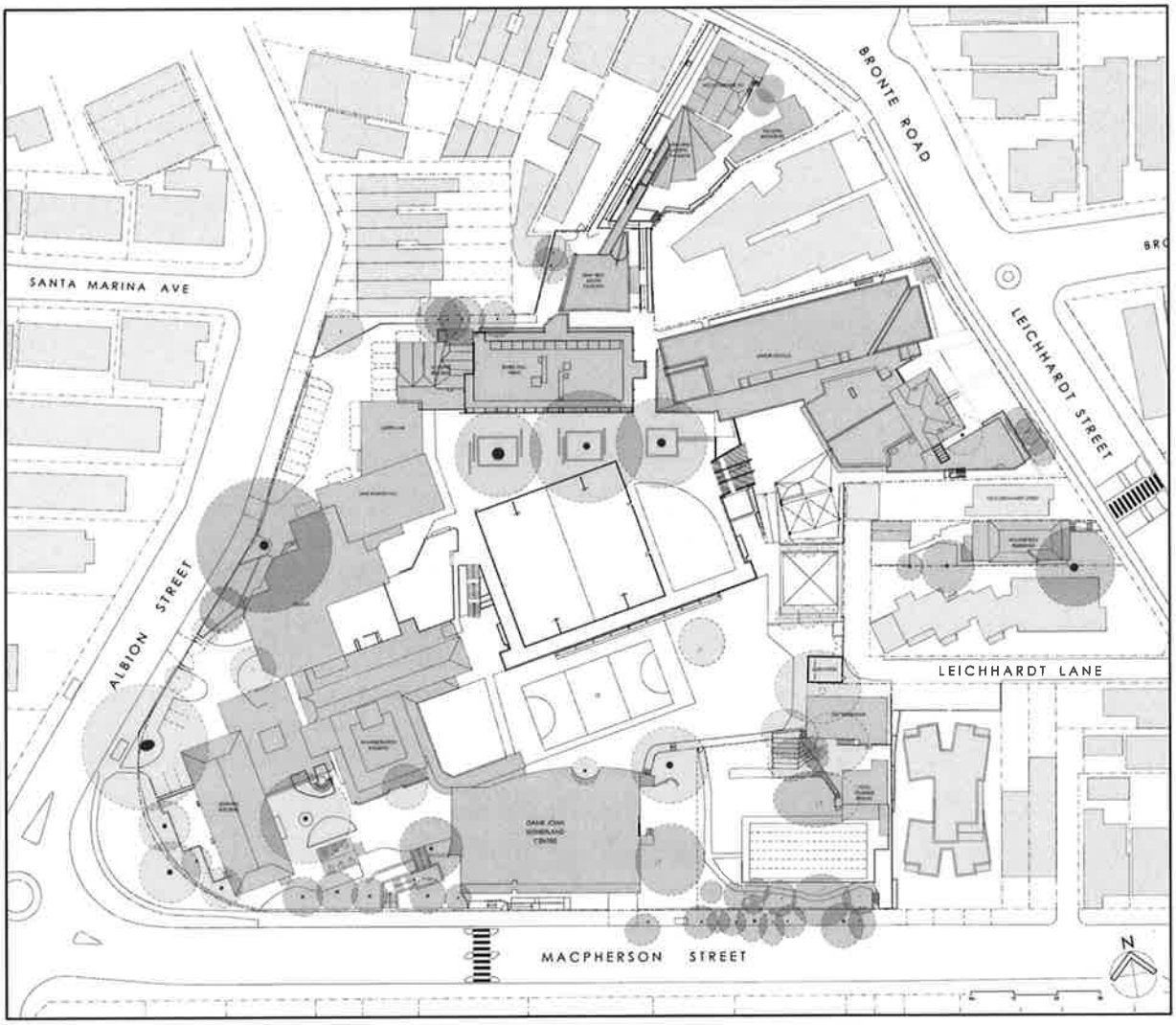

Figure 3: Existing site layout *(Source: PD Mayoh Pty Ltd)*

The site is located within a well-established residential area, which consists of low to medium density development. Additionally, the site is within close proximity to publicly accessible open space (Queens Park), the Charing Cross retail precinct and the neighbourhood shops on Macpherson Street.

The site has a primary frontage of 120 metres to Albion Street (refer to **Figure 4**) and secondary frontage of 130 metres to Macpherson Street (refer to **Figures 5** and **6**). The school campus also has three additional smaller frontages interspersed with residential properties to Bronte Road and Leichhardt Street (refer to **Figures 7** to **8**). The main pedestrian entries to the site are from Gate 1 at Albion Street and the Junior School from Leichhardt Street. The levels across the campus vary with a fall of around six metres from west to east and north to south.

Figure 4: View of the site along Albion Street (from Gate 2 towards St Johns Building)

Figure 5: View of the site along Macpherson Street (from south-eastern corner of the site)

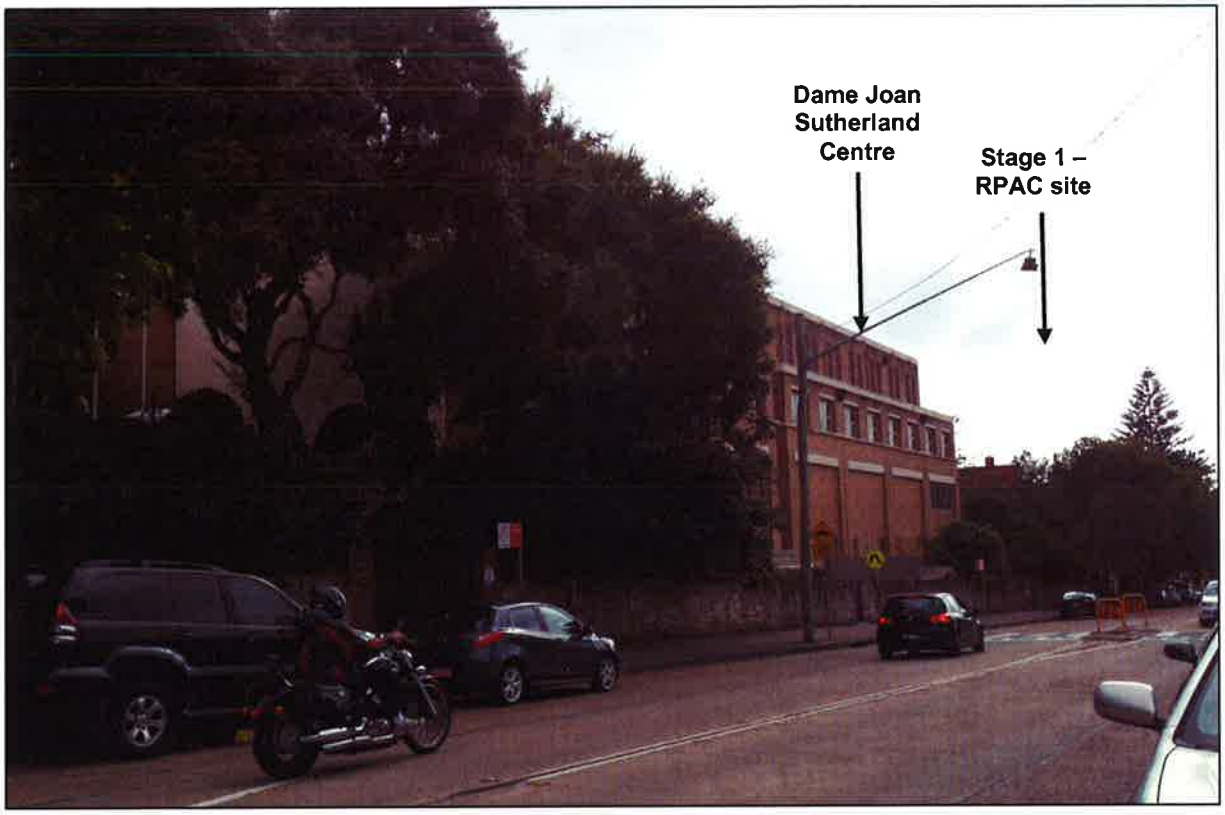

Figure 6: View towards the site along Macpherson Street (Dame Joan Sutherland Centre in foreground)

Figure 7: View of the Junior School on Leichhardt Street (from the north)

Figure 8: View of the Nan Hind Centre and future extension site on Bronte Road (from south-eastern corner of the site)

1.3 Project Description

The proposed State significant development application (SSD 6339) seeks approval for the staged redevelopment of the St Catherine's School over 15 years to support an additional 230 students and the concurrent construction and operation of Stage 1 Research, Performing Arts and Aquatic Centre (RPAC). The new building would be six storeys and a maximum 19.08 metres high and include an aquatic centre, performing arts auditorium, multi-purpose hall and research centre. **Table 1** provides a summary of the proposal's key components and features. The proposed site layout is shown in **Figure 9**.

Table 1: Key Development Components

Development Summary	• A concept proposal for the staged redevelopment (refer to **Figure 10**) of the school campus over 15 years to support an additional 230 students, comprising: ▪ demolition works; ▪ new buildings; ▪ alterations and additions; ▪ revised access arrangements; ▪ revised circulation system; ▪ additional car parking (19 spaces); and ▪ landscaping works. • Construction and operation of Stage 1 of the concept proposal for the Research, Performing Arts and Aquatic Centre (refer to **Figures 11** to **13**).	
	Existing	**Proposed**
GFA	17,727sqm	22,958sqm
FSR	0.8:1	1:1
Playground Area	6,018sqm	6,137sqm
Deep Soil Landscaped Area	5,650sqm	5,229sqm
Site coverage	9,831 (44.1%)	11,792sqm (52.9%)
Students	970	1,200
Staff	202	212
	Concept Proposal	**Stage 1**
GFA	22,958sqm	5,289sqm
Total Car Parking Spaces	75	22 (Campus Total: 78 – three to be loss with future redevelopment)
Capital Investment Value	$62,490,000	$38,683,407
Jobs	10 new operational	10 new operational 94 construction jobs

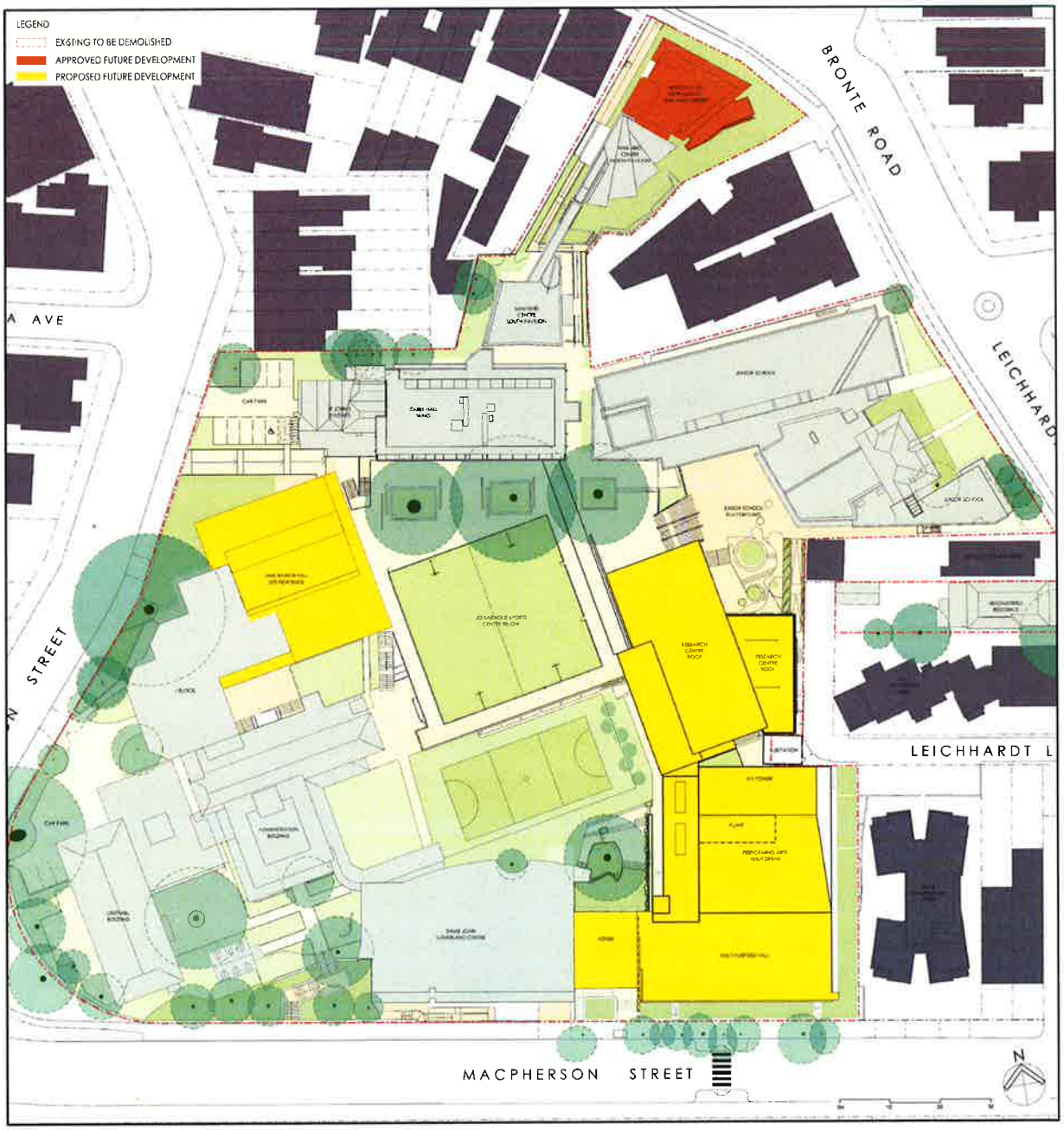

Figure 9: Proposed site layout (all stages) *(Source: PD Mayoh Pty Ltd)*

The concept proposal would be constructed over five stages (refer to **Figure 10**) as follows:

Stage 1

- Demolition works;
- construction of the 19.08m high RPAC building with an aquatic centre, performing arts auditorium, multi-purpose hall and research centre;
- internal alterations to the DJSC;
- construction of pedestrian linkages to existing school buildings;
- removal of the existing demountable building;
- construction of additional car parking;
- reconfiguration of existing car parking at Gate 1;
- landscaping works, including tree removal (20 trees);
- reconfiguration of Macpherson Street drop-off/pick-up arrangements; and
- increase in student population to 1,200 and staff numbers to 212.

Stage 2

- Demolition of car park at Gate 2 and reconfiguration of access arrangements at Gates 2 and 3;
- construction of Jane Barker Hall (JBH);
- renovation of J-Block;
- construction of BCA and accessibility upgrades; and
- landscaping works.

Stage 3

- Minor demolition works;
- construction a infill building underneath existing Lenthall Building;
- internal works for Lenthall Building;
- construction of BCA and accessibility upgrades; and
- landscaping works.

Stage 4

- Construction of internal works associated with the redistribution of uses across the buildings on the campus, excluding the RPAC, JBH, J-Block, Lenthall Building and Nan Hind Centre buildings; and
- construction of BCA and accessibility upgrades.

Stage 5

- Demolition of 319A and 317 Bronte Road; and
- construction of an extension to Nan Hind Centre (under an existing consent).

Subsequent development applications would need to be lodged for future stages of development.

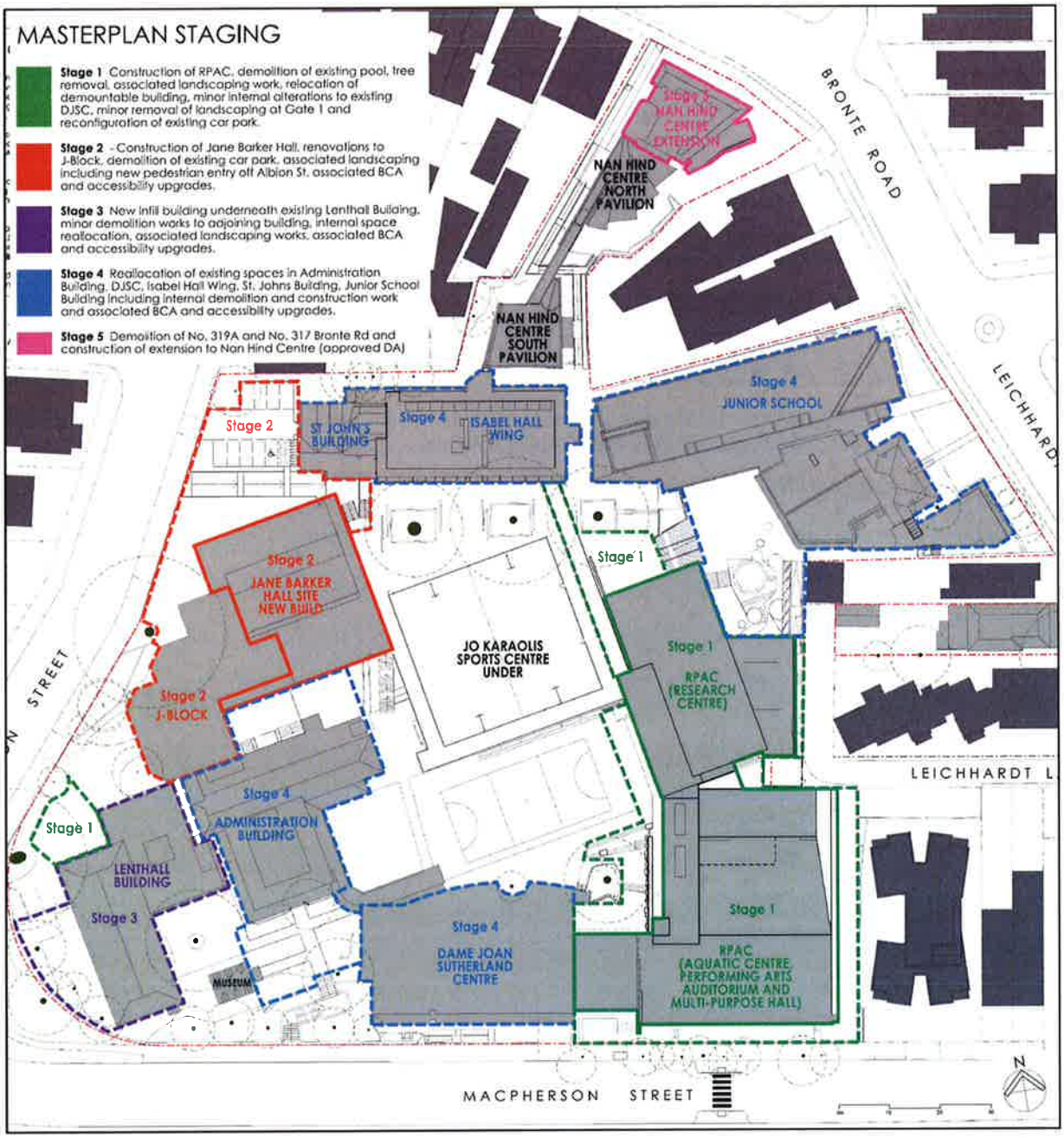

Figure 10: Proposed staging of redevelopment of the campus *(Source: PD Mayoh Pty Ltd)*

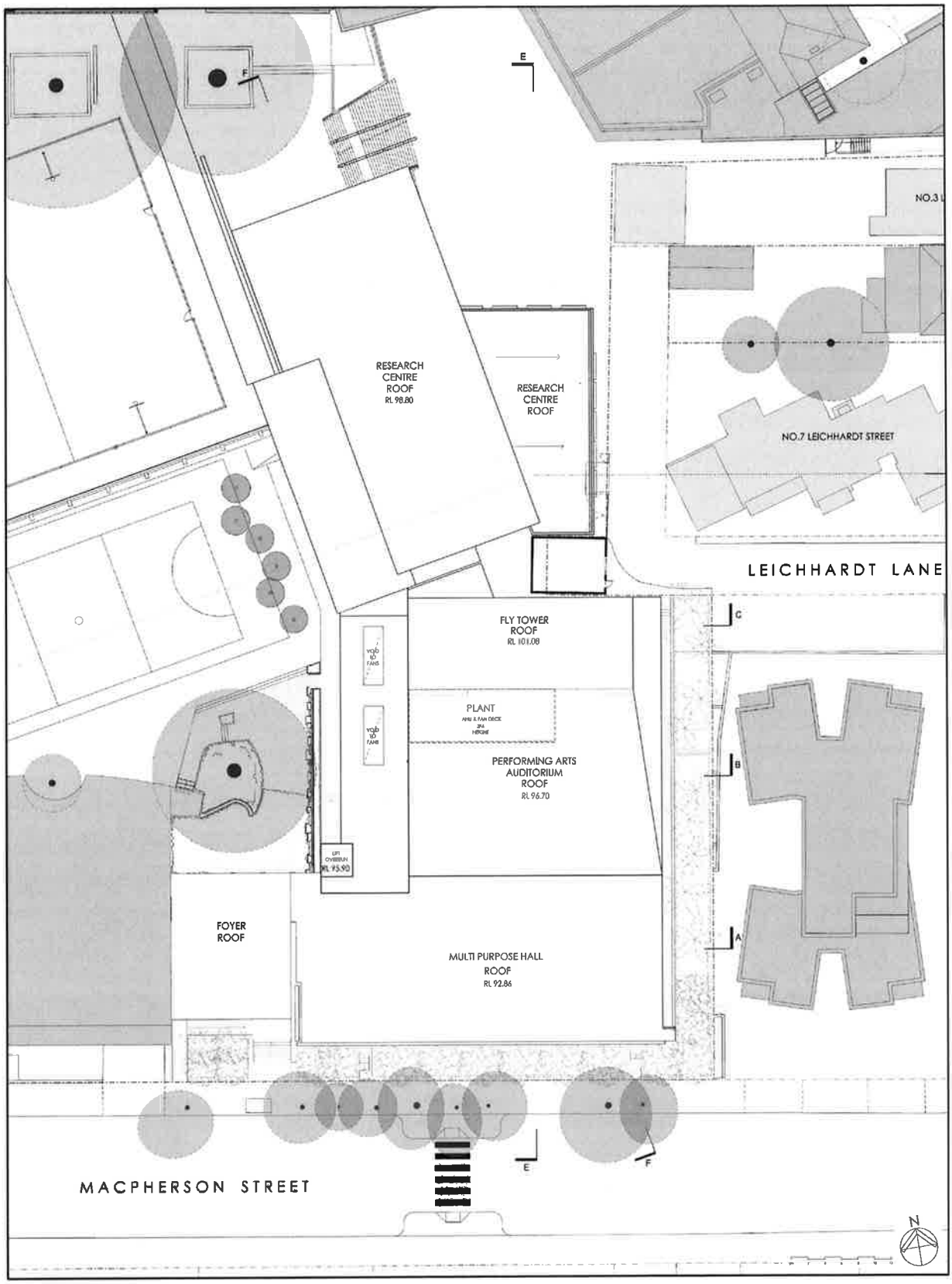

Figure 11: Proposed Stage 1 (RPAC) site layout

Figure 12: Photomontage of Stage 1 (RPAC) viewed from the west on Macpherson Street

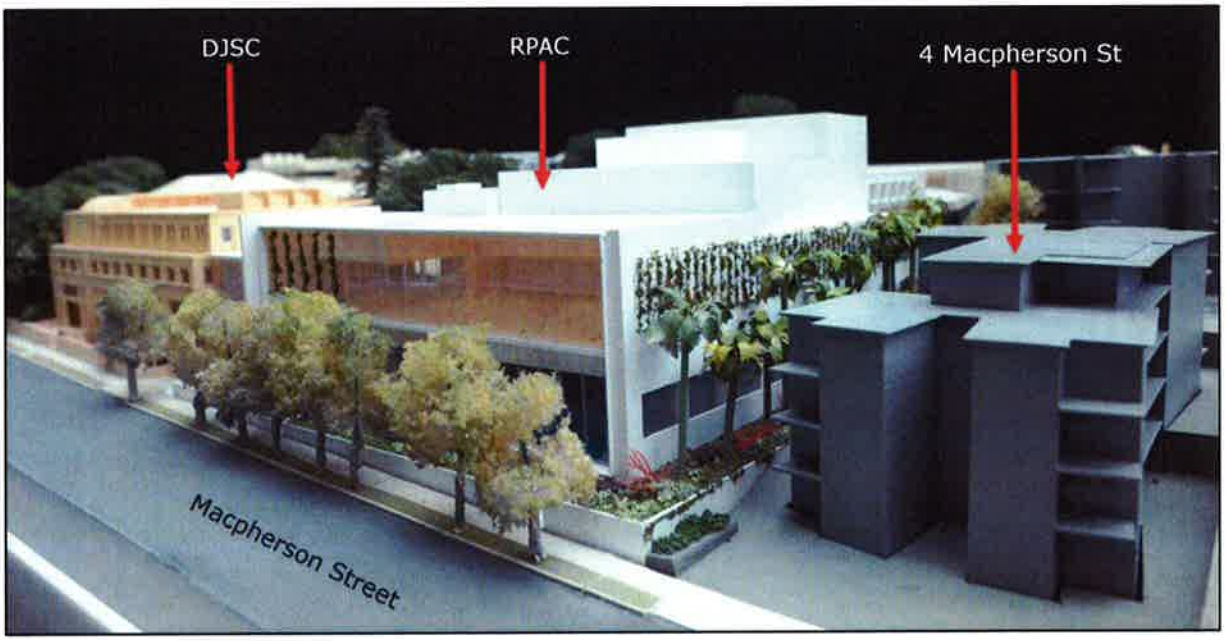

Figure 13: Model of Stage 1 (RPAC) viewed from the east on Macpherson Street

1.4 Project need and justification

The concept proposal provides for a more strategic and coordinated plan to manage the School's redevelopment and population growth over the next 15 years. It also ensures that the impacts of the development are addressed and managed based on the overall development instead of on the basis of individual stages, including traffic and transport impacts, heritage impacts and impact on amenity. The concept proposal also ensures that any necessary utility and infrastructure improvements can be staged in a coordinated approach. The concept proposal would deliver an additional 230 student placements for girls

from kindergarten to Year 12 to cater for population growth and alleviate demand on public schools within the region. The redevelopment and population growth also ensures that the culturally significant use of the site for independent girls' education continues and grows. The redevelopment includes measures that would provide overall improved operation of the school, including management of traffic related to school operations, drop-off/pick-up arrangements, parking impacts on local streets and student and staff circulation.

The Stage 1 development would provide a high standard multi-purpose facility that would enhance the current arts and sports curriculum as well as providing more learning spaces. It would reduce the school's need for use of external facilities for its educational curriculum and extracurricular activities offered to the St. Catherine's School community.

The proposal would also provide an additional 10 jobs and 94 construction jobs for Stage 1.

2. STATUTORY AND STRATEGIC CONTEXT

2.1. SEPP (State and Regional Development) 2011

The proposal is for a State significant development because it is development for the purpose of an educational establishment with a CIV in excess of $30 million under clause 15 (Educational establishments) of Schedule 1 of SEPP (State and Regional Development) 2011. Therefore the Minister for Planning is the consent authority.

2.2. Delegated Authority

In accordance with the Minister's delegation dated 14 September 2011, the Planning Assessment Commission can determine the subject application as more than 25 public submissions have been received objecting to the proposal.

2.3. Permissibility and Zoning

The site is zoned SP2 Infrastructure (Educational Establishment) under the Waverley Local Environmental Plan 2012 (WLEP). The proposal is therefore permissible with consent.

2.4. Environmental Planning Instruments

The Department's consideration of relevant EPIs (including SEPPs) is provided in **Appendix B**. The proposal is consistent with the relevant requirements of the EPIs except for the development standards relating to building height and FSR, which have been discussed in **Section 4.2.2** of this report.

2.5. Objects of the EP&A Act

Decisions made under the Act must have regard to its objects (refer to glossary at **Appendix C**), as set out in section 5 of the Act. The proposal complies with the objects of the Act as it would deliver facilities for educational purposes in an ecologically sustainable manner. The proposal promotes the social and economic welfare of the State through the orderly development of previously disturbed land for social infrastructure. The school facilities are also proposed to be used for community purposes where it can be demonstrated that the use of the facilities would have acceptable amenity impacts.

2.6. Ecologically Sustainable Development

The Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991* (refer to glossary at **Appendix C**). 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.

The Department has considered the project in relation to the ESD principles. The Precautionary and Inter-generational Equity Principles have been via a thorough and rigorous assessment of the environmental impacts of the project. The proposal is consistent with ESD principles as described in Section 6.8 of the applicant's EIS, which has been prepared in accordance with the requirements of Schedule 2 of the Regulation.

The applicant has also identified a range of ESD initiatives within the design and operation of Stage 1, including measures that would aim to:

- reduce energy use by optimising natural lighting, zoned lighting control, use of energy efficient fixtures, and the monitoring of energy usage;
- reduce water use through capture and re-use of rainwater, and water efficient fixtures;
- facilitate reduction in operational and construction waste and encourage recycling; and
- support active transport through the provision of cyclist facilities.

The Department is satisfied that the proposed sustainability initiatives would encourage ESD, in accordance with the objects of the Act and Regulation.

2.7. Environmental Planning and Assessment Regulation 2000

Subject to any other references to compliance with the Regulation cited in this report, the requirements for Notification (Part 6, Division 6) and Fees (Part 15, Division 1AA) have been complied with.

2.8. Strategic Context

The Department considers that the proposal is appropriate for the site given:

- it is consistent with the State Priorities as it will provide additional education facilities and services;
- it is consistent with NSW Government's *A Plan for Growing Sydney* to deliver school facilities supporting Sydney's growing population, including the delivery of private school facilities;
- it would provide additional social infrastructure which is important in maintaining Sydney's competitive edge and standard of living into the future;
- it would provide additional private student places ensuring that the non-government school sector responds to the increasing demand for additional school places, alleviating pressure on existing demand for additional public facilities; and
- it would provide a direct investment of $62.4 million in the region, and create 94 construction jobs and 10 new operational jobs.

2.9. Secretary's Environmental Assessment Requirements

The EIS is compliant with the Secretary's Environmental Assessment Requirements and is sufficient to enable an adequate consideration and assessment of the proposal for determination purposes.

3. EXHIBITION CONSULTATION AND SUBMISSIONS

3.1. Exhibition

In accordance with section 89F of the Act and clause 83 of the Regulation, the Secretary has made the application and accompanying information publicly available for at least 30 days following the date of first publication. The application was publicly exhibited on:

- on the Department's website from 2 October 2014 until 5 December 2014 (65 days);
- at the Department's Information Centre and Waverley Council's offices from 2 October 2014 until 5 December 2014 (65 days);

The Department advertised the public exhibition of the application (from 2 October 2014 until 17 November 2014) in the Sydney Morning Herald, The Daily Telegraph and Wentworth Courier on the 1 October 2014. The exhibition period was extended to 5 December 2014. The Department published the change to the public exhibition period in the same publications on 5 November 2014.

Adjoining landholders and relevant State and local government authorities were notified in writing.

The Department received a total of 223 submissions comprising 212 public submissions, six submissions from organisations and five submissions from government authorities. A summary of the issues raised in the submissions are provided in the following sections.

3.2. Public Authority Consultation and Submissions

Waverley Council provided the following comments for consideration:

- the school must develop a sustainable transport plan and mode shift policy;
- the proposed changes to existing pedestrian access arrangements would have traffic, access and parking impacts along all site frontages;
- 200 additional on-site car spaces should be provided as there is insufficient car parking to meet existing and future demand resulting in increased demand for on-street parking;
- all parking required for use of the aquatic centre should be provided on-site;
- the Macpherson Street/Albion Street and Macpherson Street/Leichhardt Street intersections should be maintained at current levels of service;
- a new on-site drop-off/pick-up area should be provided to address traffic congestion, community safety, illegal and unsafe parking and residential amenity impacts;
- the relocation of the pedestrian crossing on Macpherson Street requires consultation with affected residents and is unlikely to be supported given the loss of street parking;
- the traffic assessment fails to consider traffic/parking impacts for simultaneous events;
- the parking surveys provided do not consider the demands at different times;
- management of drop-off/pick-up zones need to be improved to reduce illegal parking and queuing across intersections;
- the adequacy of the Leichhardt Street drop-off/pick-up zone to cater for the increased demand needs to be further demonstrated;
- the car park access ramp should be widened for two way movement or an electric operated traffic control system be installed restricting movement to one car at a time;
- the car park design needs is to address compliance with Australian Standards in relation to ramp gradient, sight distances and blind aisles;
- additional bicycle facilities should be provided across the campus;
- service vehicles entering the site at Albion Street must be able to enter and exit in a forward direction;
- the bin storage area needs to be relocated to the vicinity of the substation;
- details regarding shuttle bus service for events needs to be provided;

- the height and gross floor area should be reduced to align with the bulk and scale of neighbouring properties;
- site coverage should be reduced to minimise loss of open space;
- planting and a varied materials palette along the eastern boundary, are appropriate to mitigate the bulk and scale of the RPAC development;
- the site is heritage listed and located in a heritage conservation area. The proposal should retain and enhance the 1857 building, ensure an inventory and archival recording;
- the removal of trees T8, T9, T10, T11 and T12 is supported, while the retention and protection of trees T1 and T6 and protection of trees T22 to T30 is recommended;
- the boundary planting (including trees T1 and T6) and stone walls should be retained due to their high value and ability to maintain privacy;
- student and staff increases should be linked to the stages of redevelopment;
- the proposed use of the facilities for events are to be limited to school and ancillary events. Any major timetabling changes should seek further endorsement from Council;
- acoustic impacts and light spill from the RPAC should be managed;
- new and existing entries should be clearly defined;
- noise generating activities should be considered in the acoustic assessment; and
- the proposed JBH (Stage 2) enhances the setting of existing heritage items and provides a positive presentation to Albion Street.

Randwick City Council raised no objection to the development and provided the following comments for consideration:

- supports Waverley Council's submission;
- traffic associated with the development should not impact Council's road network;
- heavy vehicle construction traffic should be diverted away from Randwick Junction Town Centre and should travel via Moore Park Road, Sydney Enfield Drive and Carrington Road;
- supports active transport modes and advises that the travel plan should include incentives to ensure the effective implementation of the plan;
- the travel plan should be monitored to ensure objectives are being met and revised where necessary in consultation with Waverley Council;
- car parking demand from simultaneous use of aquatic centre and auditorium and demand on on-street parking must be addressed;
- the proposed shuttle bus service for events is not an effective measure to reduce travel by car and on on-street car parking;
- a minimum of 200 additional on-site car spaces to be provided as part of Stage 1;
- the height and gross floor area of the RPAC should be reduced to ensure the RPAC development aligns with the bulk and scale of neighbouring properties; and
- site coverage should be reduced to minimise loss of open space.

Roads and Maritime Services (RMS) raised no objection to the development and provided the following comments for consideration:

- the performance of the Macpherson Street/Albion Street and Macpherson Street/Leichhardt Street intersections would deteriorate from traffic generated by the development and the applicant should ensure that the Level of Service for these intersections should be maintained at existing levels;
- any changes to existing parking controls around the school must be approved by the local traffic committee; and
- all works and regulatory signposting must be provided at no cost to the RMS.

Transport for NSW (TNSW) raised no objection to the development and provided the following comments for consideration:

- the proposal may cause delays to bus services on the surrounding network due to the deterioration of the Macpherson Street/Albion Street and Macpherson Street/Leichhardt Street intersections;
- the integrated kerb extensions on Macpherson Street should be designed to ensure two-way bus movements; and
- a significant proportion of students live within walking and cycling distance to the school and the proposal should:
  - implement measures to improve opportunities for walking and cycling;
  - investigate a raised platform for the Macpherson Street pedestrian crossing; and
  - provide additional bicycle parking facilities as the shared access from a vehicle driveway is not appropriate.

NSW Police Eastern Suburbs Local Area Command (LAC) raised no objection to the development and provided the following comments for consideration:

- the school is located on two major through roads, which are already heavily congested during extended peak periods, and the vehicle movements during drop-off/pick-up and unlawful action of drivers (such as stopping in 'No Stopping' zones within the vicinity of intersections) obstruct free flow of traffic and increase risk to other road users;
- the proposal would increase traffic and does not adequately address the associated increased drop-off/pick-up impacts on traffic congestion;
- the proposal should encourage the use of public transport given the accessibility of the site to public transport;
- bicycles as a mode of transport should be increased and bicycle parking should be increased to encourage students and staff to use this mode;
- the impacts from the additional traffic from use of the new facilities has not been addressed;
- the high incidence of school zone parking offences create an unacceptable level of risk for school students;
- agree that 'No Parking' restrictions around the school to facilitate drop-off/pick-up should be consistent and apply during the school zone time;
- 'P5 Parking' should not be implemented as 'No Parking', which allows drivers to stop for a period of up to two minutes and has been proven to be effective;
- circulation of educational material by the school is an ineffective strategy in enforcing compliance with road rules within school zones based on previous failed attempts;
- all design and engineering solutions should be investigated to increase safety at school drop-off/pick-up zones as part of the proposal prior to enforcement, which should be the final strategy for improving safety;
- an off-street drop-off/pick-up arrangement should be explored given beneficial safety and wider road network outcomes achieved by reducing queuing and circling vehicles;
- the proposed on-site parking is insufficient to meet the school expansion and the school should not rely on the constrained on-street parking supply;
- the use of the aquatic centre and auditorium would create significant demand on on-street car parking and also additional traffic and safety impacts with cars circling for off-street parking;
- parking occupancy on surrounding streets peaks at 95 per cent around 9 pm at night and therefore on-street car parking would not be able to support additional and increased capacity of events without adversely impacting residents within a five minute walking radius of the school;
- the development should provide a minimum of 200 on-site car parking spaces to accommodate car parking demand generated from the increased function spaces and capacity of venues;
- the use of low crash rates is not a good indicator of road safety as many accidents are not reported as vehicle crashes as they do not involve increased speeds, vehicle towing,

injury to a person or evidence of alcohol, and the Albion and Macpherson Street intersection is currently ranked second in the top ten vehicle blackspot report; and
- a raised concrete median should be installed to restrict the RPAC vehicle entrance to a left-in and left-out only configuration to minimise impacts to traffic flow, maintain road safety and minimise pedestrian and vehicle conflict.

The Department has fully considered the issues raised in the Council and agency submissions in its assessment of the development.

3.3. Public Submissions

The Department received a total of 218 public submissions, including submissions from the following organisations/groups:
- Charing Cross Village and Bronte Beach Precinct Committees;
- Bronte Beach Precinct;
- Bondi Junction Precinct Executive Committee;
- Strata Plan 52887 (313 Bronte Road, Waverley);
- 15-17 Macpherson Street Owners Corporation; and
- The Writers' Studio.

All the organisations and groups object to the proposal except the Bondi Junction Precinct, which provided general comments. Of the remaining 212 individual public submissions, 191 object to the proposal, 17 support the proposal and four raised comments regarding the proposal.

A summary of the key issues raised in all public submissions received are listed in **Table 2**.

Table 2: Public Submission Comments

Issue	Issue summary	Submissions (%)
Car parking - school population	Insufficient car parking to support the school population, including teachers, staff, cleaners, volunteers and services personnel should be addressed on-site.	87
Car parking - new facilities and events	Insufficient car parking to support the aquatic centre and events. A minimum of an additional 200 car spaces should be provided on-site.	83
Construction impacts	Redevelopment would result in an extended construction period. Additional mitigation measures are required to address traffic, parking, noise and dust impacts.	74
Commercial use of facilities	The aquatic centre and auditorium/hall are proposed to be used in a commercial nature and planning controls for commercial uses should be applied.	72
Pool operating hours	The extended operating hours of the pool would result in noise and parking impacts throughout the morning and evening periods.	70
Sustainable transport plan	The school has not provided an adequate sustainable transport plan or measures to support alternate travel modes.	70
Amenity impacts from RPAC	The additional noise, light spill and views impacts from the RPAC development are excessive.	68
Noise impacts – events	Additional noise from larger and more frequent events.	67
Development standards	Insufficient justification for breach in the development standards for the site. Development is incompatible with the streetscape and local context.	64
RPAC built form	The bulk and scale of the RPAC is excessive and is not consistent with planning controls or the streetscape.	62
Open space and landscaping	Loss of trees, open space and landscaping on the site is not supported.	61

Issue	Issue summary	Submissions (%)
Cumulative traffic impacts	The application has not considered the cumulative impacts from surrounding approved development.	51
Traffic impacts	Additional traffic cannot be accommodated on the local road network which is already heavily congested during school drop-off/pick-up periods.	23
Drop-off/pick-up facilities	The school has insufficient drop-off/pick-up facilities and cannot support the increased student population.	16
Safety issues	Parents undertake illegal driving and parking manoeuvres causing safety issues by impeding traffic flow.	8
On-site drop-off/pick-up	An on-site drop-off/pick-up facility should be provided.	6
Overshadowing	The RPAC development would block out sunlight to adjoining residences.	5
Charing Cross Retail	The reliance on on-street car parking would result in further economic impacts on Charing Cross retailers as car parking is used by parents.	5
Student numbers	The school is currently in breach of the permissible student numbers.	4
Noise impacts	The intensification of the school use would result in additional noise throughout the day.	2
Other	Waste collection, sustainability of the development.	Less than 1

The Department has fully considered the issues raised in public submissions in its assessment of the development.

3.4. Applicant's Response to Submissions

The applicant provided a response to the issues raised in submissions on 2 July 2015. The response included:

- a range of behavioural and travel strategies to reduce private car usage by both students and staff including carpooling, public transport and augmented minibus service, subsidised public transport, active transport and cycling;
- deletion of all additional external event use of the auditorium and scheduling of major events to avoid aquatic centre activities;
- promotion of before and after school activities to disperse peak traffic generation and mitigate impacts from the increased capacity of the aquatic centre facilities;
- restricting 'learn to swim' lessons to between 9.30 am and 2 pm on weekdays to avoid commuter peaks and to coincide with the lower resident demand for on-street parking;
- staggering finish times for students in different school years;
- utilising existing and future on-site car parking (up to 75 spaces) for events and for the aquatic centre use on the weekend (47 on-site parking spaces);
- commitment to prepare an OTMP, to address travel strategies, monitoring and reporting and operational traffic management;
- further investigation into restricting the car park entry/exit to the RPAC/DJSC driveway on Macpherson Street to left-in and left-out;
- deletion of the originally proposed shuttle bus service for events; and
- further justification to demonstrate that an off-street drop-off/pick-up zone was not feasible given existing site constraints.

The applicant's Response to Submissions (RtS) was forwarded to the relevant authorities for review, who provided the following comments:

Waverley Council advised that the response generally addresses matters raised in its submission, however, the transport related initiatives should be addressed in conditions of consent to ensure clarity is provided regarding the proposed measures and compliance with the measures. Council also notes that the changes to the parking and traffic mitigation

measures (including relocation of the pedestrian crossing and on-street parking arrangements) must be approved by the Waverley Traffic Committee.

Randwick Council noted that whilst positive amendments have been made to the proposal, concerns regarding parking and traffic impacts were reiterated. The following matters still need to be addressed:

- no additional car parking has been proposed;
- the proposed travel strategies require time to change behavioural patterns;
- details of where the travel strategies have been successfully;
- the travel survey indicating potential for travel mode change is not a meaningful indicator;
- walking as a travel mode should be explored as part of the travel strategy;
- concurrent use of the aquatic centre and auditorium for major events (greater than 250 attendees) would result in traffic and parking impacts on the surrounding streets; and
- on-site car parking should be available for all major events.

Transport for NSW supports the travel demand management measures, however, advises that no evidence has been provided to support the mode shift targets. A sensitivity traffic assessment needs to be undertaken to identify what measures would need to be implemented to maintain or improve existing operations at surrounding intersections to ensure the surrounding road network and bus operations are not compromised. It is also recommended that appropriate conditions be imposed to ensure that the effectiveness of the travel demand management measures are monitored and enforced, and traffic improvement measures are implemented if travel demand management measures are ineffective.

Transport for NSW has also recommended conditions requiring:

- local traffic committee approval of the relocation of the Macpherson Street crossing;
- preparation of a Special Events Transport Management Plan for high capacity;
- suspension of use of aquatic centre during high capacity events at the auditorium;
- promotion of walking and cycling transport modes and identification and implementation of initiatives to support these modes;
- relocation of bicycle facilities away from vehicle driveway to avoid conflict; and
- preparation of construction traffic management plan.

RMS advised that the response adequately addressed the issues raised in its original submission.

NSW Police Eastern Suburbs LAC has advised that provision of an on-site drop-off/pick-up facility requires further consideration as on-street facilities do not meet current operational requirements.

In response, the applicant provided a further Travel Strategies Transport Report to outline additional details regarding the traffic and transport impacts and travel strategies. This included:

- further details regarding the relocated pedestrian crossing configuration and associated impacts on on-street car parking along Macpherson Street;
- clarification regarding changes to bus zones along Leichhardt Street, including acknowledgment of the existing relocated bus stop and drop-off/pick-up arrangements;
- additional details regarding successful programs and travel strategies in shifting school transport modes;
- further consideration of providing drop-off/pick-up facilities on site;
- further consideration of active travel as a transport mode for students and measures that could support this transport mode; and
- a transport sensitivity analysis, which identifies that the surrounding intersections may need to be upgraded in 2020/2021 to ensure traffic efficiency is maintained at the surrounding intersections if mode shift targets are not achieved.

4. ASSESSMENT

4.1. Section 79C Evaluation

Table 3 identifies the matters for consideration under section 79C (refer to glossary at **Appendix C**) that apply to State significant development, in accordance with section 89H of the EP&A Act. The EIS has been prepared by the applicant to consider these matters and those required to be considered in the SEARs and in accordance with the requirements of section 78(8A) of the EP&A Act and Schedule 2 of the EP&A Regulation.

Table 3: Section 79C(1) Matters for Consideration

Section 79C(1) Evaluation	Consideration
(a)(i) any EPI	Refer to **Section 4.2** and **Appendix B**
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan	Refer to **Appendix B***
(a)(iiia) any planning agreement	Not applicable.
(a)(iv) the regulations	The development application meets the relevant requirements of the Regulation, including the procedures relating to development applications (Part 6 of the Regulations), public participation procedures and schedule 2 of the Regulation relating to environmental impact statements. Refer to discussion at **Section 2.7**.
(a)(v) any coastal zone management plan	Not applicable
(b) the likely impacts of that development	Appropriately mitigated or conditioned - refer to Section 4.2
(c) the suitability of the site for the development	Suitable - Refer to **Sections 2.8** and **Section 5**
(d) any submissions	Refer to **Sections 3.2** and **4.2**
(e) the public interest	Refer to **Section 4.2.5**
Biodiversity values exempt if: (a) On biodiversity certified land (b) Biobanking Statement exists	Not applicable

* Under clause 11 of the SRD SEPP, development control plans do not apply to State significant development. Notwithstanding, consideration has been given to relevant Development Control Plans at **Appendix B**.

4.2 Key and Other Issues

The Department has considered the EIS, the issues raised in submissions and the applicant's response to these issues in its assessment of the development. The Department considers the key environmental assessment issues for the application to be:

- traffic and parking impacts;
- built form and urban design;
- environmental and residential amenity;
- community use of facilities; and
- other matters.

4.2.1 Traffic and Parking Impacts

The site is surrounded by Albion Street, Macpherson Street and Leichhardt Street / Bronte Road. Bronte Road, Leichhardt Street and Macpherson Street provide regional routes for commuter traffic during the peak periods and general traffic all day. Albion Street is also an important street for access from the residential areas to the south across to these regional routes and supports the regional and local bus network, including school buses. The key intersections are:

- Macpherson Street/Albion Street;

- Macpherson Street/Leichhardt Street;
- Bronte Road/Leichhardt Street; and
- Bronte Road/Albion Street.

These intersections operate at a good to satisfactory level of service (Level of Service A to C).

The surrounding streets generally provide unrestricted parking except in the vicinity of the Charing Cross Retail precinct and Macpherson Street shops where half hour parking restrictions apply between 8:30 am to 6 pm Mon-Fri and 8:30 am to 12.30 pm on Sat and two hour parking restrictions apply except for authorised resident vehicles. No parking is permitted on Macpherson Street, Leichhardt Street and Albion Street in the morning drop-off and afternoon pick-up periods on school days and no parking is allowed on Leichhardt Lane between 7 am and 5 pm Monday to Saturday.

Traffic Generation

The Traffic and Transport Assessment (TTA) accompanying the EIS identified that 602 in the morning and 481 in the afternoon students currently travel to and from school by car. This equates to 499 car trips for drop-off and 398 car trips for pick-up based on car occupancy of 1.2 students per car (siblings travelling together). The car mode share for staff is 75 per cent, with 150 of the 202 staff travelling by car.

The TTA considers that an additional 172, 150 and 79 car trips would be generated by the development during the AM (8am–9am), PM (3pm–4pm) and weekend (12pm–1pm) peak periods based on current travel patterns. The additional car trips would be generated as follows:

- 94 (students), 8 (staff) and 70 (aquatic centre) in the AM peak period;
- 72 (students), 8 (staff) and 70 (aquatic centre) in the PM peak period; and
- 79 (aquatic centre) in the weekend peak period.

The Travel Strategies Transport Report (TSTR) submitted with the RtS introduces a range of strategies to reduce private car usage by students and staff, and manage use of the aquatic centre. Specifically, the proposed measures include:

- expanding the mini-bus service to utilise an extra 2 x 25 seat capacity buses in addition to the existing 25 seat bus, which at 75 per cent occupancy could accommodate an additional 50 students and reduce car trips by 42 (based on assumed car occupancy of 1.2 students/car);
- promotion of carpooling to target a five per cent mode shift (60 students) for student travel, which may result in a reduction of approximately 50 cars during peak periods;
- promotion of public transport to target a five per cent mode shift (60 students) for student travel, which may also result in a reduction of approximately 50 cars during peak periods;
- promotion of public transport by subsidising staff for the costs targeting a ten per cent mode shift for staff travel. This may result in a reduction of approximately 23 cars during peak periods;
- promotion of active transport through additional end-of-trip facilities and incentives to target a five per cent mode shift for staff travel, which may result in a reduction of approximately 11 cars during peak periods;
- promotion of carpooling to target a five per cent mode shift for staff travel, which may result in a reduction of approximately 9 cars during peak periods; and
- restricting external use of the aquatic centre to occur only between 9.30 am and 2 pm and 3.30 pm and 6.30 pm Monday to Friday and the weekends. This would remove traffic from use of the aquatic centre during the congested peak periods.

The TSTR identifies that behavioural and travel strategies have the potential to reduce student vehicle trips by 142 vehicles and staff by 43 vehicles (refer **Table 4**). This would

result in 185 fewer vehicle trips. Therefore, the successful implementation of the behavioural and travel strategies would result in a net positive impact as traffic generated from school operations would fall below current traffic generation numbers.

Table 4: TSTR Car Trips

	Scenario	AM	PM
Students	Existing	498	403
	Proposed (no initiatives)	618	486
	Initiatives		
	Mini-bus	42	42
	Carpool	50	50
	Public Transport	50	50
	Initiatives Total	**-142**	**-142**
	Proposed (with initiatives)	476	344
Staff	Existing	150	150
	Proposed (no initiatives)	158	158
	Initiatives		
	Public Transport	23	23
	Active Transport	11	11
	Carpool	9	9
	Initiatives Total	**-43**	**-43**
	Proposed (with initiatives)	115	115

The revised TSTR included details of the Active School Travel Programme implemented in Brisbane schools, which successfully resulted in a 24.8 per cent mode shift away from car mode. This is comparable with the 18 per cent mode shift proposed for student travel in the TSTR for St Catherine's.

A sensitivity analysis was also provided, which identified that if the change in mode shifts is not successful and existing travel patterns are maintained, the traffic associated with the progressive increase of students (approximately 15 per year) would result in the Macpherson Street/Leichhardt Street and Macpherson Street/Albion Street intersections exceeding capacity and performing poorly by 2020 and 2021 (Level of Service D to E), respectively. These intersections would need to be upgraded to maintain satisfactory levels of service and ensure that the road network would operate efficiently.

In addressing the identified impacts of the development, the applicant proposes to develop an Operational Transport Management Plan (OTMP) that would define the roles and responsibilities of the school, Waverley Council, parents and carers of students and the various government agencies for management of access to the school for all modes of transport. The plan is proposed to include:

- details regarding the travel strategies and management requirements for each strategy;
- monitoring and reporting requirements for the travel strategies, including an annual survey; and
- operational traffic management plans specific to:
  - school drop-off/pick-up zones;
  - school bus access;
  - use of the aquatic centre; and
  - major events held within the auditorium.

In its assessment of the proposal, the Department and its independent traffic consultant supported the proposed behavioural and travel strategies to reduce private car usage. It was concluded that behavioural and travel strategies appear to be attainable and potentially sustainable, subject to the implementation of the strategies and ongoing monitoring.

The Department's traffic consultant recommended the imposition of the following conditions on any approval granted for the school:

- the proposed behavioural and travel strategies should target no net increase in private car trips, post school development and population increase (i.e. as a minimum, a mode shift to maintain no greater than current levels of private car use must be achieved);
- prior to commencement of use of the new facilities, details regarding the OTMP, including details regarding the behavioural and travel strategies, must be provided. The OTMP must address:
  - objectives and targets;
  - timing;
  - responsibility;
  - funding;
  - implementation;
  - monitoring regime to evaluate each strategy; and
  - monitoring of whether the overall strategies are meeting the target of no net increase in private car trips; and
- independent traffic and on-street parking reviews should be undertaken six months after development consent and then annually to determine the effectiveness of the OTMP and measures and any adjustments that may be required prior to operation of Stage 1 in approximately 2019.

The Department is satisfied that the OTMP and the behavioural and travel strategies would reduce the overall traffic generated from the increased school population. Furthermore, traffic flow would also improve with the improved Macpherson Street drop-off/pick-up where the pedestrian crossing is being relocated to provide a longer uninterrupted zone and additional management measures such as additional traffic controllers managing the zones.

The Department has considered the information in the TTA and TSTRs, issues raised in public submissions and the independent review of the transport and traffic impacts and is satisfied that the traffic impacts can be satisfactorily managed through the preparation and implementation of the OTMP, subject to ongoing review and monitoring. If the monitoring identifies that the OTMP is unable to manage the traffic impacts, the Department recommends that the applicant undertake a further traffic assessment to identify what road upgrades are required and undertake the necessary road upgrades required to support the increased student population prior to the next annual review process. The Department has included a condition to this effect.

Drop-off/Pick-up Arrangements

The school has frontages to Albion, Macpherson and Leichhardt Streets, which are identified as sub-regional routes in eastern Sydney. The school currently utilises the parking lane along the three streets for drop-off/pick-up of students attending the school (refer to **Figure 14**). The 'No Parking' restrictions that apply on school days facilitating school drop-off/pick-up vary as follows:

- from 8 am to 9 am and 3 pm to 4.15 pm along Albion Street (seven spaces along the western side and 10 spaces along the eastern side);
- from 8 am to 9.15 am and 2.45 pm to 4.15 pm along the northern side of Macpherson Street (16 car spaces); and
- from 8 am to 9 am and 2.30 pm to 4 pm along the eastern side of Leichhardt Street (six car spaces).

Parking within these zones is unrestricted outside of these periods and provides 33 car spaces.

The TTA acknowledges that the drop-off/pick-up zones are not currently operating effectively or efficiently. The applicant has recognised that some cars currently queue into the intersections, perform illegal U-turns, park across driveways, undertake illegal overtaking

manoeuvres and double park along the school frontages. In addition, the queuing of vehicles in Leichhardt Street and Macpherson Street during school drop-off/pick-up periods often extends into the travel lane thereby impeding and slowing through traffic. The proposed intensification of the school use has the potential to exacerbate the existing issues at the drop-off/pick-up zones.

The proposal seeks to relocate the marked pedestrian crossing on Macpherson Street to the east by approximately 45 metres (immediately to the west of the bus zone) to provide an uninterrupted drop-off/pick-up zone along Macpherson Street and also increase the amount of car spaces along Macpherson Street from 16 to 19. The changes are illustrated in **Figure 15**.

In addition to the physical improvements to the Macpherson Street drop-off/pick-up zone, the following operational measures are also proposed to the school's drop-off/pick-up arrangements to improve operational efficiency at the zones:

- standardise the 'No Parking' time restrictions so that they apply from 8 am to 9 am and 2.30 pm to 4.00 pm at all the zones to reduce confusion;
- provide staff member traffic controllers at all zones to improve traffic flow and school zone safety;
- relocation of Year 3 and 4 pick-up from Leichhardt Street to Macpherson Street to improve traffic flow along Leichhardt Street;
- designate pick-up for Year 7-10 from Macpherson Street only and for Years 11 and 12 from Albion Street only instead of allowing pick-up from both Macpherson and Albion Streets for these years;
- delay Year 5-6 pick-up time from 3 pm to 3.15 pm to stagger arrival times given the intensified use of the Macpherson Street zone (Years 3-10); and
- implement a junior student registration scheme (signs within cars identifying which students they are picking up or number allocations) to improve efficiency of pick-up and availability of spaces.

These measures would complement the recent relocation of the bus zone on Leichhardt Street to the north of the pedestrian crossing by Waverley Council to prevent cars queueing into the bus zone. This has subsequently resulted in two additional car parking spaces that are utilised for school drop-off/pick-up. The reconfiguration of the bus zone and parking spaces along Leichhardt Street also provides a longer unbroken zone with a single interruption at Leichhardt Lane compared to previously where three breaks from the bus zone, Leichhardt Lane and the pedestrian crossing interrupted drop-off/pick-up activities (refer to **Figure 16**).

Waverley Council, Randwick Council, the NSW Police and the public submissions requested that an on-site drop-off/pick-up zone be provided to mitigate congestion impacts and improve traffic flow around the site. The operation of the drop-off/pick-up areas has also been raised as an issue in the public submissions. The illegal and unsafe behaviour of some parents, in particular parking in 'No Stopping' zones has been identified as contributing to congestion issues by impeding the traffic flow and causing safety concerns (even when spaces have been available within the drop-off/pick-up areas). The behaviour has also been identified as impeding bus movements as it forces buses to enter the oncoming traffic lane to manoeuvre past the illegally parked cars. In addition, the Department's independent traffic consultant (engaged to review the transport and traffic impacts of the proposal) observed that the inefficient operation of the drop-off/pick-up zone has also resulted in greater demand on on-street car parking in the surrounding streets as parents are not using the designated areas to undertake drop-off/pick-up activities.

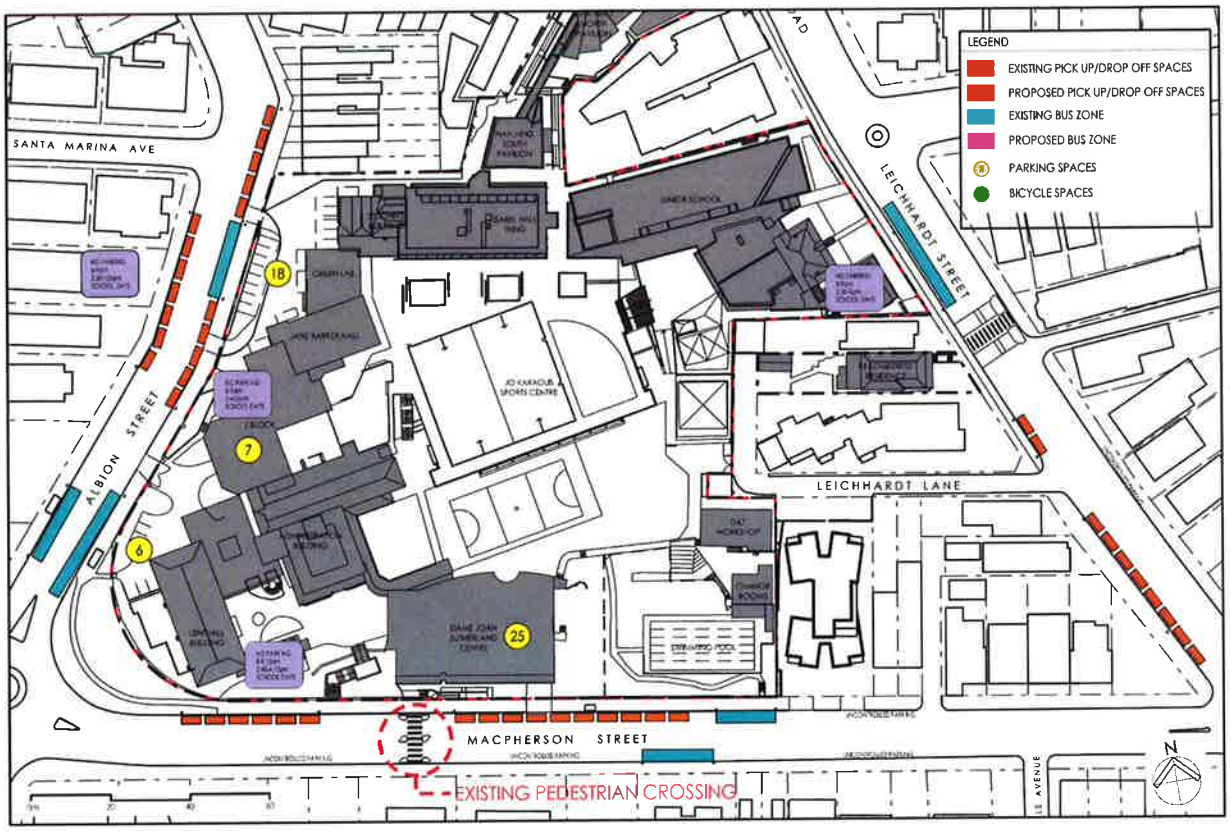

Figure 14: Existing drop-off/pick-up arrangements

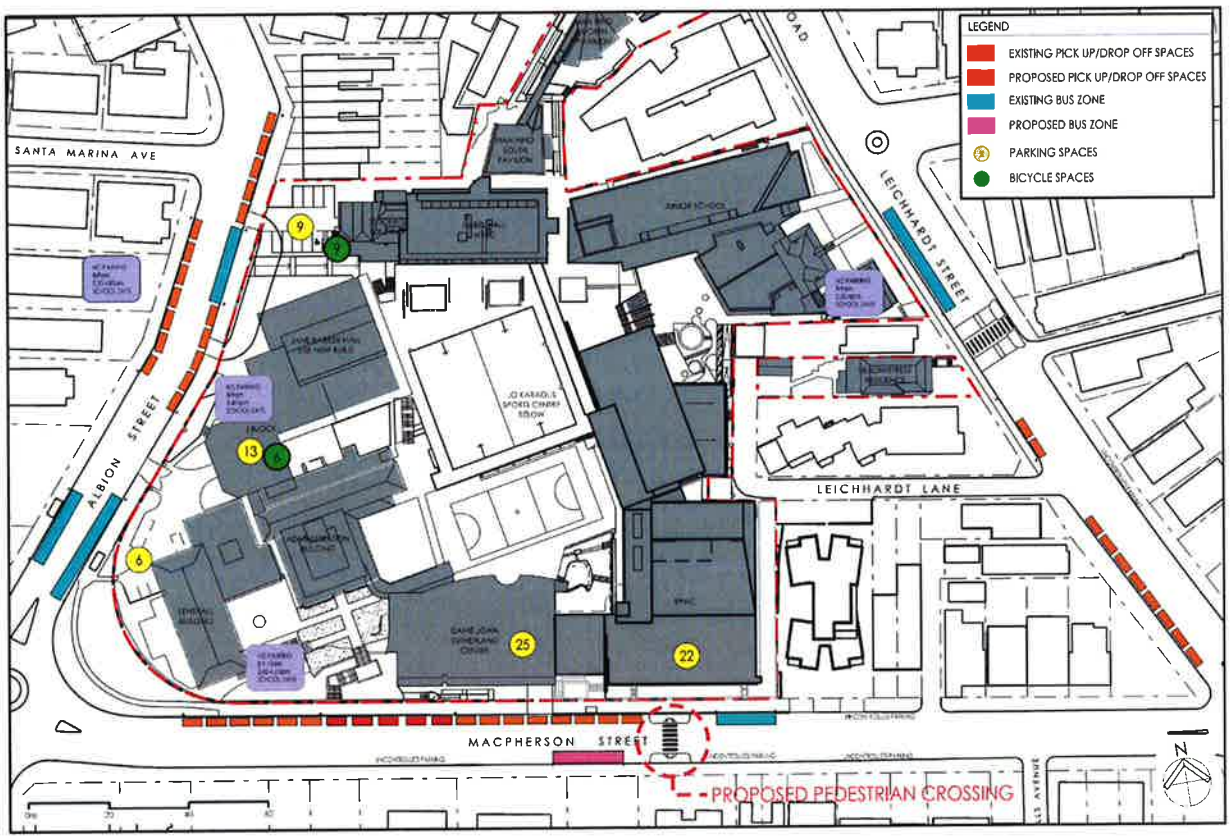

Figure 15: Proposed drop-off/pick-up arrangements

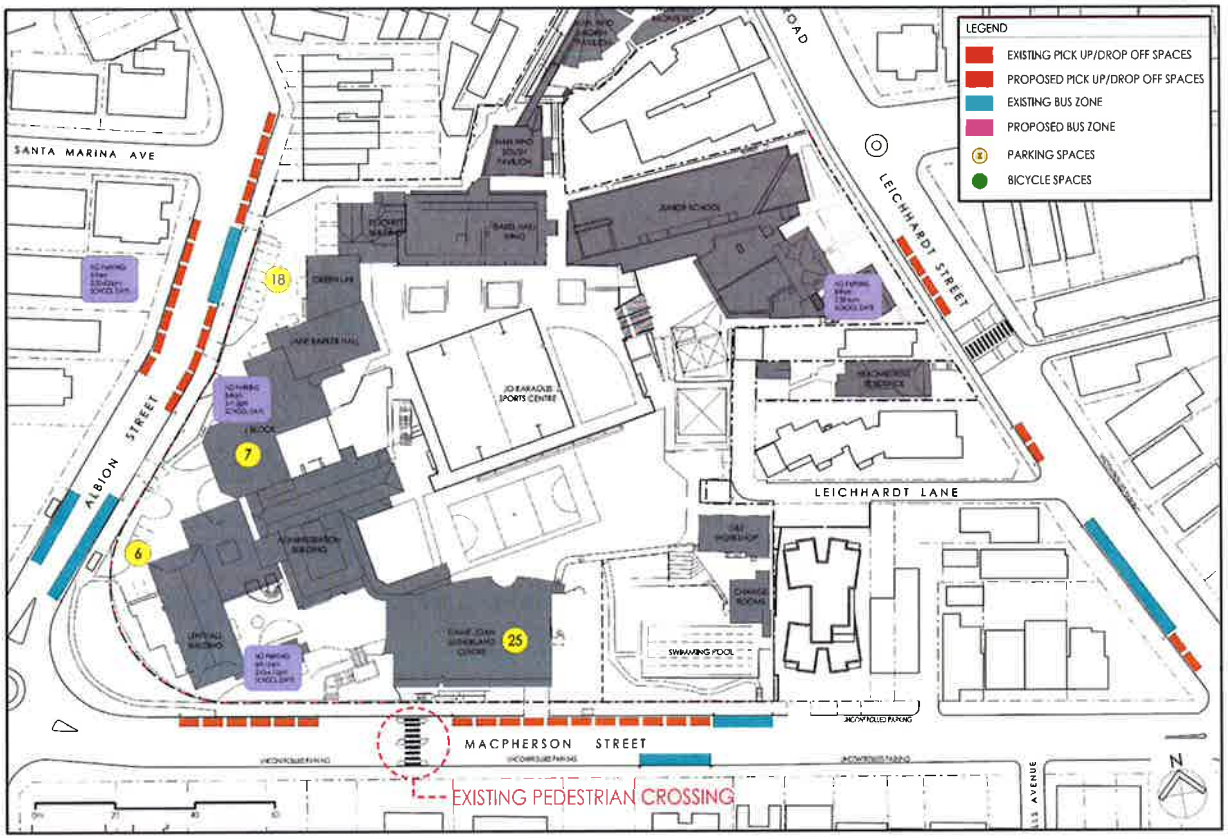

Figure 16: Previous drop-off/pick-up arrangements at Leichhardt Street

The RtS and TSTR identified that an on-site drop-off/pick-up facility could not be accommodated on-site as the only location that could support a facility would be via Albion Street (refer to **Figure 17**). Such a facility would only allow for a maximum of four vehicles and would not operate efficiently as vehicles could not enter all bays in a forward direction, queuing would be located on Albion Street and additional pedestrian and vehicle conflict would occur due to two vehicle crossings.

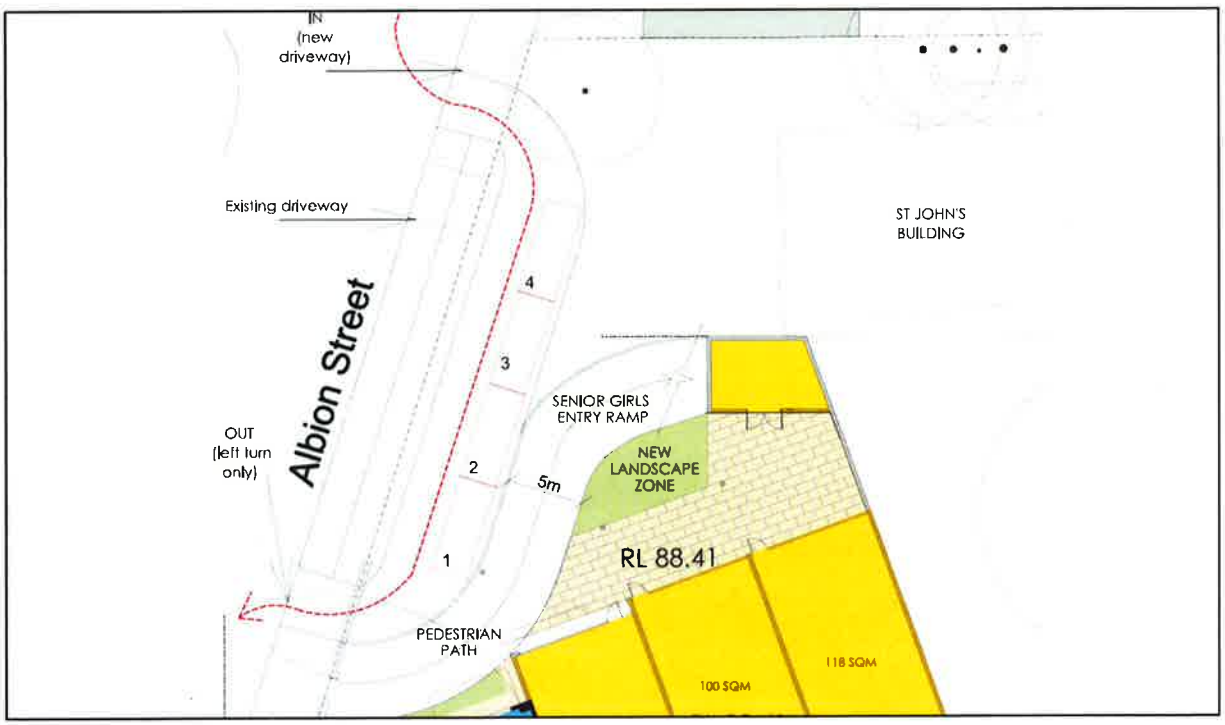

Figure 17: Potential on-site drop-off/pick-up zone along Albion Street

In response to the RtS and TSTR, the NSW Police reiterated that an on-site drop-off/pick-up facility is required given existing drop-off/pick-up on-street activities are causing impacts. The applicant consulted the NSW Police and considered an on-site facility through the existing DJSC building carpark (refer to **Figure 18**), as suggested by the NSW Police. It was concluded that such a facility could not be provided as:

- six on-site car parking spaces would need to be removed to support the additional vehicle entry;
- the number of spaces for the on-site facility would be nine, in addition to the nine retained along Macpherson Street (and would therefore provide one less space compared to the proposed on-street facility);
- a single traffic lane would be created, which requires cars behind to wait for cars in front to move forward, thereby reducing potential car throughput;
- conflict would be created with staff trying to access and use the car parking spaces;
- a secondary pedestrian/vehicle conflict point would be introduced on the public footpath; and
- delays may occur to westbound traffic along Macpherson Street created by queueing vehicles trying to enter the basement drop-off/pick-up zone.

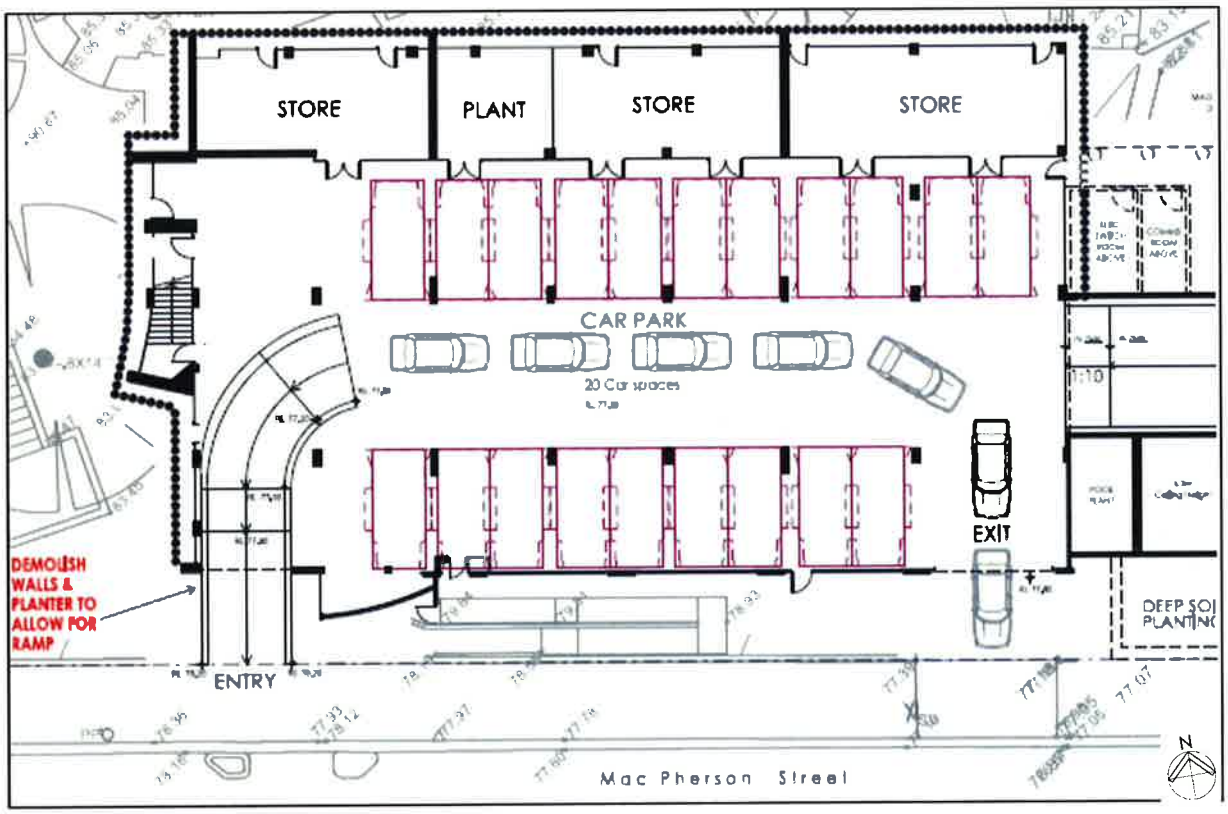

Figure 18: Potential on-site drop-off/pick-up zone within DJSC basement car park

The applicant also investigated providing a on-site facility off Macpherson Street within the front setback of the DJSC (refer to **Figure 19**) and concluded that it also would not provide any greater efficiency or capacity and would increase vehicle and pedestrian conflict.

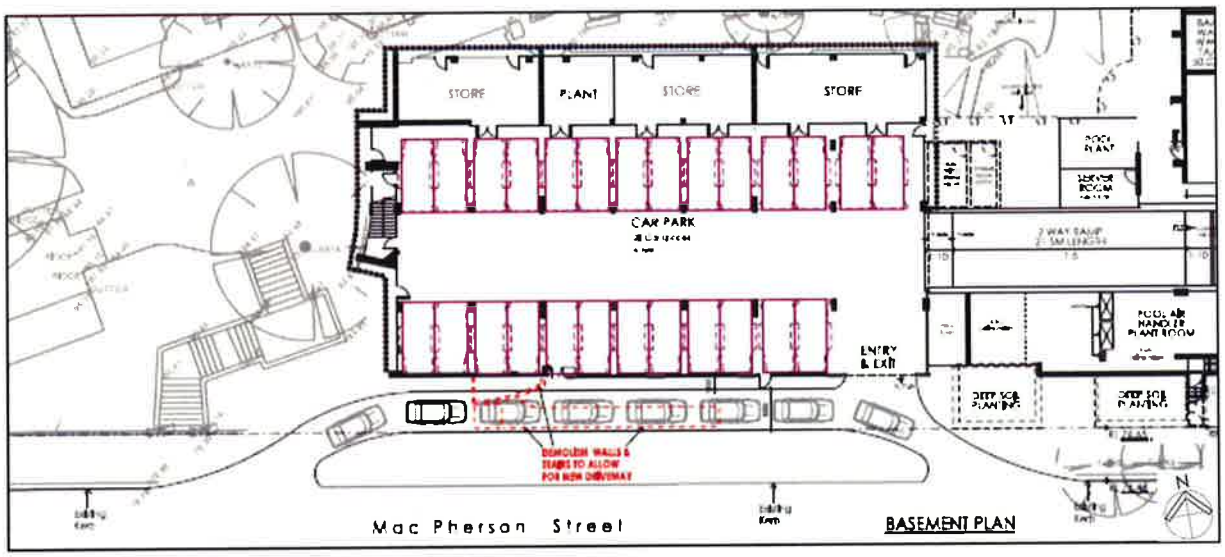

Figure 19: Potential on-site drop-off/pick-up zone along Macpherson Street

Accordingly, the applicant has concluded that the improved zone along Macpherson Street continues to provide the most efficient and greatest capacity for drop-off/pick-up operations.

Along with the proposed behavioural and travel strategies to reduce private car travel for students, the targeted scheduling and intensification of the increased number of before and after school pool programs seeks to disperse drop-off/pick-ups. The effective implementation of the operational behavioural and travel strategies would result in an overall reduction in traffic generation below existing school operations and therefore the total number of drop-off/pick-ups.

The Department acknowledges that the introduction of such an on-site facility could potentially create additional adverse impacts with additional vehicle crossings and convergence of traffic in one zone. The Department's traffic consultant considered that the mode shifts proposed are attainable and sustainable and travel demand and mode shifts as a suitable mitigation measure, subject to the preparation and implementation of the OTMP and the travel strategies.

The Department has included conditions recommended by the traffic consultant to ensure the travel strategies are implemented, monitored, reviewed and updated where necessary. The traffic consultant also recommended that independent road safety audits be undertaken for the drop-off/pick-up zones and pedestrian facilities during design development and prior to use of these areas. Conditions to this effect have been incorporated in the recommended conditions.

Should road safety audits identify any issues or monitoring identify that the physical improvements to the MacPherson Street drop-off/pick-up zone has not been effective, the OTMP should also explore the following supplementary measures:

- closing the western entrance/exit along Macpherson Street (located approximately 15 metres to the west of existing pedestrian crossing) to encourage use of the full length of the Macpherson Street drop-off/pick-up zone;
- installation of physical measures to provide deterrents to prevent illegal drop-off/pick-up such as fencing or landscaping within the 'No Stopping' zones or video surveillance;
- provision of a traffic controller for all drop-off/pick-up periods, including for aquatic centre use before and after school;
- provision of additional traffic controllers at designated drop-off areas or delayed pick-up times for parents who are identified as routinely performing unsafe or illegal drop-off/pick-ups; and

- use of the basement carpark for early aquatic centre use drop-off.

Car and Bicycle Parking

The school site currently has 56 car parking spaces comprising 25 spaces located in the basement car park of the DJSC; 18 spaces at an at-grade car park accessed from Gate 3; and 7 spaces in the J-Block under croft and six at-grade spaces accessed from Gate 1 (refer **Figure 14**).

Proposal

The Concept Proposal seeks a total 75 car spaces (additional 19 car spaces) and 15 bicycle spaces (refer **Figure 15**). This includes an additional 22 spaces in the basement of the RPAC to be accessed from the DJSC. Stage 1 would deliver these 22 car spaces and result in a total of 78 car spaces until Stage 2. Stage 2 would result in an overall reduction by 3 car spaces as a result of the construction of JBH, renovation of J-Block and reconfiguration of the car parking at Gate 3. Stage 2 would also deliver the 15 bicycle spaces.

The proposal would generate additional demand for car parking as a result of the student population increase and associated staff increases. The TTA calculated an additional demand of 8 car spaces to be generated by staff. The increased event capacity of the auditorium/hall facilities and proposed aquatic centre facilities would also result in increased demand for car parking.

Councils', the NSW Police and the public submissions identified that the proposal provides insufficient car parking to meet the demand generated by the proposal. The Council and public submissions requested that a minimum of 200 car spaces be provided with Stage 1. The loss of 8 unmarked informal car spaces within the school grounds was also identified as an issue in the public submissions.

Bus Zone Impacts

The relocation of the bus zone in Macpherson Street was identified as an issue by Waverley Council, who advised that it would need to be approved by the local traffic committee and that the residents in the vicinity of the changed road conditions would not be supportive of the changes due to the loss of on-street car parking. The Department notes that the re-configured bus stop and pedestrian crossing arrangements on the southern side of Macpherson Street would result in no net loss of car parking spaces as any spaces lost from the reconfigured pedestrian crossing and bus zone would be offset by spaces created at the current location of the pedestrian crossing and bus zone.

The applicant revised the usage profile in the RtS to exclude all non-school related use of the auditorium facilities and provided further clarity regarding non-school related use of the aquatic centre. Waverley Council were generally satisfied with the RtS whilst Randwick Council noted that the parking had not been increased and requested that conditions be imposed requiring that the basement on-site car parking (47 spaces) be made available for the aquatic centre on the weekends and all on-site parking (75 spaces) be made available for all major events.

Increased Staff

The Department considers that demand generated by staff would be met by the additional 19 car spaces that would be provided within the RPAC basement. These 19 spaces would also address the loss of any informal spaces. Furthermore, with the implementation of the travel demand management measures, there could be a reduction in car parking demand by 40 cars. Therefore, the residual 43 staff that would rely on on-street car parking is below the current situation where 94 staff would rely on on-street car parking.

The Department notes that whilst students are not permitted to drive to school, public submissions have identified that this restriction is not being observed by students. However,

the Department considers that the travel demand management measures seeking to reduce private car travel would also address any potential parking demand generated by students.

The Department concludes that the proposal would provide sufficient car parking to meet the daily requirements from the intensification of the school use subject to the implementation of the OTMP. The successful implementation of the OTMP would have an overall positive impact on on-street car parking. Bicycle parking would not be provided until Stage 2. As one of the measures to reduce staff travel is the promotion of active transport modes, the Department has included a recommended condition that requires the applicant to provide a minimum 11 bicycle spaces as part of Stage 1 to ensure that mode shift to active transport, including cycling is supported.

Events

The TTA and TSTR indicate that a full capacity event would generate a demand for 160 car spaces based on car occupancy of 2.5 people per car and 80 per cent private vehicle mode share. The applicant has committed to making on-site car parking (75 car spaces) available for attendees for full capacity events. The applicant contends that with use of the on-site car spaces for events, the residual demand for car parking that would need to be met by on-street car parking would be 85 spaces and is comparable to the existing 80 car spaces demanded by existing events (250 attendees with 2.5 people per car and 80 per cent private vehicle mode share). The applicant has also indicated that events would be timetabled to avoid overlapping with peak use of the aquatic centre.

The revised usage profile includes 63 annual events on weekdays, excluding student only use of the auditorium and hall. The morning and daytime events generally already occur, with a minor predicted increase by 50 attendees for the infants Christmas musical and 4 additional events for up to 50 parents, which would have minor impacts. There would be 28 evening events and 12 include an increase in attendees/participants or are new events, 8 of which would include use of the facilities at full capacity (500 participants/attendees in the auditorium and 600 for the hall).

The Department notes that with the use of the on-site car parking spaces, the increased capacity of the auditorium and hall facilities would result in an increase in demand on on-street car parking by 5 spaces. The Department's assessment concludes that this minor increase would be acceptable as it would occur on 8 occasions in the year, subject to the following operational management measures:

- all evening events scheduled to commence after 5pm should not commence until 6:30pm to allow surrounding residents the opportunity to return home prior to attendees arriving and filling on-street parking;
- the aquatic centre not being used concurrently with any evening or weekend event (excluding student only events) and the basement car park being made available for all evening and weekend events;
- all car parking spaces on site being made available for all events with 250 or more attendees for all evening and weekend events; and
- an up to date event schedule being maintained and available to surrounding residents, including:
  - detailing dates for all events (excluding student only events), time of events and number of attendees;
  - displaying the schedule of events in a convenient and publicly accessible location or distributing the schedule to surrounding residents on an annual basis;
  - notifying any changes to events to surrounding residents; and
  - establishing a notification process (e.g. letterbox drop or e-communication) for informing surrounding residents within one week to a fortnight before the event of the upcoming event so arrangements can be made to address car parking impacts.

The Department has recommended conditions requiring that the above matters be incorporated into the OMTP or reflected in a revised indicative usage profile to manage parking impacts from use of the auditorium and hall. The Department has also included a requirement that the specific traffic management plans to be prepared for the major events held at the auditorium must be prepared in consultation with the Councils, RMS and Transport for NSW.

Aquatic Centre

The use of the aquatic centre for 'learn to swim' classes, water polo, water polo training and squad swimming activities would involve attendees that are not students and therefore would generate additional demand for car parking.

The car parking provided in the basement car park would be utilised by staff during the day and therefore the demand generated by the daytime 'learn to swim' classes would rely on on-street car parking. All other aquatic centre use during the day would be restricted to students and therefore would not generate demand for car parking. Activities with external attendees (non-students) would not commence until 4pm for 'learn to swim' classes and 6pm for water polo or squad training.

The Department is of the opinion that the 47 spaces in the basement car park should be made available for users of the aquatic centre during all non-school periods (i.e. evening sessions after 6pm in addition to weekends). The Department considers that it would be reasonable for the daytime demand from the 'learn to swim' classes to be met by the unrestricted car spaces (20) that run along the street frontages of the campus outside of drop-off/pick-up times. The Department has previously recommended that the use of the aquatic centre be restricted until 4.30pm to mitigate any additional traffic impacts from external users in the school PM peak period. From 4.30pm the spaces along the school frontage would be available for use. Furthermore, with the change in travel modes by staff and students, on-street car parking would be reduced significantly and the overall demand on on-street car parking even with demand generated by the 'learn to swim' classes would be below demand currently generated by staff alone. Accordingly, the Department's assessment concludes that the car parking impacts for the 'learn to swim' classes on weekdays can be managed and are acceptable.

The applicant has committed to making the basement on-site car park (47 spaces) available for aquatic centre users on the weekend. The number of spaces however would not be able to meet peak demand for car parking of 64 from the weekend activities based on 90 per cent of participants arriving by car and car occupancies ranging from 1.1 to 2 people per car (44 water polo, 30 diving and 24 'learn to swim' participants), and the overlap between arrival and departures for weekend activities would peak at 103. The applicant seeks to rely on on-street car parking to meet the excess demand.

The Department considers the shortage for the peak demand generated from the weekend activities could also be accommodated within the unrestricted car spaces along the school frontages. This however would not address the overlap from cars arriving before cars have left. To mitigate this overlap there should be a minimum 15 minute period between sessions for each of the activities to minimise the parking impacts and ensure the efficient use of the basement car park.

The Department's assessment concludes that the parking impacts can be adequately mitigated and managed subject to the following being incorporated into the OMTP and has included a condition to this effect:

- the basement car park must be made available for users of the aquatic centre in the evenings (for all sessions after 6pm);
- only either the squad swimming or water polo training evening session (from 6pm) can include non-school student participants;

- 'learn to swim' for non-students is permitted after 4pm on weekdays;
- a minimum 15 minute transition period between sessions for each activity to mitigate overlapping parking demand; and
- the maximum number of attendees must be capped in accordance with the usage profile and the maximum attendees is inclusive of spectators.

Construction

The proposal would generate potential demand for up to 75 vehicles during construction of the RPAC. The applicant has advised that the construction workers would rely on on-street car parking as site constraints do not allow for any on-site areas to be used for construction parking.

The applicant has not proposed any measures to mitigate the impacts on on-street car parking as a result of the demand generated by the construction workers. The Department acknowledges that once the travel demand measures are implemented, it would reduce staff demand on on-street parking, which could then accommodate demand generated by construction workers. It is noted that the construction workers would generally arrive before residents leave for work and leave before residents arrive home from work. Therefore, constructions workers would therefore likely be relying on spaces not being utilised by residents.

Accordingly, the Department's assessment concludes that the impacts are reasonable, however, the construction traffic management plan should be revised to include measures to minimise travel by car by construction workers, such as incentives to use public transport and promotion of carpooling.

Access Arrangements

The campus is currently accessed from all three frontages with multiple pedestrian and vehicle access points (refer to **Figure 20**). The main pedestrian access points are located on Albion and Leichhardt Streets. The main vehicle access points are located on Albion and Macpherson Streets.

The Concept Proposal changes the pedestrian and vehicle access arrangements as shown in **Figure 21**. The Concept Proposal seeks to reduce to multiple entry points and reduce points of potential pedestrian and vehicle conflict by separating the pedestrian and vehicle access locations and also seeks to provide a through-site pedestrian link, additional lifts and covered walkways to improve pedestrian circulation around the campus.

The public submissions identified the new main pedestrian entrance and re-orientation of the school to Macpherson Street as an issue as it promotes car travel over public transport given the main bus stops are located on Albion Street and would further exacerbate traffic congestion issues.

Council and the NSW Police identified issues with the car park entry/exit onto Macpherson Street with regard to restrictions on two way movement due to the width, grade and sight distance issues created by the street trees to the east. The NSW Police also recommended that the access to the car park be restricted to left-in/left-out to address safety issues.

The Department's traffic consultant agreed that the restricted left-in/left-out movement restriction was a reasonable and an effective measure for improving traffic flow and safety. The restriction would be feasible given the support of the roundabouts at either end of Macpherson Street, which would allow cars to access the car park from the west and exit to the east, but may require some form of physical traffic control to enforce the left-turn only movements.

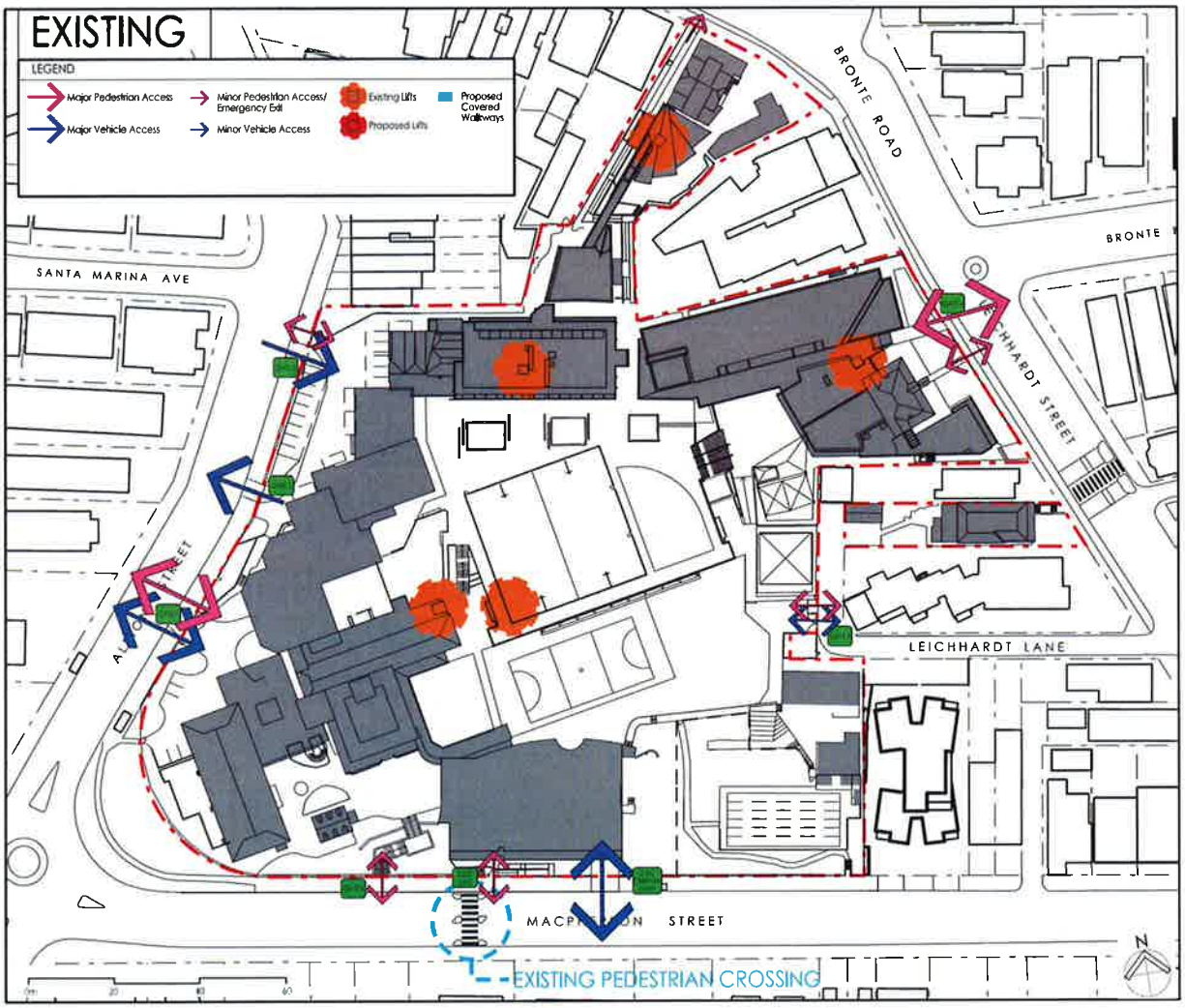

Figure 20: Existing site access points and circulation

The Department's traffic consultant agreed that the restricted left-in/left-out movement restriction was a reasonable and an effective measure for improving traffic flow and safety. The restriction would be feasible given the support of the roundabouts at either end of Macpherson Street, which would allow cars to access the car park from the west and exit to the east, but may require some form of physical traffic control to enforce the left-turn only movements.

The applicant indicated a willingness to consider a restricted left-in/left-out movement for the car park access but identified that a central median could not be provided as it would result in potential safety issues with pedestrians using the median to wait in the centre of the road as well as impacting on road width.

The Department's traffic consultant recommended the following conditions of consent:

- independent road safety audits be undertaken for all stages of further design development and prior to commencement of use of the relevant facilities, especially for the RPAC car park access; and
- prior to the operation of the consent, the timing or trigger (such as road safety audit) for the establishment of a left-in/left-out movement restriction for the RPAC car park access off Macpherson Street needs to be determined.

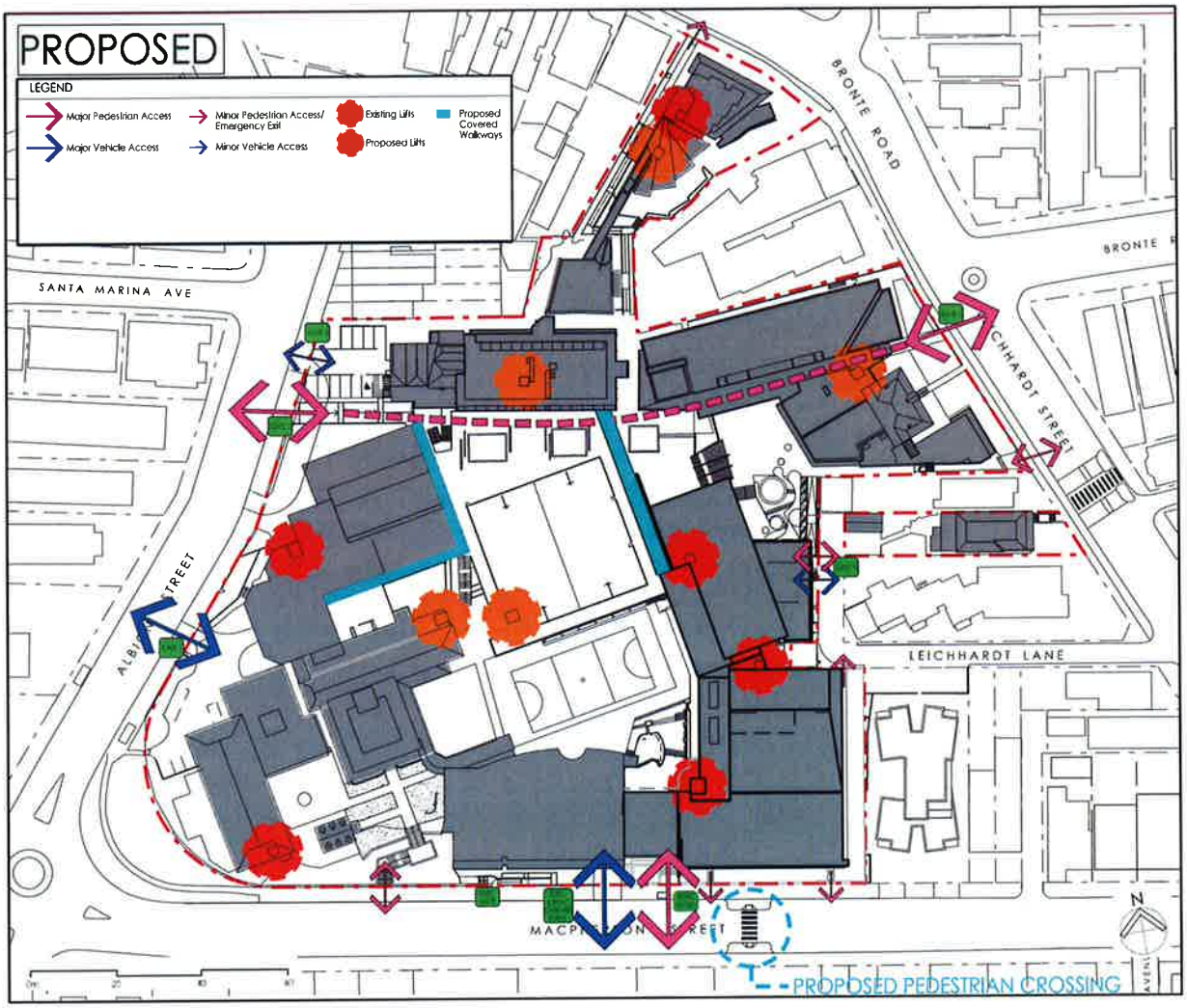

Figure 21: Proposed site access points and circulation

The Department supports the changes to the entry points and walkways as they would improve circulation, connectivity and the legibility of the campus. The changes would also improve safety with fewer vehicle access points and greater separation of pedestrians and vehicles to minimise conflict. The closure of Gate 1 would result in diverting students and staff travelling by public transport to Gates 2 and 4 (pedestrian only gates), which are approximately 100 metres away from the public bus stop. Access via Gate 2 is considered reasonable as it provides good access to the remainder of the campus. Access via Gates 2 and 4 would reduce pedestrian and vehicle conflict with students only navigating past one controlled vehicle crossing.

The Department has incorporated the traffic consultant's recommendations in the recommended conditions of consent. The Department has also incorporated a requirement that as part of the monitoring and review of the travel demand management strategies, the accessibility of the campus for staff and students arriving/departing via public transport be reviewed.

4.2.2 Built Form and Urban Design

The proposal includes three new building envelopes:

- Stage 1 RPAC building envelope fronting Macpherson Street;
- Stage 2 building envelope to replace JBH building located along Albion Street; and
- Stage 5 building envelope which adopts the approved form of the Nan Hind Pavilion.

The proposal also contains minor additions to the Lenthall Building as part of Stage 3, comprising enclosure of part of the undercroft. Therefore, Stage 3 would have negligible built form impacts.

A maximum FSR of 0.6 applies to the subject site under Waverley LEP. The proposed additional gross floor area (GFA) on the site is 5,231sqm, increasing the total GFA for the site from 17,727sqm to 22,958sqm (refer to **Table 5** for GFA breakdown). The site already exceeds the development standards and the proposal would result in a greater exceedance, increasing the FSR from 0.8:1 to 1:1 for the entire school campus.

A 9.5 metre height control also applies to the site. The three proposed building envelopes have maximum heights of 19.08 metres, 11.13 metres and 11.2 metres, which exceeds the prescribed control.

The applicant has argued that compliance with the standards is unreasonable and unnecessary as the controls are not appropriate for an educational establishment, especially where the development standards are already exceeded.

Table 5: Existing, approved and proposed GFA and FSR

Building	Existing GFA (sqm)	Existing & Approved GFA (sqm)	Proposed GFA (sqm)
RPAC building envelope	0	0	5,289
JBH building envelope	514	514	960
Nan Hind Pavilion	0	597	597
DJSC	2,879	2,879	2,771
School Museum	44	44	44
Lenthall Building	1,713	1,713	1,743
Administration Building	1,423	1,423	1,229
Uniform Shop	222	222	222
J-Block	2,028	2,028	1,881
Green Lab	131	131	0
St Johns Building and Isabel Hall Wing	2,247	2,247	2,247
Nan Hind Centre	751	751	751
Junior School Buildings	2,949	2,949	2,949
317 Bronte Road	241	0	0
319A Bronte Road	86	0	0
D&T Workshop	131	131	0
Jo Karaolis Sports Centre	2,275	2,275	2,275
Approved Indoor Sports Complex	0	2,370	0
Total GFA	**17,727**	**20,274**	**22,958**
FSR	**0.8:1**	**0.9:1**	**1:1**

The applicant also contends that:

- the proposed FSR is commensurate with the development standards applying to the medium density residential development to the south where a FSR of 0.9:1 applies, and

to the Charing Cross retail strip to the north-west and neighbourhood shops to the south-east of the site where a FSR of 1:1 applies;
- the envelope heights are consistent with existing and approved development across the site and any reduction would potentially result in the loss of playground or landscaping areas;
- the built form of the RPAC is appropriate within the context of Macpherson Street;
- the RPAC is comparable to the existing consent granted by the Land and Environment Court on 10 April 1992 for the Performing Arts Centre and Indoor Sports Complex (DA-258/89);
- the RPAC development provides an appropriate transition between the DJSC and the adjoining residential development at 4 Macpherson Street, which also exceeds the 8.5 metre height limit that applies to that site;
- the Stage 2 JBH development replaces development that currently partially exceeds the height control;
- Council has supported development up to 14 metres at Waverley College that exceeds the 9.5 metre height limit that also applies to that nearby school site, further demonstrating that the height controls are not suitable for education uses;
- the proposal would not result in unreasonable amenity impacts;
- the development standards have been virtually abandoned as existing and approved development generally exceed the development standards for the site; and
- compliance would impede the further delivery of infrastructure and compromise the objectives of the infrastructure zoning of the site.

The exceedances of the height and floor space controls were raised as an issue by the community groups and in the public submissions. The public submission considered that the intensification of the school use and the height was inconsistent with the locality and would result in amenity impacts on the neighbourhood. In particular, the height and massing of Stage 1 would have significant amenity impacts on the adjoining residential flat building.

Stage 1 RPAC building envelope

The applicant is seeking approval for a six storey building envelope (including plant level) located on the Macpherson Street frontage. Concurrent approval to construct the Stage 1 RPAC building is also sought. The RPAC building would contain the aquatic centre (two pools), 500 seat auditorium, multi-purpose hall, research centre and ancillary basement car parking. **Figures 22** and **23** show the main Macpherson Street and eastern elevation of the new building, while **Figures 24** and **25** show the building in perspective when viewed from Macpherson Street.

The RPAC building replaces the outdoor swimming pool and largely fills the undeveloped south-eastern portion of the site. The building has an irregular shaped footprint due to proposed uses of the building, which require large uninterrupted floorplates and taller ceiling heights to accommodate the fly tower, seating for the auditorium and deeper pool areas for diving.

The approved Indoor Sports Complex, which the proposal seeks to replace, comprised 2,370sqm of GFA with a height of approximately RL 95.1 and parapet height of RL 92.25. The RPAC building proposes GFA of 5,289sqm and a maximum height of RL 101.08. The RPAC building is sited where the approved Indoor Sports Complex was intended to be located.

The building would present as a regular four storey building along Macpherson Street, with a similar height to the DJSC. The RPAC building has also been setback from the property boundary of the adjoining residential flat building (4 metres). The proposed building then increases in height to accommodate the fly tower for the auditorium and extends north at this elevated position to form the research centre.

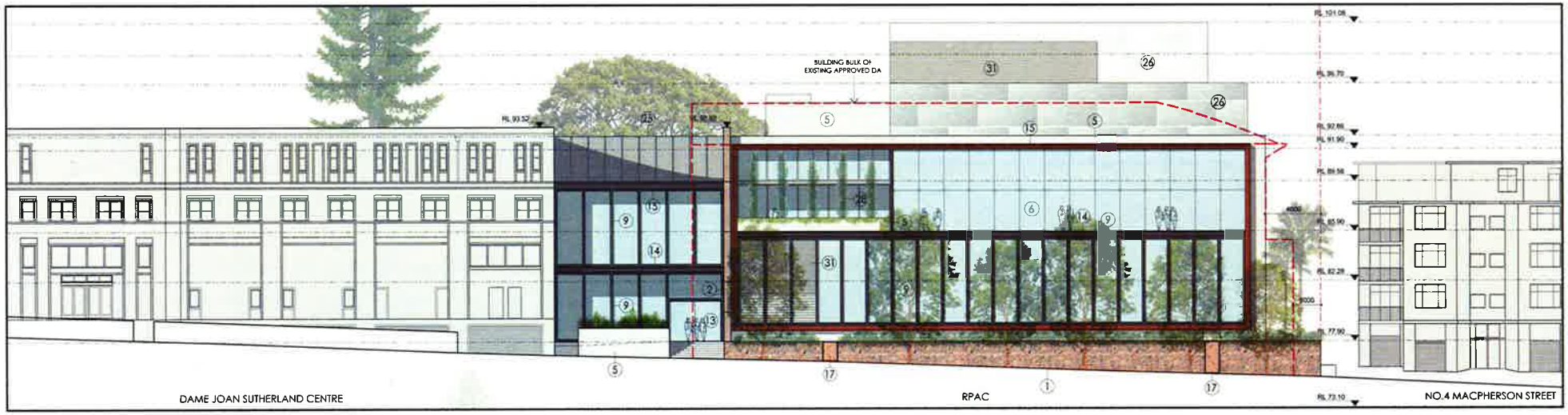

Figure 22: RPAC Macpherson Street elevation (outline of existing Indoor Sports Complex approval dotted red)

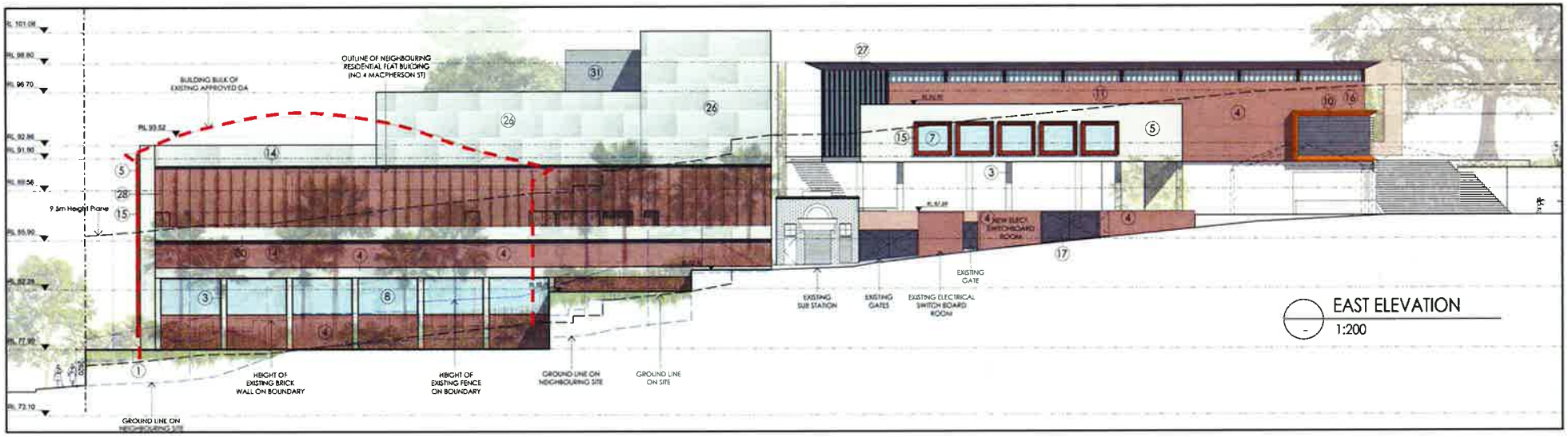

Figure 23: RPAC eastern elevation (outline of existing Indoor Sports Complex approval dotted red)

Figure 24: Model of Stage 1 (RPAC) viewed from Macpherson Street

The research centre is located immediately west of the lower residential development on Leichhardt Street. The centre has been designed to align with the higher elements on the campus whilst retaining ground level play areas. The upper level of the research centre has been setback from the boundary to minimise the massing impacts on adjacent residential development, including overshadowing impacts.

Figure 25: Aerial view of model of Stage 1 (RPAC)

The Department is of the opinion that the massing of the RPAC development is appropriate for the site as it:

- is generally consistent with the height of the DJSC (parapet RL 93.5) and comparable in height with the adjacent residential flat buildings;

- is appropriate within the streetscape, which includes larger scale school buildings and residential flat buildings;
- consolidates the uses and ensures the greatest retention of open space and play areas;
- improves north-south access through the campus by providing covered access for the length of the building and linkages to existing education buildings;
- incorporates articulation and modulation of the building to provide visual interest and mitigate the massing of the development;
- responds to the topography of the site and is designed to provide a transition between the tallest elements on the campus and the surrounding development;
- provides appropriate setbacks to allow for landscaping and allows for the retention of a landscaped setting along Macpherson Street;
- is comparable with the height of the previously approved Indoor Sports Complex at the same location; and
- would have negligible heritage impacts given the separation from heritage significant buildings and reinstatement of the sandstone rubble wall (discussed further in this report).

The Department is satisfied that compliance with the height and FSR controls of the Waverley LEP would be unreasonable and unnecessary given the proposed uses, and the surrounding development. Accordingly, the exceedance of the development standards would not raise any matter of significance for the State or regional environmental planning. The Department's assessment concludes that there would be minimal public benefit in maintaining the development standards given that it would render the site incompatible for the proposed use and that there is sufficient environmental planning grounds to support the variations as the impacts of the development can be adequately mitigated and/or managed.

Accordingly, the Department concludes that the proposed envelope, built form and design of the RPAC is appropriate for the site.

Stage 2 JBH concept building envelope

The concept proposal seeks concept approval for a three storey envelope where the JBH and Green Lab are currently located on the western portion of the site, adjacent to Albion Street. The redevelopment of the JBH site results in an increase in GFA of 168sqm and accommodates the new Technology and Applied Science (TAS) and Sciences Block, which is anticipated to consist of 13 classrooms. **Figure 26** shows the massing of the JBH envelope within the context of the surrounding existing school buildings.

The proposed building envelope provides a regular shaped infill development that is surrounded by school buildings. It would have a similar footprint to the existing JBH building at the ground level with the existing setback to Albion Street maintained whilst the two upper levels extend the footprint closer to Albion Street. The new building envelope would ensure the ground level remains open and is supported by additional landscaping. The proposed building envelope facilitates the separation of the St John's Building and the JBH development and the establishment of the main east-west pedestrian linkage.

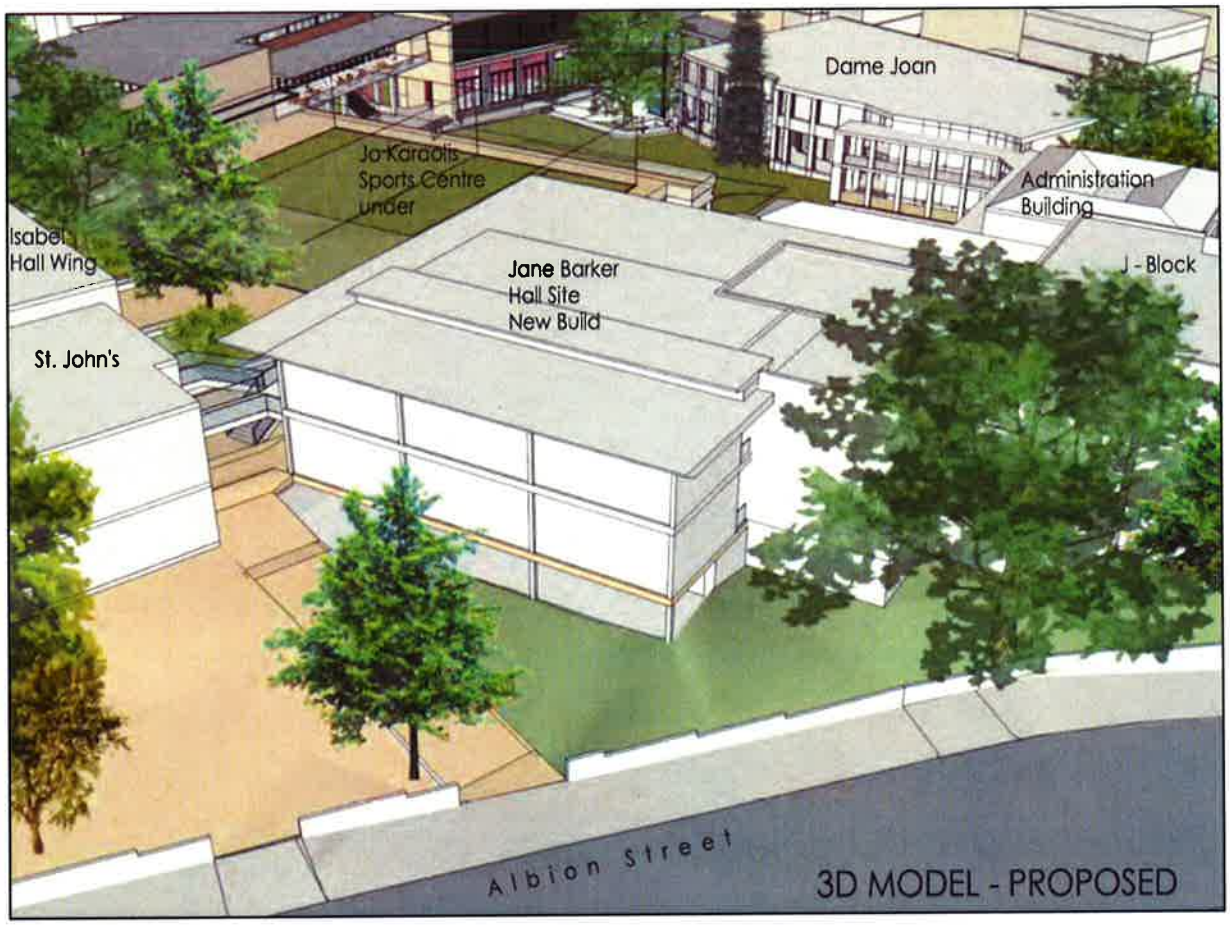

Figure 26: Stage 2 JBH building envelope - New TAS and Science Block

The Department's assessment concludes that the massing of the JBH envelope is appropriate for the site as it is consistent with the massing of the surrounding school buildings and would have minimal amenity impacts. Also, the height of the building would be compliant with the 12 metre height control that applies to complying educational establishment development under the Infrastructure SEPP, which the JBH development could be classified as if not for the floor space exccedances on the site.

The application of the development standards would preclude development of further teaching facilities on the site. The Department considers would be negligible impacts on the surrounding environment.

Stage 5 Nan Hind Pavilion Extension Concept Building Envelope

The proposal seeks approval for a four storey envelope at 317-319 Bronte Road at the northern portion of the site. It is located between a retirement village and a three storey residential development. The Stage 5 building envelope mirrors the Council approved extension to the Innovation Centre, also known as the Nan Hind Pavilion (refer **Figure 27**) The Nan Hind Pavilion Extension comprises 597sqm GFA in one basement level for storage and three levels for visual arts and music classrooms. The proposed building provides a regular shaped infill development that is setback from Bronte Road.

Figure 27: Stage 5 Council Approved Nan Hind Pavilion Extension

The Department is of the opinion that the impacts from this building have been adequately addressed in the previous application approved by Council. As considered by Council, the massing of the development was in keeping with the surrounding locality and the amenity impacts were acceptable.

The Department considers that the retention of this building envelope and incorporation as part of the proposal is appropriate. The Department considers there are sufficient environmental planning grounds to support the variations as the built form impacts of the development have already been determined to be satisfactory and the intensification of the school use can be adequately mitigated or managed.

Open Space

The site currently contains 5,624sqm of uncovered playground space, 394sqm of covered playground space and 5,650sqm of deep soil landscaped area (refer **Figure 28**). The proposal seeks to provide 5,329sqm of uncovered playground space, 808sqm of covered playground space and 5,229sqm of deep soil landscaped area (refer **Figure 29**).

This results in an increase in total playground areas by 119sqm but a reduction of deep soil landscaped area by 421sqm, resulting in an overall reduction of 302sqm of green space on the site.

The proposed reduction in deep soil landscaping which would result from the RPAC footprint, is largely offset by the reduction in circulation space and vehicle service areas at Gates 3 and 6. The proposal would therefore alter the landscaped setting at the current location of the pool, whilst improving the landscaping and presentation along the Albion Street frontage.

The Department is of the opinion that the proposal is acceptable as the redevelopment of the swimming pool along the Macpherson Street frontage is appropriate within the context of the Macpherson Street streetscape and proposed landscaping improvements to more significant and prominent Albion Street frontage. The RPAC building would be supported by tree planting along the eastern boundary and shrubs along the southern boundary to provide a softer interface with the adjoining residential and the public domain interfaces. The Department is satisfied that additional deep soil landscaping zones on Albion Street will adequately offset the tree removal required for Stage 1.

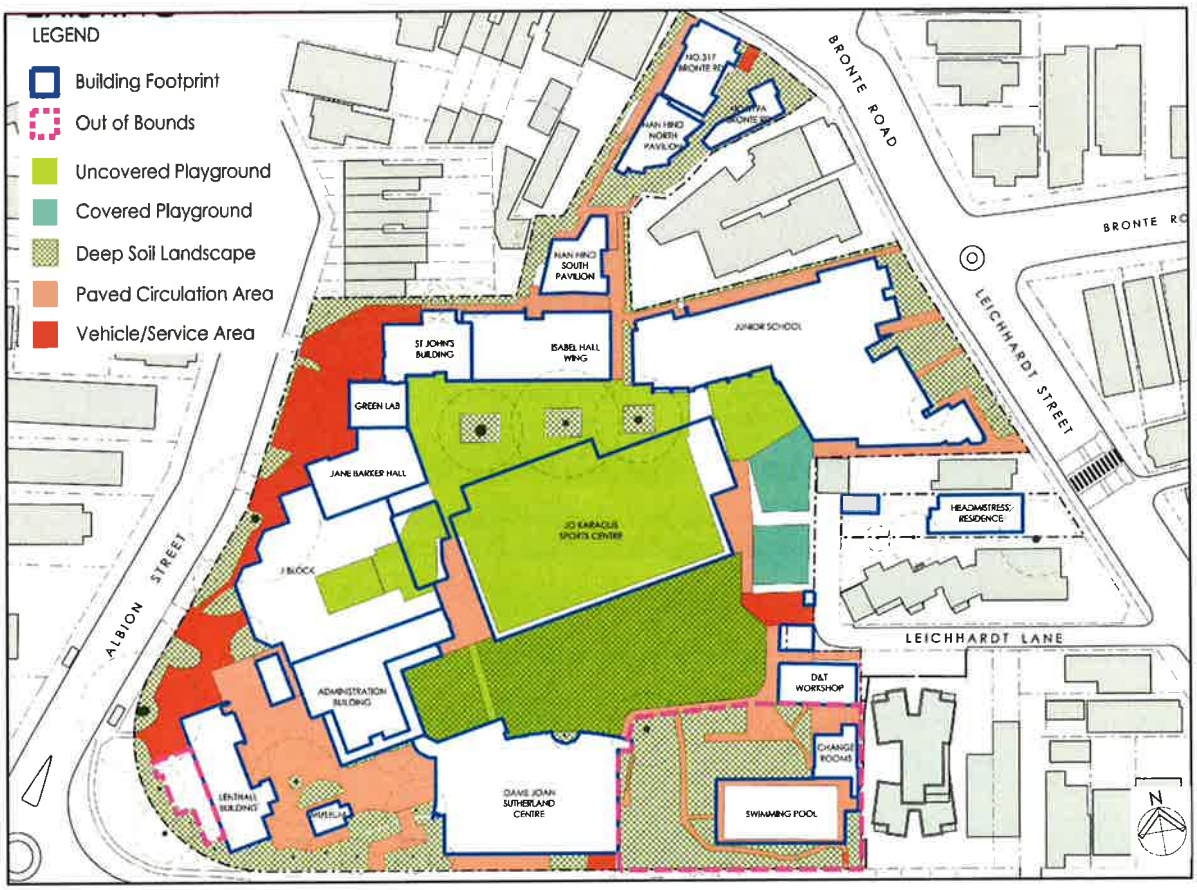

Figure 28: Existing Building Footprints and Landscaped Areas

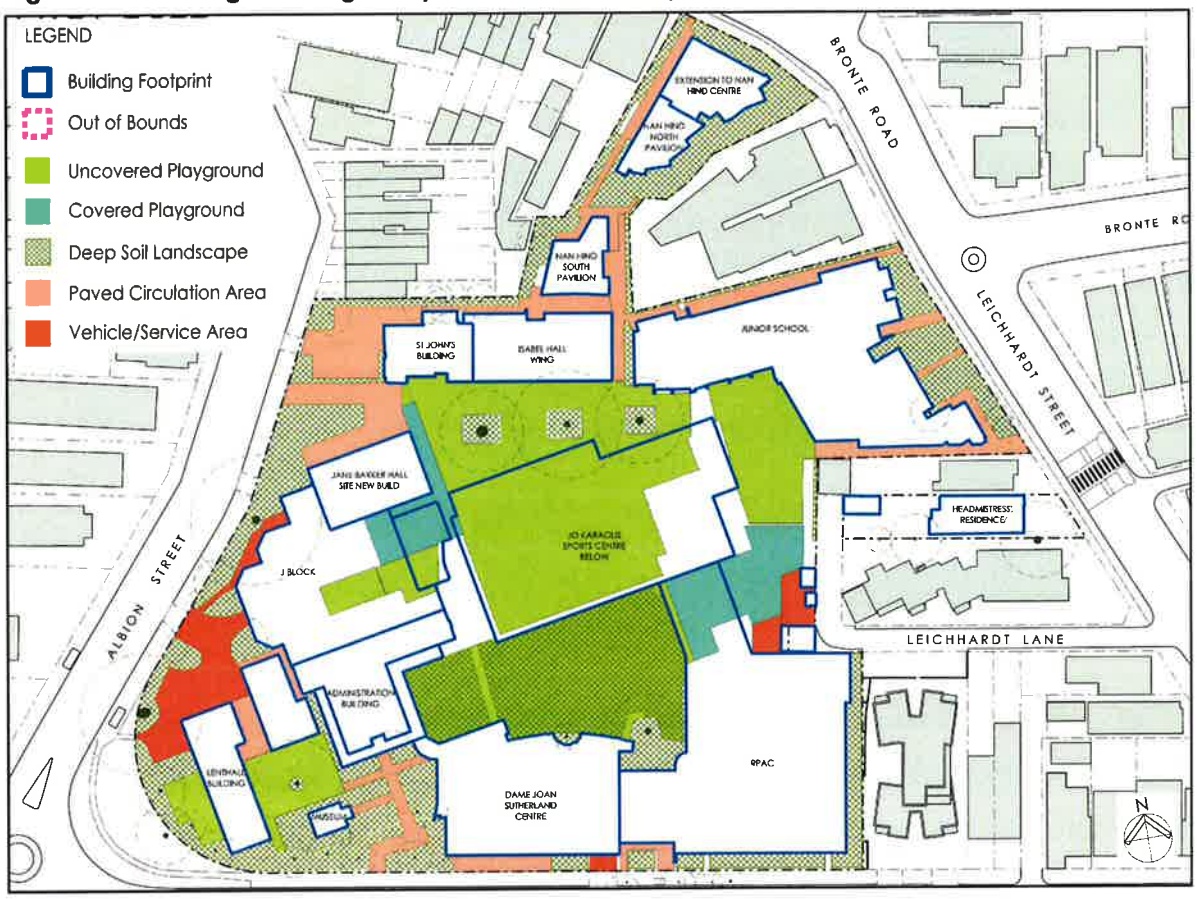

Figure 29: Proposed Building Footprints and Landscaped Areas

4.2.3 Environmental and Residential Amenity

Overshadowing

Overshadowing from the proposal would fall on the following surrounding properties:

- 4 Macpherson Street (RPAC shadow);
- 7 Leichhardt Street (RPAC shadow);
- three properties along the southern side of Macpherson Street (RPAC shadow); and
- the nursing home and retirement village at 319-321 Bronte Road (Stage 5 envelope shadow).

The most significant overshadowing impacts would be on units at 4 Macpherson Street, with shadows cast from the RPAC building falling onto units along the western elevation from 12 pm during mid-winter (refer **Figures 30** to **36**). Shadows would not fall onto the northern elevation until after 2 pm (refer **Figures 37** to **41**). All units within 4 Macpherson Street are dual aspect units with living rooms located to the north, east or south. Located along the western elevation are bedrooms and bathrooms.

Figure 30: RPAC shadow during mid-winter at 9am

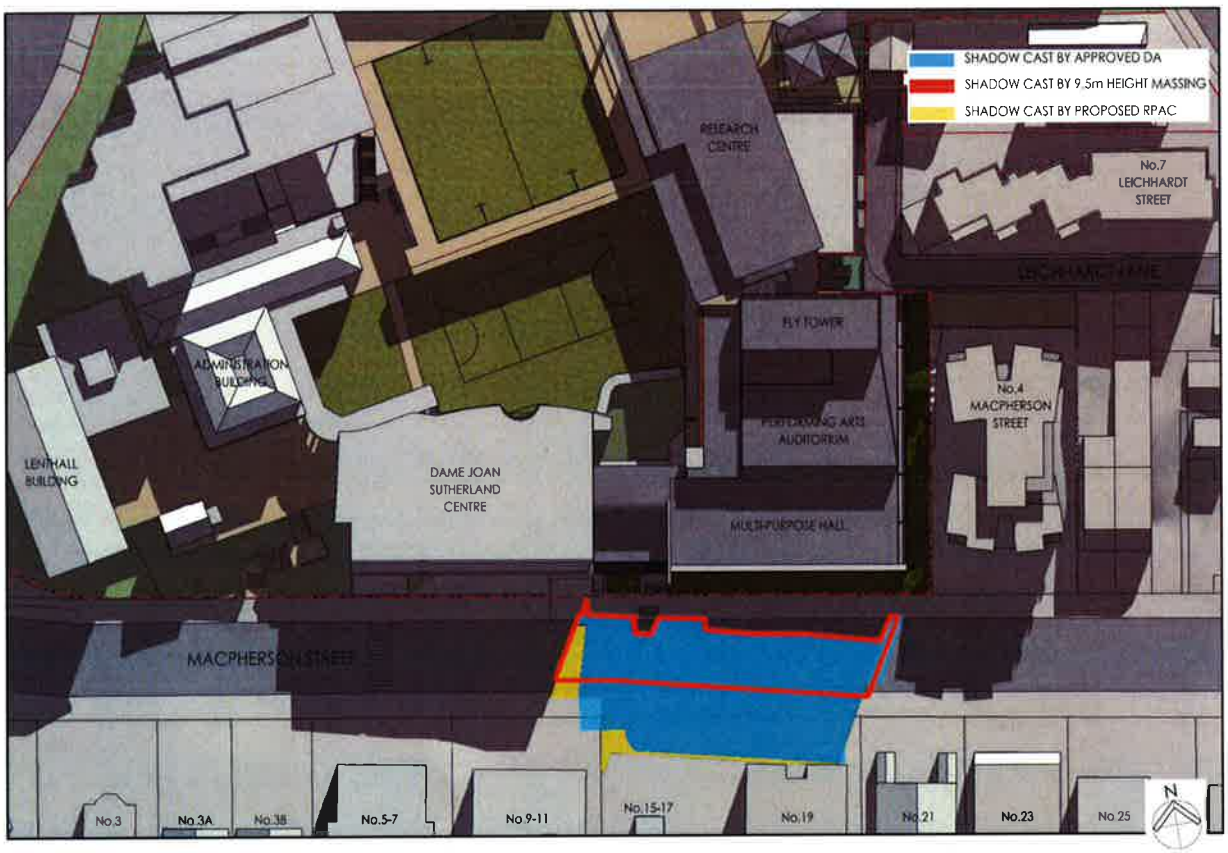

Figure 31: RPAC shadow during mid-winter at 10am

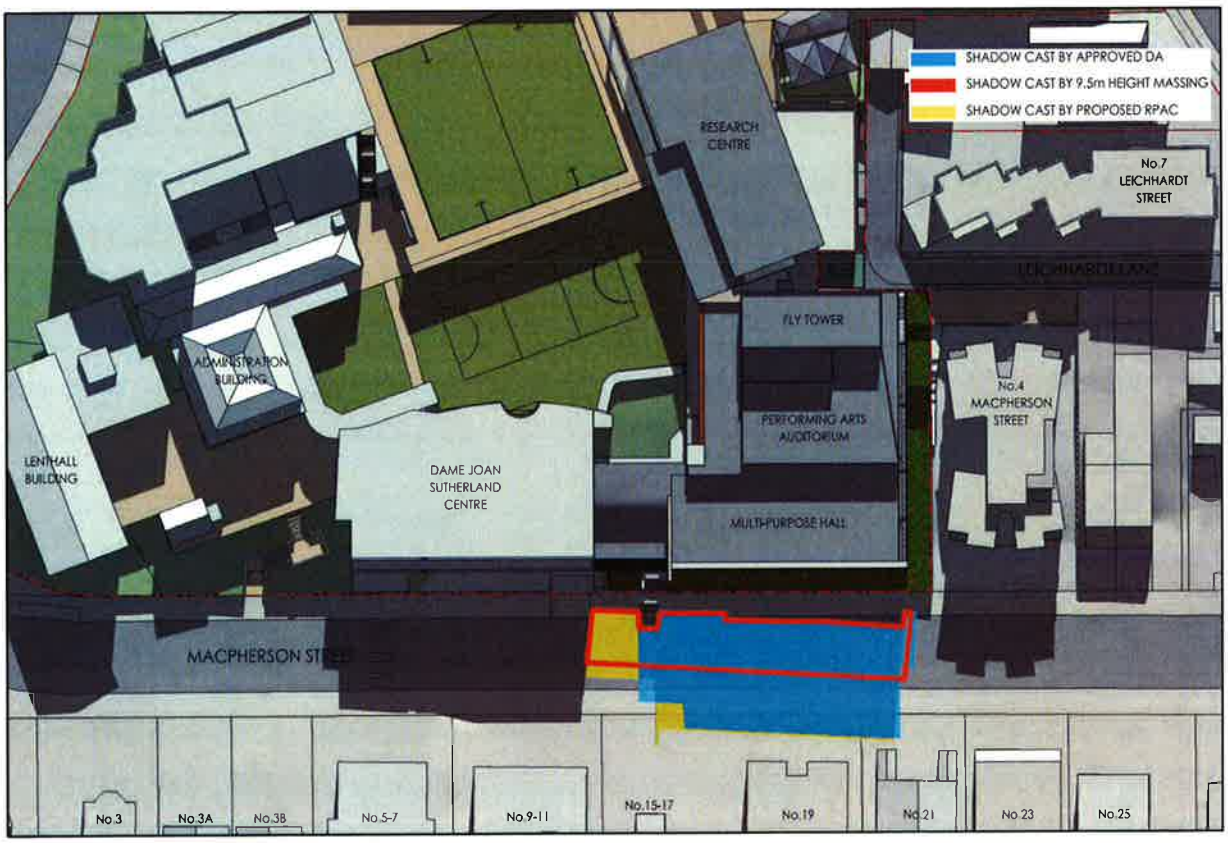

Figure 32: RPAC shadow during mid-winter at 11am

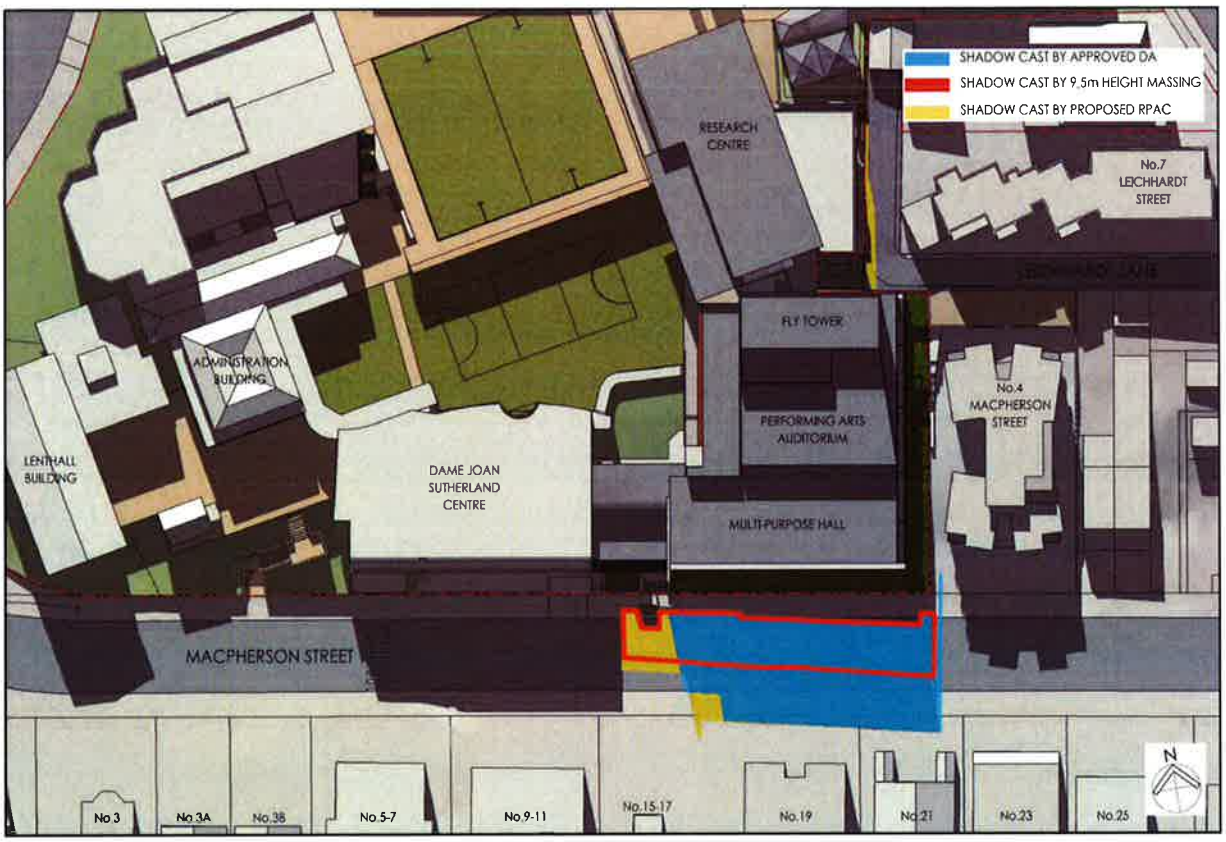

Figure 33: RPAC shadow during mid-winter at midday

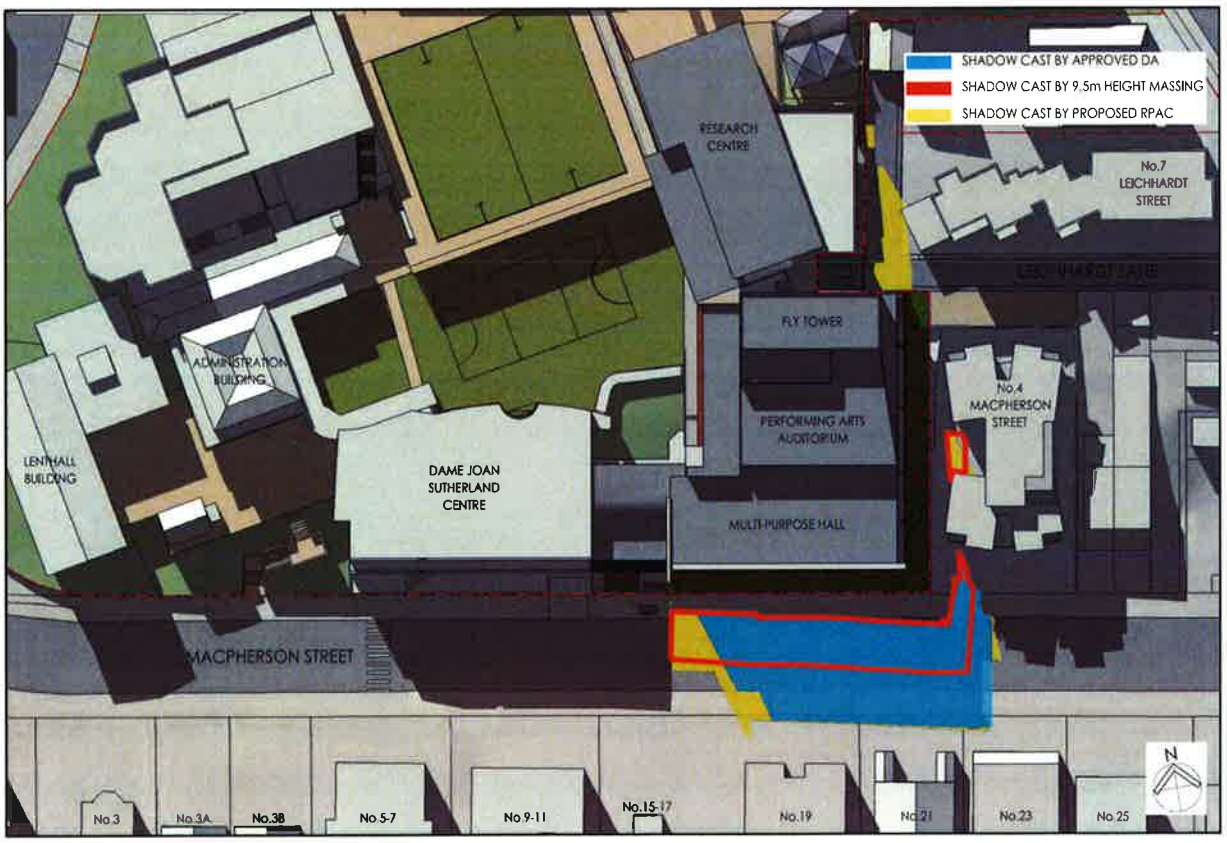

Figure 34: RPAC shadow during mid-winter at 1pm

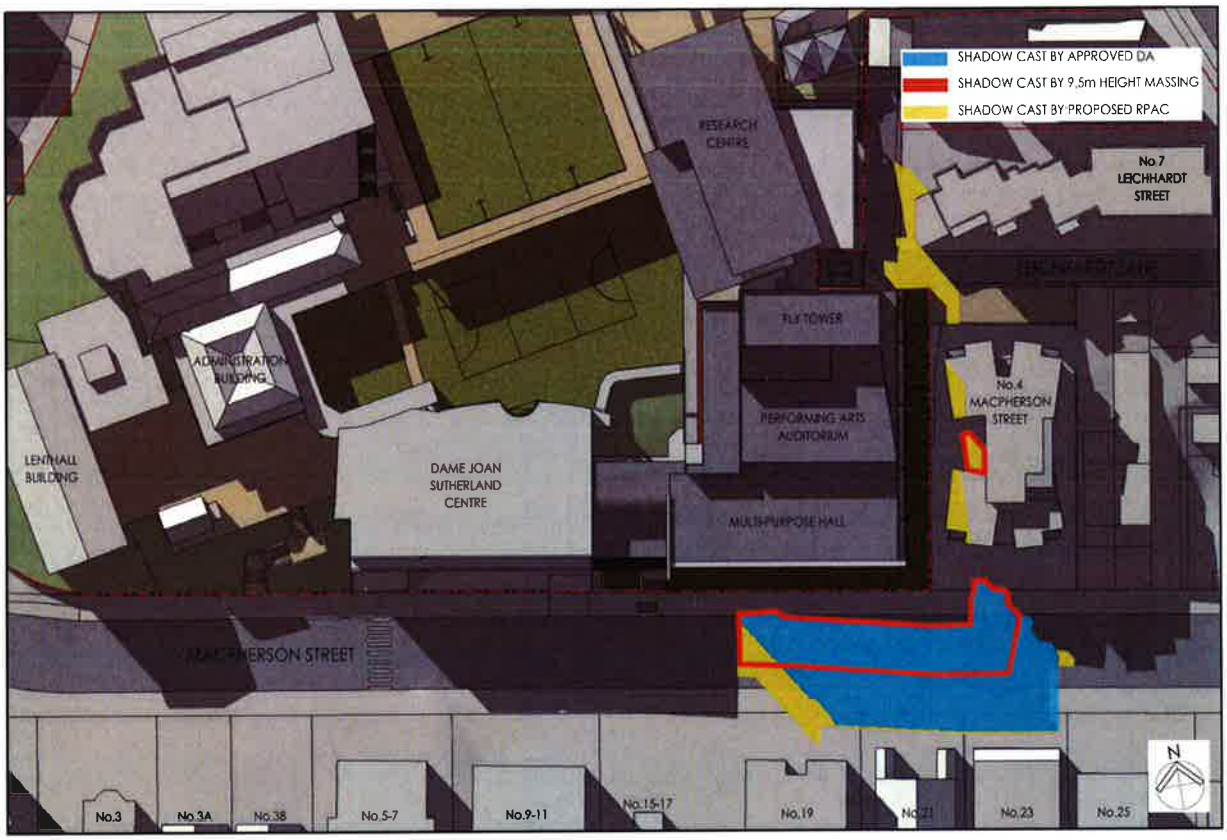

Figure 35: RPAC shadow during mid-winter at 2pm

Figure 36: RPAC shadow during mid-winter at 3pm

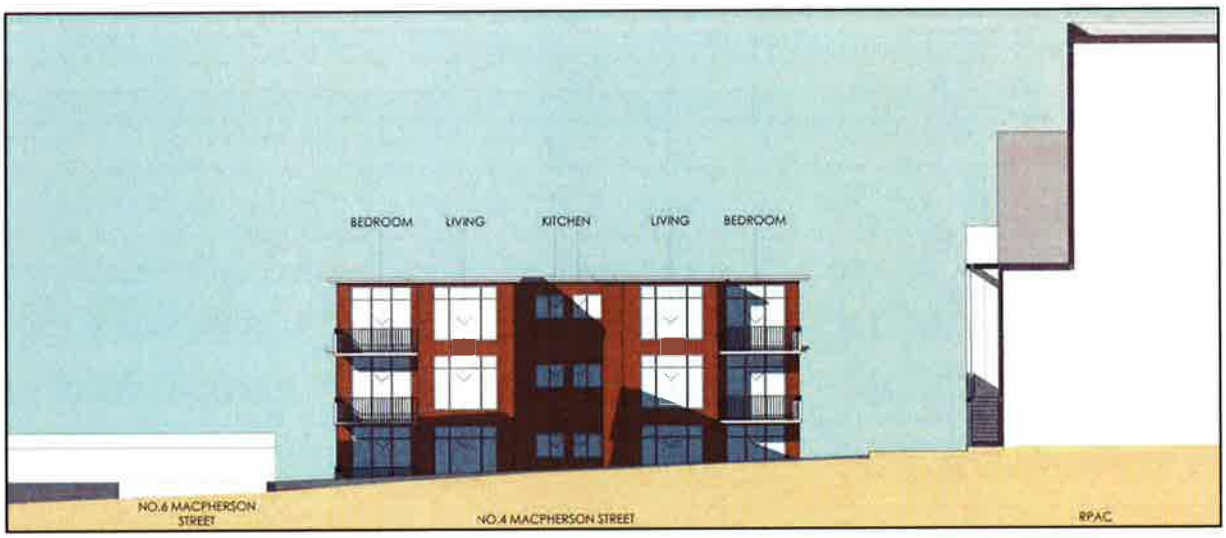

Figure 37: Sunlight to the northern elevation of 4 Macpherson St during mid-winter at 9am

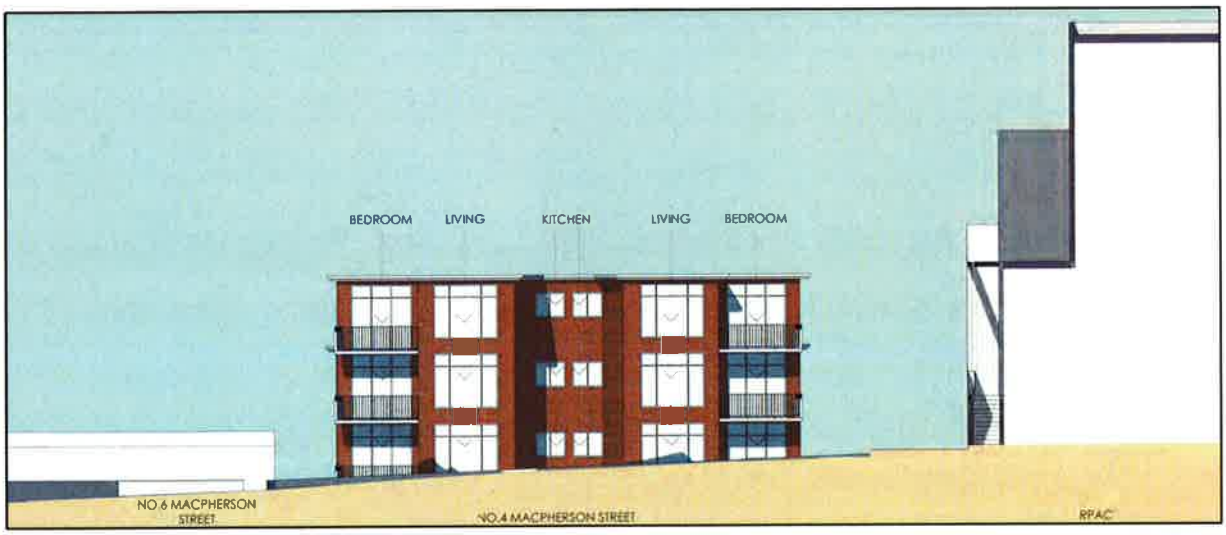

Figure 38: Sunlight to northern elevation of 4 Macpherson St during mid-winter at 10.30am

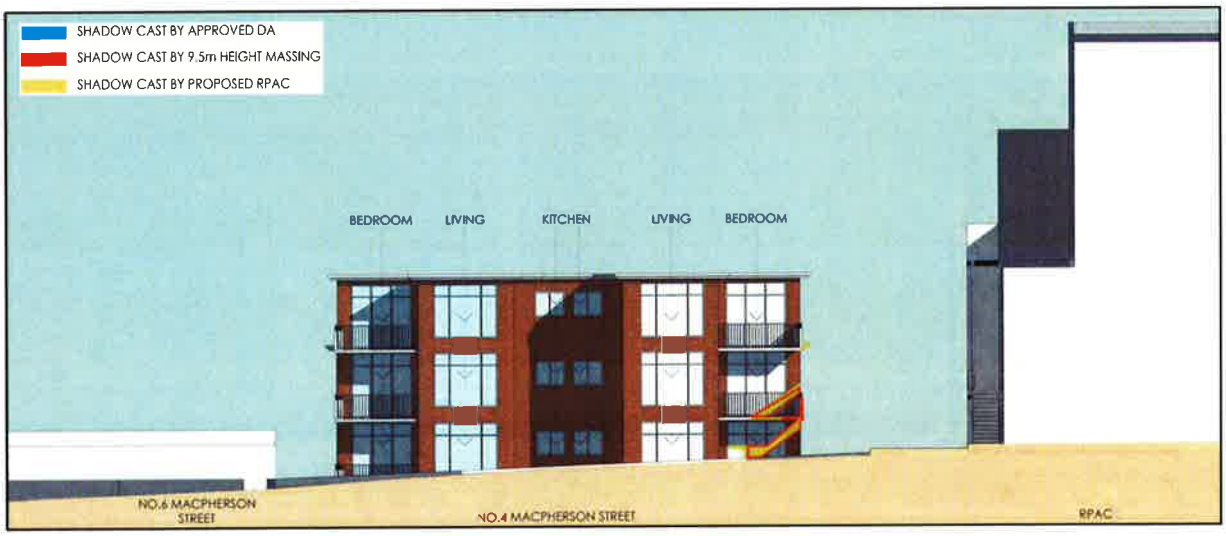

Figure 39: RPAC shadow on northern elevation of 4 Macpherson St during mid-winter at 2pm

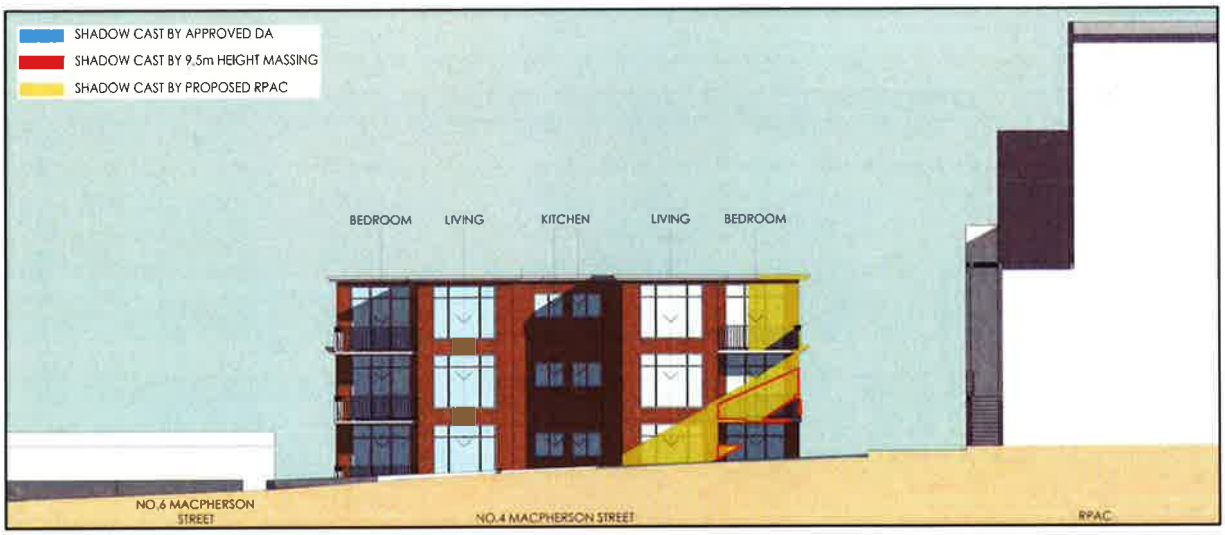

Figure 40: RPAC shadow on northern elevation of 4 Macpherson St during mid-winter at 2.30pm

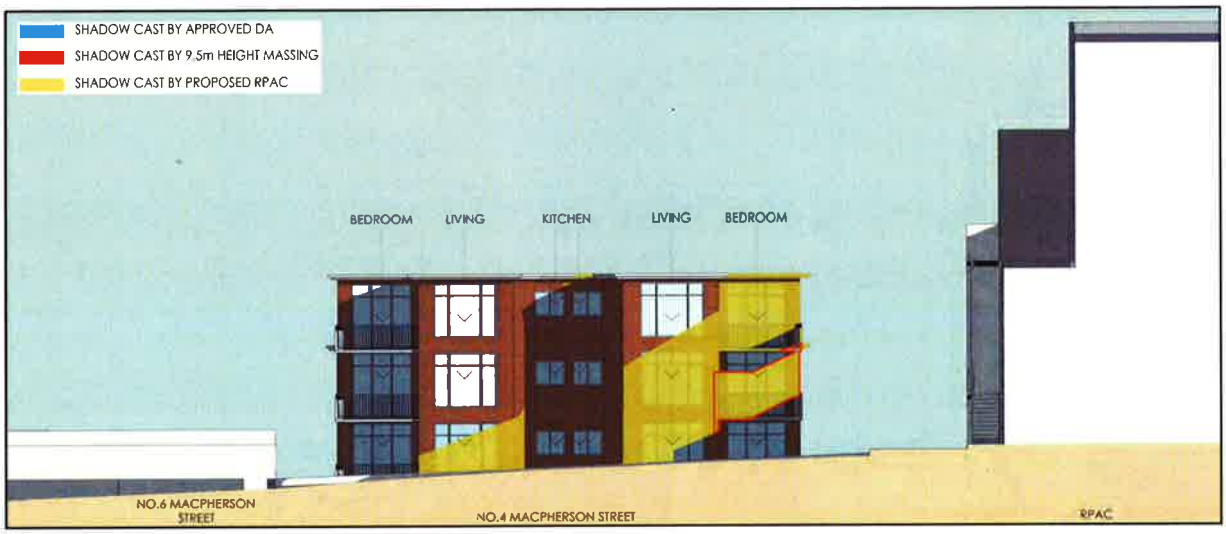

Figure 41: RPAC shadow on the northern elevation of 4 Macpherson St during mid-winter at 3pm

All units at 4 Macpherson Street affected by the overshadowing would receive sunlight to the living areas and private outdoor living areas during the morning. Overshadowing of living areas would not occur until after 2pm. The units located in the south-western corner of the building have south facing living areas, which currently do not receive sunlight, but the balconies receive partial sunlight in the afternoon during mid-winter. The RPAC would result in overshadowing of these private open space areas, however, the previously approved Indoor Sports Complex had similar overshadowing impacts (refer **Figures 42** to **44**).

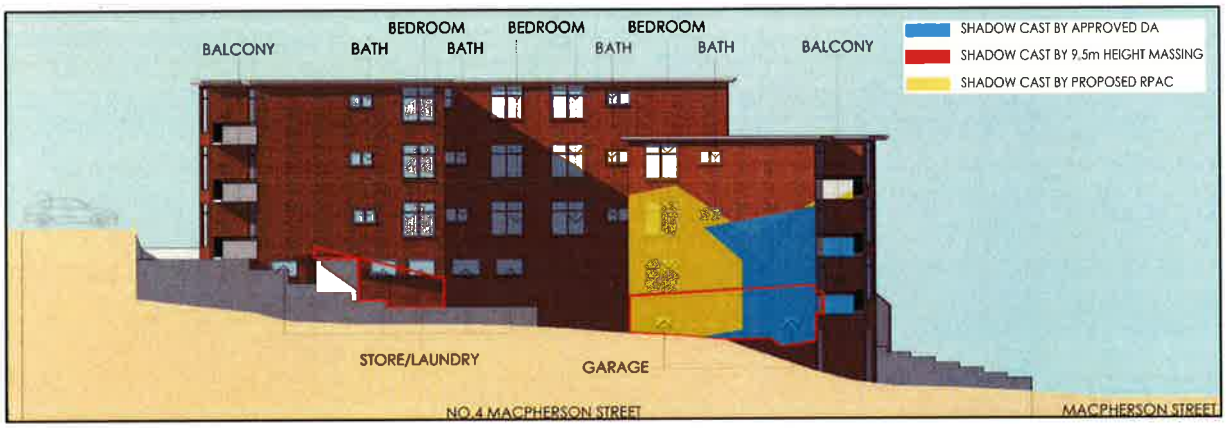

Figure 42: RPAC shadow on the western elevation of 4 Macpherson St during mid-winter at 1pm

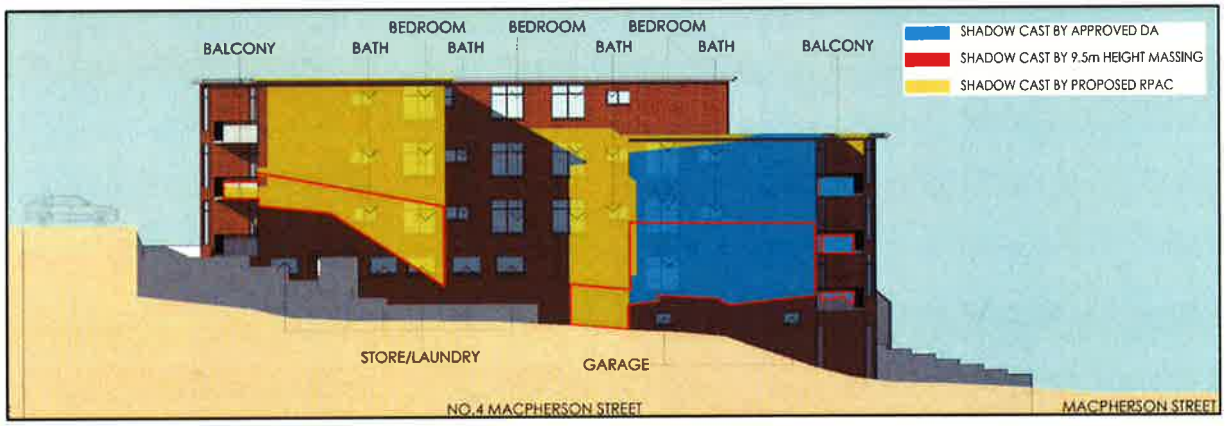

Figure 43: RPAC shadow on western elevation of 4 Macpherson St during mid-winter at 2pm

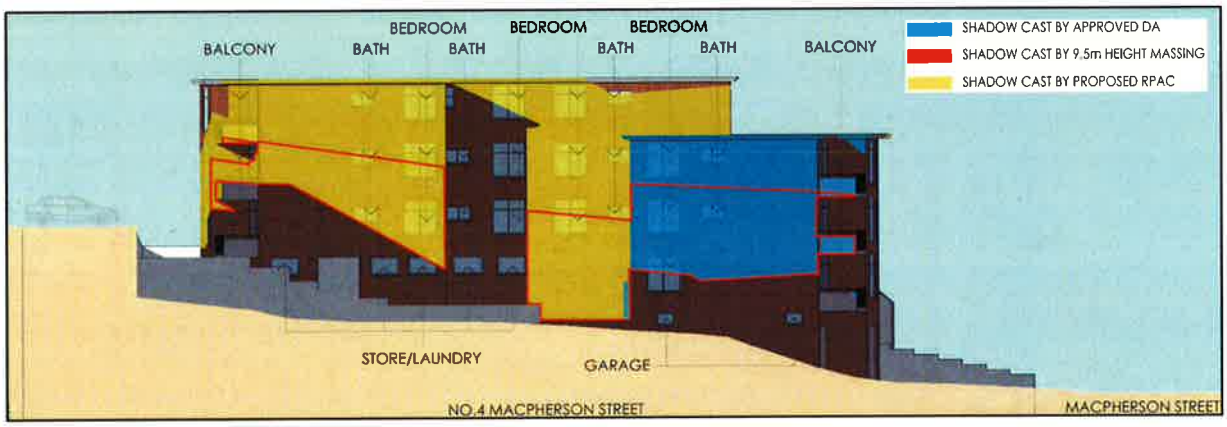

Figure 44: RPAC shadow on western elevation of 4 Macpherson St during mid-winter at 3pm

A significant proportion of the bedrooms along the western elevation are already overshadowed during mid-winter. Sunlight to these bedrooms would only be available in the late afternoon, except for the uppermost floor, which would still receive at least two hours of sunlight during mid-winter. The bedrooms of the south-western column of units would be most significantly impacted as the two lower levels would lose all sunlight to the bedrooms during mid-winter whilst the upper most unit in this column of units would still receive between one and two hours of sunlight. This column of units would receive between one and two hours of sunlight to the bedrooms during all other times of the year.

The overshadowing to 7 Leichhardt Street would be minimal as it would be confined to garages and limited shadowing of the eastern units between 2pm and 3pm during mid-winter.

The overshadowing of properties along the southern side of Macpherson Street would be limited as these north facing properties would receive sunlight all day during mid-winter and overshadowing from the RPAC would be from 9am to 10am.

The impacts of the Stage 5 envelop on the nursing home were considered acceptable by Council as rooms on the north western elevation of the nursing home maintain in excess of two hours of sunlight and generally in excess of three hours of sunlight. Therefore, the overshadowing impacts of Stage 5 are still considered acceptable.

Accordingly, the Department's assessment concludes that the overshadowing impacts of the development are acceptable as all residential properties affected would maintain a minimum of two hours of sunlight during mid-winter between 9am and 3pm to living areas and private open space areas except for the south facing units at 4 Macpherson Street. However, these units would retain between one and two hours of sunlight during all other times of the year and the impacts are comparable with those of the previously approved Indoor Sports Complex.

Visual Privacy

Potential privacy impacts would be to the units at 4 Macpherson Street from the RPAC development and the applicant has included the following design treatments to address visual privacy impacts:

- a four metre setback to the eastern boundary and mature palm tree planting along the common boundary;
- fixed windows with obscure glazing along the extent of the aquatic centre on the eastern elevation; and
- no windows along the remainder of the eastern elevation at the common boundary with 4 Macpherson Street.

Figures 45 and **46** illustrate the design treatments along the common boundary with 4 Macpherson Street.

The Department is satisfied that the mitigation measures would effectively minimise any potential privacy impacts from the RPAC on 4 Macpherson Street. The Department considers the treatment to the aquatic centre glazing should be extended to the glazing for the research centre given it is located directly to the west of the communal private open space of 7 Leichhardt Street. The Department has recommended a condition to this effect.

Privacy and light spill impacts from the RPAC development on residential properties along Macpherson Street was also raised as an issue in the public submissions. The applicant has limited operating hours of the events, including the elevated terrace, to 9.30 pm except for the boarders dance. The Department considers that the street tree planting and buffer provided by Macpherson Street would mitigate any potential privacy impacts, including light spill.

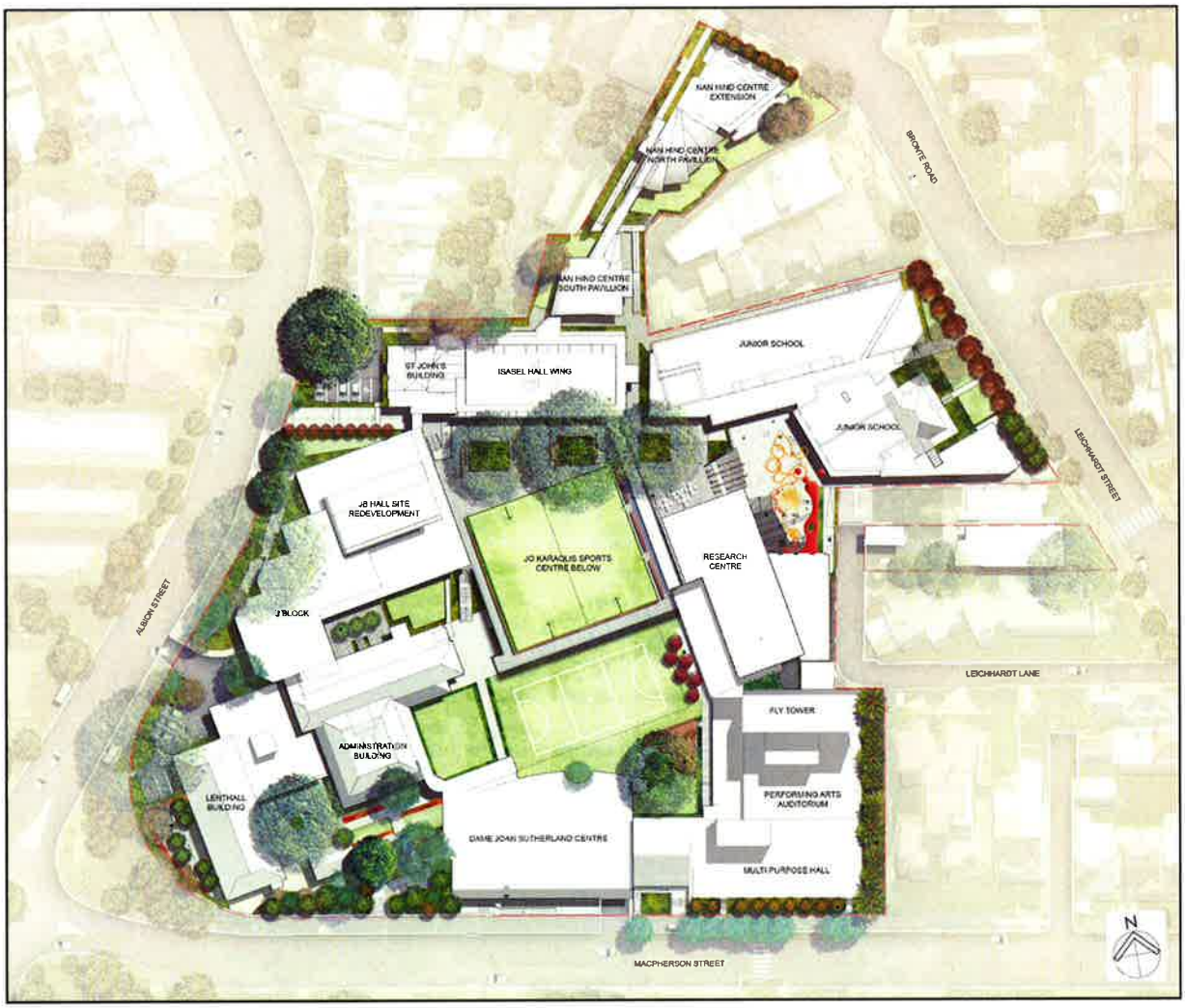

Figure 45: Landscaping Plan

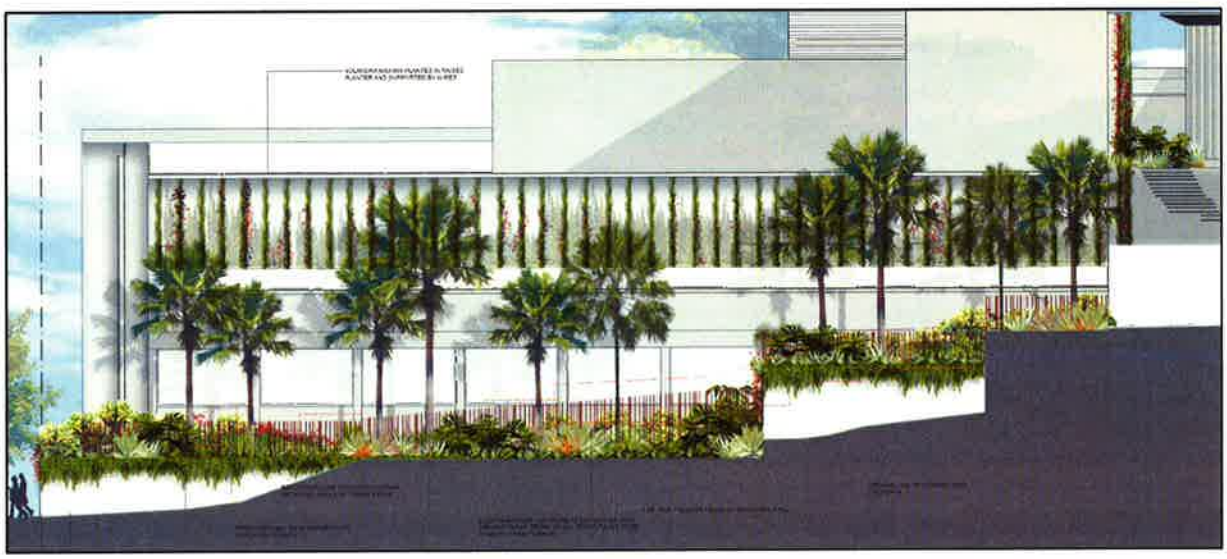

Figure 46: Landscaping alongside the RPAC building and common boundary with 4 Macpherson Street

Operational noise impacts

Noise will be generated during the operation of the development from the following noise sources:

- mechanical plant equipment:
- use of the aquatic centre;
- events at the auditorium/hall; and
- car park activities.

The Construction and Operational Noise Report established operational site specific noise levels for the surrounding residential and commercial land uses based on the NSW Industrial Noise Policy (INP) which are identified in **Table 6**.

Table 6: Operational Site Specific Noise Criteria for Surrounding Land Uses

Receiver	Noise Level LAeq (dBA)			
	Day Time (7 am to 6 pm)	Evening (6pm to 10 pm)	Night Time (10 pm to 7 am)	Morning Shoulder (6 am to 7 am)
Albion Street Residences	55	45	39	40
Macpherson Street Residences	55	45	40	40
Leichhardt Lane Residences	53	45	40	40
Commercial Receivers	65	65	65	65

Mechanical Plant

The Construction and Operational Noise Report identified noise levels are projected to be 46 dBA at the Macpherson Street Residences and concludes that mitigation measures would be required to meet the amenity criteria. This could be achieved through standard noise control measures such as acoustic screening given the minor exceedance by 1 dBA.

The Department has recommend a condition requiring compliance with the operational noise goals established in the Construction and Operational Noise Report, and that the applicant demonstrate that the mechanical plant can be controlled to meet the night time noise level in **Table 6** during the morning shoulder period.

The Department has also recommended that the applicant undertake a noise monitoring program within 60 days of the commencement of use and then one year after commencement of operation of the RPAC to verify that the measured noise levels of the mechanical plant do not exceed the site specific operational noise levels.

Aquatic Centre, Auditorium and Hall

The use of the RPAC facilities are expected to generate noise levels of up to:

- 95 dBA during musicals in the auditorium which would be mitigated by the enclosure of the auditorium which would also be designed to limit external noise intrusion;
- 33 dBA at the residences on the southern side of Macpherson Street during events in the hall in the evening; and
- 105 dBA when whistles are being used, which would result in a predicted noise level of 32 dBA at the 4 Macpherson Street residences.

The Construction and Operational Noise Report identified that the building would generally attenuate noise to nearby residents and concluded that the predicted noise levels would meet evening and morning shoulder criterion.

The Department has recommended conditions regarding operating hours for the RPAC building and has also recommended that the applicant prepare an Operational Management

Plan for the events to address potential noise impacts associated with functions held within the RPAC. The Department has also recommended that noise monitoring be undertaken during the first noise generating event for each event type (music evening in auditorium, dance in hall, swim training, water polo training, water polo competition) to ensure that the noise levels meet the operational site specific noise levels.

Traffic Noise

The traffic associated with the largest event, up to 600 people, and construction traffic has the potential to generate a minor increase in traffic noise by up to 0.1 dBA, which is well within the permissible 2 dBA above existing road traffic noise levels under the NSW Road Noise Policy (RNP). It is noted that the school already hosts events with these capacities.

Construction noise and vibration impacts

The Construction and Operational Noise Report indicates that the noise impacts during construction would generally exceed the noise management levels at the Macpherson Street and Leichhardt Lane residences during bulk excavation and building construction stages. The predicted construction noise levels would exceed the highly noise affected level of 75 dBA at 4 Macpherson Street during bulk excavation. Construction vibration is predicted to comply with human comfort criteria and generally structural damage vibration criteria, except where rock breakers are used in the vicinity of 4 Macpherson Street.

The Construction and Operational Noise Report acknowledges that noise control measures would be required, including selection of quiet equipment, use of rocksaws instead of breakers, acoustic barriers around plant, respite periods and trial testing of equipment where vibration criteria may be exceeded. Additional measures that should be addressed in the Construction Noise and Vibration Management Plan, including auditing plant, operator training, equipment selection, plant location and noise barriers is also recommended.

The Department has recommended conditions to require the preparation of the Construction Noise and Vibration Management Plan and require that it is implemented during construction. The plan should:

- be prepared in consultation with the noise sensitive receivers on Macpherson Street and Leichhardt Street where the noise level is predicted to be exceeded;
- identify appropriate measures to mitigate the noise impacts;
- monitor noise impacts; and
- establish a complaints management system.

4.2.4 Community Use of Facilities

The application proposes to construct two pools in the aquatic centre, a 25 metre x 30 metre pool to replace the outdoor pool and a new shallow pool for 'learn to swim' classes. The indicative usage profile for the two pools is shown in **Table 7**.

Table 7: Aquatic centre uses and proposed hours of operation

	Frequency	Time	Duration	Attendance
Main Pool				
Water Polo Training	Weekdays (Terms 1 & 4) (am – four days/week* pm – every)	6 am to 8 am & 3.30 pm to 8 pm	am – 2 hrs pm – 90 mins	50/session
Squad Swimming	Weekdays*	6 am to 8 am & 3.30 pm to 8 pm	am – 2 hrs pm – 90 mins	40/session
Diving Program	Weekdays* (one day/week)	6 am to 8 am	2 hrs	30/session
	Saturday	2 pm to 4 pm	2 hrs	30/session
Water Polo	Saturday (All terms)	7.30 am to 6 pm	approx. 45 mins	44/session

	Frequency	Time	Duration	Attendance
Water Polo (Boys and Men)	Sunday (Terms 1 & 4)	8 am to 6 pm	approx. 45 mins	44/session
Shallow Pool				
Learn to swim (6 mths to 5 yrs)	Weekdays	9.30 am to 2 pm	30 mins	24/session
Learn to swim* (K-2 or 5+ yrs)	Weekdays	7.30 am to 8 am & 3.30 pm to 7 pm	30 mins	24/session
Learn to swim (open)	Weekends	8 am to 6 pm	30 mins	24/session

* School student use only

The school currently runs 'learn to swim' classes in the outdoor pool with up to four participants per session. The proposed 'learn to swim' classes would significantly increase the number of classes on offer at the school and the number of participants up to 24 per session. The classes would also be available to non-school student participants.

A number of the public submissions raised concern over the commercial use of the new facilities and the associated additional traffic and car parking impacts, as outlined in **Section 4.2.1** of this report.

Whilst the use of the auditorium was originally proposed to include external groups, the applicant has removed this component as part of the RtS.

Clause 28(3) of the Infrastructure SEPP identifies that an educational establishment (including any part of its site and any of its facilities) may be used, with consent, for any community purpose, whether or not it is a commercial use of the establishment. Consequently, uses that are considered to be for a 'community purpose' are permissible within educational establishments, with consent.

The Department considers that the proposed ancillary 'learn to swim' program would be classified as a community use and is consistent with the intent of clause 28(3) of the Infrastructure SEPP. Therefore, the proposed community use of the pool in the application is permissible with consent. The Department is also of the opinion that the use of the aquatic centre for non-school related water polo competition and training is also considered to be permissible with consent.

The Department considers that the traffic and car parking impacts associated with the use of the aquatic facilities is satisfactory, subject to restricting the use of the facilities for non-school related purposes to outside of peak traffic generating periods and prohibiting any simultaneous use of the aquatic facilities and event facilities on campus.

Any additional use above that proposed in **Table 7** would require separate approval from Council. The Department has included a condition to this effect.

4.2.5 Other Matters

Heritage

St Catherine's School is listed as a heritage item in the WLEP and is located within the Charing Cross heritage conservation area. The Georgian style 'St Johns' building, and the late Victorian mansion, 'La Vincompte', are heritage items under the WLEP. The Heritage Impact Statement submitted with the EIS identifies that the heritage significance is limited to individual components of the site, namely the Administration Building and the other specifically listed items (refer to **Figure 47**).

The demolition works of the link between the Lenthall Building and the Administration Building as part of Stage 3 and minor refurbishment works proposed for the Administration

building and the 'St Johns' Building as apart of Stage 4, including BCA and accessibility upgrade works, involves work to the heritage fabric.

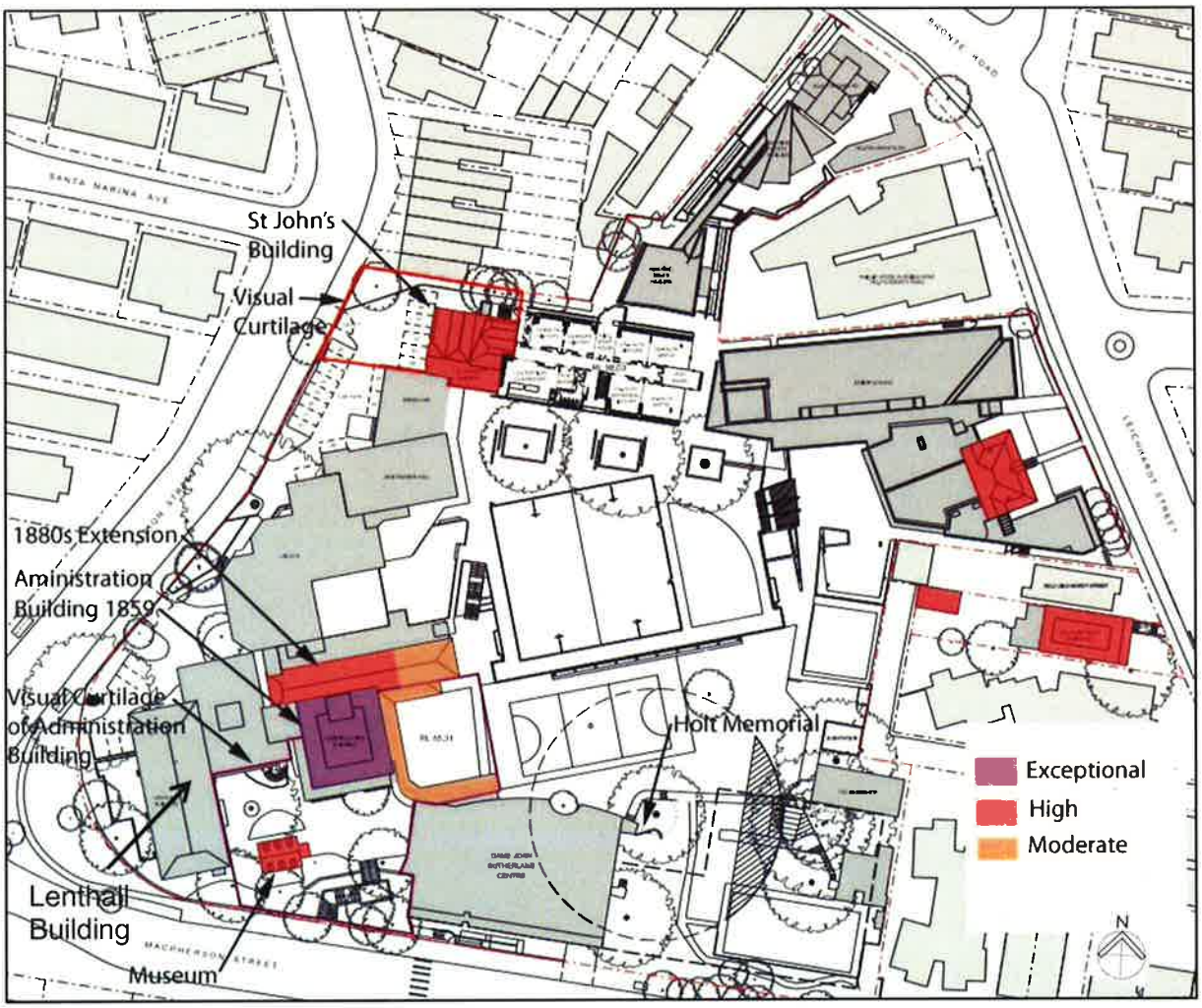

Figure 47: Heritage significant components on school site

The Heritage Impact Statement concluded that the impacts would be acceptable as:

- the RPAC is significantly removed from the heritage components on the site;
- the RPAC would have no impact on the conservation area or heritage items;
- the sandstone rubble wall on Macpherson Street, which has been previously adjusted and remodelled would be reconstructed, stabilising the structure and ensuring its conservation;
- the Stage 2 demolition and building envelope would improve the setting of 'St Johns' as a wider visual catchment and improved landscaping can be achieved;
- the demolition of certain non-significant aspects of the site and continued upgrading of facilities enhances the significance of the conserved items and ongoing school use; and
- the refurbishment works in Stages 3 and 4 would not remove any original or early fabric and in some instances the internal works would restore the original dimensions or remove intrusive elements.

The Department acknowledges that with the exception of the 'St Johns' building, all other heritage items are not within close proximity of the RPAC building, Stage 2 and Stage 3 building envelopes. The Department is of the opinion that the proposal would have an overall positive impact on the heritage significance of the site as:

- the demolition of the JBH and the proposed Stage 2 envelope improves the heritage setting of 'St Johns' and provides greater transparency and access with the new pedestrian gate and east-west pedestrian link;

- the proposal would remove an intrusive element and restore views to the western side of the Administration Building;
- the bulk and scale has been consolidated in the least significant frontage where contemporary school buildings already contribute to the streetscape; and
- the new contrasting contemporary building signifies the ongoing and future use of the campus for school purposes.

Accordingly, the Department is satisfied the proposal will not result in any significant impact on the significance of any of the local heritage items or their setting.

Campus Population

The proposal seeks to increase the student population from 970 to 1,200 and the staff from 202 to 212. The increased student population is not linked to the stages of development of the campus. The proponent is seeking a progressive increase in student numbers of 14 to 16 students annually up until 2029.

The intensification of the school use and increase in student and staff population was raised as an issue in the public submissions. The contravention of the existing restriction of student population at 930 as outlined in the last previous development application for substantial works approved by Council (DA 140-2011) and justification for student increase was also raised as an issue.

The Department considers that the provision of additional student placements and teachers would be in the public interest and that it would provide an overall positive social benefit provided that the impacts associated with the intensified school use can be appropriately managed. As previously discussed in the report, the key impacts associated with the increase in students and staff would be the traffic and parking impacts.

The Department considers that the traffic and parking impacts from the addition of 230 students and 10 staff can be mitigated with the shift in travel modes to the school. The Department does not consider that the Stage 1 approval should restrict the student or staff increase as it is not linked to the capacity of the school buildings. However, the Department does consider that OMTP and the Macpherson Street improvements to be critical to improving safety and managing the impacts and therefore recommends that no student of staff increase be permitted until:

- the OTMP is prepared, implemented, reviewed and mode share shifts have been achieved; and
- the physical improvements to the Macpherson Street drop-off/pick-up have been completed to ensure safety concerns have been addressed.

Public interest

The proposal is considered to be in the public interest as it would have benefits including:

- delivering sustainable development on the campus by considering the life cycle of existing and new structures and future campus requirements;
- providing additional student places, which caters for increased demand;
- improved urban design and pedestrian outcomes for the site; and
- providing overall improved traffic outcomes and travel demand management for the entire school population.

5. CONCLUSION

The staged redevelopment of the school campus and construction of the RPAC building would provide public benefit through the provision of additional school places and improving school operations to address existing issues and potential impacts from the intensification of the school use and additional events held in the new facilities. The proposal is considered to be in the public interest as it would deliver social, economic and environmental benefits to the wider community by providing additional school placements and supporting the generation of operational and construction jobs.

The Department has undertaken a merit based assessment of the proposal taking into consideration the issues raised in the public submissions and is satisfied that the residual impacts have been addressed in the EIS and the RtS, and can be adequately managed through the recommended conditions.

Whilst the proposal would result in exceedances of development standards relating to building heights and floorspace controls, the Department is of the opinion that strict compliance with these standards is unreasonable in this instance given that the site is dominated by existing buildings that are taller than the 9.5 metre height control and current floorspace is well over the floor space ratio control, and amenity impacts from the development are satisfactory.

The proposed travel demand management measures would address the impacts from the proposed development as well as the existing traffic and parking impacts of the school and provide a net benefit by improving drop-off and pick-up procedures across the site, reducing traffic generated by the school and demand on on-street car parking spaces.

The Department is satisfied that the proposed development satisfactorily responds to the issues raised and the recommended conditions of consent will ensure that the intensification of the school use and the construction and future operation of the proposed facilities would maintain the environmental and residential amenity of the surrounding environment. The Department therefore considers the development would be in the public interest and recommends that the staged State significant development application and concurrent Stage 1 be approved, subject to conditions.

6. RECOMMENDATION

In accordance with section 89E of the *Environmental Planning and Assessment Act 1979*, it is recommended that the Planning Assessment Commission, as delegate of the Minister for Planning,

- **considers** the findings and recommendations of this report;
- **approves** the State significant development application for the staged redevelopment of the St Catherine's School campus and construction and operation of Stage 1 of the redevelopment, including increase in student and staff population (SSD 6339), subject to conditions set out in the attached instrument at **Appendix D**; and
- **signs** the attached development consent at **Appendix D**.

Prepared by: Megan Fu

Endorsed by:

Karen Jones 4.12.15
Director
Transport Assessments

David Gainsford 4/12/15
Executive Director
Priority Projects Assessments