

**MAJOR PROJECT ASSESSMENT:
Sydney University Abercrombie
Precinct Redevelopment
Cnr Codrington Street and Abercrombie
Street
(MP07_0158)**



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

October 2012

ABBREVIATIONS

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

Cover Photograph: Abercrombie Street/Codrington Street Perspective

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EXECUTIVE SUMMARY

This report is an assessment of a project application by the University of Sydney (the proponent), seeking approval for the construction of a business school building and student accommodation building, including basement car parking and ancillary works, pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. The proposal is located at the University of Sydney's Darlington Campus, Darlington.

The project application (as amended) seeks approval for bulk earthworks, demolition of existing structures, remediation, subdivision and the construction of a new four to six storey business school building, comprising new learning and teaching spaces, faculty office, lecture theatres and café and two basement car parking levels. The proposal also includes the construction of a new three to five storey student accommodation building providing 188 beds, public domain and landscaping works and including minor works to Darlington Public School. The project has a capital investment value (CIV) of \$247 million and will generate 500 operational jobs and 200 construction jobs.

The site is zoned No.5 Special Uses (University) under South Sydney Local Environmental Plan (SSLEP) 1998. The project consists of a university business school and student accommodation and is permissible with consent.

The EA was exhibited between 25 May 2011 and 24 June 2011. The department received 7 submissions from public authorities, 63 submissions from the public (62 objections and 1 submission of support) and a submission from the then local State Member, Ms Clover Moore MP.

On 20 April 2012, the proponent submitted a Response to Submissions (RtS), which included a Preferred Project Report (PPR) and final statement of commitments proposing extensive architectural and design amendments, including a redesign of the business school building and student accommodation building, building height and gross floor area reductions, relocation of the basement vehicle access, retention of Mandelbaum House and its exclusion from the proposal, and the retention of the large Sydney Blue Gum tree.

The extensive amendments proposed within the RtS were publically exhibited between 2 May 2012 and 1 June 2012, attracting 3 submissions from public authorities and 44 public submissions of objection. In response, the proponent made minor design amendments and provided a revised statement of commitments, which was submitted to the department on 16 July 2012.

The department has assessed the merits of the proposal and considers the key issues to be built form and urban design, transport, environmental amenity, developer contributions, heritage, ecologically sustainable development and contamination. These issues have been addressed in detail and the department is satisfied they can be mitigated and managed, pursuant to section 75J of the EP&A Act.

The department is satisfied that the subject site is suitable for the proposed development and that it will provide improved teaching environments, housing to support student accommodation needs and help support the growth and development of the educational and health precinct surrounding the University of Sydney and is consistent with key strategic planning and other policy objectives. The department therefore considers the project to be in the public interest and recommends that the project application be approved, subject to conditions.

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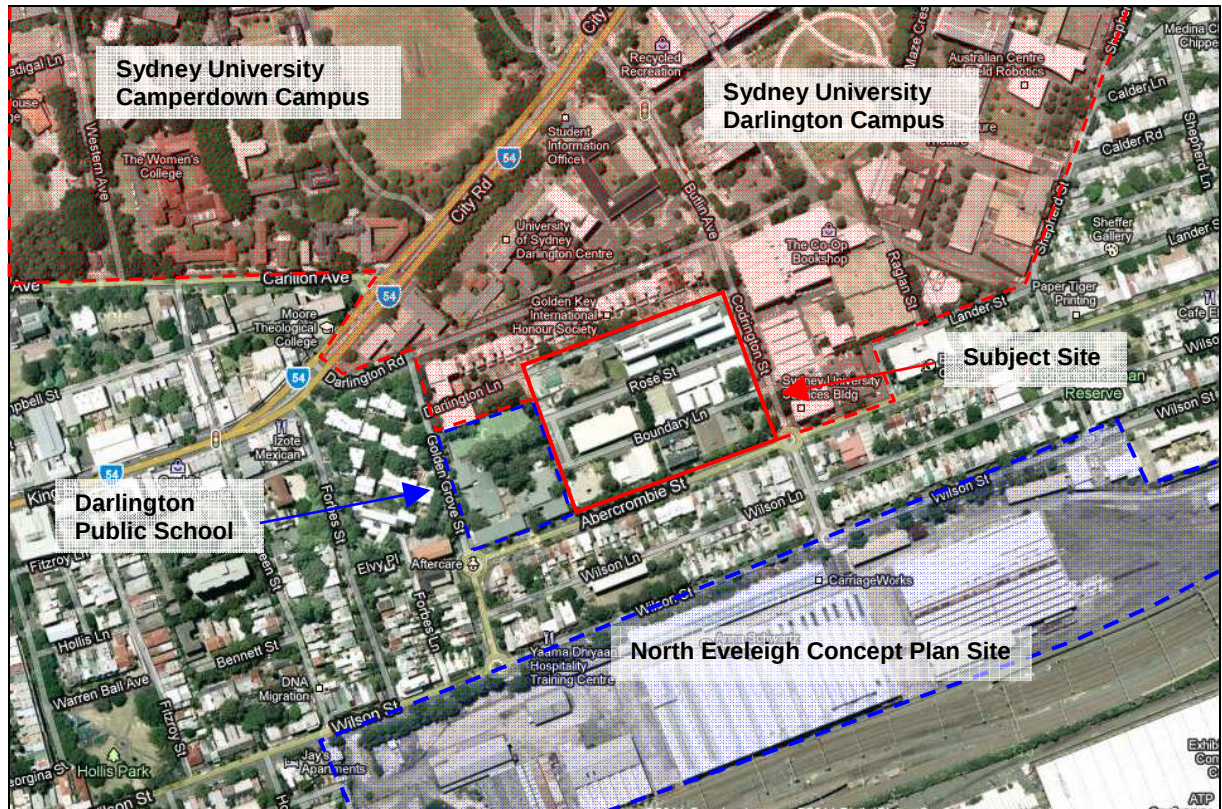
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1. BACKGROUND

1.1 SITE CONTEXT AND LOCATION

The University of Sydney proposes to redevelop the Abercrombie Precinct site to provide a new campus for its Business School Faculty, including a new four to six storey business school building and three to five storey student accommodation building, two basement levels of car parking and ancillary works, at Sydney University's Darlington Campus, bounded by Darlington Lane, Codrington Street, Abercrombie Street and Darlington Public School (see Figure 1).

Figure 1: Project Location



The development site comprises 79 individual allotments, Rose Street and Boundary Lane. The individual allotments are under the ownership of Sydney University, while at the time of lodgement, Rose Street and Boundary Lane were under the ownership of City of Sydney Council (council). Council resolved on 10 August 2010, to close both Rose Street and Boundary Lane and sell the land to the University to accommodate the project. The proposal also involves minor works to Darlington Public School.

The site is located at the southern end of the University's Darlington Campus, bounded by Darlington Lane to the north, Codrington Street to the east, Abercrombie Street to the south and Darlington Public School to the west. The site is located within the City of Sydney Local Government Area and is approximately 2 km south west of Sydney CBD and immediately north of the North Eveleigh Concept Plan site.

The site is well serviced by regular and accessible public transport networks, including train services from Redfern Station, located approximately 750 metres east, and Macdonaldtown Station, located approximately 850 metres west, and bus services travelling along City Road, located approximately 250 metres north.

1.2 SITE DESCRIPTION AND FEATURES

The project site is rectangular in shape and has an area of approximately 1.92 hectares, with frontages of approximately 169 m to Abercrombie Street and 110 m to Codrington Street (see Figure 2). The site currently contains a number of buildings and facilities used for university purposes and two existing local roads, including the existing Faculty of Economics and Business building, Rose Street and Boundary Lane, existing University maintenance facilities and services, Boundary Lane Childcare Centre and the children's deaf and hearing-impaired facility – the Shepherd Centre, but excludes the existing residential college – Mandelbaum House (see Figures 2 – 6). The Faculty of Economics and Business building currently has a total existing staff and student population of approximately 800 people.

Figure 2: Existing Site Layout

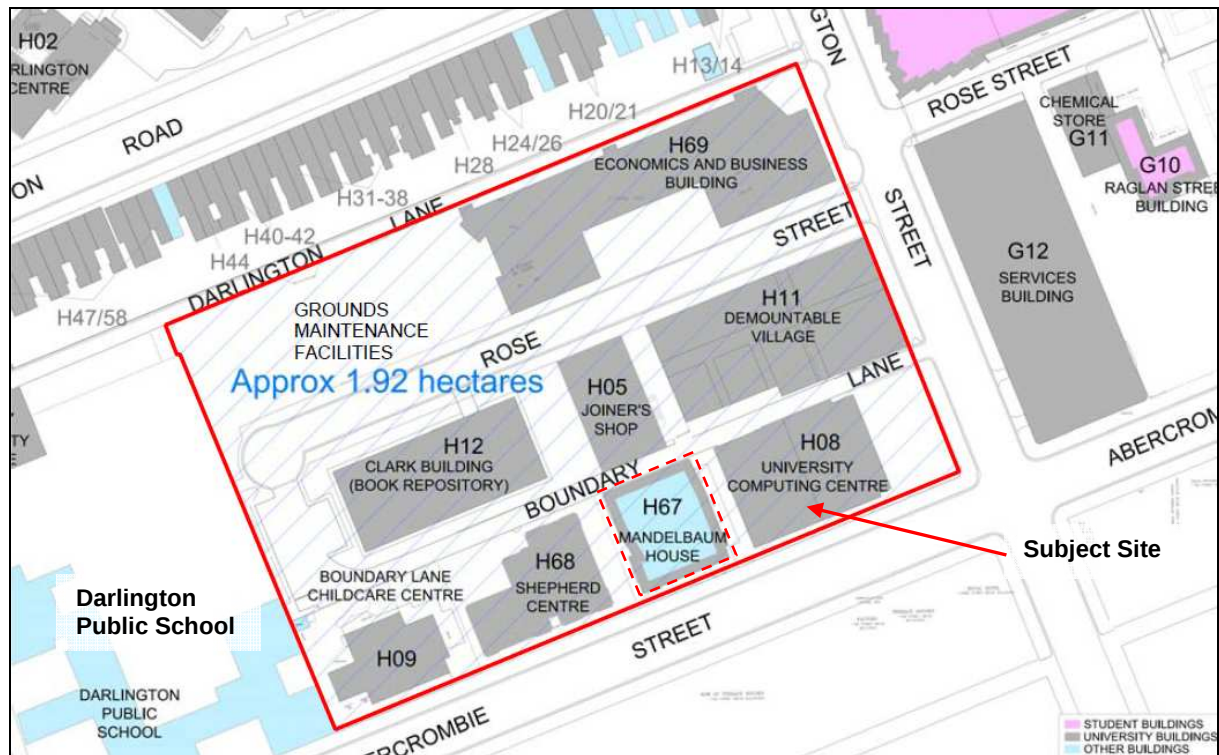


Figure 3: Codrington Street



Figure 4: Existing Abercrombie Street residential terraces



Figure 5: Mandelbaum House



Figure 6: Shepherd Centre



Vehicular access to the site is currently provided from Rose Street, Boundary Lane and Darlington Lane. Existing mature vegetation within the project site is generally located along street frontages or between buildings and ranges in condition from poor to excellent, including some excellent examples of Crow's Ash trees and a large Sydney Blue Gum tree. An existing pocket park is also located at the corner of Codrington Street and Abercrombie Street.

The project site slopes from the north-western corner of the site to the south-eastern corner towards the existing pocket park, falling diagonally across the site approximately 12 m.

1.3 SURROUNDING DEVELOPMENT

The project site is surrounded by a number of land uses, including existing two storey residential Darlington Road terraces (of which most are owned by the University and used for student accommodation), existing University buildings and land uses adjacent to the north-east and east (such as the two storey Sydney University Sports and Aquatic Centre and three storey Campus Infrastructure and Services Building), Darlington Public School adjacent to the west, and existing two to three storey Abercrombie Street terraces and three storey Royal Hotel located at the corner of Abercrombie and Codrington Streets.

1.4 STRATEGIC CONTEXT

1.4.1 NSW 2021

The NSW 2021 is a 10 year plan for NSW to help guide NSW rebuild its economy, improve the quality of service provisions, renovate infrastructure, restore government accountability and strengthen the local environment and communities. The proposed development will complement a number of key goals, including:

- providing a return to quality services through improvements to education and learning outcomes for all students
- restoring government accountability, through the extensive engagement of the local community throughout the assessment and decision making process of the proposed development.

1.4.2 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 identifies Sydney University as a knowledge precinct that contributes to the competitive strengths of Sydney, as well as being an important specialised centre and education cluster. In particular, the proposed development is considered to be consistent with the following objectives and targets of the Metropolitan Plan:

- Objective A2 – increase innovation and skills development
- Objective B2 – to strengthen major and specialised centres to support sustainable growth of the city
- Action B2.2 – provide sufficient capacity for the clustering of businesses and knowledge based activities in Major and Specialised Centres
- Objective E2 – to focus Sydney's economic growth and renewal, employment and education in centres
- Action E2.5 – strengthen clusters of activity in Specialised Centres, particularly those for high growth and high value sectors and support emergence of new clusters

- Action E2.6 – promote development of education, research and development (R&D) clusters around TAFE's, universities and health infrastructure in accessible centres to promote skills development, capacity for innovation and lifelong community learning.

The development of the Abercrombie Precinct Redevelopment project will see the creation of a new consolidated business school that provides a collaborative teaching and learning environment to attract the highest quality local and international business students and academics. The department considers that the proposal will satisfactorily meet the key objectives and actions of the Metropolitan Plan for Sydney 2036.

1.4.3 Draft Sydney City Subregional Strategy

The Draft Strategy identifies the project site as being located within the Sydney Education and Health Precinct. A key objective of the Draft Strategy is to promote existing and emerging clusters, including the education hub around the existing university. The proposal will be consistent with the following actions:

- Action A2.1.2 – NSW Government to strengthen partnerships and investigate opportunities for government and institutions to work together within the Sydney Education and Health Precinct and the wider 'creative crescent' to promote innovation
- Action A2.3.1 - ...continue to undertake programs that encourage clustering of business activities around Magnet Infrastructure.

The proposed redevelopment of the University's Abercrombie Precinct supports the growth and innovation of the existing Sydney Education and Health Precinct and further promotes the clusters of educational development around this well established precinct.

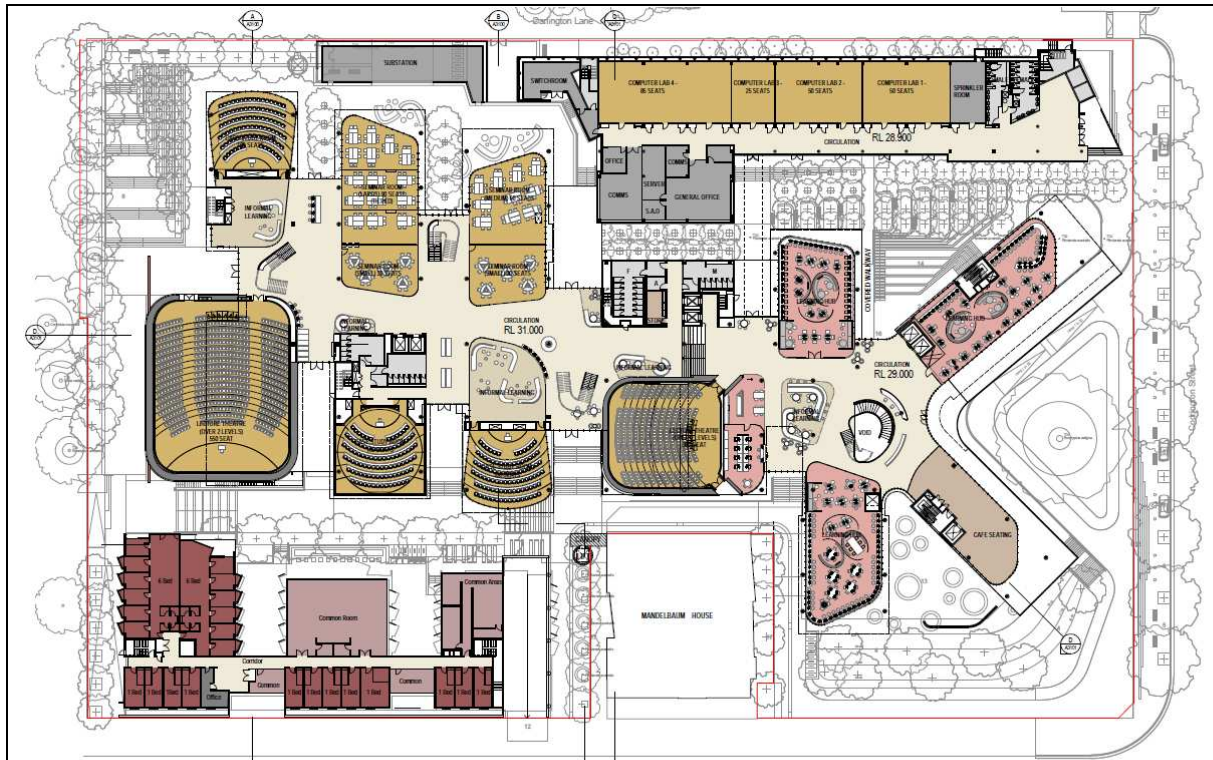
2. PROPOSED PROJECT

2.1. PROJECT DESCRIPTION

The proposal as described in the Environmental Assessment (EA), and as amended by the Preferred Project Report (PPR) (as amended), seeks approval for bulk earthworks, remediation, lot consolidation and subdivision and the development of a new business school, ranging in height from four to six storeys and comprising 28,180 sqm of GFA, a new three to five storey student accommodation building with 188 student beds and comprising 5,900 sqm of GFA, two level basement car park and ancillary works. The key components of the project are listed in Table 1. The project layout is shown in Figure 7.

Table 1: Key Project Components

Aspect	Description
Project Summary	▪ Redevelopment of the Abercrombie Precinct site, including the staged delivery of: - Remediation - Lot consolidation/subdivision - Demolition - Bulk and detailed earthworks - Construction of a new business school building and student accommodation building - Ancillary works, including utilities servicing and minor works to Darlington Public School.
<i>Remediation</i>	▪ Remediation of localised contaminated hotspots.
<i>Subdivision</i>	▪ Lot consolidation and subdivision to form two separate development lots for the business school and student accommodation buildings.
<i>Demolition</i>	▪ Demolition of all existing buildings and structures within the site (partial demolition of the Joinery Shop building), excluding the existing Faculty of Economics and Business building (H69) and Mandelbaum House.
<i>Earthworks</i>	▪ Bulk earthworks across the site to create a level building pad and to excavate basement levels.
<i>Business School</i>	▪ Construction of a four to six storey business school building, consisting of 28,180 sqm of gross floor area and incorporating: - learning and teaching spaces for approximately 5,000 students and teachers - meeting rooms - executive offices - workspaces - lecture theatres - seminar rooms - café - 2 basement levels providing 82 car parking spaces, 10 motorcycle spaces, 52 bicycle spaces (247 space in total provided) and associated showers and lockers - plant and equipment. ▪ Retention and refurbishment of the existing Faculty of Economics and Business building. ▪ Retention of Joiner's Workshop heritage significant elements to enable the former use of the site to be interpreted.
<i>Student Accommodation</i>	▪ Construction of a three to five storey student accommodation building, consisting of 5,900 sqm of gross floor area and accommodation for 188 students, including basement level bicycle storage (31 spaces), plant and garbage room.
<i>Landscaping and Public Domain</i>	▪ Retention and relocation of trees, including retention of the mature Sydney Blue Gum tree fronting Codrington Street. ▪ Removal of existing trees and provision of new landscaping, including terraces, rooftop gardens and pocket park and pocket gardens. ▪ Public plaza/forecourt and through-site link and produce garden.
<i>Darlington Public School Works</i>	▪ Removal of existing parking spaces within Golden Grove Street to accommodate a new bus set down bay and student drop-off area and provision of 12 new parking spaces (detailed works committed to by the proponent).

Figure 7: Project Layout – Ground Floor Plan

2.2. PROJECT NEED AND JUSTIFICATION

The redevelopment of the University of Sydney Business School at the Abercrombie Precinct will provide a new southern gateway to the University and help develop the strategic importance the University plays in providing education, training and research within the 'Sydney Education and Health Precinct'. Further, the project will provide improved teaching facilities, consolidating the existing faculty into a purpose built campus that supports both students and teachers and to reflect its position as a prestigious business school.

The provision of the new student accommodation facility will, in conjunction with the existing Mandelbaum House, address the current shortage in student housing within the surrounding locality.

The proposal will also see ancillary public benefits for Darlington Public School through the provision of a new bus set down bay and student drop-off area and student access to the school.

The project would also provide significant socio-economic benefits for Sydney and the locality, through the direct investment of \$247 million and generating approximately 200 full time equivalent construction jobs and 500 full time equivalent operational jobs.

3. STATUTORY CONTEXT

3.1. MAJOR PROJECT

The proposal is a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as it is development for the purpose of an Educational Facility under clause 20 of Schedule 1 of *State Environmental Planning Policy (Major Development) 2005*.

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the Act, continues to apply to transitional Part 3A projects. Director-General's environmental assessment requirements (DGRs) have been issued in respect of this project and the environmental assessment report was lodged prior to 1 October 2011. The project is therefore a transitional Part 3A project.

Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may approve or disapprove of the carrying out of the project under section 75J of the Act.

3.2. DELEGATION

The Minister has delegated his functions to determine Part 3A applications to the Planning Assessment Commission (PAC) where an application has been made by persons other than by or on behalf of a public authority.

The application is being referred to the PAC for determination as there have been 25 or more submissions received from the public. As the application has not been made by a public authority, it is able to be determined by the PAC under delegation from the Minister.

3.3. PERMISSIBILITY

The project site is zoned No.5 – Special Uses (University) under South Sydney LEP 1998 and is permissible with consent. Under the City of Sydney's Draft Sydney LEP 2011, the project site is identified with a draft zoning of SP 2 – Infrastructure (Educational Establishment). The proposed development would retain its permissibility under the proposed draft zoning.

3.4. ENVIRONMENTAL PLANNING INSTRUMENTS

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

- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy No.55 – Remediation of Land
- State Environmental Planning Policy No.65 – Design Quality of Residential Flat Development
- South Sydney Local Environmental Plan 1998.

The department has given consideration to the relevant aims and objectives of the SEPPs and EPIs, and is satisfied that the proposal, subject to the implementation of recommended conditions of approval, is generally consistent with the provisions of these instruments. The department's consideration of relevant SEPPs and EPIs is provided at Section 5.7 of this report and in Appendix D.

3.5. OBJECTS OF THE EP&A ACT

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

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

The department has considered the objects of the Act and considers that the project application is consistent with the relevant objects, specifically the encouragement of ecologically sustainable development, the orderly development and economic use of university land, provision of integrated public access through the site, provision of dedicated student housing to reduce reliance on local affordable housing provisions, and provision of public involvement and participation in the environmental planning and assessment process. The assessment of the application in relation to the relevant objects of the Act is outlined below in Section 5 of this report.

3.6. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

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

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

The department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the proposal. Further, a detailed assessment of ESD is outlined in Section 5 of this report. On the basis of this assessment, the department is satisfied that the proposal encourages ESD, in accordance with the objects of the EP&A Act.

3.7. STATEMENT OF COMPLIANCE

In accordance with section 75I of the EP&A Act, the department is satisfied that the Director-General's environmental assessment requirements have been complied with.

4. CONSULTATION AND SUBMISSIONS

4.1. EXHIBITION

Under section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. After accepting the EA, the department publicly exhibited it from 25 May 2011 until 24 June 2011 (31 days) on the department's website, and at the Department of Planning and Infrastructure and City of Sydney. The department also advertised the public exhibition in the Sydney Morning Herald and Daily Telegraph on 25 May 2011, and notified landholders and relevant State and local government authorities in writing.

The department received 70 submissions during the exhibition of the EA - 7 submissions from public authorities and 63 submissions from the general public. A summary of the issues raised in submissions is provided below.

4.2. PUBLIC AUTHORITY SUBMISSIONS

The department received a total of 7 submissions from public authorities, including City of Sydney Council, Transport for NSW, Department of Education and Communities, Office of Environment and Heritage, the Roads and Maritime Services, Sydney Metropolitan Development Authority and Sydney Water.

4.2.1 City of Sydney Council

Council advised that it considered the proposal responded well to its context and was successfully scaled, with the facades well articulated to achieve an appropriate compatibility with the streetscape, particularly Abercrombie Street. Notwithstanding this, council noted that the following issues needed to be resolved in order for the proposal to be capable of being fully supported by council:

- relationship of the development's interface with Darlington Lane, being the exposed lower level, is not supported
- the architectural character of the perimeter building needs to be amended to incorporate strong vertical articulation to ensure buildings along Abercrombie Street harmonize with the character of the Victorian terraces
- the retention of appropriate on-site trees, particularly those identified as having high to very-high retention value as detailed within the submitted Arborist Assessment – in particular, the basement car park excavations should be setback 10 m in the absence of any detailed root investigations of existing mature vegetation within Darlington Public School and the design of the proposal should be appropriately amended to ensure the retention of the exiting Sydney Blue Gum tree
- it is considered that sufficient justification has not been provided to support the removal of the existing four angle parking spaces within Golden Grove Street
- details regarding the provision and location of proposed bicycle parking are required
- appropriate traffic works would need to be satisfactorily addressed.

4.2.2 Office of Environment and Heritage (OEH)

OEH reviewed the proposal and raised no objections, noting that the recommendations provided within the supporting archaeological assessment need to be undertaken.

4.2.3 Roads and Maritime Services (RMS)

RMS raised no objections to the proposal and provided the following comments:

- consideration should be given to facilitate improvements in the level of pedestrian access, priority and safety
- the layout of the proposed car parking areas associated with the subject development and end of trip bike facilities should be provided in accordance with council requirements and AS2890.1 – 2004 and AS2890.2 – 2002
- all vehicles should enter and exit the site in a forward direction
- a Demolition and Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to council, for approval, prior to the issue of a construction certificate
- all costs associated with the proposed development shall be at no cost to RMS.

4.2.4 Transport for NSW

Transport for NSW reviewed the EA and raised no objections to the proposal. Notwithstanding this, it was recommended the proponent continue liaising with council to investigate additional formalised bicycle paths to be considered as part of the redevelopment to encourage a greater mode shift to bicycles.

4.2.5 Sydney Metropolitan Development Authority (SMDA)

Clause 6 of State Environmental Planning Policy (Urban Renewal) 2010 identifies the Abercrombie Precinct Redevelopment site as being located within the Redfern-Waterloo urban renewal precinct. SMDA is the responsible authority that oversees the renewal of the precinct.

SMDA provided support for the proposed development, noting that the proposal will provide an important contribution to the revitalisation of the Redfern-Waterloo area. However, SMDA made a number of comments in relation to the pedestrian permeability, built form and design, community facilities and development contributions. Its comments are summarised as follows:

- the demolition of the Boundary Lane Child Care Centre and Shepherd Centre buildings should be subject to their appropriate relocation elsewhere on the University Campus, to ensure continuity of the services provided
- accessibility proposed via a series of steps from Darlington Lane into the centre of the site should be improved by the provision of lift access to facilitate greater access for persons with limited mobility
- consideration should be given to incorporating design strategies into the public domain and landscaping works to facilitate greater public access.
- while the project has been well-designed, the proposal's design excellence will only be achieved through construction and careful selection of low maintenance materials to ensure longevity and minimise the potential for the proposal's aesthetics to be diminished overtime

- the SMDA does not support the proponent's view that the project be exempt from developer contributions, as applicable under the Redfern-Waterloo Authority Contributions Plan 2006 (CP) and Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006 (AHCP)
- the SMDA requests that the Department of Planning and Infrastructure review options for retaining the existing Sydney Blue Gum tree prior to any approval for its removal given its very high retention value
- the existing sandstone kerbing along Rose Street should be salvaged and reused within the development.

4.2.6 Sydney Water

Sydney Water raised no objections to the proposal, noting that the existing infrastructure has sufficient capacity to service the development, while the development will be further assessed upon the developer's Section 73 Certificate application.

4.2.7 Department of Education and Communities (DEC)

The Department of Education and Communities noted that concerns exist among the Darlington Public School community and that it is difficult for DEC to find design merit in the proposal, raising the following particular concerns:

- the development lacks appropriate building setbacks along common boundaries
- the development does not fully identify and mitigate the impact of overshadowing during winter months and subsequent loss of natural light on adjoining premises
- the development would have visual impacts due to the large scale, bulky and tall buildings being directly constructed adjacent to the lower scale Public School buildings and play areas
- there appears to be a lack of formal mitigation measures considered by the applicant to minimise the impact generated by the development
- request that the applicant undertake appropriate and justified community consultation in accordance with the DGR's with the local school community.

4.3. PUBLIC SUBMISSIONS

A total of 63 submissions were received from the public. 61 submissions raised objections to the project and only 1 supported the project. Ms Moore's submission raised a number of concerns. The key issues raised in public submissions are listed in Table 2.

Table 2: Summary of Issues Raised in Public Submissions

Issue	Proportion of submissions (%)
- The proposed seven storey height and bulk of the proposal is too high for the locality and will create an unacceptable high-rise precedent and generate shadowing impacts on the adjoining Darlington Public School.	89%
- The proposed basement car park entrance on Abercrombie Street, adjacent to Darlington Public School, will have significant impacts on the pedestrian safety and amenity of residents and parents and students. It would only be the University that is impacted by the location of a vehicle entry off Codrington Street or Darlington Lane.	77%

Issue	Proportion of submissions (%)
- The proposal will generate significant construction traffic impacts. Abercrombie Street access for construction vehicles is unacceptable.	69%
- The Noise Impact Assessment concludes that construction activities will exceed the noise management level of the <i>Interim Construction Noise Guidelines</i> . The noise impact is unacceptable and is of significant concern that the School will be adversely impacted on and the learning environment and welfare of school students will deteriorate.	63%
- The project will create unacceptable demolition and construction impacts that will impact on the health and safety and amenity of local residents and the staff and students of Darlington Public School.	61%
- The risk assessment of dust and contaminants must give consideration to school children who would spend significant hours outside and staff and students inside classrooms. Darlington Public School is not air conditioned and must have windows open to provide air flow.	60%
- Darlington Public School has discussed with the University the proposed use of ovals and other open space for recreation and sporting events. It would be beneficial if the grounds adjacent to the school could include a multi-purpose 'open space' for the school and community.	56%
- The development is inappropriately over-scaled and is larger in mass and height than current buildings within the University's Darlington Campus. The modern concrete design does not respond to the surrounding residential buildings or streetscape and would have a dramatic impact on the character and amenity of the locality.	31%
- The proposed tree removal, closure of existing streets and resumption of the existing community pocket park will impact on the local character, accessible green space and public amenity. The proposal should ensure that green space and vegetation is accessible to both the University and residents at all times.	26%
- The proposal is an overdevelopment of the site, particularly in conjunction with the proposed redevelopment of Sydney University Sport and Aquatic Centre. Alternative locations of the development have not been adequately investigated by the University. The proposal should be built at the main Camperdown campus.	11%
- The photomontages are unacceptable and translucent which reduces their impact of the development. Additional photomontages should be created showing the context of the development within the surrounding locality, including the Victorian terraces.	10%
- The proposed car park is not warranted given the project site's high accessibility to public transport. If the future student and staff population of the development are being predominantly relocated from elsewhere within the university campus, there should be no additional or new car parking provided for the development.	10%
- Stage 2 of the proposal should not be approved as there is no connection with Stage 1. Stage 2 should not be considered under Part 3A and approval should be sought from the council when the University intends to proceed.	6%
- More car parking should be provided within the design of the development to cater for the loss of Rose Street parking and to reduce the impact on	6%

Issue	Proportion of submissions (%)
local streets surrounding the project site.	
- Greater community access should be provided within the design to enable through-site access to Newtown.	5%
- The roof-top terrace of the Student Accommodation building and rooftop garden terraces should be deleted.	5%
- The proposal will result in the degradation of the heritage significant Abercrombie Street streetscape.	5%
- The level of community consultation undertaken with the local residents has been unsatisfactory and has never given the opportunity for the community to a make meaningful contribution to the planning process or design.	3%
- The proposed development will have a significant impact on the historic source of Black Wattle Creek.	2%

4.4. RESPONSE TO SUBMISSIONS

In accordance with section 75H of the EP&A Act, the proponent was requested to respond to all the issues raised in all submissions received as part of the exhibition of the EA. The proponent's Response to Submissions (RtS) report, including their Preferred Project Report (PPR) (see Appendix C), was lodged with the department on 20 April 2012, and further amended on 16 July 2012, proposing a number of key revisions to the development.

The amendments proposed within the PPR, including amendments to the architectural and design philosophy and retention of Mandelbaum House, were undertaken by the proponent to address issues raised during the exhibition of the EA and PPR. Figures 8 to 13 demonstrate the extent to which the proponent has amended the proposal to address those concerns.

Figure 8: EA 3D Perspective – Corner of Abercrombie and Codrington Street



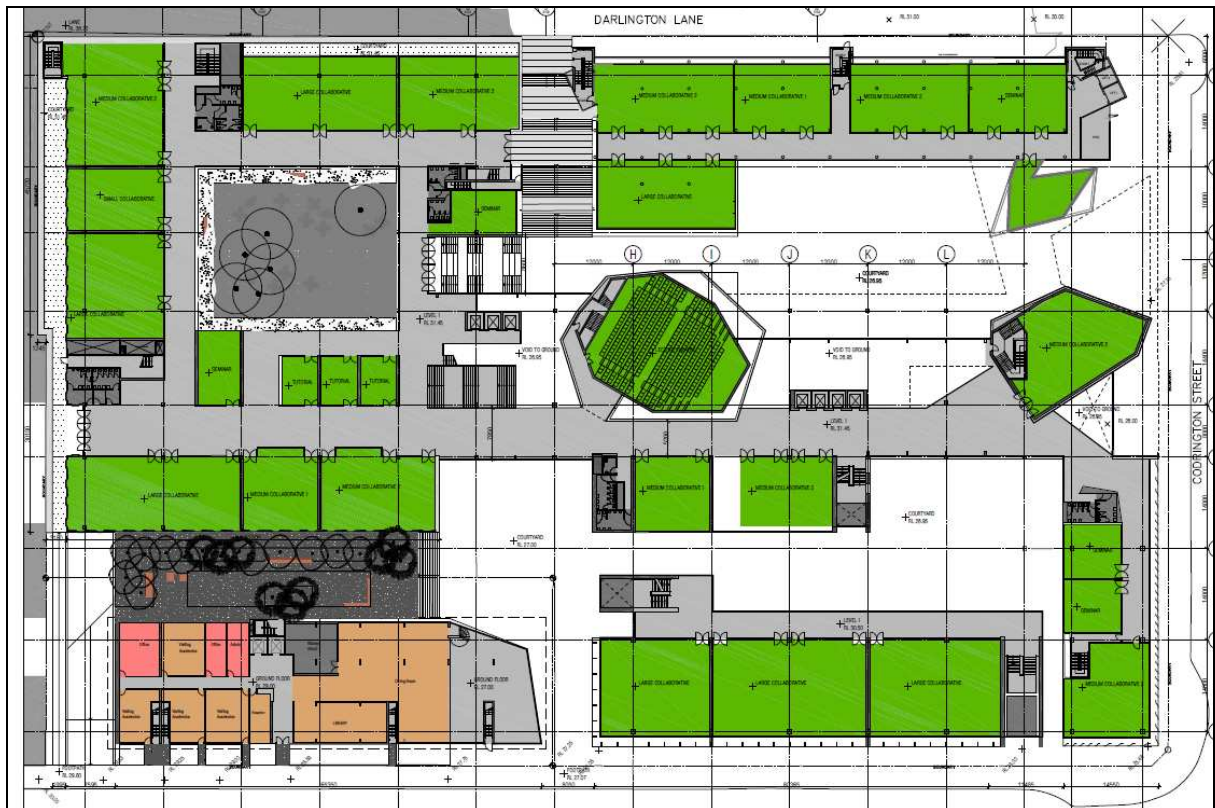
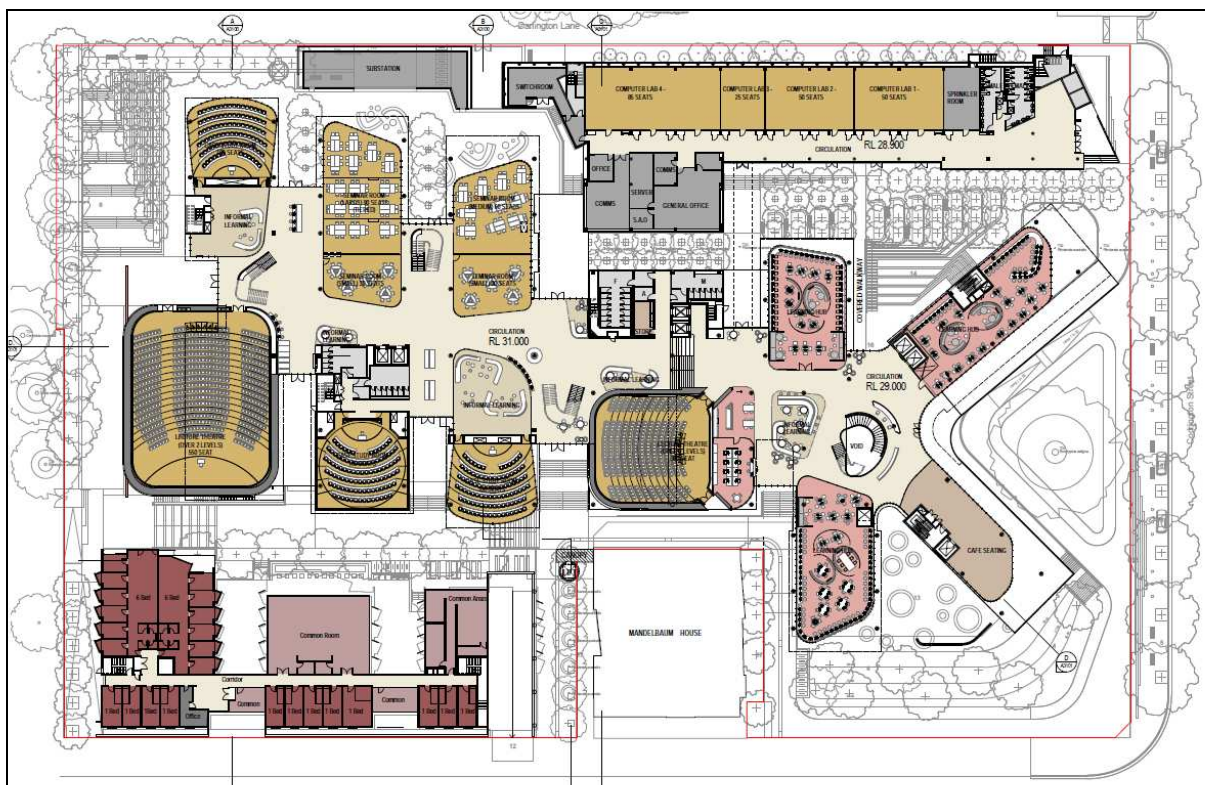
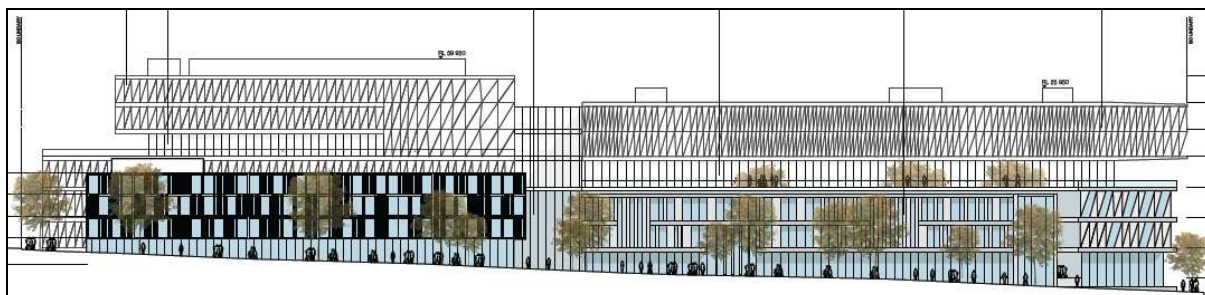
Figure 9: PPR 3D Perspective (as amended) – Corner of Abercrombie and Codrington Street**Figure 10: EA Ground Floor Plan**

Figure 11: PPR (as amended) Ground Floor Plan**Figure 12: EA Abercrombie Street Elevation****Figure 13: PPR (as amended) Abercrombie Street Elevation**

4.4.1. Preferred Project Report

The PPR proposes amendments to the business school building, including changes to the architectural design and massing, a reduction to the building height from seven to six storeys, GFA reduction, an increase in setbacks to all boundaries and a capacity reduction to on-site basement car parking.

Amendments proposed to the student accommodation building include a new architectural design, increase in building height from four to five storeys, increased GFA, increase in side setbacks to Darlington Public School and an increase in student accommodation from 100 beds to 200 beds.

In addition to the built form revisions, the PPR proposes to relocate the basement vehicle entry/exit access point further east, adjacent to Mandelbaum House on Abercrombie Street, retain the existing Sydney Blue Gum tree, and provide a new large pocket park at the corner of Abercrombie and Codrington Streets.

4.4.2. RtS/PPR Exhibition

Due to the degree of project amendments proposed within the PPR, the RtS and PPR were made publicly available on the department's website from 2 May 2012 until 1 June 2012 and referred to previous submitters, adjoining and surrounding residents, council and other public authorities. A total of 48 submissions were received during the PPR exhibition period, including 4 submissions from public authorities (council, DEC, RMS and SMDA) and 44 public submissions, all of which raised objections.

Public authority submissions from DEC, RMS and SMDA raised no objections, reiterating previous comments and recommending conditions. Although no objections were raised by council, it advised that the increased height and massing of the student accommodation building should be mitigated through setting back the upper levels and consider making further amendments to the façade design. Council also questioned the suitability of the proposed Abercrombie Street vehicle entry, the reduced bicycle parking provision, predicted construction noise emissions, and provided recommended conditions for inclusions within any instrument of approval, where relevant.

Public submissions received in response to the revised design proposed within the PPR were similar to those raised during the exhibition of the EA (see Appendix B for more detailed summary of PPR submissions), with the following concerns raised:

- the proponent has failed to investigate alternative sites on the University's main campus for the business school
- the scale and appearance of the development is inappropriate and is not consistent with the heritage character of the locality, particularly the student accommodation building
- the development will result in Mandelbaum House being ringed in and dwarfed
- the introduction of 5,000 new students, in addition to the existing 2,500 students, will adversely impact Darlington
- the basement car park is unnecessary and the development will generate additional traffic impacts and increased traffic congestion
- the basement car park access on Abercrombie Street will pose an unacceptably high risk to pedestrians, particularly children
- additional safety measures should be required for the basement access point
- the future proposed light rail should not be a factor in being able to consider Codrington Street as an alternative access point to the site
- the proposed alternate pedestrian route through the site is unacceptable and poses a 'stranger danger' issue for children
- construction activities will significantly interfere with the education and learning of adjoining students at Darlington Public School

- no commitment has been made to relocate Boundary Lane Childcare Centre before demolition and construction activities on site commence, significantly impacting on the health and safety of children and staff.

Following exhibition of the PPR, the department requested the proponent review the projects potential traffic impacts having regard to the department's independent Traffic and Transport Review of the North Eveleigh Concept Plan, review the façade treatments of the proposed student accommodation building, reduce the scale of the proposed student accommodation building and give further consideration to the potential amenity impacts on Mandelbaum House.

4.4.3. Amended PPR

Responding to the concerns raised, the proponent submitted an amendment to the PPR on 16 July 2012, proposing further design refinements, including:

- minor amendments to the built form of the business school building behind the Mandelbaum House
- minor amendments to the basement car park levels to accommodate the revised access driveway location
- setting back the two upper levels of the student accommodation building from Abercrombie Street and integrating the basement access driveway beneath its built form to allow for the retention of existing Crows Ash trees and allowance of 9.5 m distance separation between the student accommodation building and Mandelbaum House
- Revised Statement of Commitments.

Table 3 provides a comparison of the project as proposed within the original EA and PPR (as amended), with the key changes shown bold.

Table 3: Comparison of EA and PPR (as amended)

Aspect	Environmental Assessment	Preferred Project Report (as amended)
<i>Subdivision</i>	▪ Lot consolidation and subdivision to form two separate development lots for the business school and student accommodation buildings.	▪ Lot consolidation and subdivision to form two separate development lots for the business school and student accommodation buildings (excluding Mandelbaum House which no longer forms part of the proposal).
<i>Demolition</i>	▪ Staged demolition of all buildings (including Mandelbaum House) and structures within the site, excluding the existing Economics and Business Building (H69).	▪ Demolition of all existing buildings and structures within the site, excluding the existing Faculty of Economics and Business building (H69), Joiner's Shop building and Mandelbaum House.
<i>Remediation</i>	▪ No proposed within EA	▪ Remediation of localised hotspots.
<i>Earthworks</i>	▪ Bulk earthworks across the site to create a level building pad and to excavate basement levels.	▪ No change proposed.
<i>Business School</i>	▪ Construction of a three to seven storey business school building, comprising 35,185 sqm of gross floor area and incorporating:	▪ Construction of a four to six storey business school building, consisting of 28,180 sqm of gross floor area and incorporating:

Aspect	Environmental Assessment	Preferred Project Report (as amended)
	- approx. 7,500 total students/staff - learning and teaching spaces - faculty offices, admin and support - ancillary space (café/foyers) - lecture theatres - seminar rooms - two basement car parking levels for 185 spaces - 313 bicycle parking spaces - plant and equipment. ▪ Retention and refurbishment of the existing Faculty of Economics and Business building.	- approx. 5,000 total students/staff - learning and teaching spaces - faculty and executive offices, meeting rooms, admin and support - workspaces - lecture theatres - seminar rooms - café - two basement car parking levels for 82 spaces - 247 bicycle parking spaces - plant and equipment. ▪ Retention and refurbishment of the existing Faculty of Economics and Business building. ▪ Retention of Joinery Shop building's key elements to enable the former use of the site to be interpreted ▪ Increased side setback to Darlington Public School ▪ Relocation of basement car park access to mid-block location on Abercrombie Street.
<i>Student Accommodation</i>	▪ Construction of a four storey student accommodation building, comprising 4,430 sqm of gross floor area and 100 beds.	▪ Construction of a three to five storey student accommodation building, consisting of 5,900 sqm of gross floor area and 188 beds ▪ Reduced site setback to Darlington Public School.
<i>Landscaping and Public Domain</i>	▪ Transplanting existing trees from areas within building footprint. ▪ Removal of existing trees (including Sydney Blue Gum) and provision of new replacement trees and landscaping, including rooftop landscaped terraces and gardens ▪ North-south through-site link.	▪ Retention and relocation of trees, including retention of the mature Sydney Blue Gum tree and Crows Ash trees adjacent to Mandelbaum House. ▪ Removal of existing trees and provision of new landscaping, including terraces, rooftop gardens and pocket park and pocket gardens. ▪ Public plaza/forecourt and through-site link and produce garden.
<i>Darlington Public School Works</i>	▪ Demolition of existing sports storage shed and construction of new masonry shed on eastern boundary ▪ New emergency access from Golden Grove Street (including the removal of 4 on-street parking spaces). ▪ Provision of new bus bay and 4	▪ Demolition of existing sports storage shed and construction of new masonry shed on eastern boundary ▪ Removal of existing parking spaces to accommodate new emergency access, new bus set down bay and student drop-off area on Golden Grove Street. ▪ Provision of 10 new parking spaces

Aspect	Environmental Assessment	Preferred Project Report (as amended)
	new staff parking spaces off Darlington Lane.	off Darlington Lane and 2 new parking spaces in Golden Grove Street (detailed works committed to by the proponent)
	Construction of new boundary fencing and provision of an acoustic wall on the eastern boundary.	Construction of new 2.1 m boundary fencing.

5. ASSESSMENT

The department considers the key environmental issues for the project to be:

- built form and urban design
- transport
- environmental and residential amenity
- developer contributions
- heritage
- ecologically sustainable development
- contamination

5.1. BUILT FORM AND URBAN DESIGN

5.1.1. Height, bulk and scale

The Abercrombie Precinct Redevelopment site is not subject to any specific building controls or restrictions within any environmental planning instruments. The Draft University 2020 Masterplan identifies the redevelopment of the Abercrombie Precinct as creating the new southern face for the university, envisaging a scheme ranging from four to seven storeys in height. The surrounding built environment is characterised by a mixture of different land uses, and different building typologies, scales and heights. Large scale university buildings (including the existing University Services building and Sports and Aquatic Centre) exist opposite the subject site in Codrington Street, while the two and three storey residential terraces dominate the opposite side of Abercrombie Street.

The proposed development seeks approval for a new business school building ranging in height from four to six storeys (RL48.00 to RL54.50) and new student accommodation building having a height of three to five storeys (RL38.70 to RL44.70). The proposed development height and scale has drawn concern from the local community, with a number of submissions commenting that the height is inconsistent with existing development within the surrounding area and contrary to the heritage character and scale of the locality.

The department acknowledges that the proposed development is of a scale and height generally larger than the existing development within the immediate locality, particularly the nearby residential terraces. Notwithstanding, the proposed development occupies its own block on the periphery of the Darlington residential precinct, also incorporating the Darlington Public School, and has no defined built form character. Therefore, the proposed buildings do not necessarily need to mimic the existing scale of the residential terraces, but rather provide a sympathetic design response to the mixed character of the existing built environment.

The proposed scale and design of the project is a functional response to the proponent's educational and teaching requirements. The proposed design also has

the potential to become a landmark building within the precinct due to its setting and high quality architectural design.

The bulk and scale of the proposed business school building has been concentrated to the centre of the site, stepping up from four storeys adjacent to Darlington Public School and Darlington Lane, to five storeys in the centre of the site, and then to six storeys fronting Codrington Street and the corner of Abercrombie Street (see Figures 14 and 15).

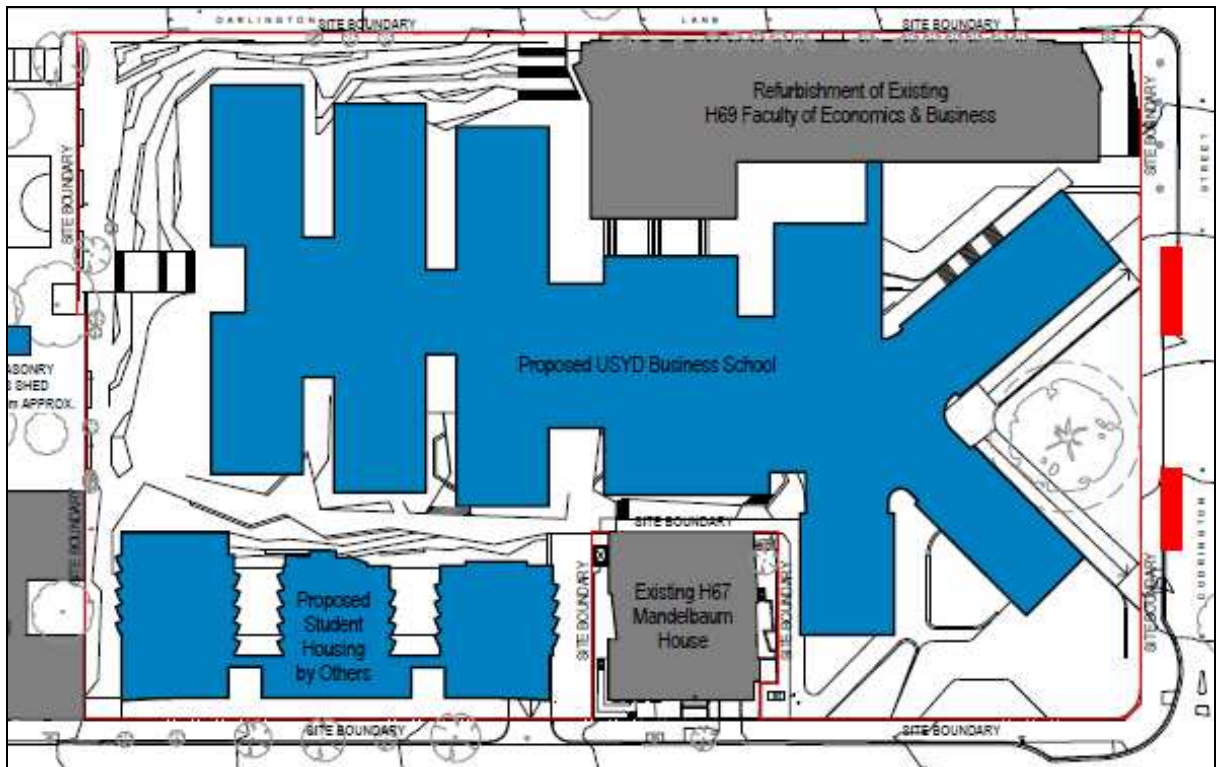
Figure 14: Abercrombie Street Elevation



Figure 15: Darlington Lane Elevation



Figure 16: Site Overview



The central location of the proposal's height and mass, between Mandelbaum House and the existing Faculty of Economics and Business building, will help in providing a more sympathetic interface with existing adjoining development, while the proposed transition of scale towards Codrington Street focuses the larger elements of the development away from more sensitive land uses. In addition, the use of modular elements within the design of the business school building breaks up building's mass (see Figure 16), with the tallest modular elements fronting Abercrombie Street and Codrington Street setback between 13 m and 18 m at ground level to allow for relief at the street level and opportunities for landscaping, including the retention of the existing mature Sydney Blue Gum tree.

The western interface of the proposed business school building has been influenced by the scale of Darlington Public School and its playground, with the four storey height of the development pulled further into the site than proposed in the original EA, setback between 18 m – 19.3 m, thereby minimising potential amenity impacts and ensuring the protection of the existing mature trees situated along the public school boundary.

Additionally, the height of the business school building's Darlington Lane elevation has regard to the four storey height of the existing Faculty of Economics and Business building (see Figure 15), providing a continuation of the existing built form, but broken down into separated modular elements that break up the building bulk.

Adjacent to Mandelbaum House, the proposed business school building will be only one to two storeys above the height of the existing residential college, and setback between 6 m to 7.5 m. Directly behind Mandelbaum House, level four of the business school building has been recessed a further 3 m, providing additional relief from the adjacent building bulk. It is also recommended that a condition be imposed requiring the proposed rooftop plant located immediately behind Mandelbaum House on the business school building be relocated to a central position on the proposed building's roof to further mitigate massing impacts.

Figure 17: Codrington Street Perspective



The proponent also advises that the use of operable ceramic louvers within the business school building's façade creates a visually permeable and transparent wall, altering the building's apparent solid form, exposing the recessed upper levels four and five and level

four terraces (see Figure 17). The use of the proposed transparent façade will also assist in breaking down the solid form of the building's mass, which becomes more transparent when viewed closer to the building's façade. The proposed façade treatment also provides an important architectural role in defining the development's modular elements and screening the upper level terraces on level four.

The proposed three to five storey height of the new student accommodation building responds positively to the existing height of Darlington Public School and Mandelbaum House (see Figure 18). A three storey building height will front Abercrombie Street, creating a consistent street wall. The top two storeys of the proposed residential college are recessed a further 3 m back from the levels below, reducing the bulk of the building in the Abercrombie Street streetscape and providing a satisfactory transition in built form across the site (see Figure 19 and 20). In addition, the proposed student accommodation building is sited directly adjacent to the existing built form of Darlington Public School, thereby minimising potential impacts on the existing school playground.

Figure 18: Student Accommodation Building Abercrombie Street Elevation



Figure 19: Abercrombie Street – Darlington Lane Section

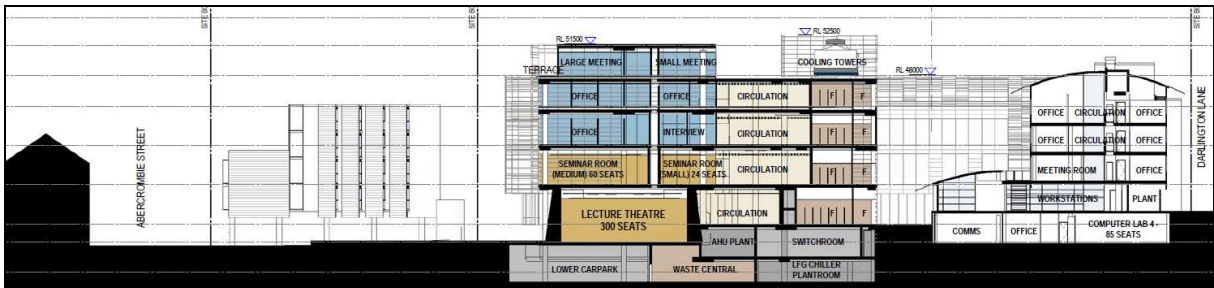


Figure 20: Student Accommodation Building Abercrombie Street Perspective



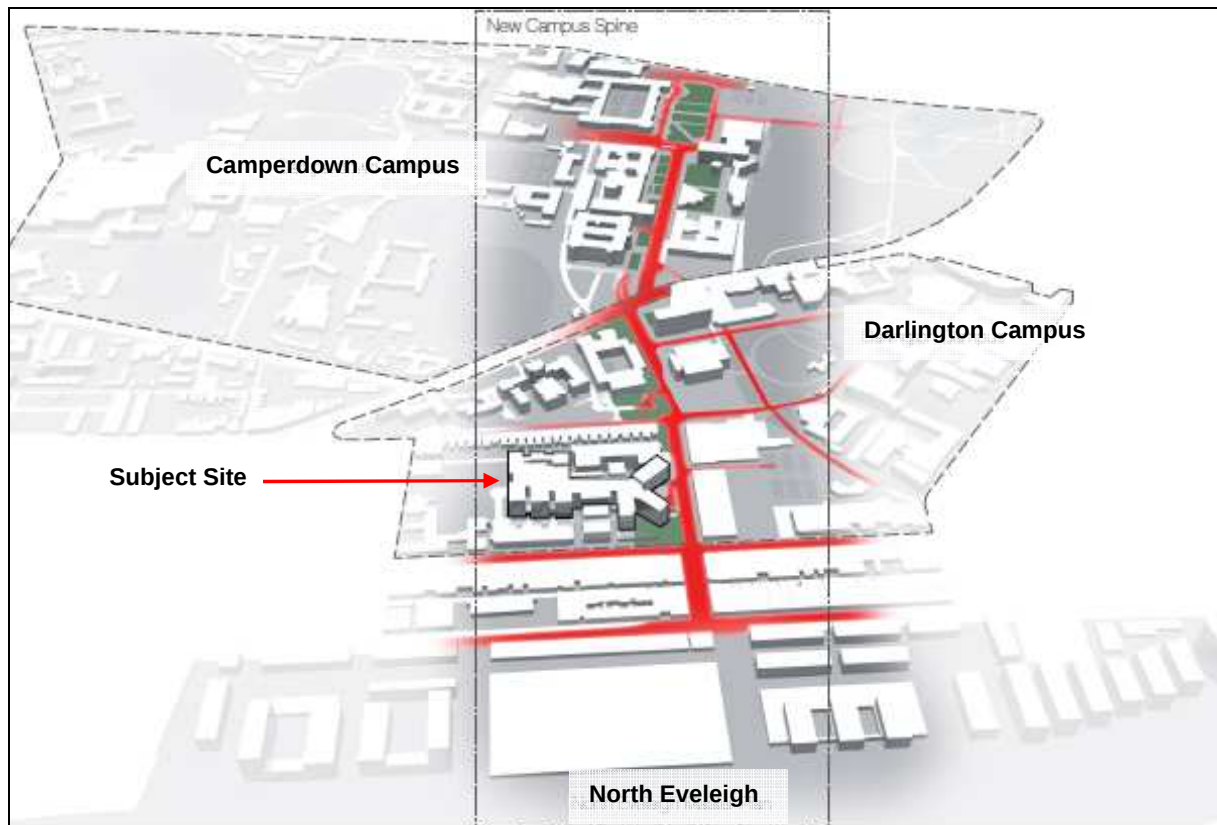
Setbacks proposed from the adjacent primary school and residential college are considered satisfactory, with the side setbacks enabling the provision of a public through-site link adjacent to the primary school and new alternate school entrance (subject to future agreement with the school) between Abercrombie Street and Darlington Lane and retention of the existing Crows Ash trees adjacent to Mandelbaum House, ensuring the green outlook for existing resident students is retained and any potential amenity impacts on the existing ground floor terrace and library patio are minimised.

The department considers the proposed height and scale of the proposed development has satisfactorily responded the diverse built form character of the locality. The architectural design response has appropriately addressed concerns raised regarding the scale of the proposal, positioning the development's mass within the centre of the site and towards Codrington Street and reducing its scale adjacent to the primary school to minimise potential amenity impacts and ensure the protection of the existing mature vegetation. The scale and design of the student accommodation building similarly responds to the existing scale and height of development within Abercrombie Street, providing an acceptable residential land use interface to the business school building development.

5.1.2. Public Domain and Landscaping

The proposed redevelopment of the Abercrombie Precinct would enable the envisaged structural framework of the university to be realised, reinforcing campus activities along a new north-south campus spine (see Figure 21), reinforcing the entrance to the Darlington Campus through the placement of landmark buildings, such as the proposed business school building.

Figure 21: University Campus Spine



The redevelopment will act as a catalyst to improve pedestrian connectivity and permeability throughout the Darlington Campus, with the public domain and

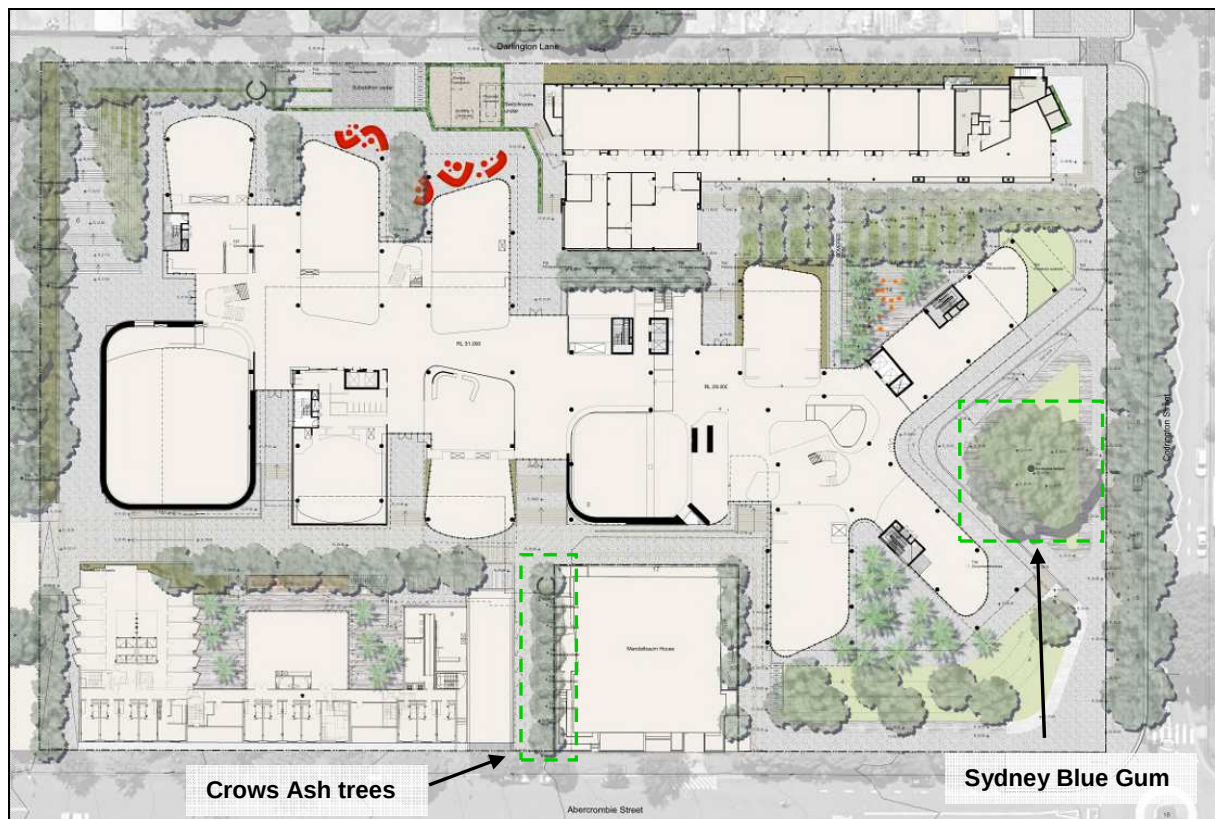
landscape design concept aiming to provide opportunities for increased social interaction and amenity for students, staff and community through the creation of a safe pedestrian friendly environment, a new network of connected spaces, visible presence and interaction between the site and general public and through the use of high quality, robust materials and finishes and native plant species.

The landscape design concept proposes a series of accessible urban spaces, including the proposed pocket park at the corner of Abercrombie and Codrington Streets, new public forecourt area fronting Codrington Street, small pocket gardens within the site and informal terraced landscape area at the interface with Darlington Lane (see Figure 22). The setback of the lower levels of the three large modular elements fronting the corner of Abercrombie and Codrington Streets allows for the new pocket park and forecourt to be integrated into the built form with the upper levels overhanging above.

The public domain design provides increased pedestrian permeability, including a publically accessible through-site link from Abercrombie Street through to Darlington Lane along the western common boundary, which includes a community produce garden and proposed new site access to Darlington Public School (subject to further discussions, as committed to by the proponent).

The proposed development proposes the removal of approximately 137 trees due to: the proposed building footprints; their poor condition and form; root damage; and/or their identification within the City of Sydney Street Tree Masterplan as being recommended to be replaced with a more appropriate species. Notwithstanding, the proposal will retain and/or relocate a number of trees into the overall landscape concept. Figure 23 details the proposed trees to be removed (coloured red), to be retained (coloured green) and those proposed to be relocated (coloured orange).

Figure 22: Landscape Concept Plan

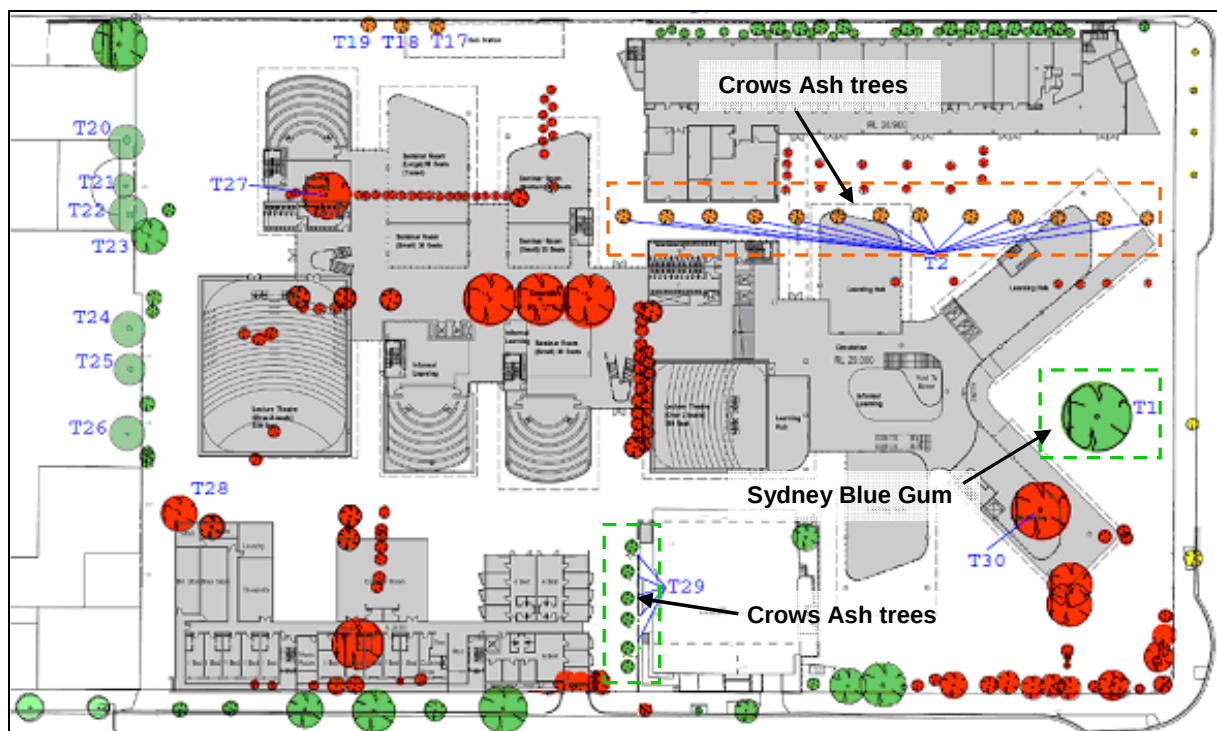


Of particular note is the proposed retention of the existing row of Crows Ash trees (*Flindersia australis*) adjacent to Mandelbaum House and the large Sydney Blue Gum tree (*Eucalyptus saligna*), which is proposed as a key feature of the overall precinct design fronting Codrington Street. In addition, the increased setbacks to Darlington Public School will ensure that the existing mature vegetation within the school grounds is not impacted upon.

An existing Wallangarra White Gum is identified for removal from within the centre of the existing childcare centre due to the trees location within the footprint of the proposed student accommodation building. The Wallangarra White Gum, or *Eucalyptus Scoparia*, is listed as a threatened species under the *NSW Threatened Species Conservation Act 1995* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. The proponent's arborist report details that this species it is not a naturally occurring species within the locality and is considered to be a planted specimen rather than remnant vegetation. The arborist report advises that the tree's removal would not significantly impact on the species when having consideration to clause 5A(2) of the EP&A Act. Further, the trees removal would be more than adequately compensated through landscaping proposed as part of the site's redevelopment.

The proposed public domain and landscape design concept satisfactorily complements the proposed architectural design and will provide an environment that will encourage greater community and resident interaction with the university, making provision for improved pedestrian permeability and high quality areas of usable open space. The public domain improvements to Abercrombie and Codrington Streets create a focal point and support the establishment of a new southern gateway to the university, while the proposed landscape and public domain works to the Darlington Lane frontage will create an improved and unique landscaped environment that takes advantage of the natural slope of the land.

Figure 23: Tree Removal Plan



5.2. ENVIRONMENTAL AND RESIDENTIAL AMENITY

5.2.1. Residential Amenity

The central location of the taller elements of the project largely restricts midwinter overshadowing impacts to within the subject site, with Darlington Public School expected to only receive minor over shadowing for approximately 2 hours during early morning mid winter. The existing residential terraces on the southern side of Abercrombie Street would also only experience minimal additional overshadowing during mid winter, from 3 pm and onwards (see Figures 24 – 26), to which the proposal would not impact on those dwellings achieving the recommended minimum 2 hours direct sunlight to at least 70% of living rooms between 9 am and 3 pm during mid winter.

A submission received from the existing residential college notes that the privacy and amenity of the student residents will be adversely impacted upon, noting that the proposal will create overshadowing and privacy impact on students' rooms and commonly used outdoor recreational spaces.

The department acknowledges that the proposed development will generate overshadowing impacts on Mandelbaum House, particularly during the mid winter morning and afternoon. The submission makes note of existing terrace areas and a rooftop terrace that are commonly used by students for social, passive recreational activities. In this respect, the proposal would satisfactorily maintain solar access to the rooftop terrace area during the mid winter solstice.

Figure 24: Winter Solstice Shadow Diagram – 9:00am

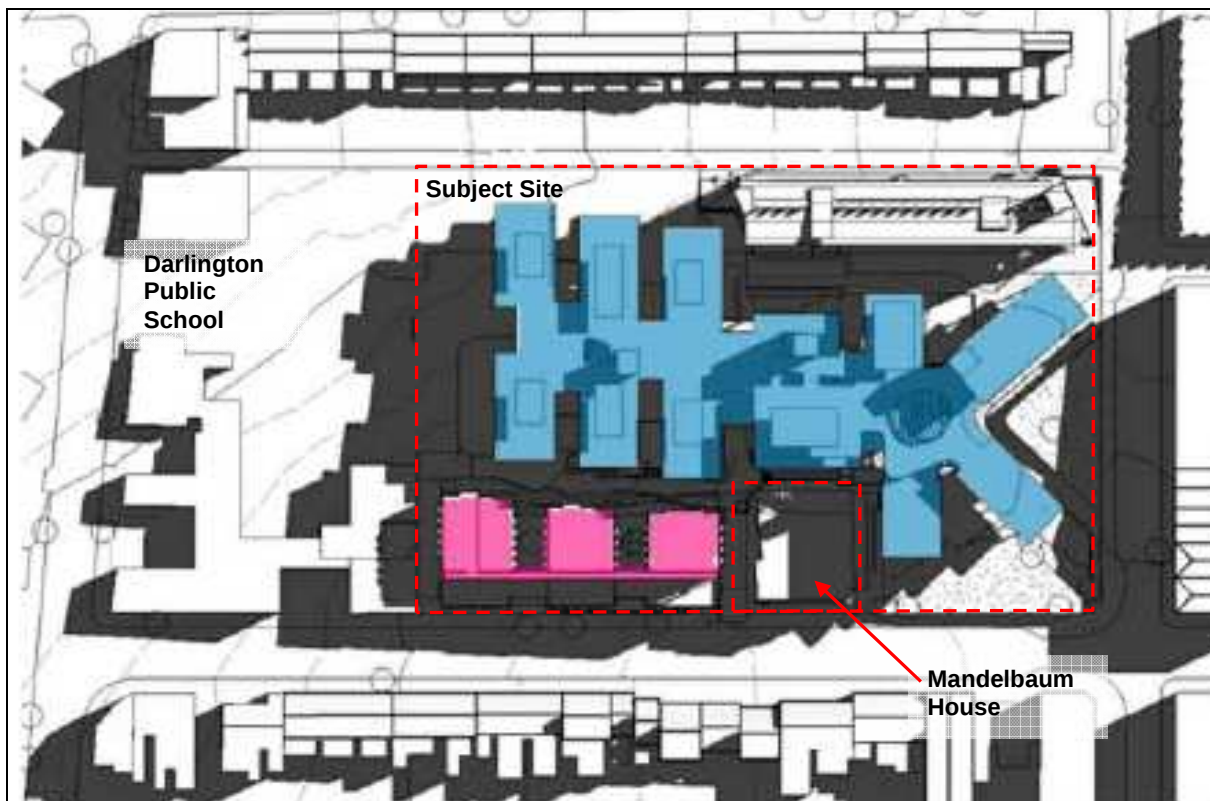
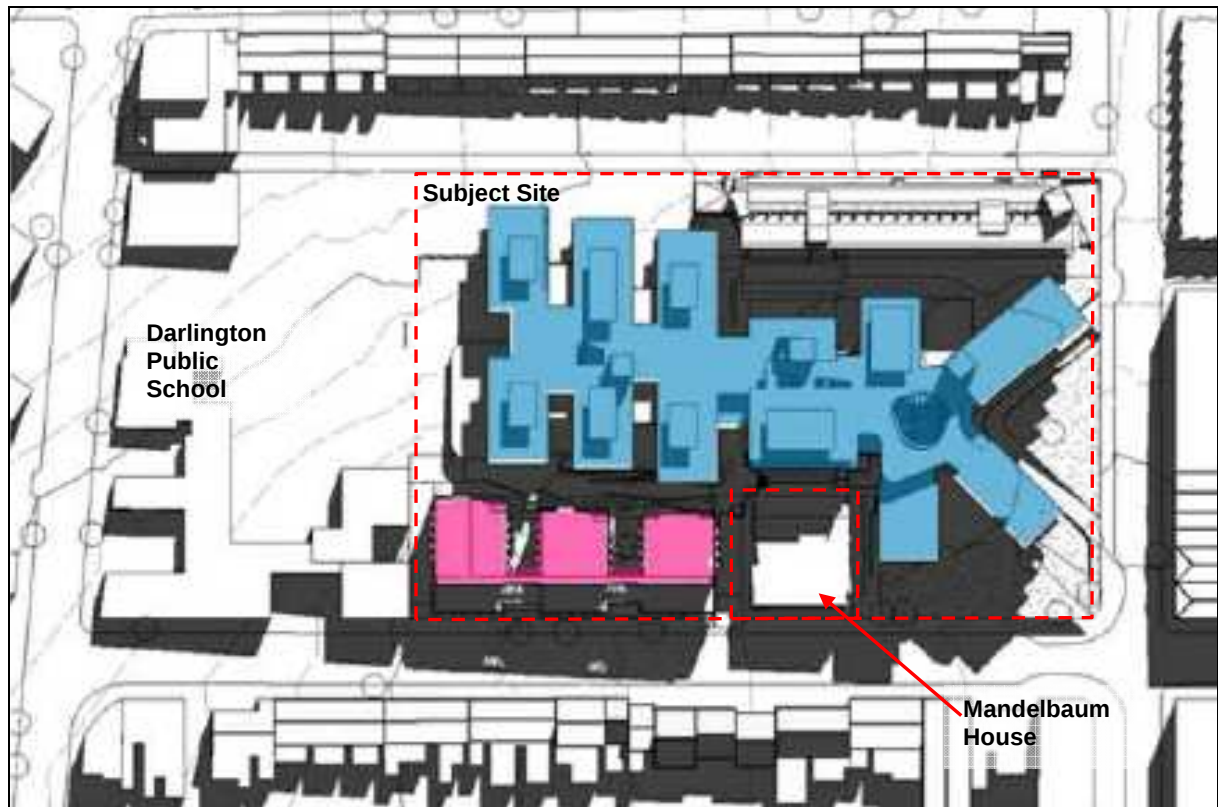
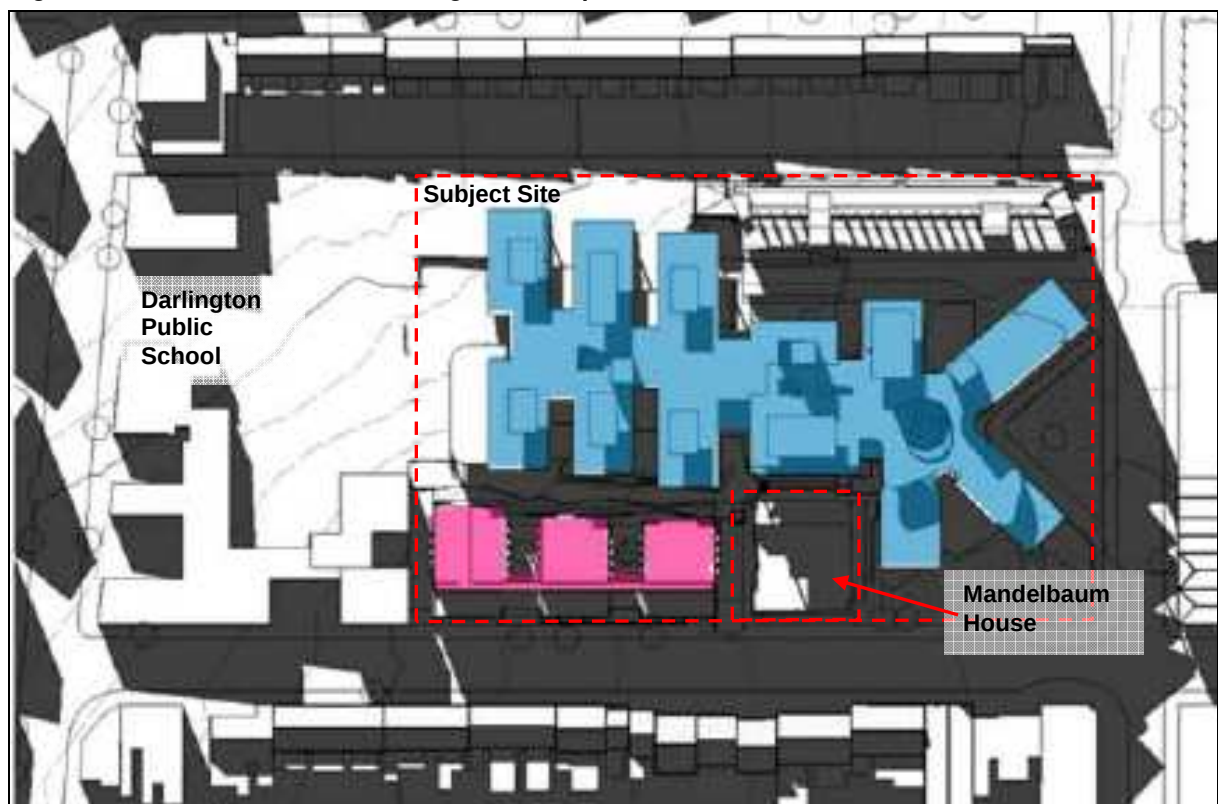


Figure 25: Winter Solstice Shadow Diagram – 12:00 noon**Figure 26: Winter Solstice Shadow Diagram – 3:00pm**

In order to reduce impacts on Mandelbaum House, the proponent also amended level four of the business school building immediately behind, increasing its setback and providing a small terrace, screened with the proposed ceramic louvers. Notwithstanding, further improvements to the solar access for the college would be

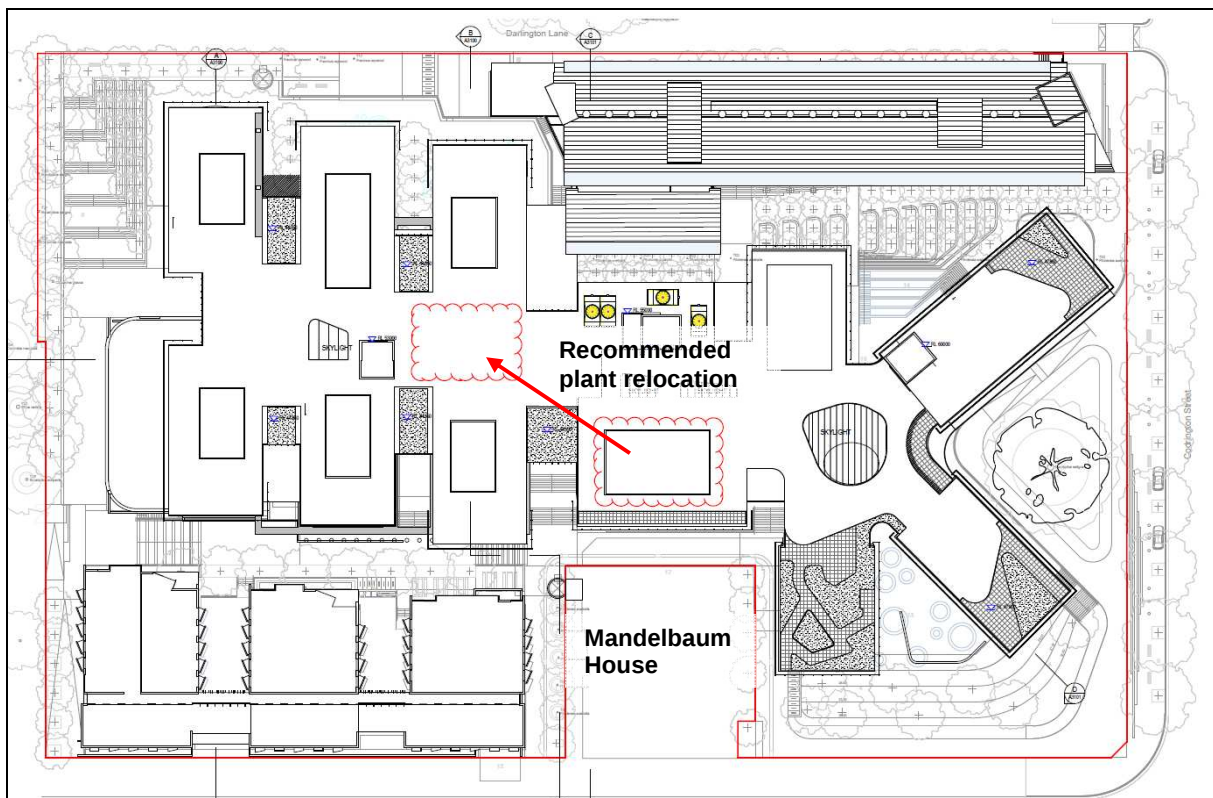
possible by relocating the rooftop plant of the business school building from immediately behind to within the centre of the building (see Figure 27). Accordingly, a condition is recommended to be imposed requiring the amendment, which would also assist in reducing the bulk of the development.

Having regard to the privacy impact concerns raised, the proponent advised that the ceramic louvres on the façade in front of the level four terrace would be angled to maintain a level of privacy for Mandelbaum House. However, to ensure that a satisfactory level of privacy and amenity is maintained for the college's residents, the department recommends a condition requiring the proposed ceramic louvres directly adjacent to the Mandelbaum House on levels one to four of the business school building be fixed to minimise overlooking opportunities.

The proposed student accommodation building is proposed to be provided with angled windows that satisfactorily minimises privacy impacts on adjoining land uses, whilst allowing for access to daylight and ventilation. The proposed separation from the proposed business school building will ensure that satisfactory privacy levels are achieved.

The proposed façade treatment of the business school building and its separation from the adjacent primary school boundary will ensure that the proposed development does not impact on the privacy and amenity of the adjoining school children.

Figure 27: Recommended Rooftop Plant Relocation



The department considers the proposed development, subject to recommended conditions, will achieve satisfactory levels of privacy and amenity for the existing residents of Mandelbaum House and Darlington Public School students, and future occupants of the development.

5.2.2. Noise, Vibration and Dust Impacts

Construction

The submitted noise impact assessment provides an assessment of vibration impacts, in particular the effects on people and damage to building structures. Vibrations generated by the proposed development are best described as 'intermittent' vibration and measured by the vibration dose value (VDV), which relates to the probability of adverse comment or disturbance to building occupants. Vibrations generated during the construction phases are likely to be generated by hydraulic rock breaking and piling activities associated with the basement and lower level excavation.

The noise impact assessment notes that the vibration compliance criteria for a human's response is more stringent than that of the compliance criteria for assessing vibration construction impacts on buildings. Accordingly, the proponent proposes that the VDV criterion set out within Table 5 of the submitted noise impact assessment form the basis for construction activity compliance specific to the receiver types (residences and offices/educational institutions).

In addressing potential impacts from construction vibration and attaining compliance with the VDV criterion set out within Table 5 of the noise impact assessment, the proponent proposes the following practices be adopted:

- limitation of operational hours of activities likely to create high levels of vibration
- monitor sensitive locations during critical periods
- selection of appropriate plant machinery and construction methods with a low potential for the generation of vibration.

The submitted noise impact assessment details that the three construction phases of the development, consisting of demolition, site preparation and general building construction, would involve activities that generate noise emissions above the identified noise management levels, particularly activities located at the development site boundary. The noise impact assessment established noise management levels from noise logging conducted on the surrounding zones. The Industrial Noise Policy (INP) advises that noise management levels are determined by adding 10dB to the measured background noise levels (RBL) (see Table 4).

The noise impact assessment also provides predicted intrusive noise levels ($L_{Aeq, 15min}$) at surrounding sensitive receivers (see Figure 28), based on the maximum sound power levels from equipment expected to be used during the development (see Table 5). A noise source is considered intrusive when measured as exceeding the RBL by 5dB.

Table 4: Background Noise Levels and Construction Noise Management Levels

Sensitive Receiver	Daytime Background Noise Level – RBL (L_{A90})	Construction Noise Management Levels – $L_{Aeq, 15 min}$	
		Noise Affected (RBL + 10dBA)	Highly Affected
A - Darlington Lane	44dBA	54dBA	75dBA
B - Abercrombie Street	45dBA	55dBA	75dBA
C- Darlington Public School	35dBA	45dBA	75dBA
D -Syd Uni Services Building*	59dBA	70dBA	75dBA

*INP recommended maximum noise level for commercial

Table 5: Predicted Construction Noise Levels

Sensitive Receiver	Type of Building	Predicted $L_{Aeq,15min}$ Noise Level (dBA) – “Average” – “Worst case”			Noise Criteria $L_{Aeq,15min}$ (dBA)	
		Demolition	Earthworks and Excavation	Building Construction	Noise Affected	Highly Noise Affected
A	Residential	59 – 78	63 – 82	58 – 78	54dBA	75dBA
B	Residential	57 – 72	63 – 76	56 – 71	55dBA	75dBA
C	School	47 – 68	51 – 72	47 – 66	45dBA	75dBA
D	Commercial	48 – 62	52 – 66	48 – 61	70dBA	75dBA

The “worst case” noise situations are those noise levels predicted at the development site boundary and are calculated as exceeding management levels by 13 to 28dBA at adjacent receivers, with occupants of the existing Darlington Road terraces (sensitive receiver ‘A’) and Abercrombie Street terraces (sensitive receiver B) predicted to be impacted by high noise levels. The calculated “average” situation, identified as long term noise levels, were calculated as exceeding the identified management levels by up to 5dBA for demolition, 9dBA for site preparation and 4dBA for general construction activities.

Figure 28: Sensitive Noise Receivers

Where predicted or measured noise levels exceed the noise management levels, the Office of Environment and Heritage's Interim Construction Noise Guideline recommends that the proponent should apply all feasible and reasonable work practices in order to minimise noise.

It is noted that it is difficult to achieve management levels in all circumstances in particular in built up urban areas, and in acknowledging the construction noise level exceedances, the proponent has provided commitments to undertake noise and dust monitoring, as well as community consultation, throughout the construction period in accordance with their preliminary Construction Management Plan. The proponent also advises that demolition works required for the removal of buildings adjacent to Darlington Public School will be undertaken outside of school hours, with the

intention of carrying out as much demolition as possible during school holidays. Further, the following practices are proposed to be adopted during construction:

- limiting the hours during which site activities likely to create high levels of noise or vibration are permitted
- establishing channels of communication between the contractor/developer, local authority and residents
- appointing a site representative responsible for matters relating to noise
- all site access roads will be kept even so as to mitigate the potential for truck vibration.

In addition to the proponent's commitments, the department considers it appropriate that further noise mitigation measures be implemented to reduce the potential for the creation of 'highly affected' noise impacts on surrounding sensitive receivers. The department recommends that an acoustic barrier be constructed along the development site's boundary with Darlington Public School, around the Boundary Lane Childcare Centre and Mandelbaum House, which will assist in attenuating noise emissions. Further, the department recommends that provision be made for respite periods from operating intrusive equipment, as negotiated by the proponent with sensitive receivers. The implementation of these measures in conjunction with the proponent's proposed mitigation measures will ensure that the potential noise impacts generated during the construction of the development are satisfactorily minimised.

Operational

Sources of noise generation from the operation of the proposed development that have the potential to increase noise levels at the adjoining sensitive receivers include the use of the basement car park and loading dock facility, building services plant, outdoor activities and traffic noise on local roads. In this respect, the location of parking and loading activities within the basement levels would limit potential impacts generated from such noise sources. Further, the use of the proposed basement driveway on Abercrombie Street has been calculated as being satisfactory.

In addressing potential noise impacts from the building services plant, the submitted noise impact assessment concluded that to achieve compliance with the INP noise criteria the following acoustic treatments could be used:

- duct mounted attenuators on the atmosphere side of all air handling plant
- splitter attenuators or acoustic louvres providing free ventilation to plant areas
- solid barriers screening any external plant
- anti-vibration mounts on all reciprocating plant.

The submitted noise impact assessment also notes that mechanical plant that would be installed would be designed to minimise impacts on the nearest receivers and to comply with the INP. Further, noise impacts that would be associated with the use of the proposed rooftop terraces are assessed as satisfactorily complying with the INP noise criteria.

The department is satisfied that the measures committed to by the proponent, including engagement with the community, noise monitoring, and restrictions on intrusive noise activities, will ensure that noise impacts are minimised on adjacent sensitive receivers. Further, conditions recommended by the department, will satisfactorily mitigate any

adverse noise and vibration impacts during the construction and operation of the proposed development.

5.2.3. Boundary Lane Childcare Centre

Concerns have been raised about the delayed timing of the relocation of the childcare centre and subsequent exposure to impacts generated by demolition and construction works. It has been requested by the childcare centre board that the department conditionally require the proponent to find a suitable alternative location for the childcare centre prior to the commencement of any demolition and construction works.

The delayed relocation of the childcare centre would result in it being subject to potential impacts from demolition and construction activities, similar to those expected to be experienced by Darlington Public School and Abercrombie Street residents, as detailed within the submitted noise impact assessment. The department has previously recommended conditions requiring the construction of acoustic barriers between the development site and sensitive land uses, including the childcare centre, and implementation of respite periods during the day restricting the use of intrusive demolition and construction machinery.

Notwithstanding the proponent's commitment to the relocation of the childcare centre to a new site with the same operational capacity prior to the demolition of the centre, the proponent has also committed to implementing additional mitigation measures to limit noise and dust impacts from construction work, including on going monitoring of impacts that would be reported to the childcare centre board.

The department considers the proposed mitigation measures, in conjunction with the recommended conditions will satisfactorily mitigate the potential amenity impacts generated by the development. Continued monitoring and engagement with the childcare centre and their board in accordance with the Interim Construction Noise Guideline will ensure that works are undertaken in an appropriate manner so as to minimise immediate impacts on the centre, prior to its eventual relocation.

5.3. TRANSPORT

5.3.1. Traffic and Vehicle Access

Vehicle Access

Vehicle access to the proposed basement car park and service area for the development is proposed from Abercrombie Street, consisting of a two-way vehicle crossing at a mid-block location, integrated beneath the eastern edge of the proposed student accommodation building.

During the exhibition of both the EA and PPR a number of objections were raised in relation to the proposed provision and location of vehicular access on Abercrombie Street and the potential impacts on pedestrians, school children and impact of increased traffic. The proponent reviewed alternative vehicle access options in response to the issues raised during exhibition, including two from Codrington Street, Darlington Lane and the original Abercrombie Street access point in the southwest corner of the site as proposed within the exhibited EA (see Figures 29 – 32).

The alternate access options from Codrington Street were not considered feasible given existing underground electrical services along Codrington Street, the university's

envisaged future character of the area as a university entrance and pedestrian priority area, impact and proximity to the existing pedestrian crossing, impact on the proposed public domain design and impact on the existing Sydney Blue Gum tree.

In respect to the Darlington Lane access option, the proponent advises that the existing width of Darlington Lane is too narrow and not suitable for two-way traffic and to constricted for service vehicles, dramatically impacting on the pedestrian connectivity proposed through the site and removing the pedestrian focus of the development. The elevation of Darlington Lane above the rest of the site would also require the provision of steep ramps to access basement vehicle areas, potentially resulting in vehicles exiting the basement at a higher speed. Further, the location of an access point along the western boundary of the site would result in unacceptable impacts on the existing mature vegetation adjacent to the site within the public school grounds.

The final option reviewed included the vehicle access originally proposed in the southwest corner of the site, adjacent to the common boundary with Darlington Public School. The location was amended due largely to safety concerns raised during the exhibition of the EA. Its relocation has also afforded the provision of the proposed pedestrian through-site link, as detailed above.

Figure 29: Codrington Street at Rose Street

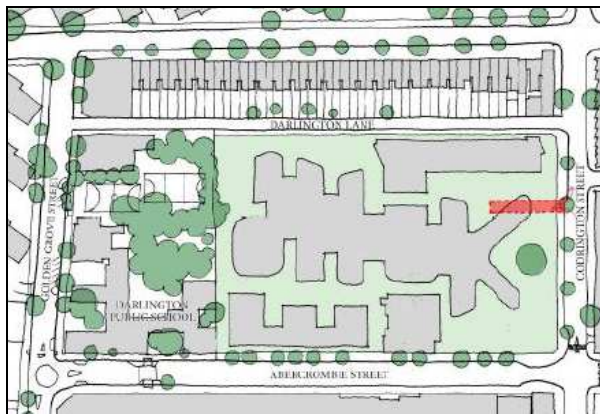


Figure 30: Darlington Lane

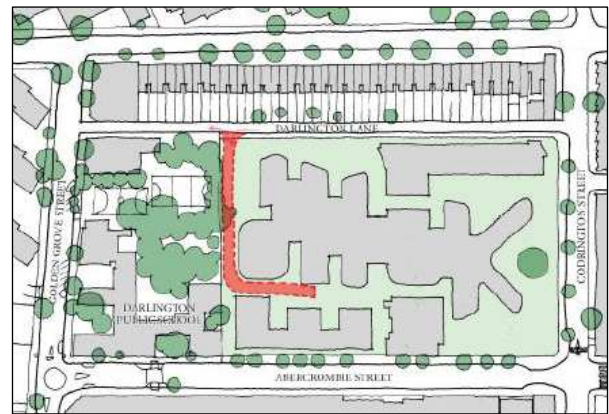


Figure 31: Codrington Street at Boundary Lane



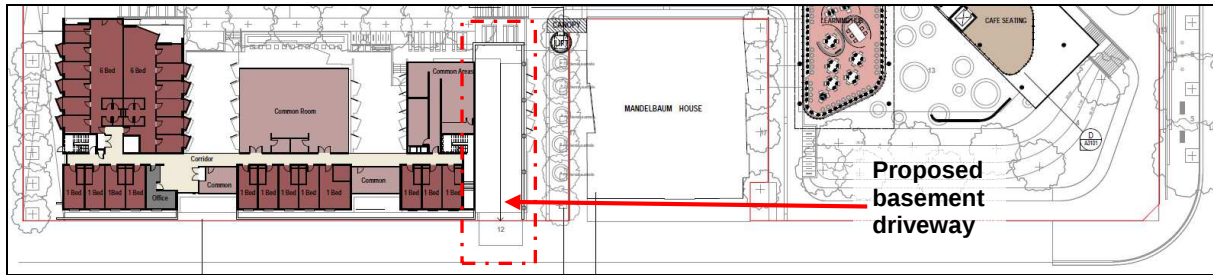
Figure 32: Abercrombie Street – SW corner of site



The PPR proposed midblock vehicle access point was subject to further amendments to integrate it beneath the eastern edge of the proposed student accommodation building to provide greater relief to the adjacent Mandelbaum House and retention of the existing vegetation (see Figure 33). The design amendment has also allowed for the provision of plays to ensure adequate sight lines are achieved for vehicles exiting the basement and will ensure improved visibility and awareness for pedestrians walking towards the primary

school. The proponent has also highlighted that the mid-block location is more appropriate considering its distance to other intersections.

Figure 33: Abercrombie Street - proposed midblock



Notwithstanding, the proponent has also committed to a number of pedestrian safety measures to ensure that any potential pedestrian impacts are minimised, including:

- use of appropriate “GIVE WAY TO PEDESTIRANS” signage
- shallow 1 in 8 gradient for egress, encouraging slower exit speeds
- variable message board indicating availability of parking to reduce unnecessary use of the access point
- provision of a coloured driveway footpath to indicate to vehicles a more vulnerable area and that pedestrians on the footpath have right of way, similar to the existing treatment to the Mandelbaum House basement driveway access
- installation of a vehicle egress alarm, set to the school operating hours, to warn pedestrians and vehicles of potential conflict.

Service vehicle access within the basement is provided for the proposed business school building, student accommodation building and existing Mandelbaum House. Swept path analysis undertaken demonstrates that a medium ridged vehicle (MRV) and standard waste collection vehicle are capable of entering and leaving the site in a forward direction.

The department has considered the concerns raised in relation to the proposed location of the vehicle access point on Abercrombie Street. Alternative access options were considered in detail by the proponent, however, the proposed mid-block driveway location is considered more favourable both from a traffic and design perspective, offering better accessibility and safety. Combined with the proposed management measures committed to by the proponent, the department considers the proposed access arrangements to be satisfactory.

Traffic Impact

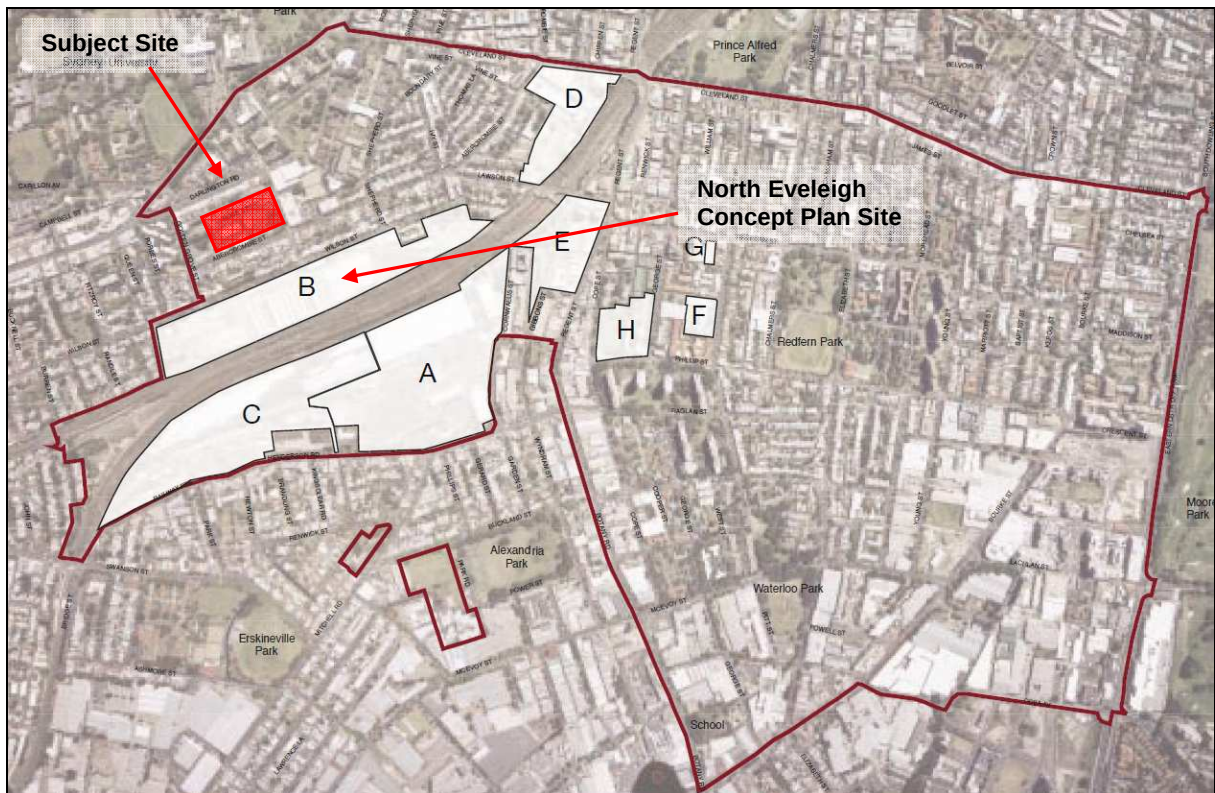
Concerns were raised during the exhibition of the EA and PPR regarding the additional traffic impact generated by the proposed development and future student population converging on the site. The proponent advised that the proposed redevelopment would not increase the total number of student enrolments within the faculty, but allow for the consolidation of its activities to one location within the university's grounds, with existing classes and functions of the faculty proposed to be relocated from the main campus to the new facility proposed at the Darlington Campus.

The Faculty of Business and Economics building has an existing student and staff capacity of 804 persons. The proposed redevelopment of the site (as amended) would provide a total staff and student capacity of approximately 5,100 people, resulting in an increase of approximately 4,300 people currently on site.

The traffic assessment mode split data shows that approximately 40% of university staff and workers drive to work, while studies have shown that approximately 5% of students drive to classes. Based on the projected total student and staff population of the business school development and average peak hour traffic volume, the development was estimated to generate approximately 134 vehicle trips / hour during the AM weekday peak. Having regard to the existing student and staff population located on the main university campus and their relocation to the subject site, the predicted vehicle trips would not necessarily correlate to additional traffic flows on the wider network. The specific impact of these traffic flows on the subject site would be further constrained considering the restricted on-site parking proposed to be provided and existing parking restrictions within the surrounding road networks.

The Director-General's Environmental Assessment Requirements issued for the proposed development also required the proponent to consider the cumulative impacts on the local and subregional area, including the future development of the North Eveleigh concept plan site (see Figure 34).

Figure 34: North Eveleigh Concept Plan Location (Site B)



The North Eveleigh concept plan (MP08_0015), approved by the then Minister for Planning on 16 December 2008, granted consent for the use of the site for residential, office/retail and open space purposes, as well as the adaptive reuse of heritage buildings for cultural/community purposes, having a total gross floor area of 177,527 sqm. The concept plan also made provision for approximately 1,800 basement car parking spaces with vehicular access to be provided from Wilson Street.

The North Eveleigh concept plan traffic impact assessment was independently reviewed by traffic consultants, Sinclair Knight Merz (SKM), following the receipt of concerns from surrounding residents in response to the assumptions made about traffic generated by the concept plan development, calculation and mode share assumptions. The department's independent assessment of the concept plan traffic impact assessment by

SKM found that future traffic generation of the concept plan could be suitably managed through intersection upgrades and preparation of a Transport Management and Access Plan (TMAP). The SKM recommendations were included by the department within the Instrument of Approval for the North Eveleigh concept plan.

A submission received from a local community group raised concerns about the reliance on the North Eveleigh concept plan traffic data in assessing the cumulative impacts of the proposed development, noting that the SKM independent assessment found that the concept plan traffic impact assessment underestimated the traffic generation and intersection level of service generated by the mixed use development.

Having regard to concerns raised over the validity of the North Eveleigh concept plan traffic data, a submission provided by the proponent's traffic consultant advised that the data used was reviewed separately against traffic surveys undertaken in 2012 at high density residential developments in Erskineville, which had good public transport access. The 2012 surveys indicated a peak hour traffic generation rate of 0.15 / 0.18 car per dwelling in the AM and PM respectively. These rates were lower than the 0.24 car trips per dwelling rate adopted within the approved concept plan traffic impact assessment and rate recommended within RMS's Guide to Traffic Generating Developments publication. In this respect, the department considers the North Eveleigh concept plan traffic data adopted for the purposes of the assessment undertaken within the proponent's traffic impact assessment report both conservative and satisfactory.

In reviewing the background traffic flows, traffic counts of the existing local road network were undertaken in 2010 and analysed against existing traffic count data from the transport impact assessment for the North Eveleigh concept plan. The North Eveleigh concept plan traffic impact assessment also included an assessment of the proposed Abercrombie Precinct redevelopment, contemplating an overestimated 10,000 students, 800 staff and a childcare centre for 30 staff and 200 student parents, approximately double the size of the development proposed.

Figure 35: Abercrombie Street Traffic Count Site Details



More recent AM peak traffic counts of vehicles travelling eastbound on Abercrombie Street, between Golden Grove Street and Shepherd Street (see Figure 35), indicate average weekday peak traffic flows of 408v/hr between 8 am – 9 am, while from midday – 8 pm, traffic flows in the same direction fall dramatically and remain consistent at around 200 – 300 v/hr.

Conversely, westbound traffic counts on Abercrombie Street, between Shepherd Street and Golden Grove Street, indicated an afternoon peak of 257 v/hr between 5 pm – 6 pm and a consistent low vehicle trip rate per hour from early morning to midday between 100 – 200 v/hr (see Table 6).

Table 6: Abercrombie Street Traffic Count Summary

Abercrombie Street Traffic Direction	Period	5th Day Average Traffic Count
Eastbound*	8 am – 9 am (AM)	408 vehicles per hour
	9 am – 10 am (AM)	352 vehicles per hour
	Midday – 1 pm (PM)	265 vehicles per hour
	3 pm – 4 pm (PM)	262 vehicles per hour
	4 pm – 5 pm (PM)	270 vehicles per hour
	5 pm – 6 pm (PM)	274 vehicles per hour
	6 pm – 7 pm (PM)	253 vehicles per hour
	7 pm – 8 pm (PM)	213 vehicles per hour
Westbound**	8 am – 9 am (AM)	132 vehicles per hour
	9 am – 10 am (AM)	172 vehicles per hour
	Midday – 1 pm (PM)	147 vehicles per hour
	3 pm – 4 pm (PM)	171 vehicles per hour
	4 pm – 5 pm (PM)	187 vehicles per hour
	5 pm – 6 pm (PM)	257 vehicles per hour
	6 pm – 7 pm (PM)	206 vehicles per hour
	7 pm – 8 pm (PM)	145 vehicles per hour

* Eastbound from Golden Grove Street to Shepherd Street

** Westbound from Shepherd Street to Golden Grove Street

The data reveals an average 5.2% growth in traffic during peak periods above that previously assessed under the North Eveleigh Concept Plan. However, the North Eveleigh traffic impact assessment took into consideration increased traffic up to 2016 using RMS's strategic modelling, assuming an 8.0% growth in traffic. The 2016 model of the higher assumed traffic growth, details that the surrounding road network will maintain satisfactory intersection capacities, operating between a level of service of 'A' or 'B', inclusive of the overestimated Abercrombie Precinct Redevelopment data.

The proposed mid-block site access on Abercrombie Street, traffic counts of Abercrombie Street and peak hour trip rates were also assessed using RMS's SIDRA analysis to determine its capacity. It was determined that the proposed site access and eastern and western arms of Abercrombie Street would continue to operate at a satisfactory level of service 'A', with minimal delay generated.

Having regard to the above, the department is satisfied that the traffic generated by the proposed development can be satisfactorily accommodated within the existing road network. Further, the traffic generated by the proposed development in association with the future traffic associated with the North Eveleigh redevelopment, can be adequately accommodated. In addition, the proposed site access will operate satisfactorily and have minimal impact on the existing traffic conditions.

5.3.2. Parking

The proposed development involves the provision of two basement car parking levels, providing 82 car parking spaces, 10 motorcycle parking spaces and 52 bicycle parking spaces (including 49 showers and amenities) for the business school building and 31 bicycle parking spaces for the student accommodation building. A further 195 bicycle parking spaces are proposed to be provided at accessible areas throughout the ground level of the development.

The project site is not subject to specific parking controls, however, having regard to council's draft Sydney Local Environmental Plan 2011, the proposal generates a maximum parking requirement of approximately 135 parking spaces. In this regard, the proposed 82 spaces are considered satisfactory. The use of the on-site parking would be restricted to vehicles with permits and visitors who pay for its use. Permits would only be available to post graduate students and staff. The university advises that it encourages sustainable travel by not providing parking to undergraduate students and encouraging the use of public transport.

In addition, the proponent proposes to provide 12 new spaces along Darlington Lane and within Golden Grove Street to cater for the loss of spaces created by the relocation of the Darlington public school bus drop off bay from Rose Street to the front of the school on Golden Grove Street.

Works associated with the redevelopment of the Abercrombie Precinct would also result in the permanent loss of approximately 71 on-street car parking spaces from Boundary Lane, Rose Street and Abercrombie Street, particularly due to the closure and incorporation of Rose Street and Boundary Lane into the development site. The reduction of on-street parking spaces is not expected to create a significant flow on effect and increase demand for parking along Abercrombie Street and Golden Grove Street, which are subject to 1hr parking restrictions, Monday to Friday. In this respect, students and staff who chose to drive would have difficulty in securing parking within the surrounding local road network given the unfavourable parking timeframe provided. Further, paid parking is available for students and staff within the Shepherd Street car park, adjacent to the Seymour Centre.

Further, the proponent advises that the proposed basement car park would also be available for paid parking use on weekends, providing the potential to alleviate parking demand generated by markets and activities held at university or at the Carriage Works as Eveleigh.

The department is satisfied that the proposed parking arrangements for the development will satisfactorily cater for the demand generated, whilst encouraging alternate, non-vehicle transport modes of travel.

5.3.3. Construction Traffic

The preliminary construction traffic management plan submitted with the PPR nominates an estimated construction period of 26 months, accommodating works associated with the basement excavation, construction of buildings and structures, finishing works to buildings and hard and soft landscaping.

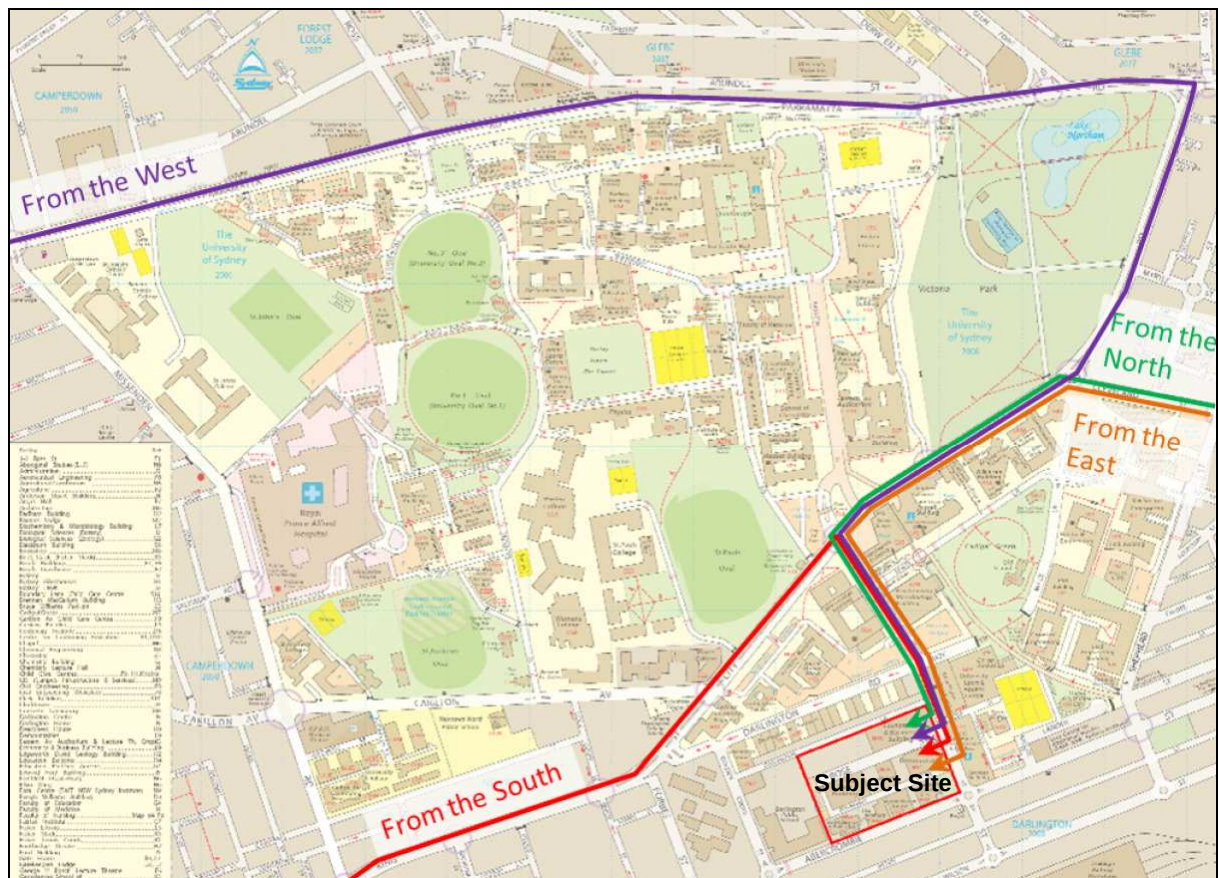
Construction traffic generated will make use of surrounding major roads and access the site from Codrington Street via City Road (see Figure 36). On occasions, however, construction traffic will be required to use Abercrombie Street, but will be restricted to

specific deliveries and not utilised for regular construction material. In this respect, construction traffic impacts will be largely restricted to the north of the site, having minimal impact on the surrounding residential premises.

During construction, it is anticipated that the development will generate approximately 80 medium rigid vehicle (MRV) trips/day during excavation, 60 MRV trips/day during construction, 25 MRV trips/day during finishing and 15 MRV trips/week during landscaping.

Site access is proposed to be controlled via a gated access point on Codrington Street, with traffic controls to be in place to ensure pedestrian safety is maintained, while strict scheduling of vehicle movements will be implemented to ensure that the occurrence of waiting construction vehicles is minimised.

Figure 36: Construction Vehicle Access Routes



The preliminary construction traffic management plan prepared satisfactorily demonstrates that the proposed construction traffic generated by the proposal can be satisfactorily accommodated within the existing road network, while the provision of appropriate traffic management measures will ensure that impacts on the surrounding community are minimised.

5.4. DEVELOPER CONTRIBUTIONS

The proposed development is located within the Redfern-Waterloo precinct and is subject to both the Redfern-Waterloo Authority Contributions Plan 2006 (CP) and Redfern-Waterloo Authority Affordable Housing Contributions Plan 2006 (AHCP). The contribution plans allow the Minister to impose conditions requiring the payment of a development levy of 2 per cent of the proposed development cost for the CP

under section 94A of the EP&A Act and a contribution rate of \$59 per sqm of gross floor area of development for the AHCP under 94G of the EP&A Act.

Based on the capital investment value (CIV) of the development as calculated in accordance with clause 9 of the CP, the proposed development generates a CP contribution of approximately \$4.5 million and a AHCP contribution of approximately \$2 million based on the total development GFA, totalling approximately \$6.5 million.

Under the CP, contributions are intended to be used for the provision of public amenities and facilities to meet the needs generated by new development, including:

- improved railway station and public transport infrastructure to cater for increased workers, students and residents
- upgraded roads and bridges
- public domain embellishment, including public art
- community facilities
- drainage and stormwater infrastructure.

AHCP contributions are paid into a fund that SMDA applies towards the provision of affordable housing, through:

- the purchase of existing dwellings/housing
- refurbishment of established dwellings/housing to provide additional affordable housing
- purchase of newly constructed dwellings
- construction of new dwellings.

The proponent has sought an exemption from paying the contributions for the CP and AHCP on the following grounds:

RWA Contributions Plan

- the Minister can agree that the proposal is 'other public infrastructure', as the project is for the provision of public infrastructure by the Crown, and therefore exempt from paying contributions
- the proposed development is for the provision of public infrastructure by the Crown for a research and education purpose and will not generate any significant increase in student and staff numbers
- Planning Circular D6 advises that it is unreasonable to levy developer contributions for Crown developments that provide community facilities
- the proposed development is not within or adjacent to the key sites identified within the contribution plan
- the development has little nexus or relationship to the works schedule of the contributions plan
- the university has a public character and the proposed development would provide a number of material public benefits, including a new public pocket park, new pedestrian site permeability and through-site link
- the proposed development would contribute directly to the revitalisation of the RWA precinct as sought by the CP, which the university would achieve without the need to pay monetary contributions.

RWA Affordable Housing Contributions Plan

- it is acknowledged that the proposed student housing is not 'affordable housing' as defined under the plan, however, it is an affordable form of accommodation that would provide additional on-campus housing and alleviate pressure on the surrounding rental market and existing 'affordable housing' stock
- the Minister can agree that the proposal is 'other public infrastructure', as the project is for the provision of public infrastructure by the Crown, and therefore exempt from paying contributions
- the proposed development is for the provision of public infrastructure by the Crown for a research and education purpose and that the development will not generate any significant increase in student and staff numbers
- council's Affordable Rental Housing Strategy identifies students as a disproportionately affected sector of the rental market affected by decreasing housing affordability
- student housing is identified as a form of affordable housing under council's Strategy, of which the proposed development would contribute to approximately 13 per cent of council's affordable housing target (1,450 dwellings) by 2030.

SMDA has stated that the proposed development does not warrant an exemption from paying the relevant contributions, arguing that:

- the development does not constitute public infrastructure as identified within the CP and AHCP
- the proposed student accommodation building does not constitute affordable housing as defined under the EP&A Act
- residential and working populations associated with development within the operational area are not a consideration for levying contributions
- the establishment of a nexus is not required to levy a development within the CP operational area.

The SMDA noted that the proponent may be eligible for an exemption from the AHCP contributions subject to the student accommodation building meeting the Government's requirement for affordable housing, the accommodation being managed by a bona-fide affordable housing provider and not for the exclusive use by students. In response, the proponent acknowledged that the housing proposed did not specifically meet the definition of 'affordable housing' under the EP&A Act, but noted that it believed the proposed student housing will provide significant benefit and also help offset the demand on existing affordable housing within the surrounding locality.

In considering both positions, the department agrees that some contributions should be paid, however disagrees with levying the full 2 per cent of the development cost (\$4,499,000) plus the full affordable housing contribution (\$2,010,720) for the following reasons:

- while the development may not be considered as a traditional form of public infrastructure (school, hospital), it plays an important role in providing tertiary education to members of the public
- the development will play a significant role in revitalising the Abercrombie precinct
- the development will provide improved services for members of the public, including students and the local residential community
- the development will provide enhanced opportunities for passive recreation via the construction of a new public pocket park, new pedestrian site permeability and a through-site link
- the proposed 5,900 sqm student accommodation building would equate to approximately 78.6 per cent of the total affordable housing proposed to be provided under the AHCP
- the proposed student housing will contribute to approximately 13 per cent of City of Sydney's affordable housing target (note: student housing is included within affordable housing targets under *City of Sydney's Affordable Rental Housing Strategy 2009-2014*).

For the reasons outlined above, the department recommends that the contribution required under the CP be offset by the contributions applicable under the AHCP. Furthermore, the GFA of the student accommodation building should be excluded from the calculations of the AHCP contribution as student housing will provide accommodation for a sector of the population in need of affordable housing (despite not technically being defined as affordable housing in the EP&A Act), thereby alleviating pressure on existing and future affordable housing stock within the RWA precinct. The calculation of the rate payable is provided in Table 7.

Table 7: Summary of Contributions Payable

Contribution Plan	Rate	Contribution Payable	Proposed Contribution
RWA CP	2% of CIV	\$4,499,000	\$4,499,000 - \$1,662,620 (proposed AHCP) = \$2,836,380
RWA AHCP	\$59 x GFA	\$2,010,720	\$1,662,620
Total		\$6,509,720	\$4,499,000

The \$4,499,000 contribution total represents a \$2,010,720 reduction in contributions under the two contributions plans. The department considers the reductions to the levies payable under the plans to be acceptable taking into consideration the public benefits that the proposed development will offer, the education services provided and reduced pressure on the provision and demand for affordable housing. Accordingly, the department has recommended appropriate conditions requiring the payment of the relevant contributions.

5.5. HERITAGE

Under the South Sydney Local Environmental Plan 1998, the subject site is located within the Golden Grove Conservation Area and is in the vicinity of the existing row of heritage listed residential terraces fronting Darlington Road. Notwithstanding, the City of Sydney's Draft Sydney Local Environmental Plan 2011 excludes the subject site from the existing conservation area, with a number of buildings identified as detracting from the significance of the conservation area.

The heritage impact statement prepared for the proposed development details that with the exception of the existing residential terraces fronting Darlington Road and Abercrombie Street, the surrounding area lacks 'architectural harmony and uniformity of character'. However, Rose Street, Boundary Lane and the Joiner's Workshop building were identified having a contribution to the character of the area.

During the exhibition of the EA, the NSW Heritage Council and council noted that the scale and mass of the proposal should be amended to break up the building bulk to achieve a finer urban grain similar to that of the heritage listed Darlington Road terraces. In response, the architectural design of the business school building (as amended within the PPR) provides projected modular elements within the northern façade, breaking down the bulk of the proposal and providing a more sympathetic design response to the Darlington Road terraces.

Additionally, following exhibition of the EA, council expressed a desire to have the existing Joiner's Workshop building retained within the overall design of the proposal. In response, the PPR made provision for the retention of parts of the Joiner's Workshop façade to the southern elevation of the business school building, adjacent to the internal walkway, which also allows for an interpretation of Boundary Lane alignment. The proponent has also committed to the recommendations provided within the non-indigenous archaeological assessment.

In its response to the revised PPR design, council noted that it generally support the design principles and materials and finishes of the business school building and consider the use of the retained Joiner's Workshop façade for a study room to be appropriate.

Concerns were raised also during the exhibition of the EA and PPR that the proposal was out of character with the existing heritage character of the locality. It is noted that the proposed development is a contemporary response to the existing character. The design of the proposed student accommodation building is provided with vertical treatments to the façade that represent the existing fine grain of the residential terraces within Abercrombie Street, whilst also providing a transition to the contemporary design and scale of the business school building. Further, Abercrombie Street is characterised by a mixture of architectural styles and the proposed development will only add to the diverse character of the locality.

The mass of the proposed northern elevation of the business school building is broken up using the modular elements and is buffered by the existing scale of the Faculty of Economics and Business building.

The department is satisfied that the proposed development responds in a positive manner to the existing historical character of the locality. The proposed retention of the existing Joiner's Workshop (previously approved to be demolished by council) is

proposed to be integrated into the business school building, offering a permanent interpretation of the historical built form on the subject site.

5.6. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Ecologically sustainable development (ESD) can be satisfactorily 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*

In regard to the application of the precautionary principle, the Abercrombie Precinct Redevelopment would not pose a significant risk to the creation of serious or irreversible environmental damage. In this respect it is noted that the proposed removal of the *Eucalyptus scoparia* would not create significant impacts on the existing species in that the specimen is not a naturally occurring species within the locality and it is considered to have been planted rather than being remnant vegetation.

Having regard to the promotion of inter-generational equity and ensuring that the quality of the environment is maintained and/or enhanced for future generations, the proposal will provide a sustainable and ecologically designed development for the purposes of providing an improved educational environment. Specifically, the submitted Sustainability and ESD Planning Submissions Report accompanying the PPR, outlines strategies and targets to achieve key objectives for the proposal, including:

- a 5-star Green Star Education v1 Design and As-Built certification
- orientate and design occupied spaces to achieve appropriate thermal comfort bands, such as orientating offices north to north-east that maximise morning winter sun
- efficient and effective window glazing, shading (external louvres), displacement ventilation, blind installations, indoor plants and green walls
- a low energy HVAC system incorporating natural ventilation and mixed mode operation
- consideration of on-site combined heat/power generation (co-generation/tri-generation) and energy metering and monitoring
- rainwater harvesting and use of efficient flow rate plumbing fixtures
- target for construction waste going off site to achieve 98% reuse/recycling
- provision of bicycle parking for 5% of staff and students
- development of a multidisciplinary teaching and education tool.

The proposed development will not detrimentally impact on the existing biological diversity or ecological integrity of the site, with the resultant disturbance to have minimal impacts on the existing fragmented site. Further, the design of the precinct, as outlined within the PPR, proposes to retain the existing large Sydney Blue Gum tree and also seeks to relocate existing mature vegetation to a more appropriate location within the site to ensure its retention.

In this respect, the valuation of the existing environmental assets has played a key role in the design and function of the proposed redevelopment, with the existing Sydney Blue Gum forming a key feature of the new pocket park, while the relocated Crow's Ash trees will ensure that the proposed through-site connection is well established.

The department is satisfied that the proponent has adequately considered the incorporation of ESD within the design, construction and future operation of the development. The department has recommended appropriate conditions to ensure that the proposal achieves the recommended Green Star design rating.

5.7. CONTAMINATION

The submitted Phase 1 environmental assessment identified areas of environmental interest, including potential areas of fill, the Joiner's Workshop, recycling centre, and existing on-site transformers. The qualitative risk assessment undertaken on the areas of environmental interest noted that only the areas of potential fill material had a medium level contamination risk, with no areas or sources of potential contamination considered to present a high level of risk. The assessment recommends an intrusive stage 2 investigations process be undertaken, involving soil and ground water sampling, prior to construction to further define the presence of potential contamination.

A Phase 2 environmental assessment was undertaken, comprising soil and groundwater investigations to assess risks to users and to the environment. It was concluded that the subject site was generally considered suitable for the intended educational land use, subject to management or remediation to address localised hotspots prior to the redevelopment of the site, through management techniques involving hotspot excavation for offsite disposal and implementation of an environmental management plan (EMP). It was further recommended that these management options be further investigated through the development of a remedial action plan (RAP)

Clause 9 of State Environmental Planning Policy No.55 – Remediation of Land (SEPP 55) identifies the proposed remediation work as being category 1 remediation work, due to the subject site's location within a heritage conservation zone. Accordingly, the proponent has prepared a RAP to address the localised contamination hotspots in accordance with SEPP 55 and associated guidelines. The submitted RAP satisfactorily details the proposed method of remediation, through hotspot excavation for offsite disposal. Appropriate conditions are also recommended requiring the preparation of a site audit statement prior to the commencement of remediation works and preparation of a site audit report upon completion of remediation works to certify that the remediation works have been undertaken in accordance with the RAP.

The department has considered the phase 1 and phase 2 environmental assessments and reviewed the RAP prepared for the proposed development in accordance with clause 7 of SEPP 55 and planning guidelines. Accordingly, the department is satisfied that the land will be suitable for the intended purpose, subject to the remediation works being undertaken in accordance with the RAP.

6. CONCLUSION

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

The department considers that the proposed development, as modified in the PPR, satisfactorily addresses the key concerns raised during the exhibition and assessment of the proposal and that the proposed siting, scale and form of the proposed business school and student accommodation buildings is satisfactory, subject to recommended conditions. The proposal has appropriately considered the character of the existing locality, including Darlington Public School, Mandelbaum House and surrounding residential terraces.

The department has also recommended appropriate conditions in response to key issues, including the requirement to relocate proposed rooftop plant of the business school building from directly behind Mandelbaum; the requirement for the construction of an acoustic barrier adjacent to Darlington Public School, Boundary Lane Childcare Centre and Mandelbaum House; implementation of midday respite time periods from the use of intrusive construction equipment; and the requirement for the ceramic louvres fronting Mandelbaum House to be fixed to reduce overlooking and privacy impacts.

Comments on the draft conditions from the proponent and council were sought and where relevant, have been incorporated.

The proposal is consistent with key objectives in the NSW 2021 plan, Metropolitan Plan for Sydney 2036 and draft Sydney City Subregional plan and would provide significant educational and social benefits to the local and broader community through the revitalisation of the locality and provision of new educational facilities, whilst providing areas that allow and encourage community engagement and interaction.

The department considers that the proposed development is in the public interest and is satisfied that the impacts of the proposal can be suitably mitigated and/or managed to ensure a satisfactory level of environmental performance, pursuant to section 75J of the EP&A Act.

7. RECOMMENDATION

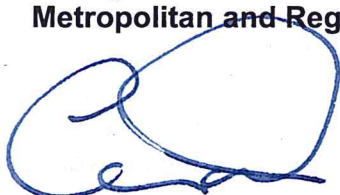
It is recommended that the Planning Assessment Commission, as delegate of the Minister for Planning and Infrastructure:

- a) **Consider** the findings and recommendations of this report;
- b) **Approve** the Major Project Application (MP07_0158), subject to conditions, under section 75J(1) of the EP&A Act, having considered all relevant matters in accordance with (a) above; and
- c) **Sign** the attached Instrument of Approval (Appendix E).



5/10/12

**Acting Director
Metropolitan and Regional Projects North**



3.10.12

**Acting Deputy Director-General
Development Assessment & Systems Performance**