# **TREES**





MATURE HIEGHT

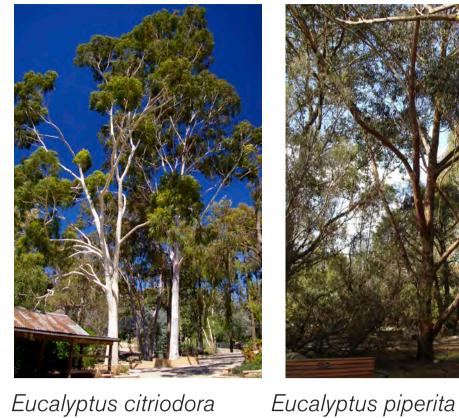
 SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK. • ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'.

Francis-Jones More

**CONTAINER SIZE** 

o DO NOT SCALE DRAWINGS.
USE FIGURED DIMENSIONS ONLY.











Flindersia australis Meleleuca linariifolia

Planting Schedule L-03090 (REV 005) **BOTANICAL NAME** COMMON NAME TREES
Agonis flexuosa
Banksia integrifolia Willow-Myrtle, Weeping Myrtle <u> Coast Banksia / Coastal Honeysuckle</u> Eucalyptus citriodora
Eucalyptus piperita
Flindersia australis
Magnolia grandiflora
Pistacia chinensis Lemon-Scented Gum
Sydney Peppermint
Native Teak / Crow's Ash
Bull Bay Magnolia Ulmus parvifolia Melaleuca linariifolia Snow in Summer / Narrow-leaved paperback SHRUBS/GROUNDCOVERS Sweet-Scented Wattle
Tea Tree / Purple Tea Tree Leptospermum flavescens "Copper Glow" <u> Eriostemon myoporoides (white)</u> NATIVE GRASSES
Isolepis nodosa
Lomandra 'Little Con'
Lomandra longifolia 'Tanika'
Lomandra katrinus Knobby Club Rush Mat Rush

Brachyscome multifida











SENSORY GARDEN Actinotis helianthi Flannel flower Lavandula angustifolia English Lavender Stachys byzantina Lamb's Ear Tulbarghia violacea Wild Garlic/Society Garlic



Magnolia graniflora

Callistemon sp











Cut leaf Daisy

Lomandra longifolia 'Tanika'



Eriostemon myoporoides











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sydney melbourne uk Level 5,70 King Street **t** +61 2 9251 7077 **w** fjmtstudio.com

**Darlington Public School**Golden Grove Street
Darlington NSW 2008

Landscape Plans
Indicative Planting Palette

TDC		9202	02
roject code		sheet no.	revision
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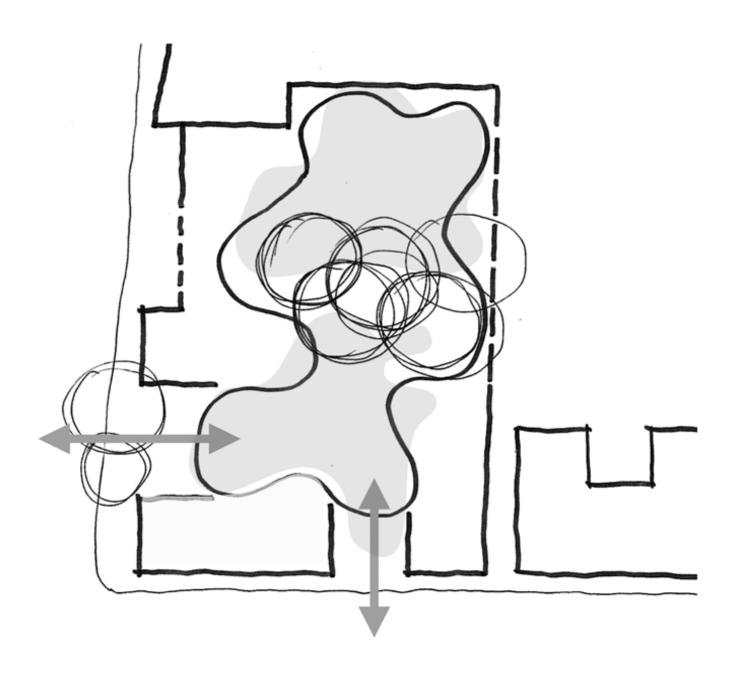
## **DARLINGTON PUBLIC SCHOOL REDEVELOPMENT**

# **Appendix K** — Construction Management Plan

SSD-9914

**Prepared by Mace Group** 

For NSW Department of Education





# **For Information Only**

# Construction Management Plan for: Darlington Public School Main Works



SEARs Requirement	Relevant Report Section
Provide details regarding the staging of the proposed development.	3.4
Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.	3.3
Provide details of how the school will continue to operate during construction activities of the new primary and secondary school, including proposed mitigation measures.	3.4, 4, 5, 6.3, 6.4, 6.5, 8,
Identify and detail how any asbestos waste, lead-based pain and Polychlorinated biphenyls (PCBs) that may be encountered will be handled, transported and disposed.	7



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#### **Version Control**

Version	Date	Prepared By	Issued To	Status
V.01	30/03/20	D. Iuliano	J. Malin	Draft for comment
V1.0	16/04/20	Mace	Ethos Urban	SSDA Document
V1.1	23/04/20	Mace	Ethos Urban	Minor Changes

#### **Purpose of Document**

#### A note to prospective tendering contractors:

The purpose of this document is to advise tendering contractors of SINSW requirements. It also outlines expectations for the construction methodology and management plans of the Darlington Public School project ("the Project").

This plan has been developed in consultation with SINSW to provide a guide to the successful tenderer on the construction management requirements of the project, inclusive of site-specific requirements throughout the construction period.

Please be aware that this plan is not prescriptive in its entirety nor has its development context been exhaustive. As such, tendering contractors are expected to further develop this plan for endorsement prior to commencement of works.



#### 1. Introduction

Darlington PS was established in about 18783 and can currently accommodate up to 230 students with 219 enrolled as of 2019. Darlington PS is located on a site (across two (2) unconsolidated lots) which are both owned by the DoE. The existing facilities are more than 40 years old with no heritage buildings identified. However, a heritage item and conservation area are adjacent to the school and have been considered as part of the development.



Figure 1 - Site Layout

The intent of the works is to stage the construction in order to allow the school to remain on site. The works will be split into two stages.

The works for Stage 1 will see the north western portion of the site developed while the School continues to use the buildings along Abercrombie Street and the play area to the north east.

The works for Stage 2 will see the school move into the Stage 1 works, and the remainder of the site demolished and developed.

It is critical that the new facility merges seamlessly with existing operation.

The outcomes from this redevelopment is to increase the capacity of the school from current 230 students to 437 students and 60 preschool children.

This Construction Management Plan ("CMP") has been prepared for the main construction works for the Project. The CMP will form the guidelines and principles for the final CMP that will be produced by the Contractor.



#### 2. Scope of Works

The proposal is to develop the design and deliver approximately 6000m² of redevelopment within the existing school lots comprising:

- Preschool
- 19 Homebases
- Library
- · Admin area and staff facilities
- Communal Hall
- Landscaped areas



#### 3. Operations of Site Establishment / Management

The works will be undertaken under the supervision of the Main Contractor ("Contractor"). The Contractor will be required to prepare a site-specific CMP prior to any construction/ demolition or set up works for SINSW approval. All statements and proposals documented in this CMP will be reviewed at the time of contract award for the works to ensure alignment with proposed preferred methodologies and sequencing developments.

#### Site Establishment 3.1.

To assist the Contractor in the development of the CMP, Mace has consulted with SINSW to provide a preliminary CMP. The following list is not a comprehensive list but will assist the Contractor:

- Proposed location of Contractors site amenities, offices and on floor lay down/tool store;
- Required site vehicle access and sizes of vehicles. All traffic management identified is to be provide by the Contract;
- Identify areas requiring site hoarding and fencing.

A proposed site establishment plan is shown below. Contractors are to make their own investigations into the suitability of the proposed site shed locations and the extent of the proposed fence line.

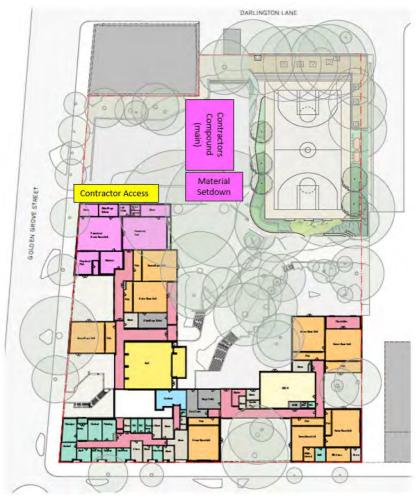


Figure 2 - Site Establishment

#### 3.2. Legislative Requirements

The works will be undertaken in accordance with legislative requirements, the SSD Consent and as specified in the tender documents related to the awarding of the Main Contract.

Site accommodation, compliant with WorkCover requirements, will be established for site offices, lunch sheds, change sheds and ablutions within the construction site. This accommodation will



service all phases of the construction and may require adjustment during the phases of construction to allow safe and effective access for workers and construction.

All visitors to the site will be inducted by the Site Manager. The induction process will include site safety, evacuation and emergency procedures and environmental management.

All personnel and sub-Contractors working onsite are required to fill in the Prohibited Employment Declaration, shown in Appendix 1, or have a Working with Children Checks (WCC). This documentation is a requirement prior any construction on site set up for all persons working on the site.

#### 3.3. Hours of Operation

The following hours of operation are proposed for the works but are subject to change according to the SSDA requirements:

Monday to Friday 7:00AM to 6:00PM
 Saturdays 8:00AM to 300PM\*
 Sundays and Public Holidays No works.

It is not envisaged that the construction works will require work to be undertaken out of the above normal working hours, however should this be necessary, appropriate applications and consultation will occur to obtain all stakeholder approvals.

#### 3.4. Staging

It is envisaged that the SSDA works will be delivered in two stages.

#### 4.4.1 Construction Staging

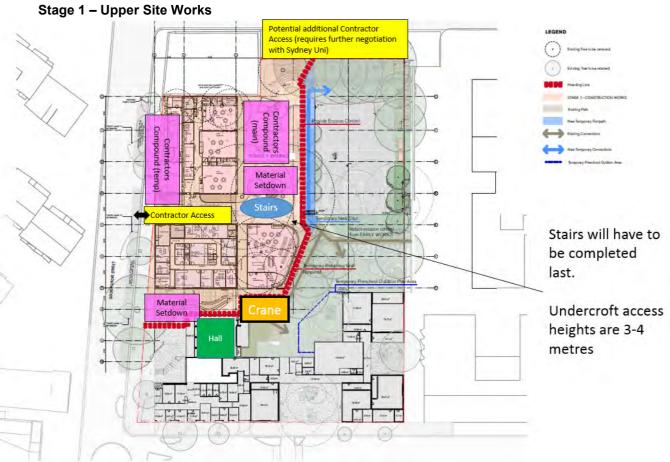


Figure 3 - Stage 1 Works

<sup>\*</sup>Removal of contaminated waste can only occur on a weekend due to a live school site. It is expected that work on Saturday will usually finish by 1pm, except in the case of removal of waste.



During stage 1, the school will remain operational in Block A & B. The area where Block C was previously (having been demolished previously under a separate approval) will form the area for construction of stage 1. The hoarding line through the middle of Block C will form the boundary of stage 1. Careful demolition of Block C will have enabled the continued use of the hall in this location. The Stage 1 works include:

- Construction of the administration/library block on ground level
- Construction of the preschool block also on ground level
- · Construction of two levels of homebases that will lay atop the two ground level blocks
- Construction of the services area alongside Golden Grove
- Landscaping for the preschool area and the remainder of the northern portion of the site to tie in the existing early works playcourt
- Electrical supply connection to the Darlington Lane substation. At completion of stage 1, the site should change over its connection to the grid from Abercrombie Street pole to the Golden Grove connection.
- End of stage 1 will also trigger lot consolidation into a single lot.

The stairs indicated in the drawing will need to be constructed last in order to allow usage of the internal compound. Temporary access to Darlington Lane, or a temporary compound on Golden Grove Street will allow works to finish once the stairs are completed.

Early Navis to would be a second of the seco

Stage 2 - Lower Site Works



Figure 4 - Stage 2 Works

Once the existing school operations have decanted into the new Stage 1 building, the Contractor will be given access to the Stage 2 site to undertake the works as documented. The site will continue to operate as a live school environment in the stage 1 building. The Contractor will be required to manage any potential disruptions in accordance with the agreed disruption management process. Stage 2 works include:

- Hall, canteen and associated areas
- Levels 1 & 2 of homebases above connecting to the Stage 1 levels
- COLA and outdoor landscaping areas

#### 4.4.2 Electrical Staging

The current Electrical supply is via a pillar on Abercrombie Street. This will supply the site during stage 1 while the new trench and connection to the substation on Darlington Lane is made. The changeover to the new supply will occur near completion of stage 1 and will coincide with lot consolidation. The new electrical supply will enter site via the North Western corner below the IXL buildina.

#### 4.4.3 Stormwater Staging

The site currently has 14 stormwater outlets to the kerb.

Stage 1 will have these outlets maintained without an OSD. City of Sydney Council has agreed to this temporary arrangement as there is no additional flow to the Stormwater system from the current system.

Stage 2 will include installation of two OSD tanks. Tank 1 will be connected to the Stormwater pipe articulated along Golden Grove. The other tank will be connected to kerb outlets. This tank is of a substantial size to reduce current flows.

With the install of both tanks, there will be a net decrease to the flow of site Stormwater to the current Council system.

#### 3.5. Public and Property Protection

As specified in Australian Standards and WorkCover requirements, appropriate hoarding / fencing and safety barriers will be installed to the work areas prior to commencement of the works. Site hoardings will be erected around the perimeter of the site and maintained to prevent public access. The Contractor will be required to install and maintain a continuous shade cloth banner and vinyl signs to all site fences within the public view prior to commencement of works.

Site signage will provide 24-hour emergency contact details including contact name and telephone number. Signage will abide by the SINSW Government Brand Guidelines.

Security and monitoring of the construction site will also be implemented by the Contractor and maintained throughout the entire construction period.

These public and property protection measures will be reviewed at the time of contract award for the works to ensure alignment with proposed preferred methodologies and sequencing developments and to ensure that the safety of the general public is maintained at all times during the works.

Ref: 200330 Darlington PS Construction Management Plan v.1.1 Date: 12/05/2020 Page: 8



#### 4. Consultation

The Main Contractor will be responsible for setting up fortnightly construction meetings with the School staff, SINSW and Mace. The Contractor will be required to chair these meetings, provide minutes and produce a written fortnightly progress plan throughout the differing stages of construction/demolition period.

Typical agenda items should include the following key components:

- Attendance and apologies;
- Acceptance of previous minutes:
- Items requirement direction to continue construction progression;
- Update on programme;
- Key activities completed in the previous period; and key activities forecast for the upcoming
- Activities that may affect operations;
- Activities that may affect the contractor and;
- Listed RFI's and outstanding actions
- Any other business.

These meetings are separate from the monthly PRG that the contractor is expected to attend, but will be run by SINSW and Mace.

#### 4.1. Contractor Monthly Report

In addition to the written progress plan, a written monthly report is required to be prepared by the Main Contractor for the Principal and is to be provided by the 28th of each month. The report should include but not limited to the following key components:

- All Work Health, Safety and Rehabilitation matters;
- The Contractors forecasted Project Completion;
- Status of the construction "works" against the current approved contract programme;
- Status of deviations from the current approved programme;
- Progress of the "works" including 6 digital photos of the "works";
- Details of any matters which may have a positive or adverse effect on the "works";
- Details of any matters the Contractor believes have potential to affect or delay the "works";
- Mitigation or remedial actions is being, or may be taken in respect of potential delays in relation to the "works";
- Status of all variations, including variations which a variation order has been issued, or anticipated variations;
- Summary and status of claims made by the Contractor under the Contract;
- Any other matters they may affect or current affecting the progress and cost of the "works"; and
- Programme showing projected status of the "works" three weeks from the date of the written report.

#### 4.2. Disruption Request Notices

Where the Main Contractor wishes to undertake noisy or disruptive works, they must prepare and submit for approval a Disruption Request Notice ("DRN") which shall be reviewed and approved by both Mace and Darlington PS prior to commencing any works. The Main Contractor should endeavour to issue these to Mace 14 days prior to when the works are proposed to take place. This should allow the school to review the proposal, assess the possible impact and have sufficient time to execute a management plan.

The DRNs will be formally discussed in the fortnightly contractor meetings, with Mace providing direction on their approval from the school in the meeting before the works are scheduled to commence.



#### 5. Environmental Management

The Contractor is expected to develop a site-specific Environmental Management Plan that details mitigation strategies to protect the ecology of the Project site and control various sources of pollution.

#### 5.1. Noise and Vibration

The Contractor will be required to monitor noise during the works and comply with legislative requirements authorised by the NSW Environment Protection Authority ("**EPA**") and the local Council. As part of the noise mitigation actions for the project, the Contractor will be responsible for the management, checking of compliance maintenance regimes and statutory supervision of all equipment, such as ensuring all trucks and machinery involved in the works are checked for defective exhaust systems and general servicing.

The contractor must ensure that all site activities which have the potential to create noise and vibration omissions are controlled and suitable equipment is utilised to mitigate the associated disruption to the school and surrounding neighbours. If additional items are required to ensure a high level of noise and vibration control, then the contractor must specify the equipment as part of the tender and make reference in the prelims section. Where the Contractor wishes to undertake disruptive works, they must prepare and submit for approval a DRN, as detailed section 5.2 above.

A draft template of a DRN is provided at Appendix 2, which will be reviewed and approved by Mace, SINSW and DPS prior to commencing any works. Machine work and other works that expose residents, workers and visitors to excessive noise will not be permitted outside the above-mentioned hours of operation.

#### 5.2. Dust

Mitigation of dust will be managed and controlled by the Contractor. The Contractor will assess the need for measures to prevent tracking of soil onto roadways outside of the site and provide if deemed necessary. These may include the provision of measures such as a shaker grid, wheel wash facilities, hosing and general manual cleaning.

The contractor must ensure that all site activities which have the potential to create dust omissions are controlled and suitable equipment is utilised to mitigate the release of dust and the associated disruption to the school and surrounding neighbours. If additional items are required to ensure a high level of dust control, then the contractor must specify and make reference in the prelims section.

Additional precautions that would be implemented during the works include the covering of all haulage trucks with tarpaulins and monitoring of weather conditions (including wind). Management and contingency plans will be developed to prevent any foreseeable impacts from dust.

#### 5.3. Erosion and Sediment Control

Erosion and sediment controls for the works will be maintained in accordance with the requirements of Managing Urban Stormwater. Stormwater runoff and drainage will be managed by the Contractor through appropriate controls consistent with NSW Environment and Heritage standards and will be required to be monitored closely following heavy rainfall. Any remedial work required to maintain the effectiveness of controls will be undertaken as a priority.

#### 6. Traffic Management

As part of the final CMP, the Contractor will be required to submit a Traffic and Pedestrian Management Plan for approval prior to commencement of the works.

#### 6.1. Site Access

Figures 1 below presents a proposed route for construction vehicular traffic to access the school Site.



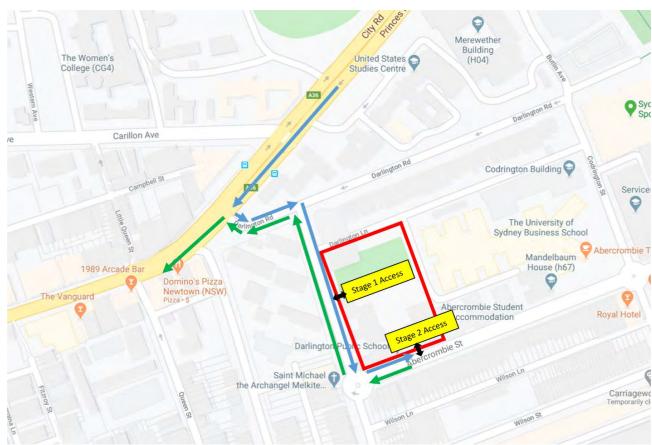


Figure 4 - Construction Vehicular Traffic Route to the Sites

It is envisaged that the construction plant and haulage will access the site from one dedicated construction access route.

During stage 1, the construction traffic will access the site via Golden Grove Street. During stage 2, access will be via Abercrombie Street. These entrances will be provided solely for the Contractors use, minimise potential impact of the regular school vehicular traffic. Appropriate traffic management procedures must be in accordance with the SSDA and include consultation with City of Sydney and TfNSW.

#### 6.2. Parking

Parking will not be provided for construction personnel. Vehicle owners are to be solely responsible for finding appropriate places to park and shall be solely responsible for any fines incurred for not complying with relevant parking restrictions. Emergency vehicle access into the School is to be maintained at all times of the construction works.

The Contractor is to refer to the Traffic Impact Assessment (TIA) prepared by TTPA, the traffic consultant. The TIA should form the basis of the Contractor's parking management plan for the construction phase. Emphasis will be on recommending and providing alternate means for workers to get to site, specifically public transport. This will be to minimise the use of private vehicles and associated impacts on the surrounding streets.

It is recommended that on site tool storage is provided for workers so that they can more easily make use of the public transport in the surrounding area. If workers are required to park near site, recommended long stay areas need to be clearly identified in order to prevent any local disruption.

#### 6.3. School Pick-up and Drop-off

Site vehicle activity should not be interfering with the drop-off and pick-up entrance along Golden Grove and Abercrombie Street. Contractor is required to identify the mitigation strategies in the Traffic Management Plan. The contractor will need to schedule main deliveries outside of these key school times.



#### 6.4. Pedestrian Protection

Unauthorised pedestrian movements must not be permitted through the construction site entrance. The construction site will be defined by clear signage and maintained throughout the construction period. Hoarding, appropriate to the interaction between pedestrians and construction works (as per WorkCover requirements and Australian Standards), will be constructed to prevent unauthorised access to the site. These hoardings and fences will be staged to allow access to in-use areas during the work.

#### 6.5. Maintenance of Services

Emergency vehicle access to the site is to be maintained at all times of the construction works. All services to the school are to be uninterrupted during school operating hours.



#### 7. Waste Management and Recycling

A formal Construction Waste Management Plan will be produced by the Contractor prior to works commencing. All material that cannot be recycled or reused will be disposed to an approved landfill facility. Waste will be minimised and that generated will be separated to maximise recycling.

#### 7.1. Asbestos & Hazardous Materials

An Asbestos Management Plan ("AMP") and the relevant statutory legislations will be consulted with nominated project stakeholders if any hazardous material is detected and requires immediate removal and treatment. The AMP will include removal control plans for any Synthetic Mineral Fibre ("SMF"), Polychlorinated Biphenyl ("PCB"), Lead Containing Paint and an Asbestos Removal Control Plan as appropriate.

Dangerous goods (such as petrol, diesel, oxy-acetylene, oils, etc.) will be stored in a lockable compound with sufficient ventilation in accordance with relevant codes of practice and standards. Material safety data sheets on all flammable and potentially harmful liquids will be provided by the Contractor undertaking the works.

The Removal Control Plan will be in accordance with the Remediation Action Plan R.001.Rev0 prepared by Douglas Partners on 23 March 2020.

#### 8. Stakeholder Consultation

Weekly meetings and site walks will be undertaken by the Contractor with Mace, SINSW and school staff at the Project site. This will inform the team, project management team and Contractors of the upcoming events that fortnight and the detailed coordination of logistics.

Weekly site reports will be developed by the Contractor outlining the site works undertaken during the week and site works planned for the following week accompanied by progress images. The Contractor is responsible for chairing and minute taking for the site meetings and the project team will mitigate any risks posed to the operations of the school site.

#### 8.1. Working within School Premise

As construction will be occurring within an operational school, the Contractor is to be mindful of this nature in tendering and throughout the works and should maintain noise and disturbance to a minimum. The Contractor is responsible for managing the sub-contractors on site and should ensure that they do not unnecessarily enter or interrupt non-construction areas or loiter in front of or peer through any windows or doors of classrooms unless specifically required to do so to undertake their works and have been duly authorised.

#### 8.2. Complaints Management System

Complaints may include any interaction with a community member or stakeholder who expresses dissatisfaction with the project, services or staff member's actions during the course of the Project.

To ensure that complaints are managed consistently the following information is required to help resolve the complaint quickly and effectively:

- Complainant contact details;
- Description of complaint;
- The requested remedy/action;
- Due date for response; and
- Immediate action (if any).

All complaints are to be documented in the fortnightly site meeting to ensure effective and timely close out. In addition, the Contractor is to maintain a complaints tracking register which records the management and close out of all complaints. If the complaint escalates, the complaint shall be referred to Mace to be advised of a clear direction from SINSW.



#### 9. Project Commissioning

A detailed building commissioning plan shall be developed in accordance with the relevant SINSW standard policies, procedures and guidelines. This plan is to be finalised no later than 6 months from completion of the works. The Contractor is responsible for coordinating all aspects of the commissioning plan including allowing sufficient time for review and revision of the commission plan by Mace, SINSW and DoE staff.

#### 9.1. As-Built Documentation

All as-built documentation is required to be completed using the provided legends (these will likely be supplied by SINSW Technical Stakeholder representatives such as Security or ICT). Development of the required symbols is mandatory when completing drawings.

#### 9.2. Security Handover

The SINSW Security team requires communication from the Main Contractor 7 days prior to project completion to allow sufficient time for the finalised security documentation to be completed. It is the Contractors responsibility to notify Mace and the Principal of this timing.

#### 9.3. SINSW Defect Review

The SINSW are required to conduct a defects review during the project handover phase. The Contractor is required to inform Mace at project completion for a defects review to be coordinated.



**Appendix 1**Prohibited Employment Declaration

**Ref**: 200330 Darlington PS Construction Management Plan v.1.1 **Owner:** Mace Australia Pty Ltd Date: 12/05/2020 Page: 1



ATTACHMENT A

### Prohibited employment declaration

Commission for Children and Young People Act 1998



The Commission for Children and Young People Act 1998 makes it an offence for a prohibited person (a person convicted of a serious sex offence, the murder of a child or a child-related personal violence offence, as well as a Registrable person under the Child Protection (Offenders Registration) Act 2000) to apply for or otherwise attempt to obtain, undertake or remain in, child-related employment. It does not apply if an order from the Industrial Relations Commission, Administrative Decisions Tribunal or Commission for Children and Young People, declares that the Act does not apply to a person in respect of a specific offence.

For further information on what is child-related employment see the Working With Children Employer Guidelines.

Section 33B of the Commission for Children and Young People Act 1998 defines a serious sex offence as:

- An offence, involving sexual activity or acts of indecency, committed in New South Wales and that was punishable by penal servitude or imprisonment for 12 months or more; or
- An offence, involving sexual activity or acts of indecency, committed elsewhere and that would have been
  an offence punishable by penal servitude or imprisonment for 12 months or more, if it had been
  committed in New South Wales; or
- An offence under section 80D or 80E (sexual servitude) of the Crimes Act 1900, committed against a child; or
- An offence under Sections 91D-91G (child prostitution, other than if committed by a child prostitute) of the Crimes Act 1900 or a similar offence under a law other than a law of New South Wales; or
- An offence under Section 91H, 578B or 578C (2A) (child pornography) of the Crimes Act 1900 or a similar offence under a law other than a law of New South Wales; or
- An offence of attempting, or of conspiracy or incitement, to commit an offence referred to in the preceding paragraphs; or
- Any other offence, whether under the law of New South Wales or elsewhere, prescribed by the regulations.

NOTE: A conviction for carnal knowledge is classified as a serious sex offence under this legislation.

Section 33B of the Commission for Children and Young People Act 1998 defines a child-related personal violence offence as an offence committed by an adult:

- · Involving intentionally wounding and causing grievous bodily harm to a child; or
- . Of attempting, or of conspiracy or incitement, to commit such an offence

Under Commission for Children and Young People Act 1998:

- It is an offence for a prohibited person to apply for or otherwise attempt to obtain, undertake or remain in child-related employment;
- Employers must ask existing employees, both paid and unpaid, and preferred applicants for child-related employment to declare if they are prohibited person or not;
- All people in child-related employment must inform their employers if they are a prohibited person or remove themselves from child-related employment; and
- Penalties are imposed for non compliance

I am aware that I am ineligible to apply for or otherwise attempt to obtain, undertake or remain in, child-related employment if I have been convicted of a serious sex offence or child-related personal violence offence as defined in the Commission for Children and Young People Act 1998, or if I am a Registrable Person under the Child Protection (Offenders Registration) Act 2000.

I have read and understood the above information in relation to the Commission for Children and Young People Act 1998. I m aware that it is an offence to make a false statement on this form.

I consent to a check of my relevant criminal records, to verify the statements I have made here, being undertaken by the NSW Commission for Children and Young People for monitoring and auditing purposes in accordance with Section 36 (1)(f) of the Commission for Children and Young People Act 1998.

I declare that I am not a person prohibited by the Act from seeking, obtaining, undertaking or remaining in child-related employment.

I understand that this information may be referred to the Commission for Children and Young People and/or to NSW Police for law enforcement purposes and for monitoring and auditing compliance with the procedures and standards for the Working With Children Check in accordance with Section 36 (1)(f) of the Commission for Children and Young People Act 1998.

Name (Block letters)	Signature
Alias (previous names)	
Date of Birth	Date
Note: Seek inde	pendent legal advice if you are unsure of your status as a prohibited person. RM IS TO BE RETURNED TO YOUR EMPLOYER

January 2007



**Appendix 2**Disruptive Request Notice Template

**Ref**: 200330 Darlington PS Construction Management Plan v.1.1 **Owner:** Mace Australia Pty Ltd Date: 12/05/2020 Page: 1



#### **School Infrastructure NSW**

# Darlington Public School Redevelopment Main Works Package

**Disruption Notice No: 001** 

tal Duration				
al Duration				
tal Duration				
scription of the Wor	ks:			
ork Sequence: gineering Services A	Affected:			
vels and/or Areas Af	fected:			
ontractor Contact du	ring the works: rs listed below will be conto	act in order of appearan	ce until a number is r	vouchod

Ref: 200330 Darlington PS Construction Management Plan v.1.1

Owner: Mace Australia Pty Ltd

Page: 2

Page: 2



# **Attachments /Reference Documents** Attachment **Document Name** Revision Comments **Contract Approved Programme** DN Issued By Contractor Project Officer Required Approval Extended Revised (5days) working days prior to Date (No less than 10 day prior to notice Period approval date works commencing works commencing **DRN Prepared By: DRN Approved By:** Signed as accepted and approved for works to proceed by the School Principal Representative: Name: Signature: Date: Cc: **General Comments that form part of this approval.**

Ref: 200330 Darlington PS Construction Management Plan v.1.1 Owner: Mace Australia Pty Ltd Page: 3

Date: 12/05/2020



# **Appendix 3**Staging Plans

- Early Works
- Stage 1 Works
- Staging Transition Zone
- Stage 2 Works

**Ref**: 200330 Darlington PS Construction Management Plan v.1.1 **Owner:** Mace Australia Pty Ltd Date: 12/05/2020

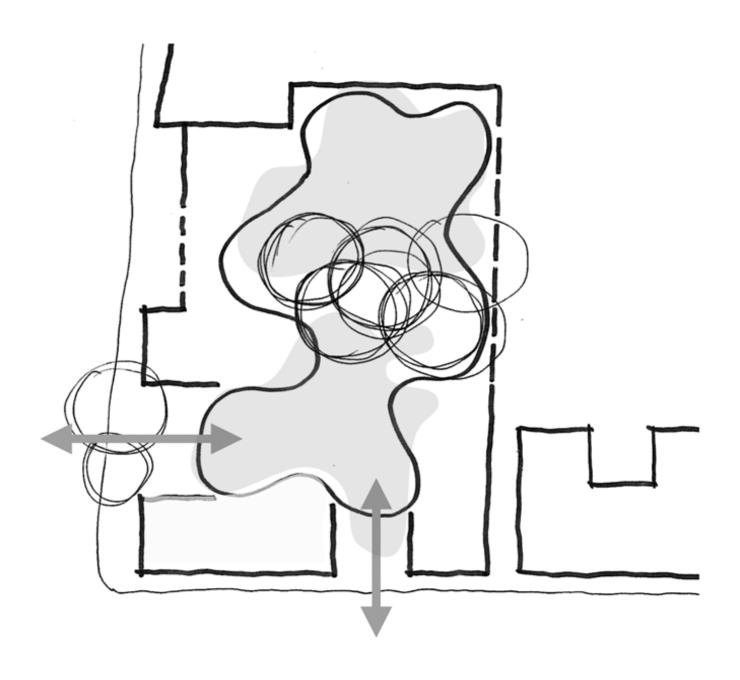
## **DARLINGTON PUBLIC SCHOOL REDEVELOPMENT**

# **Appendix L** — Transport Impact Assessment

SSD-9914

**Prepared by TTPA** 

For NSW Department of Education



# TRANSPORT AND TRAFFIC PLANNING ASSOCIATES Established 1994

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# **Darlington Public School Proposed School Expansion**

# **Transport Impact Assessment**

19043 Ref:

28 May 2020 Date:

Issue: D

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# 1.0 Introduction

This report has been prepared to accompany an application to the Department of Planning for the proposed redevelopment of the existing Darlington Public School at Darlington (Figure 1).

Darlington Public School is an inner-city school servicing the suburbs of Chippendale, Darlington and parts of Redfern and is located at the corner of Golden Grove and Abercrombie Street in Darlington adjacent to the large Sydney University Campus.

The School accommodates some 250 students at the present time with an integrated preschool facility accommodating up to 60 children. A 'Scoping Study' has revealed that the school will not be able to accommodate the future enrolment demands arising from high density residential development in its catchment area. The proposed staged redevelopment will eventuate in a student population of 415 with associated increased staffing level from 15 to 25. The preschool will be relocated within the existing school campus.

The assessment outlined in this report addresses the Department of Planning issued SEARs in the following order:

SEARS Details	Reference Section
Accurate details of the current daily and peak hour vehicle,	Section 3.3
existing and future public transport networks and pedestrian	Section 3.4
and cycle movement provided on the road network located adjacent to the proposed development	Section 3.5
Details of estimated total daily and peak hour trips generated	Section 4.1
by the proposal, including vehicle, public transport, pedestrian and bicycle trips based on surveys of the existing and similar schools within the local area	Section 4.2
The adequacy of existing public transport or any future public	Section 5.5
transport infrastructure within the vicinity of the site,	Section 5.6
pedestrian and bicycle networks and associated infrastructure to meet the likely future demand of the proposed development	Section 5.7

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Measures to integrate the development with the existing/future	Section 5.5
public transport network	Occilon 5.5
The impact of trips generated by the development on nearby	Section 5.2
intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for, and details of, upgrades or road improvement works, if required (Traffic modelling is to be undertaken using SIDRA network modelling for current and future years)	Section 5.3
The identification of infrastructure required to ameliorate any impacts on traffic efficiency and road safety impacts associated with the proposed development, including details on improvements required to affected intersections, additional school bus routes along bus capable roads (i.e. minimum 3.5 m wide travel lanes), additional bus stops or bus bays	Section 5.4 Section 5.6
Details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site	Section 5.5 Section 9.1-9.9
The proposed walking and cycling access arrangements and connections to public transport services	Section 5.5
The proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones	Section 7.1 Section 7.2
Proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance	Section 6.3 Section 7.2
Proposed number of on-site car parking spaces for teaching staff and visitors and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site	Section 6.2

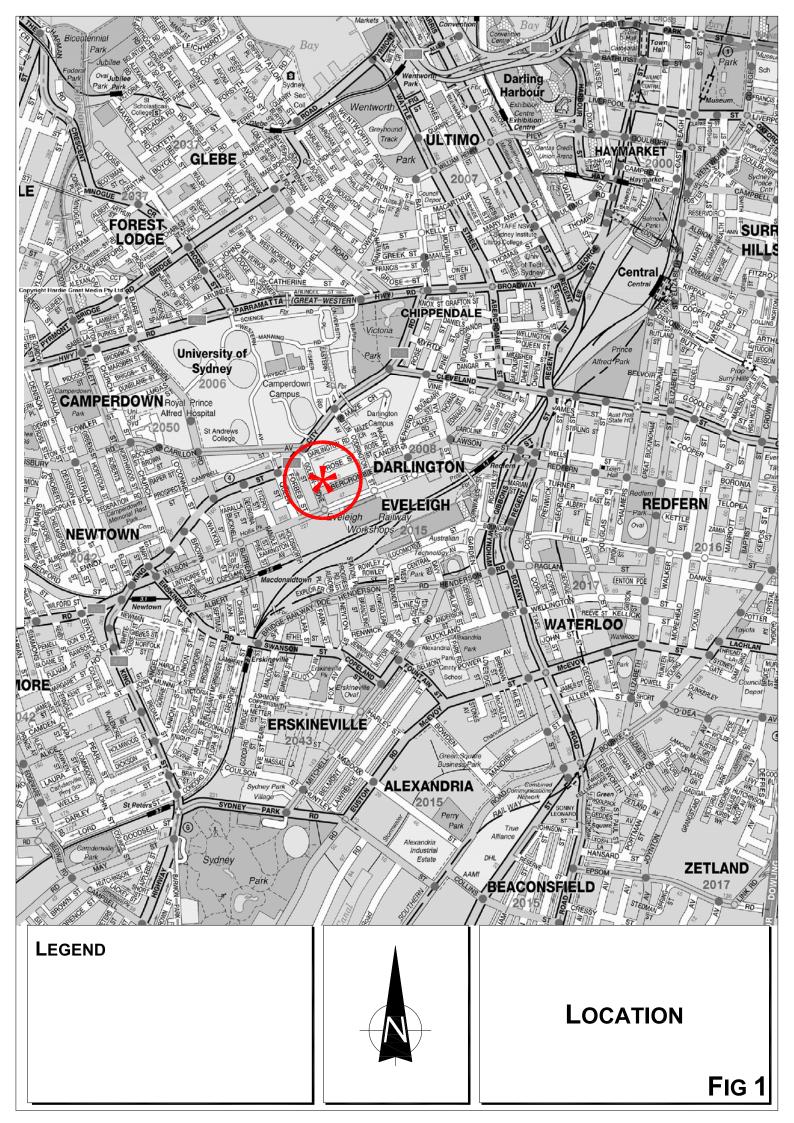
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An assessment of the cumulative on-street parking impacts of cars and bus pick-up/drop-off, staff parking and any other parking demands associated with the development	Section 6.1
An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED	Section 3.5
Emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times)	Section 7.4
The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:  - assessment of cumulative impacts associated with other construction activities (if any)  - an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity  - details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process  - details of anticipated peak hour and daily construction vehicle movements to and from the site  - details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle  - details of temporary cycling and pedestrian access during construction.	Section 8.1-8.13

In preparing this Transport Impact Assessment, the following technical documents and guidelines are referred to and relied upon as required:

- An inspection of the site and its surrounds
- Travel mode surveys of the School's existing students/staff
- Standards Australia AS2890.1, 3 and 5
- Guide to Traffic Generating Developments (Roads and Maritime Services)
- NSW Planning Guidelines for Walking and Cycling
- Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development

Ref. 19043 5



# 2.0 Proposed Development

# 2.1 Site, Context, and Existing Use

The Darlington Public School ('School') campus is bounded by Darlington Lane to the north, Abercrombie Street to the south and Golden Grove Street to the west (Figure 2). The School is situated amongst the vast University of Sydney campus while there are small pockets of old terrace housing extending along the Abercrombie Street and Wilson Street frontages.

The School has a current enrolment of some 250 students and some 15 full-time equivalent (FTE) staff members. Students/pedestrian accesses to the School are provided at both the Golden Grove Street and Abercrombie Street frontages.

The School does not have onsite parking, however, appropriate signage (15-minute parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days) are in place to reserve for the School's use 3 set down and pick up spaces on Golden Grove Street and 2 at Abercrombie Street.

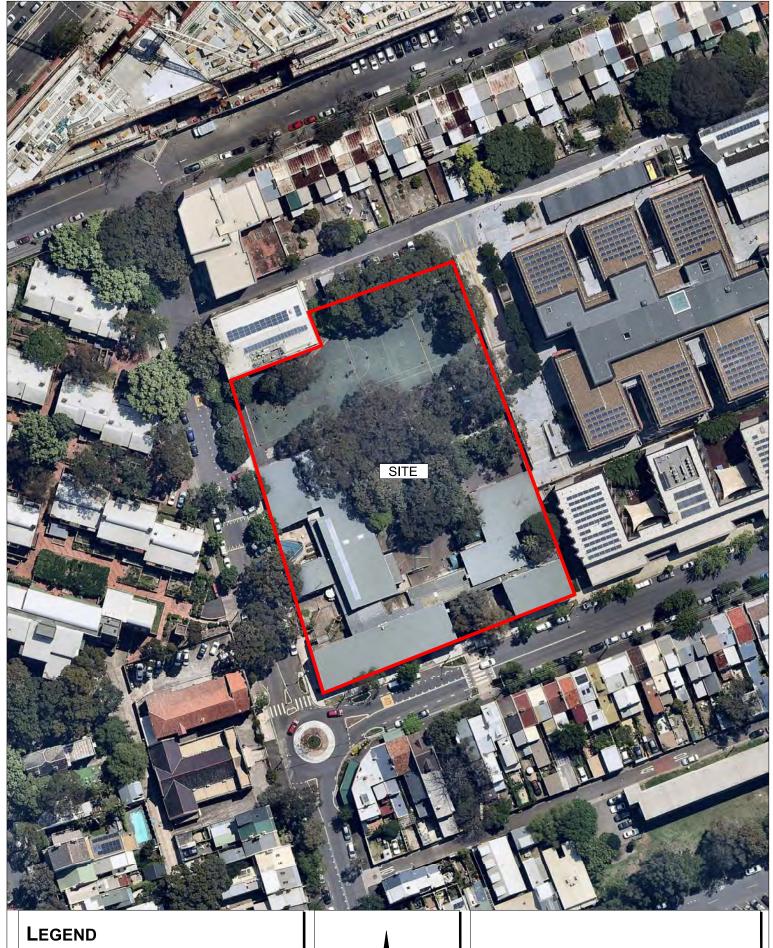
A school bus bay is also provided at the Golden Grove Street frontage with a 'No Parking (Buses Excepted 15 minutes) between 8.00am and 9.00am and 2.00pm and 4.00pm on school days' restriction.

# 2.2 Proposed Development

The proposal is for the demolition of the existing outmoded school buildings and construction of a suite of new and upgraded administrative and classroom facilities while the following operating parameters will be increased as follows:

- Student enrolment increased from 250 to 415 students
- FTE staff level to be increased from 15 to 25 persons
- Relocation of the existing preschool (capacity of 60 places to be retained)

Ref. 19043 6





SITE

Fig 2

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Along the road frontages, the following signage and traffic island changes are proposed to supplement the proposed upgrade:

#### Golden Grove Street

- 8 x Kiss and Ride only (parents remain in car) spaces between 8.30am and
   9.30am and 2.30pm and 4.30pm on school days
- 3 x 15 minutes parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days
- 1 accessible x 15 minutes parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days
- 1 x Loading Bay between 9.30am and 2.30pm on school days to serve the needs of service vehicles and/or excursion buses

#### Abercrombie Street

- 3 x 15 minutes parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days

The School's pedestrian access locations at Golden Grove Street and Abercrombie Street will be retained. The existing service vehicle driveway on Golden Grove Street will be removed while the driveway on Abercrombie Street will be relocated further east to operate as an emergency vehicle access to the School campus.

In keeping with the City's planning principles and the Department of Education's operating principles, onsite carparking will continue to be prohibited in School campus with preference given to encouraging staff members/parents to utilise available public transport services.

Details of the proposed redevelopment outcome are shown on the master plans which are reproduced in Appendix A.

# 2.3 Surrounding Developments

Upon further enquiry and desktop research, a number of approved development projects which are located in close proximity of the School are incdicated as follows:

#### - University of Sydney, Engineering and Technology Precinct

This development for which Stage 1 is currently under construction occupies a site with frontages to Shepherd Street and Maze Crescent which will be constructed in 3 stages. The Stage 1 development will comprise:

- A new 10-level building
- o Refurbishment of the Elec. Eng. Building
- o Provision for 1,384 students and 88 staff
- Deletion of 27 parking spaces.

#### University of Sydney, Darlington Road Terraces

This development which occupies a site bounded by Darlington Road and Darlington Lane has been approved and comprises:

- 317 student accommodation rooms
- o Lecture theatre and study rooms
- Lounge areas and recreational zones
- Kitchen and laundries
- No onsite parking

In conjunction with this project, it is proposed to convert Darlington Lane into a Shared Zone with a one-way traffic movement. Separately, it is also advised that Darlington Road fronting the terraces will be closed in due course, thus restricting the terraces' access movements to the intersection of Darlington Road, Butlin Avenue and Codrington Street only. However, it is advised that these proposed traffic changes are yet to be approved.

It is pertinent to note that the above identified projects are consistent with the transport planning principles of City of Sydney i.e. minimal onsite parking provision or deletion

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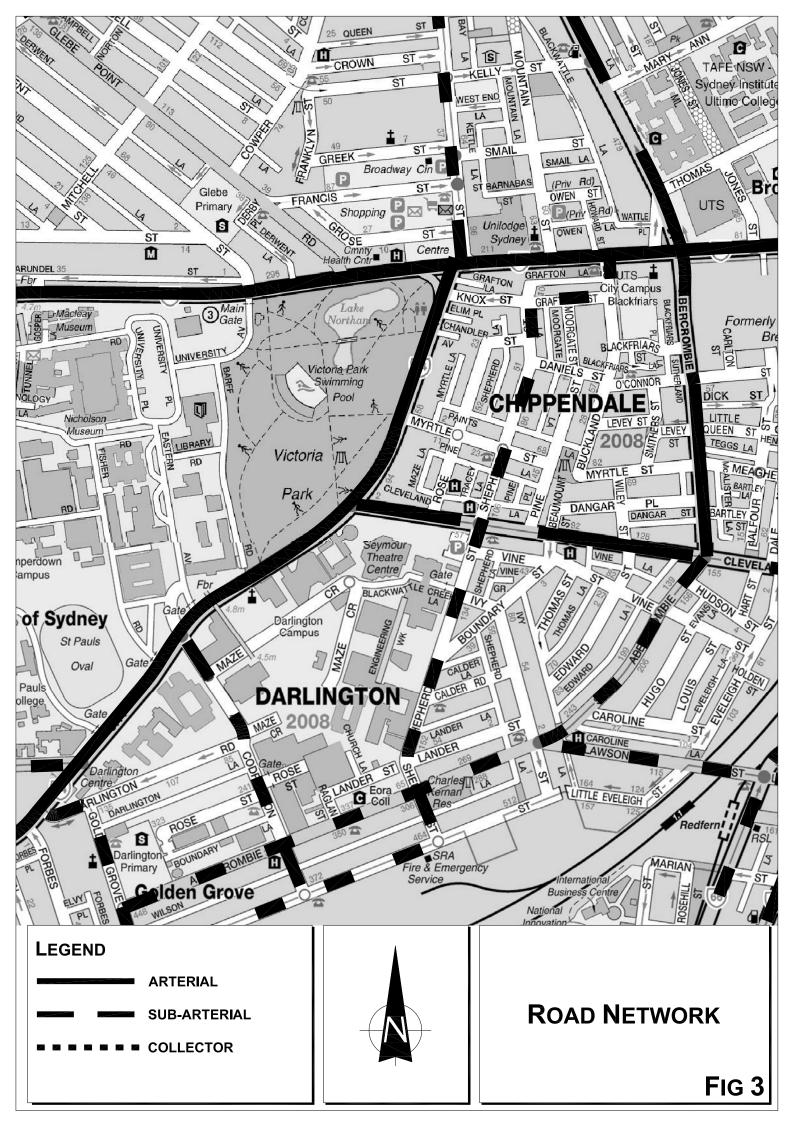
of existing parking spaces to encourage the uptake of available transport services which are already comprehensive in the University precinct.

## 3.0 Road Network, Traffic & Transport, Pedestrian Access

## 3.1 Road Network

The road network (Figure 2) serving the school comprises:

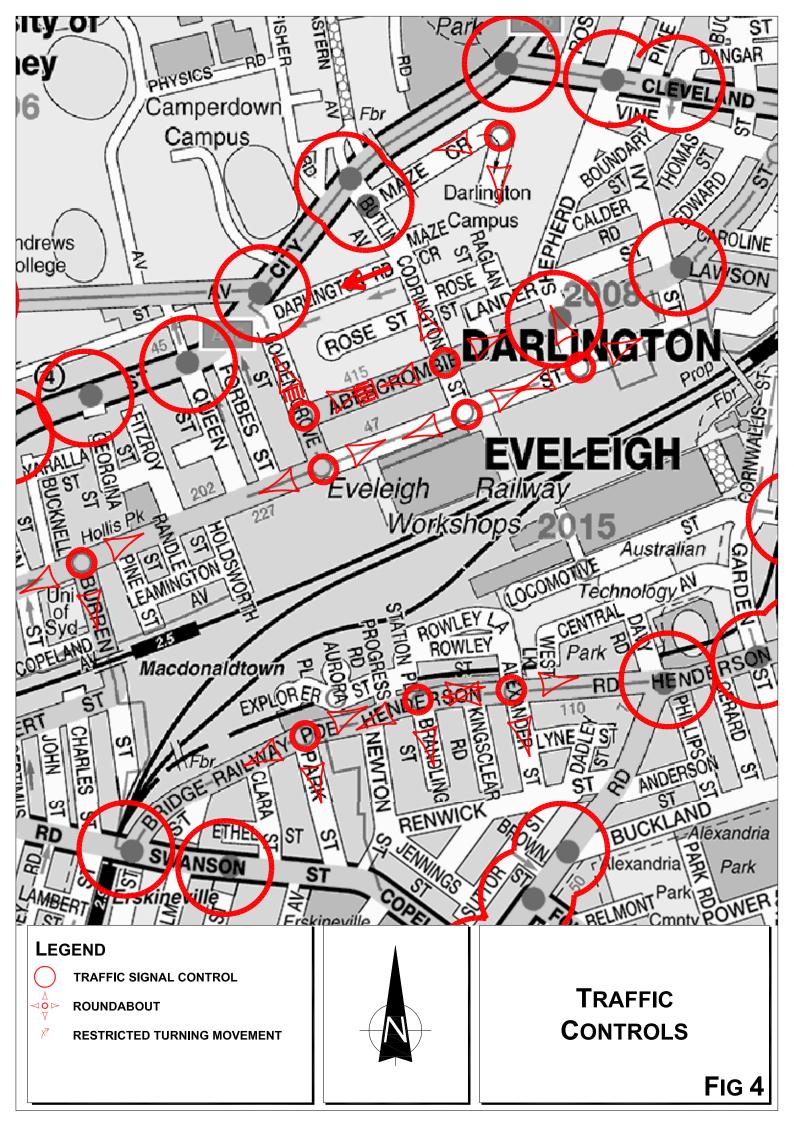
- ❖ Princes Highway (City Road/King Street) a State Highway and north-south arterial route
- Great Western Highway (Parramatta Road/Broadway) a State Highway and eastwest arterial route
- Cleveland Street a State Road and sub-arterial route linking between City Road and Anzac Parade
- ❖ Abercrombie Street (North of Cleveland Street) a State Road and sub-arterial route
- ❖ Abercrombie Street (South of Cleveland Street) a collector road route
- ❖ Wilson Street/Shepherd Street a collector road route
- ❖ Darlington Road a local road connecting between City Road to the west and Butlin Avenue to the east
- Golden Grove a collector road route connecting between King Street and Wilson Street
- Codrington Street/Butlin Avenue a collector road connecting between City Road and Wilson Street
- ❖ Darlington Lane a service lane connecting between Codrington Street and Golden Grove



## 3.2 Traffic Controls

The traffic controls (Figure 3) on the road network in the vicinity of the school include:

- ❖ the roundabout at the intersection of Abercrombie Street and Golden Grove incorporating a pedestrian crossing across the northern arm of Golden Grove
- the "wombat" raised pedestrian crossing in Abercrombie Street in the centre of the school frontage
- the one-way south restriction on Darlington Road between Codrington Street and Golden Grove
- the raised platform on Golden Grove between Abercrombie Street and Darlington Road
- the traffic control signals (with 'scramble" pedestrian phase) at the Abercrombie Street and Shepherd Street intersection
- the traffic control signals at the intersections of:
- City Road and Butlin Avenue
- Butlin Avenue and Maze Crescent
- Shepherd Street and Cleveland Street
- City Road and Carillon Avenue
- the roundabouts at intersections along Wilson Street
- the section of NO PARKING SCHOOL BUSES EXCEPTED 8am-9am and 2pm-4pm SCHOOL DAYS on Golden Grove along the eastern part of the school frontage
- ❖ the section of ¼P parking (60°) 8.30-9.30am and 2.30-3.30pm SCHOOL DAYS on Golden Grove along the western part of the school frontage
- the section of 1P parking and disabled parking on Abercrombie Street along the school frontage



- the Light Traffic Thoroughfare restriction on all roads in the precinct including Abercrombie Street, Shepherd Street, Lawson Street and Ivy Street
- the 40 kmph School Zone speed limit restriction on both Abercrombie Street and Golden Grove Street in the vicinity of the Darlington Primary School

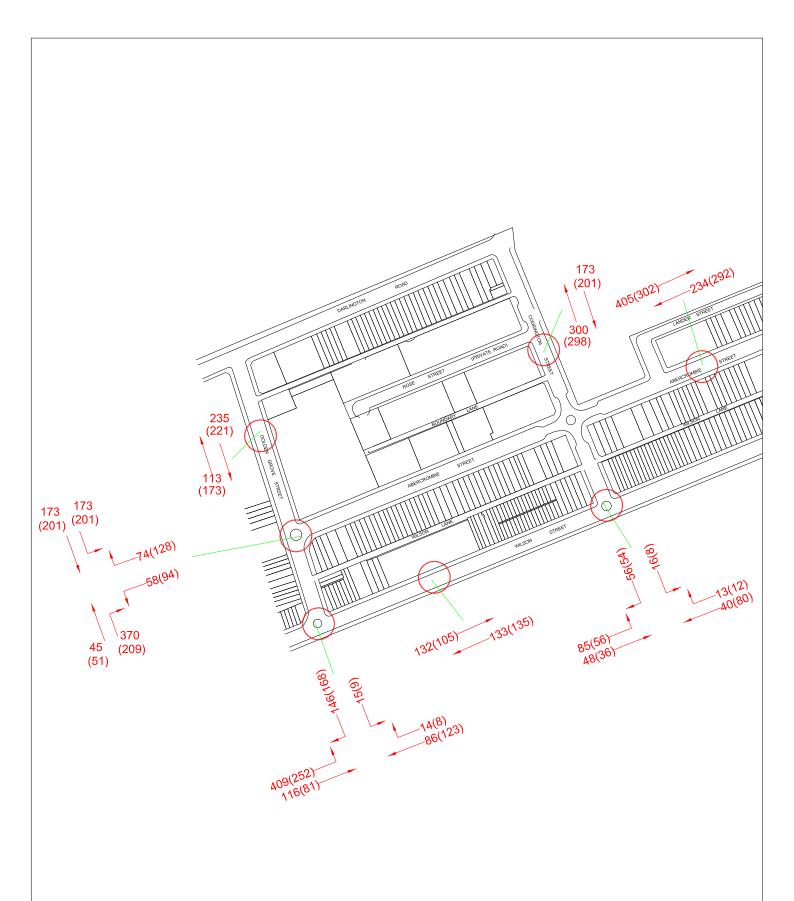
## 3.3 Traffic Conditions

Details of the prevailing traffic conditions on the road system serving the site are provided by data published by surveys undertaken as part of this study. The recorded peak traffic flows at the nearby intersections are indicated on Figure 5.

The operational performance of the key intersections (being King Street/Darlington Road and Golden Grove Street/Abercrombie Street intersections) have been assessed using the traffic modelling program SIDRA. The outcome of the TTPA assessment, which indicates a satisfactory level of service under prevailing peak traffic demand is provided in Appendix B and summarised as follows:

	AM Peak		PM Peak	
	LOS	AVD	LOS	AVD
King St/ Darlington Rd	Α	9.5s	А	11.5s
Abercrombie St/ Golden Gr	Α	8.6s	А	8.5s

The assessment indicates that the key intersections surrounding the site are currently operating with ample spare capacities. The existing levels of service (LOS) and average delays (AVD) indicate the network is currently operating with no undue constraint under peak traffic conditions.



### **LEGEND**

123 - AM 8AM - 9AM(123) - PM 5PM - 6PM



AM & PM WEEKDAY
TRAFFIC VOLUMES

FIG 5

## 3.4 Transport Services

### **Bus Service**

The site is advantaged by close proximity to the City Road bus route corridor which serves the needs of the University population extensively. The available bus routes at the City Road corridor are indicated in the following extract and service summary:



Source: Nearmap

Route	Details	Route	Details
352	Bondi Junction – Marrickville	M30	Sydenham – Mosman
370	Leichardt – Coogee	N10	CBD – Sutherland
422	CBD – Kogarah	N30	CBD – Macarthur
423	CBD – Kingsgrove	N40	CBD – East Hills
426	CBD – Dulwich Hill	L23	CBD – Kingsgrove
428	CBD – Dulwich Hill	L28	CBD – Canterbury

### **Trains**

In addition to the extensive bus services, the site is located some 980m (12-15 minute walk/3-5 minute cycle) west of the Redfern Railway Station. Connection is provided via a dedicated shared path (cyclist and pedestrians along Wilson Street and Little Eveleigh Street) as shown in the following:



Source: Nearmap

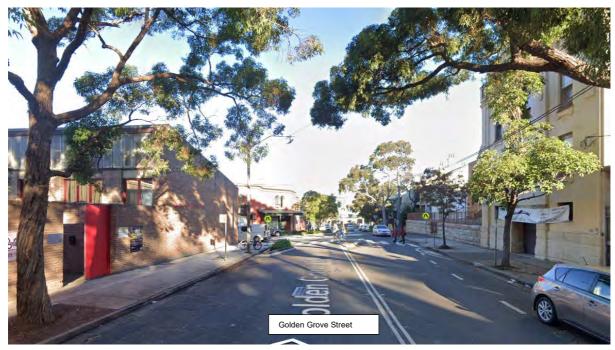
A less frequently serviced railway station, Macdonaldtown station, which is also located within close proximity of the site, is situated some 800m to the west (10-12 minute walk/3-4 minute cycle). This railway station is also conveniently accessible via Golden Grove Street, Wilson Street and Burren Street as follows:



Source: Nearmap

## 3.5 Pedestrian/Cycle Connectivity

Established footpaths are available in the surrounding street frontages providing convenient and direct connections between the School and the surrounding streets i.e. Darlington Road, Darlington Lane and Abercrombie Street further afield from the site. School students are also benefitted by the marked foot crossings available at both the Golden Grove Street and Abercrombie Street frontages (details below).

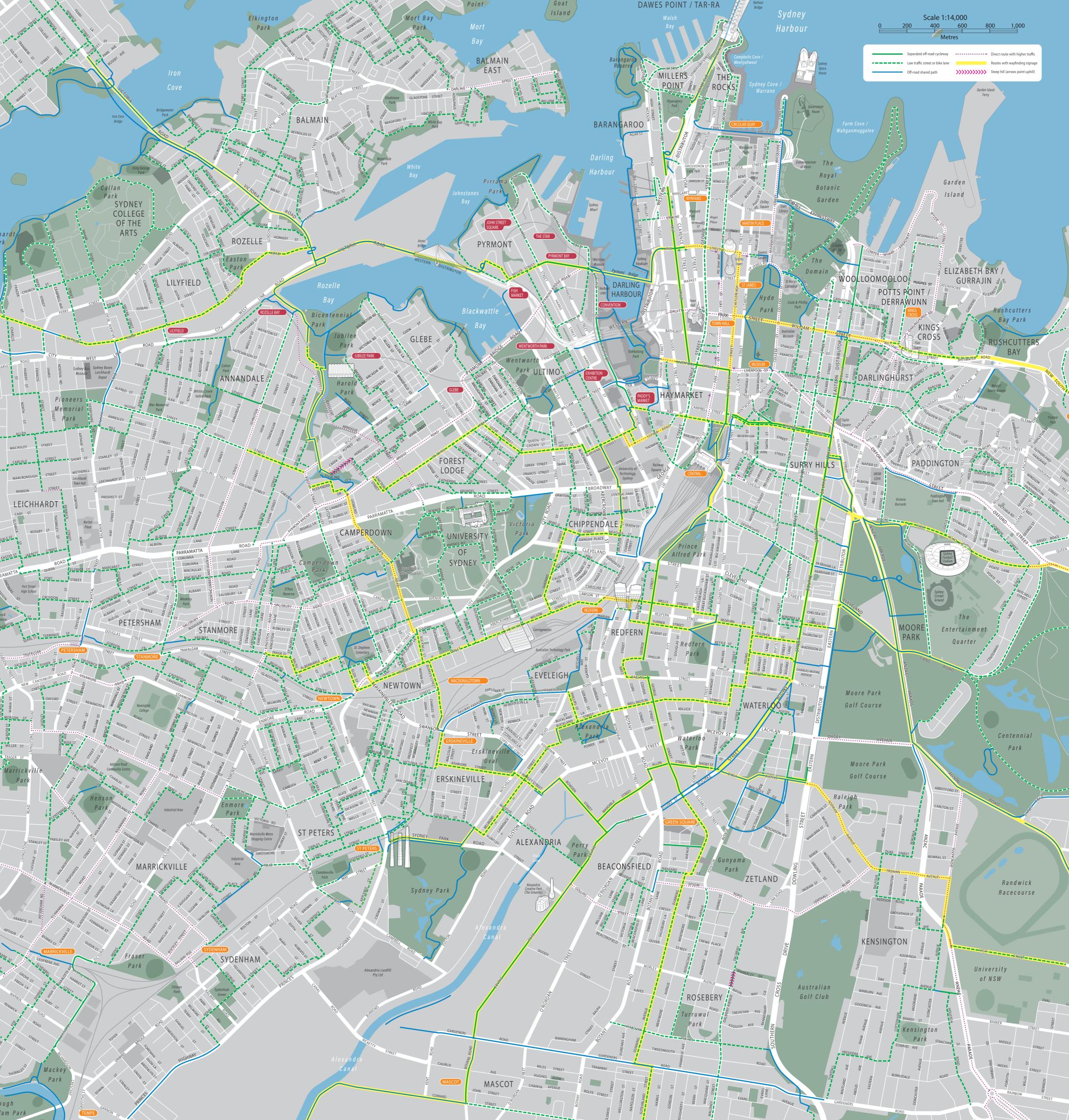




Source: Nearmap

The site is located within close proximity to both on and off-road cycling facilities. King Street, Darlington Road, Golden Grove Street and Abercrombie Street are identified in the Sydney Cycleways map as 'bicycle friendly roads'. In the immediate vicinity of the School, Wilson Street provides the added benefit of a dedicated Shared Cycleway

connecting the campus with the University, surrounding residences, as well as Macdonaldtown and Redfern Stations. Details of the comprehensive cycle paths available in the immediate and further surroundings are indicated on the City of Sydney published cycle map which is reproduced overleaf.



## 4.0 Travel Planning

## 4.1 Parking Demand

The School has a total of 5 set down/pick-up spaces, being 2 at the Abercrombie Street frontage and 3 at the Golden Grove Street frontage. Separately, there is a signposted school bus bay along the Golden Grove Street frontage.

To establish the existing traffic demand associated with the School, a survey of the set down and pick up spaces was commissioned in April 2019 which reveal the following 'turnover' during the School's morning and afternoon peaks:

AM 55 vehicles

PM 40 vehicles

## 4.2 Travel Mode Survey

To supplement the survey, a separate questionnaire was undertaken of the School's students and staff to identify their current mode of travel, i.e., by car, foot or public and active transport. Details of the survey outcome are provided in Appendix C and a summary of the current mode shares for students and staff shown are as follows:

	AM	PM
Walk	44.6%	41.2%
Bicycle/Scooter	28.5%	29.4%
Car	26.9%	20.6%
Bus	-	8.8%

The survey outcome indicates, quite clearly in the context of this School, that reliance on using vehicles to set down and pick up students is already lower than that typically observed in a suburban school. This is likely due to the locality of the School within a highly accessible area.

## 5.0 Traffic Impact Assessment

## 5.1 Traffic Generation

Traffic circumstances for schools in the metropolitan areas are generally dictated by the parents' mode of travel and set down/pick-up characteristics.

Based on the survey findings detailed in the preceding section, the School's traffic generation can be deduced as 0.27 vehicle movements per student in the AM peak and 0.21 vehicle movements per student in the PM peak.

Application of the above rates to the envisaged population of 415 students would therefore indicate the following potential traffic generation outcome:

AM 112 vehicle trips per hour

PM 87 vehicle trips per hour

And by comparison with the existing School:

	AM	PM
Existing	55	40
Post-Dev	112	87
Net Increase	57	47

Therefore, in the event that staff and parents' travel behaviour continue to occur in the existing manner, the post-development circumstance would likely result in additional traffic generation of up to 57 vtph during the School's peak periods.

## 5.2 Cumulative Traffic Impact

As detailed previously in Section 2.3 of this report, the key new land uses that will be within proximity of the School are:

- the Engineering and Technology Precinct building, University of Sydney
- the Darlington Terraces, University of Sydney

The new and upgraded Engineering and Technology building will have a reduction of 27 spaces while the student accommodation i.e. Darlington Terraces will have no onsite parking.

These developments having constrained onsite parking, coupled with limited unrestricted parking spaces in the immediate surroundings, will discourage vehicle ownership amongst residents. It follows that there will be limited vehicular traffic generation outcome associated with these developments. As such, the identified surrounding developments will not be expected to occasion an adverse cumulative traffic impact on the surrounding road network.

## 5.3 Traffic Impact due to Surrounding Changes

There are two proposals which will potentially alter the road and traffic operations in the vicinity of the site namely:

### **Darlington Lane Shared Zone**

It is proposed to introduce a Shared Zone restriction with a one-way north traffic flow along Darlington Lane in conjunction with the proposed Darlington Terraces development (see details below).

Whilst it is subsequently advised that the proposed change is not yet formally approved by Council/TfNSW, it is nevertheless not anticipated that the conversion of this laneway to a Shared Zone will have any discernible adverse effect to the School's operation. On the contrary, if approved, the conversion to Shared Zone, i.e. a roadway where pedestrians have right of way over vehicles, will be seen as a positive outcome as the School will now be bounded by a pedestrian friendly laneway.



Source: SMEC Darlington Road Terraces TIA, April 2018

### **Construction Impact**

Similarly, if approved, it is expected that the Darlington Road closure would restrict the School's construction vehicles to approach and depart from the site via the King Street – Darlington Road – Golden Grove Street route only. It is noted that Darlington Road is restricted for heavy vehicle access, however, dispensation could be sought from Council to gain access to the site on the basis that:

- the nominated route presents as a route of minimal impact to the surrounding residential dwellings;
- the nominated route presents as a route which is most directly connected to the arterial and sub-arterial network.

It is recommended that the principle agreement is sought from Council's Construction Regulations Team prior to construction.

## 5.4 Traffic Impact — Vehicular

To assess the potential traffic implications resulting from the School's redevelopment, the local road network is assessed using lane-based traffic modelling program SIDRA.

An even directional distribution between King Street and Abercrombie Street is adopted for the purpose of this assessment. On this basis, the existing and post-development outcome (Appendix B) are summarised in the following:

	AM		P	PM	
	LOS	AVD	LOS	AVD	
Existing					
King St/Darlington Rd	Α	9.5s	Α	11.5s	
Golden Gr/Abercrombie	Α	8.6s	Α	8.5s	
Post-development					
King St/Darlington Rd	Α	11.6s	Α	13.0s	
Golden Gr/Abercrombie	Α	8.6s	Α	8.4s	

The assessment outcome indicates that the additional traffic movements resulting from the School expansion will maintain the existing network at LOS A. As such, it is assessed that the existing road network can accommodate the anticipated additional traffic demand with no undue capacity issue, thus there will be no additional road/traffic upgrade necessary to accommodate this development.

## 5.5 Traffic Impact — Bicycle and Pedestrian Facilities

The questionnaire survey reveals some 45% of school children walked to and from the School while some 30% rode a bicycle/scooter. If these rates of uptake are maintained in the upgraded School, then the additional pedestrians/cyclists will likely be:

Bicycle + 74 students Foot + 50 students

To the extent that there are excellent foot path and cycle facilities available in the surrounding road network, the School does not currently have provision for onsite storage for bicycles/scooters for students/staff. It is understood that some parents 'push' their children's bicycles/scooters to/from the School. In view of the above, it would be

prudent for the proposal to incorporate onsite storage for students/staff, noting that staff members will be further benefitted by onsite End of Trip facilities. The uptake of these facilities, including the ready public transport services that already exist in the vicinity of the School, can be collectively encouraged by the appropriate implementation of a Green Travel Plan, which includes a suitable Transport Access Guide. Section 9 of this assessment outlines such a document on a conceptual level.

## 5.6 Traffic Impact — Public Transport Facilities

The questionnaire survey reveals some 8.8% of school children travelled to/from the School using the available bus services. None was recorded to have arrived/departed by train. This is due to the factor of 'local school catchment' where students and their families are typically local residents who are within reasonable walking distances of the School. Nevertheless, observations made in the local bus/train services during the School's peak hours indicate that the services via Redfern Station are generally closer to capacity during the morning peak while the Macdonaldtown Station route was observed to operate with higher level of spare capacities. Buses are generally observed to be 'crowded' during the morning peak periods, however, the high frequency of those services (along City Road/King Street) appear to be capable of accommodating the peak demands with no undue difficulty. These public transport services are generally operating with ample spare capacities during the School's afternoon peak. It is expected that there will some level of uptake in terms of these available public transport services following the School's expansion, however, it is not anticipated this increment would be significant due to the location of the School (i.e. largely by staff members only). On this basis, it can be expected that the available public transport services will continue to serve the needs of the School adequately.

## 5.7 Safety Impact — Vehicle, Bicycles and Pedestrians

The proposal will result in additional traffic, pedestrians as well as bicycle/scooter riders. The traffic modelling assessment indicates the immediately surrounding intersection will continue to operate with level of service A following the School's expansion. Because there are generally quite limited increments to the respective intersections' average delays (i.e. the additional average delays experienced by road users), it is not expected

that driver behaviour will change drastically following the development. As the proposal seeks to discourage parents from travelling to/from the School using private vehicles, it is anticipated that the additional 'load' on the traffic network will be somewhat less than that which is assessed in Section 5.4. The additional children activities either in form of pedestrians or bicycles/scooters will be readily accommodated by the existing road traffic/crossing devices that exist in the surrounds of the School campus. On this basis, it is assessed that the proposal will not be expected to result in undue safety issue on the local road network for the 3 user groups.

## 6.0 Proposed Parking Arrangement

## 6.1 Capacity of Set Down and Pick Up Area

There are currently 5 set down and pick up spaces available for the School's use. Thus, the surveyed peak movements of 55 trips would indicate a 'service rate' of these spaces of some 11 cars per hour per space.

Because the proposed expansion is expected to result in an addition of up to 57 vehicles per hour, application of the calculated service rate would indicate an additional requirement of 5-6 spaces, thus a potential total demand of 13 set down and pick up spaces.

## 6.2 Car Parking

The Sydney LEP specifies a maximum permissible parking provision of 1 space plus 1 space per 100m² GFA of a building used for the purpose of accommodating childcare centre/preschool. As the proposed area for this purpose is 616m² GFA, the applicable maximum parking permissible to the preschool will be 7 spaces. Accordingly, provision is made on Golden Grove Street for 3 x 15-minute parking spaces and on Abercrombie Street for 3 x 15-minute parking spaces (including one accessible) for the School and preschool's use.

The Department of Education's policy is to not provide onsite parking for parents/carers, rather accommodating students' demands by appropriate provision of set down and pick up areas. It is understood, based on observations made in the vicinity of the School and advice from the School's management, that some parents tend to overstay the 15-minute parking spaces that are reserved for set down and pick up, thus occasionally result in constrained capacity during the School peak periods. To overcome this 'misuse', it is proposed that a majority of the existing 15-minute parking is further restricted to be signposted as 'Kiss and Ride' during the relevant school peak periods. When in operation, it is expected that the Kiss and Ride area will be supervised by a School staff

member and parents will not be permitted to leave their vehicles when setting down or picking up their children.

Accordingly, provision for parking/set down and pick up for the School and Preschool is made in the following

### Golden Grove Street

- 8 x Kiss and Ride only (parents remain in car) spaces between 8.30am and 9.30am and 2.30pm and 4.30pm on school days
- 3 x 15 minutes parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days
- 1 accessible x 15 minutes parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days
- 1 x Loading Bay between 9.30am and 2.30pm on school days to serve the needs of service vehicles and/or excursion buses

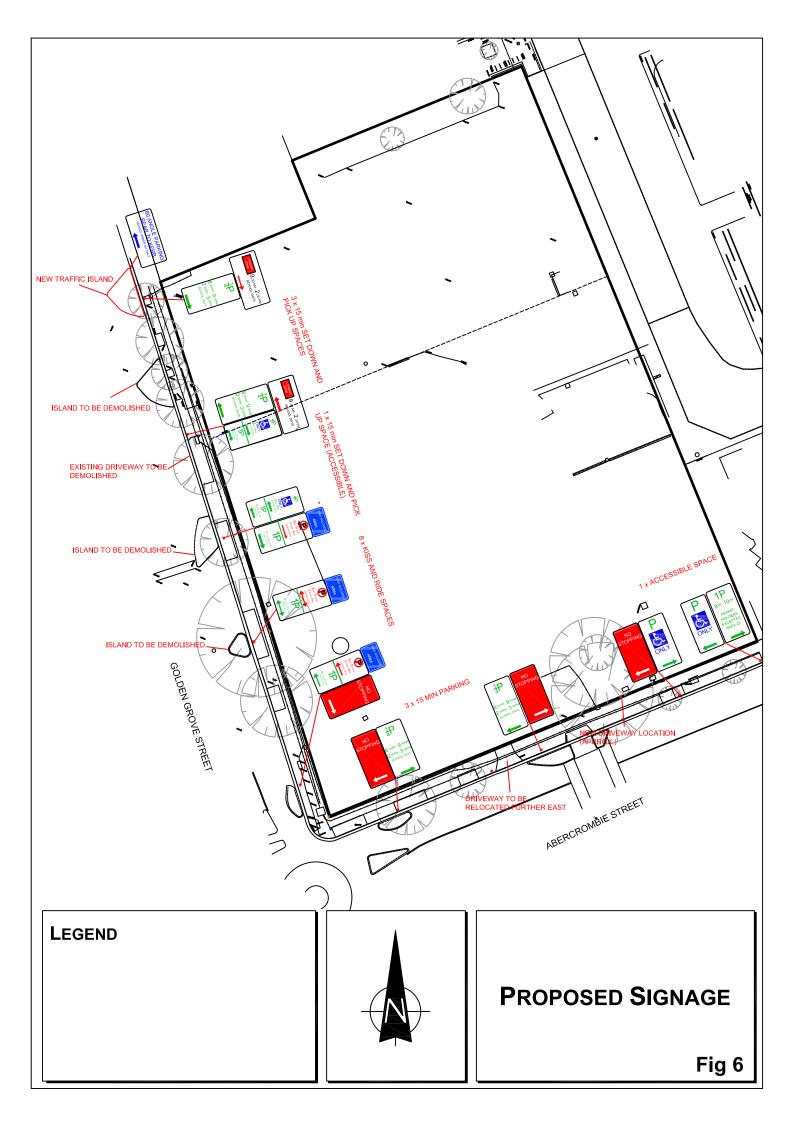
### **Abercrombie Street**

- 3 x 15 minutes parking between 8.30am and 9.30am and 2.30pm and 4.30pm on school days

It is acknowledged that the proposed arrangements will necessitate changes to existing parking signage, including modification to existing traffic island/kerb, which are the subject of a separate assessment by the Council's traffic committee.

Details of the proposed set down and pick up arrangements are shown in Figure 6 overleaf.

Consistent with the City's and the Department of Education's planning policies, onsite carparking will not be provided and staff members will be encouraged to use the existing ready transport services guided by a Transport Access Guide (TAG)/Green Travel Plan which informs users of available transport options to/from the School, details of timetabling and coverage, as well as the implementation of ridesharing/carpooling program.



## 6.3 Bicycle Parking & End of Trip Facilities

In line with the assessment made in Section 5.5 of this report, it is acknowledged that the School is likely to experience an increased uptake of bicycles/scooters by students and staff alike. The most recent surveys reveal up to 58 students travel to/from the School using the bicycles/scooters. It is understood that a large proportion (more than 50%) of these students are currently accompanied by their parents/carers when travelling to/from the School. When the School is expanded, the same rate of uptake would indicate some 116 students using the same mode of transport to/from the School. As it is not expected that all students would 'park' their bicycles at School, the proposal of 68 bicycle/scooter racks/storage within the School campus will be pragmatic and adequately provide for the students/staff who desire to park onsite.

In addition to the generous provision of bicycle storage, the School will also provide an onsite End of Trip facility which incorporates the following:

- 1 x accessible male bathroom with change room with shower
- 1 x accessible female bathroom with change room with shower
- staff dedicated bicycle racks

## 7.0 Access, Internal Circulation and Servicing

### 7.1 Access

The existing vehicular access (for servicing purposes only) at the Golden Grove Street frontage will be demolished and kerb/gutter reinstated while the existing driveway at the Abercrombie Street frontage will be relocated further east to align with a new School gate. This access will only be reserved for use by emergency vehicles.

## 7.2 Pedestrian & Bicycle Facilities

The existing marked foot crossings in the immediate surrounding of the School campus operate satisfactorily. It is intended that these infrastructures will be retained following the development.

It is understood that an additional marked footcrossing has been proposed (separate to this proposal) at Golden Grove Street north of the School, however, it is advised that this facility is not yet formally approved by the Council's traffic committee. If approved, it is expected that this device would provide an earlier opportunity for pedestrians to cross Golden Grove Street, thus improving connectivity between the School and the City Road bus stops.

The onsite bicycle parking/storage will enable students/staff to secure their bicycles in an undercover area in a well-lit section of the School campus.

## 7.3 Servicing

The existing servicing arrangement involves a truck reversing from Golden Grove Street towards the loading area. This is not considered to be a suitable arrangement given that there are high pedestrian activity and young children along the road frontages. The School's loading area/Waste Bin collection area will be relocated further north to be adjacent to the onstreet Loading Zone. Thus, all garbage collection and loading activities related to deliveries, maintenance, etc. will be expected to occur

via Golden Grove Street. Trucks/service vehicles will no longer be allowed to reverse onto the site; rather, they will be expected to undertake their activities across the footpath to minimise traffic conflict with pedestrians and general traffic. As the Loading Zone will only be operational between 9.30am and 2.30pm (outside of school peak periods) the servicing activities will need to be managed to occur within this window of period in order to minimise disruption and maximise students' safety.

## 7.4 Emergency Vehicles

The fire and rescue NSW and ambulance can access the School at all times via the Abercrombie Street driveway. Emergency protocols for the proposed School would include a requirement for the on-site staff to assist with emergency access from these roads. Any vehicles impeding the emergency vehicle access should be cleared, and any planned vehicle movements should be suspended.

## 8.0 Construction Traffic Management Plan

The preparation of a more detailed construction traffic management plan is recommended during the construction documentation process. It is advised that the development scheme would involve 2 stages, being:

- Stage 1 Building works to the north
- Stage 2 Demolition of existing school buildings and construction of hall/play space

## 8.1 Construction Process

It is anticipated that construction traffic access provision for the main contract works will occur via a temporary construction access at Golden Grove Crescent. The typical trucks expected of a development scheme of this nature will involve:

- up to 8.8m medium rigid trucks, i.e., mobile concrete pump, Hymix concrete mixer during the concrete pumping phases; and
- up to 12.5m heavy rigid trucks for the transport of construction waste materials.

All workers will be encouraged to not park in the surrounding streets and instead use the available public transport to access the site given the site's proximity to high-frequency public transport services or to carpool wherever possible.

A tool drop-off and storage facility will be provided within the site. This would allow tradespeople to drop-off and store their tools and machinery, allowing them to use public transport to travel to/ from the site on a daily basis.

Workers will also be informed of with appropriate tool/ equipment drop-off and storage arrangements made within site sheds and amenities provided on site.

## 8.2 Spoil Management

It is proposed to minimise the need for removal of spoil from the site by endeavouring to balance cut and fill to create the ground platform. Truck shaker grids and wheel wash stations shall be positioned at all entry/exit points. Machine operated street sweepers will be utilised whenever spoil is tracked onto local or state roads, and at the direction of Council.

## 8.3 Construction Vehicle Route

Truck movements associated with the proposed works will approach and depart the site via the following routes:

- 1. King Street, Butlin Avenue, Darlington Road and Golden Grove Street; and/or
- King Street, Darlington Road, and Golden Grove Street (truck sizes may be limited on this route subject to detailed turning path assessment at the intersection of King Street and Darlington Road).

Details of the routes shall form part of the contract and distributed to all drivers.

### 8.4 Construction related Vehicle Movements

For a development of this nature, it is anticipated that there will be an average of 2 trucks per day with a maximum of 8 trucks per day during peak construction (16 movements per day). Heavy vehicle movements are likely to be spread through the day. Traffic demand of this order of magnitude is not significant and can be accommodated by the available and ample spare capacity that currently exists in the local road network.

Queuing or marshalling of construction vehicles must not be permitted on the road network and call-up procedures must be put in place to manage arrivals.

Workers typically begin and end their workday outside of network peak periods (i.e., 6.30am – 3.30pm) and as such is unlikely to adversely impact the surrounding road network.

If essential, the restriction of works may be imposed during the peak school set down and pick up periods.

### 8.5 Bus Movements

The movements of buses/pedestrians and construction vehicles/workers in the surroundings of the work sites shall be closely monitored by RMS accredited Traffic Controllers. Under all circumstances, the movements of buses shall have the right of way over construction vehicles to maintain the efficiency of bus services in the local road network.

### 8.6 Pedestrian Movements

Pedestrian movements shall be separated from the site by through the provision of Class A hoarding/ fencing along the perimeter of the site and B class hoarding where applicable.

To maintain the safety of young pedestrians, RMS accredited traffic controllers will be present at the site access to manage pedestrian movements when construction vehicles are entering the site.

## 8.7 Cyclist Movements

During the construction period, cyclist movements in the vicinity of the School must remain unaffected.

## 8.8 Works Zone/Road Closure

If a Works Zone is required for the construction process, this Zone must not impede the existing set down and pick up operation at the School. This may be in the form of restriction from works/deliveries during the associated School set down and pick up periods.

## 8.9 Cranage and Materials Handling

Mobile cranes will be used to lift materials to/from trucks standing in the site compound while all delivered materials will be stored in designated secured facilities within the bounds of the site.

Should it be that a mobile crane is required to occupy any part of State Roads/Council's roads or footpaths during the construction process, a separate permit either in the form of Works Zone or temporary Road Occupancy License will need to be issued to the Council and approved prior to the planned event.

### 8.10 Site Induction

All workers and visitors employed on the site by the appointed contractor (including sub-contractors) will be required to undergo a formal 'site induction' process and all the inductions will be performed specific to each trade according to Workcover OH & S requirements.

The induction will include details of approved access routes to and from the construction site for site staff and delivery vehicles, parking arrangements, as well as standard environmental, WHS, driver protocols and emergency procedures. The agreed work hours must be included as part of this induction.

### 8.11 Traffic Control Plans

Any required Traffic Control Plans will be prepared by the Builder's appointed Traffic Control Contractor and submitted to the Council for approval.

## 8.12 Road Serviceability

The contractor shall be responsible for ensuring that the roads and footpaths along Abercrombie Street and Golden Grove Street remain in a serviceable state during the course of the construction. Under the direction of Council, the contractor will make good any roadside facilities affected by the construction works, being footpaths, road pavement, etc. to the Council's satisfaction, at no cost to Council.

## 8.13 Emergency Vehicle Access

Emergency protocols on the site would include a requirement for an accredited traffic controller to assist with emergency access, and as such, access to the School by emergency vehicles will not be affected.

Ongoing liaison will be maintained with the police and emergency services agencies throughout the construction period and a site contact will be made available for out-of-hours emergencies and access.

## 9.0 Green Travel Plan

Transport is a necessary part of life which has effects that can be managed. There is a current major focus on improving transport services as well as cycling facilities and provisions for pedestrians in major priority precincts. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling, and public transport will have major public health benefits and will ensure a prosperous urban and economic outcome for cities.

## 9.1 Objectives

A Travel Plan (TP) is a package of measures aimed at promoting and encouraging sustainable travel and reducing reliance on private vehicle usage, and is prepared with an ambition to over a progressive period:

- reduce dependence on private cars
- improve pedestrian and cycling facilities
- promote public transport and car sharing
- reduce congestion in the local area

Travel Plans have proven to be a successful way of changing travel behaviour for school developments throughout Australia and overseas. A Travel Plan is a way in which a development manages the transport needs of parents, carers, school community members, staff and visitors. The plan aims to reduce the environmental impact of travel to and from a given site and in association with its operation. In essence, the plans encourage a more efficient use of motor vehicles as well as alternatives to single occupant car usage.

### 9.2 Process

The preparation of a TP is a considered process which occurs under the leadership and guidance of an established TP Coordinator and involves the following:

- securing ownership via the establishment of a TP Coordinator
- providing a clear context of existing transport circumstances via site audit
- developing and implementing a travel plan via identification of contextual incentive schemes and the establishment of mode share targets
- monitoring the effectiveness of the plan via a formal evaluation process, i.e., travel surveys, etc.

## 9.3 Management Team

A TP Coordinator for the development will be nominated by the School Infrastructure NSW (SINSW)'s representative prior to occupation and this coordinator will have responsibility for developing, implementing and monitoring the effectiveness of the TP. The coordinator will be appointed when the occupation commences.

## 9.4 Existing Travel Circumstance

A summary of the current mode shares for students and staff are shown as follows:

	AM	PM
Walk	44.6%	41.2%
Bicycle/Scooter	28.5%	29.4%
Car	26.9%	20.6%
Bus	-	8.8%

### 9.5 Targets

Assessment of the transport circumstances for the School indicate the following desirable Mode Share targets:

	AM	PM
Walk	45%	45%
Bicycle/Scooter	35%	35%
Car	10%	10%
Bus	10%	10%

Surveys undertaken within 6 months of completion of the redevelopment of the School will be able to assess whether these targets have been met. While these targets have been set, and a range of measures have been provided in the travel plan to persuade staff and visitors to participate in sustainable travel, it is not possible to guarantee that these modal split targets will be achieved.

The measures proposed within the TP will be taken up by the staff/visitors as a matter of free choice, and this mode choice is beyond the control of the TP Coordinator. The survey results will, however, indicate the more popular measures which can then be focused upon in future updated TPs.

## 9.6 Supplementary Transport Programs

Once the new buildings are occupied the TP Coordinator may implement a number of initiatives to further enhance the effectiveness of the travel plan. Having regard for the School's operating nature, it is recommended that the following initiatives are considered and incorporated into the travel plan:

#### Increase walking, running and cycling to work and other destinations by staff

Common and effective measures that are event based including a Ride to Work/School Day raises awareness amongst teachers, parents, students and visitors alike. Likewise, the following initiatives prove to be highly effective amongst staff and potentially students:

Pedometer-based walking program

Walk/Bike buddy scheme

Provision of the end of trip facilities such as shower and change cubicle

# Convenience and Increase staff and parent awareness and knowledge of available transport options

New pamphlets and leaflets detailing these programs incorporating a TAG can be distributed to all who need to travel to and from the School. They should also be provided with an induction package for new staff and incorporates the TAG while ongoing initiatives may be circulated in the form of email newsletters.

### Other initiatives may include:

- ❖ Provide interactive timetables on-site to promote public transport usage.
- ❖ Allow for access to umbrellas and ponchos in case of wet weather.
- Provision of good quality, accurate and useful directional signage to promote walking and cycling.
- Provide real-time information on public transport arrival/departure times with information screens/monitors.

#### **Incentive Scheme for Staff Members**

For staff members, additional incentive programs may be established by SINSW to encourage the uptake of active transport. This can be delivered in the form of:

- ❖ Active carpooling program (with the benefit of knowledge of staff members' place of residence) with guaranteed ride share and car parking space within the School's compound
- ❖ Implementation of a ride share system, which could include encouraging staff to participate in a peak-hour car-pooling club to drive to a nearby station (with higher train frequencies) or common work location during the peak hours. This may be coordinated by the formally appointed Travel Coordinator.

## 9.7 Monitoring & Management of Travel Plan

It will be important to monitor the TP to ensure that travel mode targets are met, and the maximum benefits are being gained.

A TP Coordinator for the School will be appointed to ensure the successful development, implementation and monitoring of the effectiveness of the TP. The TP Coordinator will be appointed prior to the operation once the redevelopment is complete.

Travel surveys can be undertaken where the main focus will be to establish parents'/carers'/school community members', staff's and visitors' travel patterns including the mode share of trips to and from the School. This information will also help inform TPs for subsequent changes and upgrading.

It will be important to understand people's reasons for travelling the way they do, any barriers to changing their behavior and their propensity to change. This will enable the most effective initiatives to be identified, and conversely less effective initiatives can be modified or replaced to ensure the best outcomes are achieved.

It will also be necessary to provide feedback to parents, carers, school community members, staff and visitors to ensure that they can see the benefits of sustainable transport.

There are several key elements to the development and implementation of a successful TP. These include:

**Communications** – Good communications are an essential part of the TP. It will be necessary to explain the reason for adopting the plan, promote the benefits available and provide information about the alternatives to reliance on private car travel.

**Commitment** – TPs involve changing established habits and providing the impetus for parents, carers, school community members, staff and visitors for new

developments to choose a travel mode other than private car use. To achieve cooperation, it is essential to promote positively the wider objectives and benefits of the Plan. This commitment includes the provision of the necessary resources to implement the Plan, beginning with the introduction of encouragement for changing travel modes upon operation.

**Consensus** – It will be necessary to obtain broad support for the introduction of the TP.

Once the TP has been adopted, it will be essential to maintain interest in the scheme and any new initiative in the Plan will need to be publicised and marketed. Accordingly, it is proposed to produce a half-yearly leaflet for parents, carers, school community members, staff and visitors to inform them of sustainable travel initiatives.

## 9.8 Monitoring Milestones

Monitoring of the plan will be an essential process in consolidating the travel patterns and publicising the positive outcomes of the plan.

It is therefore proposed that within 3 months of occupation of the new facilities, a travel survey will be conducted. The results of the travel survey will indicate the desirable travel mode outcome. In this way, the Coordinator will be able to examine the success of the TP and make appropriate recommendations.

## 9.9 Evaluation of Targets

A travel questionnaire (example below) can be conducted with parents, carers, school community members, staff and visitors.

The first study provides a baseline for travel planning while subsequent travel surveys would be reported annually to SINSW to inform any weakness or strength in the current travel plan. Based on the review the travel plan should be refined to reflect changing circumstances.

c) Yes – carpool driver

d) Yes – carpool passenger

## Sample Survey 1. What is the postcode of your place of residence? 2. How do you travel to school? a) Walk/run b) Bicycle c) Bus d) Train e) Combination of bus and train f) Drive a car g) A passenger in a car h) Others \_\_\_\_\_ 3. What time do you usually leave and arrive at school in the morning? 4. What time do you usually leave and arrive home in the afternoon? 5. Do you use your car for school trips during the day? a) Yes b) No 6. To facilitate walk/cycle groups and/or carpooling may we share your contact details with a colleague that live/work near you? (Email:\_\_\_\_) a) Yes – walking group (Email:\_\_\_\_) b) Yes – cycling group

Whilst these targets have been set and though limited parking supply is available, and a range of measures have been provided in the travel plan to persuade parents, carers, school community members, staff and visitors to participate in sustainable travel, it is not possible to guarantee that these modal split targets will be achieved.

(Email:

## 10.0 Conclusion

The proposed Darlington Public School redevelopment project involves the demolition of existing outmoded buildings and construction of new administrative and classroom facilities and provision of additional set down and pick up area to accommodate the envisaged student population growth from the current level of 250 students to 415 students.

Assessment of the proposal has established that:

- the existing local road network adjacent to the School operates with a satisfactory level of service
- the School is suitably located within close proximity of excellent transport services in the local area
- the existing proportion of vehicle set down and pick up reliant students are 27% and 21% during the AM and PM respectively
- there will be additional provision made for active transport infrastructures i.e. bicycles storage and EOT facilities
- the projected traffic generation resulting from the expansion will have no adverse implications on the adjacent road network, and the existing network level of service will be maintained
- the travel planning for staff is to be complemented by sustainable transport planning initiatives, i.e. the publication and distribution of a TAG, the promotion and information of available transport services and timetabling details, as well as the provision of active transport infrastructures
- the existing vehicle access, internal circulation and servicing will be retained
- the provision of extended set down and pick up spaces will be adequate to the anticipated School demand.

Ref. 19043 41

- the provision of other measures such as a travel plan and traffic management plan.
- the planning and management of construction vehicles will have regard for the anticipated peak traffic operations in the vicinity of the School and accord with the Council requirements
- the anticipated construction traffic demand will be adequately accommodated by the ample spare capacities that exist within the local road network.

Ref. 19043 42

# Appendix A

## **Architectural Plans**





# Appendix B

## **SIDRA Model Results**





Site: 1 [King St / Darlington Rd AM]

King Street and Darlington Road Site Category: 19043 Stop (Two-Way)

Move	ement F	Performanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	East: Da	arlington Roa	ıd									
4	L2	117	5.0	0.094	6.3	LOSA	0.6	4.2	0.46	0.53	0.46	41.4
6	R2	12	5.0	0.114	42.4	LOS C	0.3	2.5	0.91	1.00	0.91	21.0
Appro	ach	128	5.0	0.114	9.5	LOS A	0.6	4.2	0.50	0.57	0.50	38.3
North	East: Kir	ng Street										
7	L2	40	5.0	0.247	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.0
8	T1	893	5.0	0.247	0.0	LOSA	0.0	0.0	0.00	0.02	0.00	49.2
Appro	ach	933	5.0	0.247	0.2	NA	0.0	0.0	0.00	0.02	0.00	49.1
South	West: K	ing Street										
2	T1	1800	5.0	0.319	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	208	5.0	0.288	9.3	LOS A	1.3	9.4	0.57	0.77	0.59	37.8
Appro	ach	2008	5.0	0.319	1.0	NA	1.3	9.4	0.06	0.08	0.06	46.6
All Ve	hicles	3069	5.0	0.319	1.1	NA	1.3	9.4	0.06	0.08	0.06	46.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Site: 1 [King St / Darlington Rd PM]

King Street and Darlington Road Site Category: 19043 Stop (Two-Way)

Move	ment F	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand l Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate		Average Speed km/h
South	East: Da	arlington Roa	ad									
4	L2	181	5.0	0.180	8.1	LOSA	1.1	8.3	0.62	0.64	0.62	40.0
6	R2	18	5.0	0.177	46.0	LOS D	0.6	4.1	0.91	1.01	0.94	20.0
Appro	ach	199	5.0	0.180	11.5	LOS A	1.1	8.3	0.64	0.68	0.64	36.8
North	East: Kir	ng Street										
7	L2	87	5.0	0.405	4.6	LOSA	0.0	0.0	0.00	0.06	0.00	47.8
8	T1	1439	5.0	0.405	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	49.0
Appro	ach	1526	5.0	0.405	0.3	NA	0.0	0.0	0.00	0.03	0.00	48.8
South	West: K	ing Street										
2	T1	1333	5.0	0.237	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	144	5.0	0.347	15.6	LOS B	1.4	10.4	0.78	0.94	0.89	32.8
Appro	ach	1477	5.0	0.347	1.5	NA	1.4	10.4	0.08	0.09	0.09	45.0
All Ve	hicles	3202	5.0	0.405	1.5	NA	1.4	10.4	0.08	0.10	0.08	45.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Site: 2 [Abercrombie St / Golden Gr AM]

Abercrombie Street and Golden Grove

Site Category: 19043

Roundabout

Move	ment F	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Golder	Grove										
2	T1	47	5.0	0.318	4.4	LOS A	2.1	15.6	0.29	0.59	0.29	40.4
3	R2	389	5.0	0.318	9.1	LOSA	2.1	15.6	0.29	0.59	0.29	43.3
Appro	ach	437	5.0	0.318	8.6	LOS A	2.1	15.6	0.29	0.59	0.29	43.1
East: A	Ambercr	ombie Stree	t									
4	L2	61	5.0	0.122	4.8	LOSA	0.7	5.1	0.40	0.59	0.40	42.3
6	R2	78	5.0	0.122	9.7	LOSA	0.7	5.1	0.40	0.59	0.40	47.0
Appro	ach	139	5.0	0.122	7.6	LOS A	0.7	5.1	0.40	0.59	0.40	45.0
North:	Golden	Grove										
7	L2	182	5.0	0.371	6.5	LOSA	2.4	17.6	0.63	0.68	0.63	45.6
8	T1	182	5.0	0.371	6.8	LOSA	2.4	17.6	0.63	0.68	0.63	40.1
Appro	ach	364	5.0	0.371	6.7	LOS A	2.4	17.6	0.63	0.68	0.63	43.3
All Vel	hicles	940	5.0	0.371	7.7	LOSA	2.4	17.6	0.44	0.62	0.44	43.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## Site: 2 [Abercrombie St / Golden Gr PM]

Abercrombie Street and Golden Grove

Site Category: 19043

Roundabout

Move	ment P	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Golden	Grove										
2	T1	54	5.0	0.221	4.7	LOS A	1.3	9.7	0.35	0.60	0.35	40.5
3	R2	220	5.0	0.221	9.4	LOSA	1.3	9.7	0.35	0.60	0.35	43.4
Appro	ach	274	5.0	0.221	8.5	LOS A	1.3	9.7	0.35	0.60	0.35	43.0
East:	Ambercr	ombie Stree	t									
4	L2	99	5.0	0.209	5.1	LOS A	1.2	9.1	0.44	0.62	0.44	42.0
6	R2	135	5.0	0.209	10.0	LOSA	1.2	9.1	0.44	0.62	0.44	46.7
Appro	ach	234	5.0	0.209	7.9	LOS A	1.2	9.1	0.44	0.62	0.44	44.8
North:	Golden	Grove										
7	L2	212	5.0	0.368	5.4	LOS A	2.5	18.0	0.50	0.56	0.50	46.4
8	T1	212	5.0	0.368	5.6	LOS A	2.5	18.0	0.50	0.56	0.50	41.1
Appro	ach	423	5.0	0.368	5.5	LOS A	2.5	18.0	0.50	0.56	0.50	44.3
All Ve	hicles	931	5.0	0.368	7.0	LOS A	2.5	18.0	0.44	0.59	0.44	44.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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🥯 Site: 1 [King St / Darlington Rd AM - DEV]

King Street and Darlington Road Site Category: 19043 Stop (Two-Way)

Move	ement F	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	East: Da	arlington Roa	ad									
4	L2	125	5.0	0.101	6.3	LOSA	0.6	4.5	0.46	0.53	0.46	41.4
6	R2	20	5.0	0.198	45.3	LOS D	0.6	4.5	0.92	1.01	0.96	20.2
Appro	ach	145	5.0	0.198	11.6	LOS A	0.6	4.5	0.52	0.60	0.53	36.4
North	East: Kir	ng Street										
7	L2	48	5.0	0.250	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	47.9
8	T1	893	5.0	0.250	0.0	LOSA	0.0	0.0	0.00	0.03	0.00	49.1
Appro	ach	941	5.0	0.250	0.2	NA	0.0	0.0	0.00	0.03	0.00	49.0
South	West: K	ing Street										
2	T1	1800	5.0	0.319	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	217	5.0	0.302	9.5	LOS A	1.4	10.1	0.58	0.78	0.61	37.6
Appro	ach	2017	5.0	0.319	1.0	NA	1.4	10.1	0.06	0.08	0.07	46.5
All Ve	hicles	3103	5.0	0.319	1.3	NA	1.4	10.1	0.06	0.09	0.07	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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🥯 Site: 1 [King St / Darlington Rd PM - DEV]

King Street and Darlington Road Site Category: 19043 Stop (Two-Way)

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate		Average Speed km/h
South	East: Da	ırlington Roa	ad									
4	L2	188	5.0	0.187	8.0	LOSA	1.2	8.7	0.62	0.65	0.62	40.0
6	R2	25	5.0	0.250	49.6	LOS D	0.8	6.1	0.92	1.03	1.01	19.1
Appro	ach	214	5.0	0.250	13.0	LOS A	1.2	8.7	0.65	0.69	0.66	35.6
Northl	East: Kin	g Street										
7	L2	95	5.0	0.407	4.6	LOS A	0.0	0.0	0.00	0.07	0.00	47.7
8	T1	1439	5.0	0.407	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	48.9
Appro	ach	1534	5.0	0.407	0.3	NA	0.0	0.0	0.00	0.03	0.00	48.8
South	West: Ki	ng Street										
2	T1	1333	5.0	0.237	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	151	5.0	0.365	15.9	LOS B	1.5	11.1	0.79	0.94	0.91	32.6
Appro	ach	1483	5.0	0.365	1.6	NA	1.5	11.1	0.08	0.10	0.09	44.8
All Ve	hicles	3231	5.0	0.407	1.7	NA	1.5	11.1	0.08	0.11	0.09	44.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## Site: 2 [Abercrombie St / Golden Gr AM - DEV]

Abercrombie Street and Golden Grove

Site Category: 19043

Roundabout

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate		Average Speed km/h
South	: Golden	Grove										
2	T1	56	5.0	0.328	4.4	LOS A	2.2	16.3	0.31	0.59	0.31	40.4
3	R2	389	5.0	0.328	9.2	LOSA	2.2	16.3	0.31	0.59	0.31	43.3
Appro	ach	445	5.0	0.328	8.6	LOS A	2.2	16.3	0.31	0.59	0.31	43.0
East:	Ambercr	ombie Stree	t									
4	L2	61	5.0	0.130	4.9	LOSA	0.7	5.5	0.41	0.60	0.41	42.1
6	R2	86	5.0	0.130	9.8	LOSA	0.7	5.5	0.41	0.60	0.41	46.8
Appro	ach	147	5.0	0.130	7.7	LOS A	0.7	5.5	0.41	0.60	0.41	44.9
North	: Golden	Grove										
7	L2	191	5.0	0.388	6.6	LOSA	2.6	18.8	0.64	0.68	0.64	45.5
8	T1	191	5.0	0.388	6.8	LOSA	2.6	18.8	0.64	0.68	0.64	40.0
Appro	ach	381	5.0	0.388	6.7	LOS A	2.6	18.8	0.64	0.68	0.64	43.2
All Ve	hicles	974	5.0	0.388	7.7	LOS A	2.6	18.8	0.45	0.63	0.45	43.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## Site: 2 [Abercrombie St / Golden Gr PM - DEV]

Abercrombie Street and Golden Grove

Site Category: 19043

Roundabout

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South:	: Golden	Grove										
2	T1	61	5.0	0.229	4.7	LOS A	1.4	10.2	0.37	0.60	0.37	40.6
3	R2	220	5.0	0.229	9.5	LOS A	1.4	10.2	0.37	0.60	0.37	43.5
Appro	ach	281	5.0	0.229	8.4	LOS A	1.4	10.2	0.37	0.60	0.37	43.0
East: A	Ambercr	ombie Stree	t									
4	L2	99	5.0	0.217	5.2	LOS A	1.3	9.5	0.45	0.63	0.45	41.8
6	R2	142	5.0	0.217	10.0	LOS A	1.3	9.5	0.45	0.63	0.45	46.5
Appro	ach	241	5.0	0.217	8.0	LOS A	1.3	9.5	0.45	0.63	0.45	44.7
North:	Golden	Grove										
7	L2	219	5.0	0.380	5.4	LOS A	2.6	18.9	0.51	0.57	0.51	46.4
8	T1	219	5.0	0.380	5.6	LOS A	2.6	18.9	0.51	0.57	0.51	41.1
Appro	ach	438	5.0	0.380	5.5	LOS A	2.6	18.9	0.51	0.57	0.51	44.2
All Vel	hicles	960	5.0	0.380	7.0	LOS A	2.6	18.9	0.45	0.59	0.45	44.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# Appendix C

**Travel Mode Survey** 





LOCATION	NORTH	<b>Golden Grove Street</b>	TIME PERIOD	0800 - 0900
	EAST	Abercrombie Street		1430 - 1530
	SOUTH	<b>Golden Grove Street</b>		-
	WEST	Abercrombie Street	DATE	Tuesday, April 9, 2019
SUBURB		DARLINGTON	WEATHER	FINE

Numbe	er of Children	1	2	3	4	
Time	Per 15 Mins	Walking	Bike/Scooter	Car	Bus/Van	
8:00	- 8:15	8	1	3	0	12
8:15	- 8:30	13	23	7	0	43
8:30	- 8:45	26	15	24	0	65
8:45	- 9:00	44	19	21	0	84
Pe	eriod End	91	58	55	0	204
14:30	- 14:45	0	0	2	0	2
14:45	- 15:00	5	2	8	0	15
15:00	- 15:15	73	53	30	17	173
15:15	- 15:30	2	2	0	0	4
Pe	eriod End	80	57	40	17	194



LOCATION	NORTH	<b>Golden Grove Street</b>	TIME PERIOD	0800 - 0900
	EAST	Abercrombie Street	•	1430 - 1530
	SOUTH	Golden Grove Street	•	-
	WEST	Abercrombie Street	DATE	Tuesday, April 9, 2019
SUBURB		DARLINGTON	WEATHER	FINE

Number of Children	1	2	3	4	
Time Per Hour	Walking	Bike/Scooter	Car	Bus/Van	
8:00 - 9:00	91	58	55	0	204
Period End	91	58	55	0	204
14:30 - 15:30	80	57	40	17	194
Period End	80	57	40	17	194

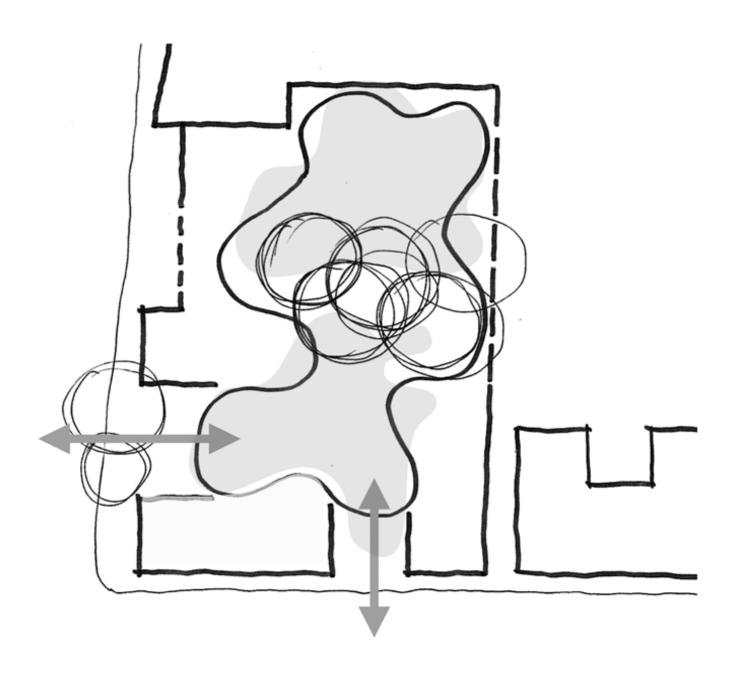
### **DARLINGTON PUBLIC SCHOOL REDEVELOPMENT**

## **Appendix M** — Heritage Impact Statement

SSD-9914

**Prepared by GML** 

For NSW Department of Education





# School Redevelopment Program SSD 9914

# Heritage Impact Statement Darlington Public School

Golden Grove Street, Chippendale

Report prepared for Department of Planning, Industry and Environment Final June 2020



#### Report Register

The following report register documents the development and issue of the report entitled Darlington Public School Redevelopment Program SSD 9914—Heritage Impact Statement undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
18-0630B	1	Draft Report	8 May 2020
18-0630B	2	Final Draft Report	5 June 2020
18-0630B	3	Final Report	9 June 2020

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**GML** Heritage

#### 1.0 Introduction

#### 1.1 Project Background and Overview

Schools Infrastructure New South Wales (SI NSW) has engaged GML Heritage Pty Ltd (GML) on behalf of the Department of Planning, Industry and Environment to prepare a Heritage Impact Statement (HIS) for the proposed Darlington Public School Redevelopment Program (the proposed redevelopment). The HIS forms part of the Environmental Assessment for the project that is subject to assessment as State Significant Development (SSD) under the NSW *Environmental Planning and Assessment Act 1979*.

This HIS describes the history of the site and its heritage significance, as well as the potential impacts of the proposed redevelopment on the heritage significance of heritage items in the vicinity and the adjacent conservation area.

Darlington Public School (the school) is located at Golden Grove Street, Chippendale. The scope of the school project redevelopment includes demolition of all buildings and landscape features on the school site (the site) and redevelopment of the site with new school facilities featuring cultural interpretation arising from community consultation. FJMT Architects (FJMT) have prepared the architectural documentation for the school redevelopment in association with SI NSW and representatives from the Darlington Public School community.

The school is not listed as a heritage item on Schedule 5 of the *Sydney Local Environmental Plan 2012* (Sydney LEP) but is in the vicinity of a number of locally listed heritage conservation areas (HCA) and heritage items.

As part of early concept design for the masterplan, SI NSW undertook a process of community consultation including workshops and surveys covering Aboriginal cultural heritage, Aboriginal community views and new landscape design over a period from March 2019 to May 2020. GML has separately provided heritage advice for the project in regard to community consultation.

GML has reviewed the architectural documentation for the proposed development prepared by FJMT in April 2020 (refer to Section 7.0).

The proposed redevelopment is being assessed as SSD (SSD 9914) and will be accompanied by the Environmental Impact Statement (EIS) as prepared by Ethos Urban. Secretary's Environmental Assessment Requirements (SEARs) were issued on 19 March 2019 and are addressed under the Heritage Impact Assessment section of this HIS report (refer to Section 7.0).

The concept design was reviewed and supported by the Government Architect's NSW State Design Review Panel (GANSW SDRP) in February 2020. The GANSW SDRP comments in regard to heritage are addressed in this HIS (refer to Appendix B).

#### 1.2 Site Identification

The proposed school redevelopment site is located in Chippendale, Sydney, built across Lot 592 DP752049 and Lot 100 DP623500. The school is bound by Golden Grove Street (to the east), Abercrombie Street (to the south), with buildings from the University of Sydney's Abercrombie Precinct (Darlington Campus) on the other boundaries. The University of Sydney Regiment building (former IXL Building) occupies the corner of Golden Grove Street and Darlington Land, but is not part of the school site.

The school site is located adjacent to the part of Darlington which the University of Sydney has expanded into, south of City Road. The former Eveleigh Railway yards are also close by, to the south.

The location and extent of the Darlington Public School site is shown in Figure 1.1 and Figure 2.2 below.



**Figure 1.1** Aerial photograph showing the school site in the context of the surrounding suburbs—the site is circled in red. (Source: SIX Maps with GML overlay addition, 2019)



Figure 1.2 Location of the school site—the site is outlined in red. (Source: SIX Maps with GML overlay addition, 2019)



Figure 1.3 The school's location in relation to the University of Sydney and Carriageworks. (Source: FJMT 2020)

#### 1.3 Other Heritage Reports

Relevant heritage reports prepared for the proposed redevelopment are:

- Casey and Lowe, Darlington Public School, Historical Archaeological Assessment, April 2019 (2019 AA report);
- GML, Darlington Public School—Aboriginal Archaeological Due Diligence, prepared for Schools Infrastructure NSW, February 2019 (2019 DD report);
- GML, Darlington Public School—Aboriginal Cultural Heritage Assessment Report, prepared for the Department of Education, April 2020 (2020 ACHAR); and
- Lamb, Dr R and Maze-Riley, Jane; Darlington Public School, Proposed Redevelopment, Visual Assessment Report, prepared for NSW Department of Education, February 2019 (2019 VAR).
- Ethos Urban, Darlington Public School SSDA, Visual Impact Assessment, prepared for Schools Infrastructure NSW 3 May 2020 (2020 VIA).

Relevant outcomes of the above reports have been included in or referenced in this HIS report.

#### 1.4 Author Identification and Acknowledgements

This report has been prepared by Catherine Macarthur, GML Associate, assisted by Courtney Fung, GML Student Planner. Review has been undertaken by Catherine Forbe, GML Principal.

#### 1.5 Methodology

#### 1.5.1 Approach

This report has been prepared in accordance with the following documents:

- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013 (the Burra Charter);
- the *Statements of Heritage Impact Guidelines*, published by the Heritage Office and Department of Urban Affairs and Planning 1996, revised 2002;
- Design in Context Guidelines for Infill Development in the Historic Environment, published by the Heritage Office and Department of Urban Affairs and Planning, 2005;
- Movable Heritage Principles, NSW Heritage Office / NSW Ministry for the Arts, 2000; and
- Better Placed. Design Guide for Heritage, Government Architect NSW 2018
- Better Placed. Design Guide for Schools, Government Architect NSW 2018

Work of the following reports has been summarised, or referenced, as follows in this HIS report:

- Assessment of historical and Aboriginal archaeology potential of the site has been undertaken in the previous 2019 AA and 2019 DD reports, and is briefly summarised only.
- Information on Aboriginal art collections, and the impacts of the proposed school redevelopment in regard to Aboriginal archaeology and community values, is addressed in the 2020 ACHAR. This information is summarised in this HIS.

#### 1.5.2 Consultation and Review

#### **Government Architect NSW State Design Review Panel**

The initial Concept Design Report prepared by FJMT in 2019 was reviewed by the Government Architect's NSW State Design Review Panel (GANSW SDRP), and formal advice and recommendations on the options presented was provided in August 2019. Heritage considerations were raised at this stage of the process.

FJMT in association with SI NSW developed the selected concept design masterplan and proceeded to general design development, incorporating recommendations of the GANSW SDRP. The design was again reviewed by the GANSW SDRP in November 2019. The GANSW SDRP has indicated support for the scheme and it is understood that no further reviews are required in the preparation of this HIS report.

#### **Aboriginal Cultural Heritage**

As part of early concept design for the masterplan, SI NSW undertook a process of community consultation including workshops and surveys covering Aboriginal cultural heritage, Aboriginal community views and new landscape design over a period from March 2019 to May 2020.

Aboriginal and school community consultation has followed three avenues of investigation during the development of the 2020 ACHAR.

 A formal process of Aboriginal community consultation adhering to the OEH's guidelines has been undertaken.<sup>1</sup>

- Over the past two years, the school has undertaken informal consultation into the values of the
  place. In addition, all NSW schools undertake consultation with their students; schools with a
  higher proportion of Aboriginal children are asked two specific additional questions about their
  connection. The outcomes from these consultations have been provided and used to underpin the
  direction for further specific community consultation.
- A program of community consultation was developed by JOC Consulting and GML, in collaboration with Darlington Public School, the project architects and SI NSW. The aim was to develop an understanding of key values held by three specific user groups who are connected with the school.

Aboriginal community consultation undertaken by GML with SI NSW as part of the ACHAR identified the following aspects of the school that are important to the local Aboriginal community and general school community (Aboriginal and non-Aboriginal students, teachers and parents).

Four main categories of community response were identified by teachers and parents:

- Celebrating and Recognising Aboriginal Culture and History.
- Teaching Aboriginal Culture.
- Culturally Valued Learning Spaces.
- Art and Display of Aboriginal Culture.

This HIS has included (directly) text from the 2020 ACHAR as relevant to the description of the place, significance of the school and assessment of heritage impact. Further details can be found in the 2020 ACHAR.

GML has separately provided heritage advice and a methodology for the project regarding community consultation, to guide the proposed redevelopment of the school site and facilitate recognition of cultural needs, in particular the importance of Aboriginal culture and heritage to the school community. The outcomes of this separate commission were the AA report and the ACHAR report respectively. Both have contributed to the school design.

#### 1.5.3 Limitations

This heritage significance assessment and impact assessment of this report has been limited by the following factors.

The site is not a listed heritage item; however, a preliminary heritage assessment of the existing school buildings has been made to enable impacts of the proposed school redevelopment in relation to the site. This takes into account the original school design, culturally adapted spaces, social value of the school and integral artwork. As would normally be required for a heritage item it has been limited as follows:

- Understanding the evolution and potential significance of the current school site has been limited to desktop research.
- Detailed analysis of the site to identify recent changes to the buildings has not been undertaken.
- Comparative analysis of the school site has not been undertaken. This could include school campus buildings built in the 1970s and other complexes designed in the Brutalist style.
- Trees on the site have not been assessed for heritage significance in this HIS report.

• The NSW Government 2013 plan for Aboriginal affairs, OCHRE,<sup>2</sup> provides policy and guidance. This document has been drawn upon in the 2020 ACHAR in relation to developing recommendations, but not referred to in this HIS report.

#### 1.6 Terminology

The terminology used in this report is consistent with the *NSW Heritage Manual*, prepared by the Heritage Office (now Heritage Division), and the Burra Charter.

- **Place** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.
- Cultural significance means aesthetic, historic, scientific, social or spiritual value for past,
  present or future generations. Cultural significance is embodied in the place itself, its fabric,
  setting, use, associations, meanings, records, related places and related objects. Places may
  have a range of values for different individuals or groups.
- Fabric means all the physical material of the place including components, fixtures, contents, and objects.
- Conservation means all the processes of looking after a place so to retain its cultural significance.
- Maintenance means the continuous protective care of the fabric and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction.
- Preservation means maintaining the fabric of a place in its existing state and retarding deterioration.
- **Restoration** means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.
- **Reconstruction** means returning the place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.
- Adaptation means modifying a place to suit the existing use or a proposed use.
- **Use** means the functions of a place, as well as the activities and practices that may occur at the place.
- Compatible use means a use which respects the cultural significance of a place. Such a use
  involves no or minimal impact on cultural significance.
- **Curtilage** is defined as the area of land surrounding an item that is required to retain and interpret its heritage significance. The nature and extent of the curtilage will vary and can include but is not limited to lot boundaries and visual catchments.
- Setting means the area around a place, which may include the visual catchment.
- Related place means a place that contributes to the cultural significance of another place.
- **Movable heritage** is a term used to define any natural or manufactured object of heritage significance. It does not include archaeological relics found underwater or underground.
- Fixed heritage as above, but usually fixed in place.

#### 2.0 Statutory Context and Heritage Listings

#### 2.1 Statutory Context

This section provides a summary of relevant heritage listings and discusses the state and local statutory planning context as it relates to heritage and potential archaeological resources of the site. In NSW, items of heritage significance and archaeological remains (referred to as 'objects' or 'relics') are afforded statutory protection under the following Acts:

- National Parks and Wildlife Act 1974 (NSW) (NPW Act);
- Heritage Act 1977 (NSW) (Heritage Act); and
- Environmental Planning and Assessment Act 1979 (NSW) (EPA Act).

#### 2.1.1 National Parks and Wildlife Act 1974 (NSW)

All Aboriginal objects and places receive statutory protection under the NPW Act. Aboriginal objects are defined in the Act as:

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Under the Act, applicants must seek approval prior to disturbance of sites with potential to contain Aboriginal objects or cultural material. Harming Aboriginal objects and harming or desecrating Aboriginal places is also a liability offence under the Act. 'Harm' includes to destroy, deface, damage or move an Aboriginal object or declared Aboriginal place.

#### 2.1.2 Heritage Act 1977 (NSW)

The objectives of the Heritage Act are to conserve NSW's environmental heritage. The Act is used to regulate the impacts of development on the state's heritage assets. The Act defines a heritage item as 'a place, building, work, relic, moveable object or precinct'.

#### **Archaeology**

Specifically, for archaeology, 'relic' means any deposit, object or material:

- (a) that relates to the settlement of the area that comprises of New South Wales, not being Aboriginal settlement; and
- (b) that is of State or local heritage significance.

Archaeological features and deposits are afforded statutory protection by the 'relics' provision of the Heritage Act (as amended in 1999).

Section 139(1) of the Heritage Act states that:

A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance is carried out in accordance with an excavation permit.

Excavation permits may be issued under Section 141 of the Heritage Act by the Heritage Council of NSW, or by the Heritage Division, Department of Premier and Cabinet (DPC), under delegation.

#### 2.1.3 Environmental Planning and Assessment Act 1979 (NSW)

The EPA Act is administered by the NSW Department of Planning, Industry and Environment and provides for environmental planning instruments to be made to guide the process of development and land use. The EPA Act also protects local heritage items and conservation areas by listing them on Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs), which provide local councils with the framework required to make planning decisions.

#### **SEARs**

The redevelopment of Darlington Public School is being assessed as SSD (SSD 9914). Secretary's Environmental Assessment Requirements (SEARs) were issued on 19 March 2019. Key Issues of the SEARs relevant to this report, and addressed under the Heritage Impact Assessment section 7.0 below, are:

- 4. Built Form and Urban Design
- 8. Heritage

Requirements for historical archaeology, also under Key Issue 8, are addressed separately in the 2019 AA report. The SEARs for Key Issue 10, Aboriginal heritage, are addressed separately in the ACHAR report also by GML.

The SEARs require adherence to the following Office of Environment and Heritage policy and documents:

- Criteria for the Assessment of Excavation Directors, NSW Heritage Council, Office of Environment and Heritage;
- NSW Heritage Manual guidelines for the preparation of Statements of Heritage Impact, NSW
  Department of Urban Affairs and Planning and the Heritage Council of NSW, first edition, 1996;
  and
- the Burra Charter.

The table below provides a summary in response to the key issues SEARs Assessment Requirements as relevant to this HIS.

Table 2.1 SEARs Assessment Requirements.

SEA	Rs Assessment Requirements	HIS Response	
Key	Key Issue 4—Built Form and Urban Design		
•	Address the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces.	The proposed school design will sit well in its context being sited on the street alignment and reflecting both the rhythms of the terrace house forms in the vicinity and diversity of industrial building nearby.  GML has responded in more detail to urban design considerations in Section 7.0.	
•	Address design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, and colours.	The proposed school will primarily address Golden Grove Street and the corner of Abercrombie Streets, which will assist it to be compatible in the historic streetscape context. Façade treatment, roof forms, articulation and materiality reference the context as well as interpreting the 1970s school buildings which will be demolished.	

SEARs Assessment Requirements	HIS Response
	GML has responded to urban design considerations in Section 7.0.
Provide details of any digital signage boards, including size, location and finishes.	Illuminated signage is proposed at key entry points to the site and to identify the school and preschool entries. The proposal is considered appropriate in context.
	GML has responded to signage considerations in Section 7.0 below.
<ul> <li>Provide a detailed site-wide landscape strategy, including consideration of equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography and existing vegetation.</li> </ul>	The Landscape Plan shows tree to be removed, and new landscaping which will include culturally appropriate learning spaced and indigenous species.  GML has responded to the Landscape Plan in Section 7.0.
Provide a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items.	GML provides an assessment of impact of the proposed development on key views along Abercrombie Street and Golden Grove Streets in this HIS.  A more detailed assessment is included in the 2020 VIA and the 2019 VAR
Demonstrate that Aboriginal culture and heritage is considered and incorporated holistically in the design proposal.	The 2020 ACHAR prepared by GML addresses Aboriginal culture and heritage. This HIS summarises or refers to the 2020 ACHAR. Artwork is of particular importance in the proposed school design as follows:
	Movable artworks (and objects) will be removed and stored prior to commencement of demolition. The new design of the school will include culturally appropriate placement of the artworks.
	Fixed art works (and objects) will be archivally recorded. Where possible they will be retained, and otherwise fabric will be considered for salvage and interpretive re-use in the new landscape design.
Key Issue 8—Heritage	
The EIS must provide a heritage assessment address limited to, conservation areas, relics and views. When	sing potential impacts to any state or local heritage items, including, but not re impacted the assessment must:
be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage	GML has prepared this HIS report and associated heritage reports (including the 2019 DD and the 2020 ACHAR). GML is a recognised heritage firm with over 30 years' experience.
Council's Excavation Director criteria)	Casey and Lowe prepared the 2019 AA (draft) and is also a firm with recognised expertise in archaeology.
outline the proposed mitigation and management measures generally consistent with the NSW Heritage Manual (1996)	Refer below to Section 7.9 Mitigation Measures.
consider impacts including, but not limited to, vibration, demolition, archaeological	Vibration  There is potential for construction works associated with the proposed
disturbance	development to impact heritage items (and buildings in HCAs) in the vicinity. A separate construction methodology should be provided to ensure that impacts related to vibrations (due to excavation, demolition and construction) do not impact heritage items in the vicinity (or are minimised), including:
	former Jones IXL factory garage including interiors;

SEARs Assessment Requirements	HIS Response
	St Michael's Church group;
	Terrace Group including interiors, 124–131 Darlington Road, Darlington; and
	<ul> <li>contributory buildings opposite the school site and within the C18 Golden Grove, Heritage Conservation Area.</li> </ul>
	Other heritage items and heritage conservation areas, including the SHR listed University of Sydney Heritage Conservation Area, are considered too distant for potential impact.
	Demolition
	No buildings on site have been assessed to be of heritage significance; there would be little or no heritage impact as a result of the proposed demolition.
	The significance of the trees on site has not been assessed.
	Demolition, alone, would not impact the context of conservation areas in the vicinity.
	Archaeological Disturbance
	The 2019 AA indicates that:
	The school site has the potential to retain archaeological remains in relation to early urban occupation of Golden Grove Estate from 1879. However, any archaeological remains are unlikely to hold heritage value at the local level and would probably not be defined as 'relics' under the NSW Heritage Act.
	The 2019 DD report, which assesses the site for its potential to retain Aboriginal objects (under the NPW Act), concluded that:
	The site is not considered to hold archaeological potential for Aboriginal objects (as afforded statutory protection under the NPW Act). The proposed redevelopment of the site would therefore be unlikely to have any impact in this regard.
	Refer to these reports for further detail.
where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations, and include the results of these test excavations.	<ul> <li>Aboriginal archaeology should be managed through an unexpected finds policy.</li> <li>Historical archaeology management is set out by Casey &amp; Lowe.</li> <li>Refer to the 2019 AA and 2019 DD reports for further detail.</li> </ul>

SEARs Assessment Requirements	HIS Response
provide a statement of significance and an	Statements of significance are included in this HIS Section 5.0.
assessment of the impact on the heritage significance of the heritage items on the site	Heritage items in the vicinity include:
and within proximity and the adjoining heritage conservation area in accordance	<ul> <li>Former Jones IXL factory garage including interiors, 2–10 Golden Grove Street, Darlington;</li> </ul>
with the guidelines in the NSW Heritage Manual	<ul> <li>St Michael's Church group including buildings and their interiors and grounds, 2–10 Golden Grove Street, Darlington;</li> </ul>
	<ul> <li>Terrace group including interiors, 19–23 Golden Grove Street, Newtown; and</li> </ul>
	<ul> <li>Terrace group 'University Terrace' including interiors, 124–131 Darlington Road, Darlington.</li> </ul>
	The school site is not located within any LEP conservation areas but is located in the vicinity of the following areas:
	C5 University of Sydney Conservation Area (state); and
	C18 Golden Grove Conservation Area (local).
	The significance of heritage items and conservation areas in the vicinity of the school is addressed in this HIS at Section 5.0.
	The assessment of the impact on the heritage significance of heritage items in the vicinity and conservation areas in the vicinity of the site are included in this report below under 7.3 Planning Controls.
	The school site is not a heritage item; however, a preliminary assessment of significance of the site has been provided to enable consideration of impacts of demolition.
address any archaeological potential and significance on the site and the impacts the	Archaeological potential and significance of the site is addressed in the 2019 AA and 2019 DD reports.
development may have on this significance	The 2019 AA concluded that remains associated with the former housing and shop on the corner of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current research.
	The 2019 DD report concludes that the site is not considered to hold archaeological potential for Aboriginal objects and therefore the proposed redevelopment of the site would be unlikely to have any adverse impact in this regard.
	Demolition, excavation and new construction will impact the site, but the archaeological potential is considered low as above.
address the significance of the buildings proposed to be demolished	As above, the school site is not a heritage item; however, a preliminary assessment of significance of the site has been provided to enable consideration of impacts of demolition.
	Refer to Section 5.0 or this assessment and a summary of the assessment work of the 2020 ACHAR which assesses the significance of some spaces within the school and Aboriginal artwork (fixed and movable). The work of the ACHAR has informed the proposed new school design.

#### **Sydney Local Environmental Plan 2012**

The study area is located within the City of Sydney local government area (LGA). The Sydney LEP contains the following previsions relevant to the heritage items in Part 5 Clause 10—Heritage Conservation. The relevant objectives 5.10(1) are listed as:

- (a) to conserve the environmental heritage of the City of Sydney,
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

#### Clause 5.10(2) establishes the requirement for development consent as it applies to heritage items:

Development consent is required for any of the following:

- (a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):
  - (i) a heritage item,
  - (ii) an Aboriginal object,
  - (iii) a building, work, relic or tree within a heritage conservation area,
- (b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,
- (c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- (d) disturbing or excavating an Aboriginal place of heritage significance,
- (e) erecting a building on land:
  - (i) on which a heritage item is located or that is within a heritage conservation area, or
  - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- (f) subdividing land:
  - (i) on which a heritage item is located or that is within a heritage conservation area, or
  - (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

The school site is not a heritage item, however, Clause 5.10(5) establishes the requirement for a heritage management document that assessment the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

The consent authority may, before granting consent to any development—

- (a) on land on which a heritage item is located, or
- (b) on land that is within a heritage conservation area, or
- (c) on land that is within the vicinity of land referred to in paragraph (a) or (b),

The school site is not a heritage items, but is in the vicinity of a number of local heritage items and the Golden Grove Heritage Conservation Area.

Clause 5.10(7) addresses the requirements for archaeological sites and Clause 5.10(8) addresses the requirements for places of Aboriginal significance. These requirements are addressed in the 2019 AA, 2019 DD, and 2020 ACHAR reports and summarised in this HIS.

#### **DCP 2012**

Part 3.9 of the *Sydney Development Control Plan 2012* (DCP 2012) includes controls relating to the management of heritage properties and supplements the provisions of the Sydney LEP.

Section 3.9.1 sets out the requirements for preparing a HIS to accompany development applications that affect:

- (a) heritage items identified in the Sydney LEP 2012; or
- (b) properties within a Heritage Conservation Area identified in Sydney LEP 2012.

The redevelopment of the school site requires the preparation of a HIS to accompany the development application due to the site being adjacent to four HCAs as well as the potential impact of the proposed works on the significance of heritage items in the vicinity. The requirements for the HIS report to address under the DCP 2012 are as follows (DCP Section 3.9.1 (4):

- (a) the heritage significance of the heritage item or the contribution which the building makes to the heritage significance of the heritage conservation area;
- (b) the options that were considered when arriving at a preferred development and the reasons for choosing the preferred option;
- (c) the impact of the proposed development on the heritage significance of the heritage item, heritage items within the vicinity, or the heritage conservation area; and
- (d) the compatibility of the development with conservation policies contained within an applicable Heritage Conservation Management Plan or Conservation Management Strategy, or conservation policies within the Sydney Heritage Inventory Report.

The provisions of Section 3.9.3 (3) and (4) are included below:

- (3) Alterations and additions to buildings and structures and new development of sites in the vicinity of a heritage item are to be designed to respect and complement the heritage item in terms of the:
  - (a) building envelope;
  - (b) proportions;
  - (c) materials, colours and finishes; and
  - (d) building and street alignment.
- (4) Development in the vicinity of a heritage item is to minimise the impact on the setting of the item by:
  - (a) providing an adequate area around the building to allow interpretation of the heritage item;
  - (b) retaining original or significant landscaping (including plantings with direct links or association with the heritage item);
  - (c) protecting, where possible and allowing the interpretation of archaeological features; and

(d) Retaining and respecting significant views to and from the heritage item.

The HIS addresses these provision as the school redevelopment site is in the vicinity of a number of local heritage items and the Golden Grove Heritage Conservation Area.

## 2.2 Heritage Listings

Darlington Public School is located in Chippendale in the vicinity of a number of HCAs and heritage items included on the Sydney LEP. The Sydney LEP Heritage Map identifies these areas and items which are in the vicinity of the site (refer to Figure 1.3).

The school site is not listed as a heritage item within the Sydney LEP.

The school site is not listed on the State Heritage Register (SHR), is not included on the NSW Department of Education Government Schools Section 170 Heritage and Conservation Register (S170 Register) and is not included on the Australian Institute of Architects Register of Significant Buildings in NSW.

## 2.2.1 Conservation Areas in the Vicinity

The school site is located in the vicinity of the following HCAs:

- C5 University of Sydney Conservation Area (state significance);
- C18 Golden Grove Conservation Area (local significance);
- C45 Union Street West Conservation Area (local significance); and
- C47 King Street Heritage Conservation Area (local significance).

Golden Grove Conservation Area is immediately adjacent to the school site, to the south, and C45 and C47 are also nearby to the northwest. The University of Sydney Conservation Area is up the hill to the north of the school site (refer to Figures 2.1 and 2.2). The University of Sydney Conservation Area is also included on the NSW State Heritage Register (SHR) (refer to Figure 2.3). These HCAs mostly comprise 'contributory' properties.

#### 2.2.2 Heritage Items in the Vicinity

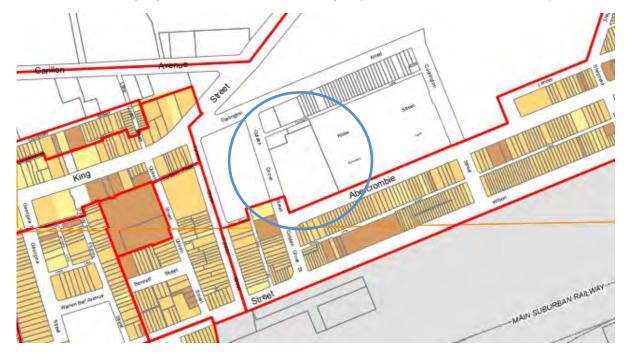
There are a number of heritage items in the vicinity of the school site—the most relevant being those most likely to be impacted by redevelopment of the school site (refer to Figures 2.1). These include:

- Former Jones IXL factory garage including interiors, 2–10 Golden Grove Street, Darlington;
- St Michael's Church group including buildings and their interiors and grounds, 2–10 Golden Grove Street, Darlington;
- Terrace group including interiors, 19–23 Golden Grove Street, Newtown; and
- Terrace group 'University Terrace' including interiors, 124–131 Darlington Road, Darlington.

Locations and summaries of statutory heritage register citations of these area and items are included at Table 5-3 below. Further detail can be obtained from the listings themselves at the NSW Heritage website (https://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx).



**Figure 2.1** City of Sydney Heritage Map identifying conservation areas (red hatched), heritage items (brown shading) and the project site (circled in blue). (Source: *Sydney Local Environmental Plan 2012*, Heritage Map Sheets HER009 and HER\_010, viewed April 2019)



**Figure 2.2** City of Sydney Heritage Map identifying conservation areas (for HCA numbers see figure above), heritage items (brown shading) and the project site (circled in blue). (Source: *Sydney Development Control Plan 2012*, Building Contributions Map 009 and 010, viewed April 2019)

# Heritage Council of New South Wales State Heritage Register - SHR: 01974 - Plan: 2734 SHR Curtilage The University of Sydney, University Colleges and Victoria Park Land Parcels Corner of Parramatta and City Roads, Camperdown Railways Gazettal Date:31 August 2018 Roads 100 200 300 LGAs Scale: 1;9,000 Datum/Projection: GCS GDA 1994

Figure 2.3 Conservation area map for SHR Item 10974 identified as the University of Sydney, University Colleges and Victoria Park. Note the subject site, circled in blue, is located south of this conservation area. (Source: SHR listing, viewed May 2019 <a href="https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5056444">https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5056444</a>)

#### 2.3 Endnotes

- Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW).
- NSW Department of Aboriginal Affairs, OCHRE. NSW Government Plan for Aboriginal affairs: education, employment & accountability, 2013, NSW Department of Aboriginal Affairs.,

# 3.0 Historical Outline and Historical Context Review

The following brief history of Darlington Public School includes extracts from the ACHAR and AA reports and select secondary sources.

# 3.1 Ethnohistory

The Aboriginal people that lived in the area now occupied by Darlington Public School were either Cadigal or Wan(n)gal. These groups are local descent groups, otherwise referred to as local clans or territorial clans. Some confusion remains as to which clan is associated with what are now the grounds of the school, arising from conflicting information contained within two historical quotes:

The tribe of Cadi inhabit the south side, extending from the sought head to Long-Cove; at which place the district of Wanne, and the tribe of Wangal, commences, extending as far as Parra-mata, or Rose-Hill.<sup>1</sup>

From the entrance of the harbour, along the south shore, to the cove adjoining this settlement the district is called Cadi, and the tribe Cadigal; the women, Cadigalleon. The south side of the harbour from the above-mentioned cove to Rose Hill, which the natives call Parramatta, the district is called Wann, and the tribe Wanngal.<sup>2</sup>

The original inhabitants of the Sydney region relied on food gained through fishing and hunting, and gathering plants and small animals. The land and its rivers and estuaries were the source of a range of plant and animals for food, medicines, and raw materials for tools, weapons, shelters and body decoration.<sup>3</sup> A variety of tools were used for obtaining food and raw materials, carrying small objects, and equipment making. Weapons were required for either offensive or defensive purposes.<sup>4</sup>

The landforms that comprise Darlington Public School are low gradient middle slopes below a ridgeline (now King Street), which ran into the area which is now Sydney University. These landforms comprised part of the wider landscape which was inhabited by Aboriginal people, who would have accessed plant resources, and likely fresh water from the small ephemeral creeks. However, being located near but not on the harbour suggests this specific area was not a focus for habitation activities which could have resulted in a dense or extensive archaeological signature. Visitation would have been most likely transient, rather than longer term repeat visitation to known or established sites or habitation locations. Regardless, the length of Aboriginal habitation across the Cumberland Plain and around Sydney Harbour has resulted in an enduring legacy of archaeological sites, and intangible connection with Country, place and the land, which endures today and is personified through the Aboriginal connections in Darlington Public School.

# 3.2 Early European History

The area that is now Darlington was part of the Crown Reserve which was set aside by Governor Phillip in the early 1790s for school purposes. At the time Darlington was well forested, being covered in turpentines and ironbarks. In 1801 it was granted to the trustees of the Female Orphan School, who never used the land but instead leased it to timber-getters. Over the next 18 years the area was progressively cleared by the timber-getters, who provided a regular source of income for the Female Orphan School.

In 1819 the land of the Crown Reserve was divided and partly regranted, with land given to Thomas Shepherd and William Chippendale (who gives his name to the suburb). William Hutchinson, a former convict and later successful businessman, received a parcel of land which was called 'Golden Grove', which covered the current school site. Hutchinson used the land for grazing, probably for cows destined

for Sydney butchers and markets, and the land was said to be called the Bullock Paddock in reference to this 1

Hutchinson's land continued to be used for grazing through the middle of the nineteenth century. Darlington and the area around Cleveland Street (which bordered Hutchinson's land) remained sparsely populated at this time, with less than 12 houses being recorded in 1860. However, the introduction of the railway to the south in the 1850s and the planning of the Eveleigh Railyards in 1875 caused the population to swell, as workers' terraces were built to house the workers employed at the railyard and their families. Golden Grove was subdivided in parts from 1879 through to the middle of the 1880s as part of this process and terrace houses were built upon it. Darlington meanwhile had been declared its own municipality in 1864, as it was outside the boundaries of the City of Sydney which ended at Cleveland Street. <sup>2</sup>

# 3.3 Establishment of the First Darlington Public School, 1877

The first Darlington Public School was established in 1877 to meet the needs of the growing community who were coalescing in area because of the Eveleigh Railyards. This school was located at Maze Crescent within the University of Sydney (now Cadigal Green of the University of Sydney) and was designed by George Allen Mansfield, an architect to the Council of Education. Darlington was one of several schools he designed.

By 1880 education was made compulsory. The effect was a dramatic increase in the student intake at the school, which increased from 361 in 1880 to 1064 by 1890. This matched the continued growth of the Darlington area, which became an important centre of employment for workers. This included a growing population of Aboriginal people, for whom the railyards were one of the biggest employers. Most of these Aboriginal employees lived in the Darlington to Redfern area, and many sent their children to the old Darlington school.

# 3.4 Closure of the Old Darlington School

Through the early twentieth century Darlington continued to be a suburb dominated by working-class families who worked in the various factories, railyards and industries around Eveleigh, Redfern and Chippendale. Following World War II, Darlington increasingly came into the view of the University of Sydney who saw the suburb as a key area it could expand into. Darlington was made available for the University to develop outside of regular planning regulations by the County of Cumberland Planning Scheme of 1951.<sup>3</sup>

The University was given permission to purchase 36 acres of land in Darlington to expand into, which it diligently began doing in the 1960s after purchasing land in previous years. This included the land of the Old Darlington School. Over the next 15 years, many Darlington properties were acquired and redeveloped for new university buildings. This caused upheaval in the local community, which had come to have a strong Aboriginal character by the middle of the twentieth century, especially towards Redfern and The Block.<sup>4</sup>

Up to the 1970s the Old Darlington School was the main school that parents in the Redfern and Darlington Aboriginal community sent their children to. By the 1970s the school was in a poor condition. This, in conjunction with the rapid development around the school by the University, resulted in a proposal to build a new school in Darlington within the community. In 1975 the Old Darlington School closed and ownership was transferred to Sydney University, where the school building remains to today.

# 3.5 Present-day Darlington Public School

The new Darlington Public School was constructed in 1975 in a cleared block between Abercrombie Street, Golden Grove Street, Rose Lane and Darlington Lane. The new school buildings had been designed earlier in 1973 by the Government Architect, being simple functional Brutalist buildings.

In 1989 the effects from the Newcastle earthquake impacted buildings in Sydney. This included the Blackfriars school in Chippendale, which had also been designed by Mansfield in 1884. The damage caused by the earthquake significantly damaged the school, causing its closure. Younger students who attended the school were then moved to Darlington Public School.

Adaptations to the Darlington Public School complex occurred in the 1990s, and is understood to have involved adaptation of spaces to reflect the cultural use of the school by the Aboriginal community, as well as, notably, a number of significant Aboriginal artworks important to the school community. The 1973 Government Architect's site plan shows the northern edge of the school bounded by Rose Street; however, the present school site playground extends over Rose Street with the northern boundary at Darlington Lane, suggesting additional land was acquired for the school (refer to Figure 4.12). Records also indicate that kindergarten buildings were added to the school in the 1990s, which accords with the above boundary change, but this has not been confirmed.

Darlington Public School has had a part in providing public education for 44 years to date. The school has a current student population of 183. The school is renowned for its connection with the local Aboriginal community and currently 25 per cent of Darlington Public students identify themselves as Aboriginal, taught by 21 teachers, six of whom are Aboriginal.

# 3.6 Aboriginal Education at Darlington Public School

Darlington continues to have a large Aboriginal population, many of whom were educated at Darlington Public School and who now send their children to the school. The school is renowned for its connection with the local Aboriginal community, having worked collaboratively with Aboriginal Elders, parents, teachers and students since 1975. These collaborations have given the school a unique character, as it is filled with artworks, cultural spaces and references to the Aboriginal community, including the Jarjums Rugs and the emphasis on teaching Aboriginal culture and promoting awareness.



**Figure 3.1** Circa 1920–1929 photograph of World War I Memorial Gates and Wall at the Darlington Public School. (Source: Australian War Memorial Photograph Collection)



**Figure 3.2** 1977 photograph of Darlington Public School and playground on Abercrombie Street, Darlington. (Source: City of Sydney Archives)

# 3.7 Land Use Summary

Casey and Lowe summarised the early land use of the site:

The early use of the study area following European settlement in 1788 was for timber felling and grazing of cattle. By 1819 the land was granted to William Hutchinson whose estate retained ownership until the land was subdivided into the Golden Grove Estate.

Table 3.1 Phases and Land Uses (Source: Casey and Lowe).

Phase	Land Use	
Pre-1788	Natural landscape and Aboriginal occupation.	
1788–1819	Vacant land in the ownership of the Orphan School.	
1819–1879	Vacant land in the ownership of William Hutchinson and his estate.	
1879–1893	Initial subdivision and the sale of the Golden Grove Estate.	
1893–1968	Occupation of the houses on the edge of the University of Sydney.	
Pre-1975	Purchase and demolition of majority of houses for the school.	
1975	Darlington Public School moved to its present location	

# 3.8 Historic Maps of the Locality

The following historic maps provide an overview of the development of the Darlington locality. Blackwattle Swamp Creek is shown to run through William Hutchinson's land grant in 1819. The creek is identified on the 1886 and 1892 land surveys showing subdivisions and building locations, in the general areas of the Darlington Public School site. Refer to Figures 3.3 to 3.5.



**Figure 3.3** 1819 plan showing the location of William Hutchinson's land and Blackwattle Creek. The University is located on the site of Grose Farm while the Darlington Public School site is on William Hutchinson's grant (circled). (Source: Connybeare Morrison and Partners 1990s, Map A, via Casey and Lowe)

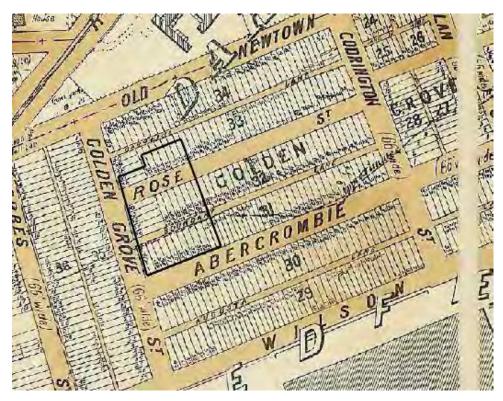
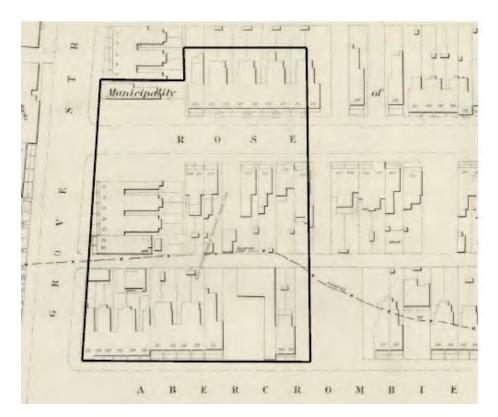
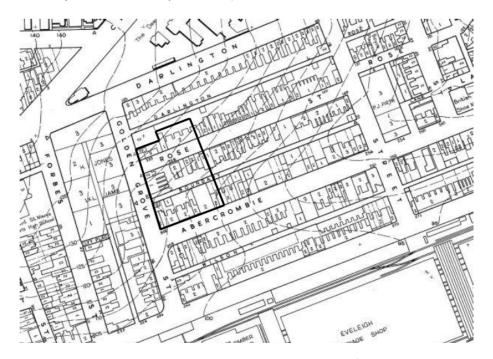


Figure 3.4 Detail of the 1886 City of Sydney – Glebe, Camperdown, Darlington plan. (Source: Glebe, Camperdown, Newtown, Macdonaldtown & Darlington, 1886, Higinbotham & Robinson, Publishers, Archives ID A-00880473 <a href="https://archives.cityofsydney.nsw.gov.au/nodes/view/1709400">https://archives.cityofsydney.nsw.gov.au/nodes/view/1709400</a>, cited in Archaeological Assessment, Casey and Lowe, April 2019)



**Figure 3.5** Detail of the 1892 Metropolitan Detail Services survey plan of the area. The subject site is shown outlined in black. The broken line reads 'approx. course of Blackwattle Boundary Swamp Creek'. The vertical writing within the study area is 'Approx position of head of Blackwattle Swamp Creek'. (Source: Archaeological Assessment, Casey and Lowe, April 2019)



**Figure 3.6** City of Sydney Civic Survey 1938-50. The study area is outlined. (Source: Archaeological Assessment, Casey and Lowe, April 2019)



**Figure 3.7** Location of the study area overlaid on the 1943 aerial photograph showing the Old Darlington School, rows of Victorian terraces that characterised Darlington, including houses across the area later occupied by the Darlington Public School; the Eveleigh railway yards; and the Henry Jones & Co IXL Jam Factory. (Source: SIX Maps, with GML additions 2019)



**Figure 3.8** Location of the study area overlaid on the 1943 aerial photograph showing the Old Darlington School, rows of Victorian terraces that characterised Darlington, including houses across the area later occupied by the Darlington Public School; the Eveleigh railway yards; and the Henry Jones & Co IXL Jam Factory. (Source: SIX Maps)

# 3.9 Context Review—Historical Photographs

No photographs have been found of the residential building and corner store demolished on the site to make way for the new Darlington Public School by 1975.

The following historic photographs of buildings in the vicinity (some remaining, some demolished) provide an indication of the urban form and character of the nineteenth-century buildings that previously occupied the Darlington Public School site.



Figure 3.9 Historic views of the local context—Elvy's butchery and residence in Codrington Street (corner Rose Street) Darlington, 1890s. (Source: City of Sydney Archive, ID number A-00031736)



**Figure 3.10** Historic views of the local context—Elvy's butchery and residence in Codrington Street Darlington, 1971. (Source: City of Sydney Archive, ID number A-00031733)



Figure 3.11 Historic views of the local context—demolition site for the University of Sydney, 15–16 Codrington Street, Darlington (now Butlin Avenue). View northwest from near the intersection of Codrington Street and Darlington Road along Codrington Street towards City Road, 1965. (Source: City of Sydney Archive, ID A-00046511)



Figure 3.12 Historic views of the local context at 266–268 Abercrombie Street, Darlington at corner of Shepherd Lane and Abercrombie Street. Side wall showing Winfield cigarette advertising sign is visible, as well as Salems Handy Store, gifts, hardware, gadgets and kitchenware store at 268 Abercrombie Street on right, 1970. (Source: City of Sydney Archive, Series SSMC Heritage Photographic Survey, ID A-00063585)



Figure 3.13 Historic views of the local context—St Kieran's Roman Catholic Church at 21–25 Golden Grove Street, Darlington, circa 1977. View looking north along Golden Grove Street with St Kieran's Roman Catholic Church (opposite Abercrombie Street) and school and Henry Jones Jam Factory advertising IXL jam. (Source: City of Sydney Archive, Series SSMC Heritage Photographic Survey, ID A-00062861)



**Figure 3.14** Historic views of the local context—industrial area on Golden Grove Street, Darlington, circa 1977. View south from Darlington Road. (Source: City of Sydney Archive, Series SSMC Heritage Photographic Survey, ID A-00062525)



Figure 3.15 Hall area mural. Shown in the mural background are representations of the evolution of the Darlington schools and locality (not dated). (Source: GML 2020) (refer also Figure 4-29)

# 4.0 Description of the School Site and Context

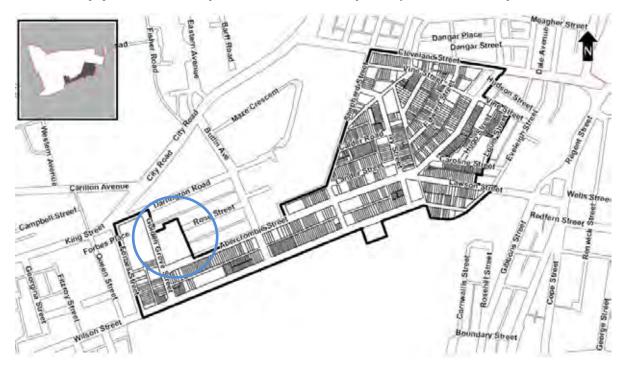
## 4.1 Darlington / West Redfern Locality

The school site is located within the Darlington / West Redfern locality as defined in the Sydney DCP 2012, Section 2.3.2. Refer to Figure 4.1. The description of this area from the DCP is included below:

This locality is bounded by Cleveland Street and City Road to the north, Forbes Street to the west, Wilson Street and the railway lines to the south and the Redfern Waterloo Authority sites around Eveleigh Street to the east.

This locality is a predominantly residential neighbourhood mainly comprised of terrace rows. The consistency of terrace rows: their scale and proportions, roof design and materials palette, is very important to the quality of the streetscape. High quality additions and alterations are encouraged to maintain the character and protect residential amenity.

The emerging centre around Codrington Street on the former Eveleigh Railway Yards site is encouraged.



**Figure 4.1** City of Sydney Heritage Map identifying DCP 12 Locality Statement for Chippendale (outlined area). Note the subject site, circled in blue, is included in the Chippendale locality. (Source: *Sydney Development Control Plan 2012*, Chippendale Locality Statement Map, viewed April 2019)

# 4.2 Heritage Conservation Areas in the Vicinity

Heritage conservation areas in the vicinity of the school site are identified in Section 2.0 above, and shown in photographs of the urban context provided below at Section 4.4. The significance of these HCAs is provided at Section 5.1.2.

## 4.3 Heritage Items in the Vicinity

Heritage items in the vicinity of the school site are identified in Section 2.0 above and are described in Section 5.1.3 below, along with photographs and statements of heritage significance.

#### 4.4 Urban Context and Views

The following location plan and images provide an overview of the urban context and the location of key views towards the school site, as well the location of the school buildings at the intersection of Abercrombie and Golden Grove Streets.

#### 4.4.1 Key Views and Visual Catchment

Key views to the school site are looking north and south along Golden Grove Street and looking west along Abercrombie Street, as shown by the arrows on the Location Plan below. The 2019 VAR describes the public domain views associated with the site in relation to a previous scheme for the site (but remains generally valid) as follows:

The potential public domain visual catchment of the site is limited and local, predominantly constrained to the immediately surrounding streets by semi-continuous walls of both low and taller built forms. Therefore public domain views to the site are limited. The composition of views from the majority of locations inspected are characterised by a foreground of built form including roads and street wall elevation of school buildings and the canopy of vegetation within the school grounds. It is unlikely that any public domain views to distant, scenic or highly valued features would be available across and beyond the site that could be affected by the proposal. Views to the Melkite Catholic Cathedral are available from Golden Grove Street and Abercrombie Street. Where it terminates the vista south in Abercrombie Street.

#### The 2020 VIA defines the visual catchment of the site as follows:

The visual catchment of the site (ie, from where the site can be seen) is contained to parts of Abercrombie Street, Golden Grove Street, **Darlington** Lane and the site to the east largely due to the relatively level topography, continuous or near continuous terrace rows and taller nearby buildings.

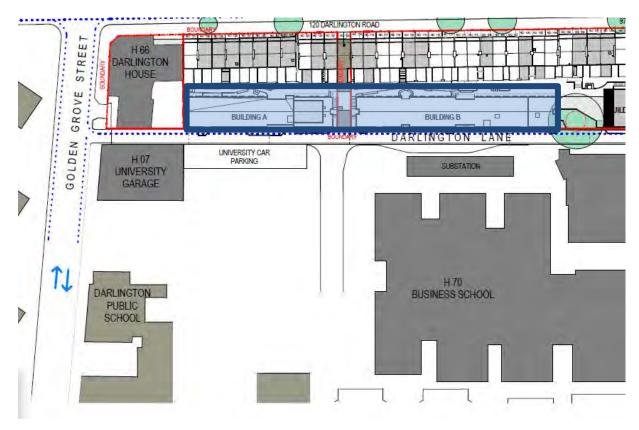
While not within the visual catchment, the nearby Carriageworks complex is a notable feature of the broader surrounding urban landscape.

#### 4.4.2 Built Form

The buildings forming the street corner are the Darlington Public School and the two storey verandahed Victorian corner shop building opposite. St Michael's Church is located at the T-intersection. The terrace housing directly south and north of the site are remnants of the late nineteenth-century subdivisions of Golden Grove forming Darlington. Medium-scale public housing c1980s is located to the west of the school site on Golden Grove Street and more large-scale, recent university buildings are located to the east.

#### 4.4.3 Future Built Form

We are advised that a scheme for three to four level medium density housing associated with the University of Sydney has recently been approved, and will be located on the rear portion of land of the Darlington Street terrace houses (heritage item), addressing Darlington Lane. Block A of this development faces the north side of the school site.



**Figure 4.2** Recently approved University of Sydney development (outlined in blue) addressing Darlington Lane and facing the north boundary of the school site. (Source: Allen Jack and Cottier Architects, 25.11.2016)

## 4.4.4 Street Trees

Review of Council's Street Tree Master Plan (2011)<sup>5</sup> indicates that trees in the vicinity of the site are:

- Golden Grove Street—tallowwood (Eucalyptus microcorys); and
- Abercrombie Street—Queensland brush box (Lophostemon confertus).

These trees are not identified as heritage items in the LEP but may be located within the adjacent heritage conservation areas.



Figure 4.3 Darlington Public School location plan with key views indicated. Note: St Michael's Church is incorrectly identified, and this text should be swapped with the item below it. (Source: FJMT 2020)

## Darlington Public School—Urban Context and Views



Figure 4.4 View looking north along Golden Grove Street. St Michael's Church group is to the left, and Darlington Public School is to the right behind the roundabout. View A above. (Source: GML, 2019)

## Darlington Public School—Urban Context and Views



**Figure 4.5** View along Golden Grove Street looking south. The site is to the left behind the former Jones IXL factory garage (the dark brick building). (Source: GML, 2019)



Figure 4.6 View along Golden Grove Street looking south. The site is to the left. View B above. (Source: GML, 2019)



Figure 4.7 View looking east along Darlington Lane, from Golden Grove Street. (Source: GML, 2019)



Figure 4.8 View looking east along Darlington Lane, which forms the north boundary of the site. (Source: GML, 2019)



**Figure 4.9** View along Abercrombie Street looking west. The site is to the right, and the St Michael's Church group on Golden Grove Street terminates this view. (View C above) (Source: GML, 2020)



**Figure 4.10** View along Abercrombie Street looking west. The corner of the site is visible at the right, and the St Michael's Church group on Golden Grove Street terminates this view. (Source: GML, 2019)

## Darlington Public School—Urban Context and Views



Figure 4.11 View looking east along Abercrombie Street. (Source: GML 2020)



Figure 4.12 Detail view of the south side of the school facing Golden Grove Street looking south and adjacent building (to the east). (Source: GML 2020)

# 4.5 Darlington Public School

#### 4.5.1 School Site

The Darlington Public School site and context plan at Figure 4.2 above shows the arrangement of school buildings and open space on the school site. As noted in the history above, some changes have occurred, including land acquisition extending the site to the north and a new kindergarten block.

Built to the footpath alignment, the school is primarily enclosed by brick walls of the school buildings and its courtyards on Abercrombie and Golden Grove Streets. The remainder of these street frontages are enclosed by a modern metal fence. The former IXL building (now University of Sydney Regiment) is located at the corner of Golden Grove Street and Abercrombie Lane and is not part of the school site.

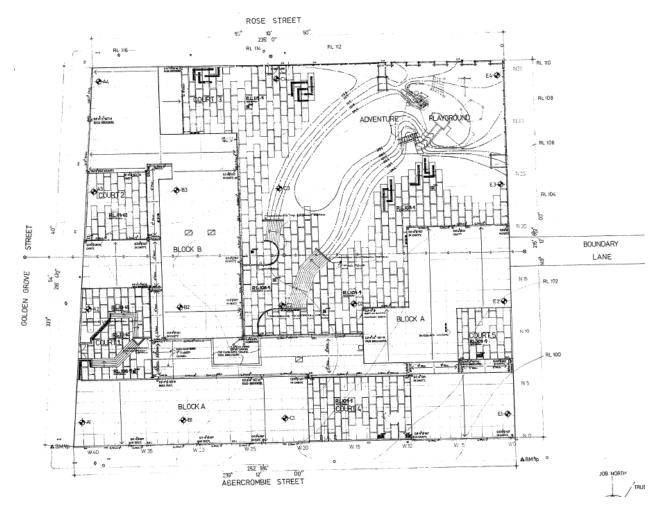
The school presents itself as a place connected with Aboriginal culture, heritage and education. The school has designed and adapted spaces with Aboriginal art, song, and language. Some of these elements are clearly visible to visitors, such as the school entrance way, whilst other elements of the place are intangible, such as cultural practice and the school song. These adaptations are described in Section 4.5.3 below.

#### 4.5.2 Landscape and Open Space

The landscape areas of the school site comprise the smaller paved courtyards associated with the school buildings, the adapted central Adventure Playground and a larger open playground to the north. The open area is gently terraced to the fall of the site, is covered in bitumen and modern sport surfaces. The central courtyard has a number of mature trees, the canopies of which are prominent visually from the surrounding streets.

#### 4.5.3 The Buildings and Courtyards

The school building complex, as designed in 1973, comprises single and two-storey brick buildings utilising a concrete frame. The school site plan below at Figure 4.12 shows the school as built in more detail notably: blocks A, B and C (separated by four distinct paved courts). The complex is designed in a simple, Brutalist manner, with its walls built to the building line on Abercrombie Street and Golden Grove Street and, along with two other buildings, forms the urban corner. Minor changes over time have occurred. The photographs below show the school in its current form.



**Figure 4.13** Darlington Demonstration Public School site plan, signed 31.3.73 by Ted Farmer, the Government Architect. Working drawings are attributed to Bruce Taylor, Architect. The 1973 Government Architect's site plan shows the northern edge of the school bounded by Rose Street; however, the present school site playground extends over Rose Street with the northern boundary at Darlington Lane, suggesting additional land was acquired for the school. (Source: Plan SB461/14, sheet no.1)

## Darlington Public School—Photographs of Site, Buildings and Landscape



Figure 4.14 View of fenced school grounds along Golden Grove Street looking south. (Source: GML 2020)



Figure 4.15 View of north side of school buildings from Golden Grove Street. (Source: GML 2020)

# Darlington Public School—Photographs of Site, Buildings and Landscape



**Figure 4.16** View of school wall along Golden Grove Street looking south. (Source: GML 2020)



Figure 4.17 View of west side of school facing Golden Grove Street looking south. (Source: GML 2020)



Figure 4.18 View of school at corner of Golden Grove Street and Abercrombie Street. (Source: GML 2020)



**Figure 4.19** View of south side of school facing Abercrombie Street. (Source: GML 2020)



Figure 4.20 Detail view of entry at west side of the school facing Golden Grove Street looking south. (Source: GML 2020)



**Figure 4.21** Detail view of south side of school facing Golden Grove Street looking south. (Source: GML 2020)

#### Darlington Public School—Photographs of Site, Buildings and Landscape



**Figure 4.22** Entrance courtyard with indigenous plants and Aboriginal artworks. (Source: GML 2019)



Figure 4.23 The Year 6 art wall, and Yarning Place. (Source: GML 2019)



Figure 4.24 Engraved sandstone blocks in the school yard. (Source: GML 2019)



Figure 4.25 The school's main hall decorated with Aboriginal flags, and six Jarjums rugs, designed by Aboriginal children in collaboration with their Elders. (Source: GML 2019)

#### 4.5.4 Aboriginal Heritage in Space and Design Elements

An understanding of the physical school elements that present an outward expression of connections to the Aboriginal community underpins the assessment of intangible elements of education. This section provides a brief review of the school's aesthetics, notably Aboriginal art and specific spaces or elements within the school that have been identified as important by teachers and students. Further detail is included in the 2020 ACHAR.

#### **Golden Grove Street Entry and Courtyard**

Visitors to the school enter through a large bright red door on Golden Grove Street. This door has become a symbol for entry into the school and designates a point of arrival (no specific cultural connection has been described with this door). The school is symbolised by an Aboriginal logo of a kangaroo encircled by kangaroo footprints and the school name (Figure 4.44). This was designed by

former teacher Neil Thorne (who also designed and 'burnt' Aboriginal artwork into a door and created several burnt wood artworks, and the school totems).

The small entrance courtyard contains numerous indigenous plantings and Aboriginal artworks (Figure 4.20), leading past an acknowledgement of Country to the entrance foyer. This area is resplendent with a large mural beneath the reception desk (Figure 4.21), and display cases with Aboriginal objects. Moving along a narrow wall with a large Aboriginal language map, and past the burnt wood door, the school's main hall contains ribbons of Aboriginal flags, images of Aboriginal people (Figure 4.22), and six Jarjums rugs which were designed by Aboriginal students in collaboration their Elders (Figure 2.6, and Section 2.3.2).

## The Yarning Place

The Yarning Place is constructed from sandstone blocks and sits beneath the Year 6 artworks (Figures 4.22 and 4.23). The area is used by students to sit and talk, or discuss important matters. The space is valued by students and teachers and provides a safe location for discussion.

Darlington Public School teachers present an Acknowledgement of Country at the start of every day, often in a space described as a 'yarning circle'. Development of a specific acknowledgement has been led by the pre-school Aboriginal teachers.

Nearby, one of the school courtyards features sandstone blocks with Aboriginal engravings (Figure 4.23).

#### 4.5.5 School Space and Artworks

Darlington Public School currently holds a large collection of Aboriginal artworks, murals and objects produced by students, teachers and significant Australian artists. These represent a collection amassed over the school's 40 years of operation.

The school halls, walls, external spaces and surfaces are covered with Aboriginal art, motifs, symbols and items that create connections across the school and a journey through the corridors and spaces of the school. The art leads children through their day, between classes, providing a backdrop and context to their everyday activities. The development of the school and its aesthetic character has been organic, unplanned and matured with the school and its teachers. Every painting, depiction, symbol etc has a story—some happy; some connected to events; some with people. Most teachers know some part of the story behind any particular artwork—only when they come together to talk, or yarn, is the full story told.

The art provides a tangible expression of connection between the school and its Aboriginal origins and heritage—for all students, teachers and parents, past and present.

The artworks described below and in the following photographs are identified in the ACHAR as the most important to the school community.

An overview of the artworks that hold the greatest attachment for current teachers, as identified in the 2020 ACHAR, is presented below and are arranged by Artworks (Fixed) and Artworks (Moveable) for the purposes of this report. Moveable artwork includes items which could be unscrewed and stored.

#### Year 6 Art Wall

The Year 6 art wall contains specifically designed artworks, produced each year by the students in Year 6, with the assistance of professional artists and the art teachers (Figure 4.22). The artworks are

specifically designed by the year and recreate one of the school totems; children make individual artworks which they take home with them at the end of the year. To date four works have been produced: goannas, frilled-neck lizards, koalas and owls—there are 10 further totems to be produced.

They are really important because they link the kids who have current gone through school to the art works. You see the kids who have left the school, come back to the school, and they still remember making their art work—'I made that' or 'that's my name there'—it creates a community, who feel they link back to all of the school's history, and brings it up to now. [John Askew, 8 May 2019]

## The Jarjums Rugs

On the wall of the school's main hall hangs six hand-crafted rugs, each measuring 2m by 2.9m (Figures 4.45 to 4.51). These are the 'Jarjums rugs', which were designed by Aboriginal students at the school in collaboration with their Elders. The rugs were initially visualised and drawn on paper, followed by a process of creating a physical three-dimensional design. The designs were reviewed by 'The Rug Collection', which selected six designs for manufacture using hand tufted wool.

The rugs are described by principal Liz Sinnott as 'one of the most authentic cultural exchanges I have been involved in, in my 30 plus years of teaching', and 'an authentic piece of children working with elders to give their song lines a visual presence'.

Each of the six rugs holds significance to the school and the children and demonstrates the connections between the school and Aboriginal culture. A description of the story or songline for each rug is provided by the students:

#### Bucca

The rug shows my home in the Nambucca Valley and my home town, Bowraville and the places my family gather to spend time together, to yarn and connect. In my design there are the meeting places at the Island (Nambucca Heads) and meeting places in Bowra, where I and my extended family come from. The green mountains and bush represents the Mountains of Bowra.

The water represents the freshwater of Bowra and my favourite beach at Bucca the Island. These are special places to me and places I miss because we live in Sydney. [Mandawuy Jarrett]

#### Home

My mother is from salt water country Gumbaynggirr, on the mid North Coast of NSW, and my father is from freshwater country, Nooghaburra, in North Western NSW.

The yellow and green side of the rug is the freshwater, the purple and black is the saltwater. The circle in the middle represents me and a place to call "Home". The lines that lead into the circle is the connection where it belongs. [Maawa Mumbulla]

#### Mother Earth and the Raging Sands

This design shows the story of Mother Earth and the Raging Sands.

The different colours in this design represent the different sands; the red and brown are the desert sands; the dark grey are the muddy river sands; the creamy white in the middle represent the beach sands. Our Mother Earth owns these sands and will one day walk to the sands. [Kohen Sines]

#### Quindalup

This design is about family and us all coming together. The circles are the campfires with my family sitting around them and then the two rivers that join them. I have called this rug Quindalup which means 'a happy place'. [Kyleigha Crawford]

#### Spiritual Animal

The Owl is a spirit animal. When the Owl spirit appears it is a sign to let family members know that there is an announcement of significance. Most likely symbolic, like a life transition. [Antwon Peckham]

#### Traditional Island Hunting Connections

The red line represents the hunting grounds and the connection between islands. The islands of the Torres Strait are depicted in grey while the blue represents the sea. This shows the connection between the lamo (Yam Island) and Badu Island. [Denis Tarrant]

#### **Classroom Identification**

'The educators at Darlington PS show a strong awareness of Aboriginal culture through ongoing experiences' (Clarence Slockee, 18 April 2019). This awareness is present in the everyday actions of teachers, the naming of the classes, and the connection with Aboriginal culture which underpins the education methods of the school. It is implemented by all teachers—both Aboriginal and non-Aboriginal.

At Darlington Public School each class is allocated a name relating to Australian fauna: Scarlet Robins, Rainbow Lorikeets, Echidnas, Owls, Turtles, Frogs, Dingoes, Platypuses, Koalas, Geckos, Goannas and Frilled-neck Lizards. Each class is referred to by its animal name, and each classroom contains a painted depiction of its animal totem. These totems were designed and painted by Aboriginal Elders and former teacher Neil Thorne (Figure 4.32). These totems have come to form the basis for the Year 6 artworks.

#### **Our Reconciliation Sand Time Line**

The themes of reconciliation and healing are regularly practised and implemented by the teachers, often through collaborative events and the creation of specific artworks. A recent example of reconciliation is the creation of 'Our Reconciliation Sand Time Line' (Figure 4.33), which is displayed with decorated Aboriginal objects in the school's main entrance foyer:

Our Reconciliation Sand Time Line

This is the Darlington Public School Reconciliation Sand Time Line which was created by students, teachers, families and the local community.

It signifies that 'We all walk together on this land as one,' it was created using soil, natural white and red sand which represent different areas of Australia and the land in which we are standing today. All students got to place a cup of sand within the box which represents all students, families and the local community who contributed becoming one.

#### 4.5.6 The Art Collection

Darlington Public School holds a considerable quantity of Aboriginal artworks, over 100, as well as Aboriginal objects (eg Figure 4.40) They represent a collection amassed over the school's 44 years of education. Many of the artworks have been gifted, produced or manufactured in collaboration with Aboriginal Elders, parents, teachers and students. The art provides a tangible expression of connection between the school and its Aboriginal origins and heritage—for all students, teachers and parents, present and past. SI NSW has prepared a catalogue of all artworks, which is presented in Appendix E of the 2020 ACHAR.



Figure 4.26 Artworks (wall mural)—part of Year 6 Art Wall. (Source: GML 2020)



Figure 4.27 Artworks (wall mural), part of Year 6 Artworks and Totems. (Source: FJMT 2020)



**Figure 4.28** Artworks (wall mural)—this mural was created by a prominent grandparent in the school community. It shows all the totem animals living harmoniously together. (Source: FJMT 2020)



Figure 4.29 Artworks (wall mural)—hall area mural. Shown in the mural is former preschool teacher, former Aboriginal Education Officer [Auntie Norma], and children who attended the school at the time. In the background are representations of what the former schools used to look like and the background shows the evolution of Darlington School. (source: GML 2020)



**Figure 4.30** Artworks (wall mural)—birds wall mural. Painted by Peter Oxley (from the band the Sunnyboys) and Jenny (a mum at the school). (Source: GML 2020)



**Figure 4.31** Artworks (wall mural)—entrance foyer with Aboriginal mural. School children painted this with a local artist. (Source: GML 2019)



**Figure 4.32** Hanging mural painted on board, Year 6 artwork, 2015. (Source: GML 2019)



**Figure 4.33** Artworks—this work was made by Sally Morgan, who is a prominent NSW artist and author of the book *My Story*. (Source: GML 2020)



**Figure 4.34** Artworks (wall mural)—entrance courtyard with indigenous plants and Aboriginal artworks. (Source: GML 2019)



**Figure 4.35** Artworks (wall mural)—frog mural in Preschool Courtyard. (Source: GML 2020)



Figure 4.36 Frilled-neck lizard, class totem painting. (Source: GML 2019)



**Figure 4.37** 'Our Reconciliation Sand Time Line'. (Source: GML 2019)



Figure 4.38 Artworks—unknown. (Source: GML 2020)



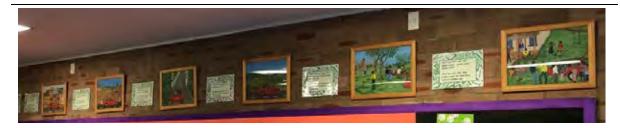
**Figure 4.39** Artworks—NAIDOC Week, A4 wooden boards. Made by Uncle Neil Thorne each year for NAIDOC Week. (Source: GML 2020)



**Figure 4.40** Selected artworks, burnt door—the door represents the Aboriginal education office. (Source: FJMT 2020)



**Figure 4.41** Artworks—digeridoos (outside the music room). (Source: GML 2020)



**Figure 4.42** Artworks—The Wheel on the Holden. Kerry Toomey, a teacher at the school, painted a lot of the stories that Auntie Wendy [Wendy Notley] made through video and songs with the school children. (Source: GML 2020)



Figure 4.43 Artworks—Boomerang. This massive boomerang represents the A-frame of a house. (Source: GML 2020)



Figure 4.44 Artworks—Platypus, 2012 class artwork for NAIDOC Week poster. Each child in the class painted or coloured in a different part of the platypus. (Source: GML 2020)



**Figure 4.45** School logo designed by Neil Thorne [the former Aboriginal resource education officer at the school]. (Source: ACHAR, GML 2020)



**Figure 4.46** The six Jarjums rugs hanging on the school wall. The rugs were designed by Aboriginal students at the school in collaboration with their Elders. (Source: GML 2019)

## Detail—The Six Jarjums rugs



**Figure 4.47** *Bucca* by Mandawuy Jarrett. (Source: The Rug Collection)



Figure 4.48 *Home* by Maawa Mumbulla. (Source: The Rug Collection)



**Figure 4.49** *Mother Earth Raging Sands* by Kohen Sines. (Source: The Rug Collection)



**Figure 4.50** *Quindalup* by Kyleigha Crawford. (Source: The Rug Collection)



**Figure 4.51** *Spiritual Animal* by Antwon Peckham. (Source: The Rug Collection)



**Figure 4.52** *Traditional Island Hunting Connections* by Denis Tarrant. (Source: The Rug Collection)

# 5.0 Heritage Significance

The assessment of heritage significance and preliminary statement of significance of the Darlington Public School below is not required as the site is not listed as a heritage item in the 2012 Sydney LEP. The following preliminary assessment, however, provides a basis for the heritage impact assessment, in addition to the considerations for HCAs and heritage items in the vicinity, which follows at Section 6.0 of this report.

Comparative analysis of similar school campuses was not undertaken. Comparison with other contemporary school campuses including those with Brutalist buildings would enable more detailed assessment particularly under criterion C (aesthetic significance). Comparative analysis of Aboriginal cultural adaptations to a school (or other institutional site) would also enable more detailed assessment under criterion G (representativeness).

## 5.1 Heritage Significance Assessment

#### 5.1.1 The School Site

The assessment of heritage significance of the school site uses the standard criteria identified in the NSW Heritage Office's publication Assessing Heritage Significance. This assessment is considered preliminary only and based on available desktop research and recent community consultation in association with the planned school redevelopment. Key points from the 2020 ACHAR and the 2019 AA report have been included in the assessment below. Further detail can be found in these reports.

Trees on the site have not been assessed for heritage significance.

The assessment below indicates that the school has some significance at a local level under some criteria (A, B, C, D and G).

 Table 5.1 Preliminary Assessment of Heritage Significance—Darlington Public School.

Criterion	Assessment
Criterion A (Historical Significance) An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)	<ul> <li>The school has some historic significance locally as the second public school in Darlington, having replaced the 1878 Old Darlington School in 1974.</li> <li>The school site has the potential to retain archaeological remains in relation to early urban occupation of Golden Grove Estate from 1879.</li> <li>The school site has some significance at the local level under criterion A.</li> </ul>
Criterion B (Historical Association)  An item has strong or special association with the life or works of a person, or group of persons, of importance in the cultural or natural history of NSW (or the cultural or natural history of the local	The school has some historic associations, having been built for the education of children in the local community whose parents typically worked in various public and private industries nearby. While the industrial workplaces have changed and the local community has evolved, including undergoing gentrification, and the establishment of the Aboriginal community in the Block, some cultural associations remain.
area)	The school has subsumed earlier Darlington housing, both of which have some historic association to the local community.
	The school site has some significance at the local level under criterion B.
Criterion C (Aesthetic Significance)	The school buildings present as a cohesive school campus designed in the Brutalist style, typical of school architecture in NSW of the 1970s.

## **GML** Heritage

Criterion	Assessment			
An item is important in demonstrating aesthetic characteristics and/or a high	Comparative analysis has not been undertaken and the relative architectural value of the school campus has not been assessed.			
degree of creative or technical achievement in NSW (or the local area)	Aboriginal adaptations to the school and artwork associated with the school community has been identified as important by teachers and students.			
	The school buildings, some spaces and artwork have some significance at the local level under criterion B.			
Criterion D (Social Significance)  An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons	<ul> <li>Aboriginal community consultation has informed the following values associated with the school site.</li> <li>Celebrating Aboriginal culture.</li> <li>Teaching Aboriginal culture, and Aboriginal ways of learning and teaching.</li> <li>Learning spaces: general outdoor areas, yarning circles, edible gardens, native trees.</li> <li>Traditional Aboriginal art and artefacts within the school site.</li> <li>Recent Aboriginal art and murals (including works by students and teachers).</li> <li>The school site, some spaces and artwork have been identified as having significance under criterion D at a local level.</li> </ul>			
Criterion E (Research Potential)  An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)	<ul> <li>Little research potential has been identified for the school site in regard to the existing buildings.</li> <li>Remains associated with the shop on the corner of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current research, although the site of the corner shop at the corner of Abercrombie and Golden Grove Streets may retain some research value.</li> <li>There may be some limited local research potential at the school site in regard to archaeology under criterion E. The school buildings are not likely to be significant</li> </ul>			
Criterion F (Rarity)  An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)	<ul> <li>The school buildings are typical of a small school complex built in NSW in the 1970s and are not likely to be rare.</li> <li>Any archaeological remains would not be considered rare.</li> <li>The school site is not considered significant under criterion F.</li> </ul>			
Criterion G (Representativeness)  An item is important in demonstrating the principal characteristics of a class of NSW's (or a class of the local area's):  - cultural or natural places; or - cultural or natural environments	<ul> <li>The school buildings are typical of a small school complex built in NSW in the 1970s, and represent this era architecturally to some degree.</li> <li>Comparative analysis has not been undertaken and the representative value of the school campus has not been assessed; however, the Aboriginal cultural adaptations may be considered representative.</li> <li>In terms of potential archaeological remains on the school site, the examples of footings and house layout may be representative of inner-city housing in 1890s Sydney; however, they are likely to be in poor and fragmented condition and would not meet the threshold for representativeness.</li> <li>The school site, its buildings and potential archaeological remains may have some significance under criterion G.</li> </ul>			

## 5.1.2 Aboriginal Culture and Heritage

#### **Themes**

The 2020 ACHAR identified the following themes relating to Aboriginal culture and heritage. A summary of what is important about the school under each theme is summarised from the ACHAR, to enable assessment of the heritage impact of the proposed school design.

#### Celebrating and Recognising Aboriginal Culture and History

Darlington Public School has a demonstrated and strong connection with Aboriginal culture and heritage. The school community perceives Darlington as *the* 'Aboriginal school', where exemplary teaching, understanding, presentation and inclusion of Aboriginal culture foster an inclusive atmosphere for all students, Aboriginal and non-Aboriginal.

#### Teaching Aboriginal Culture

Darlington Public School's educational awareness and ability to teach students about Aboriginal culture is considered important. It promotes cultural continuity through the passing on of Aboriginal knowledge, culture and traditions from one generation to the next.

#### 'Spaces'

In general, Aboriginal cultures view and use 'space' differently from other cultures. There are traditions around the use of and access to space, and the need for spaces which provide unique cultural and social engagements. Teachers have developed specific spaces within the current school for different cultural purposes. The presence of these spaces, their cultural links and importance to the school community is valued by the school community. Seating/Meeting/Yarn Space (Circle, Campfire Feel) is considered important for storytelling activities as an integral part of Aboriginal culture. The concept of class totems is valued.

#### Art and Display of Aboriginal Culture

Darlington Public School contains and displays a significant collection of art and artefacts that reflect Aboriginal culture and heritage. These items dominate the aesthetic of the place, creating an atmosphere and setting which is rare and possibly even unique within a NSW school. The school community have a strong connection with the art and display of Aboriginal culture in the school and see these aspects as underpinning the connection between the school, local community and Aboriginal culture. The current 'random' approach to display of artwork throughout the school is not considered important.

#### **Totems**

The totems (artwork from Year 6 students) have been at the school for 20–30 years and are considered important.

## The Art Collection

The heritage value of the art, embodied through the social and aesthetic values, is difficult to describe due to the complexities associated with inherent and hidden meaning, the stories behind each art piece, and individual connections teachers and students hold with the art.

The range of connections between the school community and the art collection is diverse and every artwork has a backstory. Results of consultation are presented in the 2020 ACHAR. Cultural meaning

and value were attributed to some artworks; others were considered universally important, holding importance to the history of the school. To teachers who were new to the school the artworks proved to be part of their cultural immersion in Darlington Public School. In summary, the art collection defines the character of the school, its spaces, teachers and students.

For detailed outcomes from the consultation refer to the 2020 ACHAR.

## The Most Important Items/Features of Darlington

The 2020 ACHAR identified the following items/features as being the most important considerations for the heritage assessment of the new design:

- The school is located in Darlington/Redfern. Redfern is special, with a rich and important history. There are also many firsts here—the first Aboriginal medical centre, first Aboriginal legal centre and the home of Aboriginal Legal Service (ALS), Aboriginal Medical Service (AMS), Black Theatre etc.
- We value safety for our students and community. We want the school to be a safe space for people to come and feel comfortable. More than 90 per cent of students feel that their teachers understand Aboriginal culture.
- This school is about relationships. We need spaces to have a yarn, to talk, to debrief. This is important for people to share and listen, to open up about any trauma and heal. For instance, we could build a 'student's staffroom', where students can chat and debrief.
- Our culture is valuable and powerful. We are more than just a representation of culture, we are living, breathing culture.
- Darlington PS is more than art on walls. We need to create a strong sense of belonging and connection, that can inspire our Aboriginal children as well as foster greater understanding in the wider community.

# 5.2 Statement of Significance

## 5.2.1 Preliminary Statement of Significance

Darlington Public School was built in 1975, replacing the earlier school of the same name built in 1877. Darlington Public School has some historical and associative significance in the Darlington local area. Both schools were purpose built for the local communities of the time. The first Darlington Public School served the growing community associated with the various nearby public and private industries, as well as the Eveleigh Railway Yards. The archaeological remains associated with the buildings from the early urban occupation of Golden Grove Estate (from 1879) which were demolished to make way for the new school are likely to be of some local significance historically. These remains are considered to have little research potential, with the exception of the site of the corner shop at the corner of Abercrombie and Golden Grove Streets.

The design of the school campus displays architecture typical of the 1970s Brutalist style, and presents to the street as a single and two storey brick walled complex with mono-pitched roofs to the three main buildings. Built to the street alignment, the school complex responds harmoniously in scale to the Victorian architecture of the adjacent conservation areas, formally holding the corner. The school campus design is not likely to be rare, but is likely to be have some representative value architecturally, as well as for its archaeological remains. Comparative analysis of the school campus with other similar government schools, or other examples of low-scale Brutalist public architecture, has not been undertaken.

The school site, located in an area which has undergone gentrification, retains strong local associations, notably for the local Aboriginal community. School Aboriginal cultural activities, some spaces and artwork have been identified to be important to students and teachers: the art collection defining the character of the school, its spaces, teachers and students. These promote Aboriginal cultural continuity through enabling the passing on of Aboriginal knowledge, culture and traditions from one generation to the next.

#### 5.2.2 Aboriginal Heritage Values Statement of Significance

The following assessment of Aboriginal heritage values connected with Darlington Public School as included in the 2020 ACHAR used four of the NSW heritage assessment criteria as follows: historic value, social and spiritual values, aesthetic value and scientific value.

Darlington PS holds heritage significance to generations of families in the local community, notably the local Aboriginal community. The current Darlington PS is valued by the local community as a place of cultural respect, appreciation, learning and tradition. The history of the school itself is considered important by the community, because it is associated with the industrial growth of Darlington, Redfern and Chippendale during the late nineteenth century, and with the later economic and social growth of these suburbs, particularly with respect to Aboriginal history.

The school's focus on inclusion and Aboriginal culture has created a unique aesthetic which provides a visually stimulating, sociable, and safe space for students and other community members to gather. The school's large collection of Aboriginal art, both movable and an essential part of the fabric of the school, creates a setting which envelopes the teachers and students in Aboriginal traditions and teaching. This aesthetic underpins the teaching methods, creating unique spaces with both social and functional use. Darlington PS exemplifies methods of teaching, the use of space and aesthetics, and demonstrates principles of inclusion and acceptance, that established a benchmark for NSW education standards and direction.

# 5.2.3 Heritage Conservation Areas (in the vicinity)

 Table 5.2 Statutory Heritage Register Citations—Heritage Conservation Areas in the Vicinity.

Name	Proximity and Significance	ID No.	Level
C5 University of Sydney Heritage Conservation Area	This CA is located to the north of the redevelopment site. The SHR listing boundary (refer to Figure 2.3) does not include University of Sydney land or buildings located south of City Road, ie where the school site is located.		Local State
	The following is extracted from the State Heritage Inventory database:		
	Significance  The University of Sydney, University Colleges and Victoria Park is of state historical significance, as a vestige of Governor Phillip's original 1,000 acres (404 ha) 'Kanguroo Ground' Crown reserve of 1790 and for its connection to the 18th century British government's approach to colonialism and its concept of 'terra nullius' as the foundation for dispossession of Aboriginal land in the immediate area of Sydney.		
	The University of Sydney is of state historical significance as the first and oldest university in Australia, dating from 1850. Reflecting in the cultural landscape changes in tertiary education, landscape design, institutional architecture, economic development and social attitudes; including pioneering university education for women in NSW (1881) and the establishment of the first university college for women in Australia, Women's College in 1892.		
	The University of Sydney and Victoria Park as connected landscapes have tangible links to Charles Moore, Director of the Royal Botanic Gardens (1848–1896) and subsequent designers using prevalent 19th century theories of landscape design, plant material and horticultural techniques.		
C18 Golden Grove Heritage Conservation	This CA is located immediately to the south of the redevelopment site and includes Abercrombie Street and Golden Grove Street.	C18	Local
Area	The following is extracted from the State Heritage Inventory database:		
	Significance		
	The Golden Grove Estate has historic significance as the earliest grant in the area and as a representative area of late nineteenth century residential subdivision and late nineteenth century housing. The area developed largely within the period 1880 – 1890, illustrating the influence of the Eveleigh Railway Workshops on the surrounding area. The terraces and streetscapes are substantially intact and have aesthetic value for their harmony and consistency and in their ability to represent working class and middle class housing and community in the late Victorian period.		

Name	Proximity and Significance	ID No.	Level
C45 Union Street West Conservation Area	This CA is located to the west of the redevelopment site and is not considered close enough to warrant heritage impact assessment.	C45	Local
C47 King Street Heritage Conservation Area	This CA is located to the northwest of the redevelopment site and is not considered close enough to warrant heritage impact assessment.	C47	Local

## 5.2.4 Heritage Items (in the Vicinity)

Summaries of the heritage significance of these items are included below. Further detail can be obtained from the listings themselves at the Heritage NSW website.

Table 5.3 Statutory Heritage Register Citations—Heritage Items in the Vicinity.

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			street, Darlington.	

Lot 20, DP 1196550. (Source: Google Street View. 2019)

Name and Significance	ID No.	Level
Former Jones IXL factory garage including interiors (now used by the Sydney University Regiment)	12244	Local
The following is extracted from the State Heritage Inventory database:		
Significance		

Built in 1937 as a motor garage for the Henry Jones and Company factory, this former garage represents the industrial development of Darlington during the mid-twentieth century. The Henry Jones and Company garage is historically significant for its connection to the development of the Australian food processing industry for jams, tinned fruits and other processed foods. The construction of the garage to house delivery trucks for the former IXL jam factory also represents technological advancements of the inter-war period through the growing use of motor vehicles for the distribution of products. The property also has aesthetic / architectural significance and has potential social value.

Address and Image	Name and Significance	ID No.	Level
Figure 5.2 19–23 Golden Grove Street, Newtown. Lots 23–28, Section 35, DP 111120; Lot 14, DP 66240; Lot 15, DP 82954; Lot 16, DP 67786. (Source: Google Street View. 2019)	St Michael's Church group including buildings and their interiors and grounds  The following is extracted from the State Heritage Inventory database:  Significance  St Michael's Church Group includes two storey Post-War Church, two storey  Victorian Gothic style school and three storey Federation hall. While there is no significance assessment on the State Heritage Inventory (SHI), the church has aesthetic and historic significance for its range of architectural values and eras (including post war) as well as social value to the local attending community.	1979	Local
Figure 5.3 104–123 Darlington Road, Darlington. Lots 1–12, DP 33326; Lot A, DP 185532; Lot 1, DP 1067807; Lots A and B, DP 436059; Lot 1, DP 185534; Lot 1, DP 1038854. (Source: Google Street View. 2019)	Terrace group including interiors The following is extracted from the State Heritage Inventory database:  Significance Two-storey Victorian Italianate style terrace group, associated with the development of the Golden Grove Estate and the expansion of workers' housing related to the development of the Eveleigh Railway Workshops in the 1880s and 1890s.	I534	Local
Figure 5.4 124–131 Darlington Road, Darlington. Lots 30–35, Section 34, DP 11112. (Source: Google Street View. 2019)	Terrace group 'University Terrace' including interiors  The following is extracted from the State Heritage Inventory database:  Significance  Two storey Victorian Italianate style terrace group, associated with the development of the Golden Grove Estate and the expansion of workers housing related to the development of the Eveleigh Railway Workshops in the 1880s and 1890s.	1535	Local

#### 5.3 Endnotes

- King cited in Hunter, J 1793 [1968], *An Historical Journal of the Transactions at Port Jackson and Norfolk Island*, Australian Facsimile Editions No. 148. Library Board of South Australia, J. Stockdale, London, p 412.
- Phillip, A 1790 [1892], Letter from Governor Phillip to Lord Sydney, Government House, Sydney Cove 13 February, vol. 1 (2), HR NSW. Phillip 1783-1792, p 309.
- Benson, D and Howell, J 1990, *Taken for Granted: The Bushland of Sydney and its Suburbs*, Kangaroo Press in association with the Royal Botanic Gardens Sydney, Sydney.
  - Attenbrow, V 2010, Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records, University of New South Wales Press, Kensington, NSW.
  - Kohen, J L 1986, 'Prehistoric Settlement in the western Cumberland Plain: Resources, environment and technology', Phd Thesis, Macquarie University.
- Heritage Management Consultants et al., University of Sydney, Grounds Conservation Plan, vol. 1, report prepared for Facilities Management Office, University of Sydney, October 2002.
- <sup>1</sup> Fitzgerald, S 2008, 'Darlington', *Dictionary of Sydney*, viewed 1 May 2020 <a href="https://dictionaryofsydney.org/entry/Darlington">https://dictionaryofsydney.org/entry/Darlington</a>.
- <sup>2</sup> Fitzgerald, S 2008, 'Darlington', *Dictionary of Sydney*, viewed 1 May 2020 <a href="https://dictionaryofsydney.org/entry/Darlington">https://dictionaryofsydney.org/entry/Darlington</a>.
- 3 Fitzgerald, S 2008, 'Darlington', Dictionary of Sydney, viewed 1 May 2020 <a href="https://dictionaryofsydney.org/entry/Darlington">https://dictionaryofsydney.org/entry/Darlington</a>.
- <sup>4</sup> Fitzgerald, S 2008, 'Darlington', *Dictionary of Sydney*, viewed 1 May 2020 <a href="https://dictionaryofsydney.org/entry/Darlington">https://dictionaryofsydney.org/entry/Darlington</a>.
- City of Sydney, 'Street Tree Master Plan 2011', viewed 1 May 2020 <a href="https://www.cityofsydney.nsw.gov.au/\_\_data/assets/pdf\_file/0015/130236/STMP2011\_150501-PartA.PDF">https://www.cityofsydney.nsw.gov.au/\_\_data/assets/pdf\_file/0015/130236/STMP2011\_150501-PartA.PDF</a>.
- The Jarjums rugs are sold through 'The Rug Collection' <a href="https://www.therugcollection.com.au/product-category/rugs/designer-collection/indigenous-collection/">https://www.therugcollection.com.au/product-category/rugs/designer-collection/indigenous-collection/</a>.
- <sup>7</sup> Darlington Public School, 'Classes', viewed 27 March 2019 <a href="https://darlington-p.schools.nsw.gov.au/classes.html">https://darlington-p.schools.nsw.gov.au/classes.html</a>.
- 8 NSW Heritage Office 2001, Assessing Heritage Significance, NSW Heritage Office, Sydney.

# 6.0 The Proposal

The information in this section has been provided by FJMT Studio on behalf of the Department of Education (the 'Applicant') and has been summarised from the Darlington Public School SSD-9914 Architectural Design Statement.

SI NSW proposes to redevelop the existing Darlington Public School site to accommodate up to 437 students. It is proposed that the existing buildings will be replaced with a modern education building that will meet the current and future learning needs of the students and provide a comfortable working environment for staff. The current school population is 183 students and 24 preschool children.

As the development has a Capital Investment Value exceeding \$20 million, a State Significant Development Application (SSDA) will be submitted to the Department of Planning and Environment.

#### 6.1 The Brief

The brief is to deliver a school for 415 students, to be accommodated in 19 home bases, with potential to increase capacity up to 437 students, and to provide a new preschool on the site.

The proposed Darlington Public School Master Plan is based on the NSW Department of Education's Educational Facilities, Standards and Guidelines for a Core 14 school.

## 6.2 Scope of Work

#### Demolition, tree removal and site preparation

- Demolition of all existing buildings in two stages:
  - Stage 1 will require the partial demolition of Block C
  - Stage 2 will require the demolition of all remaining buildings, Blocks A, B and C
- Tree removal
- Site remediation
- Minor excavation works to facilitate the new building
- Installation of civil, hydraulic and electrical services

#### New buildings

- Construction of a new 2 and 3 storey primary school building in 2 stages with integrated administration facilities, library, staff
  facilities, canteen and communal hall, as well as an integrated preschool and community clinic.
- Covered Outdoor Learning Area (COLA)

#### Yarning Circle and Selected Artworks

- Implementing yarning circle fabric and into the new landscape design
- Where possible, all artworks, murals and objects have been retained and integrated into the new school design.

#### Landscaping

- Retention of some existing trees as nominated in the Landscape report.
- Landscaping works throughout the site, connecting pathways, new play areas, and assembly area.

#### Other works

- Fences, entry gates and Signage zones
- Modifications to existing pick-up / drop-off arrangements

# 6.3 Description of Proposed Works

The proposed master plan involves demolition of all existing school buildings (built in 1975) in two stages, and redevelopment of the 7,253m<sup>2</sup> site. It proposes to accommodate a maximum of 437 primary school students (providing an additional two home bases), an associated preschool for 60 children and a Community Clinic.

This involves construction of a new two and three storey primary school building in 2 stages with integrated administration facilities, library, staff facilities, canteen and communal hall, as well as an integrated preschool. The new buildings are linear and arranged parallel to Golden Grove Street, with the Preschool adjacent to the former IXL factory. The buildings extend from Abercrombie Street to the former IXL factory. The west elevation of the building presents to Golden Grove Street as a lower single storey plinth of light coloured face brick with an arched entry, below a series of darker face brick sawtooth roof forms. The street corner is a return of the plinth, and the adjacent south elevation on Abercrombie Street comprises taller built form (for half of the street front only). The remainder of this street frontage will have a 2m high wall with sliding gates (vertical metal blades) with a secondary school entry which is set back, widening the footpath in part. The eastern elevation faces the school grounds and is highly modulated. Signage is proposed to both street frontages at the entries of the school and preschool.

Landscaping works will be developed throughout the site, including a new games court (which is to be assessed separately and not included in this SSDA), connecting pathways, new play areas, and an assembly area. Many artworks, murals and objects have been retained and integrated into the new school design.

A number of opportunities for Art and Indigenous Interpretation are utilised within the new school design. Retained sections of fixed art work (painted murals) are integrated into the landscape plan and placement of specific art work and cultural objects has been considered in the design of interior spaces, aiming to inspire children and foster a greater understanding in the wider community. Painted murals that cannot be retained in the new school design will be recorded, their salvaged fabric potentially utilised in the landscape design, along with new placement of the existing yarning circle stones.

Twenty five trees will be removed from the site, 17 trees will be retained (including street trees), and 35 new trees are proposed. The 12 associated street trees along the street frontages are proposed to be retained and resin bonded gravel is proposed to the tree surrounds along Golden Grove Street including at the Main Entrance and the entrance to the Preschool.

The proposed streetscape works includes upgrades to the existing concrete footpath (to match existing and an extension of internal unit pavers to emphasise the school address to Golden Grove Street. The concrete footpath to Abercrombie Street will be retained / made good as required.

#### **Aboriginal Cultural and Heritage Context**

Architectural Design Statement references the previous workshops/consultations, studies and the ACHAR report conducted, and have considered the following in the proposed school design:

- Celebrate, recognise and preserve Aboriginal Culture and History
- Continue the current atmosphere, learning culture and spirit of community
- Allow for the teaching of Aboriginal Culture, inside and outside the classroom
- Design spaces to be culturally considered and embody cultural values and learning

Provide a strong integration of art and display of Aboriginal Culture

# **6.4 Proposed School Redevelopment Drawings**

The following drawings, prepared by FJMT as part of the architectural documentation package issued in February 2020, were reviewed by GML for this HIS.

# 6.4.1 Architectural Drawings

 Table 6.1 Architectural Drawings.

Number	Issue Date	Title	
1000	17 April 2020	Cover Sheet and Drawing Schedule	
1200	17 April 2020	Existing Site Plan	
1201	17 April 2020	Proposed Site Plan	
2050	17 April 2020	Lower Ground Floor Plan	
2051	17 April 2020	Upper Ground Floor Plan	
2052	17 April 2020	Level 1 Plan	
2053	17 April 2020	Level 2 Plan	
2054	17 April 2020	Roof Plan	
2101	17 April 2020	Demolition Plan	
2811	17 April 2020	Upper Ground Floor Plan – S2 Play Areas	
3200	17 April 2020	Elevations – 1:200	
3300	17 April 2020	Elevations – signage	
4200	17 April 2020	Sections – 1:200	
4201	17 April 2020	Sections – 1:200	
4300	17 April 2020	Western Façade	
4301	17 April 2020	Western Facade	
4302	17 April 2020	Eastern Façade	
6000	17 April 2020	Photo Montages	

# 6.4.2 Landscape Drawings

The following drawings were prepared by FJMT

Table 6.2 Landscape Drawings.

Number / Rev	Issue Date	Title	
8001/ (-)	April 2020	SS Landscape Ground Plane Plan SSDD	
8003 (rev 02)	17 April 2020	Landscape Plans Tree Management Plans SSDA	
8101 (rev 02)	17 April 2020	Landscape Plans Detail Areas	
8102 (rev 02)	17 April 2020	Landscape Plans Detail Areas	
8103 (rev 02)	17 April 2020	Landscape Plans Detail Areas	
8203 (rev 1)	17 April 2020	Landscape Plans Indicative Planting Palette	

Select images from the following documents are also included in the next section to describe the proposal visually:

- FJMT, Darlington Public School SSD 9914, Architectural Design Statement, April 2020; and
- FJMT, Darlington Public School SSD 9914, Landscape Report, April 2020.

# 6.5 Site Plan, 3D Views and Elevations

#### Site Plans



**Figure 6.1** Demolition plan for Stage 2 demolition. Stage 1 demolition will be will take place under a separate authority. (Source: FJMT, April 2020) (refer also to figures 6-13 to 6-15 which show locations of retained and demolished murals).

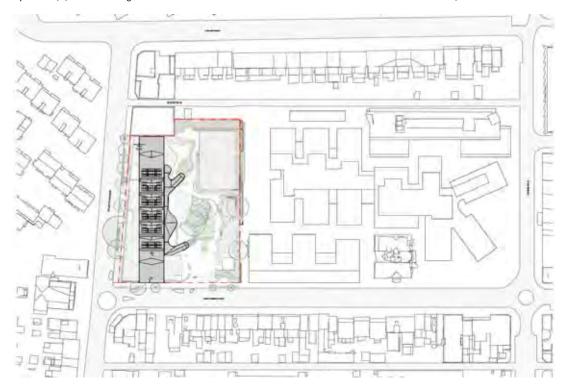


Figure 6.2 Site plan. (Source: FJMT, April 2020)

## 3D Views

# Selected Master Plan Option The daugh path was been developed on the Master IAP Playope in a was analysmation of Options Card The developed option removes some floor area that was above the neugent form a real value and one option of the selection of the sele

Figure 6.3 3D model of the selected masterplan. (Source: FJMT, April 2019)

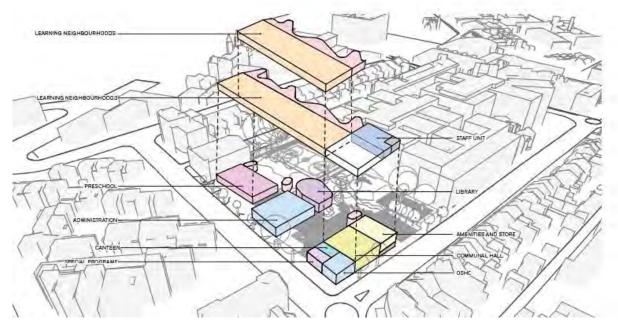


Figure 6.4 Site plan, faculty locations. (Source: FJMT, April 2020)

## 3D Views



Figure 6.5 3D view of the masterplan. (Source: FJMT, April 2020)



Figure 6.6 Perspective view of the school viewed from the corner of Abercrombie and Golden Grove Streets. (Source: FJMT, April 2020)

## Public Elevations

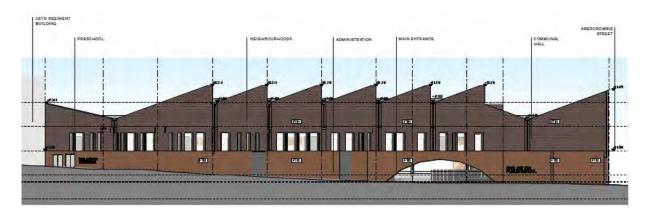


Figure 6.5 West elevation—Golden Grove Street elevation. (Source: FJMT, April 2020)

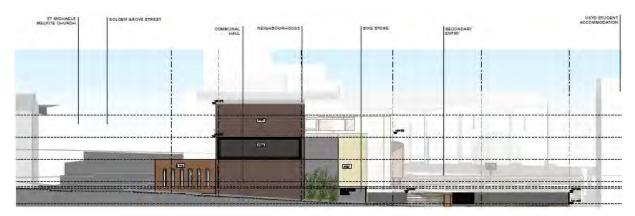


Figure 6.6 South elevation—Abercrombie Street elevation. (Source: FJMT, April 2020)

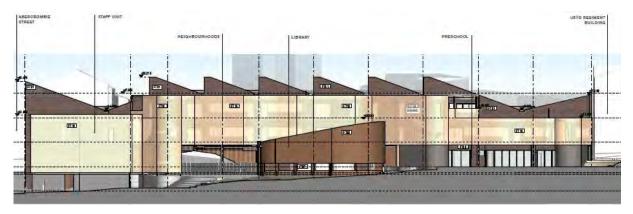
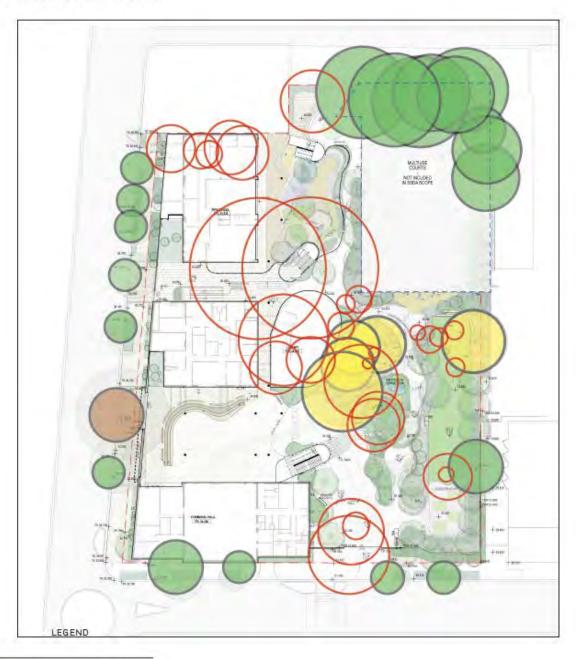


Figure 6.7 Eastern (internal) elevation, facing the school grounds. (Source: FJMT, April 2020)

Site Plans – Existing Vegetation

# **EXISTING VEGETATION**

# Tree management plan



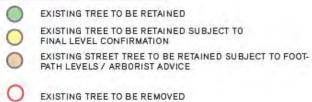
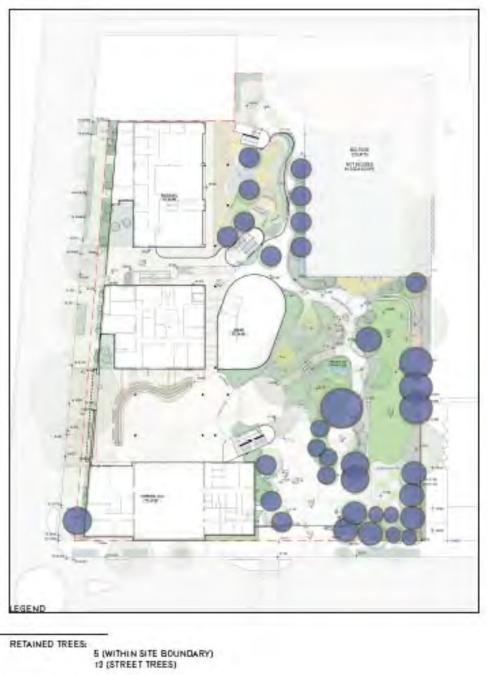


Figure 6.8 Existing trees and Tree Management Plan. (Source: FJMT 2020)

# PROPOSED TREES



RETAINED TREES:

5 (WITHIN SITE BOUNDARY)

12 (STREET TREES)

REMOVED TREES: 25

PROPOSED TREES: 35

PROPOSED TREE

Figure 6.9 Proposed trees. (Source: FJMT 2020)

## Site Plans - Entries and Fence Line

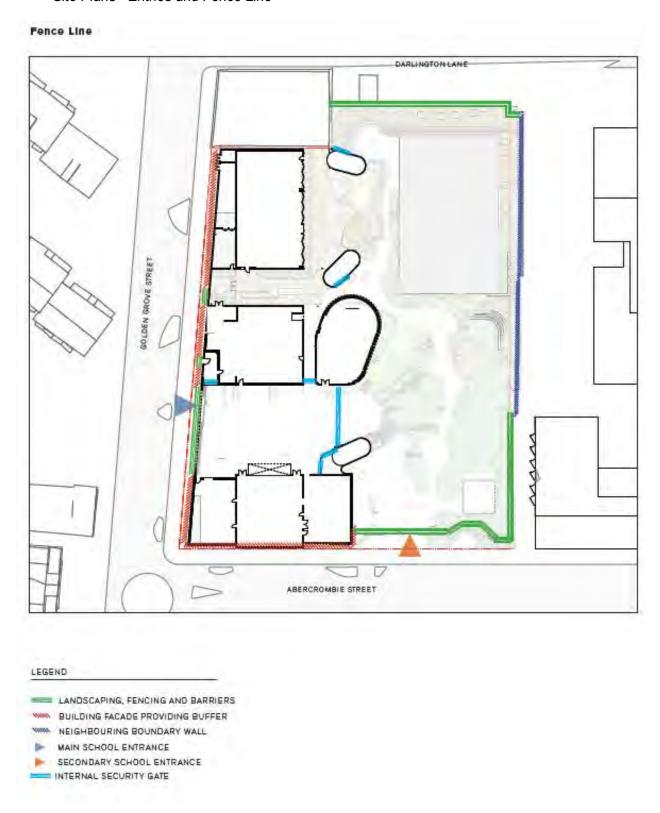
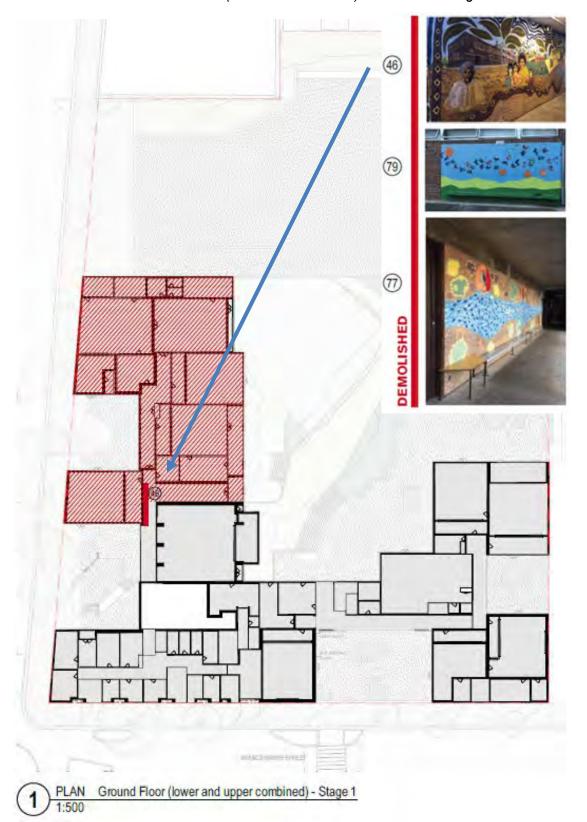


Figure 6.10 Entries and Fence Line. (Source FJMT 2020)



Site Plans – Fixed Art Work (Painted Wall Murals) Demolition – Stage One Demolition

Figure 6.11 Brick Mural Demolition Plans, Stage One. (Source FJMT 2020)

# Site Plans – Fixed Art Work (Painted Wall Murals) Demolition – Stage Two Demolition

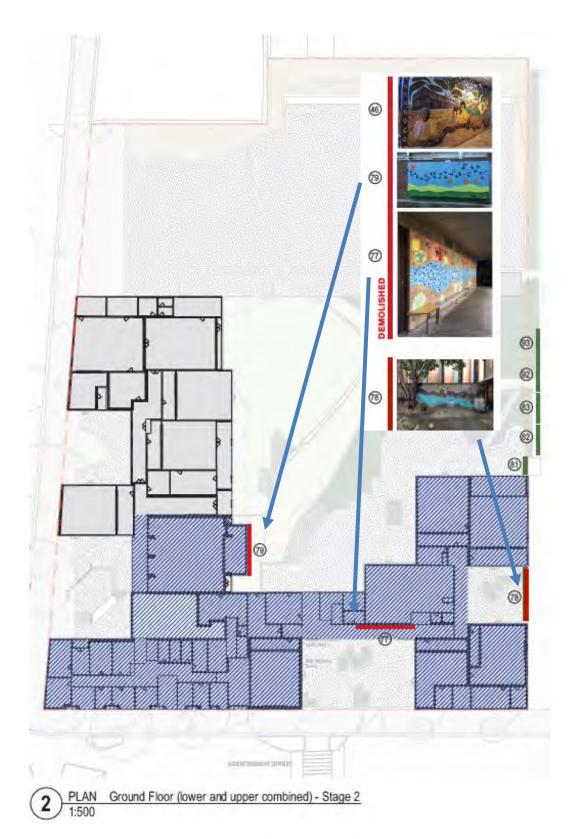


Figure 6.12 Brick Mural Demolition Plans, Stage Two. (Source FJMT 2020)



Site Plans - Fixed Art Work (Painted Wall Murals) Retention - Stage Two Demolition

Figure 6.13 Brick Mural Demolition Plans, Stage Two, showing retained Painted Wall Murals. (Source FJMT 2020)

Site Plans - Indigenous Overlay Artwork (Painted Wall Murals) Retained and New Art Opportunities

## **Indigenous Overlay and Artwork**



ARTWORK RETAINED ON EXISTING WALLS &/ OR OPPORUNITIES TO MOUNT TO EXISTING WALLS (AS NOTED) ARTWORK OR WALL ART RELAID INTO THE FACE OF NEW TERRACE SEATS ART & / OR INDIGENOUS INTERPRETATION:
- SET INTO THE UNDERCROFT OF THE ROOF ABOVE - INLAID INTO THE NEW PAVED COLA - LOCATED IN THE NATURE LEARNING PLAYGROUND - INTEGRATED WITH THE PRESCHOOL FENCE

Existing artistic works could be salvaged and relaid / mounted into new landscape elements.

New artworks could also be incorporated in the outdoor spaces.

Figure 6.16 Indigenous overlay and artwork-Concept. (Source: FJMT, May 2020)

# Photo Montages



Figure 6.17 View south along Golden Grove Street. (Source: FJMT, Mayl 2020)



Figure 6.18 View north east from Golden Grove Street roundabout. (Source: FJMT, Mayl 2020)



Figure 6.19 View west along Abercrombie Street. (Source: FJMT, Mayl 2020)

## 6.6 Architect's Design Statement

Excerpts from the FJMT design statement are included below. Further detail is included at Appendix A.

#### 6.6.1 Executive Summary

The proposal for the school will reflect the values as stated in Darlington Public School's Vision Statement in the 2018 School Plan:

"At Darlington Public School we educate on purpose. Our vision is that all students receive strong educational foundations on which independent, critical thinking, lifelong learners are developed. Our goal is that all Darlington Public school students are able to use their educational opportunities to make a positive difference in their own lives and in the wider community."

One of the fundamental principles of our response is to develop a strong identity and a sense of place for the campus, which will support the school as an inclusive, community focused campus that can support the holistic education of each learner. Our response unlocks the potential of the site through a number of strategic moves which provide ongoing opportunities for increased amenity and functionality.

#### 6.6.2 Proposed Design

- The development of a concept for Darlington public school is drawn from the project brief and analysis of the site.

  The proposal locates the main bulk of the buildings along the edge of the site following the roads and referencing the walls that currently encircle the school.
- The facade is opened up in selected places, allowing generous access points into the school, and making the school accessible to the community.
- The lower built-form along Golden Grove St provides a human scale to the entry points and helps to hold back the main volume of the learning neighbourhoods from the road edge.
- The building forms an L-shape to frame selective views into the school site from the roads and to help enclose and secure the school without the need for extensive fencing.
- The exterior facades are very linear and aligned to a grid to reflect the urban fabric surrounding the site, while the inward-facing facade that addresses the playground is curved to provide a gentler character to the school.
- The volume of the school hall, located on the corner of Golden Grove and Abercrombie Streets, reaches upwards as a welcoming gesture to the local community.
- The library and main COLA have been located in the centre of the school, representing the heart of the campus.

#### 6.6.3 Implementation of Early Heritage Advice

Between the 2019 and 2020 iterations of landscape and architectural design for the new school, the ACHAR was finalised as a draft and issued to the project architects. The heritage values and associated management policy of the ACHAR was considered during planning for the new design, with a direct response to heritage in the architectural and landscape design of the proposed development.

Several aspects of the design that have been included in the revised 2020 ADS and landscape designs are as follows:

recognition and celebration of Aboriginal cultural heritage throughout the design, as a key
consideration underpinning the development of the new school. The need for consideration of
Aboriginal cultural heritage is a key part of the Architectural Design Statement (ADS).

- consideration of heritage aspects in certain key spaces in the new school design, including the entry undercroft, school hall, library, classrooms, yarning circles;
- the design acknowledges artwork, murals and objects as being integral to the school's identity.
   The design has sought to integrate these aspects into the new school. Key murals such as the Year 6 art wall will be retained. Consideration is provided for future expansion of these artworks;
- there has been further consideration given to the special placement of key artworks, including: the Jarjum rugs, year six artwork and totems, murals, the burnt door and carved sandstone blocks;
- the new landscaping challenges the natural constraints of the site, and develops external gardens, grounds and play spaces linked to learning games and different learning languages, featuring natural elements such as sand and rock;
- the new external landscaping seeks to retain existing 'heritage' fabric from school murals that
  cannot be retained during redevelopment. These aspects will be incorporated into landscaping.
  Re-use of items such as bricks from former murals will create an interesting, tangible and visual
  connection between the old and new schools;
- there has been consideration of key ESD principles which focus on natural elements including light, water and wind. These considerations have investigated the changing seasonal movement of light and wind, and sought to highlight these elements in the new building design, allowing for passive cooling of the buildings; and
- movement through the new school design is based on a network of pathways, lines, spaces and shortcuts. These movement corridors should allow for interaction with the site, considering the needs of a range of users.

# 7.0 Heritage Impact Assessment

# 7.1 Approach

This assessment of heritage impact has been prepared with reference to the guideline document 'Statements of Heritage Impact' (2002), prepared by the then NSW Heritage Office and contained within the NSW Heritage Manual. It is also consistent with the relevant principles and guidelines of the Burra Charter, which defines the principles and procedures to be followed in the conservation of Australian heritage places.

In order to clarify the potential impact of the proposed work, GML has developed a ranking methodology for measuring the level of potential impacts on heritage values, which is applied in table 7.1 below. The methodology used to rate the impact level is explained below.

Table 7.1 Extent of Heritage Impact.

Ranking	Extent of Impact	
Actions that would have an adverse impact on a heritage item. Actions in this category would include rem an important part of a heritage item's fabric or additions of new structures in its vicinity that destroy the vis setting of the item. (Some actions which have a lesser impact may be described as having a 'minor adver impact.)		
Neutral	Actions that would have no heritage impact.	
Positive	Actions that would bring a benefit to a heritage item, such as removal of intrusive elements or fabric or a substantial improvement to the item's visual setting.	

State Government requirements of this HIS precede the impact assessment. The impact assessment first addresses the planning controls of the City of Sydney (2012 LEP and DCP), followed by impact assessment which follows the *NSW Heritage Manual* Guidelines.

## 7.2 State Government Requirements

#### 7.2.1 SEARs Key Issue 8—Heritage

SEARs for redevelopment of the school site issued on 19 March 2019 are addressed in brief in Table 2.2 above in this report. Key issues of the SEARs relevant to this report are:

- 4. Built Form and Urban Design
- 8. Heritage

#### Government Architect of NSW

#### **Design Guides**

Principles and objectives from the design guides relevant to consideration of heritage impact are included below.

 Table 7.2 Design Guide for Schools—Better Design for Schools, Design Guide for Heritage—Better Placed.

Design Guide	HIS Response
Design Guide for Schools—Better Design for Schools	
Principle 1—Context, built form and landscape	The impacts of the proposed you calcular setting landscape, horitage
<ul> <li>Schools should be designed to respond to and enhance the positive qualities of their setting, landscape and heritage, including Aboriginal cultural heritage.</li> <li>Landscape should be integrated into the design of school developments to enhance on-site amenity, contribute to the streetscape and mitigate negative impacts on neighbouring sites.</li> </ul>	The impacts of the proposed new school on setting, landscape, heritage and views are addressed in this HIS.  Consultation with the school and Aboriginal community, as outlined in the 2020 ACHAR, identified a series of principles which were provided to inform the new design. Inclusion of these principles is important to ensure recognition, continuity and connection between the Aboriginal values and traditions associated with the old school and the new.  Landscape design considerations are presented in the FJMT Landscape Report, which addresses street trees, trees on site, and new landscape design which incorporates retention/reinstatement of some fixed artwork (painted wall murals).
Principle 7—Aesthetics	
<ul> <li>Schools should respond to positive elements from the site and surrounding neighbourhood and have a positive impact on the quality and character of a neighbourhood.</li> </ul>	The impacts of the proposed new school on the quality and character of the neighbourhood (Darlington/West Redfern Locality and Orange Grove HCA) is addressed in this HIS in Section 7.3.2 below.
<ul> <li>The built form should respond to the existing or desired future context, particularly, positive elements from the site and surrounding neighbourhood, and have a positive impact on the quality and sense of identity of the neighbourhood.</li> </ul>	
Design Guide for Heritage—Better Placed	
Objective 1—'Better fit'	
<ul> <li>Character, scale, form, siting, materials and colours and details of important aspects of the new design to ensure the new design will respect the local context.</li> </ul>	The impacts of the proposed new school design on local context in regard to: character, scale, form, siting, materials and colours and details addressed in this HIS in other sections below.
Objective 3—'Better for community'	The ACHAR included policy and guidelines to incorporate Aboriginal
Interpretation of the Aboriginal social values of the school community to build knowledge and understanding of the cultural heritage of Aboriginal Australia, to be incorporated into the powershool.	social values in the new school design, such as:     the need for spaces to be designed to accommodate specific art works (reference 3) below); and
Australia, to be incorporated into the new school design.	<ul> <li>flexible learning spaces, such as yarning circles, how they function, their spatial requirements and why these spaces are important.</li> </ul>
	The school community has identified values, and aspects of intangible and movable heritage that need to be included in the new school design and building.
Objective 4—'Better look and feel'	
The new school should respect the spatial qualities of its heritage context, including views to and from the school site.	These qualities are addressed in this HIS.

# **Government Architect NSW State Design Review Panel**

The GANSW SDRP has advised on relevant policies and objectives and provided comments on the school redevelopment masterplan. Two sessions with the panel have been held, on 14 August 2019 and 6 November 2019. The responses of the panel are included at Appendix B.

Comments were made on:

- massing, scale and streetscape;
- heritage;
- Aboriginal culture;
- landscape and open space; and
- sustainability.

While all aspects of review are relevant, the heritage component of these discussions is included below.

Heritage     Explore ways in which the existing fabric of the school could be repurposed in the built form and/or landscape treatments.		Architect's Response	
		It is envisaged that the bricks from the existing school will be recycled and used in selected locations. Further development of these ideas will occur during detailed design.	
•	The panel anticipates further engagement with the Aboriginal community leading to a meaningful manifestation of cultural heritage in the built form, landscape, art, wayfinding and other elements of the project.	<ul> <li>Refer to the Section 5.1.2 of this report and the separate ACHAR report. Further consultation with the community will occur during detailed design.</li> </ul>	

In summary, the GANSW SDRP indicated the proposal was acceptable and no further consultation with them was required. This HIS did not involve any direct liaison with the panel.

# 7.3 Planning Controls

#### 7.3.1 Sydney LEP 2012, Clause 5.10

The school site is not a heritage item. It is, however, in the vicinity of a number of heritage items and heritage conservation areas.

Historical archaeology and Aboriginal heritage significance in relation to the proposed redevelopment are addressed separately in other reports, specifically the DD, AA and ACHAR reports, as noted above. Select reference is made to these reports below.

The potential heritage impacts of the proposed works are discussed below. The extent of heritage impact is generally stated to be nil (or little), adverse or positive, or not assessed.

 Table 7.3 Discussion of Heritage Impacts of Proposed Works in relation to Sydney LEP 2012, Clause 5.10.

Proposed Works	Discussion of Potential Heritage Impacts and mitigation measures to minimise or compensate impacts	Extent of Heritage Impact on Heritage Significance	
Demolition  • Existing buildings on site	The site is not a heritage item; however, the school has been assessed as having some local heritage significance.  Any heritage impact as a result of the proposed demolition of the 1970s (or later) school buildings would be balanced by a new school on the site, which integrates the existing Aboriginal cultural values of the site. The school should be photographically recorded.  The significance of the trees on site has not been assessed.  The potential impacts of vibrations on adjacent heritage items is discussed in Table 7.2 above.	Adverse (minor)  (Trees not assessed)  Adverse (potential)	
Demolition  • Any Aboriginal object  The DD report concludes that the proposed redevelopment the site would be unlikely to have any impact on Aborigon objects. Refer to the DD report for further detail.  Community consultation associated with the ACHAR refound that some spaces and Aboriginal artworks are of significance to the Aboriginal community. The movable are proposed to be relocated to the new school and sow values have otherwise informed the new school design considered positive.  Fixed Aboriginal artwork will be retained or reinstated with possible. This will have both positive and adverse impactive (refer Table 7.6 below).  An archival photographic recording of the fixed artworks be undertaken.		Neutral  Positive  Positive / Adverse	
Demolition  • A building, work, relic or tree within a heritage conservation area	The school site is not located within any LEP conservation areas but is located in the vicinity of the following areas:  • C5 University of Sydney Conservation Area (state);  • C18 Golden Grove Conservation Area (local);  • C45 Union Street West Conservation Area (local); and  • C47 King Street Heritage Conservation Area (local).  It is not likely that there will be any impact on buildings, works, relics or trees within C5, C45 and C47, due to the distance of these conservation areas from the school site.  The significance of street trees associated with CA18 (and adjacent to the school site) has not been assessed, but trees will generally be retained in line with council's Street Tree Master Plan (2011). Street trees should be protected during excavation and construction works.  The potential impacts of vibrations on adjacent conservation areas are discussed in Table 7.2 above.	Neutral Neutral	

## **GML** Heritage

Proposed Works	Discussion of Potential Heritage Impacts and mitigation measures to minimise or compensate impacts	Extent of Heritage Impact on Heritage Significance	
Altering a heritage item.  The school site is not a heritage item.		-	
Disturbing or excavation an archaeological site  While there is potential for archaeological disturbance through demolition and excavation, the AA report concludes that the site has little research potential. Remains associated with the shop on the corner of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current research. Refer to the AA report.		Neutral	
Disturbing or excavating an Aboriginal place of heritage significance  The 2019 DD report concludes that the site is not considered to hold archaeological potential for Aboriginal objects and therefore the proposed redevelopment of the site would be unlikely to have any adverse impact in this regard.  Refer to the 2019 DD report.  Impacts on artwork, which is considered significant, are addressed elsewhere in this section.		Neutral	
Demolition, excavation and construction  Heritage items in the vicinity  Former Jones IXL factory garage including interiors; St Michael's Church group including buildings and thei interiors and grounds;  Terrace group including interiors; and Terrace group 'University Terrace' including interiors.  The most at risk heritage item is the Former Jones IXL Factory garage, given its boundary / building line directly adjoins the proposed new school buildings.		Adverse (potential)	
Erecting a new building  • Heritage significance of the site	The ACHAR includes policy and guidelines to incorporate Aboriginal social values in the new school design. In response to this the proposed school design includes:  • spaces to be designed to accommodate specific movable artworks;  • flexible learning spaces, such as yarning circles, have been incorporated in the school and landscape design;  • retained fixed artwork elements in the landscape design are shown retained where possible (painted wall murals and carved sandstone blocks). Some painted wall murals will be demolished.  Social values of the Aboriginal community are not attributed to the physical fabric of the school building. A positive outcome through design is anticipated through recognition of Aboriginal social values of the school community.	Positive Positive Positive / Adverse (minor)	
Erecting a new Given their proximity to the school site there is potential for the proposed new school design to impact heritage items in the vicinity including:			

Proposed Works	Discussion of Potential Heritage Impacts and mitigation measures to minimise or compensate impacts	Extent of Heritage Impact on Heritage Significance
Heritage items in the vicinity	Former Jones IXL factory garage including interiors;     St Michael's Church group including buildings and their interiors and grounds; and     Terrace groups in Darlington Road, including interiors. The new school design is set lower than the adjacent former Jones IXL factory garage building, and abuts the south wall. This wall is a secondary façade, originally designed to be adjacent to another building. There will be little or no heritage impact.  The main public elevation of the new school design sleeps.	Neutral
	The main public elevation of the new school design along Golden Grove Street will face in part the St Michael's Church group but not dominate it. The new built form will also reinforce the urban corner but not dominate the Church group which terminates the urban vista along Abercrombie Street.  The rear of the terrace houses along Darlington Road 'face' the new school design, but as both the terraces and the new school building design are set back from Darlington Lane, there will be limited heritage impact visually.	Positive / Neutral  Neutral
Erecting a new building  Conservation Areas in the vicinity	The school site is located in the vicinity of the following areas, but due to the scale of the new development, the potential public and private domain visual catchment of the site being small (2020 VIA) and/or the topography, it is unlikely to have any adverse impacts on their significant values:	
	<ul> <li>C5 University of Sydney Conservation Area (state);</li> <li>C45 Union Street West Conservation Area (local); and</li> <li>C47 King Street Heritage Conservation Area (local).</li> <li>The school site is located adjacent to the C18 Golden Grove Conservation Area (local). The proposed school design will not have an adverse impact on its significant values due to the siting of the new main built form on Golden Grove Street which</li> </ul>	Neutral  Neutral
	faces a range of existing buildings of varied type and scale.  Positively, the design reinforces the urban corner of Golden  Grove Street and Abercrombie Street.	Positive
	The 'gap' in built form where the school site is open (fenced) to Abercrombie Street does not contribute to or detract from the predominant character of the Golden Grove HCA opposite, which represents working class and middle class housing and community in the late Victorian period.	Neutral
Erecting a new building  • Impact on	Significant views identified in this report (Section 4.4 above) will not be adversely impacted.  Refer to 7.4.3 c) below.	Neutral
subdivision pattern and views.	This assessment is consistent with the views expressed in the 2020 VIA which concluded that the proposed development would not create any significant negative visual effects in	

Proposed Works	Discussion of Potential Heritage Impacts and mitigation measures to minimise or compensate impacts	Extent of Heritage Impact on Heritage Significance
	relation to the character or composition of public or private domain views.	

## 7.3.2 Sydney DCP 2012—Darlington / West Redfern Locality

The school site is located within the Darlington / West Redfern Locality as identified in the Sydney DCP 2012, Section 2.3.2. The DCP provides guidance for new development in the form of design principles, which would apply to the proposed new school design. Comments are made in regard to these principles below.

Table 7.4 Discussion of Heritage Impacts of Proposed Works in relation to Sydney DCP 2012—Darlington / West Redfern Locality.

Principles		Comment—Proposed New School Design	
a)	Development must achieve and satisfy the outcomes expressed in the character statement and supporting principles.	The proposal, while not residential in nature, is a high quality addition to the area and does not detract from the character of the area as identified in the locality character statement.	
		The proposal satisfies the supporting principles in regard to items b), f), g), i) and j) below.	
b)	Development is to respond to and complement heritage items and contributory buildings within heritage conservation areas, including streetscapes and lanes.	Satisfies this principle as the proposed design as it does not detract from or dominate heritage properties in the vicinity (most of which are contributory) within the Golden Grove heritage conservation area, and heritage items in the vicinity.	
		Heritage items are addressed in street character comments, and separately below:	
		Satisfies this principle in regard to streetscapes, as the proposed school development is built to the street alignment (as the Victorian residential built form and later industrial buildings are). It is compatible in the context of Darlington Laneway, Abercrombie Street and Golden Grove Street. The school will have a strong presence on the corner particularly when viewed along Abercrombie Street, but not preclude views of St Michael's Church at the end of the vista. All street trees are retained.	
		The Darlington Laneway and its heritage character of Victorian terrace house rear wings is not adversely impacted by the proposed new school which presents to Golden Grove Street and is set back significantly from the laneway.	
		The Golden Grove Street character is varied, notably including Victorian row housing, St Michael's Church buildings of various form and design and the former IXL factory garage building. It is not adversely impacted by the proposed new school which presents as a new sawtooth roofed form, on a base plinth, to Golden Grove Street built to the street alignment, as is typical of historic buildings in this area.	
		The Abercrombie Street character is defined by the regular terrace housing of the Golden Grove HCA on the south side (opposite the school site), and a variety of larger university buildings on the north side (adjacent to the school site). The proposed new school which returns on the street corner and is	

Prin	ciples	Comment—Proposed New School Design
		open to Abercrombie Street (ie enclosed by a school fence) is atypical, but acceptable given the strong corner address.
		Satisfies this principle in regard to the former Jones IXL factory garage building. The proposed school's built form is of a larger scale overall, but a lower height adjacent. The new school buildings would not be read directly against the Darlington Lane side of the former Jones IXL factory garage building, and would read as compatible contemporary building when viewed from Golden Grove Street.
		Satisfies this principle in regard to the St Michael's Church group, which terminates the vista along Abercrombie Street towards the west. The historic and proposed built form along this view, with buildings located on the street alignment, reinforces this urban vista.
c)	Maintain the curtilage of the industrial buildings in the Eveleigh Rail Yards.	n/a
d)	Enhance views along Codrington Street from City Road to the Eveleigh Rail Yards Arts Centre.	n/a
e)	Preserve distant views across the Eveleigh Rail Yards site.	n/a
f)	Retain the low scale of built form and consistent building types particularly terrace rows.	Satisfies this principle in regard to low scale development. It does not seek to replicate the terrace house form of the earlier subdivision of the area.
g)	Design infill to respond to the height, massing and predominant horizontal and vertical proportions of existing buildings.	Satisfies this principle overall. Discussed above.
h)	Design additions and alterations to retain the scale and massing of front elevations and the original roof form as viewed from the primary street frontage.	n/a
i)	Retain and protect distinctive early industrial buildings.	Satisfies this principle. The former Jones IXL factory garaged building is retained, but is not part of the school site. Although adjoining the site, it will remain separate from the proposed new school development.
j)	Design institutional development to be sympathetic to the low scale and fine grain of the neighbourhood.	Satisfies this principle in regard to the low scale and fine grain of the neighbourhood. The proposed new main school building is compatible in scale to the adjacent heritage items and employs sympathetic modulation and materiality in its elevational treatment, which draws on the existing school buildings and the former industrial buildings, notably the former industrial buildings in the vicinity, particularly the former Jones IXL factory garage building adjacent.
		The contemporary corner treatment of the proposed new school provides as strong corner presence in response to the historic urban form, notably the Victorian shop building opposite, and the shop building which preceded the 1970s school buildings.
k)	Encourage sympathetic street block perimeter development on public housing sites.	n/a

#### 7.3.3 Sydney DCP 2012—3.9 Heritage

Section 3.9 of the DCP includes provisions for heritage items and properties located within a heritage conservation area. The school site is not a heritage item nor located within a heritage conservation area. Regardless, most principles that would be considered under the DCP are included in the tables above in relation to the Darlington/West Redfern Locality.

The 2019 AA, 2019 DD and 2020 ACHAR have been prepared for the proposed redevelopment of the school.

# 7.4 NSW Heritage Manual Guidelines

The Heritage Office publication 'Statements of Heritage Impact' forms part of the NSW Heritage Manual and provides a standardised approach to the assessment and presentation of heritage impacts. It contains a checklist of the types of questions that should be considered when assessing impacts under the relevant categories of the proposed changes.

This assessment does not refer to change of use, fire upgrading or signage.

#### 7.4.1 Summary of Statement of Heritage Impacts

a) The following aspects of the proposal respect or enhance the heritage significance of the item or conservation area for the following reasons:

Under the proposed new school design by FJMT:

- The public domain presentation of the main new school building has formal qualities which interpret the 1970s school building (in form and materiality).
- A lower scale of built form is proposed on the Golden Grove Street building line, with taller built form generally set back, which also holds the historic corner at Golden Grove and Abercrombie Streets. This will enable the new school buildings to be compatible in scale with the row housing of the conservation area opposite, and act as a transition to the larger, more recent institutional buildings in the vicinity, as well as the 1980s public housing opposite to the west.
- Street trees are proposed to be retained.
- On-site landscape design, while necessarily removing hard landscaping and 29 trees, involves
  planting of new landscapes which will include culturally informed learning spaces and local
  indigenous and education replacement planting (ie bush tucker gardens).
- Community consultation has resulted in a design which aims to retain and respect cultural identity
  through recreation of significant spaces (ie the yarning circle), culturally informed art placement
  (movable items) in the new design and retention of fixed artworks (wall murals) where possible in
  the new landscape design, typically to the perimeter walls of the site. These are indicated in table
  7.6 below.
- Photographic archival recording, use of the NSW Heritage Council Movable Heritage Polices, preparation of an art management strategy, a construction methodology, and an interpretation plan are recommended in this HIS, which will contribute to managing the cultural heritage aspects of this project prior to and during construction work.

#### b) The following aspects of the proposal could detrimentally impact on heritage significance.

Under the SI NSW brief, the new school design requires:

- Demolition of the school buildings will result in the loss of the school complex designed by the Government Architect in the 1970s. The school is not a heritage item, but nonetheless has some local heritage value, architecturally and culturally for the local community.
- Removal of 30–40 trees on site could impact the visual quality of the area through loss of these tree canopies.
- The fixed artworks (wall murals) and yarning circle will be impacted. Section 7.9 outlines mitigation
  measures achieved through early input to the new design and construction processes.
- The movable and fixed art (and object) collection could be impacted through removal from their current locations (ie loss, damage and compromised associations). The recommendations of Section 8.0 are provided to ensure protection, care and placement / reinstatement / interpretation of these items are consistent with the expectations of the school community and are carried out.
  - c) The following sympathetic solutions have been considered and discounted for the following reasons:

Retention of the existing school buildings with additions and alterations to the site.

 This option was discounted as the site did not have the potential to expand appropriately to future projected student needs and numbers.

Retention of the existing school buildings and site unchanged with additional school buildings provided on another site nearby.

• The cultural identity of the school includes associations with this site and was considered important to retain. Further, no other sites were available in the vicinity.

Various masterplan options for placement of new buildings were considered and an amalgamation of Options C and D was selected for development in consultation with SI NSW.



Figure 7.1 Concept masterplan options. (Source: FJMT 2020)

#### 7.4.2 Demolition of a Building or Structure

a) Have all options for retention and adaptive re-use been explored?

The following options have been explored.

- Alternatives to demolition of the school buildings have been considered. Further adaptation of the school buildings would not enable the school to expand to future projected student needs and numbers.
- As a purpose-built school in the inner city, adaptation for another use is not likely to be appropriate
  or desirable to SI NSW.
- Full retention of the fixed art (painted wall murals) was not considered feasible given the scale of new development and level changes proposed for the site.
  - b) Can all of the significant elements of the heritage item be kept and any new development be located elsewhere on the site?

The school site is not a heritage item.

c) Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?

Postponement of demolition would mean that the proposed new school development would not be able to proceed.

d) Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?

GML has been consulted at the early stages of the project (including for previous school design by other architects), through to the stage of the DA submission (SSD) of the current proposal.

Heritage advice provided and implemented includes:

- community consultation (school staff, students and parents) as presented in the 2020 ACHAR;
- recognition of cultural values of the site, including artworks;
- new building design to integrate findings of community consultation, in particular culturally appropriate learning spaces, Aboriginal art (fixed and movable); and
- new building design to include built form to the street alignment (Golden Grove and Abercrombie Streets) and maintain a presence at the street corner.

#### 7.4.3 New Development Adjacent to a Heritage Item

#### a) How is the impact of the new development on the heritage significance of the item or area to be minimised?

The public domain presentation of the proposed new main school building has formal qualities
which are of a lower scale of built form on the Golden Grove Street building line, with taller built
form generally set back, which will also turn the historic corner at Golden Grove and Abercrombie
Streets.

This placement of form and the saw tooth roof design will enable the new school buildings to be compatible in scale and rhythm with the row housing of the conservation area opposite, and contribute to the formal corner defined by the other heritage items and the former shop of the Golden Grove HCA opposite. The tallest proposed school building element (fronting Abercrombie Street) will not exceed the height of the St Michael's Church group.

The stepped scale of the proposed school will also act as a transition to the larger, more recent institutional buildings in the vicinity, as well as the 1980s public housing opposite to the west.



Figure 7.2 St Michael's Church group, heritage item and part of the Golden Grove HCA. (Source: VAR, 2019)



**Figure 7.3** Corner shop and row housing and part of the Golden Grove HCA. (Source: VAR, 2019)



Figure 7.4 Proposed new school buildings on corner of Abercrombie and Golden Grove Streets. (Source: FJMT. 2020)

- The proposed new main school building abuts the south side of heritage item; the former Jones IXL factory garage building, but is not taller than this building so will not dominate. This wall is a secondary façade of face brick and there are no windows. Potential impacts of new construction immediately adjacent are addressed in Table 7.2 SEARs Assessment Requirements above.
- The proposed new main school building will not visually impact the heritage items (terrace housing) at 104–123 Darlington Road, Darlington, given the positioning of the new buildings 'behind' the former Jones IXL factory garage building and the fall of the land. The rear of these heritage items faces the school site.



**Figure 7.5** Former IXL building, south side. (Source: GML. 2019)



**Figure 7.6** Darlington Lane looking east. (Source: GML. 2019)



**Figure 7.7** Darlington Lane looking east. (Source: GML. 2019)

- Character, scale, form, siting, materials and colours and details of the proposal respect the local context and minimise impact on its significance by:
  - placing the main mass (stepped in form to reduce the overall scale) along Golden Grove
     Street and at the corner, thereby reinforcing historic corner in a contemporary way;
  - contemporary use of forms (sawtooth roof shape), materials (brickwork) and colours which interpret the existing school; and
  - contemporary use of traditional materials and details which reflect the existing school and the diversity of the local context, as well as responding to the former industrial character of the area, including the former Jones IXL factory garage building adjacent. Materiality selected includes face brickwork, both new and recycled from the demolished school. The recycled brickwork (dark brown) is proposed to be used on the community centre which faces Abercrombie Street, and other public domain elevations are a combination of lighter toned brick (base plinth) and dark brown areas above. Modern mesh sheeting will feature on the Abercrombie Street wall and within the school complex. Details such as windows and screening are modern, and generally compatible with the housing of the Golden Grove HCA and the former industrial buildings nearby.



Figure 7.8 Materiality and façades (selected images). (Source: FJMT, 2020)

#### a) Why is the new development required to be adjacent to a heritage item?

- The new development is sited to address the Golden Grove Street frontage, and is to be built to
  the street alignment, like the existing school and the former Jones IXL factory garage building;
  this is the best location to achieve greater capacity at the school, leaving the eastern portion of
  the site undeveloped for the playground area and landscaping.
- Following land acquisition and closure of Boundary Lane for the school, the former Jones IXL
  factory garage building sits at the northwest corner of the school site. As the south side of the
  former Jones IXL factory garage building which will adjoin the new school buildings is a secondary
  façade, and the new building will be of a lower height, there will be little visual impact.

How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?

The former Jones IXL factory garage building was designed to address the corner of Darlington Lane and Golden Grove Street, and was built in an urban setting of row housing adjacent, when Boundary Lane still existed. The curtilage of the former Jones IXL factory garage building is not adversely impacted by the proposed new school buildings.

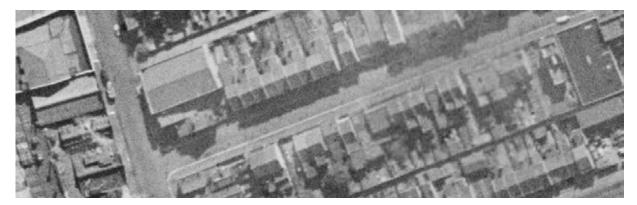


Figure 7.9 Former Jones IXL factory garage building, c1943, showing terrace houses adjoining. (Source: SIX Maps extract of figure 3.8 above)

How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?

Under the proposed new school design by FJMT, views to and from heritage items will not be significantly impacted:

- The proposed new building will hold the corner of Golden Grove Street and Abercrombie Street and while dominant in the vista terminating at St Michael's Church group (view C, refer to Section 4.4 above) will not impede views to the Church group, or adversely impact views of heritage items looking towards the school site (view A).
- The view along Golden Grove Street of the former Jones IXL factory garage building (View B) will not be adversely impacted.



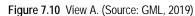








Figure 7.12 View C. (Source: GML, 2020)

This assessment is consistent with the general assessment of the 2020 VIA which concluded that the proposed development would not create any significant negative visual effects in relation to the character or composition of public or private domain views

Figure 7.11 View B. (Source: GML, 2020)

Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?

Alternative sites have not been considered.

- The 2019 AA concluded that remains associated with the former housing and shop on the corner
  of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current
  research.
- The 2019 DD report concluded that the site is not considered to hold archaeological potential for Aboriginal objects and therefore the proposed redevelopment of the site would be unlikely to have any adverse impact in this regard.

Refer to the refer to the 2019 AA and 2019 DD reports.

e) Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?

The proposed new school design by FJMT interprets to some degree the 1970s school building. Various architectural forms are utilised:

- The former Jones IXL factory garage building will retain its street presence and will not be dominated by new school forms.
- The St Michael's Church group is also a collection of distinct buildings of various eras, styles and built form. This grouping will not be compromised by the proposed new school development.
- The terrace housing of the Golden Grove HCA will not be adversely affected by the proposed new school development.

While the new building is of a different form, and larger than the current school buildings, it is sympathetic to the various adjacent heritage items and the Golden Grove HCA in the vicinity

f) Will the additions visually dominate the heritage item? How has this been minimised?

The proposed new school design by FJMT will generally not visually dominate heritage items in the vicinity and the Golden Grove HCA, as discussed above, although the tall roof form addressing Abercrombie Street will be distinctive. The new corner form will hold this urban corner.

g) Will the public, and users of the item, still be able to view and appreciate its significance?

Under the proposed new school design by FJMT, the public and users of the heritage items in the vicinity will still be able to view and appreciate their significance.

#### 7.4.4 New Services

a) How has the impact of the new services on the heritage significance of the item been minimised?

GML and Casey Lowe have provided heritage advice on historical and Aboriginal archaeological considerations. (Refer to the 2019 DD and 2019 AA reports.)

b) Are any of the existing services of heritage significance? In what way? Are they affected by the new work?

No services of significance have been identified.

c) Has the advice of a conservation consultant (e.g. architect) been sought? Has the consultant's advice been implemented?

GML and Casey Lowe have provided heritage advice on historical and Aboriginal archaeological considerations. (Refer to the 2019 DD and 2019 AA reports.)

d) Are any known or potential archaeological deposits (underground and under floor) affected by the proposed new services?

New services are not anticipated to impact potential archaeological deposits of significance:

- The 2019 AA concluded that remains associated with the former housing and shop on the corner
  of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current
  research.
- The 2019 DD report concludes that the site is not considered to hold archaeological potential for Aboriginal objects and therefore the proposed redevelopment of the site would be unlikely to have any adverse impact in this regard.

Refer to the 2019 AA and 2019 DD reports.

#### 7.4.5 New Landscape Works and Features (including Carparks and Fences)

a) How has the impact of the new work on the heritage significance of the existing landscape been minimised?

The new proposed new school design landscape plans are informed by a study of trees, wall murals, and school pedagogy. A number of landscape character zones have been developed.

The social and cultural significance of the school landscape is largely related to the school's Aboriginal cultural activities, some spaces and artwork. The art collection, including murals in the existing landscape, defines the character of the school, its spaces, teachers and students. In relation to outdoor activities and artwork:

- The yarning circle will be demolished but replaced with similar spaces in the landscape, informed by community consultation outlined in the ACHAR.
- Fixed artworks (and objects) will be archivally recorded. Where possible it will be retained, and otherwise fabric will be salvaged for interpretive re-use in the new landscape design. (Refer to Section 6, Site Plans, figures 6-13 to 6-16).

Table 7.5 Fixed Artwork Heritage Impacts (item numbers refer to Site Plan Figures as shown in 6-13 to 6-15 this report).

Item No.	Fixed Artwork	Proposed Change	Heritage Impact—Comment
81,82, 83,92, 93	Painted wall murals—Year 6 wall	Retained in full.	Positive – in addition, new extension walls are proposed to the site perimeter for future art creation.
46	Painted wall mural—hall mural (Aunty Norma)	Demolition.	Adverse – however the recommended art strategy includes recording and salvage (where possible) of these murals.  Positively – the landscape design provides opportunity for future painted wall murals and other site artworks.
77	Total Animals Living Harmoniously		
78	Painted wall mural—Year 6 wall (part)		
79	Birds Wall Mural		
-	Engraved sandstone blocks	To be demolished during site redevelopment, but set aside and	Adverse—through loss of position in yarning circle.

Item No.	Fixed Artwork	Proposed Change	Heritage Impact—Comment		
		protected during the construction process. These stones form part of the yarning circle.	Positive—due to plan to salvage and reuse these stones in the new landscape design.		

Trees are addressed in Section 7.7 below.

b) Has evidence (archival and physical) of previous landscape work been investigated? Are previous works being reinstated?

Addressed in the section above.

c) Has the advice of a consultant skilled in the conservation of heritage landscapes been sought? If so, have their recommendations been implemented?

No, the input on conservation of heritage landscapes has been based on the consultation presented in the 2020 ACHAR and this HIS.

d) Are any known or potential archaeological deposits affected by the landscape works? If so, what alternatives have been considered?

Alternatives have not been considered:

- The 2019 AA concluded that remains associated with the former housing and shop on the corner
  of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current
  research.
- The 2019 DD report concludes that the site is not considered to hold archaeological potential for Aboriginal objects and therefore the proposed redevelopment of the site would be unlikely to have any adverse impact in this regard.

Refer to the 2019 AA and 2019 DD reports.

e) How does the work impact on views to, and from, adjacent heritage items?

Refer to 7.7.3 d) above.

#### 7.4.6 Tree Removal or Replacement

a) Does the tree contribute to the heritage significance of the item or landscape?

Under the proposed new school design by FJMT:

- 29 existing trees are proposed to be removed from the school site and five existing trees will be retained on the site (subject to levels); and
- All street trees are proposed to be retained, with one of these currently under investigation for viability in association with the new school entrance.

The school site is not a heritage item, and trees have not been separately assessed for heritage significance. However, the central courtyard includes mature trees, the canopies of which are prominent visually from the surrounding streets.

Street trees are not identified as heritage items in the 2012 LEP as individual items and are not referenced in the Golden Grove HCA, but are included in Council's Street Tree Master Plan (2011).

#### b) Why is the tree being removed?

Tree removal on the site is proposed to enable construction of the new school buildings on the site in the context of anticipated new levels for the playground areas.

The one street tree is currently under consideration for removal depending on entry requirements for the school.

#### c) Has the advice of a tree surgeon or horticultural specialist been obtained?

Yes, Arborist (Moore Trees) and Biodiversity Consultant (Eco Logical Australia) have been consulted throughout the design process.

#### d) Is the tree being replaced? Why? With the same or a different species?

The FJMT Landscape Plan shows the approach to tree removal and replacement. The Tree Management Plan included at Figure 6.10 in this report (extracted from the Landscape Plan) shows trees to the retained and removed, and replacement tree locations.

New planting is planned and includes trees, shrubs, ground covers, native grasses and a sensory garden. Indigenous plants are proposed. Further details are available in the Landscape Drawings set by FJMT.

#### 7.4.7 New Signage

#### a) How has the impact of the new signage on the heritage significance of the item been minimised?

Signage is shown in the architectural drawings prepared by FJMT (Sheet No. 3300).

- There are two main entry signs on Golden Grove Street which identify the separate preschool and school entries. They are shown to be (backlit) large format metal lettering fixed (approx. 3m and 5.3 metres in length respectively) to the new street wall of the school. A similar sign is to be located on the new Abercrombie Street wall.
- A vertical illuminated signage zone is shown centrally located on the proposed new metal fence to Abercrombie Street, which is set back from the street alignment.

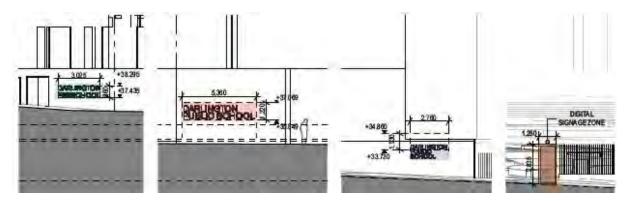


Figure 7.13 Elevation—signage. (Source: FJMT 2010, plan 3300)

These signs would have little impact, with the illuminated sign having the greatest potential visual impact on the Golden Grove HCA opposite. Illumination levels should be managed adequately by other Council controls.

b) Have alternative signage forms been considered (e.g. free standing or shingle signs). Why were they rejected?

Alternative signage was not considered necessary, given the building is to be demolished.

c) Is the signage in accordance with section 6, 'Areas of Heritage Significance', in Outdoor Advertising: An Urban Design-Based Approach? How?

The project planner advises that new signage is consistent with this approach.

d) Will the signage visually dominate the heritage item/ heritage conservation area or heritage streetscape?

As above in this section, these signs would have little impact, with the illuminated sign having the greatest potential visual impact on the Golden Grove HCA. Illumination levels should be managed adequately by other Council controls.

e) Can the sign be remotely illuminated rather than internally illuminated?

The project planner advises that new signage illumination will be static and illuminated and complies with the planning controls.

#### 7.5 Mitigation Measures

#### **Historical Archaeology**

The AA report concluded that little research potential has been identified for the school site in regard to the existing buildings and historical archaeological potential. Remains associated with the shop on the corner of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current research. Mitigation measures are not provided.

#### **Aboriginal Archaeology**

The DD report concluded that the proposed redevelopment of the site would be unlikely to have any impact on Aboriginal objects. Recommendations were made in case any Aboriginal objects were identified during the development works. Refer to the separate report for further detail.

#### **Impacts of Construction Process**

In this HIS, in regard to built heritage, a construction methodology should be required to manage potential damage to the heritage items in the vicinity, in particular the former Jones IXL factory garage building. This would mitigate damage due to vibration and other damage during demolition, excavation and construction of the proposed school redevelopment which adjoins the new building. The street trees of the Golden Grove HCA and the Darlington / West Redfern Locality have not been assessed as part of this report, but their protection should be included in the construction methodology.

#### Loss of the Existing Darlington Public School Buildings

Demolition of the existing school building will result in a loss of a 1970s school complex built by the Government Architect, which may have some local heritage significance although it is not listed as a local heritage item. Architecturally, this is mitigated to some degree by the interpretive elements of the

new school design, in particular the sawtooth roof form addressing Golden Grove Street and face brick materiality of the building, potentially including use of salvage bricks from the existing school.

Demolition of spaces which have undergone cultural adaptations for the Aboriginal school community and loss of some fixed art murals (painted brick walls) to be demolished has been mitigated to some degree by early input into the school design brief. Walls with murals will be retained where possible as shown in figure 6-14. The school community has identified values, and aspects of intangible and movable heritage that have been integrated into the new school design, ie culturally informed spaces and places specifically designed for artworks and objects.

#### **Presentation to the Public Domain and Local Character**

The public domain presentation of the main new school building has formal qualities which interpret the 1970s school building (in form and materiality), provide a low scale on the street alignment, with taller built form set back and holding the corner at Golden Grove and Abercrombie Streets. While the proposed new school building is larger in scale than the current school, its greatest form is proposed adjacent to, and comparable with, the larger public housing development adjacent, and on Abercrombie Street in association with the corner.

The proposed new school buildings do not seek to replicate the historic character of the original Victorian terrace housing or corner shop, or the adjacent Golden Grove Conservation Area and the Darlington / West Redfern Locality. The proposed new forms are mitigated by the concentration of built form on Golden Grove Street, varying scale to the street and its interpretive contribution (in relation to the 1970s school forms). Further, the visual catchment of the school site is small.

#### 8.0 Conclusion and Recommendations

#### 8.1 Conclusion

The proposed new school will require demolition of all existing school buildings, removal of some extant landscaping and redevelopment across the whole site. The proposed new school buildings would be predominantly sited along the Golden Grove Street frontage, with a single-storey base plinth built to the street alignment and a taller roof form behind. The main school entry would be located centrally along this frontage. Buildings would be consolidated at the western half of the site, with landscaped playground areas to the east and accessible from Abercrombie Street.

The proposed development is generally compatible in scale and form with the Darlington / West Redfern Locality design principles (and the character of the adjacent Golden Grove Conservation Area) and heritage items in the vicinity. The formal street corner of the new school design has a dominant roof form which will mark the historic corner at the intersection of Abercrombie Street with Golden Grove Street in a contemporary manner, and not exceed the height of the The tallest proposed school building element (fronting Abercrombie Street) will not exceed the height of the main St Michael's Church group building. This corner features the corner shop building (within the Golden Grove HCA) and the St Michael's Church group, which terminates the vista along Abercrombie Street. While the proposed school would appear larger than the current school buildings, important views (and vistas) along Abercrombie Street and Golden Grove Street would essentially be retained. Views to St Michael's Church group would not be obscured. Existing street trees will be retained. This assessment is consistent with the advice of the 2020 VIA which concluded that proposed development would not create any significant negative visual effects in relation to the character or composition of public or private domain views.

The siting, form, details and materials of the proposed new school buildings will be compatible with heritage items in the vicinity, which vary in scale and building type. In particular, although the new development abuts the former Jones IXL factory garage building, it will not adversely impact this building; this is because the new development adjoins this building on a secondary façade (with no windows), is lower in height and utilises face brickwork. The rear wings of the heritage items (two-storey terrace house rows) which back on to Darlington Lane will not be impacted by the school design given the distance from these rear wings. Further, a scheme has recently been approved for significant new development in the rear of these terrace houses.

Salvaged bricks from the existing 1970s school buildings (to be demolished) are being considered for reuse in select locations on the site. The materiality and form of the main Golden Grove elevation with its saw tooth roof also references the existing 1970s architecture, as well as the scale and rhythm of terrace housing in the adjacent conservation areas. While the school building is not a listed heritage item, it nonetheless has some local heritage significance as a small school complex designed by the NSW Government Architect in the Brutalist style. Despite this loss of the existing school buildings, the proposed redevelopment of the site has the potential for a positive heritage impact overall. This will be achieved through the continued educational use of the site, interpretive aspects of the new school design, incorporation of Aboriginal cultural values through the design of specific learning environments (such as the yarning circle), a place-based design approach for specific movable artworks and objects including the Art Collection and retention of fixed artwork in the landscape.

A significant number of trees are proposed to be removed from the site as a result of proposed level changes and to make way for the new school buildings. The heritage value of the school trees has not

been assessed; however, it is noted that the 2019 VAR identifies that the composition of views in relation to the school site and in the general area includes street wall elevation of school buildings and the canopy of vegetation within the school grounds. New trees and site landscaping, including iindigenous plants, are proposed.

Previous archaeological investigations of the site have identified that the remains associated with the former housing and shop on the corner of Abercrombie and Golden Grove Streets are not anticipated to make a contribution to current research, and that the site is not considered to hold archaeological potential for Aboriginal objects. The proposed redevelopment of the site would be unlikely to have any adverse impact on historical or Aboriginal archaeology. Further detail is provided in the 2019 AA and 2019 DD reports.

An understanding of the physical school elements which present an outward expression of connections to the Aboriginal community underpins the assessment of intangible elements of education at the school which were identified in the ACHAR to be: Celebrating and Recognising Aboriginal Culture and History, Teaching Aboriginal Culture, 'Spaces', Art and Display of Aboriginal Culture, Art and Display of Aboriginal Culture and The Art Collection.

Darlington Public School holds significant heritage values connecting the school with the teachers, students and local Aboriginal community. The proposed development has the potential to impact these values, if the values are not recognised and considered during the project's planning, consent authority approval processes and implementation stages.

The art collection defines the character of the school, its spaces, teachers and students. Movable artworks (and objects) will be removed and stored prior to commencement of demolition. New design of the school will include culturally appropriate placement of the artworks, positively retaining these works and their cultural associations. Most fixed artworks (and objects) will be necessarily impacted by redevelopment of the site. This will be mitigated by archival photographic recordings being undertaken prior to demolition, retention of fixed art work (where possible) and planned salvage of fabric for interpretive re-use in the new design.

Further detail in regard to community consultation, identified Aboriginal cultural values, heritage impacts and recommendations in regard to Aboriginal heritage in space and design, culture and history refer to the 2020 ACHAR. A separate assessment of how the school's values may be directly or indirectly affected by the proposal is provided in the ACHAR [Table 6.1] and included in this report at Appendix A of this HIS report.

#### 8.2 Recommendations

The following recommendations arising from the assessment of potential heritage impact of the proposed school redevelopment and the work of the ACHAR are made to guide managing the cultural heritage aspects of this project prior to and during construction work. They are provided to ensure protection, care and placement / reinstatement / interpretation of these items are carried out.

Review of the proposed school redevelopment by consent authorities should have regard for the consultation work, assessments and recommendations of the ACHAR.

Approval of the Darlington Public School masterplan proposed by SI NSW and prepared by FJMT Architects should include:

 A construction methodology should be prepared to ensure against damage to the heritage items in the vicinity, in particular the former Jones IXL factory garage building. Damage of concern includes vibration and other damage during demolition, excavation of the site and construction of the proposed school redevelopment. The methodology should also include care of street trees and trees retained on the school site. It should also include the care of retained fixed art and salvaged fabric to be reinstated (in new locations) in the landscape design (including demolished mural bricks and Yarning Circle carved sandstone blocks). This approach should align with the Art Management Strategy (refer below) and be required prior to issue of the construction certificate.

- A photographic archival recording of the school, its buildings, exterior/interior spaces, artwork (movable and fixed) and landscape, should be undertaken in accordance with NSW Heritage Office guidelines whilst the school is still operational, and should be completed prior to issue of the construction certificate. This should include professional photography of all the fixed artworks (painted wall murals).
- An Art Management Strategy should be prepared to manage movable and fixed artwork, by representatives of the school community, to inform design development of the proposed school, care and storage during construction and reinstatement of artwork in the new school when complete. It is recommended that this is prepared as soon as possible and should be completed prior to change at the site (ie school decampment or demolition at the site). The Strategy should:
  - allow for ongoing management and care of current and future movable and fixed art collections of the Darlington Public School, and should recognise the role of private individuals and community custodians in caring for their movable / fixed heritage.
  - include a formal photographic inventory/catalogue of all movable artworks based on the basic catalogue created as part of the ACHAR report (and included in that report at Appendix E of that report). This should be prepared prior to removal of artworks from buildings / site. Removal, storage and protection of these items prior to demolition should also be addressed. Further detailed recommendations on placement of specific moveable items are included in the ACHAR report. FJMT have also prepared preliminary schedules of art and artefacts which are included at Appendix E of this report..
  - specifically address fixed artworks and objects (including the painted wall murals and carved sandstone blocks which currently form the outdoor yarning circle). These items should be documented in the photographic archival recording of the school site, and locations keyed to a plan. The retention or reinstatement of these items should also be detailed in the schedule of conservation works. Opportunities for new fixed artworks in the new school design should be addressed in the Strategy.
  - During the school redevelopment process management of the movable artwork, including historic objects, and to some degree the fixed artworks, representatives of the school community and SI NSW could be guided by the NSW Heritage Office Moveable Heritage Principles<sup>3</sup> (refer to Appendix C).
- An Interpretation Plan should be prepared, in association with representatives of the school community, and could include stories of the site's geography (including the Blackwattle Swamp Creek which runs through the site), early land use, education at Darlington Public School (including the original Victorian school building), Victorian residential development of the site, the Orange Grove subdivision and Aboriginal cultural values are represented on the site. It could be guided by the NSW Heritage Office Interpreting Heritage Places and Items Guidelines<sup>4</sup>

- Recommendations of the 2020 AHCAR could be incorporated in the Interpretation Plan, the following detailed could be included:
  - A teacher/student guide to the art including details on each artwork, the story behind its creation or acquisition, and information on the meaning and importance of each item.
     This can be connected with the archival recording publication on the old school.
  - Opportunities for cross-cultural learning can be provided by sharing and active participation in cultural activities—for instance, development of a Darlington Aboriginal cultural program.
  - Identification of key trees within the school to be retained and conserved. These are likely to be habitat trees for native animals and birds. Reference to the ecological assessment for the school should be made when determining which trees to retain.

#### 8.3 Endnotes

- City of Sydney, 'Street Tree Master Plan 2011', viewed 1 May 2020 <a href="https://www.cityofsydney.nsw.gov.au/\_data/assets/pdf\_file/0015/130236/STMP2011\_150501-PartA.PDF">https://www.cityofsydney.nsw.gov.au/\_data/assets/pdf\_file/0015/130236/STMP2011\_150501-PartA.PDF</a>.
- <sup>3</sup> NSW Government, 'What is moveable heritage and why is it important?', viewed 1 May 2020 <a href="https://www.environment.nsw.gov.au/Heritage/aboutheritage/movableheritage.htm">https://www.environment.nsw.gov.au/Heritage/aboutheritage/movableheritage.htm</a>.
- 4 NSW Government, 'Interpreting Heritage Places and Items', viewed 1 May 2020 <a href="https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/NSWHeritageOfficeGuidelinesinfointerpreting.pdf">https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/NSWHeritageOfficeGuidelinesinfointerpreting.pdf</a>

#### **GML** Heritage

### 9.0 Appendices

#### Appendix A

Statement of Heritage Impact (2020 ACHAR)

#### Appendix B

**NSW SDRP Consultation** 

#### **Appendix C**

NSW Heritage Office Moveable Heritage Principles

#### Appendix D

Architectural Drawings of School, 1975

#### **Appendix E**

Preliminary Schedules of Art and Artefacts, prepared by FJMT, 2020

#### **GML** Heritage

#### Appendix A: Statement of Heritage Impact (2020 ACHAR)

This section is an extract from the ACHAR and provides a description of the proposed activity and identifies the Aboriginal values that could be impacted directly or indirectly by the activity. The impact assessment underpins the development of heritage management policy (Section 7) which should guide the development process for the new Darlington PS.

#### **Statement of Heritage Impact**

Darlington PS does not contain any known Aboriginal objects (as afforded statutory protection under the NPW Act), and is not considered to hold archaeological potential for Aboriginal objects. As such, the proposal will not 'harm' Aboriginal objects.

However, Darlington PS holds significant heritage values connecting the school with the teachers, students and local Aboriginal community (outlined in Table 5.1, of the ACHAR). The proposed development has the potential to impact these values, if the values are not recognised and considered during the project's planning and implementation stages. An assessment of how the place's values may be directly or indirectly affected by the proposal is provided in at Table 6.1 of the ACHAR included below.

**Table 9.1** Statement of Potential Heritage Impacts.

Value	Manifest Through	Potential Impacts and Mitigation Strategies
Historical	The history of education in Darlington PS since 1875.  The connection between the local community, the economics and social history of Darlington and the educational facility.  The Aboriginal historical value is not embodied in the current buildings.	The school redevelopment would create a new phase of education in Darlington consistent with other historic changes and developments to the school since 1875.  The new design has considered the context of Darlington PS and its social history through the implementation of key design themes.  Providing that the key design themes underpin the redevelopment, the impact of the proposed work on the historic values of the place would be minimal.
Scientific	The ability of the school to teach traditional Aboriginal values in a safe and meaningful context.  The ability of the school to provide new direction with respect to educational methods and standards exemplifying cultural appreciation and understanding.	The current school provides space for a unique method of teaching within a specific setting. Redevelopment of the school will impact (or change) this value, irrespective of how the new design is implemented.  The new design must allow for the natural development of teaching methods by the staff, along with a natural evolution of the use of space. It is important that all spaces are therefore not 'filled', but the new school can grow to fill its new space.  The new school design has included specific places and items connected with Aboriginal culture, such as the 'yarning' space. The specific design of these spaces needs to consider the functional use of each space, so that the educational values can be maintained.

Value	Manifest Through	Potential Impacts and Mitigation Strategies				
Social	The connection between the school and the Darlington to Redfern community, notably the Aboriginal community.	The new school needs to understand its place as part of the local community and its function beyond an educational facility. If this connection can be maintained, this value will not be impacted.				
	The function of the school as both an educational institution, and a centre for social acceptance, a safe space, and core hub to the local community.  The school's identification with local Aboriginal people, and notably Aboriginal	The new school design process needs to seek out and understand the Aboriginal cultural connections with key physical elements of the existing spaces and specifically how these aspects function and are used on a daily basis. If the design is able to include these aspects this value should not be impacted.				
	culture and heritage.	<ul> <li>Implementation of key design themes means that safeguards have been put in place to protect the social values of the school including:</li> <li>ongoing involvement of the local and school community in design decisions;</li> </ul>				
		inclusion of specific physical elements and spaces to reflect the aspirations of the Aboriginal community including edible gardens, yarning circles; and				
		involvement of the school children in development of external spaces.				
		Beyond the design process, the assessment has sought to include key stakeholder groups identified by the school, in a process of assessment that identifies key elements and values.				
		Policy developed for the maintenance of heritage values (Section 7) needs to be implemented.				
Aesthetic	The outer appearance of the school to the wider public—such as the red doors	Any demolition of fabric and surfaces containing murals and art will result in an impact on the school's aesthetic value.				
	on Golden Grove.	The Year 6 art walls will be retained and not impacted.				
	The inner function of the school, where the appearance governs the identity and	All movable art and objects can be retained and stored for re-use, and thus the inherent value of these items can be retained.				
	use of space. The school's collection of art and objects.	The new school design provides a 'blank canvas' for new art and design. The mode of implementing new art and design through the school has the potential to impact this value (and the connected social value) because the aesthetic value is an aspect which has grown over 45 years—it is something which has been created by the local community. Installation of 'manufactured' Aboriginal design (that is design that is not developed and implemented by the school community specifically for the school) would likely not be accepted by the local community and would impact this value.				

## **Appendix B: NSW SDRP Consultation**

# G N SW

21.08.2019

Karissa Kendall, Project Director, SINSW

Via email – <u>karissa.kendall@det.nsw.edu.</u> <u>au</u> PROJECT: Darlington Public School

RE: SDRP SESSION 37 – 14.08.19 (third review)

Dear Karissa,

Thank you for the opportunity to review the above project a third time at the SDRP session held on 14.08.19.

The panel acknowledges and commends SINSW for their commitment to delivering design excellence demonstrated by undertaking a project review and change of direction, with a new design team.

The panel generally supports the design development of the project. In particular the following aspects of the design proposal are supported:

- 1. Rigorous process of analysis to unpack the complexity and diversity of issues affecting the site;
- 2. Clarity of the masterplanning options presented;
- 3. Engagement with the urban context and streetscape pattern;
- 4. Location of the hall to facilitate shared community access;
- 5. Retention of trees;
- 6. Response to topography and hydrology of the site;
- 7. Masterplanning to facilitate incorporation of passive design strategies as design develops;
- 8. Minimisation of fencing by using the building as secure line where possible.

The following commentary provides advice and recommendations for the project:

#### Massing and scale

- The panel supports the location of the hall at the corner of Abercrombie and Golden Grove streets. The hall should have a clear street presence, welcoming aspect and engagement with the urban context. The height of the hall should be considered together with its architectural expression to determine an appropriate 3-dimensional response to its location.
- The concentration of 3-story elements along the southeast and northwest boundaries is supported. Detail should be provided to illustrate how built forms will interact with the student housing and Regiment buildings adjacent.
- The approach illustrated in options C & D, with one or several functions perpendicular to Golden Grove Street has the potential to more

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successfully accommodate the slope of the site. Further detail should be provided to illustrate this potential including multiple sectional views.

#### Heritage

- Explore ways in which the existing fabric of the school could be repurposed in the built form and/or landscape treatments.
- The panel anticipates further engagement with the Aboriginal community leading to a meaningful manifestation of cultural heritage in the built form, landscape, art, wayfinding and other elements of the project. Applicants may contact GANSW for assistance or advice on integration of Indigenous Culture and Heritage.

#### Landscape and open space

- The panel supports the approach presented of the COLA areas to create an interface between the school grounds and the public domain. Further detail is required to illustrate these areas and the amenity provided, ensuring the spaces do not become too low or too deep.
- Clarify and illustrate retention of existing trees along Darlington Lane.
- Clarify any roof areas which will be used as play areas and/or landscaped open space.

#### Sustainability

Detail ESD initiatives and performance targets, including passive and active energy modes, overshadowing, solar access, energy generation, water collection and reuse, etc.

The panel saw merit in options A, C and D and look forward to seeing the development and consolidation of these schemes manifested in the next presentation.

Please refer to the design package requirements form for information on materials to be provided at the next SDRP.

Please contact GANSW Design Advisor, Carol Marra (Carol.Marra@planning.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

**Rory Toomey** 

Principal Design Excellence

Chair, SDRP

CC

**NSW SDRP Panel members** 

Ashley Dunn, Isabelle Toland, Richard Johnson, Rory Toomey (Chair - GANSW)

GANSW Design Advisor

**DPIE** 

Carol Marra **Andrew Beattie** 

Government Archimet

City of Sydney Peter Hill

SINSW Lyndall Smith, Glen Irwin, Aaron Smith,

Carmen Debsieh

FJMT Elizabeth Carpenter, Cassandra Cutler

Mace Group Daniel Iuliano, Josh Malin

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# G N SW

12.11.2019

Karissa Kendall, Project Director, SINSW

Via email – <u>karissa.kendall@det.nsw.edu.</u> au PROJECT: Darlington Public School

RE: SDRP SESSION 43 – 06.11.19 (fourth review)

Dear Karissa,

Thank you for the opportunity to review the above project at the SDRP session held on 06.11.19.

The selected masterplan and general design development of the project is supported. In particular the following aspects of the design proposal are supported:

- Clarity and logic of the selected masterplan option;
- Engagement with the urban context and streetscape pattern;
- Scale and massing of the building forms which respond and contribute to the surrounding neighbourhood;
- Proposed materiality and incorporation of salvaged items such as the red gates and murals;
- Location of the hall to facilitate shared community access;
- Retention of existing trees;
- Response to topography and hydrology of the site;
- Masterplanning to facilitate incorporation of passive design strategies;
- Minimisation of fencing by using the building as secure line where possible.

The following commentary provides advice and recommendations for the project:

#### **Aboriginal Culture**

The approach to understanding and engaging with local Aboriginal culture is commended as a starting point. Provide details of how the connection to Country will be made evident throughout the school grounds: for example, using landscape, materials, plant selection, art installations/murals, naming, wayfinding devices, play equipment, paving, colour, texture and so on.

#### Landscape

- The landscape strategy incorporating connected spaces at various scales is supported. The landscape design should be further detailed to incorporate robust surfaces, materials and plantings, particularly in areas of high play traffic.
- The setbacks along Golden Grove Street should be further detailed to demonstrate the continuity of the urban realm with robust and low-

Government Architect New South Wates L24, 320 Plst Street Sydney NSW 2000 GPO Box 89 Sydney NSW 2001 maintenance materials and landscaping. These areas should be illustrated to indicate how sightlines between the street and the preschool will be resolved.

- Explore and illustrate how natural environmental systems (ie water) can be integrated into play areas.
- Clarify and illustrate access to and visual appearance of the Library roof.
- Provide a plan illustrating the potential use of the upper level circulation/outdoor learning spaces.

#### Hall & Streetscape

- The possibility of a community foyer at the south west corner of the Hall is supported and should be further developed.
- Illustrate the treatment of street edges at the setback along Golden Grove Street and whether these can incorporate street seating or other public amenity.
- Provide a view illustrating the proposed visual connection from Abercrombie Street through the street-wall into the school at the service entry and assembly area.
- The design of the entry fence as a place-specific screen integrated with the built form is supported and further details should be provided. Explore versions where a staggered fence line addresses spatial generosity to both sides of the fence where needed.

#### Sustainability

- Detail ESD initiatives and performance targets, including passive and active energy modes, overshadowing, solar access, energy generation, water collection and reuse, etc.

The items noted above should be addressed in the EIS submission.

Please contact GANSW Design Advisor, Carol Marra (Carol.Marra@planning.nsw.gov.au), if you have any queries regarding this advice.

Sincerely,

Rory Toomey Principal Design Excellence

Chair, SDRP

CC

NSW SDRP Panel members Ashley Dunn, Isabelle Toland, Peter Mould,

Rory Toomey (Chair - GANSW)

GANSW Design Advisor

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# **HERITAGE INFORMATION SERIES**

## **MOVABLE HERITAGE PRINCIPLES**





#### **MOVABLE HERITAGE PROJECT**

The Movable Heritage Principles were developed as part of a Movable Heritage Project, managed jointly by the NSW Heritage Office and the NSW Ministry for the Arts. They were written by John Petersen, NSW Heritage Office, in collaboration with a Movable Heritage Reference Group providing expert advice. Its members were Meredith Walker, Australia ICOMOS, Kylie Winkworth, heritage consultant and author of an earlier Heritage Council of NSW taskforce report on movable heritage, David Ellis, Ministry for the Arts, Ian Stephenson, National Trust of Australia (NSW), James Broadbent, Historic Houses Trust of NSW, Ian Arthur, Institution of Engineers Australia, Lisa Newell, Ku-ring-gai Municipal Council, Pat Townley, Powerhouse Museum, Kay Söderlund, Museums Australia, Maisy Stapleton, Museums and Galleries Foundation of NSW, Dennis Gojak, NSW National Parks and Wildlife Service, Phil Gordon, Arts Advisory Council Museums Committee and Vanessa Mack, University of Sydney Macleay Museum. NSW cultural institutions also provided input through the Ministry for the Arts.

The Heritage Council of NSW endorsed the Movable Heritage Principles in December 1998.

#### **DISCLAIMER**

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#### Front cover graphics:

Aboriginal hand stencils, South Coast. *Photograph courtesy of National Parks and Wildlife Service* Interior of Belltrees shearing shed, built near Scone in NSW in 1879 by architect J. Horbury Hunt. Artefacts from the site of first Government House Archaeology Collection. *Photograph courtesy of Museum of Sydney on the site of first Government House* 

Grose Valley, Blue Mountains, NSW. *Photograph courtesy of National Parks and Wildlife Service* Back cover graphics:

Australia Square, Sydney

Entrance to the central temple, Sze Yup Temple, Glebe. *Photograph by Karl Zhao* Lands Department Building, Sydney

The bow of iron steamer, *Merimbula*, wrecked near Currarong in 1928. *Photo by David Nutley* Snowy Mountains Scheme. *Photograph courtesy of the Snowy Mountains Hydro-electric Authority* St Mark's Anglican Church, Darling Point, Sydney. *Photograph by Stuart Humphreys* Belltrees Shearing Shed, near Scone, NSW.

Detail from the crypt floor of St Mary's Cathedral, Sydney. Photograph courtesy of St Mary's Cathedral

#### **MOVABLE HERITAGE PRINCIPLES**

The aim of the Movable Heritage Principles is to assist New South Wales Government and community organisations to manage their movable heritage items and collections and to develop appropriate conservation policies.

#### INTRODUCTION

"Movable heritage" is a term used to define any natural or manufactured object or collection of heritage significance.

Responsibility for movable heritage is shared by private owners and government and community organisations. The Movable Heritage Principles will underpin efforts to identify and care for movable heritage objects and collections in their context. They will strengthen partnerships, co-operation and focus policies to achieve good practice in NSW.

The principles recognise the importance of:

- researching, understanding and retaining the significance of movable heritage as an integral part of the heritage and cultural diversity of New South Wales;
- documenting provenance, physical context, associations and ownership and conserving movable heritage as part of our heritage legacy to future generations;
- promoting the value of movable heritage to the community through access, education and interpretation programs;
- managing movable heritage items and collections in their significant place and community context;
- recognising the role of private individuals and community custodians in caring for movable heritage;
- establishing partnerships between owners of movable heritage and the government, professional and community organisations which can assist them.

#### THE PRINCIPLES

#### 1. Movable heritage relates to places and people.

Movable heritage exists in a variety of contexts in addition to museum, library and archive collections. It may be associated with places, regions, people and communities. It is often best to care for items and collections in this context.

2. Educating the community about how to identify and manage movable heritage assists in conserving items and collections.

Community education is an effective way to protect movable heritage in the long term. Private owners and community custodians have information and knowledge about movable heritage and why it is important. Communities need to be involved in managing and interpreting their cultural material.

3. Assess the heritage significance of movable items and collections before making decisions on managing them.

Decisions on managing movable heritage, including acquisition, should be based on their significance, including their relationships to places and people. The wishes of private owners and community custodians should also guide decisions.

Where relevant, conservation management plans should include policies that integrate the management of heritage places and their significant items.

4. Recognise the significance of indigenous movable heritage to indigenous communities and its unique role in cultural maintenance, cultural renewal and community esteem.

It is important to respect indigenous intellectual property rights and the cultural traditions of indigenous people, including cultural restrictions.

Consult with the relevant indigenous community and key indigenous bodies and use their advice to guide decisions on identifying and managing movable heritage, including access and interpretation. \*

5. Retain movable heritage within its relationship to places and people, unless there is no prudent or feasible alternative to its removal.

Movable heritage often derives significance from its relationship to a region, building or site. Removing items from a place can diminish or damage the significance of both the items and the place. Explore opportunities for conserving movable heritage in its context where this is possible.

6. Remove movable heritage from its relationship to places and people only when the items and collections are under threat and this is the only means of safeguarding or investigating significance.

Moving items and collections may alter and diminish significance and cause damage. However, it may not always be possible, practical or desirable to retain movable heritage in its context. It may be necessary for the cultural custodian to relocate the items and collections for cultural reasons or to remove them for research. It may be necessary to remove them temporarily for conservation treatment, exhibition or during works to a building or site. Removing items may be the only means of ensuring their security and may be necessary for health and safety or to protect the place. Minimise the impact on heritage significance if moving items. Where possible and culturally appropriate, keep movable heritage in another location at the place.

3

<sup>\*</sup> Museums Australia has a policy guidelines document entitled *Previous Possessions, New Obligations: Policies for Museums in Australia and Aboriginal and Torres Strait Peoples.* 

# 7. Provide community access to movable heritage and encourage interpretation.

Community access to movable heritage is important because it helps people to understand and maintain cultural traditions and practices. Its also encourages the conservation of significant movable items. Interpret movable heritage and places and educate people to understand uses, functions, community history and cultural practices.

#### 8. Document movable heritage.

Documentation includes researching history, assessing significance, recording provenance, physical context, associations with a building, site, region or community and the history of conservation and exhibition. Documenting items and collections can assist in exploring conservation options to return or reinstate movable heritage to places or people should circumstances change. Keep systematic records of the subsequent location of items both with the site or building records and with the items and collections themselves.

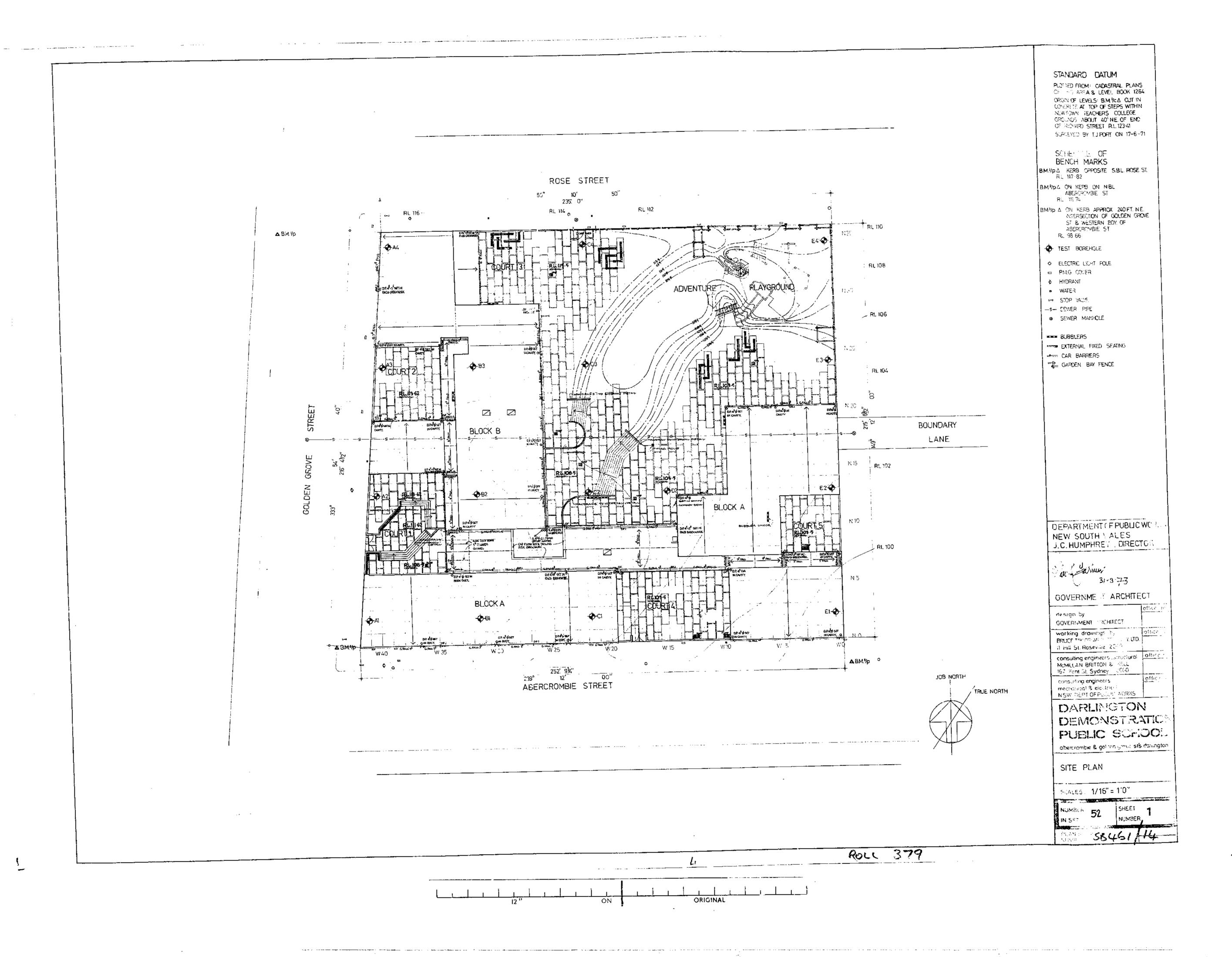
# 9. Acquire movable heritage where there is no alternative to removal, where this serves clearly defined collecting policies.

Organisations acquiring items and collections should identify their collecting intentions in cooperation with other bodies in their region. Where possible, movable heritage should form part of a collection that can be interpreted to promote an understanding of its significant place and community associations.

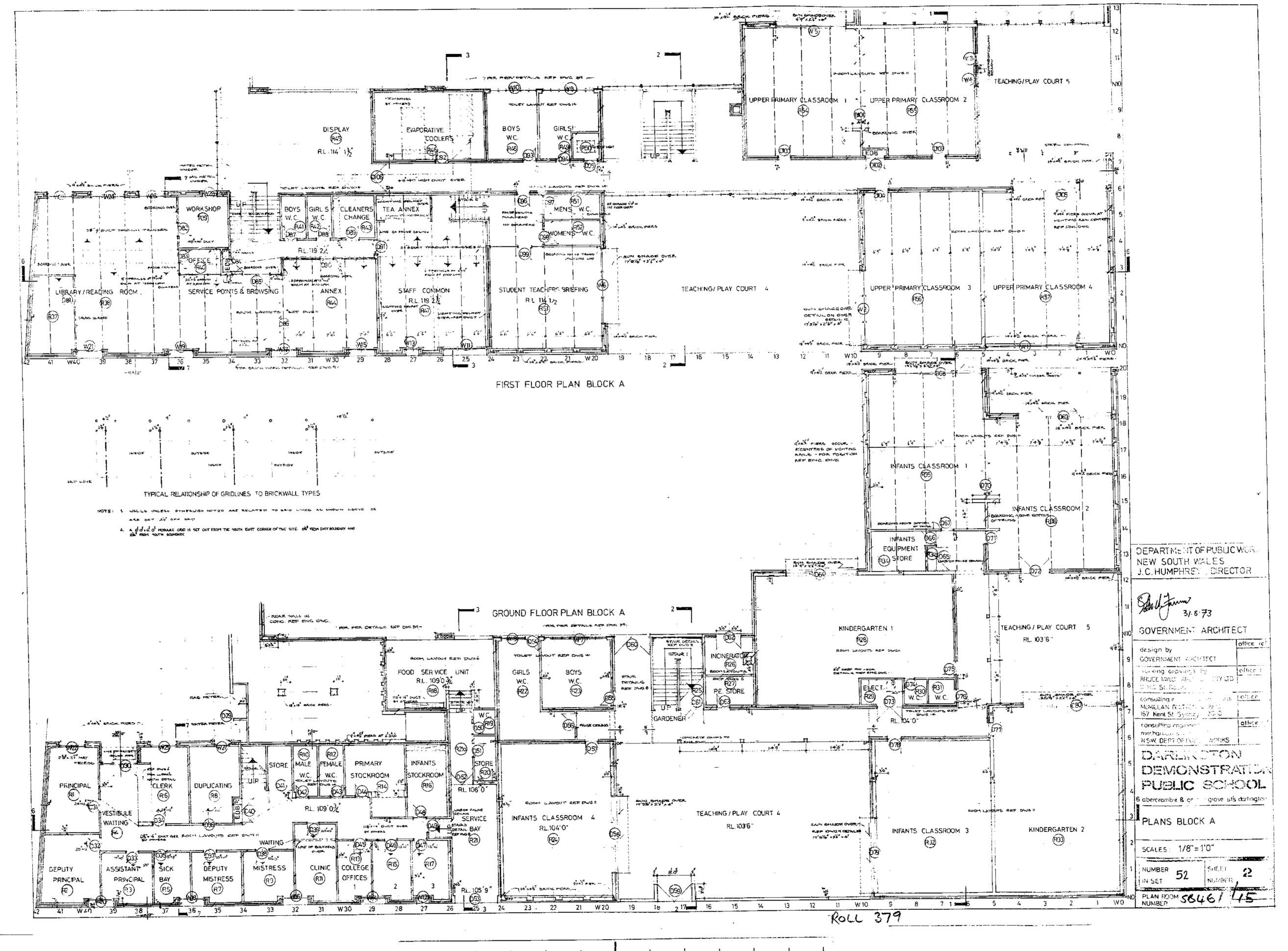
# 10. Reinstate or return items and collections to places and people when circumstances change.

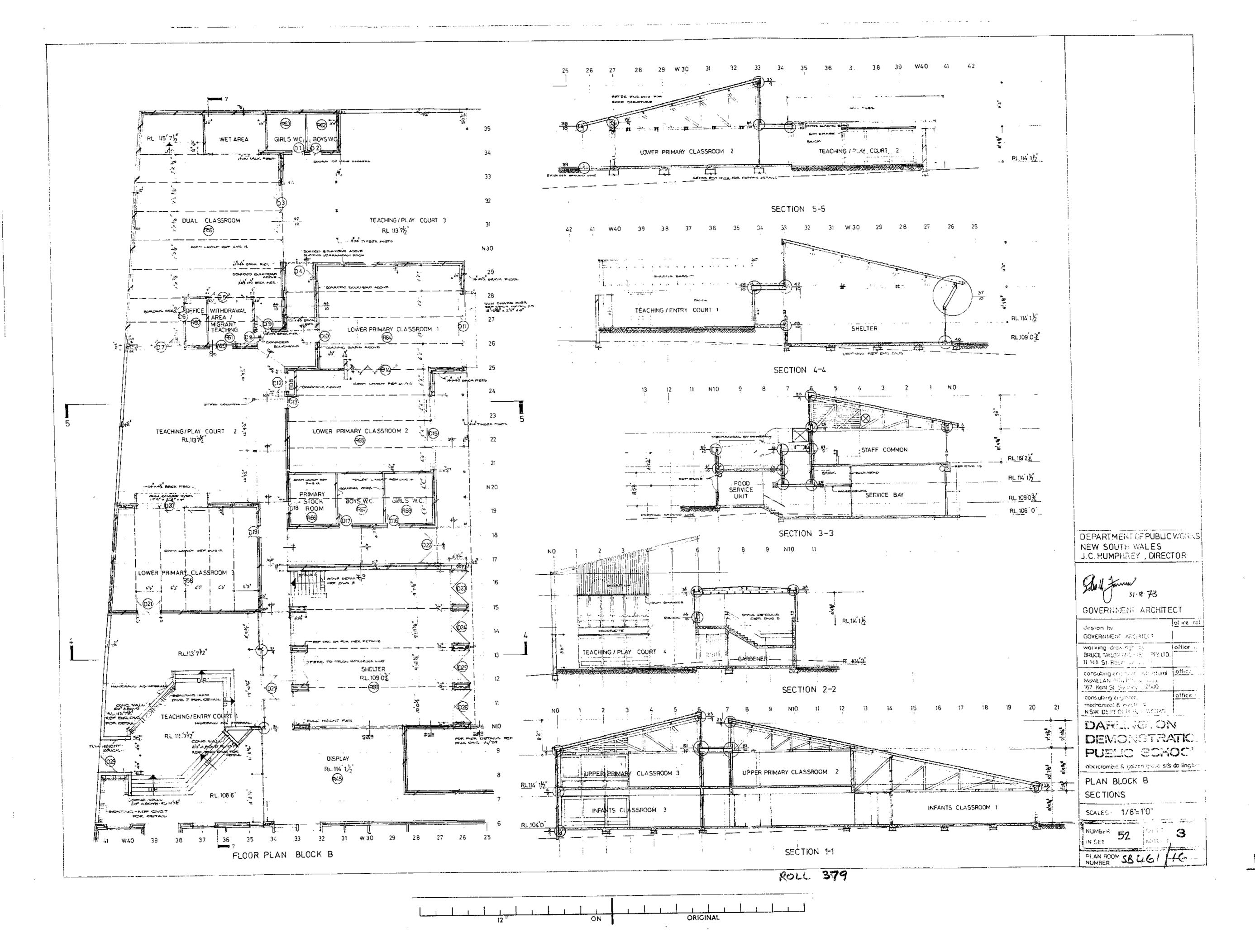
It is important to understand the heritage significance of items and collections before making decisions about moving, relocating, disposing or giving them away. If possible, and if culturally appropriate, reinstate or return the items and collections to their significant context. Relevant community and cultural groups should inform such decisions.

# Appendix D: Architectural Drawings of School, 1975

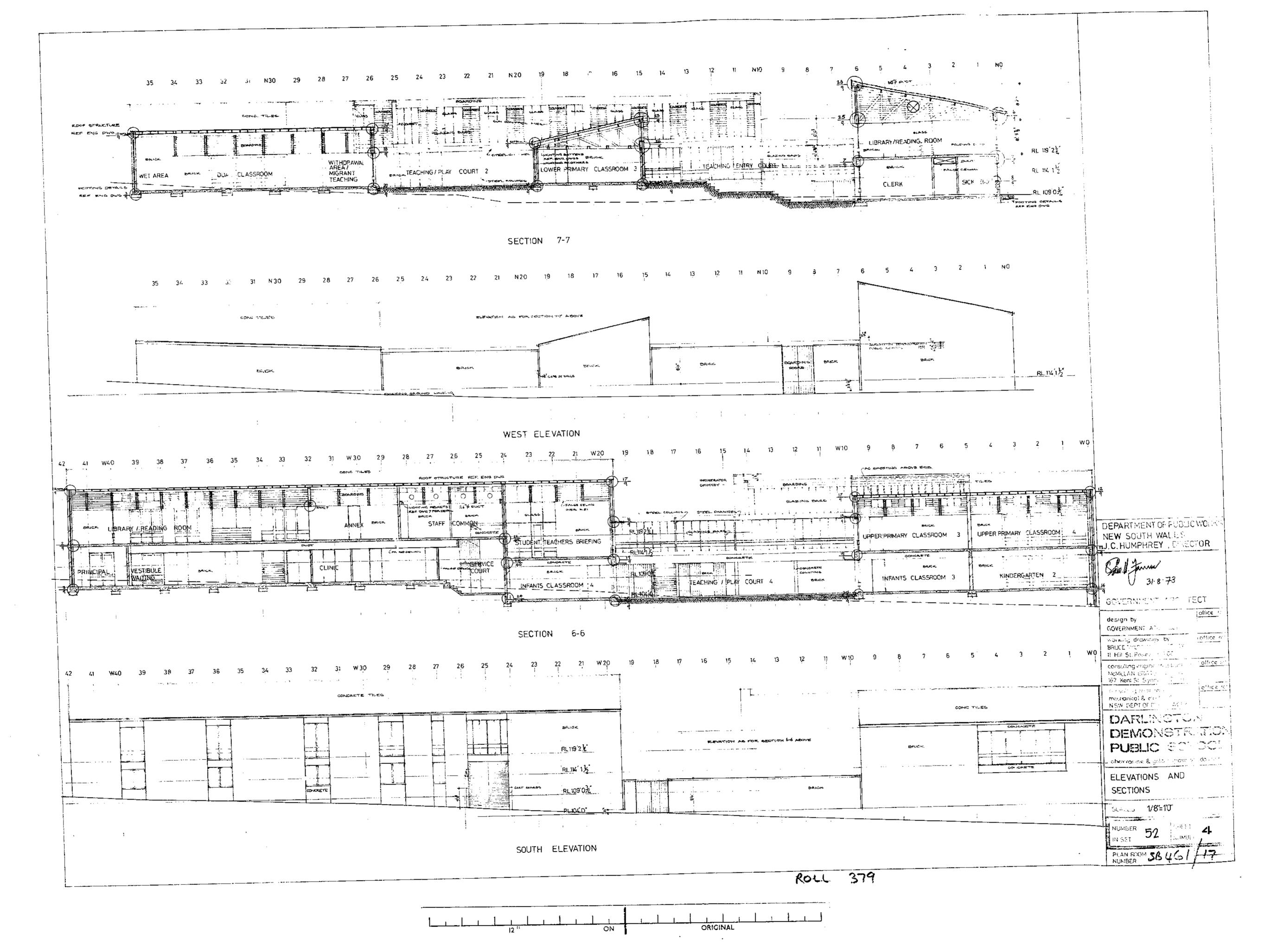


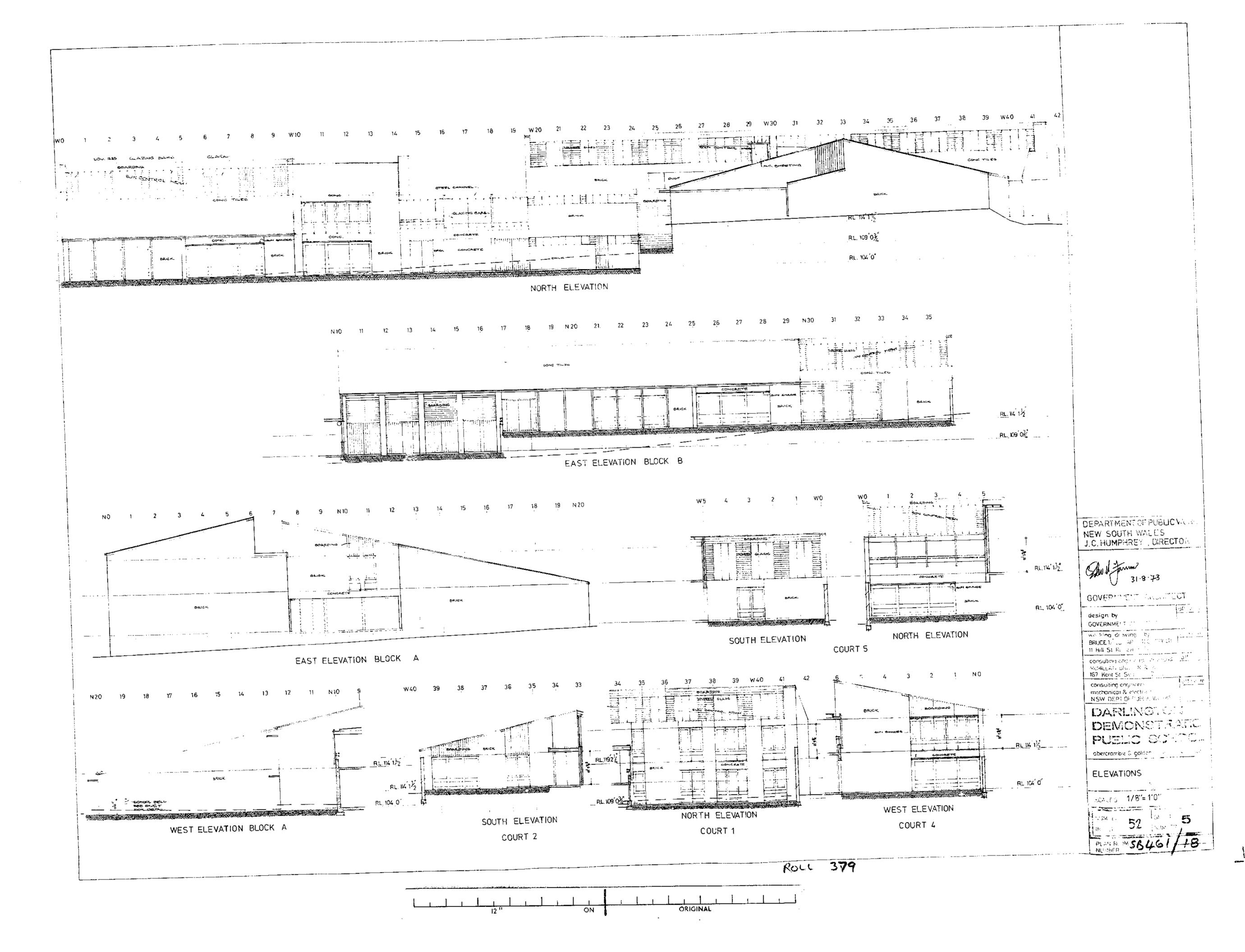
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Appendix E: Preliminary Schedules of Art and Artefacts, prepared by FJMT, 2020

## DARLINGTON PUBLIC SCHOOL ARTEFACT SCHEDULE

ITEM No.	Artefact Name	Image	Existing Location	Details	Dimensions	Future Status	Future Location	Notes
1	Display Cabinet		Reception Entry	2 display cabinets     Items include tools, boomerangs, art, sculptures, etc.	Wall mounted cabinet: 1840 (L) x 280 (W) x 860 (H) Floor mounted cabinet: 1700 (L) x 580 (W) x 1000 (H)	Artefacts to be retained and installed in new display unit	TBC	
2	Display Cabinet		Admin corridor	Loose furniture - display cabinet     Items include bowls,	960 (L) x 380 (W) x 1530 (H)	Artefacts to be retained and installed in new display unit	TBC	
3	Display Cabinet		Admin corridor	- Wall mounted display cabinet - Items include tools, boomerangs, art, sculptures, etc.	1700 (L) x 280 (W) x 700 (H)	Artefacts to be retained and installed in new display unit	TBC	
4	Sandstone Carvings		Second Entry Courtyard	Carvings in sandstone blocks	Varies	Retained and reinstalled in new landscape	TBC	
5	Sandstone Carvings		Central Courtyard		Varies	Retained and reinstalled in new landscape	TBC	
6			Corridor between hall and central courtyard	Various artworks including sculptures and cutouts of Aboriginal persons if interest	Varies	TBC	TBC	
7	Didgeridoos		Music Room			Didgeridoos to be retained and installed in new display	Special programs room	
8	Main Entry Gate	M	Main Entry	Red Double door	2150 (L) x 2920 (H)	Documented and demolished	-	
9	Blue Bus		Central Courtyard	Darlington School Bus converted into an learning space as part of P&F grant		Documented and demolished	-	
10	Framed Boomerangs		Principals Office	- Wall hung	640 (L) x 430 (H)	TBC	TBC	

## DARLINGTON PUBLIC SCHOOL ARTWORK SCHEDULE

ITEM No.	Name/Artist	Image	Existing Location	Details	Dimensions	Future Status	Future Location	Notes
1	Unknown		Main Entry Courtyard	Acrylic on Boards     Face fixed to brick wall     Sequal panels	2660 (L) x 1200 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
2	Unknown	M	Main Entry Courtyard	Acrylic on Boards     Face fixed to brick wall     4 equal panels	1700 (L) x 2450 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
3	Unknown		Main Entry Courtyard	Acrylic on Boards     Face fixed to brick wall     4 Panels (1 missing)	1700 (L) x 2450 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
4	Unknown		Main Entry Courtyard	- Acrylic on Boards - Face fixed to brick wall - 3 Equal panels	1450 (L) x 2850 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret Discuss with school community whether this piece should be displayed or archived.
5	Local artist and children	45/4	Reception Entry	Acrylic on Boards     Face fixed to brick wall     2 Equal panels	4120 (L) x 950 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret Discuss with school community whether this piece should be displayed or archived.
6	Unknown	验	Reception Entry	- Acrylic on Canvas - Wall hung	1000 (L) x 770 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
7	Unknown		Admin Corridor	- Laminated Lino prints - Wall mounted		Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
8	Sally Morgan Artwork	10	Admin Corridor	Acrylic on Boards     Face fixed to pinboard/partition wall	1220 (L) x 930 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
9	Burnt Door Neil Thorne	8	Admin Office Door	- Engravings on door panel	890 (L) x 2200 (H)	Retained	TBC	Door to be relocated to potentially the Library. Discuss with school community.
10	Unknown		Admin Corridor	- Wall hung A3 Frame	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
11	Unknown		Admin Corridor	- Wall hung A3 Frame	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
12	Unknown		Admin Corridor	- Wall hung print	640 (L) x 860 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
13	Operation Art 2012 Hanna Cai		Library/Hall Stair	- Wall hung A3 Frame	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
14	Operation Art 2012 Elissa Tennant	(30)	Library/Hall Stair	- Wall hung A3 Frame	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret Discuss with school community whether this piece should be displayed or archived.
15	Operation Art 2012 Melisa Hau	100	Library/Hall Stair	- Wall hung A3 Frame	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
16	Operation Art 2012 Billie Wild		Library/Hall Stair	- Wall hung A3 Frame	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
17	Unknown		Library/Hall Stair	- Acrylic on Boards - Face fixed to brick wall	840 (L) x 2620 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
18	Unknown	-444-	Library/Hall Stair	- Wall Hung Print	2480 (L) x 1200 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
19-37	Koori Week Boards Neil Thorne	Makes a	Library/Hall Stair	- A4 wooden boards with etchings/ engravings		Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
38	Unknown		Staffroom	- Stretched pattern fabric, wall hung	600 (L) x 600 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret Discuss with school community whether this piece should be displayed or archived.
39	Unknown		Block A Level 1 Staff Toilets	- Mixed media on paper, wall hung	2400 (L) x 1200 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
40-45	The Wheel on the Holden Kerry Toomey & Wendy Notley	170	Hall Area	- Wall hung A3 Frames	A3 Frames x 6	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
46	Unknown		Hall Area	- Paint on Brick wall	5400 (L) x 2550 (H)	Photographic Documentation	TBC	Refer attached commentary. Photograph, demolish and re interpret in a publicly accessed area.
47	Unknown		Block C Corridor	Acrylic on Boards     Face fixed to brick wall	1920 (L) x 1250 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
48-53	Jarjum Rugs Various Artists	100 P	Hall	- 6 x wall mounted rugs	Single Rug dimensions: 1440 (L) x 2320 (H)	Retained	Hall	Assess condition and relocate into new school. Jarjum rugs to be displayed in the new communal hall.
54	Unknown	Lenn	Hall	- Wall hung print	3000 (L) x 1650 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret Discuss with school community whether this piece should be displayed or archived.
55	Year 6 2015	100	Block A & B Corridor Link	acrylic on board     Face fixed to brick wall     Year 6 artwork	1840 (L) x 1200 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
56-60	Operation Art	Boy	Block A & B Corridor Link	- Wall hung A3 Frames	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.

ITEM No.	Name/Artist	Image	Existing Location	Details	Dimensions	Future Status	Future Location	Notes
61-63	Operation Art		Block A & B Corridor Link	- Wall hung A3 Frames	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
64-71	Operation Art	-11	Block A & B Corridor Link	- Wall hung A3 Frames	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
72-74	Operation Art	AIM	Block A & B Corridor Link	- Wall hung A3 Frames	640 (L) x 520 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
75	Unknown		Block A & B Corridor Link	- Acrylic on canvas/fabric - Wall hung - 2 equal canvases	2260 (L) x 2550 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
76	Unknown	100	Secondary Entry Courtyard	- Acrylic on Boards - Face fixed to brick wall - 4 Panels	7350 (L) x 2500 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
77	Mural by J,P. Simon, Darlington Students and Community (1986)		Secondary Entry Courtyard	- Paint on brick wall	10250 (L) x 2550 (H)	Photographic Documentation	TBC	Refer attached commentary, Photograph, demolish and re interpret in Pre School zone.
78	Unknown	Land III	Block B Courtyard	- Paint on brick wall	8800 (L) x 2500 (H)	Photographic Documentation	TBC	Retain in situ
79	Bird Wall Mural	hange 15	Hall Exterior	- Paint on brick wall	5800 (L) x 2300 (H)	Photographic Documentation/ Interpretation	Potentially Preschool	As noted in the ACHAR this mural "was supposed to be painted as the rainbow wall, but when it was painted by Peter Oxley (from the band "the Sunnyboys") and Jenny (a mum at the school), they followed their instinct and painted birds flying through the air." "Teachers noted that this art has become a favoured location for younger children to sit beneath and eat lunch." Page 44 ACHAR V4. Refer attached commentary.
80	Eco Murals Hotbed Designs & DPS Year 4,5 & 6 2000		Central Courtyard	- Acrylic on Boards - Face fixed to brick wall - 5 Panels - Bottom of panels are damaged/missing	6250 (L) x 3700 (H)	Photographic Documentation	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
81	Totem Murals 2015	12	East Boundary Wall	- Paint on brick wall	3050 (L) x 2150 (H)	Photographic Documentation	TBC	Retain in situ
82	Totem Murals 2016	4	East Boundary Wall	- Paint on brick wall	3050 (L) x 2150 (H)	Photographic Documentation	TBC	Retain in situ
83	Totem Murals 2017		East Boundary Wall	- Paint on brick wall	3050 (L) x 2150 (H)	Photographic Documentation	TBC	Retain in situ
84	Eco Murals Hotbed Designs & DPS Year 4,5 & 6 2000	4-20	Northern Heritage Boundary Wall	Acrylic on boards fixed to brick wall     2 equal panels	1200 (L) x 3700 (H)	Retained	TBC	Retain in situ
85	Unknown		Preschool Play Area	- Acrylic on board fixed to brick wall	2760 (L) x 1200 (H)	Photographic Documentation	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
86	Unknown		Preschool Play Area	Acrylic on boards fixed to brick wall     3 equal panels	2880 (L) x 1200 (H)	Photographic Documentation	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
87	Unknown		Preschool Courtyard	Acrylic on boards fixed to brick wall     3 equal panels	2760(L) x 1200 (H)	Photographic Documentation	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
88	Frog Mural		Preschool Courtyard	- Acrylic on board fixed to brick wall	3700 (L) x 1200 (H)	Photographic Documentation	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
89	Unknown		Principal's Office	- Wall hung artwork	560 (L) x 470 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
90	Unknown		Principal's Office	- Wall hung artwork	600 (L) x 775 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
91	Unknown		Principal's Office	- Wall hung artwork	800 (L) x 600 (H)	Retained	TBC	Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.
	Boomerang	A	Unknown					Assess condition and relocate into new school. If condition is poor, photograph and re interpret. Discuss with school community whether this piece should be displayed or archived.

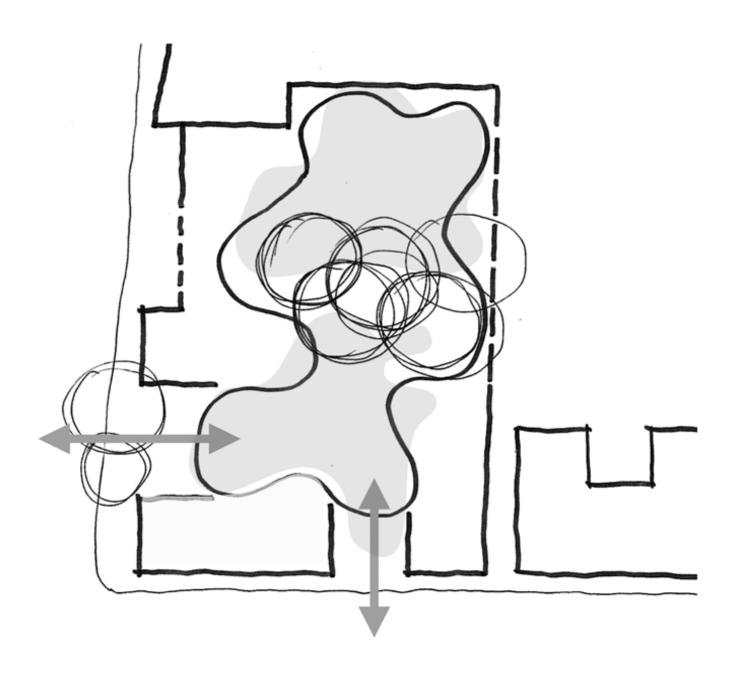
# **DARLINGTON PUBLIC SCHOOL REDEVELOPMENT**

**Appendix N — Aboriginal Cultural Heritage Assessment Report** 

SSD-9914

**Prepared by GML** 

For NSW Department of Education





# **Darlington Public School**

# **Aboriginal Cultural Heritage Assessment Report**

Report prepared for Schools Infrastructure NSW

June 2020



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# **Report Register**

The following report register documents the development and issue of the report entitled Darlington Public School—Aboriginal Cultural Heritage Assessment Report, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
18-0630A	0	Pre-Draft Report	22 July 2019
18-0630A	1	Draft Report for SI NSW Review	4 November 2019
18-0630B	2	Revised Draft Following Redesign of School	27 April 2020
18-0630B	3	Draft for Aboriginal Community Review	30 April 2020
18-0630B	4	Final Report following Aboriginal Community Review	9 June 2020

# **Quality Assurance**

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2016.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Tim Owen	Project Director & Reviewer:	Madeline Shanahan
Issue No.	4	Issue No.	4
Signature	Elm own	Signature	MyLah
Position:	Principal	Position:	Senior Associate
Date:	9 June 2020	Date:	9 June 2020

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# Aboriginal Cultural Heritage Assessment Report Cover Sheet

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	Aboriginal Cultural Heritage Assessment Report				
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	Tel: 02 9319 4811				
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Report prepared for	Schools Infrastructure NSW				
Date of Report	June 2020				
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# **GML** Heritage

# 1.0 Introduction

# 1.1 Darlington Public School

Darlington Public School (PS) is an inner-city school servicing the suburbs of Chippendale, Darlington, Redfern and Waterloo (Figure 1.1). The school extends across Lot 592 DP752049 and Lot 100 DP623500 (Figure 1.2). The school is bound by Golden Grove Street (to the east), Abercrombie Street (to the south), with buildings from the University of Sydney's Abercrombie Precinct (Darlington Campus) on the other boundaries.

GML Heritage Pty Ltd (GML) has been engaged by Schools Infrastructure NSW (SI NSW) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the redevelopment of Darlington PS. The ACHAR forms part of the Environmental Assessment for the project that is subject to assessment as State Significant Development (SSD) under the *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act). The ACHAR aims to identify and describe Aboriginal cultural and heritage connections within Darlington PS.

At the commencement of the assessment process it was understood the local Aboriginal community was socially connected with the school, and the school had a high percentage of Aboriginal teachers and students relative to other inner-city Sydney schools. The diverse nature of the school's population and the different aspirations the parents have for their children is reflected in the mission statement of the school:

Darlington Public School is a centre for learning, enjoyment and cultural enrichment.<sup>1</sup>

As such, connections between the community and the school were not the traditional heritage or archaeological aspects. This has been recognised by SI NSW through development of 15 Darlington PS Key Design Themes (Figure 1.3), which underpin the new design for the school.

To develop a methodology suitable for assessing the heritage values of the school, GML teamed up with JOC Consulting (JOC), which specialises in community consultation. Four themed consultation processes were undertaken with the school community. The output from the consultations informs and underpins the heritage values assessment, and has provided a context for policy development that aims to recognise, incorporate and conserve the most important components of the school's Aboriginal culture and heritage through the redevelopment process.

# 1.2 Project SEARs

The Darlington PS redevelopment is being assessed as SSD (SSD 9914). Secretary's Environmental Assessment Requirements (SEARs) were issued on 19 March 2019. Key Issue 10 identifies the requirements for Aboriginal heritage. The SEARs require adherence to the following Office of Environment and Heritage (OEH) policy and documents:

- Aboriginal cultural heritage consultation requirements for proponents 2010, Part 6, National Parks and Wildlife Act 1974 [OEH 2010];
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (the Due Diligence Code);
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (the Code of Practice);

- OEH, Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW;
   and
- the Australia ICOMOS Burra Charter, 2013 (Burra Charter).

**Table 1.1** Project SEARs and Compliance with the ACHAR.

SEARs Deliverable Requirements – ACHAR	Document Reference
Identify and describe the Aboriginal cultural heritage values that exist across the site and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation.	Sections 2 to 5
Identify and address the Aboriginal cultural heritage values in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010).	This report and Appendix A
Undertake consultation with Aboriginal people and document in accordance with Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values of Aboriginal people who have a cultural association with the land are to be documented in the ACHAR.	Section 3 and Appendix B
Identify, assess and document all impacts on the Aboriginal cultural heritage values in the ACHAR.	Section 6
The EIS and the supporting ACHAR must demonstrate attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.	Sections 6 and 7

# 1.3 Proposed Development

The primary objective of the proposed development is to increase the capacity of the school in order to meet the growing demand for public education in Sydney's Inner West suburbs. The development will seek to demolish and rebuild the existing school to accommodate up to 437 students. It is proposed that the existing building stock, which is nearing the end of its economic life and usefulness, will be replaced with modern educational buildings that will meet the learning needs of the students and provide a comfortable working environment for staff.

Supplementary objectives of the proposed development include:

- creation of a welcoming atmosphere and pleasant school environment both internally and externally;
- improvement of the school's connection with the local community;
- retention of Aboriginal artworks and artefacts for display and storage in the new development;
- design of intuitive wayfinding throughout the school grounds;
- improvement of pedestrian safety at school pick-up/drop-off points;
- creation of purposeful outdoor learning spaces to function as a learning tool for student interaction and exploration;
- design of innovative learning environments; and
- provision of community access to the communal hall, play space and other ancillary facilities.

The physical accommodation brief includes the following:

- nineteen new home bases with shared practical, presentation, withdrawal and outdoor areas;
- new administration facilities with a school clinic;
- new staff room facilities;
- new library;
- one new special programs rooms;
- new communal hall with OSHC and canteen facilities;
- three new preschool classrooms with dedicated storage, toilets and outdoor play area;
- accessible and ambulant toilet facilities and new general storage areas;
- new external play area with a covered outdoor learning area (COLA); and
- new substation and services rooms and cupboards.

# 1.4 Statutory Context

## 1.4.1 Environmental Planning and Assessment Act 1979

The EPA Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments can include Aboriginal objects and places, historic sites, landscapes and parks. The EPA Act requires that appropriate measures be taken for the management of the potential archaeological resource consistent with the requirements of the *National Parks and Wildlife Act 1974* (NSW) (NPW Act).

The relevant sections of the EPA Act are:

- Part 4: Development that requires consent under consideration of environmental planning instruments.
- Part 4, Division 4.7 State Significant Development, Section 4.41.
- Part 5: An assessment process for activities undertaken by Public Authorities and for developments that do not require development consent but an approval under another mechanism.

### 1.4.2 National Parks and Wildlife Act 1974

Section 90 of the NPW Act provides statutory protection for all Aboriginal 'objects' consisting of any material evidence of the Indigenous occupation of New South Wales. It also enables, under Section 84, the declaration of 'Aboriginal places', which are areas of cultural significance to the Aboriginal community. Aboriginal objects and places are given automatic statutory protection in NSW and it is an offence to harm an Aboriginal object or declared Aboriginal Place without the Minister's consent.

The NPW Act defines an Aboriginal object as:

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Under the EPA Act, Section 4.41, SSD that is authorised by the granting of a development consent does not require an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the NPW Act. However, a project's SEARs define the mechanism for the assessment and management of Aboriginal heritage and objects.

# 1.5 Approach to the Assessment of Aboriginal Heritage

# 1.5.1 Aboriginal Archaeology and Aboriginal Objects

An assessment of the Darlington PS Aboriginal archaeological potential has been undertaken and is presented as Appendix A. The assessment found the Darlington PS site has been subject to significant disturbance over the last 130 years and has little to no potential for Aboriginal objects, as defined under the NPW Act.

The report finds there is no further requirement for Aboriginal archaeological involvement during the redevelopment process. Development works can proceed subject to caution.

# 1.5.2 The Burra Charter Process

The Burra Charter process (Article 6) defines a broad three-stage process—comprising seven smaller steps—for the management of heritage. The three stages involve:

- 1. developing an understanding of significance;
- 2. ensuring policy is developed appropriate to the significance; and
- 3. ensuring management is undertaken in accordance with that policy.

The definitions presented in the Burra Charter have provided the basis for definitions used in this report. The Burra Charter's Indigenous Practice Note provides further guidance for application of the Burra Charter to Aboriginal heritage. Of relevance are the following definitions:

### Article 1.1—Place

Place means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.<sup>2</sup>

'Place' includes locations that embody spiritual value (such as Dreaming places, sacred landscapes, and stone arrangements), social and historical value (such as massacre sites), as well as scientific value (such as archaeological sites). In fact, one place may be all of these things or may embody all of these values at the same time.<sup>3</sup>

### Article 1.2—Cultural Significance

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.<sup>4</sup>

### Article 1.10—Use

Use means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.<sup>5</sup>

### Article 1.11—Compatible Use

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

### Article 8—Setting

Conservation requires the retention of an appropriate setting. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place.<sup>6</sup>

Places of significance to Indigenous people require a holistic approach to 'setting'. 'Setting' may encompass the broadest of experiential factors including a sense of 'intrusion' occasioned when people of the 'wrong' gender, age or level of initiation trespass on defined areas, as well as auditory and visual intrusion.

For some Indigenous peoples, nature and culture are indivisible. The social significance and spiritual significance of a place for Indigenous people may be wholly or partly dependent on the natural environment that the place forms a part of, including aspects such as biodiversity, and totemic and resource species.<sup>7</sup>

# **Application to the Current Assessment**

This ACHAR has been prepared in accordance with the requirements of the OEH *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011).<sup>8</sup> Stages 1 and 2 of the Burra Charter Process have been applied during development of the ACHAR. Stage 3 can be implemented by the project architect during design for the new school, and SI NSW through post consent conditions, where policy and future projects can be implemented.

The following steps have thus far been undertaken for this ACHAR.

### Step 1—Understand the Place

An archaeological understanding of the place was achieved through investigation into the local environment, potential archaeology, history and literature relevant to the study area. Formal Aboriginal community consultation was undertaken adhering to OEH guidelines for proponents. These investigations represented a traditional approach to an assessment of Aboriginal heritage.

In addition, collaboration with the school principal identified three stakeholder groups key to understanding the value of the school. These included: current and past school teachers, the school children, and parents of school children. Three separate means of consulting with these groups was developed, and targeted consultation was undertaken. The approach has identified the themes and items of significant value to each group.

# Step 2—Assess Cultural Significance

The assessment of cultural significance was developed on the basis that that 'cultural significance may change' and 'tangible heritage should not be emphasised at the expense of intangible heritage'. 10

Darlington PS's cultural significance is founded in the social, aesthetic and recent history of the place. The assessment has made efforts to understand these values and provide means for recognition and conservation.

### Step 3—Identify Factors and Issues

Consideration of key factors and issues connected with the school's redevelopment has involved collaboration with the wider project team. The size of the school, its future requirements, consideration

of values outside heritage and compliance with state policy and legislation means considerable constraints exist for the design team.

## Step 4—Develop Policy

The results from Steps 1 to 3 underpin the heritage policies. These aim to guide the school's redevelopment process. The policies define specific future needs, opportunities and constraints connected with the redevelopment. Some policy can be implemented through the design process; other policies need to form part of the Statement of Commitments for the new school, post project approval.

# 1.6 Objectives of this Aboriginal Cultural Heritage Assessment

The objectives of this assessment were to:

- undertake identification of Aboriginal community members who can speak for the Country within which the project is located;
- involve the Aboriginal community in the cultural heritage assessment process;
- consult with the Aboriginal community and determine their opinions with respect to the project and its potential 'harm' to cultural heritage;
- understand the range and type of Aboriginal heritage values and places within the study area;
- determine whether the identified Aboriginal sites and places are a component of a wider Aboriginal cultural landscape;
- understand how the physical Aboriginal sites relate to Aboriginal tradition within the wider area;
- prepare a cultural heritage values assessment for all identified aspects of Aboriginal cultural heritage, as identified within this report;
- determine how the proposed project may impact the identified Aboriginal cultural heritage;
- aim to minimise impacts to Aboriginal cultural heritage through sensible and pragmatic site and land management;
- determine where impacts are unavoidable and develop a series of impact mitigation strategies that benefit Aboriginal cultural heritage and the proponent; and
- provide clear recommendations for the conservation of Aboriginal heritage values and mitigation of any potential impacts to these values.

# 1.7 Investigators, Contributors and Authorship

This project has been undertaken by the personnel listed in Table 1.2. Each person's role and affiliations are detailed in the table below.

Table 1.2 Investigators and Contributors.

Person	Affiliation	Role
Cath Snelgrove	GML	Project Director, project advice and report reviewer (Versions 1 and 2)
Madeline Shanahan	GML	Project Director, project advice and report reviewer (Versions 3 and 4)

Person	Affiliation	Role		
Tim Owen GML		Project Manager, lead heritage investigator and primary author		
Lara Tooby GML		Author of due diligence reporting		
Suzy Pickles	GML	School liaison and participation in school consultation		
Susan Whitby GML		Participation in school consultation		
John O'Callaghan JOC		Lead social consultant and development of social analysis		
Mette Kirk JOC		Development of social analysis, implementation of social analysis, and author of JOC reports		
Elizabeth Sinnott	DPS	School principal 2019, key contact and facilitator for social analysis		
Luen Samonte	GWA	Principal project architect 2019		
Elizabeth Carpenter	FJMT	Principal project architect 2020		



Figure 1.1 The study area in relation to surrounding suburbs. (Source: SIX Maps, with GML additions 2019)



Figure 1.2 Location of the study area. (Source: SIX Maps, with GML additions 2019)

### NSW Department of Education - School Infrastructure

### Key design themes

excellence:



#### Aboriginal Education Excellence



- Display of student end community Aboriginal art projects, and initiatives.
- Strong ties with the local and Aboriginal institutions including NCIE, Redfern Police, Sydney University and UTS



#### 2 Creative & Performing Arts

- A reputation for creative and performing arts
- Dedicated music room
- Importance of practical activities areas
   Students involved in
- Students involved in DNN Training Band, Koori Ersemble and Condwana Chor
- A diverse school cumcula that includes visual arts, drama, music choir and training bands



# 3 Community Hub

- Promote a culture of equality, diversity and inclusivity
- Cose facilities to function as a community hub and provide spaces for fire
- Freserva integrated services such as before and after school care, preschool care, occupational therapy speech therapy and mental health



#### Learning & Student Wellbeing

- Create environmental outside the classroom that extend learning and promote student wellbeing
- Request for integrated breakout spaces and maker spaces
- Environments can also include auditorium and outdoor learning



### 5 Create Global Citizens

- Preserve school vision of preparing students as global citizens through learning and teaching of contemporary itspes
- Program on sustainability and "going green" initiative
- Curricula covers diverse priorities such as Abunginal and Tumes strait islander histories and cultures, Australia-Asia engagement, sustainability and digital technologies



#### 6 Communicate through & Navigate by Architecture

- To create environments that embody education and encourage life-long tearning and discovery
- Environments that assist in navigating spaces from the point of view of the osers including pre-schoolers, students, parents and visitori.



### 7 Heritage Connections

- To preserve the history and heritage of students and the school
- Calebration of history and acknowledgement of social heritage, indigenous heritage and natural heritage



#### B Point of Arrival, Entrance & Navigation

- To create a welcoming and pronounced main actual entry
- Space for the school community to wait, gather and communicate
- Dedicated kiss and drop zone
- Maritalis security to ensure the safety of students, staff and parents



### schoolinfrastructure.nsw.gov.au

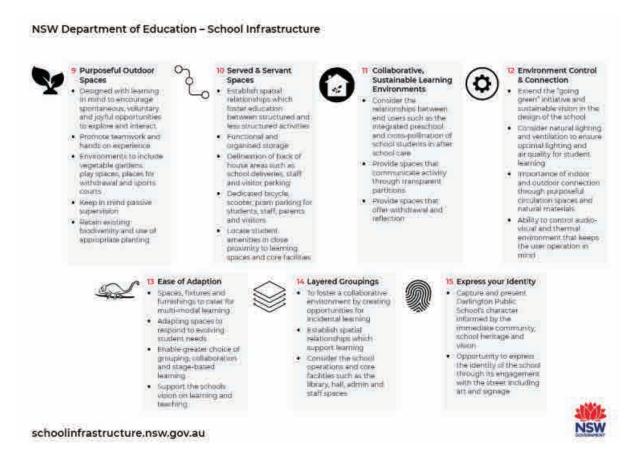


Figure 1.3 NSW Department of Education—Darlington PS Key Design Themes. (Source: SI NSW 2018)

# 1.8 Endnotes

- 1 Darlington Public School, 'About Our School', viewed 27 March 2019 <a href="https://darlington-p.schools.nsw.gov.au/about-our-school.html">https://darlington-p.schools.nsw.gov.au/about-our-school.html</a>>.
- <sup>2</sup> Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC, Article 1.1.
- Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC, p 2.
- 4 Australia ICOMOS Inc, The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013, Australia ICOMOS Inc, Burwood, VIC, Article 1.2.
- Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC, Article 1.10.
- 6 Australia ICOMOS Inc, The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013, Australia ICOMOS Inc, Burwood, VIC, Article 8.
- Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC, p 5.
- Office of Environment and Heritage NSW, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW 2011*, Office of Environment and Heritage, Department of Premier and Cabinet, Sydney South,
- 9 Australia ICOMOS Inc, The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013, Australia ICOMOS Inc, Burwood, VIC, p 4.
- Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC, pp 2 and 4.

# 2.0 Darlington Public School

The history of Darlington's Public Schools are interwoven across three separate school sites, entangled with the late nineteenth and twentieth-century history of Darlington and Redfern. The schools are viewed as a central part of the local community—not just as places of education, but as places of recognition, identify, safety and belonging. This brief overview contextualises the place of the current Darlington Public School, highlighting some of its important social and aesthetic connections.

# 2.1 A Brief History of Darlington's Public Schools

The Aboriginal history of Sydney, post British arrival, is complex and includes Aboriginal connections from across Australia. Towards the end of the nineteenth century, Sydney was seen as a place of opportunity and work. Aboriginal people moved to Sydney from across the state, seeking work opportunities, accommodation and connections with community and family. Darlington and Redfern have always had a large Aboriginal population because of their central locations, relatively cheap housing, and close proximity to industry and jobs in Sydney. These connections are enduring and continue today.

Establishment of the first Darlington School (the Old Darlington School) is connected with local industry and the Eveleigh Railway Yards. The Eveleigh Railway Yards was proposed and planned in 1875, and the land was resumed in 1878 when the railway workshops were built.<sup>2</sup> Concurrent with this industrial expansion was the working-class urban development in Darlington, including the Golden Grove Estate. The rows of upright narrow Victorian terraces, which today provide the suburb with its character, were constructed to house the railway workers.

By 1877 Darlington's population became sufficient to warrant the establishment of its own school, and the first Darlington School was proposed. The school was designed by George Allen Mansfield, architect to the Council of Education. Darlington was one of several schools he designed, and in 1878 the Old Darlington School, located at Maze Crescent inside the University of Sydney, opened. The Old Darlington School is now part of the university and a state heritage listed item. The statement of significance for the Old Darlington School describes the place as:

An important public building of the former suburb of Darlington, the smallest municipality in Sydney. An example of the work of the well known architect George Allen Mansfield. A fine example of a single storey Gothic Revival style suburban schools designed by the Architect to the Council of Education: George Allen Mansfield. Indicating the process of expansion of the University of Sydney into Darlington.<sup>3</sup>

By 1880 education was made compulsory and the Golden Grove Estate was subdivided. The effect was a dramatic increase in the student intake, which increased from 361, in 1880, to 1064 by 1890.<sup>4</sup>

In the late nineteenth century, many Aboriginal people sought work in public and private industries that were emerging around the railyards at Eveleigh. Opening in 1886, the Eveleigh Railway Yards became Sydney's largest employer, and one of the biggest employers of Aboriginal people. Many Aboriginal men worked in the Alexandria goods yard loading trains. Aboriginal people were also working on the waterfront docks at Walsh Bay and Darling Harbour,<sup>5</sup> at the Henry Jones & Co IXL Jam Factory on Golden Grove Street (adjacent to the current Darlington School), Francis Chocolates on Stirling Street in Redfern, and the Australian Glass Manufacturers on South Dowling Street at Waterloo.<sup>6</sup> Most Aboriginal people employed in local industry lived in the Darlington to Redfern area, and many sent their children to the old Darlington school.

Through the twentieth century Redfern, and notoriously 'The Block', became associated with the local Aboriginal community. This specific history stems from the 1930s depression when many extended families moved to the area around Caroline, Eveleigh, Vine and Louis Streets, which became known as 'The Block'. Following the 1967 Referendum on Citizenship Rights, and the abolition of the NSW Aboriginal reserve system, the local Aboriginal population in Redfern continued to increase. The early 1970s saw squatters, political opposition and activism focus on land around The Block, as a response to Sydney's overcrowding and homelessness. In 1973 Aboriginal leaders formed the Aboriginal Housing Company, and bought six houses in The Block with a grant from the Whitlam Labor Government. By 1994 all of The Block was owned by the Aboriginal Housing Company, and remains owned by them today.<sup>7</sup>

Through to the 1970s, Aboriginal parents living in Redfern and Darlington sent their children to the Old Darlington School. By the 1970s the school was in a poor condition and concurrent with other social changes in the suburb, a new school was proposed. In 1975 the Old Darlington School closed, and ownership was transferred to Sydney University. A new school was constructed across a cleared block occupying land bound by Abercrombie Street, Golden Grove Street, Rose Lane and Darlington Lane—the Darlington Public School. This school was built to serve the needs of an expanding and growing community.



**Figure 2.1** Darlington in 1943, showing the Old Darlington School; the rows of Victorian Terraces that characterised Darlington, including houses across the area later occupied by the Darlington Public School; the Eveleigh railway yards; and the Henry Jones & Co IXL Jam Factory. (Source: Six Maps, with GML overlay, 2019)

# 2.2 Aboriginal Education at Darlington Public School

Darlington Public School opened its doors for education in 1975. In 1989 the effects from the Newcastle earthquake impacted Sydney, including the Blackfriars school in Chippendale. Blackfriars had also been designed by Mansfield, in 1884, but in 1989 this school was significantly damaged and closed. The pre-school to Year 2 students were moved to Darlington School, combining enrolments.

Teaching students for 44 years, the school has a current student population of 240. The school is renowned for its connection with the local Aboriginal community, and currently has 25 per cent Aboriginal student enrolment, taught by 21 teachers, six of whom are Aboriginal. The position of the school within the Aboriginal community and its approach to education is described best by the school:

Darlington Public School prides itself on Aboriginal education and provides many opportunities for Aboriginal and Torres Strait Islander students to get the most out of their education, in accordance with the objectives outlined in Department of Education and Communities Aboriginal Education Policy.

Darlington Public School implements Personalised Learning Plans (PLP) for all Aboriginal students. PLPs are created in partnership with Aboriginal parents, teacher and student and involve mutual agreement on learning goals. They reflect areas of strength and development and demonstrate evidence of linear achievement for Aboriginal students.

Our school's Aboriginal education resource teacher and our Aboriginal education officer work in partnership with staff to create programs and provide direct support for Aboriginal and Torres Strait Islander students in literacy and numeracy.<sup>8</sup>

# 2.3 Cultural Heritage Within the Current Darlington School

Over the 44 years of operation the school building itself has not substantially changed. Constructed from concrete and brick, the school and its layout present a series of corridors and classrooms, centred around a large sunken hall. The layout is typical of the place's period of construction, but has been adapted by the school community to become fit for purpose, notably in the recognition, celebration and education of Aboriginal history, people, art and culture.

An understanding of the physical school elements which present an outward expression of connections to the Aboriginal community underpins the assessment of intangible elements of education. This section provides a brief review of the school's aesthetics, notably Aboriginal art and specific spaces or elements within the school that have been identified as important by teachers and students. A more detailed review of art with a 'high' cultural value is provided in Section 4 as an outcome from the process of consultation.

# 2.3.1 Aboriginal Heritage in Space and Design Elements

Darlington PS presents itself as a place clearly connected with Aboriginal culture, heritage and education. The school has designed and adapted spaces with Aboriginal art, song, and language. Some of these elements are clearly visible to visitors, such as the school entrance way, whilst other elements of then place are intangible and need to be experienced, such as the school song.

Visitors to the school enter through a large bright red door on Golden Grove Street. This door has become a symbol for entry into the school and designates a point of arrival (no specific cultural connection has been described with this door). The school is symbolised by an Aboriginal logo of a kangaroo encircled by kangaroo footprints and the school name (Figure 2.1). This was designed by former teacher Neil Thorne (who also designed and 'burnt' Aboriginal artwork into a door and created several burnt wood artworks, and the school totems).



Figure 2.2 Darlington PS logo and motto, designed by former teacher Neil Thorne. (Source: GML 2019)

The small entrance courtyard contains numerous indigenous plantings and Aboriginal artworks (Figure 2.3), leading past an acknowledgement of Country to the entrance foyer. This area is resplendent with a large mural beneath the reception desk (Figure 2.4), and display cases with Aboriginal objects. Moving along a narrow wall with a large Aboriginal language map, and past the burnt wood door, the school's main hall contains ribbons of Aboriginal flags, images of Aboriginal people (Figure 2.5), and six Jarjums rugs which were designed by Aboriginal students in collaboration their elders (Figure 2.6, and Section 2.3.2).

The school halls, walls, external spaces and surfaces are covered with Aboriginal art, motifs, symbols and items that create connections across the school and a journey through the corridors and spaces of the school. The art leads children through their day, between classes, providing a backdrop and context to their everyday activities. The development of the school and its aesthetic character has been organic, unplanned and matured with the school and its teachers. Every painting, depiction, symbol etc has a story; some happy, some connected to events; some with people. Most teachers know some part of the story behind any particular artwork—only when they come together to talk, or yarn, is the full story told.

The Year 6 art wall contains specifically designed artworks, produced each year by the students in Year 6, with the assistance of professional artists and the art teachers (Figure 2.7). The artworks are specifically designed by the year and recreate one of the school totems; children make individual artworks which they take home with them at the end of the year. To date four works have been produced: goannas, frilled-neck lizards, koalas and owls—there are 10 further totems to be produced.

They are really important because they link the kids who have current gone through school to the art works. You see the kids who have left the school, come back to the school, and they still remember making their art work—'I made that' or 'that's my name there'—it creates a community, who feel they link back to all of the school's history, and brings it up to now. [John Askew, 8 May 2019]

The Yarning place is constructed from sandstone blocks and sits beneath the Year 6 artworks (Figure 2.7). The area is used by students to sit and talk, or discuss important matters. The space is valued by students and teachers and provides a safe location for discussion.

One of the school courtyards features sandstone blocks with Aboriginal engravings (Figure 2.8). These are significant because they are the only engravings at the school.

Carvings are strong in NSW and a big part of our Aboriginal culture. They are one of the few forms [of art and culture] that have lived on, such as at Mount Kuring Gai. 10 Its something kids can visit in real life, as well as having something local... I would like to see this form of Aboriginal art represented in the new school. [Kharma Greer, 8 May 2019]



Figure 2.3 Entrance courtyard with indigenous plants and Aboriginal artworks. (Source: GML 2019)



Figure 2.4 Entrance foyer with Aboriginal mural. (Source: GML



Figure 2.5 The school's main hall decorated with Aboriginal flags, and six Jarjums rugs, designed by Aboriginal children in collaboration with their elders. (Source: GML 2019)



Figure 2.6 The six Jarjums rugs hanging on the school wall. (Source: GML 2019)





Figure 2.7 The Year 6 art wall, and Yarning place. (Source: GML 2019)

Figure 2.8 Engraved sandstone blocks in the school yard. (Source: GML 2019)

### 2.3.2 The Jarjums Rugs

On the wall of the school's main hall hangs six hand-crafted rugs, each measuring 2m by 2.9m (Figure 2.6, and Figures 2.9 to 2.14). These are the 'Jarjums rugs', which were designed by Aboriginal students at the school in collaboration with their elders. The rugs were initially visualised and drawn on paper, followed by a process of creating a physical three-dimensional design. The designs were reviewed by 'The Rug Collection', who selected six designs for manufacture using hand tufted wool.

The rugs are described by principal Liz Sinnott as 'one of the most authentic cultural exchanges I have been involved in, in my 30 plus years of teaching', and 'an authentic piece of children working with elders to give their song lines a visual presence'.

Each of the six rugs holds significance to the school and the children and demonstrates the connections between the school and Aboriginal culture. A description of the story or songline for each rug is provided by the students:

#### Bucca

The rug shows my home in the Nambucca Valley and my home town, Bowraville and the places my family gather to spend time together, to yarn and connect. In my design there are the meeting places at the Island (Nambucca Heads) and meeting places in Bowra, where I and my extended family come from. The green mountains and bush represents the Mountains of Bowra.

The water represents the freshwater of Bowra and my favourite beach at Bucca the Island. These are special places to me and places I miss because we live in Sydney. [Mandawuy Jarrett]

#### Home

My mother is from salt water country Gumbaynggirr, on the mid North Coast of NSW, and my father is from freshwater country, Nooghaburra, in North Western NSW.

The yellow and green side of the rug is the freshwater, the purple and black is the saltwater. The circle in the middle represents me and a place to call "Home". The lines that lead into the circle is the connection where it belongs. [Maawa Mumbulla]



**Figure 2.9** *Bucca* by Mandawuy Jarrett. (Source: The Rug Collection)



**Figure 2.10** *Home* by Maawa Mumbulla. (Source: The Rug Collection)



**Figure 2.11** *Mother Earth Raging Sands* by Kohen Sines. (Source: The Rug Collection)



**Figure 2.12** *Quindalup* by Kyleigha Crawford. (Source: The Rug Collection)



**Figure 2.13** *Spiritual Animal* by Antwon Peckham. (Source: The Rug Collection)



**Figure 2.14** *Traditional Island Hunting Connections* by Denis Tarrant. (Source: The Rug Collection)

### Mother Earth and the Raging Sands

This design shows the story of Mother Earth and the Raging Sands.

The different colours in this design represent the different sands; the red and brown are the desert sands; the dark grey are the muddy river sands; the creamy white in the middle represent the beach sands. Our Mother Earth owns these sands and will one day walk to the sands. [Kohen Sines]

### Quindalup

This design is about family and us all coming together. The circles are the campfires with my family sitting around them and then the two rivers that join them. I have called this rug Quindalup which means 'a happy place'. [Kyleigha Crawford]

### Spiritual Animal

The Owl is a spirit animal. When the Owl spirit appears it is a sign to let family members know that there is an announcement of significance. Most likely symbolic, like a life transition. [Antwon Peckham]

### Traditional Island Hunting Connections

The red line represents the hunting grounds and the connection between islands. The islands of the Torres Strait are depicted in grey while the blue represents the sea. This shows the connection between the lamo (Yam Island) and Badu Island. [Denis Tarrant]

## 2.3.3 Teaching Aboriginal Culture and Heritage

'The educators at Darlington PS show a strong awareness of Aboriginal culture through ongoing experiences' (Clarence Slockee, 18 April 2019). This awareness is present in the everyday actions of teachers, the naming of the classes, and the connection with Aboriginal culture which underpins education methods of the school. It is implemented by all teachers—both Aboriginal and non-Aboriginal.

At Darlington PS each class is allocated a name relating to Australian fauna: Scarlet Robins, Rainbow Lorikeets, Echidnas, Owls, Turtles, Frogs, Dingoes, Platypuses, Koalas, Geckos, Goannas and Frilledneck Lizards. <sup>11</sup> Each class is referred to by its animal name, and each classroom contains a painted depiction of its animal totem. These totems were designed and painted by Aboriginal elders and former teacher Neil Thorne (Figure 2.15). These totems have come to form the basis for the Year 6 artworks.



Figure 2.15 Frilled-neck Lizard, class totem painting. (Source: GML 2019)

Darlington PS teachers present an Acknowledgement of Country at the start of every day, often in a space described as a 'Yarning Circle'. Development of a specific acknowledgement has been led by the pre-school Aboriginal teachers, where actions accompany the following words:

We put of hands on the ground to acknowledge the Gadigal land. (hands to the floor) We raise of hands to the sky that covers the Gadigal land. (hands in the air) We touch our hearts to care for the Gadigal land. (hands on your chest)

Darlington PS has a school song, written and composed by Graeme Sandstrom. The song is about reconciliation and healing:

Darlington School Song

Have you heard of our children and our name? We are proud to be standing here today. All the world in front of us. Timeless land behind us.

Here's a meeting where different souls can blend.

Now its time for our differences to mend.

We've got it all together now.

Let's show them all,

Let's show them how.

Sing out to the world as one.

We're a school where we get things done.

Can you hear us?

We mean everything we say.

And if you listen you can join with us today.

The themes of reconciliation and healing are regularly practiced and implemented by the teachers, often through collaborative events and the creation of specific art works. A recent example of reconciliation is the creation of 'Our Reconciliation Sand Time Line' (Figure 2.16), which is displayed with decorated Aboriginal objects in the school's main entrance foyer:

Our Reconciliation Sand Time Line

This is the Darlington Public School Reconciliation Sand Time Line which was created by students, teachers, families and the local community.

It signifies that 'We all walk together on this land as one,' it was created using soil, natural white and red sand which represent different areas of Australia and the land in which we are standing today. All students got to place a cup of sand within the box which represents all students, families and the local community who contributed becoming one.

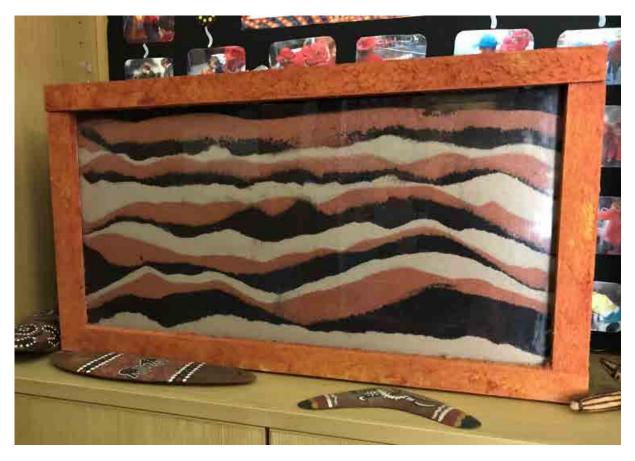


Figure 2.16 'Our Reconciliation Sand Time Line'. (Source: GML 2019)

# 2.3.4 The Art Collection

Darlington PS holds a considerable quantity of Aboriginal artworks, over 100, and Aboriginal objects (eg Figure 2.17, and Appendix E). These represent a collection amassed over the school's 40 years of education. Many of the artworks have been gifted, produced or manufactured in collaboration with Aboriginal elders, parents, teachers and students. The art provides a tangible expression of connection between the school and its Aboriginal origins and heritage—for all students, teachers and parents, present and past.

An overview of the artworks that hold the greatest attachment for current teachers is presented in Section 4.4. SI NSW has prepared a catalogue of all artworks, which is presented in Appendix E.



Figure 2.17 Hanging mural painted on board, Year 6 artwork 2015. (Source: GML 2019)

# 2.4 Endnotes

- Barani, Sydney's Aboriginal History, 'Henry Jones IXL Jam Factory', viewed 27 March 2019 <a href="https://www.sydneybarani.com.au/sites/henry-jones-ixl-jam-factory/">https://www.sydneybarani.com.au/sites/henry-jones-ixl-jam-factory/</a>.
- Office of Environment and Heritage, State Heritage Inventory, 'Eveleigh Railway Workshops', viewed 27 March 2019 <a href="https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045103">https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045103</a>.
- Office of Environment and Heritage, State Heritage Inventory, 'Old Darlington School', viewed 27 March 2019 <a href="https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4726033">https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4726033</a>.
- 4 Darlington Public School, 'About our school', viewed 27 March 2019 <a href="https://darlington-p.schools.nsw.gov.au/about-our-school.html">https://darlington-p.schools.nsw.gov.au/about-our-school.html</a>.
- Barani, Sydney's Aboriginal History, 'Eveleigh Railway Yards', viewed 27 March 2019 <a href="https://www.sydneybarani.com.au/sites/eveleigh-railway-yards/">https://www.sydneybarani.com.au/sites/eveleigh-railway-yards/</a>>.
- Barani, Sydney's Aboriginal History, 'Henry Jones IXL Jam Factory', viewed 27 March 2019 <a href="https://www.sydneybarani.com.au/sites/henry-jones-ixl-jam-factory/">https://www.sydneybarani.com.au/sites/henry-jones-ixl-jam-factory/</a>.
- Barani, Sydney's Aboriginal History, 'Aboriginal Housing Company', viewed 27 March 2019 <a href="https://www.sydneybarani.com.au/sites/aboriginal-housing-company/">https://www.sydneybarani.com.au/sites/aboriginal-housing-company/</a>>.
- Barlington Public School, 'About our school', viewed 27 March 2019 <a href="https://darlington-p.schools.nsw.gov.au/about-our-school.html">https://darlington-p.schools.nsw.gov.au/about-our-school.html</a>.
- The Jarjums rugs are sold through 'The Rug Collection' <a href="https://www.therugcollection.com.au/product-category/rugs/designer-collection/indigenous-collection/">https://www.therugcollection.com.au/product-category/rugs/designer-collection/indigenous-collection/</a>.
- Eg NSW National Parks and Wildlife Service, 'Aboriginal Heritage walk' <a href="https://www.nationalparks.nsw.gov.au/things-to-do/walking-tracks/aboriginal-heritage-walk">https://www.nationalparks.nsw.gov.au/things-to-do/walking-tracks/aboriginal-heritage-walk</a>.
- 11 Darlington Public School, 'Classes', viewed 27 March 2019 <a href="https://darlington-p.schools.nsw.gov.au/classes.html">https://darlington-p.schools.nsw.gov.au/classes.html</a>>.

# 3.0 Community Consultation—Processes

## 3.1 Introduction

Aboriginal and school community consultation has followed three avenues of investigation during the development of this ACHAR.

- A formal process of Aboriginal community consultation adhering to the OEH's guidelines has been undertaken.<sup>1</sup>
- Over the past two years, the school has undertaken informal consultation into the values of the
  place. In addition, all NSW schools undertake consultation with their students; schools with a
  higher proportion of Aboriginal children are asked two specific additional questions about their
  connection. The outcomes from these consultations have been provided and used to underpin the
  direction for further specific community consultation.
- A program of community consultation was developed by JOC and GML, in collaboration with Darlington PS, the project architects and SI NSW. The aim was to develop an understanding of key values held by three specific user groups who are connected with the school.

This section provides the methodology for each of these three avenues of investigation; with respect to prior consultation undertaken by the school, the outcomes and analysis are presented here because they underpin the consequent development of the 2019 consultation process.

# 3.2 OEH Aboriginal Community Consultation Process

The formal process of Aboriginal community consultation was undertaken adhering to the OEH 2010 guidelines. Details of the full consultation process are provided in Appendix B. Given the nature of the project and assessment of an active school, all Aboriginal groups identified through the initial processes of consultation were asked to specify either their connection with the school and its students, or whether they held specific knowledge relating to the school and its location in Darlington.

A total of six groups registered as Aboriginal parties (RAPs) for consultation during the project. One group identified they had a relative attending the school. As the likely values connected with the school were not archaeological or reflective of other traditional connections, and as the subject site is an active school, no formal opportunity was made for RAPs to enter the school and assess the school. However, those RAPs with a direct connection with the school have been afforded the opportunity to provide input into the assessment of values through completion of the parent's questionnaire (detailed in Section 3.5.3). This questionnaire was disseminated directly through the school's systems, under the guidance of the school principal.

All RAPs have been issued with the draft of this ACHAR and asked to provide feedback, comments and suggestions within the formal 28-day review period. All comments are attached with the consultation log and included where relevant into the report.

# 3.3 Consultation Undertaken Prior to 2019

A long history of connection exists between Darlington PS and the local community, local Aboriginal parents and Aboriginal students. The importance of the connection was recognised by the school's

principal as an aspect which needed to be recognised, recorded, appreciated and celebrated within the new school design.

To capture the connections and values between the school and local Aboriginal community, the school held a series of consultation events during 2018. Although these predate the current investigation and assessment, the outcomes were captured by the school. The outcomes from 2018 work provide a baseline from which the current process of investigation and consultation can commence. This section provides an overview of all prior consultation, and identifies key themes and aspects relating to Aboriginal heritage at Darlington PS. The outcomes have been used to direct the current 2019 program of consultation.

Consultation between the school, parents and teachers has been undertaken through the following activities/events:

- A teacher and parent workshop, in March 2018. The workshop included 11 participants who undertook a Preserve, Add, Remove, Keep Out (PARK) exercise.
- During NAIDOC week 2018, an information booth provided details relating to the school's redevelopment and sought feedback and comments from attendees. Three posters requested responses from the school children, parents and teachers; the themes were: 'Bright Ideas', 'What you love about Darlington?' and 'Cultural aspects you want to add/keep'.
- Several surveys have been undertaken, including a 'Darlington Public School Upgrade Snapshot'
  and two 'Tell Them From Me' surveys of Year 4, 5 and 6 children, which included Darlingtonspecific questions relating to Aboriginal heritage.
- A community meeting was held on 16 May 2018, where comments and feedback were sought on the proposed development. Around 100 people attended the meeting. A second PARK consultation exercise was undertaken.

### 3.4 Outcomes and Themes Consultation Prior to 2019

Very strong opinion and feedback on the connection between Darlington Public School and Aboriginal culture and heritage has been displayed by the three response groups (school children, parents and teachers). The outcomes and themes are presented by groups: the school children and the adults (parents and teachers).

## 3.4.1 From the School Children

The 'Tell Them From Me' surveys asked for a response to two questions from the Aboriginal students:

- 'I feel good about my culture when I am at school'.
- 'My teachers have a good understanding of my culture'.

The responses to both questions in both surveys was overwhelmingly positive (Table 3.1). The outcome demonstrates the strong connection between the students, teachers and Aboriginal heritage recognition at the school.

Survey	1	2	1	2
Response	I feel good about my culture when I am at school		My teachers have a good understanding of my culture	
Strongly Agree	67%	75%	60%	44%
Agree	24%	25%	30%	50%
Neither Agree or Disagree	0%	0%	0%	6%
Disagree	5%	0%	0%	0%
Strongly Disagree	5%	0%	10%	0%

**Table 3.1** Results of the Two 2018 'Tell Them From Me' Surveys (response is in percentage terms).

Consultation with the students has provided some feedback as to important aspects of the place. Students responded to the PARK questions stating that what they wanted to keep in Darlington was the 'Aboriginal culture'. Children also expressed a need for a community garden, including edible plant species. Students also detailed their connection with the art, and expressed a desire for further art, including a 'Koori Flag wall'.

### 3.4.2 From the Parents and Teachers

The responses from adults can be divided into four categories:

- Celebrating and Recognising Aboriginal Culture and History.
- Teaching Aboriginal Culture.
- Requirements for Cultural Spaces.
- Art and Display of Aboriginal Culture.

Statements relating to these themes are presented below, along with an overarching comment on each category.

### Celebrating and Recognising Aboriginal Culture and History

Darlington Public School has a demonstrated and strong connection with Aboriginal culture and heritage. Responses to consultation clearly perceive Darlington as *the* 'Aboriginal school' where exemplary teaching, understanding, presentation and inclusion of Aboriginal culture foster an inclusive atmosphere for all students, Aboriginal and non-Aboriginal.

Preserving the Indigenous heritage and culture of the school is very important for most respondents. The respondents wanted the Department of Education to listen to Indigenous community leadership on how and what will make 'Darlo' a place that really reflects the local story—a place that reaches right back to the Eora/Dharug heritage. Specifically, the strong links to Aboriginal heritage throughout the school via artworks, colours, naming of rooms, representation, teachings and cultural emphasis. Specific comments included:

- Darlington is a unique school with a wonderful, genuinely inclusive culture. This needs to be retained before, during and after the redevelopment.
- 'Strong Aboriginal culture' should be an objective to be retained as part of the redevelopment.

- The Aboriginal Cultural of our school is so important. Consultation and collaboration with our First people's community is essential.
- Preserve the focus on ATSI culture and a celebration of history in the new education model for Darlington public school. This included the Aboriginal artworks visible inside and outside the school.
- The Aboriginal cultural heritage—teaching, naming, art, invitation to Indigenous children to be in the school regardless of catchment.
- Preserve links to Aboriginal heritage.
- I would like the spirit of community that is so strong at Darlington to be reflected in the new build.
- 'All' Aboriginal cultural aspects are important in the redevelopment of Darlington Public School.
- A continuation of the current atmosphere in the new development.
- I'm not Aboriginal, but I like the way the school has really embraced and celebrates the Aboriginal culture.
- The Aboriginal cultural heritage—teaching, naming, art, invitation to Indigenous children to be in the school regardless of catchment.
- Preserve links to Aboriginal Heritage.

# **Teaching Aboriginal Culture**

Darlington Public School's educational awareness and ability to teach students about Aboriginal culture provided the basis for many comments. A commitment is sought to maintain a focus on Aboriginal education in the new school. A perceived threat is apparent in that respondents were worried the new school could lose the connection with Aboriginal culture; conversely, the new school is also tentatively seen as an opportunity to enhance the educational basis. Specific comments included:

- It is vital that Darlington retains and possibly expands the Aboriginal cultural education at the school.
- The PARK exercise highlighted specific aspects relating to the teaching of Aboriginal culture, including: inviting community Elders to interact with and teach students; a 'Brewarra Concept' language class; cultural song, dance and instrument lessons; cultural history lessons; beading and weaving workshops; storytelling/performance areas; Aboriginal tours on site; bush tucker plants in the school gardens; cultural spaces; koori sports; and an Indigenous choir.
- Focus on Aboriginal ways of learning and teaching.
- I'd like the First People to be integrated into the school with information about them everywhere. White people have very little awareness in Australia and information about every aspect of the First People history and how it is important to this area and school is needed, timelines, infographics, as well as cultural aspects. Parents and kids need to be introduced to the First People and their culture with workshops and courses and where possible course work should integrate cultural learning. The gardens should integrate First Peoples food as well. Plant grasses that kids can learn to weave as a class course. Kids love this stuff. Harvest and use what grows at the school.

### 'Spaces'

In general, Aboriginal cultures view and use 'space' differently from other cultures. There are traditions around the use of and access to space, and the need for spaces which provide unique cultural and social engagements. Teachers have developed specific spaces within the current school for different cultural purposes (NB these aspects are investigated in the 2019 consultation, Section 3.5.1). Respondents to

the 2018 engagements identified the presence of these spaces, their cultural links and importance. In terms of Aboriginal aspects important to the redevelopment of Darlington Public School, the respondents recognised that the school is culturally diverse and welcomes all, and required Aboriginal identity expressed through architectural and design principles. Specific comments included:

- Dedicated spaces for cultural learning, starting with Indigenous culture.
- Purposeful outdoor areas for learning and green spaces. These have the potential to be designed with Aboriginal cultural heritage elements.
- Preserve the edible garden, as well as any native trees.
- Comfortable yarning circles for smaller and larger group gatherings.
- Symbols (shapes, artwork, colours) should be embedded in the visual design of the school alongside other cultural symbols.

### Art and Display of Aboriginal Culture

Darlington Public School contains and displays a significant collection of art and artefacts reflective of Aboriginal culture and heritage. These items dominate the aesthetic of the place, creating an atmosphere and setting which is possibly unique within a NSW school. The parents and teachers maintain a very strong connection with the art and display of Aboriginal culture in the school and see these aspects as underpinning the connection between the school, local community and Aboriginal culture. An understanding of the art and displays of Aboriginal culture, coupled with conservation, management and re-establishment in the new school, is viewed as a vital component of the new development process. Respondents also saw Aboriginal art and culture as a significant opportunity for new directions in the redevelopment and future education. Specific comments included:

- Retain all artworks, mural photographs and cultural objects and provide new dedicated displays. Ensure the school maintains its proud Aboriginal identity through extensive design consultation with Aboriginal stakeholders.
- All community respondents wanted to keep the exterior murals, paintings, artefacts and other artworks throughout the school.
- What the local Aboriginal community believes is important must be preserved. A new mural covering the outside walls would be fabulous. The local Aboriginal arts community should be engaged to do that.
- A significance number of people listed the Year Six/children's murals, and Aboriginal artworks to be preserved.
- It would be a shame to lose the beautiful murals that are on the school walls, but I understand that this would be difficult to retain.
- Paintings, house colours, house names are Aboriginal cultural aspects are important in the redevelopment of Darlington Public School.
- 'Artworks' are Aboriginal cultural aspects are important in the redevelopment of Darlington Public School.
- Indigenous artworks, a new art focused curriculum with dancing and a band.

# 3.5 Community Consultation 2019

At the commencement of the project, SI NSW and GML met with the school principal to confirm the avenues for community consultation. Three key stakeholders were identified: the school teachers, the school children, and the school children's parents. The school provided specific advice on how each group should be engaged, the processes to be used, and sequence and timeframes for consultation.

Four separate processes of consultation have been implemented. An overview of each process is detailed below. The outcomes from the consultation is provided in Section 4, with detailed responses in Appendix C.

# 3.5.1 Teachers' Workshop

A teachers' workshop was held on 20 March 2019 at the school after the end of the school day. The workshop was organised by the school principal—all teachers were invited to attend and participate. On arrival four groups were established; the principal asked the Aboriginal teachers to divide between the four groups. In addition to the teachers, two Aboriginal parents who held lifelong connections with the school were invited to attend and facilitate discussions.

The discussions aimed to shed light on how the overarching design theme of 'Aboriginal Education Excellence' could be achieved through well-considered heritage planning. This theme had been identified in the NSW Government Design Themes for Darlington PS (Figure 1.3). Four sub-themes were the focus for the workshop:

- Celebrating and Recognising Aboriginal Culture and History (after theme 7).
- Teaching Aboriginal Culture (after theme 4).
- Requirements for Cultural Spaces (after theme 8).
- Art and Display of Aboriginal Culture (after theme 2).

The design themes were provided to each group to help centre discussions and look at practical ways of progressing Aboriginal heritage through the design themes. It was noted that there was some overlap between the design themes and each group was able to discuss more than one theme. Each table was provided with a butcher's paper worksheet with the key questions. A facilitator from GML or JOC was present at each table to guide the conversation and ask relevant questions.

Under each theme, questions were posed, and all answers were recorded on paper:

- Celebrating and Recognising Aboriginal Culture and History—related to design theme (7) 'Heritage Connections'. The two questions asked were:
  - What do you value most about the school's existing Aboriginal heritage connections (indoor or outdoor)?
  - What opportunities are there for improving Aboriginal heritage connections (indoor or outdoor)?
- Teaching Aboriginal Culture—related to design theme (4) 'Learning and Student Wellbeing'. The two questions asked were:
  - What do you value most about the school's existing Aboriginal learning and wellbeing program?
  - What opportunities are there for improving Aboriginal learning and wellbeing program?
- Requirements for Cultural Spaces—related to design theme (8) 'Point of Arrival, Entrance and Navigation'. The two questions asked were:

- What do you value most about the school's existing (indoor and outdoor) Aboriginal cultural spaces and how is Aboriginal heritage and culture reflected in the point of arrival, entrance and navigation (indoor and outdoor)?
- What opportunities are there for improving the Aboriginal cultural spaces and point of arrival, entrance and navigation (indoor and outdoor)?
- Art and Display of Aboriginal Culture—related to design theme (2) 'Creative and Performing Arts'.
   The three questions asked were:
  - What do you value most about the school's existing Aboriginal Creative and Performing Arts?
  - Are there stories you would like to see shared?
  - What opportunities are there for improving the Aboriginal Creative and Performing Arts?

The outcomes from the discussion by each of the four groups was compiled, and a roundtable discussion was held so every participant could highlight key messages for the wider group. The workshop identified distinct themes and outcomes, which are summarised in Section 4.1. The JOC report on the teachers' workshop is provided in Appendix C.

## 3.5.2 Students' Workshop

Following previous consultation with Aboriginal parents (2018), and the outcomes of the workshop with teachers, the students' workshop was structured around the same four sub-themes:

- Celebrating and Recognising Aboriginal Culture and History (after theme 7).
- Teaching Aboriginal Culture (after theme 4).
- Requirements for Cultural Spaces (after theme 8).
- Art and Display of Aboriginal Culture (after theme 2).

The purpose of the workshop was to gain insights from students on how Aboriginal culture and heritage at the school can be protected and enhanced in order to create a safe learning environment and showcase excellence in Aboriginal education. The guiding questions allowed small student groups between the ages of 5 to 11 to discuss what Aboriginal heritage means to them, what they want to 'keep' from the existing school, and what they would like to see in the new school. The key questions asked included:

- Q1—How do you see Aboriginal culture and heritage recognised and celebrated within your school today?
- Q2—What are your favourite Aboriginal artworks and objects in the school?
- Q3—Have you got any ideas on what Aboriginal art and culture you would like to see in the new school?

The workshop divided the 20 students into four groups, each of approximately five students. Led by a facilitator the groups toured specific areas of the school. The groups reconvened at the end of the workshop, drawing those features that in their mind stood out as being important to retain, enhance or

accommodate in the new school. A group discussion was held that gave students the opportunity to express their ideas in a wider forum.

Students from across the school were selected by the principal on the basis of ethnicity, learning ability and age. The purpose of the selection was to provide a subset of students who reflected the total student population.

#### 3.5.3 Parents' Questionnaire

A questionnaire was developed for the parents of students in the school. Again, the questionnaire was based on the key themes identified during prior consultation. The draft questionnaire was developed in collaboration with the school principal.

The survey included six questions. Questions 1 and 2 allowed for a quick tick box response; questions 3 to 6 required qualitative responses. The questions were:

- Question 1—How important do you feel Aboriginal culture and heritage is to the students and community of Darlington Public School? Why do you feel this way?
- Question 2—How do you feel about the way Aboriginal culture and heritage is taught at Darlington Public School?
  - Question 2a—The curriculum and content of teaching includes Aboriginal culture and heritage well. Please explain why?
  - Question 2b—The methods of teaching Aboriginal culture and heritage are appropriate and interesting. Please explain why?
  - Question 2c—The spaces for teaching Aboriginal culture & heritage are culturally appropriate and supportive. Please explain why?
- Question 3—Have you got any suggestions on how Darlington Public School can promote and support Aboriginal creative performances, and the display of art?
- Question 4—Have you got some ideas or thoughts on how Aboriginal culture, heritage and stories
  can be better included in the design of the following spaces at the redeveloped Darlington Public
  School: entrance to school, learning spaces, hall, library, canteen, indoor play spaces, outdoor
  play spaces, other.
- Question 5a—Do you have any stories or memories of cultural experiences at Darlington Public School?
- Question 5b—How would you like to see that reflected?
- Question 6—Have you got any other ideas, suggestions or comments?

Initial distribution was undertaken during the teacher—parent evening, but resulted in a poor survey return. A second round of targeted distribution was undertaken by the principal, which resulted in 14 surveys being completed and returned. The results provided strong and direct recommendations for the new school.

## 3.5.4 Teachers' Art Workshop

The school contains a significant quantity of Aboriginal art—an overview is provided in Section 2.3.4. The heritage value of the art, embodied through the social and aesthetic values, is difficult to describe due to the complexities associated with inherent and hidden meaning, the stories behind each art piece, and individual connections teachers and students hold with the art.

On one level the art collection defines the character of the school, its spaces, teachers and students. In order to gain an understanding of some artworks, and the hidden meanings and values connected with the works, an afternoon consultation session was held with the teachers. To provide an overview of the extent of the art collection the teachers were provided with the catalogue of all artworks (Appendix E); this was marked up with additional details relating to the artists.

The teachers split into three groups and were asked to identify specific art and/or objects which held personal value to them. The teachers were asked to present in a short 60-second film (or sound recording) why the specific artwork was of value.

Fifteen teachers participated in the workshop and described artworks. The range of connection was diverse and every artwork had a back story. Some of the Aboriginal teachers identified cultural meaning and value in some works. Some teachers were new to the school and the artworks proved to be part of their cultural immersion in Darlington PS. Some artworks were universally important and held importance to the history of the school. The artworks identified and described by the teachers are detailed in Section 4.4.

### 3.6 Endnotes

Department of Environment Climate Change and Water NSW 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents, Department of Environment, Climate Change and Water (NSW).

# 4.0 Community Consultation—Outcomes

The outcomes from the four avenues of community consultation are described in the sections below.

# 4.1 Teachers' Workshop

The teachers' workshop was held on 20 March and attended by 20 staff members. The outcomes have been summarised and grouped together into key values and opportunities. The text is presented in the first person, as spoken by the teachers.

### 4.1.1 The Most Important Items/Features of Darlington

The following items/features were identified as being most important considerations for the heritage assessment:

- The school is located in Darlington/Redfern. Redfern is special with a rich and important history.
  There are also many firsts here—the first Aboriginal medical centre, first Aboriginal legal centre
  and the home of Aboriginal Legal Service (ALS), Aboriginal Medical Service (AMS), Black
  Theatre etc.
- We value safety for our students and community. We want the school to be a safe space for people to come and feel comfortable. More than 90 per cent of students feel that their teachers understand Aboriginal culture.
- This school is about relationships. We need spaces to have a yarn, to talk, to debrief. This is
  important for people to share and listen, to open up about any trauma and heal. For instance,
  we could build a 'student's staffroom', where students can chat and debrief.
- Our culture is valuable and powerful. We are more than just a representation of culture, we are living, breathing culture.
- Darlington PS is more than art on walls. We need to create a strong sense of belonging and connection, that can inspire our Aboriginal children as well as foster greater understanding in the wider community.

## 4.1.2 Summary of Values and Opportunities that Resonated Most

While all ideas and views were deemed as important in the redevelopment (eg no one disagreed with any of the statements), the values and opportunities below were found to resonate most with participants. These are based on a total tally of all votes across the four themes (eg a particular opportunity may have been discussed across several themes).

# Connection, Belonging and Healing

It is important that art and design is positive and tells a story of resilience and triumph while creating nurturing environments. There is a weight of hurt amongst Aboriginal people and the school must create safe, inclusive spaces where children and others can feel safe and at home and debrief. There are also opportunities for the school to build relationships with creative Aboriginal organisations and community groups.

## **Cultural Recognition**

All design and art needs to reflect a diverse and dynamic community. Culture is present and alive, it's not stagnant or in the past. Any new artwork should as far as possible be commissioned to local Aboriginal artists.

### **Displays**

Displays of Aboriginal art should be more creative and less random—not just sit in a case. 'Get it out from the glass.' Displays should provide opportunity for interpretation for all community to learn from and have fun with—it shouldn't be like a museum. Some of the display or art can be fixed while others can be interactive (using audio and QR labels for explaining artworks and artefacts).

## **Welcoming Area and Point of Arrival**

The welcome to the school is very important and the redevelopment should include a gathering space, kiss and drop, carpeting, connected motif through the school, navigating and wayfinding through Aboriginal symbols. It should be an inclusive space for families, not just students, and provide good space for bikes, prams and scooters. Welcome words, especially at the point of arrival, are important and should include different languages.

### **Learning Spaces (Classrooms and Preschool)**

The learning spaces need to actively encourage students to think about culture and should include totems in classrooms (perhaps also class totems) as well as art and clapsticks, shells, pinecones, dillybags, bark printing and wooden artefacts. Spaces should be creative and include a yarning circle in each class.

### Landscaping and Bush Tucker

It is important that landscaping reflects Aboriginal culture and storytelling. It should include features such as surface decorations/images; bush tucker gardens and seasonal signs (six seasons); interpretive signage and links to teaching/learning; and tree carvings. There is also an opportunity to celebrate bush tucker kitchen and cooking, eg regular cooking at school with children.

### **History**

It is important that spaces are made to showcase history and stories; this is core to a sense of belonging and continuity at the school as well as its strong connection to Redfern. This could include a memorial wall or place, a mural or video material that also captures the political history of Darlington Public School. There is also an opportunity to showcase the history of 'First Nations' in Sydney.

## Seating/Meeting/Yarn Space (Circle, Campfire Feel)

Storytelling is an integral part of Aboriginal culture and the design should include both an indoor and an outdoor seating/yarn space that also can allow for debrief and other gatherings. A yarn circle should be provided in every classroom.

#### **Blue Bus**

The blue bus should be removed—it's taking up too much space. There is an opportunity to preserve its image through an archival recording and possibly cut the front off it so it can be used in a future playground.

#### **Totems**

The totems (artwork from Year 6 students) have been at the school for 20–30 years and it is important to keep them.

### 4.1.3 Key Quotes

Facilitators captured quotes from participants throughout the session with a selection provided below (all quotes are provided in the data sets under each theme in the following sections of this report):

The school is all about belonging, safe spaces and connection. This is where people come to find family, even if it is not their blood family.

Use Redfern as a strength—Redfern is a meeting place. It is a symbol and survival.

We culturally live our lives everyday but we're still connected to our past.

Truth hurts, but can lead to healing. Spaces across the school should be places for healing and difficult conversations, not just for students or teachers but families and community.

We can walk two worlds, not one or the other.

I like a space you can feel something in, where you can feel the history and community.

History does not have a start point and an endpoint. It is dynamic and it doesn't always move in a straight, chronological line.

We have a long line of trauma. The hardships exhaust us, but enlightens us as well.

Aboriginal heritage and art is valuable and powerful. It is not just about representations on walls. We are a school where posters won't cut it.

Sharing stories [in a way that follows protocols and customs] can bring healing from events that have been filled with shame.

# 4.2 Students' Workshop

The students' workshop was held in 1 May 2019 and attended by 20 students reflective of the school's diverse student base. Outcomes from the workshop have been grouped by theme.

### 4.2.1 Recognising Aboriginal Culture and Heritage

The following statements were provided by students during the workshop. The statements are provided verbatim, reflecting the language of the students. The key messages received from the students was a pride in the school's approach and dissemination of Aboriginal heritage, an inclusivity between people from all cultures, and that the identity of the school is personified through the displays of Aboriginal art, which should continue to be produced in the new school.

- Aboriginal heritage is important because they were the first people here.
- I think there should be a lot of Aboriginal heritage and art in the school because of the way they [Aboriginal people] have been treated over the last many many years. We need to see it [heritage].
- It would be cool to see a change, because they [Aboriginal people] deserve it. We need to recognise history.
- I think Aboriginal culture in the school is fine as it is.
- It would be cool to have a place where Aboriginal art can be shared with other art.

- It would be really cool to mix Aboriginal heritage with other cultures so we can understand more about different cultures.
- It would be good to see a dreamtime story down one wall [eg a mural]. We could also do a story using art to show the Aboriginal history of the school and Redfern.

### 4.2.2 Requirements for Classrooms

Within the existing school, students identified that the music room and platypus room were their favourite classrooms to spend time in. These rooms are both large, relatively open and have large glass windows which provide an 'airy' feel. Questioning the teachers on this response identified that the platypus classroom was one of the favoured spaces within the whole school, which excelled as a learning/teaching space. This was attributed to the glass walls on either side of the classroom, which provided the open feeling.

Students wanted more opportunities to learn from different cultures through sharing and actively participating in practices instead of learning through traditional learning approaches. The learning approach requested demonstrates that greater appreciation of culture is gained through activities, rather than static learning. This identifies future opportunities for a Darlington program of Aboriginal culture, where students could develop and transfer their learning of Aboriginal culture to the local community and other nearby schools that do not have active Aboriginal cultural programs.

Students suggested implementing outdoor classrooms to create more interesting and diverse learning experiences. This resonates with the identification of the open and light filled spaces within the existing school and demonstrates a connection with 'nature' rather than static brick and mortar spaces.

### 4.2.3 Native Vegetation and Gardens

The students showed an interest in increasing native vegetation throughout the school to encourage diverse learning opportunities. This can be achieved through a bush tucker garden and kitchen to foster a stronger integration of traditional items, food and practice into the school curriculum. This idea was expressed as a desirable element for the new design by students.

The students demonstrated an interest in learning about the connection between totems and native plants. Connecting fauna and flora could be used to further enhance the understanding of Aboriginal culture and natural ecosystems within an urban environment.

#### 4.2.4 Murals and Artwork

The artwork and murals are identified as integral to Darlington PS's identity. There is a direct connection between the students and the art. For instance, the students identified the retention of Year 6 legacy artwork as being important to keep a connection to past students. Younger students looked to the future and time when they would be part of creating their own Year 6 artwork. With respect to the breadth of Aboriginal art and artefacts, the students could identify many symbolic elements, but were unable to share their meaning and importance.

The students were proud to share and discuss their personal and class totems and identified the importance of celebrating the school's connection to Redfern's rich history. The identified specific art elements, such as the NAIDOC Week burnt plaques, as having a significant importance representing this connection with the place and its history.

The students wanted to keep a record of the existing school, to show how it looks now. They were sad to see the old school go, because they felt a strong sense of belonging to the school. However, they

saw the renewal of the school as an opportunity to improve the integration and celebration of Aboriginal and other cultures of students and teachers.

### 4.2.5 Entrance and Hallways Setting

The entrance and hallways were as integral a part of the school building as the classrooms. The students showed familiarity with the spaces and their contents, although the transitional nature of time in these spaces prevented deep connection with specific items or art or objects. Providing the time for observation and engagement (for instance with the objects in the entrance hall display cases) allowed the students to build a rapid connection with certain objects. Three key messages were communicated by the students with respect to the entrance and hallways:

- Students wanted to see paintings at the entrance, halls and outside the school on the streets: 'so people know the importance of Aboriginal heritage to the school.'
- It was difficult for many students to articulate the meaning of Aboriginal cultural symbols and artwork: 'all the symbols in the art mean something but we don't know what.'
- Many students expressed a strong sense of belonging to the school (as it is now) and wanted to see the heritage of the school itself recognised: 'it's important to keep a record of pictures of the school so we don't lose memories and our history.'

### 4.3 Parents' Questionnaire

Question 1 related to the importance of Aboriginal culture and heritage at Darlington PS. A total of 75 per cent of respondents felt that Aboriginal culture and heritage is 'very important' to the students and community of Darlington PS. This was due to a variety of reasons:

- Recognition of Aboriginal Culture as Australia's culture is important to our sense of belonging and history.
- Continual education of Aboriginal culture for kids and parents is crucial to recognising Aboriginal heritage within our society.
- Darlington Public School does a lot to reconstruct culture and build understanding in the community.
- Aboriginal culture and heritage has respect for the land in a different way than white settlement culture does.
- Aboriginal culture and heritage should be in every Australian school.
- There is a diversity in culture at Darlington; and with that, there is an opportunity for creating a unique and unifying identity through Aboriginal culture.

Question 2 related to the way Aboriginal culture and heritage is taught at Darlington PS. Question 2a asked how parents felt the curriculum and content of teaching includes Aboriginal culture and heritage. In total 29 per cent strongly agreed and 57 per cent agreed that the curriculum and content includes Aboriginal culture. Specific comments included:

- Indigenous culture is embedded into everyday life at Darlington Public School, every school in Australia should be the same.
- There is a stronger intercultural curriculum at Darlington than most schools; this is something very special and should be retained.
- The way Aboriginal culture is taught is appropriate.

There could be more elements or opportunities for learning about Aboriginal culture.

Question 2b asked whether the methods of teaching Aboriginal culture and heritage were appropriate and interesting. A total of 50 per cent strongly agreed, and 29 per cent agreed. Specific comments included:

- All students have the opportunity to participate in culture where appropriate.
- There are specific programs for Indigenous students.
- Art making is a good method of teaching culture; this is done well at Darlington.

Question 2c asked whether the spaces for teaching Aboriginal culture and heritage were culturally appropriate and supportive. A total of 21 per cent strongly agreed and 36 per cent agreed. There were some mixed views on this question, with some of the neutral comments noting the existing spaces need improvement, and there should be new spaces embedding visual arts and exhibitions.

Question 3 requested suggestions on how Darlington PS could promote and support Aboriginal creative performances, and the display of art. The responses included:

- Through visits, performances (eg teaching through Aboriginal dance groups).
- More spaces dedicated to display of Aboriginal art.
- A larger assembly hall with a deeper stage that would allow for better space for Aboriginal creative performances.
- Simulated visual arts exhibits that can be on exhibition throughout Sydney.
- Through establishing partnerships with local Aboriginal led organisations and businesses.
- Teaching practical skills like weaving.
- Learning about Aboriginal food.

Question 4 asked for ideas on Aboriginal cultural heritage integration into the new school design. Table 4.1 provides an overview of the responses.

**Table 4.1** Parent Responses to Question 4.

Spaces at the School	Suggestions for Including Aboriginal Culture	
Entrance to school	Bright colours and a really nice garden	
	Plants	
	Paintings	
	The way it is now is great	
Learning spaces, eg break-out spaces	Introduce bright artwork	
	Artworks with information of the features	
Hall	Bright colours, design	
	Art	
	Maybe have a heritage walkthrough	
	Heritage items displayed	
Library	Children's books (additional historical books) and modern stories	
	Bright colours	
	Art & design displays	

Spaces at the School	Suggestions for Including Aboriginal Culture	
Canteen	Positive art quotes	
	Bright colours	
	Indigenous planters for food	
	Use Indigenous names for food	
Outdoor play spaces	Cultural garden	
All spaces in the school	Warm, earthy colours from the Australian landscape and Aboriginal colours	
	Art	
	Possibly have fabrics and carpets printed with Aboriginal art if appropriate	
	Native plants everywhere	
	Bush tucker garden	
	A well-researched Aboriginal history of the Darlington area	
	Use Indigenous names for places, trees and relationships	

Question 5a asked parents to recall specific stories or memories of cultural experiences at Darlington Public School. The responses included:

- Smoking ceremony during NAIDOC Week was powerful
- Tribal Warrior Redfern
- Community Centre visits
- Aboriginal cooking of Johnny Cakes
- The 'Sea of Hands' Barangaroo (2016 or 2017)

Question 5b asked how parents would like to see cultural experiences reflected. The responses included the need for more 'real' cultural experiences/exchange, and providing education events for non-Indigenous people, which included the teaching of beliefs, customs and cultural expectations.

Finally, parents were asked for other ideas, suggestions or comments. The responses included that the school should 'keep doing what you are doing' and that a bush tucker garden was needed 'to learn the skills, culture, stories of food, animals and the environment.' Other quotes and comments included:

Australia was invaded by Europeans who spent the next 200+ years destroying Indigenous people and their culture, or trying to. Every community (especially one such as Darlo, with a strong and beautiful Indigenous contingent) should do everything possible to aid with reconstruction, led by Indigenous people.

I can positively envision the possibility of having some simulated spaces with the visual arts, exhibits, and alike that students/parents/carers can enjoy and learn from.

A lot of people, especially from overseas are not really aware of how rich Australian culture is from Aboriginal Culture.

Attending the smoking ceremony during NAIDOC week was a very powerful experience.

One of the strengths of the school is the diversity of the students, a unifying emphasis on Aboriginal culture is reflective of Australia's makeup as a whole.

# 4.4 Teachers' Art Workshop

Darlington PS contains a substantial collection of Aboriginal art and objects. Artworks fall into three categories: objects; art on a movable medium; and art, often painted, directly onto the school fabric—

the walls and other surfaces. The art represents a collection accumulated over the past 45 years. It has been produced by local Aboriginal people and non-Aboriginal people; some art is by renowned artists, some by the school children and the teachers.

The 15 teachers who participated in the workshop described 15 artworks within the school. One teacher, who was new to the school, provided the following comments which symbolise the importance of the artworks to the school and wider community:

I am new to the school and started working here in 2019. I do not have a favourite art work, but in the new school all the art should be preserved. I am not from an Indigenous background, I am Korean. I can make a connection with the art. The Korean people through history have been through hardship, with different countries invading our country. Looking at the beautiful artworks, it shows that we can take pride in our [Australian] culture, and we can tell that the spirit of the people lives on. It is very important for young Australians to look at this and move forward, and to try our best in everything.

The following table (Table 4.2) provides an overview of the 15 artworks described by the teachers, cross-referenced to the SI NSW catalogue (Appendix E), with a photograph of the current context in the school. The teacher descriptions for each item are provided anonymously.

These items are not identified as the most important or significant, but the items with which teachers felt a personal affinity. The items reflect the diversity of artworks found within the school, along with a diversity in manufacturing techniques and artists. It is apparent that art by named artists does not have a greater significance than art by students. For instance, art manufactured by students and teachers connected the people to the place, and generates enduring connections between students and the school.

During the workshop it was recognised that a number of artworks connected with the fabric of the school would be impacted by redevelopment of the school. The teachers demonstrated a pragmatic understanding for the need to redevelop the school and that certain artworks would therefore be removed/lost. The process was seen as an opportunity to both create space for new artworks and develop new creative and social space within the school. It also provided the opportunity to better appreciate certain artworks, notably highlighting items such as the Jarjums rugs, through creation of new display cases for these items.

Of the artwork on built elements, the teachers requested that the Year 6 art walls remain during the redevelopment process—this should be achievable given their location on the walls of buildings adjacent to the school. Protection for these works needs to be implemented prior to any demolition commencing.

Table 4.2 Descriptions of Artworks and Reasons for Their Importance to Darlington's Teachers.

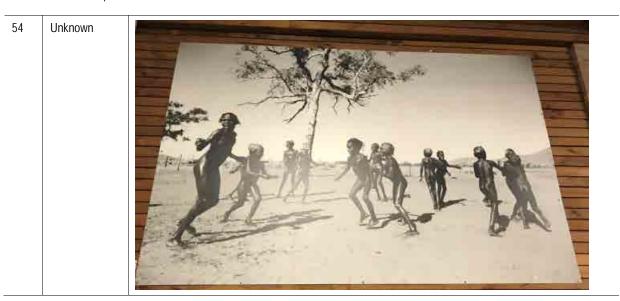
#	Name	Image of Artwork in Current Context
48– 53	Jarjums rugs Also refer to Section 2.3.2	

Jarjums rugs were designed by Aboriginal students at the school in collaboration with their elders. The rugs were initially visualised and drawn on paper, followed by a process of creating a physical three-dimensional design. The designs were reviewed by 'The Rug Collection', who selected six designs for manufacture using hand tufted wool.

The rugs are described by principal Liz Sinnott as 'one of the most authentic cultural exchanges I have been involved in, in my 30 plus years of teaching', and 'an authentic piece of children working with elders to give their song lines a visual presence'.

Other teachers involved in the project have stated:

- The rugs represent authentic song lines. The kids who made the designs, were not necessarily engaged in other learning, but were able to learn and express their song lines through culture. It brought the school closer with the Aboriginal families. The rugs (as artworks) are just the physical representation of one activity. The relationships we have built with the families through the activity has enabled us to connect authentically with families who had not previously had good experiences in school. As a result, our relationships have developed. I hope to see a new school that keeps and displays these art works. One day the kids [of the artists] will be able to visit and say 'my dad did that when he was five'.
- This student, his experience of making the rug with his parents and other Aboriginal people from his family; he was so proud of it.



### # Name Image of Artwork in Current Context

- The kids look like they are having a lot of fun. There is community, and connection to the land. I think a lot of our kids, this could represent a place where they have come from, or where they go on holidays.
- When I look at this picture I think 'freedom' and 'electric joy'. When I first came to this school I had a magnetic connection with this picture and felt the connection the kids in the picture have, being out in the sunshine, with each other. It remind me of being a kid, and being with kids from all different families, playing together in the summer. It provides an instinctive memory. I love having it in the hall across from the rugs—it provides a joyful and strong earthy presence in a space where we all gather together. When we have an assembly, I look at these items and have to take a deep breath.
- This is important because it shows Aboriginal people as part of the land in a rural habitat, there is no Aboriginal
  negative aspect to being Aboriginal. It is just the joy and excitement of being young and Aboriginal in this
  Country.

88 Frog Mural in Preschool Courtyard



I love this art work because it reminds me of nature. When the kids come to play in the sandpit, it provides the kids with imagination. When I worked in the preschool we had tadpoles and watched them change into frogs. This picture symbolises the circle of life and changes to people and the students. Perhaps it's like the evolution of the school itself.

8 Sally Morgan artwork

Sally Morgan artwork

This work was made by Sally Morgan, who is a prominent NSW artist and author. She is known for the book My Story, which was one of the first books to look at the life of children growing up being Aboriginal. Her artwork is something contemporary, but also incorporates elements of traditional art. I find her really good as an artist to show continuation of our culture, how it is growing, how it is changing, and that we do not have a dying culture but one which is becoming more colourful.





This mural was created by a prominent grandparent to the school, who has grandchildren in the school. This mural is very important for the younger children because it shows them how to connect to their totem animals. It also shows all the totem animals living harmoniously together.

# Name

Image of Artwork in Current Context

9 Admin office door



- The door is really important to Darlington. The door represents the Aboriginal education office—its welcoming and doesn't matter whether the door is open or closed.
- This room was an Aboriginal education room, its location, and the specific design on the door, meant that
  people [students] who were coming to the school for the first time would see the door and feel safe and willing
  to talk. The proximity [location] of the office within the school, meant the person in the room could sit, look and
  see all the parents and students walk past.
- The door was made by Neil Thorne [the former Aboriginal resource education officer], this was his office. One of his skills was wood burning. He burnt Aboriginal designs into the door, including the school logo—which he also designed. He did not complete the door, the story behind the incomplete door is that Auntie Norma said she would take the door when it was finished, so Neil said 'I'm not finishing it'. The kids recognise that the door is a really important piece of art work, and they tell people about the door—they think it should go into the new school, and so do I.
- It's such a unique item. It does not need to go into the new school as a door, but we would have to think about how the door was mounted or framed.
- It could be hung as an artwork outside the new Aboriginal education office.

## # Name Image of Artwork in Current Context

- The room used to be known was the Wombat room because of the picture of the Wombat etc. After Neil had completed the door, it was liked by parents so much, that the idea was opened to parents of kids from the school. Parents were invited to put pictures of their kids' totems on the class room doors throughout the school—although, this door proved a hard act to follow, so not many designs were proposed.
- Neil started the symbolic framework of totems for each class. We don't refer to our classes as Year 2 or year 3, but by the totems. They learn about that totem, it provides a parallel Aboriginal learning activity.
- 19- NAIDOC 37 Week, A4 wooden boards



These were all made by Uncle Neil Thorne. Every year for NAICOD [sic] week he would make one artwork. Hopefully in the future he can make more for the school.

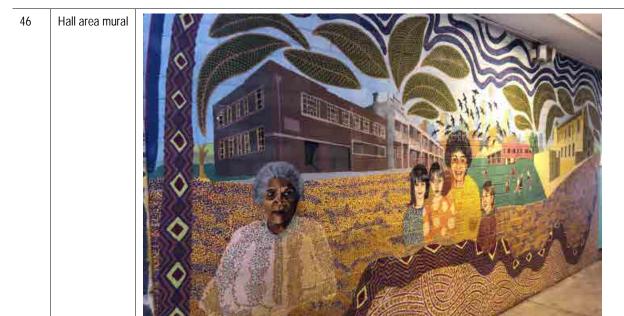
40– The Wheel on 45 the Holden



One of our closest friends was Auntie Wendy [Wendy Notley], from Auntie Wendy's mob. Over the last 20 to 25 years, a lot of videos and songs she made was with kids from this school. Kerry Toomey was a teacher at this school. Kerry painted a lot of the stories that Wendy put in book form. These need to be transported to the new school. The writing needs to accompany the images (but can be re-printed).

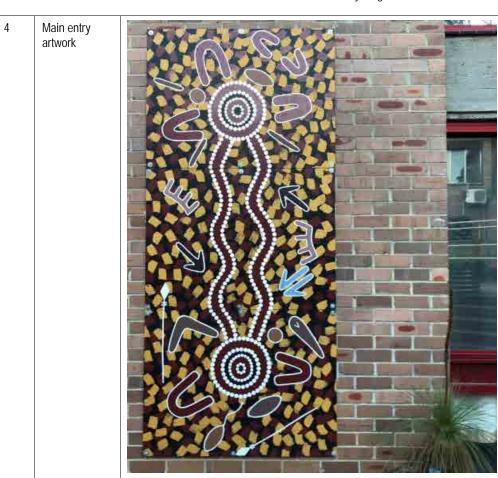
#	Name	Image of Artwork in Current Context
5	Reception entry mural	

- I like this mural. I walk past it every day. I watched the children paint this with a local artist. The preschool kids watched the painting all day, through the preschool fence, and then kept asking about it and what it meant.
- I like this artwork, because the first time I came to Darlington it was the first art I noticed. I look at it every day, and always see something different.



I have walked past this mural one thousand times. Maybe people don't understand the symbology and people. Shown in the mural is former preschool teacher, our former Aboriginal Education Officer [Auntie Norma], children who were in the school at the time. In the background are representations of what the former schools used to look like. [The background shows the evolution of Darlington School.]

- This wall was supposed to be painted as the rainbow wall, but when it was painted by Peter Oxley (from the band the 'Sunnyboys') and Jenny (a mum at the school), they followed their instinct and painted birds flying through the air.
- Teachers noted that this art has become a favoured location for younger children to sit beneath and eat lunch.



### # Name Image of Artwork in Current Context

When I first arrived, having my first interview to become a teacher here, I was greeted at the front gate by four beautiful artworks. This one in particular really resonated with me, it made me feel at home straight away, because it shows what our school is about—about Aboriginal culture, about celebrating it, and about letting people, know loud and proud, that it is something we are proud of, and we hope that you can enjoy it and share it with us too. Hopefully this type of design can be incorporated in the new school.

39 Platypus



This platypus is special to me because I did it with my class in 2012. We made it for a NAIDOC Week poster. One parent came to help us with the class. Each child in the class painted or coloured in a different part of the platypus; and the chldren's hand are traced and placed in a certain way. Every child therefore contributed to the art. Even though it is not too old, it links the students and the Aboriginal students in the class to the school now. I think its important for current kids to see art that they have made up on the wall, as well as art by other people.

N/A Boomerang



This massive boomerang represents the A-frame of a house. It's large and solid and should be better incorporated into the new school.

#	Name	Image of Artwork in Current Context
N/A	Digeridoos (outside the music room)	

# 4.5 Synopsis of Key Elements Reflecting Aboriginal Heritage

The workshops have highlighted the following significant aspects connecting Aboriginal traditions, culture, heritage and education with the Darlington PS (Table 4.3).

I think the digeridoos should be conserved and better placed within the school. The box is horrendous and I would like to see them hung in a contemporary way, and even used every day, or as part of ceremonies. They need to be linked

Table 4.3 Key Outcomes from the Workshops.

to the music room.

Item	Aspect of Aboriginal Heritage	
The Darlington School	The history of a Darlington school in Darlington The current Darlington PS, extant for 44 years at its current location The continuity of education of Aboriginal children at the school	
The Darlington community Connection between local Aboriginal culture and Darlington PS	History of Darlington and Redfern, and connection with the Darlington PS. The generations of families who have attended the school  The school's importance to the local community, notably the cultural reconstruction and building within the local community  The importance of Aboriginal heritage to the school  Representation of Aboriginal culture in the school  People external to the school, becoming involved in the creation of the school space and its aesthetics	

Item	Aspect of Aboriginal Heritage	
The current Darlington PS	Aboriginal culture is embedded into everyday life in the school	
	A sense of belonging to a community and culture, for both Aboriginal and non-Aboriginal students	
	A safe space for listening, learning and healing	
	The connections between the school and other local Aboriginal organisations	
	Navigation through the school by the use of Aboriginal art and symbology	
	Specific spaces hold importance to the children eg the platypus classroom	
	Use of Aboriginal traditions eg totems, anchors each class and space within an Aboriginal cultural framework, resulting in Aboriginal culture and tradition being the daily normal, rather than an aspect for occasional study and investigation	
The methods of teaching at	The recognition and understanding of Aboriginal culture	
Darlington PS	The use of Aboriginal narratives, objects and art to form learning spaces for cultural understanding	
	The function of dedicated cultural spaces for cultural learning and storytelling	
	Learning approach through active engagement and cultural activities	
	The opportunity for all students to participate in Aboriginal cultural activities	
The aesthetics of the school	The colours used in the school and the outward display of Aboriginal connection between the school and local community	
	The collection of art and objects	
	The stories behind the art and objects	
	The meaning and symbology inherent within these items	
	The creation of spaces, places and feelings resultant of the art and objects	
	The use of plants, notably natives, and their connection with Aboriginal culture	
	Certain spaces present an aesthetic value by the children eg the platypus classroom	
	Certain art works create social value for the children eg the Year 6 art wall and the Jarjum rugs	

# 5.0 Assessment of Heritage Values

### 5.1 Introduction

The best practice guide to managing heritage places is the Burra Charter. It defines cultural significance as:

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

An assessment of aesthetic and social/spiritual values of Aboriginal cultural significance can only be made by the relevant Aboriginal community because Aboriginal people are the primary source of information about their cultural heritage values. Consulting with Aboriginal people at an early stage of the assessment process ensures they have opportunities to express their opinions and investigate aspects of Darlington Public School that are important to them. Aboriginal people must have control of their cultural knowledge and how it is used and shared. Restriction of cultural knowledge may be an important part of the value of the cultural knowledge. Management of impacts to Aboriginal cultural heritage values must involve the relevant Aboriginal people to ensure appropriate management is undertaken in accordance with the cultural heritage values.<sup>1</sup>

In line with the Burra Charter's five principal values (social, historical, scientific, aesthetic and spiritual) and the NSW Heritage Office's publication *Assessing Heritage Significance*,<sup>2</sup> four of the NSW heritage assessment criteria can be used to assess the Aboriginal heritage values connected with the Darlington PS.<sup>3</sup>

## The four NSW criteria are:

- Historic value: 4 'an item is important in the course, or patterning, of NSW's cultural or natural history (or cultural or natural history of the local area)';
- Social and spiritual values: 5 'an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons';
- Aesthetic value: 6 'an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)'; and
- Scientific value:<sup>7</sup> 'an item has potential to yield information that will contribute to an
  understanding of NSW's cultural or natural history (or the cultural or natural history of the local
  area)'.

The assessment of heritage values connected to Darlington PS is based on the outcomes from the community consultation and understanding of the school's historical importance within the local community. These aspects have provided insight into the key social, aesthetic, historic and scientific values associated with the place. Following OEH 2011,8 values are graded in accordance with a basic ranking of high, moderate or low. The ranking is based upon the research potential, representativeness, rarity and educational potential of each value. The grading is stated at the end of each value assessment below.

# **5.2 Significance Assessment**

#### 5.2.1 Historical Value

Darlington PS is an important long-standing educational facility located in the suburb of Darlington. The school has been associated with different sites, but all are identified by the local community as a central component of the Darlington to Redfern area, notably the local Aboriginal community. Darlington PS has provided education to Sydney's inner-city children since 1878; the school has become an integral part of the local community. The history of the school is intertwined with the economic and social evolution of the surrounding suburbs, initially as a response to the growing Eveleigh Rail Yards industrial precinct, and later connected with twentieth-century Redfern.

Darlington PS today is of importance to the suburb because of the education of local generations of families, notably Aboriginal families. The Darlington PS meets this criterion at a high level because of the importance of the educational facility to the local community. The extant Darlington PS site and buildings meet this criterion at the moderate level as they represent the most recent history of the school, but do not hold a specific value to the school teachers, community or students. It is the historical presence of the school that is of highest value, not the extant buildings on site today.

#### 5.2.2 Social Value

Darlington PS has a special association with the Darlington to Redfern community and the wider Aboriginal community of Sydney. The school is part of the social fabric of the Darlington to Redfern area and an integral component of the local Aboriginal community. The school is more than a place that provides education services—Darlington PS functions as a social hub to the local community, providing a location which welcomes local Aboriginal people, their culture and connections. The school provides a venue which is viewed by the local community as a safe space, a place where relationships are developed and nurtured; it is seen as a place of sharing, where cultural healing occurs. These values have come about through long-term recognition, acceptance and celebration of Aboriginal culture and heritage.

Darlington PS meets this criterion at a high level because of the connection with the local Darlington community and Sydney's wider Aboriginal population, the school's approach to the dissemination of Aboriginal culture and heritage, and the rarity of the school in functioning as a social, educational and inclusive part of the local community for such a long period. The social importance of the school's approach to education and appreciation of Aboriginal culture and heritage is unique in Sydney and can be considered as an antecedent for Aboriginal reconciliation and inclusivity.

#### 5.2.3 Scientific Value

The scientific value of Darlington PS is embodied in the place, its presentation of Aboriginal culture and heritage and its ability to disseminate these values to Aboriginal and non-Aboriginal people. The school, its setting and place within the local community provides a context to spread and share values and understanding, which contributes to the wider community's understanding of traditional and contemporary Aboriginal Australia.

Darlington PS and its social and aesthetic qualities have the ability to provide substantial new directions for educational methods in NSW, particularly in terms of recognition, acceptance and celebration of Aboriginal culture and heritage. As such the school meets this criterion at a high level.

#### 5.2.4 Aesthetic Value

Darlington PS has a unique aesthetic, mixing many aspects of visual, auditory and other sensory aspects, seen in the Aboriginal art, imagery, totems, song and traditions, throughout the school, its classrooms, corridors, spaces and outward public presentation. The aesthetic connection provides the school with its outward identity, whilst creating an inward-looking safe, accepting and nurturing space for the pupils, particularly Aboriginal students.

The school contains a range of Aboriginal artwork, murals and objects, which combine artworks produced by students and teachers with artworks by significant Australian artists. The artwork uses a combination of traditional materials to support the art, and also the school's fabric itself, such as wall, floors, and other built items. The evolution and development of the art collection has been organic, responding to social and traditional events, the interaction of the school with external people and parties, and 40-plus years of growth through the school site. The aesthetic provides a means of navigating through the school, identifying places, corridors, classrooms and outdoor spaces, both by name and in function.

Darlington PS meets this criterion at a high level because the aesthetic of the school provides context for the school within the suburb of Darlington. The outward appearance of the school immediately identifies its connections to the local community. The aesthetics provide the context and backdrop which underpins the daily function of the school.

# 5.3 Statement of Significance

Darlington PS holds heritage significance to generations of families in the local community, notably the local Aboriginal community. The current Darlington PS is valued by the local community as a place of cultural respect, appreciation, learning and tradition. The history of the school itself is considered importance by the community, because it is associated with the industrial growth of Darlington, Redfern and Chippendale during the late nineteenth century, and with the later economic and social growth of these suburbs, particularly with respect to Aboriginal history.

The school's focus on inclusion and Aboriginal culture has created a unique aesthetic which provides a visually stimulating, sociable, and safe space for students and other community members to gather. The school's large collection of Aboriginal art, both movable and an essential part of the fabric of the school, creates a setting which envelopes the teachers and students in Aboriginal traditions and teaching. This aesthetic underpins the teaching methods, creating unique spaces with both social and functional use. Darlington PS exemplifies methods of teaching, the use of space and aesthetics, and demonstrates principles of inclusion and acceptance, that established a benchmark for NSW education standards and direction.

An overview of how these cultural values are manifest within the study area is presented in Table 5.1.

 Table 5.1 Summary of Aboriginal Cultural Heritage Values.

Value	Manifest Through	Grade of Significance
Historic	The history of education in Darlington PS since 1875. The connection between the local community, the economics and social history of Darlington and the educational facility.	High

Value	Manifest Through Grade of Significance	
Social/Spiritual	The connection between the school and the Darlington and Redfern community, notably the Aboriginal community. The function of the school as both an educational institution, and a centre for social acceptance, a safe space, and core hub for the local community.	
	The school's identification with local Aboriginal people, and notably Aboriginal culture and heritage.	
Scientific	The ability of the school to teach traditional Aboriginal values in a safe and meaningful context.	High
	The ability of the school to provide new direction with respect to educational methods and standards exemplifying cultural appreciation and understanding.	
Aesthetic The outer appearance of the school to the wider public.		High
	The inner function of the school, where the appearance governs the identity and use of space.	
	The school's collection of art and objects.	

## 5.4 Endnotes

- Department of Environment, Climate Change and Water 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, Department of Environment, Climate Change and Water, p 2.
- <sup>2</sup> NSW Heritage Office 2001, Assessing Heritage Significance, NSW Heritage Office, Sydney.
- Office of Environment and Heritage 2011, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Office of Environment and Heritage, Sydney; this guide provides a background for undertaking an Aboriginal cultural heritage values assessment in accordance with the Burra Charter and NSW Heritage Office's *Assessing Heritage Significance* 2001. The approach recommended by the OEH has been adhered to for this report.
- <sup>4</sup> NSW Heritage Office 2001, 'Criteria A' in Assessing Heritage Significance, NSW Heritage Office, Sydney.
- <sup>5</sup> NSW Heritage Office 2001, 'Criteria D' in Assessing Heritage Significance, NSW Heritage Office, Sydney.
- 6 NSW Heritage Office 2001, 'Criteria C' in Assessing Heritage Significance, NSW Heritage Office, Sydney.
- <sup>7</sup> NSW Heritage Office 2001, 'Criteria E' in *Assessing Heritage Significance*, NSW Heritage Office, Sydney.
- <sup>8</sup> Office of Environment and Heritage 2011, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Office of Environment and Heritage, Sydney.

# 6.0 Statement of Heritage Impact

This section provides a description of the proposed activity and identifies the Aboriginal values that could be impacted directly or indirectly by the activity. The impact assessment underpins the development of heritage management policy (Section 7) which should guide the development process for the new Darlington PS.

# 6.1 Statement of Heritage Impact

Darlington PS does not contain any known Aboriginal objects (as afforded statutory protection under the NPW Act), and is not considered to hold archaeological potential for Aboriginal objects. As such, the proposal will not 'harm' Aboriginal objects.

However, Darlington PS holds significant heritage values connecting the school with the teachers, students and local Aboriginal community (outlined in Table 5.1). The proposed development has the potential to impact these values, if the values are not recognised and considered during the project's planning and implementation stages. An assessment of how the place's values may be directly or indirectly affected by the proposal is provided in Table 6.1.

Table 6.1 Statement of Potential Heritage Impacts.

Value	Manifest Through	Potential Impacts and Mitigation Strategies
Historical	The history of education in Darlington PS since 1875.  The connection between the local community, the economics and social history of Darlington and the educational facility.  The Aboriginal historical value is not embodied in the current buildings.	The school redevelopment would create a new phase of education in Darlington consistent with other historic changes and developments to the school since 1875.  The new design has considered the context of Darlington PS and its social history through the implementation of key design themes. Providing that the key design themes underpin the redevelopment, the impact of the proposed work on the historic values of the place would be minimal.
Social	The connection between the school and the Darlington to Redfern community, notably the Aboriginal community.  The function of the school as both an educational institution, and a centre for social acceptance, a safe space, and core hub to the local community.  The school's identification with local Aboriginal people, and notably Aboriginal culture and heritage.	The new school needs to understand its place as part of the local community and its function beyond an educational facility. If this connection can be maintained, this value will not be impacted.  The new school design process needs to seek out and understand the Aboriginal cultural connections with key physical elements of the existing spaces and specifically how these aspects function and are used on a daily basis. If the design is able to include these aspects this value should not be impacted.  Implementation of key design themes means that safeguards have been put in place to protect the social values of the school including:  ongoing involvement of the local and school community in design decisions;  inclusion of specific physical elements and spaces to reflect the aspirations of the Aboriginal community including edible gardens, yarning circles; and  involvement of the school children in development of external spaces.  Beyond the design process, the assessment has sought to include key stakeholder groups identified by the school, in a process of assessment that identifies key elements and values.  Policy developed for the maintenance of heritage values (Section 7) needs to be implemented.

Value	Manifest Through	Potential Impacts and Mitigation Strategies
Scientific	The ability of the school to teach traditional Aboriginal values in a safe and meaningful context.  The ability of the school to provide new direction with respect to educational methods and standards exemplifying cultural appreciation and understanding.	The current school provides space for a unique method of teaching within a specific setting. Redevelopment of the school will impact (or change) this value, irrespective of how the new design is implemented.
		The new design must allow for the natural development of teaching methods by the staff, along with a natural evolution of the use of space. It is important that all spaces are therefore not 'filled', but the new school can grow to fill its new space.
		The new school design has included specific places and items connected with Aboriginal culture, such as the 'yarning' space. The specific design of these spaces needs to consider the functional use of each space, so that the educational values can be maintained.
Aesthetic	The outer appearance of the school to the wider public—such as the red doors on Golden Grove.  The inner function of the school, where the appearance governs the identity and use of space.  The school's collection of art and objects.	Any demolition of fabric and surfaces containing murals and art will result in an impact on the school's aesthetic value.
		The Year 6 art walls will be retained and not impacted.
		All movable art and objects can be retained and stored for re-use, and thus the inherent value of these items can be retained.
		The new school design provides a 'blank canvas' for new art and design. The mode of implementing new art and design through the school has the potential to impact this value (and the connected social value) because the aesthetic value is an aspect which has grown over 45 years—it is something which has been created by the local community. Installation of 'manufactured' Aboriginal design (that is design that is not developed and implemented by the school community specifically for the school) would likely not be accepted by the local community and would impact this value.

# 6.2 Darlington PS—Design Considerations for Heritage Conservation

SI NSW proposes to redevelop the Darlington PS. The proposed redevelopment has undergone two phases. The first, in 2019, was based on the outcomes of a detailed landscape concept design (Arcadia, May 2019) and site masterplan (Gardner Wetherill, 2019). In 2020 the site's landscape and architectural proposal were modified by architects FJMT.

The proposed activity will require demolition of all existing school buildings, removal of some extant landscaping and redevelopment across the whole site. From the outset, the school redesign and masterplan process has considered Aboriginal heritage and connections, identifying key policies and design themes (Figure 1.3). Between the 2019 and 2020 iterations of landscape and architectural design for the new school, this ACHAR was finalised as a draft and issued to the project architects. The heritage values and associated management policy was considered during planning for the new design, with a direct response to heritage in the Architectural Design Statement (FJMT, 2020)<sup>1</sup> and Landscape Report (FJMT, 2020).<sup>2</sup>

Several aspects of the design that have been included in the revised 2020 ADS and landscape designs (Figures 6.1 and 6.2) are as follows:

recognition and celebration of Aboriginal cultural heritage throughout the design, as a key
consideration underpinning the development of the new school. The need for consideration of
Aboriginal cultural heritage is a key part of the Architectural Design Statement (ADS). Appendix
D includes the relevant pages from the ADS for ease of reference;

- consideration of heritage aspects in certain key spaces in the new school design, including the entry undercroft, school hall, library, classrooms, yarning circles;
- the design acknowledges artwork, murals and objects as being integral to the school's identity.
   The design has sought to integrate these aspects into the new school. Key murals such as the Year 6 art wall will be retained. Consideration is provided for future expansion of these artworks;
- there has been further consideration given to the special placement of key artworks, including: the Jarjum rugs, year six artwork and totems, murals, the burnt door and carved sandstone blocks;
- the new landscaping challenges the natural constraints of the site, and develops external gardens, grounds and play spaces linked to learning games and different learning languages, featuring natural elements such as water, sand and rock;
- the new external landscaping seeks to retain existing 'heritage' fabric from school murals that
  cannot be retained during redevelopment. These aspects will be incorporated into landscaping.
   Re-use of items such as bricks from former murals will create an interesting, tangible and visual
  connection between the old and new schools:
- there has been consideration of key ESD principles which focus on natural elements including light, water and wind. These considerations have investigated the changing seasonal movement of light and wind, and sought to highlight these elements in the new building design, allowing for passive cooling of the buildings; and
- movement through the new school design is based on a network of pathways, lines, spaces and shortcuts. These movement corridors should allow for interaction with the site, considering the needs of a range of users.

The initial consideration and inclusion of these aspects by FJMT provides a sound basis for developing the proposal for the new Darlington PS. Further consideration of heritage needs to be undertaken during detailed design for the new school.

The statements of heritage impact (Table 6.1) rely on the premise that the new design process and its implementation will be a collaboration between the project architects, SI NSW and the local community (the teachers, students and parents). To guide this process, Section 7 provides key policies (based on the key design themes) to assist throughout the design, build and re-fit process. Implementation of these policies and guidelines should provide a means to retain, conserve, promote and enhance the extant values through the new building. They should provide a context for social acceptance of the new school by the local community—maintaining Darlington PS within this community. This can be achieved through implementation of the Aboriginal heritage policy and recommendations, which are outlined in Section 7 of this report.

# **ESD & WSUD**

# Ecological Sustainable Development & Water Sensitive Urban Design



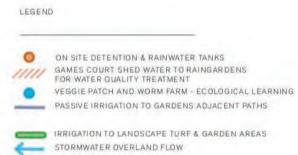


Figure 6.1 ESD and WSUD outlining water movement through the site and the use of passive irrigation. (Source: FJMT 2020)

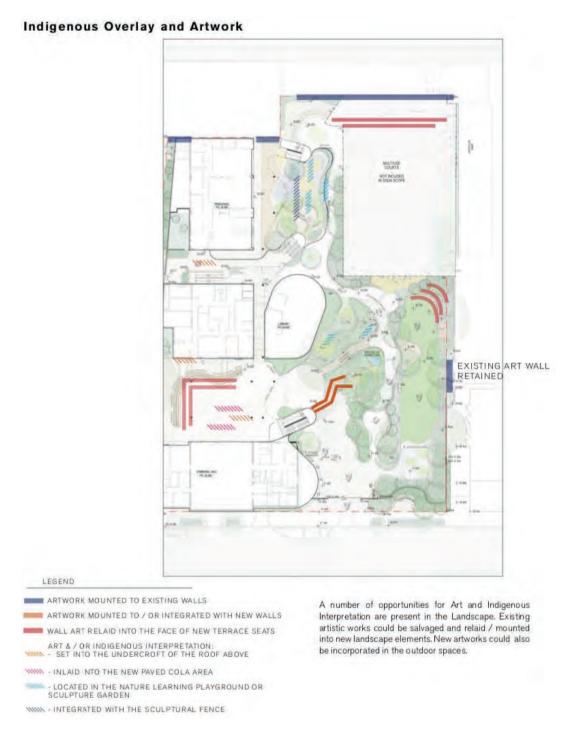


Figure 6.2 Aboriginal heritage considerations in the preliminary landscape masterplan. (Source: FJMT 2020)

# 6.3 Endnotes

- <sup>1</sup> FJMT, 17 April 2020. Darlington Public School, SSD 9914 Architectural Design Statement, Golden Grove Street, Darlington, Sydney, Department of Education.
- <sup>2</sup> FJMT, 17 April 2020. Darlington Public School, SSD 9914 Landscape Report, Golden Grove Street, Darlington, Sydney, Department of Education.

# 7.0 Heritage Policy and Recommendations

### 7.1 Introduction

Darlington PS has been assessed as having substantial social and aesthetic and some historical and scientific values. These values are frequently intangible and relate to the operation, function and use of space by the existing school. The function of the school has become a significant element within the local (Aboriginal and non-Aboriginal) community. The NSW Government Architect speaks to the place of such schools:

Schools are a vital part of any healthy and thriving community. They provide an important civic place for meeting and exchange and often operate as social as well as educational hubs, not just for parents and students, but for the wider community through the sharing of sports grounds and other facilities.<sup>1</sup>

The design process for the new Darlington PS is considering the identified values whilst applying specific policy to maintain and enhance the values. This process should be underpinned through application of the three Government Architect NSW publications in the 'Better Placed' series:

- 'Design Guide for Schools';<sup>2</sup>
- 'An integrated design policy for the built environment of New South Wales';3
- 'Environmental Design';<sup>4</sup> as well as
- the OCHRE Grid principles.<sup>5</sup>

The Better Placed design principles mirror the Education 2017 SEPP<sup>6</sup> design quality principles (Schedule 4) to be used when designing new schools and school building upgrades. The principles are set out below, along with a commentary relating to the identified values associated with Darlington PS.

The NSW Government 2013 plan for Aboriginal affairs—OCHRE<sup>7</sup> provides policy and guidance and has been drawn upon in relation to developing recommendations.

The seven Better Placed design principles are summarised in Section 7.2 and a brief commentary is provided in relation to Darlington PS. Consultation with staff at Darlington has identified that the new school needs to provide a continuity of use, community access, sense of place and community value. Section 7.3 develops the discussion examining values and provides recommendations for 'remembering' the existing Darlington PS. Section 7.4 provides direction and recommendations for the new school, including considerations for its designers and implementable actions linked to the school's heritage values, notably its social and aesthetic values.

# 7.2 'Better Placed' Seven Design Principles

### 7.2.1 Better Fit—Contextual, Local and of its Place

Good design in the built environment is informed by and derived from its location, context and social setting. It is placebased and relevant to and resonant with local character, and communal aspirations. It also contributes to evolving character and setting.<sup>8</sup>

Darlington (the suburb) has a specific heritage character comprising several conservation areas (refer to the GML analysis of the built heritage impact statement<sup>9</sup>). Designers of the new school have an

opportunity to examine the surrounding space and develop new buildings that fit into the suburb and respond to the local surroundings.

With respect to Aboriginal values, the Darlington PS is used by the community as a meeting and gathering place. The spatial context and response to urban setting needs to consider the movement of people through the school, during and outside teaching hours. The movement corridors should be natural and provide a connection (visual and physical) between the new buildings, new landscaping and existing street/urban setting.

Spaces inside the new school should consider student and parent needs, notably during parent waiting times (before and after school), and student recess times. Spaces that are comfortable but engaging should be developed, inside the building and in the landscape. Design for spaces should consider Aboriginal heritage, taking guidance from the successful spaces within the existing school in particular the music room and the platypus classroom. Some spaces should be open and connected, others need to be private or separated space. Creation and delineation of external space may need to consider seasonal changes and opportunities for exploring and experiencing these changes in a classroom setting.

Spaces need to be allowed to evolve and change as the new school grows. The school may want to participate in collaborative design workshops to evolve and develop spaces. Collaborative design should become a principle within the new design.

## 7.2.2 Better Performance—Sustainable, Adaptable and Durable

Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an optional extra, but a fundamental aspect of functional, whole of life design.<sup>10</sup>

The new school has potential to identify and incorporate aspects of the local environment into the design, recognising and responding to Aboriginal seasonal cycles. Aboriginal culture is connected with the changing seasons and connects cultural events with specific parts of the year. The year-round changes in light, air temperature and air movement can be recognised and the new school designed with such key environmental and green star principles in mind. Inclusion of these elements will also culminate in passive design, minimising the use of energy resources.<sup>11</sup>

An opportunity exists to anchor the building into the landscape of the suburb through extensive planting which is connected to local ecological communities, creating habitat and thereby inviting birds and animals into the school grounds. A connection to many natural elements (eg elements reflective of the pre-urbanised environment) could be considered with the use of sandstone elements, soil textures, and water flowing through the school. The design should consider rainwater harvesting, with the ability to support deep soil zones capable of supporting mature trees and associated understorey vegetation. This approach could link and recognise the importance of the classroom names and totems, directly to the natural environment, while also boosting the sustainability of the school and both reflecting and enhancing the natural heritage of the local area.

### 7.2.3 Better for Community—Inclusive, Connected and Diverse

The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.<sup>12</sup>

The school site is acknowledged as relatively small, with many constraints defining the placement of buildings and the interface between public and school space. However, these constraints also need to

be considered in terms of opportunities. For instance, the need to maintain an external wall around Golden Grove Street and Abercrombie Street provides considerable opportunity in terms of structural design (that can be used to define and announce the school eg the current red doors), and provide canvases for future artwork (eg required expansions to the Year 6 art wall). This wall would need to both establish security and define the school space, while being welcoming for the local and school community. Wayfinding through the school should follow principles developed through an understanding of sustainability (described under sustainability). This will create a natural flow and pathways through the building and landscape, resulting in an accessibility not currently present in the extant building and landscape.<sup>13</sup>

The school has a history of engaging with the local community to create a space that is inclusive and welcoming. This process needs to continue but also recognise that it has taken 44 years for Darlington to evolve its present form. Therefore, new design should not aim to decorate and fill every space prior to opening. Whilst not formally a part of DET Connected Communities, 14 the principles and initiatives of this program can be examined and implemented into the new design, along with consideration of education initiatives outlined in OCHRE. 15

## 7.2.4 Better for People—Safe, Comfortable and Liveable

The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.<sup>16</sup>

For the local Aboriginal community, Darlington PS functions as a hub within the local community, creating an inclusive and safe space. The school is directly linked into the health, healing and reconciliation and social fabric of the local community, and this function must be retained in any new development.

Aboriginal wellbeing has social, economic, emotional, cultural and spiritual dimensions and healing needs to occur at the individual, family and community level. Healing is a process that takes time and cannot be achieved through a one-off event or program.<sup>17</sup>

The involvement of the local community in the design process is essential.

The NSW Government recognises that Aboriginal communities are best placed to understand local needs and that service delivery can be compromised if distinct local conditions are overlooked in favour of a 'one size fits all' approach.<sup>18</sup>

The local design and decision-making process must ensure high levels of community engagement and where possible collaborative design, throughout the process. The process must remember the existing Darlington school, and transfer key elements into the new school and its design.

### 7.2.5 Better Working—Functional, Efficient and Fit for Purpose

Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to changes over time. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.<sup>19</sup>

The amenity of the new school must provide a pleasant and engaging space that is accessible for a wide range of educational, informal and community activities. The integration of internal and external spaces, considering key design principles around sustainability and the natural environment, will result in a functional and efficient space.

## 7.2.6 Better Value—Creating and Adding Value

Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.<sup>20</sup>

The current Darlington PS creates value for the local community beyond its requirements for education, through its function as a safe social space and venue for students and parents. An investment in good design will serve the local Aboriginal community in aspects of future health, education and notably economic advantage.<sup>21</sup> Assuming the new school will have a life span of 50 years, the redevelopment options represent investment in three or more generations and must therefore consider wider public benefit over time.

The value of creating space and design that reflects current and future Aboriginal values will continue to provide benefit for the local and wider community, notably in recognition of Aboriginal reconciliation and the need to 'close the gap'.

## 7.2.7 Better Look and Feel—Engaging, Inviting and Attractive

The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.<sup>22</sup>

The local character of Darlington/Chippendale should provide a context for the new design, notably the scale, form and appearance of the building. While needing to become a new part of Darlington, the school should seek to maintain its own unique identity as both a school, and as a connection with the local Aboriginal community. The outward appearance needs to be continued into the school grounds, and seamlessly integrated into the school buildings and internal spaces. The aesthetics of the school should be derived from the three environmental design principles:<sup>23</sup>

- Understand the physical surroundings.
- Understand how the surroundings affect people.
- Adopting strategies that benefit people and the surroundings.

# 7.3 Remembering the Existing Darlington School

The identified Aboriginal cultural heritage values need to be 'remembered' and certain items and aspects 'transferred' into the new school. This section identifies key actions and recommendations that need to be undertaken prior to the current school closing, and before the new school design is finalised.

### 7.3.1 Recording Values in the Existing School

The existing school should be subject to an archival recording whilst still an operational school. This will conserve the living memory of the space, provide a meaningful record for the community, who may feel loss at the demolition of the older school buildings, and provide a talking point for the community, while allowing a mechanism for commemoration of the old school and its place within the local Aboriginal and non-Aboriginal community.

The archival recording should systematically move through the school from Kindergarten to Year 6 classrooms, recording the spaces and connected cultural elements. Communal spaces should also be recorded. The archival recording should investigate and record the functional use of each space. This work will require both high quality photography and oral history recording. People to be interviewed need to be identified through a social values strategy, and may include former staff, community members (especially artists involved in the creation of works), current staff, and perhaps selected students.

All artworks need to be formally recorded. A basic catalogue has been created (Appendix E). This can be the basis for a formal record. Each artwork needs to be recorded professionally by high-resolution digital photography, and detailed information on the creator, meaning and values associated with each piece. The same type of record needs to be created for Aboriginal objects held by the school.

The archival record could be used as a commemorative publication on the school and its place/connection with the local Aboriginal community.

Significant fabric from the existing school that will be transferred to the new school needs to be identified (refer below for details of some items). This will include the 'burnt door' and carved sandstone blocks which currently form the outdoor yarning circle.

The items to be retained and protected during the redevelopment need to be specifically identified and proposals for the protection of these items instigated. This will include the Year 6 art wall, which uses a Sydney University building, and thus will not be subject to potential demolition.

Key trees within the school need to be identified, retained and conserved. These are likely to be habitat trees for animals and birds. Reference to the ecological assessment for the school should be made when determining which trees to retain.

## 7.3.2 Transferring Values to the New School

The movable art collection should be conserved and where feasible transferred into the new school. The placement of art in the new school should be undertaken in collaboration with the school community. Some pieces, for instance the Jarjum rugs, should have specifically designed spaces for display and curation. Items such as the digeridoos should have a functional relationship with a new space, such as the music room where they can be accessed and used. Other pieces may have culturally significant purposes, such as the burnt door, or require culturally appropriate placement, such as the NAIDOC Week burnt plaques.

The Aboriginal designed 'burnt door' holds social value and signifies the presence of a safe space behind the door. The door is unlikely to meet current fire standards, but must be brought into the new school and installed (mounted) on the wall (as an artwork) adjacent to a safe space room accessible to students. This action will maintain the values inherent in the door, the story behind its creation, and social connection felt by staff and students.

Some of the important large murals within the old school, on walls that cannot be retained during redevelopment, can be included into the new school as art 'placeholders'. This can be achieved by high-resolution photography of the murals, and printing the images onto a large canvas. Large-scale canvas printing is currently used by Schools Infrastructure NSW and the City of Sydney on development sites. Installation of two or three large and familiar canvases on selected walls of the new school will connect the old and new Darlington school, providing further familiarity for the school

community. Once the school community is ready for a new artwork to be painted, the canvas can be simply removed, and new art murals painted.

The recorded murals should form the basis for canvas construction site hoardings during the new development. This will provide the school site with continued presence demonstrating to the community that connections are being maintained.

Prior to the closure of the existing school, the local community should be invited to plan and hold a cultural farewell. On opening the new school, a further cultural arrival can be proposed.

# 7.4 The New Darlington Public School

The identified Aboriginal cultural heritage values need to become embedded into the new school's design. This process has commenced through consideration of heritage in the Architectural Design Statement<sup>24</sup> and landscape reports<sup>25</sup>. Combining community consultation, the heritage values assessment, and connection with the Government Architect's Better Placed guidelines has identified four themes to guide and influence the new design. These need to be implemented through detailed design and planning for the new school.

### 7.4.1 Heritage Connections

The new school must recognise and celebrate the history of education in Darlington. The Darlington school community recognises that inclusivity of all cultures is important and should underpin the philosophy of the new school. An emphasis on Aboriginal culture is vital to maintain connection with the local community, and this must be recognised and celebrated through the new design.

The new school must be a place for gathering, reconciliation, healing and community engagement. The community must be allowed to provide input into the new design and feel part of the process of development. Ownership of the new buildings and space can be facilitated by remembering the existing Darlington PS and combining key elements into the new place. Darlington PS contains an extensive art collection that is valued by the school and local community. This should also be recognised and managed in the new school. Art is embodied in the existing school and should continue to fill every space and classroom in the new school.

All new design should reflect Aboriginal heritage connections and showcase Aboriginal history and stories. These aspects are discussed below, under physical design and spaces.

The landscape design should include native plants which are linked with the environments of the class totems. Connecting fauna and flora could be used to further enhance the understanding of Aboriginal culture and natural ecosystems, within an urban environment. The school currently contains mature trees which are often associated with birds and other wildlife (for instance, on 23 October 2019 a tawny frogmouth<sup>26</sup> flew into the school, and provided extensive learning opportunities). Many built elements are associated with significant artworks (notably the Year 6 art wall). Some elements need to be identified in the masterplan for protection and retention during redevelopment.

### 7.4.2 Physical Design and 'Spaces'

The new school design should consider its location in Darlington, the corner position of the site, and the heritage character of the suburb. The design needs to present the school outwardly, and aesthetically state its intent and connection with the Aboriginal community. Constraints, such as the external wall, should be viewed as opportunities to provide unique design for the new school, and allow space for future artwork (refer to Section 7.4.4).

The design should be based on an understanding of year-round seasonal environmental cycles, and how these can be translated into a sustainable and energy passive design for the new school. The design should actively demonstrate how passive design is included in the new building, for instance natural air flow 'corridors' could be physically represented in the new building, allowing students to feel a cooling breeze in summer, visually appreciate the airflow and remain connected to the outside environment. The design should use materials present in the local environment, such as sandstone and local soils, and develop water movement through the site, creating a passive water harvesting and distribution system. These elements could be part of a collaborative design process.

Navigation through the school should be dynamic and living, and wayfinding should implement Aboriginal symbolism already connected with the school. Totems should become part of the navigation and wayfinding within the new school. The school's main emblem is a kangaroo, and kangaroo tracks could lead people along the main routes into the school, class totems could be associated with relevant spaces in the school. Pavement treatments could be extended into the public domain on Abercrombie and Golden Grove Streets.

The design will consider the requirements for spaces by the different user groups (staff, student, parent and community), and their specific needs during school and after school hours. This will include a need for promoting non-carbon-based transport to school. Space should be considered for temporary and safe storage of parents' bikes and prams during drop-off/collection times, and storage for student bikes etc. Council should be consulted with respect to creating safer public spaces around the school, notably in connection with students using bikes and scooters for transport to the school.

Requirements for cultural spaces (such as the yarning circle), both internally and externally, need to be considered and allowed to evolve as the new school grows. This must be guided by the staff and students who use the spaces. Fixed spaces which cannot be changed in relation to environment, climate or need may not be necessary for some cultural spaces and flexibility of use should be built in where possible.

#### 7.4.3 Learning and Student Wellbeing

The new school must provide a welcoming and safe space, with outdoor classrooms, and an indoor design that brings 'nature' or the aesthetic of the outdoors into every classroom. New classroom design should study the form and space of the existing platypus classroom and music room which are identified as the favoured spaces in the extant school by students.

The connections between nature, Aboriginal heritage and the natural environment should be emphasised. A bush tucker garden should be linked with an kitchen, which is suitable for community use and cultural events.

Opportunities for cross-cultural learning can be provided by sharing and active participation in cultural activities. For instance, development of a Darlington Aboriginal cultural program, which students at Darlington could deliver to the local community and other nearby schools. This program should be considered during design, with key elements in the new design being usable elements for the program.

A teacher/student guide to the art should be developed. This should include details on each artwork, the story behind its creation or acquisition, and information on the meaning and importance of each item. This can be connected with the archival recording publication on the old school.

#### 7.4.4 Artistic and Creative Design

The new school requires space and facilities for the creation of new art. The Year 6 art wall is recognised as a high value item, which needs to be retained during any development. This art wall also needs sufficient space to expand. Such expansion could be possible on the internal face of the school's external wall on Abercrombie Street. This wall is likely required for security purposes, but if designed appropriately it could perform multiple functions within the school. Its design material, size and shape could be influenced by Aboriginal art and/or a relevant Dreaming story. It can provide an engaging school frontage that is unique but respectful to the setting, and defines the nature and history of the Darlington school.

The development of new art should be organic and not contrived, for instance opportunities for new art and designs do not need to be developed immediately as part of the re-design. Rather space should be provided for the school community to create and install new art as well as new cultural spaces and facilities over the ensuing decades. Opportunities for placeholders and connecting the new school with the old have been described above.

A statement artwork by a significant local Aboriginal artist could be considered for one external wall of the new school. The location, size and subject matter needs to be determined in collaboration with the local community. A further new mural could be considered showing the evolution of the school. This would provide an evolution from the existing mural depicting this subject (Appendix E, item 46). A new mural that includes all phases of Darlington PS, eg 'from where we have come to where we are going', would be a suitable tribute and celebration for the school.

### 7.5 Endnotes

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- <sup>19</sup> Government Architect NSW 2017, 'Better Placed. An integrated design policy for the built environment of New South Wales', p 42.
- <sup>20</sup> Government Architect NSW 2017, 'Better Placed. An integrated design policy for the built environment of New South Wales', p 43.
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- <sup>22</sup> Government Architect NSW 2017, 'Better Placed. An integrated design policy for the built environment of New South Wales', p 44.
- <sup>23</sup> Government Architect NSW 2018, 'Better Placed. Environmental Design'.
- <sup>24</sup> FJMT, 17 April 2020. Darlington Public School, SSD 9914 Architectural Design Statement, Golden Grove Street, Darlington, Sydney, Department of Education.
- <sup>25</sup> FJMT, 17 April 2020. Darlington Public School, SSD 9914 Landscape Report, Golden Grove Street, Darlington, Sydney, Department of Education.
- https://www.owlpages.com/owls/articles.php?a=95.

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# 8.0 Appendices

### Appendix A

Darlington Due Diligence Report

### Appendix B

**Details of Aboriginal Consultation** 

### **Appendix C**

Outcomes from Teachers, Parents and Students consultation program

### **Appendix D**

Aboriginal Heritage Design Response by FJMT

### Appendix E

Artwork and Artefact Register

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# Appendix A

Darlington Due Diligence Report



# **Darlington Public School**

Aboriginal Archaeological Due Diligence

**Final Report** 

Report prepared for the Department of Education

April 2020



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### **Report Register**

The following report register documents the development and issue of the report entitled Darlington Public School—Aboriginal Archaeological Due Diligence undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
18-0630	1	Draft Report	26 February 2019
18-0630	1	Final Report, minor amendments to project details	29 April 2020

### **Quality Assurance**

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Lara Tooby	Project Director & Reviewer:	Dr Tim Owen
Issue No.	2	Issue No.	2
Signature	Inaforty	Signature	Ein own
Position:	Heritage Consultant	Position:	Principal
Date:	29 April 2020	Date:	29 April 2020

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### 1.0 Introduction

### 1.1 Project Initiation

GML Heritage Pty Ltd (GML) has been engaged by the Schools Infrastructure NSW (SI NSW) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the redevelopment of Darlington Public School. The ACHAR forms part of the Environmental Assessment for the project which is subject to assessment as State Significant Development (SSD) under the *Environmental Planning and Assessment Act* 1979 (NSW) (EPA Act).

The ACHAR will identify and describe the Aboriginal cultural heritage values that exist across the whole area that would be affected by the development. This includes scientific values, which often relate to archaeological and Aboriginal objects. This due diligence report has been prepared to identify whether the study area possesses or has the potential to possess Aboriginal objects, as defined under the *National Parks and Wildlife Act 1974* (NSW) (NPW Act), and scientific values. This due diligence report forms an appendix to the ACHAR.

### 1.2 Darlington Public School

Darlington Public School is in Darlington, Sydney, built across Lot 592 DP752049 and Lot 100 DP623500 (Figure 1.1). The school is bound by Golden Grove Street (to the east), Abercrombie Street (to the south), with buildings from the University of Sydney's Abercrombie Precinct (Darlington Campus) on the other boundaries.

### 1.3 Proposed Development

The primary objective of the proposed development is to increase the capacity of the school in order to meet the growing demand for public education in Sydney's Inner West suburbs. The development will seek to demolish and rebuild the existing school to accommodate up to 437 students. It is proposed that the existing building stock, which is nearing the end of its economic life and usefulness, will be replaced with modern educational buildings that will meet the learning needs of the students and provide a comfortable working environment for staff.

Supplementary objectives of the proposed development include:

- creation of a welcoming atmosphere and pleasant school environment both internally and externally;
- improvement of the school's connection with the local community;
- retention of Aboriginal artworks and artefacts for display and storage in the new development;
- design of intuitive wayfinding throughout the school grounds;
- improvement of pedestrian safety at school pick-up/drop-off points;
- creation of purposeful outdoor learning spaces to function as a learning tool for student interaction and exploration;
- design of innovative learning environments; and
- provision of community access to the communal hall, play space and other ancillary facilities.

The physical accommodation brief includes the following:

- nineteen new home bases with shared practical, presentation, withdrawal and outdoor areas;
- new administration facilities with a school clinic;
- new staff room facilities;
- new library;
- one special programs rooms;
- new communal hall with OSHC and canteen facilities;
- three new preschool classrooms with dedicated storage, toilets and outdoor play area;
- accessible and ambulant toilet facilities and new general storage areas;
- new external play area with a covered outdoor learning area (COLA); and
- new substation and services rooms and cupboards.

### 1.4 Statutory Context

### 1.4.1 Environmental Planning and Assessment Act 1979

The EPA Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments can include Aboriginal objects and places, historic sites, landscapes and parks. The EPA Act requires that appropriate measures be taken for the management of the potential archaeological resource consistent with the requirements of the NPW Act.

The relevant sections of the EPA Act are:

- Part 4: Development that requires consent under consideration of environmental planning instruments.
- Part 4, Division 4.7 State Significant Development, Section 4.41.
- Part 5: An assessment process for activities undertaken by Public Authorities and for developments that do not require development consent but an approval under another mechanism.

#### 1.4.2 National Parks and Wildlife Act 1974

Section 90 of the NPW Act provides statutory protection for all Aboriginal 'objects' consisting of any material evidence of the Indigenous occupation of New South Wales. It also enables, under Section 84, the declaration of 'Aboriginal places' which are areas of cultural significance to the Aboriginal community. Aboriginal objects and places are given automatic statutory protection in NSW and it is an offence to harm an Aboriginal object or declared Aboriginal Place without the Minister's consent.

The NPW Act defines an Aboriginal object as:

any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Under the EPA Act, Section 4.41, SSD that is authorised by the granting of a development consent does not require an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the NPW Act. However, a project's Secretary's Environmental Assessment Requirements (SEARs) define the mechanism for the assessment and management of Aboriginal heritage and objects.

SEARs (at the time of preparation of the report) are yet to be issued for the project. Typically SEARs require a project to adhere to the following Office of Environment and Heritage (OEH) policy and documents:

- Aboriginal cultural heritage consultation requirements for proponents 2010, Part 6, National Parks and Wildlife Act 1974;
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (the Due Diligence Code);
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (the Code of Practice);
- OEH, Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW; and
- the Australia ICOMOS Burra Charter, 2013 (Burra Charter).

The purpose of this due diligence report is to identify whether Darlington Public School possesses or has the potential to possess Aboriginal objects, and values connected with these objects, in accordance with the OEH guidelines for due diligence. The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*<sup>1</sup> sets out the reasonable and practicable steps which individuals and organisations need to take in order to:

- 1. identify whether Aboriginal objects are, or are likely to be, present in an area;
- determine whether the activities they propose are likely to harm Aboriginal objects (if present); and
- 3. determine (if not SSD) whether an AHIP application is required. Once declared an SSD project, no AHIP will be required (should Aboriginal objects be present).

### 1.5 Authorship

This report has been prepared by Lara Tooby, GML Graduate Heritage Consultant, and Dr Tim Owen, Principal, of GML.



Figure 1.1 The study area in relation to surrounding suburbs. (Source: SIX Maps, with GML additions 2019)



Figure 1.2 Location of the study area. (Source: SIX Maps, with GML additions 2019)

### 2.0 Environmental Context and Archaeological Context

### 2.1 Ethnohistory

The Aboriginal people that lived in the area now occupied by Darlington Public School were either Cadigal or Wan(n)gal. These groups are local descent groups, otherwise referred to as local clans or territorial clans. Some confusion remains as to which clan is associated with what are now the grounds of the school, arising from conflicting information contained within two historical quotes:

The tribe of Cadi inhabit the south side, extending from the sought head to Long-Cove; at which place the district of Wanne, and the tribe of Wangal, commences, extending as far as Parra-mata, or Rose-Hill.<sup>2</sup>

From the entrance of the harbour, along the south shore, to the cove adjoining this settlement the district is called Cadi, and the tribe Cadigal; the women, Cadigalleon. The south side of the harbour from the above-mentioned cove to Rose Hill, which the natives call Parramatta, the district is called Wann, and the tribe Wanngal.<sup>3</sup>

The original inhabitants of the Sydney region relied on food gained through fishing and hunting, and gathering plants and small animals. The land and its rivers and estuaries were the source of a range of plant and animals for food, medicines, and raw materials for tools, weapons, shelters and body decoration.<sup>4</sup> A variety of tools were used for obtaining food and raw materials, carrying small objects, and equipment making. Weapons were required for either offensive or defensive purposes.<sup>5</sup>

The length of Aboriginal habitation in Sydney is understood from the study of archaeological sites and their associated deposits. Stratified archaeological sites in Parramatta have yielded dates for occupation from 30,000 to 40,000 years. The length of Aboriginal occupation extended from the middle Pleistocene, through the end of the last glacial maximum, into and throughout the Holocene (the last 10,000 years). The length of Aboriginal habitation across the Cumberland Plain and around Sydney Harbour has resulted in an enduring legacy of archaeological sites, and intangible connection with Country, place and the land, which endures today and is personified through the Aboriginal connections in Darlington Public School.

These connections are explored through the ACHAR, which considers the social, historical and aesthetic values of this place.

### 2.2 Landscape Context

The purpose of this section is to provide environmental contextual information for use in developing a predictive model of Aboriginal site locations associated with the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources, including water, flora and fauna, and suitable raw materials for the manufacture of stone tools and other items had—and continues to have—a significant influence over the way in which people use the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited, whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

### 2.2.1 Geology and Soils

The geology of the study area comprises Wianamatta shale overlying Hawkesbury sandstone. The surface geology is characterised by a thin capping of Wianamatta shales. The nearest outcropping of

sandstone has been identified in the northeast corner of Victoria Park.<sup>7</sup> As part of the local geology, some silcrete outcrops have been identified south in the Newtown area. These outcrops may form part of a tertiary palaeochannel but are at a distance from the study area. The implication for Aboriginal archaeology is that the surface geology of the study area is generally unsuitable for supporting Aboriginal sites such as engraved art sites or grinding grooves.

The associated soil landscapes found across the study area are from the Blacktown soil landscape. Blacktown soils are characterised by shallow to moderately deep soils that are both poor in fertility and drainage.<sup>8</sup> Blacktown residual soils are duplex and do not contain horizons capable of yielding stratified Aboriginal sites (eg sites and Aboriginal archaeological deposits buried over time). The soil horizon capable of containing Aboriginal objects is the A<sub>2</sub> horizon (described in this instance of bt<sub>2</sub>), which is typically between 100mm and 400mm in depth. This horizon is located below a thin organic A<sub>1</sub> layer (typically 100mm depth), which is frequently removed prior to development due to it limited stability. Archaeological excavation across the Cumberland Plain has confirmed that the lower B horizon clays (bt<sub>3</sub>) have no Aboriginal archaeological potential and, when intact and undisturbed, do not contain an Aboriginal archaeological signature.

The implication for potential Aboriginal archaeological deposits across the Darlington Public School site is that soils capable of containing Aboriginal objects would be the shallow topsoils, A<sub>1</sub> and A<sub>2</sub> horizons with a maximum depth of 300–400mm. Soils below this depth do not hold potential for Aboriginal objects.

In this location, the ability of any soils to contain Aboriginal objects depends on both the likelihood of Aboriginal people 'discarding' Aboriginal objects (determined through predictive modelling), coupled with the overarching integrity and condition of the soils (whether original pre-development soils remain within the site).

### 2.2.2 Landforms and Landscape

The site is located within the Cumberland lowlands physiographic region. The general area consists of gently undulating rises with broad crests and ridges consisting of rounded upper slopes and concave lower slopes. Local relief is to 30m with slopes grading to 5–10%.

The study area is located on the southern slope of the ridgeline on which King Street and the Camperdown Campus of the University of Sydney sit. The highest point of this ridge is in the vicinity of the University's Great Hall, at approximately 40m above sea level.

Landforms across the study area can be described as undifferentiated; there are no features with favourable view corridors, connection with former walking routes (such as ridgelines, eg similar to King Street), or raised flat or terraced areas adjacent to creek lines. The implication for Aboriginal archaeology is that there are no specific landforms which present a focus for Aboriginal habitation activities or lend themselves favourable to Aboriginal occupation.

#### 2.2.3 Hydrology

Darlington Public School is located near the headwaters (the origin) of Blackwattle Creek, <sup>10</sup> which flowed northeast across the area that is now the University of Sydney Engineering Faculty, in the direction of Victoria Park and Chippendale (an area of freshwater swamps), before running into the intertidal mudflats of Blackwattle Bay (now under Wentworth Park). The general pattern of landforms suggests the creek would have been ephemeral, without a deep or formed channel.

The Darlington Public School site was likely part of a wider area with marshy ground, subject to sheet wash and slow water movement downslope to the area which is now the Eveleigh Carriageworks. There are no known creeks or water sources within the school site.

#### 2.2.4 Fauna and Flora

Historically, the Wianamatta shales of inner Sydney comprised open forests that were dominated by turpentine (*Syncarpia glomulifera*), ironbark eucalypts (eg *Eucalyptus paniculata*), with shrubbery including *Acacia*, *Dodonaea* and *Kennedia*. The floral conformation of the Wianamatta shale open forests would have been largely determined by rainfall and drainage conditions.<sup>11</sup>

The fauna of Sydney, at the time of contact, is well documented and includes many species still present on the Cumberland lowlands today. The various species included kangaroo and wallaby, with the study area previously known as the 'Kangaroo ground'. Other species documented include wombats, echidnas, flying foxes, emus, quolls, various native rats and mice, snakes and lizards.<sup>12</sup>

The general location of the study area on the edge of the swampy headwaters of Blackwattle Creek and the open forests of the central Sydney area means Holocene Aboriginal populations occupying this area had access to a diverse range of resources and environments.

#### 2.3 Modern Land Use and Disturbance

The recent history of the study area is connected with that of the wider block, which is part of Sydney University.

- 1788 to 1879—the study area was part of the School Reserve (c1788–1801), Female Orphan Institution (1801–1819) and Golden Grove Estate (1819–1879). Land use over this period was timber felling and animal grazing. These activities would have disturbed soil horizons, but not removed intact original soils, or modified landforms.
- 1879 to 1958—the area was subdivided and formed the Golden Grove Estate, with extensive terrace house and warehouse construction across the area (Section 2.3). This activity would have significantly altered and impacted the study area.
- 1958 to present—the wider block became part of a special uses zone, which allowed the University of Sydney to become the principal buyer of land parcels when they became available. The Darlington Public School site is located in the southwest corner of the larger block and constructed in 1975. Construction of the school required demolition of extant buildings and levelling of the site followed by significant earthworks and construction. This activity resulted in further significant impact to soil horizons and landforms within the study area.

### 2.4 Historical Aerial Photography

The Sydney 1943 aerial photograph provides evidence for mid-twentieth century land use across the study area (Figure 2.1). The whole study area is clearly developed, with rows of terrace houses, a road (the western extension of Rose Street), and industrial workshops across the site. Construction of these houses and warehouses are unlikely to have involved deep foundations. However, construction of house foundations (around 1879) would have involved clearing the ground surface, removing the upper soil horizons, levelling the ground, and excavation of shallow trenches to the underlying clay, or bedrock, for construction of brick foundations.

Today, none of the buildings present in 1943 remain on the site. Between the 1940s and 2000 the whole area was cleared of all buildings and materials. This process is likely to have been undertaken mechanically, with buildings being demolished and their materials being mounded and pushed to either level the site, or pushed off site.

Darlington Public School was constructed after 1958, with concrete and brick buildings across the site. These buildings required excavation for their foundations, which would have further excavated and disturbed the site. In 2000 the only undeveloped parts of the site contained grassed courts, which by 2009 had been converted into hardstand materials. It is understood that the hardstand material was used to cap contaminated materials and fills.

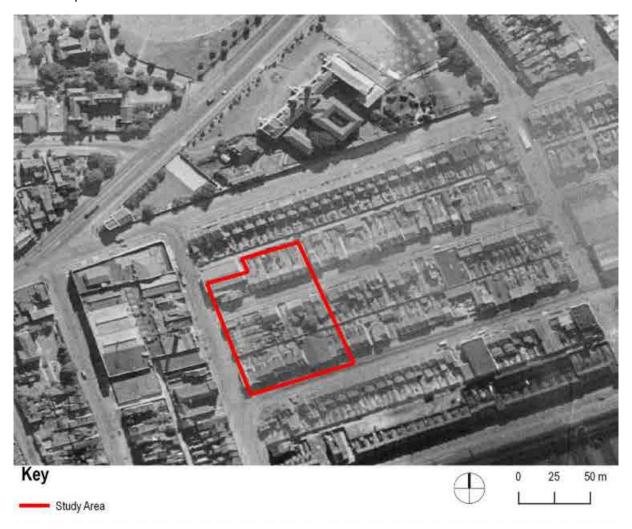


Figure 2.1 1943 aerial photograph, showing the developed residential nature of the study area. (Source: Six Maps, with GML additions, 2019)

### 2.5 Summary of Environmental Context

The landforms that comprise Darlington Public School are low gradient middle slopes below a ridgeline (now King Street), which ran into the area which is now Sydney University. These landforms comprised part of the wider landscape which was inhabited by Aboriginal people, who would have accessed plant resources, and likely fresh water from the small ephemeral creeks. However, being located near but not on the harbour suggests this specific area did not form a specific focus for habitation activities which could have resulted in a dense or extensive archaeological signature. Visitation would have been most

likely transient, rather than longer term repeat visitation to known or established sites or habitation locations. There are no specific environmental features that would have provided a focus; the origins of Blackwattle Creek were likely ephemeral and not a reliable source of water.

The more recent (non-Aboriginal) history of the study area included vegetation stripping and around 100 years of grazing prior to subdivision in 1879. The history and impacts observable in aerial photography provide evidence that the Darlington Public School site has been subject to holistic development first for houses and industry, followed by demolition and clearance for construction of the school. These processes are likely to have impacted through the excavation, movement and removal of any original A<sub>1</sub> and A<sub>2</sub> Blacktown soils which may have been present. It is very unlikely that the study area retains any pre-development soils capable of yielding Aboriginal objects. Any soils present are unlikely to retain structural integrity, given the level of development and disturbance evident from the aerial photographs.

### 3.0 Archaeological Context

The archaeological context provides an overview of prior studies and identified Aboriginal sites, as well as a statement of archaeological prediction as to the types of sites which could potentially occur within the study area.

### 3.1 Aboriginal Heritage Information Management System Search

A search of the OEH Aboriginal Heritage Information Management System (AHIMS) database of a zone from latitude, longitude -33.9002, 151.1661 to -33.8586, 151.2322 with a 50m buffer, was undertaken on 7 February 2019. The results of the search are shown in Table 3.1 and Figures 3.1 and 3.2. The search identified 42 sites. There are no Aboriginal sites or places located within the study area; the nearest Aboriginal sites are 500m to the northeast.

These results do not include AHIMS sites 45-6-2838, 45-6-3081, 45-6-3152 or 45-6-3552, which had been registered sites which have had their statuses updated to 'Not a Site'.

Table 3.1 Results of AHIMS Search.

Site Type	Frequency
Artefact Site	10
Ceremony and Dreaming Site with Burial	1
Ceremony and Dreaming Site with Shell Midden	1
Potential Archaeological Deposit (PAD)	22
Resource and Gathering	1
Rock Art	2
Rock Art and Artefact(s)	1
Rock Shelter with Midden	1
Shell Midden	3

The pattern revealed by the AHIMS search is likely to have been heavily skewed by the nature of urban development in Sydney's inner city, rather than demonstrative of Aboriginal patterns of landscape use. The extremely high level of ground disturbance caused by urban development would have destroyed most Aboriginal archaeological evidence before laws came into force protecting it. Most of the recorded sites have been recorded within the last 15 years and registered as modern development begins to encroach on less disturbed areas.

The patterning of Aboriginal sites shows a strong correlation with landform and proximity to the harbour. Locations on the current shoreline contain a combination of engraved art sites and shell middens, reflective of sandstone outcrops on promontories being used as platforms for art, and shellfish being consumed near the point of origin.

Aboriginal sites away from the foreshore are predominantly stone based artefact sites, or locations designed with potential for these sites. The exception is the resource gathering site located at Lake Northam, to the east of Sydney University.

### 3.2 Relevant Local Literature

The following archaeological studies are relevant to the current study.

#### **Quadrant Development Site, Ultimo, 2003**

The Quadrant site, on the corner of Broadway and Mountain Street (Ultimo), was the subject of archaeological testing in 2001 and 2002. Blackwattle Creek originally passed through the Quadrant site, which was also a natural swamp.

Excavation revealed that in a portion of the site, natural soil profiles had been preserved beneath a capping of introduced fill laid in the historical period, although these were truncated and disturbed. The soil profiles present at this site comprised a deep alluvial deposit, with the upper layers consisting of a Blacktown soil landscape. The Blacktown soil landscape is characterised by its poor drainage quality.<sup>13</sup>

An artefact site (registered AHIMS site #45-6-2629) was identified during a program of testing. The site was identified as a background distribution of stone artefacts in a landscape only sporadically visited by Aboriginal people. It was concluded that the limited Aboriginal archaeological evidence encountered at the Quadrant site was the product of two factors. The first was the significant disturbance across the site in the historical period. The second was the way past Aboriginal people were likely to have utilised the natural environment:

The poorly-drained nature of the landscape at the Quadrant site is one possible explanation for the absence of more substantial Aboriginal archaeological remains identified during the investigation program. It is reasonable to assume that Aboriginal people in the past may have exploited the various resources available within these environments, but it is unlikely people established long-term occupation sites on them.<sup>14</sup>

Beyond the creekline and swamp, more elevated portions of the site located on Hawkesbury sandstone would have been more favourable for Aboriginal occupation with a less ephemeral archaeological signature. It was noted that these locations have generally experienced such a degree of historical development that the natural A horizon soils capable of bearing artefacts and archaeological deposits have been removed or heavily disturbed.

### University of Sydney, 2004-2005

In 2004 Aboriginal heritage assessment and survey of a portion of the University of Sydney's Camperdown and Darlington Campuses was undertaken as part of upgrades and construction undertaken during the Campus 2010 project. No Aboriginal sites/objects were identified; however, four areas of PAD were recorded.<sup>15</sup>

A program of archaeological testing was implemented at two of these PADs in 2005. The first was located at the former Geology Lawns (now the site of the Law Building); the second was at Maze Green, adjacent to the Old Darlington School.

Testing at the Geology Lawn revealed that between 75cm and 160cm of fill had been introduced above the A horizon soils. The A horizon was an average of 50cm thick and was moderately disturbed, as indicated by the presence of historical materials. One piece of flaked silcrete debitage was the only artefact retrieved from testing at the Geology Lawn.

At Maze Green archaeological testing revealed that most soil profiles consisted of a clay loam A horizon grading to a yellowish brown clay B horizon. Many of the soil profiles were significantly disturbed by historical activity. One test pit, close to the Old Darlington School, revealed sediments that appeared to represent a still, shallow freshwater pond and may be associated with the natural swamp previously

located here before the landscape was significantly modified. One silcrete artefact was retrieved from disturbed overburden during testing; no artefacts were recovered from natural soil profiles.

These results attest to the developed and disturbed nature of landforms around Sydney University, coupled with the likely limited Aboriginal occupational evidence deposited on landforms across the university.

### Abercrombie Precinct Redevelopment, 2012

In 2011 an Aboriginal Archaeology Assessment Report for the redevelopment of the Abercrombie Street Precinct at the Darlington Campus, University of Sydney, was prepared. The study area was the Abercrombie precinct, excluding the site of Darlington Public School.

A background review of historical land use and site inspection was undertaken. The analysis determined that the area had been subject to considerable disturbance and that there were unlikely to be remnant Aboriginal sites and/or Aboriginal objects present. This was due to the evidence of heavy disturbance across the site having a high likelihood to have destroyed or damaged any archaeological deposits (which could have been present).

### 3.3 Archaeological Predictive Modelling

Aboriginal archaeological predictive modelling for the Cumberland Plain is outlined by Owen and Cowie 2017.<sup>17</sup> Two models presented are relevant to the current study.

The stream order model<sup>18</sup> details that landforms on first order ephemeral creeks may present some evidence of Aboriginal occupation, although not in great density. Other factors and landforms noted as favourable, including raised terraces, elevated flats, north and northeast aspects on lower slopes, are not found within the study area. Application of this model to Darlington Public School would describe limited archaeology potential, only within 50m of the former creek line.

The economic resource model details landforms associated with texture changes and ecotones, which may have formed a focus for Aboriginal activities. The study area does not contain landform texture changes, nor different former ecological communities. Application of this model suggests that the study area did not represent a location with specific factors that would have presented a focus for Aboriginal habitation or activities, likely resulting in an Aboriginal archaeological signature.

### 3.4 Analysis of Archaeological Context

The patterning of known Aboriginal archaeological sites in the central Sydney area is not indicative of the way past Aboriginal people used and occupied the local landscape. Three isolated finds and/or artefact scatters have been identified within 2km of the study area; these are likely to have been the most common archaeological site type inland from the harbour foreshore. Most of these have since been destroyed or damaged by urban development in the Sydney area. Consequentially it is difficult to accurately predict the nature of Aboriginal archaeological sites that may be present in the study area based on these results.

Drawing on past archaeological work near the study area, it is possible to make some predictions regarding the archaeological resource that may be present at the study area. Synthesis of archaeological investigations across the wider Sydney region found that campsites were generally located close to estuaries, freshwater sources and marine shorelines.<sup>19</sup> The previous archaeological work along the course of Blackwattle Creek suggests that other environmental factors beyond the availability of water

influenced past Aboriginal use of this landscape, and thus the nature of archaeological remains present. There has been little identifiable Aboriginal connection with the use of Blackwattle Creek.

The swampy landscape surrounding Blackwattle Creek at the Quadrant site and at Maze Green near the Old Darlington School could have been important foci for resource collection; however, they would have not provided favourable habitation locations. Resource collection, including hunting and collection of plant material, are usually ephemeral and leave little physical trace or archaeological signature. Such landscapes would have been visited occasionally by Aboriginal people; however, any archaeological deposit is likely to consist of a background scatter of stone artefacts indicative of people travelling across the land.

In conclusion, the Darlington Public School site was unlikely to have been a focus for Aboriginal habitation or occupation. Whilst Aboriginal people may have passed through the area on a regular basis, there is little to indicate a focus for activities. Should Aboriginal objects (sites) be present, these would most likely be in the form of discarded stone artefacts, without any specific focus.

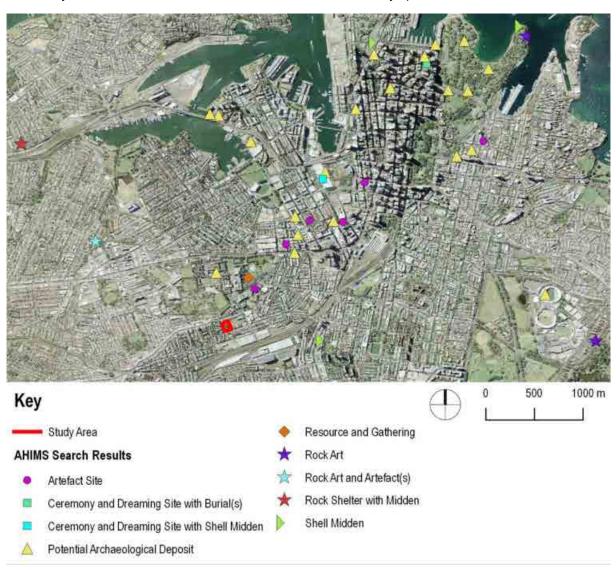


Figure 3.1 The AHIMS search area and sites. (Source: SIX Maps with GML 2019 inclusions from AHIMS data)

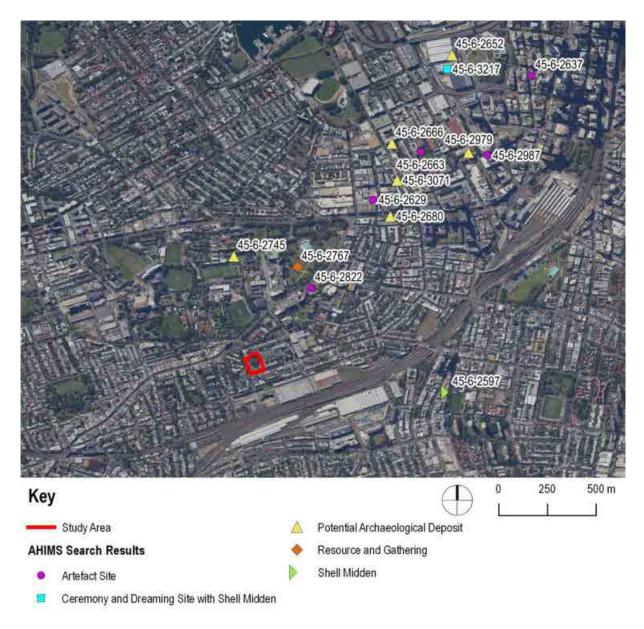


Figure 3.2 AHIMS sites around the subject area. (Source: SIX Maps with GML 2019 inclusions from AHIMS data)

### 4.0 Site Inspection and Desktop Analysis

### 4.1 Visual Inspection of the Study Area

An inspection of the study area was undertaken on 12 February 2019 by Lara Tooby and Dr Tim Owen of GML. The subject site was inspected for visible archaeological remains or evidence of former ground disturbance.

The site inspection was informed by detailed knowledge of the school and its grounds, due to parental connections with the school. During the inspection various aspects of the study area were recorded, including topography, ground levels across the site, areas of exposed soil and the presence of subsurface services. The following observations were made:

- The study area slopes gradually from the north boundary to the south boundary.
- The southern portion of the study area is occupied by extensive buildings, which are cut into the ground, with concrete slabs being poured to form foundations (Figure 4.1).
- The northern part of the study area is covered in 'soft-fall' material, used for ball courts. The ground surface has been levelled and flattened to form a flat surface (Figure 4.2). Some locations have been cut down to create steps and levels across the site. These steps cut into the ground surface, lowering it below the adjacent street level.
- The study area contains no surface exposures of natural intact soils. All trees and vegetation have been planted post-1943.

The conclusion from the study area inspection is that the whole Darlington Public School site has been heavily disturbed. The area comprises constructed landforms, buildings and constructed surfaces. If any archaeological evidence such as Aboriginal objects are present it would not be possible to determine their origin or context.

#### 4.1.1 Potential Archaeological Resource

An assessment of the potential Aboriginal archaeological resource within Darlington Public School is determined by considering the following:

- the likelihood that past activities undertaken by Aboriginal people in the study area would have led to the creation of archaeological deposits; and
- the level of disturbance experienced at the site in the historical period.

As discussed above in Sections 2.5 and 3.4, whilst the study area was probably used by Aboriginal people, this use was probably short term or transient primarily as a hunting and gathering ground, as the swampy environment made it unsuitable for residential campsites. Subsistence activities such as hunting leave little identifiable archaeological signature and usually consist of low density background artefact scatter associated with occasional visitation and use.

The entire study area can be assessed as being heavily disturbed by historical activity. This is likely to have destroyed or damaged any archaeological deposits that related to the study area.

### **GML** Heritage

In synopsis, Darlington Public School is assessed as having no potential for Aboriginal archaeological remains to survive intact. If present, any Aboriginal objects would be within fill and displaced from their original deposition context.



Figure 4.1 View of the southwest corner of the study area, on the corner of Abercrombie Street and Golden Grove Street, showing the current built form. (Source: GML 2019)



**Figure 4.2** View of the central gates on Golden Grove Street, across the ball courts, showing the levelled nature of the study area. (Source: GML 2019)

### 5.0 Conclusions and Recommendations

#### 5.1 Conclusions

In conclusion, it has been determined that Darlington Public School does not contain previously recorded Aboriginal places or Aboriginal objects. Following a site inspection, no landscape features associated with Aboriginal archaeological objects or potential Aboriginal archaeological objects were identified. The potential for Aboriginal sites or objects to be present on the ground surface or within subsurface deposits is nil. As such, the proposed redevelopment of the study area would have no impact on Aboriginal objects.

### 5.2 Recommendations

- This report should be included in the Environmental Assessment for the proposed redevelopment of the site and form an appendix to the ACHAR.
- No further Aboriginal archaeological assessment or investigation would be required prior to, or in conjunction with, the proposed redevelopment.
- With respect to Aboriginal objects, and the due diligence code of practice, the proposed action can proceed subject to caution.
- If Aboriginal objects were to be identified during the development of the subject site, works must stop and a suitably qualified archaeologist notified immediately to assess the finds. The finds must be reported to OEH and further approvals may be necessary prior to the recommencement of works.
- In the extremely unlikely event that human skeletal remains were to be discovered during any development works, the finding would need to be reported immediately to the New South Wales Coroner's Office and/or the New South Wales Police. If the remains are suspected to be Aboriginal, OEH would also need to be contacted and a specialist consulted to determine the nature of the remains.

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# Appendix B

Details of Aboriginal Consultation

### **B Aboriginal Community Consultation—OEH Process**

#### **B.1 Introduction**

Aboriginal community consultation is required for any assessment of Aboriginal heritage in order to make a valid assessment of Aboriginal (heritage) 'values'; especially those Aboriginal memories, stories and associations between the Aboriginal people and their traditional lands or Country. Aboriginal people frequently express an enduring connection to their Country, a connection that transcends generations, both past and present. The connection is frequently expressed as a sense of belonging, which may manifest through physical objects or place; alternatively it may be presented as an intangible idea, where an appreciation of an unseen quality or non-materialistic value connects a place in the landscape, tradition, observance, custom, lore belief and/or history to the person or group describing the item, event or value. The notion of intangible, social, or community values is essential to Aboriginal people as 'the effective protection and conservation of this heritage is important in maintaining the identity, health and wellbeing of Aboriginal people'.<sup>1</sup>

In order to gather social and community views and opinions with respect to Aboriginal heritage and identify and address Aboriginal heritage values, the OEH requires proponents to adhere to the guideline document *Aboriginal cultural heritage consultation requirements for proponents 2010.*<sup>2</sup> In addition to providing a mechanism for engaging the Aboriginal community, the directives in the guidelines must be followed for any study that might eventually be used to support an application for an AHIP under Part 6 of the NPW Act.

GML recognises and acknowledges the continuing Indigenous ownership of the traditional knowledge, traditional cultural expressions, practices, innovations and intellectual property rights in the materials provided by RAPs, on which research and assessments in our reports may be based, and endeavour to protect the privacy, integrity and wellbeing of participants in this research.

### **B.2 The Process of Consultation**

These consultation guidelines set out a process involving identification, registration, engagement and consultation with Aboriginal peoples who may hold cultural knowledge relevant to determining the significance of an Aboriginal object and/or place.

Adherence with guidelines involves following a number of stages, which includes:

- 1. Informing Aboriginal people about the nature and scope of the proposal.
- 2. Understanding what might be present in the landscape and its cultural significance.
- Determining the potential impacts and the proposed strategies to deal with them.
- Reviewing the report.<sup>3</sup>

Aboriginal groups are invited to register interest as a party to consultation. This includes placing local press advertisement(s), responses are sought from the Registered Aboriginal Parties (RAPs) on the proposed assessment methodology, and an opportunity to comment on the assessment reports and recommendations is provided to the RAPs. The guidelines specify timeframes for each stage of the consultation process. Further details pertaining to these stages are described below.

The Aboriginal community consultation for is project has been carried out in accordance with the OEH guideline. This chapter contains specific details of Aboriginal community consultation with regard to the heritage assessment of the study area.

The complete log of all communications between GML and RAPs and all letters, responses and details pertaining to this consultation are provided in Appendix A.

#### **B.2.1 Stage 1: Notification of Project**

The aim of Stage 1 is to 'identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project'. The identification process involves:

- sending letters to select government agencies to determine relevant Aboriginal stakeholder groups to contact; and
- placing notices in local press, inviting Aboriginal people who hold relevant cultural knowledge to register in the process of community consultation.

A letter notifying all Aboriginal people and the Local Aboriginal Land Council (LALC) about the proposed project must be sent to each individual and group identified through the above stages. Aboriginal people have a minimum of 14 days after the letter is sent or the notice published in the newspaper to register an interest in the project.

The outcome of Stage 1 is a list of Aboriginal people who have registered to be involved in consultation. These are the RAPs. The RAP is to be involved for the remainder of the project; no Aboriginal consultation outside of the RAPs is required.

Letters requesting contact details for Aboriginal people or organisations who may hold cultural knowledge and may identify heritage issues relevant to the study area were sent via email in January and February 2019 to:

- the OEH;
- Local Aboriginal Land Council;
- Office of The Registrar, Aboriginal Lands Right Act 1983;
- National Native Title Tribunal;
- Native Titles Service Corporation;
- City of Sydney Council; and
- the Greater Sydney Catchment Management Authority (Greater Sydney Local Land Service).

Subsequently, those Aboriginal people who were identified during the Step 1 notifications were contacted via letter on 20 February 2020, providing information regarding the project and inviting them to register an interest (Step 2 notifications). A notification was also placed in the Central Courier on 20 February 2019, inviting registrations of interest by Aboriginal people with cultural knowledge relevant to the project area.

### **Registered Aboriginal Parties**

In line with the outcomes of Stage 1 following OEH 2010: Appendix B<sup>5</sup> the Registered Aboriginal Parties (RAPs) are:

- Darug Boorooberongal Elders Aboriginal Corporation;
- Didge Ngunawal Clan;
- Darug Land Observations;
- A1 Indigenous Services;
- Ginninderra Aboriginal Corporation; and
- Metropolitan Local Aboriginal Land Council.

The list of project RAPs was sent to the OEH and Local Aboriginal Land Council on 12 March 2019.

#### **B.2.2 Stage 2: Presentation of Information**

A letter was sent to all RAPs informing them of the project outline, project impacts, timeline and milestones of the project. Included is a methodology for undertaking the assessment and a request for any information on culturally sensitive areas of local traditional knowledge relating to the study area.

OEH have determined that Stage 2 must allow 28 days for the RAPs to respond.

Each group was provided with written details of the proposed project on 12 March 2019. Comments were received from the DLO and MLALC. Both groups supported the methodology.

#### **B.2.3 Stage 3: Gathering Information**

Of the six groups registered for consultation, one group identified they had a relative attending the school. As the likely values connected with the school were not archaeological or reflective of other traditional connections, and as the subject site is an active school, no formal opportunity was made for RAPs to enter the school and assess the school. However, those RAPs with a direct connection with the school have been afforded the opportunity to provide input into the assessment of values through completion of the parent's questionnaire (this is detailed in Section 3.5.3 of the main ACHAR). This questionnaire was disseminated directly through the school's systems, under the guidance of the school principal.

#### **B.2.4 Stage 4: Review of Draft Report**

All project RAPs were provided the draft report for review on 1 May 2020. A period of 28 days was allowed for their review. The following comments were received:

To be added following RAP review.

#### **B.3 Endnotes**

- Department of Environment, Climate Change and Water 2010, Aboriginal cultural heritage consultation requirements for proponents 2010, Sydney.
- Department of Environment, Climate Change and Water 2010, Aboriginal cultural heritage consultation requirements for proponents 2010, Sydney.

### **GML** Heritage

- <sup>3</sup> List taken from Department of Environment, Climate Change and Water 2010, Aboriginal cultural heritage consultation requirements for proponents 2010, Sydney, p 10.
- <sup>4</sup> Department of Environment, Climate Change and Water 2010, Aboriginal cultural heritage consultation requirements for proponents 2010, Sydney, p 10.
- Department of Environment, Climate Change and Water 2010, Aboriginal cultural heritage consultation requirements for proponents 2010, Sydney.

# Aboriginal Consultation Log—Darlington Public School Project—18-0630

# Stage 1—Notification of project proposal and registration of interest

### Stage 1, Step 1—Compilation of a list of Aboriginal stakeholders

Body/Group	Contact	Date Sent	Date Reply	Comment	Reference
OEH region office	Susan Harrison Senior Team Leader Planning Greater Sydney Branch Regional Operations Office of Environment and Heritage PO Box 644 Parramatta NSW 2124	30 Jan 2019	1 Feb 2019	OEH provided an extensive list of Aboriginal stakeholders for the Greater Sydney Branch. All organisations and individuals who have a listed interest in the LGA relevant to this project were listed and invited to register and interest in the project.  Page 2 of the list of the Stakeholders was missing, so a follow-up email to locate this page was sent on 7 Feb 2019. Missing page emailed on the same day. List of 44 potential RAPS provided.	Letter and Email
Local Aboriginal Land Council (LALC)	Metropolitan Local Aboriginal Land Council metrolalc@metrolalc.org.au PO Box 1103, Strawberry Hills NSW 2012	7 Feb 2019			
The Registrar, Aboriginal Lands Right Act 1983	The Registrar, Aboriginal Land Rights Act PO Box 112 GLEBE NSW 2037 adminofficer@oralra.nsw.gov.au Att: Ms Megan Mebberson	7 Feb 2019	19 Feb 2019	There are not currently any registered Aboriginal Owners (under the Land Rights Act) in the Study Area. ALRA recommended we contact Metro LALC.	Email

Body/Group	Contact	Date Sent	Date Reply	Comment	Reference
National Native Title Tribunal (NNTT)	National Native Title Tribunal GPO Box 9973 SYDNEY 2000 enquiries@nntt.gov.au Attention: Ms Kimberley Wilson	7 Feb 2019	7 Feb 2019	'Records held by the National Native Title Tribunal as at 07 February 2019 indicate that the identified parcels appear to be freehold, and freehold tenure extinguishes native title.'	Email
Native Title Services Corporation (NTSCORP Limited)	Native Title Services Corporation PO Box 2105 STRAWBERRY HILLS NSW 2012 information@ntscorp.com.au	7 Feb 2019			
Local Council	City of Sydney GPO Box 1591 Sydney NSW 2001 council@cityofsydney.nsw.gov.au	7 Feb 2019	25 Feb 2019	The City of Sydney defers to the Metropolitan Local Aboriginal Land Council as the cultural stakeholder for these matters.'  John Poulton COS Heritage Specialist (ph: 9246 7725)	Email
Catchment Management Authority (CMA)	Greater Sydney Catchment Management Authority admin.greatersydney@lls.nsw.gov.au	7 Feb 2019	8 Feb 2019	'We strongly recommend that you make contact with the Office of Environment and Heritage (OEH), Cultural Heritage Division, for all-inclusive contact lists of persons and organisations that may assist with your investigation.'	Email

Approximately 10 days should be allowed for these groups to respond.

### Stage 1, Step 2—Newspaper Advert

Newspaper	Date Printed	Reference
Central Courier	20 February 2019	Tear Sheet

As a minimum 14 days must be allowed for Aboriginal people to respond to the newspaper advertisement, the closing date for response was 6 March 2019.

## List of Aboriginal groups/people from Step 1 and Step 2.

The following list of Aboriginal groups were identified. he OEH list formed the primary basis of referrals, and GML contacted every stakeholder who had listed Sydney as a *Local Government Area* they were interest in.

Organisation	First Name	Last Name	Email	Street Address	Suburb	State	Postcode	Phone Number
Metropolitan Local Aboriginal Land Council	Nathan	Moran	nmoran@metrolalc.org.au; metrolalc@metrolalc.org.au	PO Box 1103	STRAWBERRY HILLS	NSW	2012	(02) 83949666
La Perouse Local Aboriginal Land Council	Chris	Ingrey	admin@laperouse.org.au	PO Box 365	MATRAVILLE	NSW	2036	(02) 93114282
Darug Aboriginal Cultural Heritage Assessments	Celestine	Everingham		9/6 Chapman Ave	CHATSWOOD	NSW	2067	(02) 9410 3665
Darug Land Observations	Jamie	Workman	daruglandobservations@gmail. com	PO BOX 173	ULLADULLA	NSW	2539	Anna: 0413687279, 0415 663 763
A1 Indigenous Services	Carolyn	Hickey	cazadirect@live.com	73 Russell Street	EMU PLAINS	NSW	2750	0411 650 057
	Eric	Keidge		11 Olsson Close	HORNSBY HEIGHTS	NSW	2077	0431 166 423
Tocomwall	Danny	Franks	danny@tocomwall.com.au	PO Box 76	CARINGBAH	NSW	1495	0404 171 544
Gunyuu	Kylie	Ann Bell	gunyuuchts@gmail.com					
Walbunja	Hika	Te Kowhai	walbunja@gmail.com					0402 730 612
Badu	Karia Lea	Bond	baduchts@gmail.com	11 Jeffery Place	MORUYA	NSW	2537	0476 381 207
Goobah Developments	Basil	Smith	goobahchts@gmail.com	66 Grantham Road	BATEHAVEN	NSW	2536	0405 995 725
Wullung	Lee-Roy James	Boota		54 Blackwood Street	GERRINGONG	NSW	2534	0403 703 942

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Organisation	First Name	Last Name	Email	Street Address	Suburb	State	Postcode	Phone Number
Yerramurra	Nicholas Wade	Glover	yerramurra@gmail.com	1 Waratah Avenue	ALBION PARK RAIL	NSW	2547	0401 753 202
Nundagurri	Newton	Carriage	nundagurri@gmail.com					0421 253 677
Murrumbul	Mark	Henry	murrumbul@gmail.com					
Jerringong	Joanne Anne	Stewart	jerringong@gmail.com					0422 800 184
Pemulwuy CHTS	Pemulwuy	Johnson	pemulwuyd@gmail.com	14 Top Place	MT ANNAN	NSW	2567	0425 066 100
Bilinga	Simalene	Carriage	bilingachts@gmail.com					
Munyunga	Kaya Dawn	Bell	munyungachts@gmail.com					
Wingikara	Hayley	Bell	wingikarachts@gmail.com					
Minnamunnung	Aaron	Broad		1 Waratah Avenue	ALBION PARK RAIL	NSW	2527	0402 526 888
Walgalu	Ronald	Stewart	walgaluchts@gmail.com					
Thauaira	Shane	Carriage	thauairachts@gmail.com					
Dharug	Andrew	Bond	dharugchts@gmail.com					
Bilinga Cultural Heritage Technical Services	Robert	Brown	bilinga@mirramajah.com					
Gunyuu Cultural Heritage Technical Services	Darlene	Hoskins- McKenzie	gunyuu@mirramajah.com; management@mirramajah.com					
Munyunga Cultural Heritage Technical Services	Suzannah	McKenzie	munyunga@mirrmajah.com					

GML Heritage

Organisation	First Name	Last Name	Email	Street Address	Suburb	State	Postcode	Phone Number
Murrumbul Cultural Heritage Technical Services	Levi	McKenzie- Kirkbright	murrumbul@mirramajah.com					
Wingikara Cultural Heritage Technical Services	Wandai	Kirkbright	wingikara@mirramajah.com					
Gulaga	Wendy	Smith	gulagachts@gmail.com					
Biamanga	Seli	Storer	biamangachts@gmail.com					
Callendulla	Corey	Smith	cullendullachts@gmail.com					
Murramarang	Roxanne	Smith	murramarangchts@gmail.com					
DJMD Consultancy	Darren	Duncan	darrenjohnduncan@gmail.com					0410 510 397
Butucarbin Aboriginal Corporation	Jennifer	Beale	koori@ozemail.com.au	PO Box E18	EMMERTON	NSW	2770	(02) 9832 7167
Didge Ngunawal Clan	Lillie	Carroll	didgengunawalclan@yahoo.co m	33 Carlyle Crescent	CAMBRIDGE GARDENS	NSW	2747	0426 823 944
Ginninderra Aboriginal Corporation	Steven	Johnson	ginninderra.corp@gmail.com	PO Box 3143	GROSE VALE	NSW	2754	0406 991 221
Nerrigundah	Newton	Carriage	nerrigundahchts@gmail.com					0421 253 677
Wailwan Aboriginal Group	Philip	Boney	waarlan12@outlook.com					

#### Stage 1, Step 3—Aboriginal notification of the proposed project and an offer to be involved in the consultation

Letters were sent to identified Aboriginal representatives on 20 February 2019. 14 days were allowed for groups to register (6 March 2019).

	Aboriginal Organisation/Person	Address	Date Sent	Reference
1	Metropolitan Local Aboriginal Land Council	nmoran@metrolalc.org.au; metrolalc@metrolalc.org.au	20 February 2019	Email
2	La Perouse Local Aboriginal Land Council	admin@laperouse.org.au	20 February 2019	Email
3	Darug Aboriginal Cultural Heritage Assessments	9/6 Chapman Ave, CHATSWOOD NSW 2067	20 February 2019	Postal Letter
4	Darug Land Observations	daruglandobservations@gmail.com	20 February 2019	Email
5	A1 Indigenous Services	cazadirect@live.com	20 February 2019	Email
6	Eric Keidge	11 Olsson Close, HORNSBY HEIGHTS NSW 2077	20 February 2019	Postal Letter

	Aboriginal Organisation/Person	Address	Date Sent	Reference
7	Tocomwall	danny@tocomwall.com.au	20 February 2019	Email
8	Gunyuu	gunyuuchts@gmail.com	20 February 2019	Email
9	Walbunja	walbunja@gmail.com	20 February 2019	Email
10	Badu	baduchts@gmail.com	20 February 2019	Email
11	Goobah Developments	goobahchts@gmail.com	20 February 2019	Email
12	Wullung	54 Blackwood Street, GERRINGONG NSW 2534	20 February 2019	Postal Letter
13	Yerramurra	yerramurra@gmail.com	20 February 2019	Email
14	Nundagurri	nundagurri@gmail.com	20 February 2019	Email
15	Murrumbul	murrumbul@gmail.com	20 February 2019	Email
16	Jerringong	jerringong@gmail.com	20 February 2019	Email
17	Pemulwuy CHTS	pemulwuyd@gmail.com	20 February 2019	Email
18	Bilinga	bilingachts@gmail.com	20 February 2019	Email
19	Munyunga	munyungachts@gmail.com	20 February 2019	Email
20	Wingikara	wingikarachts@gmail.com RTS, no postal address or phone number	20 February 2019	Email
21	Minnamunnung	1 Waratah Avenue, ALBION PARK RAIL, NSW 2527; minnamunnung@gmail.com	20 February 2019	Email and Postal Letter
22	Walgalu	walgaluchts@gmail.com	20 February 2019	Email
23	Thauaira	thauairachts@gmail.com	20 February 2019	Email
24	Dharug	dharugchts@gmail.com	20 February 2019	Email
25	Bilinga Cultural Heritage Technical Services	bilinga@mirramajah.com-RTS, no postal address or phone number	20 February 2019	Email
26	Gunyuu Cultural Heritage Technical Services	gunyuu@mirramajah.com RTS; management@mirramajah.com-RTS, no postal address or phone number	20 February 2019	Email
27	Munyunga Cultural Heritage Technical Services	munyunga@mirrmajah.com RTS no postal address or phone number	20 February 2019	Email
28	Murrumbul Cultural Heritage Technical Services	murrumbul@mirramajah.com-RTS no postal address or phone number	20 February 2019	Email

	Aboriginal Organisation/Person	Address	Date Sent	Reference
29	Wingikara Cultural Heritage Technical Services	wingikara@mirramajah.com	20 February 2019	Email
30	Gulaga	gulagachts@gmail.com	20 February 2019	Email
31	Biamanga	biamangachts@gmail.com	20 February 2019	Email
32	Callendulla	cullendullachts@gmail.com	20 February 2019	Email
33	Murramarang	murramarangchts@gmail.com	20 February 2019	Email
34	DJMD Consultancy	darrenjohnduncan@gmail.com	20 February 2019	Email
35	Butucarbin Aboriginal Corporation	koori@ozemail.com.au	20 February 2019	Email
36	Didge Ngunawal Clan	didgengunawalclan@yahoo.com.au	20 February 2019	Email
37	Ginninderra Aboriginal Corporation	ginninderra.corp@gmail.com	20 February 2019	Email
38	Nerrigundah	nerrigundahchts@gmail.com	20 February 2019	Email
39	Wailwan Aboriginal Group	waarlan12@outlook.com	20 February 2019	Email
40	Barking Owl Aboriginal Corporation	barkingowlcorp@gmail.com	20 February 2019	Email
41	Thoorga Nura	thoorganura@gmail.com	20 February 2019	Email
42	Darug Boorooberongal Elders Aboriginal Corporation	boorooberongal@outlook.com	20 February 2019	Email
43	B.H. Heritage Consultants	hamptonralph46@gmail.com; nhampton77@gmail.com	20 February 2019	Email
44	Ngambaa Cultural Connections	ngambaaculturalconnections@hotmail.com	20 February 2019	Email

## Stage 1 Complete—Registered Aboriginal Parties (RAP) Contact Details

Aboriginal Organisation/Person	Contact	Date Received and comments	Reference
Darug Boorooberongal Elders Aboriginal Corporation (DBEAC)	Boorooberongal@outlook.com Uncle Gordon Workman	20 February 2019  'Some members may have people at this School but most of us are connected to the ground it stands on and which was stolen from the Darug People SONG LINES, STORY LINES, our culture customs and LORE are within these grounds this is how we are connected.' They also sent through a formal registration letter.	Letter and Email

Aboriginal Organisation/Person	Contact	Date Received and comments	Reference
Didge Ngunawal Clan (DNC)	didgengunawalclan@yahoo.com.au Paul Boyd & Lilly Carroll	20 February 2019 'DNC would like to register an interest into 18-0630 Darlington Public School ACC'	Email
Darug Land Observations	daruglandobservations@gmail.com Anna O'Hara	22 February 2019 Letter of expression of interest to be involved in the project	Letter and Email
A1 Indigenous Services	cazadirect@live.com Carolyn Hickey	23 February 2019 A1 would like to register for consultation and an field work for this project. I am a traditional owner and hold cultural knowledge and connection to this area, I have a niece that attends this school, I will bring to this job, 15 years experience in cultural heritage work, we are among one of oldest registered groups, my staff and I will bring experience and professionalism to each job. I have attached a contact of reference to attest to our quality of work.'	Email
Ginninderra Aboriginal Corporation	ginninderra.corp@gmail.com Lisa Green	4 March 2019  Our Ginninderra Aboriginal Corporation members are interested in consulting and assisting with all aspects of the above-mentioned project at Darlington Public School.	Letter and Email
Metropolitan Local Aboriginal Land Council	metrolalc@metrolalc.org.au	12 March 2019 Phone conversation discussing registration.	Phone Call

La Perouse Local Aboriginal Land council responded to the invitation to register an interest, but identified that the study areas was not within their boundaries.

A copy of the registered Aboriginal parties was sent to OEH and the LALC on 12 March 2019.

Organisation	Date Sent
LALC	12 March 2019
OEH	12 March 2019

## Stage 2—Presentation of information about the proposed project

#### Stage 2, Step 1—Presentation of proposed project information and provision of proposed assessment methodology to the RAPs

Aboriginal Organisation/Person	Date Sent	Date Reply	Comments, outcomes and/or issues	Reference
A1 Indigenous Services	12 March 2019	None		
Darug Boorooberongal Elders Aboriginal Corporation	12 March 2019	None		
Darug Land Observations	12 March 2019	13 March 2019	'Darug Land Observations Pty Ltd (DLO) has reviewed the project background information and assessment methodology, and the draft Aboriginal Archaeological Due Diligence Report, and supports the proposed redevelopment of Darlington Public School, in Darlington.'	Email and Letter
Didge Ngunawal Clan (DNC)	12 March 2019	None		
Ginninderra Aboriginal Corporation	12 March 2019	None		
Metro Local Aboriginal Land Council	12 March 2019	13 March 2019	'Thank you so much for registering MLALC and for information provided for the project.	Email
			And I affirm that the MLALC's contact for the project is Ms Selin Timothy whom to assist all I have cc on this email along with MLALC Operations Manager Ms Damita McGuiness.	
			Look forward to speaking and or meeting soon.'	

As the likely values connected with the school were not archaeological or reflective of other traditional connections, and as the subject site is an active school, no formal opportunity was made for RAPs to enter the school and assess the school. However, those RAPs with a direct connection with the school have been afforded the opportunity to provide input into the assessment of values through completion of the parent's questionnaire (detailed in Section 3.5.3). This questionnaire was disseminated directly through the school's systems, under the guidance of the school principal.

#### Stage 3—Seek information from RAPs and Review of ACHAR & ATR

#### Stage 3, Step 3—Seek information from RAP on (a) the presence of Aboriginal objects of cultural value and (b) places of cultural value

The project RAPs were sent version 3 of the ACHAR for formal review and comment on 8 May 2020. A period of 28 days was allowed for comments, with a request to provide feedback by 5 June 2020. No comments or feedback was received on the draft ACHAR. A final ACHAR was produced on 5 June.

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RAP	Date Sent	Date Reply	Comments	Reference
Darug Boorooberongal Elders Aboriginal Corporation (DBEAC)	1 May 2020	None	None	
Didge Ngunawal Clan (DNC)	1 May 2020	None	None	
Darug Land Observations	1 May 2020	None	None	
A1 Indigenous Services	1 May 2020	None	None	
Ginninderra Aboriginal Corporation	1 May 2020	None	None	
Metropolitan Local Aboriginal Land Council	1 May 2020	None	None	

## Appendix C

Outcomes from Teachers, Parents and Students Consultation Program

# DARLINGTON PUBLIC SCHOOL REDEVELOPMENT PROGRAM **HERITAGE ASSESSMENT**

# NOTES FROM ABORIGINAL EDUCATION EXCELLENCE WORKSHOP WITH TEACHERS 20 MARCH 2019 Version 2



## **EXECUTIVE SUMMARY**

This document presents a summary of discussion and data collected during the Aboriginal Education Excellence Workshop held on 20 March 2019 (3:15pm-5:15pm) at Darlington Public School.

The purpose of the workshop was to understand how Aboriginal culture and heritage at the school can be protected and enhanced in order to create a safe learning environment and showcase excellence in Aboriginal education.

Following previous consultation with Aboriginal parents, the workshop was structured around four themes identified from previous consultations, which align with the Darlington Public School key design themes identified by the NSW Department of Education (School Infrastructure) as indicated below:

- Celebrating and Recognising Aboriginal Culture and History (design theme 7 Heritage connections)
- o Teaching Aboriginal Culture (design theme 4 Learning and student wellbeing)
- o Requirements for cultural spaces and point of arrival, entrance and navigation (design theme 8 Point of arrival, entrance and navigation)
- o Arts and Display of Aboriginal Culture (design theme 2 Creative and performing arts)

The workshop, along with outcomes from a parents survey as well as student workshop, will help inform the heritage assessment and the architectural and landscape design for the redevelopment of the Darlington Public School.

This report provides a summary of the most important features identified by the teachers, key opportunities, and a selection of quotes as well as the raw data from the workshop 'World Cafe' exercise where participants were asked to identify values and opportunities for each of the four themes.

#### **SUMMARY OF MOST IMPORTANT FEATURES**

The following features were identified as being most important considerations for the heritage assessment:

- The school is located in Darlington/Redfern. Redfern is special with a rich and important history. There are also many 1st here - 1st Aboriginal medical centre, 1st Aboriginal legal centre and the home of Aboriginal Legal Service (ALS), Aboriginal Medical Service (AMS), Black Theatre etc
- We value safety for our students and community. We want the school to be a safe space for people to come and feel comfortable. More than 90% of students feel that their teachers understand Aboriginal culture
- This school is about relationships. We need spaces to have a yarn, to talk, to debrief. This is important for people to share and listen, to open up about any trauma and heal. (i.e. we could build a 'student's staffroom', where students can chat and debrief)
- Our culture is valuable and powerful. We are more than just a representation of culture, we are living, breathing culture.
- Darlington Public School is more than art on walls: we need to create a strong sense of belonging and connection that can inspire our Aboriginal children as well as foster greater understanding in the wider community.

#### SUMMARY OF VALUES AND OPPORTUNITIES THAT RESONATED MOST

While all ideas and views raised were deemed as important in the redevelopment (e.g. no one disagreed with any of the statements) the values and opportunities below were found to resonate most with participants. These are based on a total tally of all votes across the four themes (e.g. a particular opportunity may have been discussed across several themes).

#### Connection, belonging and healing

It is important that art and design is positive and tells a story of resilience and triumph while creating nurturing environments. There is a weight of hurt amongst Aborignal people – and the school must create safe, inclusive spaces where children and others can feel safe and at home and debrief. There are also opportunities for the school to build relationships with creative Aboriginal organisations and community groups.

#### **Cultural recognition**

All design and art needs to reflect a diverse and dynamic community. Culture is present and alive, it's not stagnant or in the past. Any new art work should as far as possible be commissioned to local Aboriginal artists.

#### **Displays**

Displays of Aboriginal art should be more creative and less random - not just sit in a case. "Get it out from the glass". Displays should provide opportunity for interpretation for all community to learn from and have fun with – it shouldn't be like a museum. Some of the display or art can be fixed while others can be interactive (using audio and QR labels for explaining artworks and artefacts).

#### Welcoming area and point of arrival

The welcome to the school is very important and the redevelopment should include a gathering space, kiss and drop, carpeting, connected motif through the school, navigating and wayfinding through Aboriginal symbols. It should be an inclusive space for families; not just students and provide good space for bikes, prams and scooters. Welcome words, especially at point of arrival, are important and should include different languages.

#### Learning spaces (classrooms and preschool)

The learning spaces need to actively encourage students to think about culture and should include totems in class rooms (perhaps also class totems) as well as art and clapsticks, shells, pinecones, dillybags, bark printing, wooden artefacts. Spaces should we creative and include yarning circle in each class.

#### Landscaping and Bushtucker

It is important that landscaping reflects Aboriginal culture and storytelling. It should include features such as surface; bush tucker gardens and seasonal signs (6 seasons); interpretive signage and links to teaching/learning, and tree carvings. There is also an opportunity to celebrate bush tucker kitchen and cooking, e.g. regular cooking at school with children.

#### History

It is important that spaces and consideration is made to showcase history and stories; this is core to a sense of belonging and continuity at the school as well as strong connection to Redfern. This could include a memorial wall or place, a mural or video material that also captures the political history of Darlington Public School. There is also an opportunity to showcase the history of International First Nationals in Sydney.



#### Seating/meeting/yarn space (circle, campfire feel)

Storytelling is an integral part of Aboriginal culture and the design should include both an indoor and an outdoor seating/yarn space that also can allow for debrief and other gatherings such as providing a yarn circle in every classroom.

#### Blue bus

The blue bus should be removed – it's taking up too much space. There is an opportunity to preserve its image using photographic record keeping and possibly cut front off it so it can be used in playgrounds

#### **Totems**

The totems (artwork from year 6 students) have been at the school for 20-30 years and it is important to keep them.

#### **SELECTION OF QUOTES**

Facilitators captured quotes from participants throughout the session with a selection provided below (all quotes are provided in the data sets under each theme in the following sections of this report):

- "The school is all about belonging, safe spaces and connection. This is where people come to find family, even if it is not their blood family"
- "Use Redfern as a strength Redfern is a meeting place. It is a symbol and survival"
- "We culturally live our lives everyday but we're still connected to our past"
- "Truth hurts, but can lead to healing. Spaces across the school should be places for healing and difficult conversations, not just for students or teachers but families and community"
- "We can walk two worlds, not one or the other"
- "I like a space you can feel something in, where you can feel the history and community"
- "History does not have a start point and an endpoint. It is dynamic and it doesn't always move in a straight, chronological line"
- "We have a long line of trauma. The hardships exhaust us, but enlightens us as well"
- "Aboriginal heritage and art is valuable and powerful. It is not just about representations on walls. We are a school where posters won't cut it"
- "Sharing stories [in a way that follows protocols and customs] can bring healing from events that have been filled with shame."

## WORKSHOP DATA

The data below is a direct write-up of outcomes from the workshop exercise, where participants were given 10 minutes to identify values and opportunities for each theme; they then moved on to the next group until having completed all four themes.

When joining a new theme, the table facilitator would recap the previous discussion and ask each participant to place a sticky dot on the post it notes that resonated most strongly with them. These are referred to as 'votes' below.

# THEME 1 CULTURAL SPACES AND POINT OF ENTRANCE ARRIVAL, ENTRANCE AND NAVIGATION

- Landscaping
  - Surface and rainbow serpent
  - Bush Tucker gardens that is flexible
    - Seasonal signs
    - Storytelling
    - 6 seasons
    - Connections to curriculum through teaching spaces
  - Garden curriculum linked to bush tucker
  - Interpretation for garden = plaques, more subtle interpretation
  - Tree carvings
  - Sporting area
  - Equipment
  - o Flexible basketballs, soccer
  - Reinforced equipment east to access
- Welcoming area
  - Gathering space
  - Kiss and drop
  - Beginning of the day rituals
  - Spaces conducive to young
  - Acoustics need to be good
  - Connect many spaces
  - o Arrival spaces
  - Carpet
  - Connected motif through the school
  - Wayfinding/navigating arrival through Aboriginal symbols
  - Single foyer for preschool and school
  - Languages
  - Lingering
  - Community building
  - o Inclusive area for families
- Point of arrival
  - o Bikes, pams and scooters
  - o Connection
  - Congregation
  - o Currently outside school
- Totems in classrooms
  - o Totem poles and flag poles
- Preschool
  - Space
  - o Clapsticks, shells, pinecones, dillybags, bark printing, wooden artefacts
  - Used in different spaces = display

- Clapsticks used daily with music movement
- Taken outside
- Waramberee preschool = hut and quiet area

#### Displays

- o Less random not just in case
- o Artefacts with interpretation for all community to learn from
- Parents arrival waiting area
  - Placemaking
  - Acknowledgement of Country
  - Welcome in different languages
  - Artefact displays

#### Surfaces

- Keep murals/reinstall
- Symbols from artwork used in the program

#### Seasonal

- Shade
- Acknowledgement of Country
- Yarning circle = Not enough room for both classes = indoor/outdoor
- Bush Tucker garden
  - Spreadout
  - Community garden (six seasons)
  - Separate
  - Cooking, caring for plants, growing
  - Gender not required
  - o Landscaping of scale for children
  - Flexible built in seating areas
  - Drawing areas for outdoor chalk dreaming

#### Meeting place

- Respectful space
- 30-25 people in circle, different to learning spaces
- Potential to include other cultures not just tokenistic
- Outside
  - Permanent setup toys
  - Currently no dirt/grass, soil, plantings = better on the ground
  - Aboriginal mats outside
    - Undercover area for wet weather

#### Values

- Holistic place
- Not tokenistic
- Experiences
- o Embedded into program
- Diversity and inclusiveness
- Cultural sharing

#### Aboriginal room

- o Parent, children
- Safe place
- Resources
- o Tables, chairs and water
- Art
- Acknowledgement of Country
- Open for supervision
- Yarning circle

#### Koori Cup

- Space for Koori Cup
- Equipment

#### Displays

• Attractive, purposeful, welcoming, meaningful, relevant

- Centrepoint
- o Links to curriculum
- Design
  - o Biodiverse layout irregular, not linear like desire lines
  - Welcoming
- Important points for consideration
  - Welcoming space within school
  - Open not closed before 9AM
  - Safe community space for Aboriginal families
- Community room, not only staff
- Aboriginal leaders, motivation, meaning around school
- Extend into outdoor areas
- Surfaces have Aboriginal motifs on glass, carpet, walls
- Displays well curated and interpreted
- Wayfinding navigation through playground
- Finishes: fresh and bright
- Aboriginal art curated collection and curriculum
- Waiting areas for visitors and children
- Bush tucker garden
- Fireplace for ceremony near garden
- A place for healing for the whole community
- Teachers to have conversations all the time
- We are a melting pot of culture, we need a strong identity

#### **Relevant Quote**

 "School is a safe place where people can feel comfortable. It's about sharing, and sharing across generations"



# THEME 2 TEACHING ABORIGINAL CULTURE

#### What is important?

- Welcome words
  - Especially Aborginal words
  - Different language
- Canteen area
  - Next to garden
  - Next to Cooking area
- Dharawal Calendar Seasons during the year
  - Location specific knowledge
  - Calendars
- The new building should facilitate an open conversation between parents and teachers be inviting
- Yarning circle delineations. From Strayer/Suerlier institute
- Totems in the playground (not just the classroom) for children to sit on and climb on, e..g
   Attison Road near reverse garbage
- Cultural displays
  - Multicultural
  - Not just on significant days
  - o Embedded not tokenistic
- Royal Botanical Gardens connection with native plants
- Label areas with Dharawal translated with english
  - Native plants
- Traditional knowledge taught through gardens with specific areas
- Outside the classroom a calm area using the natural environment
- Greater involvement with elders and community more frequently embedded in regular
- Consistent teaching
  - Rather then occasional days
- Djarual Carpets Currently on the walls of the hall
  - Meanings behind these
  - Clearly displayed in the new school
  - Opportunity to teach to visitors
- Aborignal Translation of national anthem Strengthen language

#### **Opportunities**

- History
  - Aboriginal components
  - Use examples and things to link
  - Native foods and gardens used for teaching
- School logo
  - Developed by an elder
  - Class logo/totem
  - Each class has its own, painted and displayed in the classroom
- Acknowledgement of Country
  - Welcome book
  - Teach them their actions
  - Hand actions
- The 11th classroom are the hallways and open spaces Kids need to leave their classes and talk outside the class and return. Have a chat
- Yarning circle
  - How they feel
  - Specific space
  - Sit on carpet
- Yarning circle in each class, circle allows for safe space to check in and share how they are feeling

- Parent and community participation throughout the whole year
- Meeting place in the morning to be more welcoming
- Aboriginal games traditional games
- Kids used to rotate around activities by local Aboriginal people baking bread, materials and sewing
- Resources developed by community made readily available, mapped to scopes and supported by teaching areas that promote these lessons
- School has a lot of book resources for library and classrooms specific to Aboriginal culture
- Aboriginal words often from the kids, can be from across the state
- Aboriginal song
  - Gifted to the school by boriginal and Torres Strait Islanders
  - Our Aborignal songs
  - Music teacher to focus on the songs
- The non-Aboriginal kids get such a rich education regarding Aboriginal heritage. Want culture and history shared with wider community
- Strong familial links
  - Aunty Wendy
  - Settlement
  - Redfern Police
  - Tribal Warriors
- Nangi Mai award
  - Safe respectful learner award
  - Excellence in Aboriginal education
  - NSW awards
- Special days
  - Sorry Day
  - Mabo Day
  - NAIDOC Week
  - o People with Ernie Dingo
  - 'Fish Bake', big hole dug, coals
  - Smoking ceremony

#### **Relevant Quotes**

- "Greater links in community and bring community in"
- "Warning and chatting is a big thing"
- "The non-Aborignal kids know how to do a smoking ceremony"
- "There is not one parent who doesn't support Aborignal teaching"
- "Aboriginal recognition is why we chose to send our kids here"
- Never in the world have I seen Aborignal culture celebrated like a Darlington"
- Music and dance is such a big thing"
- "A Koori kid can be whatever the want"
- "We reflect the community we are in"
- "Good teaching point for Aboriginal narrative and what it is like to be Aboriginal and teach Aboriginal ways"
- "Use Redfern as a strength Redfern is a meeting place. It is a symbol and survival"

# THEME 3 ART AND DISPLAY OF ABORIGNAL CULTURE

#### What is important?

- True representation of a diverse community
- Culture is present and alive, it's not stagnant or in the past
- Creative spaces will help tell the stories
  - Connect and explain history through visuals and maps
  - o Create the outside of the school as a cultural space
- Maintain the spread art and display of culture across the school rather than concentrating it in one section.
- Our place Redfern: acknowledging history and strength of survival

#### **Opportunities**

- Display and interactive play
  - Don't want it to be like a museum
  - "Get it out from the glass"
  - Some of the art can be fixed while others can be interactive (using audio and QR labels for explaining artworks and artefacts)
  - All of the special artefact in the office area be beautifically naturally, displayed, earthy coloured background
- Blue bus
  - o Taking up space, get rid of it
  - Preserve its image using photographic record keeping
  - Cut the front off it so it can be used in playgrounds
- Totems
  - If there's a community space with the totems displayed like a meeting area
  - o 20-30 years at the school
  - Need to keep and retain
  - o Perhaps on the door?
  - Aquatic water animals used for totems
    - Keep artworks from year 6 students totems. Different colour schemes and floral frame.
- Right representation of Aborginal (local) artists artwork. To be done by locals
  - Local Aborignal people and representatives of school demographic should do the artwork
  - NSW specific artworks, i.e. not dot art, more rock carvings, xray art, carved tree art, Dendroglyphs
    - Artists: Sully Merga, Adam Itils, Robert Campbell Junior
- New quality display for items not tokenistic both the cultural and education value of the item
- Big and visible Aborignal flag very strong statement within the School that is inspired by the huge mural at the Block
- NAIDOC opportunities
  - Blend of traditional and contemporary dance and program
  - o Festivals and events mix, contemporary and historic
- External school improvements with Indigenous connection
- Permanent visual artwork that shows the place and how it has developed overtime, 'where we come from', school story.
  - E.g. the 80s, why is it important?
- Eating area could have a fire so people can have a talk
- Separate spaces for students to set away natural back hut, e.g. Waramembiri
- massive area with back
- A room for families to come in and people can feel more comfortable, bring community into it
- A meeting place: like a giant circle on the big playground at entrance where students wait in the mornings
- Community room for families and meetings, campfire circle outside for yearning

- What is culture? Talking, humour, poetry etc
  - Defined by local families
  - Commission local artists, boomerangs by boys and baskets by women
- Engagement in wider community
  - To capture comments, stories and quotes
  - o 'What do you remember about school?'
- New murals external and internal but important to keep existing animals sculptures painted Aboriginal colours and design, e.g. Reverse garbage, sit along snake
  - Murals:
    - History
    - Aboriginal flag
    - I have a dream
    - Faces of school's past students
  - Entry mural Gadigal clan, community could stop, read and learn
- History and community elders = culture
- Local community to choose stories here
  - New story for Darlington and how it's helped over the years

#### **Relevant Quotes:**

- "It's a privilege to be a part of the Aboriginal community here in Redfern"
- "We culturally live our lives everyday but we're still connected to our past"
- "Needs to be defined by locals"
- "Truth hurts, but can lead to healing. Spaces across the school should be places for healing and difficult conversations, not just for students or teachers but families and community"
- "People see culture differently depending on their experiences. We need to listen to the community to better understand how we define culture"
- "We have so many artefacts around us, so many ways to celebrate culture but what's the values of individual items? We don't know and need to understand their significance, their relevance, what do they signify?"
- "We can walk two worlds, not one or the other"
- "Our totems and School logo are important but it's unclear how they're connected to the School. If we can't find evidence of their significance, then are they important? Or should we revisit and create new symbols for our community?
- "I like a space you can feel something in, where you can feel the history and community"
- "We need the School to display itself, through art or other ways, that it is an Aboriginal cultural space, that it has an Indigenous flavour. We should have art on our fences, at our entrances, that can also educate and community can interact with"
- "The school needs to be a positive space for parents. A place where families can have a quick yarn, a space that slows you down and you can chat about difficult things in a safe space"

# THEME 4 CELEBRATING AND RECOGNISING ABORIGINAL CULTURE AND HISTORY

#### What is important?

- Recognise Aboriginal diversity and Torres Strait Islander not just one Aborignal people (e.g. the Block)
- Weight of hurt amongst Aborignal people important to create safe, inclusive spaces where children and others can feel safe at home
- People come here to find family may not be their family (blood) but a family
- Culturally appropriate spaces people have an understandable distrust of institutions
- Important to cater to diversity in age groups and in cultures
- Important to ensure the continuation of Aboriginal belonging to Darlington Public School
- Safe space in a community hurt by Stolen Generation, loss of family and 'blood' identity
- Aboriginal people connected to the school larger connection than just teaching... Families, mobs, connection
- Making sure the continuation of families attending the high school is supported

#### Opportunities (yellow post-it)

- Strengthen relationships and connection to the block and Redfern
- A sense of belonging, not just a school
- Murial and pictures, local studies document etc to showcase history and dynamic and diverse relationships with political marches
- Seating meeting place (e.g. campfire)
- Celebate bush tucker kitchen and cooking, e.g. regular cooking at school with children
- Build relationships with creative Aboriginal organisations and community groups
- History of International First Nationals in Sydney opportunity to showcase
- Open up spaces within the school to general community and Aboriginal community
- It has to be done in the right way, culturally appropriate and subject to protocols
- Meeting space of many
- Acknowledgement of Country on wall permanently
- Positive stories to inspire children. Stories of hope and resilience
- Need to show the history of DPS political involvement and 'statements', e.g. Darlington Black rise
- Strengthen relationships with wider community e.g. invite community to coffee and yarn
  - Find community champions
- Need to acknowledge Stolen Generations through art
- Stories and maps to show connection
  - Chronological time pieces showing history
- Rich history of first hand account of major events, e.g. Tent City, People are still alive to tell the story
- Invite parents and community members to storytelling/story sharing evening
- Hub for hopeful Aboriginal people Show potential and stories
- Use DPS to showcase and advocate for high schools that also are 'safe'
  - o Establish a high school based on DPS model of Aboriginal excellence in education
- Theatre at Sydney Uni
- Music, sports team, theatre, politics have evolved over time

#### **Relevant Quotes**

- "History does not have a start point and an end point. It is dynamic and it doesn't always move in a straight, chronological line"
- "The school is all about belonging, safe spaces and connection. This is where people come to find family, even if it is not their blood family (because of Stolen Generations)"
- "The school is strong in the Aboriginal community, and could be stronger if it strengthened the relations to the wider community"
- "Our strength is Redfern. Gadigal land is hard to link into. Redfern is easy to link into [as a shared history]. The cultural happenings in the '70's formed us"
- "We have a long line of trauma. The hardships exhaust us, but enlightens us as well"

- "We need positive stories. We need to show our kids how people before us have triumphed. We need to teach resilience"
- "The sense of connection, belonging, and strong community is happening [now] *in spite* of the spaces in the school. Places like bathrooms are being used as debrief places"
- "Aboriginal heritage and art is valuable and powerful. It is not just about representations on walls. We are a school where posters won't cut it"
- "The Darlo is a continuation of stories people who went here send their kids here."
- "It is important that people can come together safely and tell their stories. There are many people with connection to the school who have experienced major events that have shaped Aboriginal history in this country for example Tent Embassy, Stolen Generations.
- "Sharing stories [in a way that follows protocols and customs] can bring healing from events that have been filled with shame."
- "It is important that these stories are captured [for the benefit of future generations]"



# DARLINGTON PUBLIC SCHOOL REDEVELOPMENT PROGRAM HERITAGE ASSESSMENT

## **SURVEY SYNOPSIS REPORT**

20 MAY 2019



#### **PURPOSE**

This Survey Synopsis Report provides a summary of surveys collected from parents of students at Darlington Public School. The survey's purpose was to collect feedback on how the School can better recognise and preserve Aboriginal culture and heritage.

The survey was provided in hardcopy format in early April 2019 and submitted by early May 2019. A total of 14 surveys were collected.

The details of this Report, along with feedback collected from teachers and students will help inform the development of a comprehensive heritage assessment for the School being prepared by GML Heritage.

#### **Selected Quotes**

The below quotes provide a snapshot of comments from the surveys:

- "Australia was invaded by Europeans who spent the next 200+ years destroying Indigenous people and their culture, or trying to. Anything every community (especially one such as Darlo, with a strong and beautiful Indigenous contingent) should do everything possible to aid with reconstruction, led by Indigenous people".
- "I can positively envision the possibility of having some simulated spaces with the visual arts, exhibits, and alike that students/parents/carers can enjoy and learn from."
- "A lot of people, especially from overseas are not really aware of how rich Australian culture is from Aboriginal Culture".
- "Attending the smoking ceremony during NAIDOC week was a very powerful experience".
- "One of the strengths of the school is the diversity of the students, a unifying emphasis on Aboriginal culture is reflective of Australia's makeup as a whole".

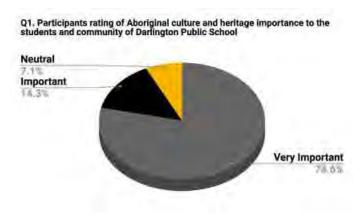


#### **SURVEY RESPONSES**

The survey echoed the findings from other engagement activities - particularly in terms of the high importance that students, teachers, parents of both Aboriginal and non-Aboriginal descent place on Aboriginal culture and heritage at Darlington Public School.

This is reflected in both the quantitative and qualitative data as shown in the following. Note that the qualitative data under each question captures (all of) the types of responses recorded, but not the frequency (as numbers are too low to be statistically relevant).

# Q1 How important do you feel Aboriginal culture and heritage is to the students and community of Darlington Public School?

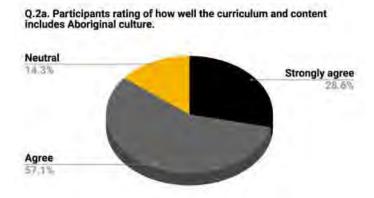


#### Why do you feel this way?

- Recognition of Aboriginal Culture as Australia's culture is important to our sense of belonging and history.
- Continual education of Aborignal culture for kids and parents is crucial to recognising Aboriginal heritage within our society.
- Darlington Public School does a lot to reconstruct culture and build understanding in the community.
- Aboriginal culture and heritage has respect for the land in a different way than white settlement culture does
- Aboriginal culture and heritage should be in every Australian school
- There is a diversity in culture at Darlington; and with that, there is an opportunity for creating a unique and unifying identity through Aboriginal culture

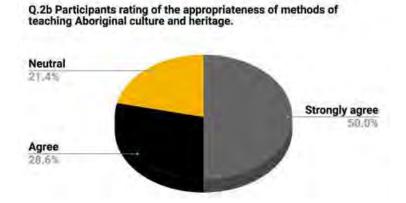


Q2 How do you feel about the way Aboriginal culture and heritage is taught at Darlington Public School? (Note that this question comes in three parts)



#### Why do you feel this way?

- Indigenious culture is embedded into everyday life at Darlington Public School, every school in Australia should be the same
- There is a stronger intercultural curriculum at Darlington than most schools; this is something very special and should be retained
- The way Aboriginal culture is taught is appropriate
- There could be more elements or opportunities for learning about Aboriginal culture.



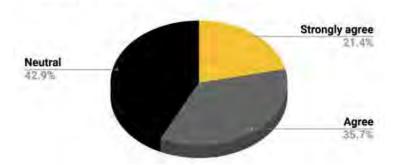
#### Why do you feel this way?

Note that some survey responses expressed a lack of understanding of current teaching methods.

- All students have the opportunity to participate in culture where appropriate
- There are specific programs for Indigenous students
- Art making is a good method of teaching culture; this is done well at Darlington



# Q.2c. Participants rating of spaces for teaching culture & heritage and if they are cultural appropriate and supportive.



#### Why do you feel this way?

There were some mixed views on this question, with some of the neutral comments noting:

- The existing spaces need improvements
- There should be new spaces embedding visual arts & exhibitions

# Q3 Have you got any suggestions on how Darlington Public School can promote and support Aboriginal creative performances, and the display of art?

- Through visits, performances (e.g. teaching through Aboriginal dance groups)
- More spaces dedicated to display of Aboriginal art
- A larger assembly hall with a deeper stage that would allow for better space for Aboriginal creative performances
- Simulated visual arts exhibits that can be on exhibition throughout Sydney
- Through establishing partnerships with local Aboriginal led organisations and businesses
- Teaching practical skills like weaving
- Learning about Aborginal food



Q4 Have you got some ideas or thoughts on how Aboriginal culture, heritage and stories can be better included in the design of the following spaces at the redevelopment Darlington Public School:

Spaces at school	Suggestions for including Aboriginal culture
Entrance to school	<ul> <li>Bright Colours and a really nice garden</li> <li>Plants</li> <li>Paintings</li> <li>The way it is now is great</li> </ul>
Learning spaces (e.g. break out spaces) Hall	<ul> <li>Introduce bright artwork</li> <li>Artworks with information of the features</li> <li>Bright colours, design</li> <li>Art</li> <li>Maybe have a heritage walkthrough</li> <li>Heritage items displayed</li> </ul>
Library	<ul> <li>Children's books (additional historical books) and modern stories as well</li> <li>Bright colours</li> <li>Art &amp; design displays</li> </ul>
Canteen	<ul> <li>Positive art quotes</li> <li>Bright colours</li> <li>Indigenous planters for food</li> <li>Use Indigenious names for food</li> </ul>
Indoor Play spaces	(no specific comments on this)
Outdoor play spaces	Cultural garden
All spaces in the school	<ul> <li>Warm, earthy colours from the Australian Landscape and Aboriginal Colours</li> <li>Art</li> <li>Possibly have fabrics and carpets printed with Aboriginal art if appropriate</li> <li>Native plants everywhere</li> <li>Bush tucker garden</li> <li>A well researched Aboriginal history of the Darlington area</li> <li>Use Indigenious names for places, trees and relationships</li> </ul>

#### Q5a. Do you have any stories or memories of cultural experiences at Darlington Public School?

- Smoking ceremony during NAIDOC week was powerful
- Tribal warrior Redfern
- Community Centre visits
- Aboriginal cooking of Johnny Cakes
- The "Sea of Hands" Barangaroo (2016 or 2017)



#### Q5b. How would you like to see that reflected?

- More 'real' cultural experiences/exchange
- Education events for non-Indigenious people teaching the beliefs, customs and cultural expectations

### Q6 Have you got any other ideas, suggestions or comments?

- Keep doing what you are doing
- "Bush tucker garden" to learn the skills, culture, stories of food, animals and the environment





# DARLINGTON PUBLIC SCHOOL REDEVELOPMENT PROGRAM HERITAGE ASSESSMENT

## **NOTES FROM WORKSHOP WITH STUDENTS**

1 MAY 2019



### **BACKGROUND**

This document provide a summary of the outcomes from the workshop with 22 Aboriginal students aged five to eleven at Darlington Public School on 1 May 2019.

The purpose of the workshop was to gain insights from students on how Aboriginal culture and heritage at the school can be protected and enhanced in order to create a safe learning environment and showcase excellence in Aboriginal education.

Following previous consultation with Aboriginal parents as well as a workshop with teachers, the workshop was structured around four themes identified from previous consultations. These themes align with the Darlington Public School key design themes identified by the NSW Department of Education.

- Celebrating and Recognising Aboriginal Culture and History
- o Requirements for cultural spaces and point of arrival, entrance and navigation
- o Arts and Display of Aboriginal Culture
- o Teaching Aboriginal Culture

The student workshop, along with outcomes from the previous consultations, will help inform the heritage assessment and the architectural and landscape design for the redevelopment of the Darlington Public School.

#### **WORKSHOP FORMAT**

This report provides a high level summary of discussions and take-outs identified by the students during the workshop. Given the varying age of the students - many as young as five - the workshop format sought to gain hands-on and verbal information (e.g. rather than written input) on Aboriginal heritage and cultural features of the school.

The workshop was divided into four smaller groups, each of approximately five students. Led by a facilitator the groups toured specific areas of the school (where the facilitator would take notes). The whole group reconvened at the end of the workshop, drawing those features that in their mind stood out as being important to retain, enhance or accommodate in the new school (attached to these notes).

The purpose and guiding questions for discussion in smaller groups were:

**Purpose:** To hear from 5-11 year old students what Aboriginal heritage means to them, what they want to keep - and what they would like to see in the new school

#### **Guiding questions for discussion:**

- Q1 How do you see Aboriginal culture and heritage recognised and celebrated within your school today?
- Q2 What are your favourite Aboriginal artworks and objects in the school?
- Q3 Have you got any ideas on what Aboringal art and culture you would like to see in the new school?

## WHAT WE HEARD

#### Q1 - RECOGNISING ABORIGINAL CULTURE AND HERITAGE IN THE SCHOOL

The following responses were shared by participants during a whole group session.

- "Aboriginal heritage is important because they were the first people here."
- "I think there should be a lot of Aboringal heritage and art in the school because of the way they [Aboriginal people] have been treated over the last many many years. We need to see it [heritage]"
- "It would be cool to see a change, because they [Aboringal people] deserve it. We need to recognise history."
- "I think Aboriginal culture in the school is fine as it is."
- "It would be cool to have a place where Aboriginal art can be shared with other art."
- "It would be really cool to mix Aboriginal heritage with other cultures (e.g. Chinese) so we can understand more about different cultures."
- "It would be good to see a dreamtime story down one wall (e.g. mural). We could also do a story using art to show the Aboriginal history of the school and Redfern."

#### Q2 and Q3 - SUMMARY OF MOST IMPORTANT FEATURES AND IDEAS FOR THE NEW SCHOOL

The following summary provides an overview of the discussions in smaller groups between participants and facilitators when asked to identify the most important considerations for the heritage assessment.

#### **Group 1: Classrooms**

- Students said the music room and platypus room were their favourite classrooms to spend time in
- Students wanted more opportunities to learn from different cultures through sharing and actively participating in practices instead of learning through traditional learning approaches
- Students suggested implementing outdoor classrooms to create more interesting and diverse learning experiences

#### Group 2: Native vegetation and gardens

- Students showed an interest in increasing native vegetation throughout the school to encourage diverse learning opportunities
- Students suggested implementing a bush tucker garden and kitchen to foster a stronger integration of traditional items, food and practice into the school curriculum
- Students were interested in learning about the connection between totems and native plants

#### **Group 3: Murals and artwork**

- Students identified the retention of year 6 legacy artwork as being important to keep a connection to past students
- Students saw the renewal of the school as an opportunity to improve the integration and celebration of Aboriginal and other cultures of students and teachers
- Students wanted to keep a record of the school to show how it looks now. They were sad to see the old school go, because they felt a strong sense of belonging to the school
- Students identified the importance of celebrating the schools connection to Redfern's rich history
- Students were proud to share and discuss their personal and class totems
- Students were able to identify Aboriginal art and artefacts but were unable to share their meaning and importance
- NAIDOC week burnt plaques were identified as having a significant importance amongst students

#### Group 4: Entrance/hall (and artwork)

- Students wanted to see paintings at the entrance and on the streets 'so people know the importance of Aborginal heritage to the school
- It was difficult for many students to articulate the meaning of Aboriginal cultural symbols and artwork: 'All the symbols in the art mean something but we don't know what'
- Many students expressed a strong sense of belonging to the school (as it is now) and wanted to see the heritage of the school itself recognised: 'It's important to keep a record of pictures of the school so we don't lose memories and our history'

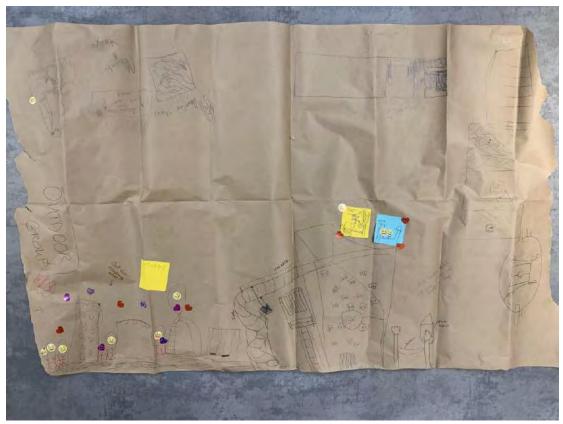
## **APPENDIX**

The below images display the drawings completed by participants during the workshop.

**Group 1: Classrooms** 



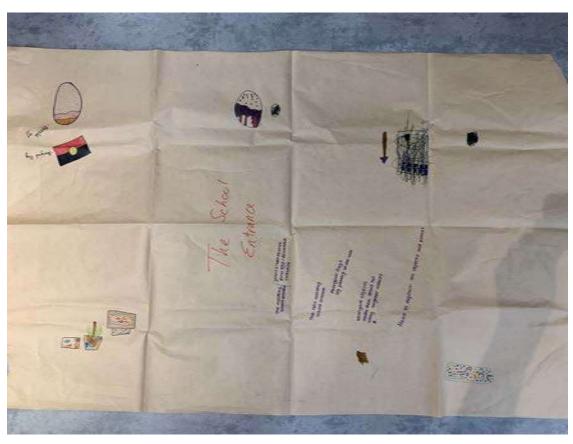
**Group 2: Native vegetation and gardens** 



**Group 3: Murals and artwork** 



Group 4: Entrance/hall (and artwork)



# Appendix D

Aboriginal Heritage Design Response by FJMT

### ABORIGINAL CULTURAL AND HERITAGE CONTEXT

### **Aboriginal Cultural Heritage**

Darlington PS is an important long-standing educational facility located in the suburb of Darlington. The school has been associated with different sites, but all are identified by the local community as a central component of the Darlington to Redfern area, notably the local Aboriginal community. Darlington PS has provided education to Sydney's inner-city children since 1878; the school has become an integral part of the local community. Darlington PS today is of importance to the suburb because of the education of local generations of families, notably Aboriginal families.

As the school is renowned for its connection and importance to the local Aboriginal community, it is critical to recognise, appreciate and celebrate the long history and connection between the school and local community throughout the proposed design. The design aims to celebrate Aboriginal culture and heritage through strongly integrating and holistically incorporating ideologies and values through the new school development.

Based on feedback from previous workshops/consultations, studies and the ACHAR report conducted, it is vital to allow for a design that will:

- Celebrate, recognise and preserve Aboriginal Culture and History
- Continue the current atmosphere, learning culture and spirit of community
- Allow for the teaching of Aboriginal Culture, inside and outside the classroom
- Design spaces to be culturally considered and embody cultural values and learning
- Provide a strong integration of art and display of Aboriginal Culture



### **Key Spaces**

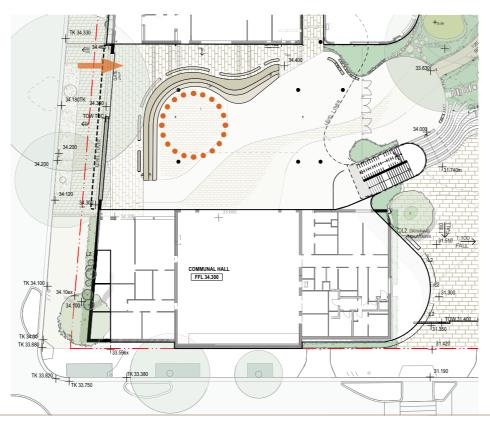
Entry Undercroft

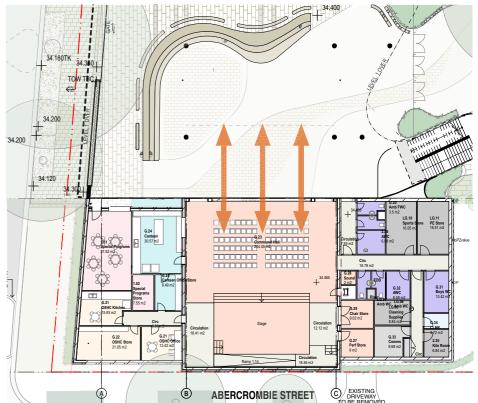
The main pedestrian entrance has been located on the southern end of Golden Grove Street, in a similar location to the existing entrance. The idea of an arrival and gathering point is integrated with the covered gathering space and the kiss and drop. It allows for gatherings of both parents and students and encourages communication and interaction. Integrated terraced seating is proposed which helps to create a protective boundary around the gathering space and provides a central seating area for performance and outdoor learning for larger groups.

### School Hall

The school hall for Darlington Public school has been located at the corner of Golden Grove and Abercrombie Streets and has been designed to allow access externally by the public and internally by the school community. The corner location provides a beacon for the school and a welcoming gesture to the local community. The hall is a flexible space and can be used for a multitude of purposes, providing a space for gathering, performances and learning. The hall also opens up to the covered undercroft which is also used for yarning, and allows for use for after-school hours activities. The continuity and flow of space was vital in creating a natural movement through the ground floor from the entry through to the yarning circle and school hall.

The school hall allows for display of important artworks such as the six current Jarjum Rugs and possible display of heritage items. Further, the Special Programs room which doubles as a music space can integrate the existing displayed digeridoos outside the existing music room.





### Library

The school library acts as a hearth and educational gathering point for Darlington Public School. It provides an architectural link between the built form and outdoor garden, creating an indoor space with external vistas to plants and landscaping. It is proposed that the library will have low level glazing at seat height which will allow views out into the garden whilst maintaining a private and protective atmosphere for students who seek a quiety sanctuary during lunch breaks.

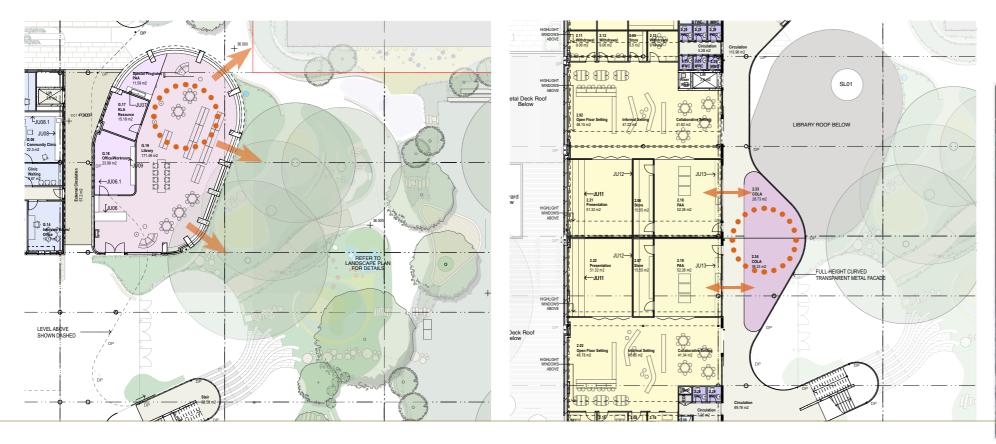
The library will feature class space, staff office, and KLA resources. Further it will integrate historical books and modern stories and it is proposed that it will house a heritage display area depicting the school and its cultural history.

### Classrooms

The classrooms have been designed to be open and encourage community, collaboration and various types of learning. The openness off the space allows for flexibility and accommodates for yarning circles space. All classrooms open to covered outdoor learning areas to promote learning outside the classroom. Artworks such as totems can be integrated into the classroom design to encourage awareness and understanding of culture. Spaces are also adaptbale to allow for yarning circles of various scales. The classrooms also open out onto Covered Outdoor Learning Areas, which have been designed to accomdoated a full class.

### Yarning Circles

Darlington PS teachers present an Acknowledgement of Country at the start of every day, often in a space described as a 'Yarning Circle'. Yarning circles are vital to the students and teachers sense of place as it provides students a safe place for open discussion. Yarning circles and spaces are proposed to feature both internally and externally in the design, and fit seamlessly in the context of the existing site, new landscaping and new classrooms. The existing yarning place in the school playground is constructed from sandstone blocks and sits beneath the the year 6 Artworks. Many existing blocks feature engravings and will be integrated in the new landscape design.





### **Artworks**

Darlington Public School currently holds a large collection of Aboriginal artworks, murals and objects, which consists of artworks produced by students, teachers and significant Australian artists. These represent a collection amassed over the school's 40 years of education. The school's hall, walls, external spaces and surfaces are covered with Aboriginal art, motifs, symbols and items that create connections across the school and a journey through the corridors and spaces of the school. The art leads children through their day, between classes, providing a backdrop and context to their everyday activities.

The art provides a tangible expression of connection between the school and its Aboriginal origins and heritage—for all students, teachers and parents, past and present. The new school development aims to provide holistic integration of artworks throughout respective spaces, aiming to inspire children and foster a greater understanding in the wider community.

Where possible, all artworks, murals and objects have been retained to be integrated into the new school. Where murals cannot be retained, they will be documented and possibly displayed in dedicated areas.

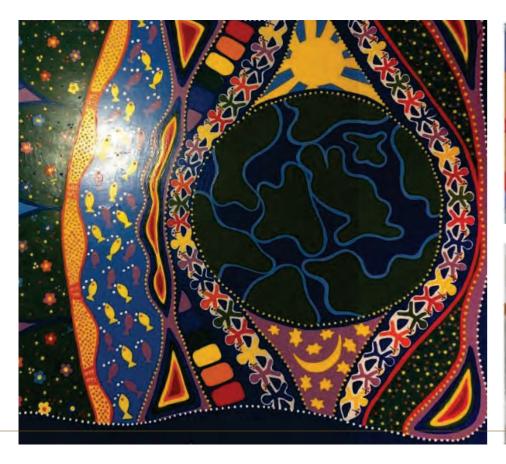
### **Selected Artworks**

Jarjum Rugs

The Jarjum Rugs are of notable importance in the schools cultural context and history. Designed by Aboriginal students at the school in collaboration with their elders, the six rugs represent an authentic cultural exchange between children and their elders, and connections between the school and Aboriginal cultural. They are currently in the existing school hall, and it is proposed that these be relocated to the new communal hall for not only the school to experience, but also for the outside community when using the hall.

Year Six Artworks and Totems

The existing Year 6 art wall contains specifically designed artworks, produced each year by the students in Year 6, with the assistance of professional artists and the art teachers. The artworks are specifically designed by the year and recreate one of the school totems. The totems have been part of the school's identity for the past 20-30 years and their integration into the context of the school has been highly regarded. The existing Year 6 artworks have been painted on the eastern boundary wall and will not be affected by the development and should be protected during construction. As there is also planned creation of future totems and Year 6 artworks, there is adequate space for this tradition to continue.







### Murals

The numerous murals are identified as integral to Darlington PS's identity and feature heavily within the school. Not only do they serve as artistic representation of culture, they also symbolize a sense of place and safety in various parts of the school. The murals have been created by students, teachers and notable artists throughout the life of the school and where possible will be retained and integrated into the new school. Although there are many that canot be retained, due to the nature of their physical medium, they will be documented and possibly displayed in a historic context in the new development. Following demolition, it is proposed to collect and reuse the painted bricks in the landscape for seating walls and other hard landscaping elements, allowing the existing artworks that cannot be saved to be remembered and reimagined in the playground of the new school.

Some murals that have been noted include the entrance foyer mural, entrance courtyard mural, preschool frog mural, bird wall mural and hall area mural.

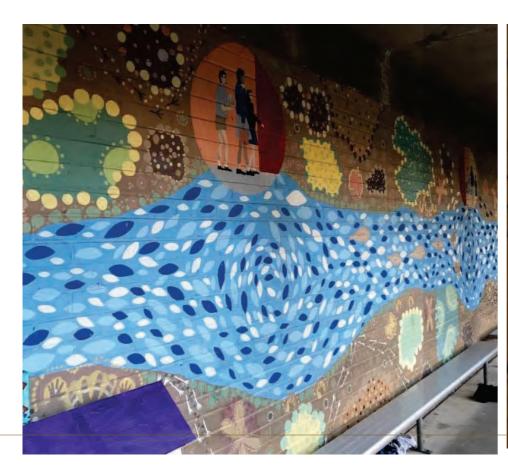
### Burnt Door

The 'Burnt Door' is important in the history and cultural heritage of Darlington Public School. Currently the entry to the Aboriginal Education Office, it presents a notion of invitation and welcoming. Created by Neil Thorne, the former Aboriginal Education Resource Officer, the door integrates the Darlington School logo and has come to represent safety and comfort to many school development in order to maintain a direct connection to the past yarning circles.

it has been previously established that the door does not need to be utilized as a door in the new development, however can be mounted or displayed amongst various other objects and artworks as part of the history of Darlington Public School.

### Carved Sandstone Blocks

The carved sandstone blocks currently form the yarning circle in the outdoor courtyard, below the year 6 artworks. These are the only form of engravings in the current school. They are of high importance to the staff and students and will be integrated in the landscaping of the new







### Landscaping

The design philosophy for the Darlington Public School playground centres around providing diverse play spaces with a variety of scales and the maximisation of functionality by providing overlays of potential uses.

The topography and grading of the site creates challenges and opportunities for the landscape design. Pedestrian movement and wheelchair access have been important drivers in creating a series of connected and functional spaces.

The playground embraces opportunities to create learning spaces, outdoor rooms and areas of active, imaginative and quiet play through the use of the connected paths and changing landforms.

Each play space is linked to possible learning games and different learning languages, featuring water, sand, rock, climbing, ball games, lines and decks, pathways and shortcuts.

The design also explores ways to embrace the indigenous culture of Darlington Public School and celebrate the rich artistic heritage of the school. Refer to the "Indigenous Overlay and Artwork" section of the Landscape Report for details.

### **Indigenous Overlay and Artwork**



### LEGEND

ARTWORK MOUNTED TO EXISTING WALLS

ARTWORK MOUNTED TO / OR INTEGRATED WITH NEW WALLS

WALL ART RELAID INTO THE FACE OF NEW TERRACE SEATS

ART & / OR INDIGENOUS INTERPRETATION:
- SET INTO THE UNDERCROFT OF THE ROOF ABOVE

-INLAID NTO THE NEW PAVED COLA AREA

- LOCATED IN THE NATURE LEARNING PLAYGROUND OR SCULPTURE GARDEN

\*\*\*\* - INTEGRATED WITH THE SCULPTURAL FENCE

A number of opportunities for Art and Indigenous Interpretation are present in the Landscape. Existing artistic works could be salvaged and relaid / mounted into new landscape elements. New artworks could also be incorporated in the outdoor spaces.

## Appendix E

Artwork and Artefact Register

# **Appendix E**

**Artwork & Artefact Register** 







## **Artwork Register**

Item No.	Artwork	Location	Dimensions (mm)	Notes	Priority -relocate & display -relocate & store -record & archive -record & print
1		Main entry courtyard	2660 (L) x 1200 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on boards</li> <li>Faced fixed to brick wall</li> <li>Artwork on 3 equal panels</li> </ul>	
2		Main entry courtyard	1700 (L) x 2450 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on boards</li> <li>Faced fixed to brick wall</li> <li>Artwork on 4 equal panels</li> </ul>	
3		Main entry courtyard	1700 (L) x 2450 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on boards</li> <li>Faced fixed to brick wall</li> <li>Artwork on 4 equal panels</li> <li>One panel missing</li> </ul>	







4	Main entry courtyard	1450 (L) x 2850 (H)	- Name: ??? - Artist/s: ??? - Acrylic on boards - Faced fixed to brick wall - Artwork on 3 equal panels
5	Reception entry	4120 (L) x 950 (H)	- Name: ??? - Artist/s: ??? - Acrylic on boards - Faced fixed to partition wall - Artwork on 2 equal panels
6	Reception entry	1000 (L) x 770 (H)	- Name: ??? - Artist/s: ??? - Acrylic on canvas - Wall hung

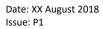








7		Admin corridor	640 (L) x 1720 (H)	- Name: ??? - Artist/s: ??? - Laminated lino prints - Wall mounted
8		Admin corridor	1220 (L) x 930 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on boards</li> <li>Faced fixed to pin board/partition wall</li> <li>One panel</li> </ul>
9	20 mm	Admin office door	890 (L) x 2200 (H)	- Name: ??? - Artist/s: ??? - Engraved on door panel

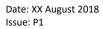








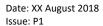
10		Admin corridor	640 (L) x 520 (H)	- Name: ??? - Artist/s: ??? - A3 frame - Wall hung
11		Admin corridor	640 (L) x 520 (H)	- Name: ??? - Artist/s: ??? - A3 frame - Wall hung
12	ZUJUMA MINISTER AND MINISTER AN	Admin corridor	640 (L) x 860 (H)	- Name: ??? - Artist/s: ??? - Print - Wall hung
13		Library/Hall Stair	640 (L) x 520 (H)	- Name: Operation Art 2012 - Artist/s: Hannah Cai - A3 frame - Wall hung







14-15	Library/Hall Stair	640 (L) x 520 (H)	<ul> <li>Name: Operation Art 2012</li> <li>Artist/s: Elissa Tennant &amp; Melisa Hau</li> <li>A3 frame</li> <li>Wall hung</li> </ul>
16	Library/Hall Stair	640 (L) x 520 (H)	- Name: Operation Art - Artist/s: Billie Wyld - A3 frame - Wall hung
17	Library/Hall Stair	840 (L) x 2620 (H)	- Name: ??? - Artist/s: ??? - Acrylic on boards - Faced fixed to brick wall - One panel
18	Library/Hall Stair	2480 (L) x 1200 (H)	- Name: ??? - Artist/s: ??? - Print - Wall hung









19-37	Library/Hall Stair	A4 wooden boards	<ul> <li>Name: Koori Week</li> <li>Artist/s: ???</li> <li>Engraving/etching on wooden boards</li> <li>Wall hung</li> </ul>
38	Staff room	600 (L) x 600 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Stretched patterned fabric</li> <li>Wall hung</li> </ul>
39	Block A Level 1 Staff Toilets	2400 (L) x 1200 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Mixed media on paper</li> <li>Wall hung</li> </ul>
40-45	Hall Area	A3 Frames	<ul> <li>Name: The Wheel on the Holden</li> <li>Artist/s: Kerry Toomey &amp; Wendy Notley</li> <li>Mixed media</li> <li>Wall hung</li> </ul>







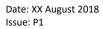
46	Hall Area	5400 (L) x 2550 (H)	- Name: ??? - Artist/s: ??? - Paint on brick wall - Mural
47	Block C Corridor	1920 (L) x 1250 (H)	- Name: ??? - Artist/s: ??? - Acrylic on board - Faced fixed to brick wall - One panel
48-53	Hall	Rug dimensions: 1440 (L) x 2320 (H)	<ul> <li>Name: Jarjum Rugs Collection</li> <li>Home by Maawa Mumbulla</li> <li>Quindalup by Kyleigha Crawford</li> <li>Spiritual Animal by Antwon Peckham</li> <li>Bucca by Mandawuy Jarrett</li> <li>Mother Earth Raging Sands by Kohen Sines</li> <li>Traditional Island Hunting Connections by Denis Tarrant</li> <li>Wall mounted</li> <li>Collaboration with Redfern Jarjum College and Wirriimbi Designs</li> </ul>







54	Z WEN	Hall	3000 (L) x 1650 (H)	<ul><li>Name: ???</li><li>Artist/s: ???</li><li>Print</li><li>Wall hung</li></ul>
55		Block A & B Corridor/Link	1840 (L) x 1200 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on board</li> <li>Faced fixed to brick wall</li> <li>One panel</li> </ul>
56-60		Block A & B Corridor/Link	640 (L) x 520 (H)	<ul> <li>Name: Operation Art</li> <li>Artist/s: ???</li> <li>A3 frame</li> <li>Wall hung</li> </ul>
61-63		Block A & B Corridor/Link	640 (L) x 520 (H)	- Name: Operation Art - Artist/s: ??? - A3 frame - Wall hung

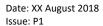








64-71	Block A & B Corridor/Link	640 (L) x 520 (H)	- Name: Operation Art - Artist/s: ??? - A3 frame - Wall hung
72-74	Block A & B Corridor/Link	640 (L) x 520 (H)	- Name: Operation Art - Artist/s: ??? - A3 frame - Wall hung
56-60	Block A & B Corridor/Link	640 (L) x 520 (H)	- Name: Operation Art - Artist/s: ??? - A3 frame - Wall hung









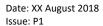
75	FARIT	Block A & B Corridor/Link	2260 (L) x 2550 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on canvas/fabric</li> <li>Wall fixed/hung</li> <li>2 equal canvas</li> </ul>
76		Secondary entry courtyard	7350 (L) x 2500 (H)	- Name: ??? - Artist/s: ??? - Acrylic on boards - Faced fixed to brick wall - Artwork on 4 equal panels
77		Secondary entry courtyard	10250 (L) x 2550 (H)	- Name: ??? - Artist/s: J. P. Simon, Darlington students and community (1986) - Paint on brick wall - Mural







78	Block B Courtyard	8800 (L) x 2500 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Paint on brick wall</li> <li>Mural</li> </ul>
79	Hall Exterior	5800 (L) x 2300 (H)	- Name: ??? - Artist/s: ??? - Paint on brick wall - Mural
80	Central Courtyard	6250 (L) x 3700 (H)	<ul> <li>Name: Eco Murals</li> <li>Artist/s: Hotbed Designs &amp; DPS Years 4,5&amp;6 (2000)</li> <li>Acrylic on boards</li> <li>Faced fixed to brick wall</li> <li>Artwork on 5 equal panels</li> <li>Bottom of all panels water damaged/missing</li> </ul>
81	East Boundary Wall	3050 (L) x 2150 (H)	<ul> <li>Name: Totem Murals 2015</li> <li>Artist/s: ???</li> <li>Paint on brick/concrete/masonry wall</li> <li>Mural</li> </ul>









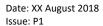
82	East Boundary Wall	3050 (L) x 2150 (H)	- Name: Totem Murals 2016 - Artist/s: ??? - Paint on brick wall - Mural
83	East Boundary Wall	3050 (L) x 2150 (H)	- Name: Totem Murals 2017 - Artist/s: ??? - Paint on brick wall - Mural
84	Northern Heritage Boundary Wall	Panel dimensions: 1200 (L) x 3700 (H)	- Name: Eco Murals - Artist/s: Hotbed Designs & DPS Years 4,5&6 (2000) - Acrylic on boards - Faced fixed to brick wall - Artwork on 2 equal panels







85	Preschool Play Area	2760 (L) x 1200 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on boards</li> <li>Faced fixed to brick wall</li> <li>One panel</li> </ul>
86	Preschool Play Area	2880 (L) x 1200 (H)	- Name: ??? - Artist/s: ??? - Acrylic on boards - Faced fixed to brick wall - Artwork on 3 equal panels
87	Preschool Courtyard	2760(L) x 1200 (H)	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Acrylic on boards</li> <li>Faced fixed to brick wall</li> <li>Artwork on 3 equal panels</li> </ul>

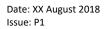








88	Preschool Courtyard	3700 (L) x 1200 (H)	- Name: ??? - Artist/s: ??? - Acrylic on boards - Faced fixed to brick wall - One panel
89	Principal's Office	560 (L) x 470 (H)	- Name: ??? - Artist/s: ??? - Mixed media - Wall hung
90	Principal's Office	600 (L) x 775 (H)	- Name: ??? - Artist/s: ??? - Mixed media - Wall hung
91	Principal's Office	800 (L) x 600 (H)	- Name: ??? - Artist/s: ??? - Mixed media - Wall hung







## **Artefact Register**

Item No.	Artwork	Location	Dimensions (mm)	Notes	Priority
1		Reception entry	Wall mounted cabinet: 1840 (L) x 280 (W) x 860 (H) Floor mounted cabinet: 1700 (L) x 580 (W) x 1000 (H)	<ul> <li>2 display cabinets</li> <li>Items include tools, boomerangs, art, sculptures, etc.</li> </ul>	
2		Admin corridor	960 (L) x 380 (W) x 1530 (H)	<ul> <li>Loose furniture - display cabinet</li> <li>Items include bowls, tools, boomerangs, art, sculptures, etc.</li> </ul>	
3		Admin corridor	1700 (L) x 280 (W) x 700 (H)	<ul> <li>Wall mounted display cabinet</li> <li>Items include tools, boomerangs, art, sculptures, etc.</li> </ul>	
4		Secondary entry courtyard	Varies	<ul><li>Name: ???</li><li>Artist/s: ???</li><li>Sandstone carvings</li></ul>	







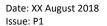
5	Central Courtyard	Varies	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Memorial</li> <li>Sandstone carvings</li> <li>Rock paintings</li> </ul>
6	Corridor from hall to central courtyard	Varies	<ul> <li>Name: ???</li> <li>Artist/s: ???</li> <li>Sculptures</li> <li>Cut outs of Aboriginal persons of interest</li> </ul>
7	Music room	1200 (L) x 180 (W) x 1800 (H)	- Display cabinet - Items include didgeridoos
8	Main entry gate	2150 (L) x 2920 (H)	







9	Central Courtyard		-	Darlington School Bus converted into an learning space as part of P&F grant	
10	Principal's Office	640 (L) x 430 (H)		Name: ??? Artist/s: ??? Framed boomerangs Wall hung	









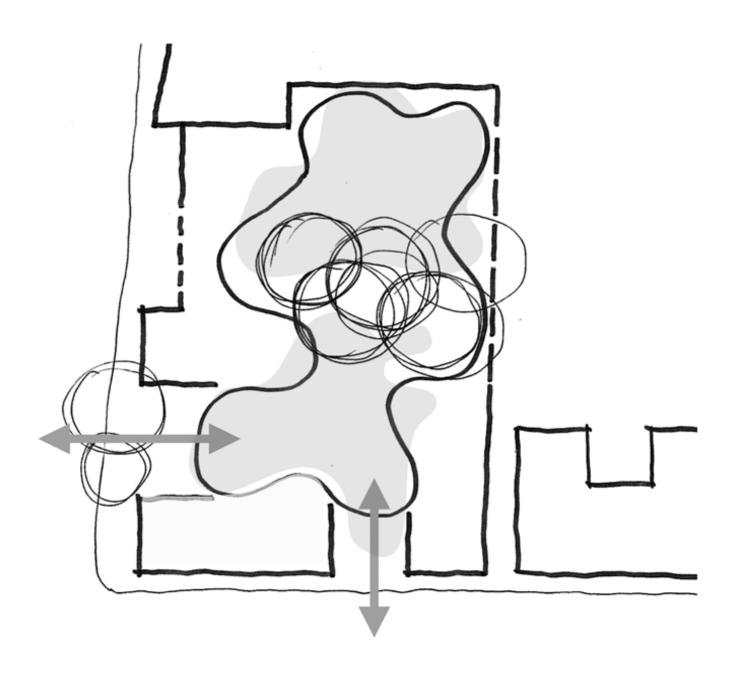
# **DARLINGTON PUBLIC SCHOOL REDEVELOPMENT**

# **Appendix O — Social Impact Assessment**

SSD-9914

**Prepared by Ethos Urban** 

For NSW Department of Education



# ETHOS URBAN

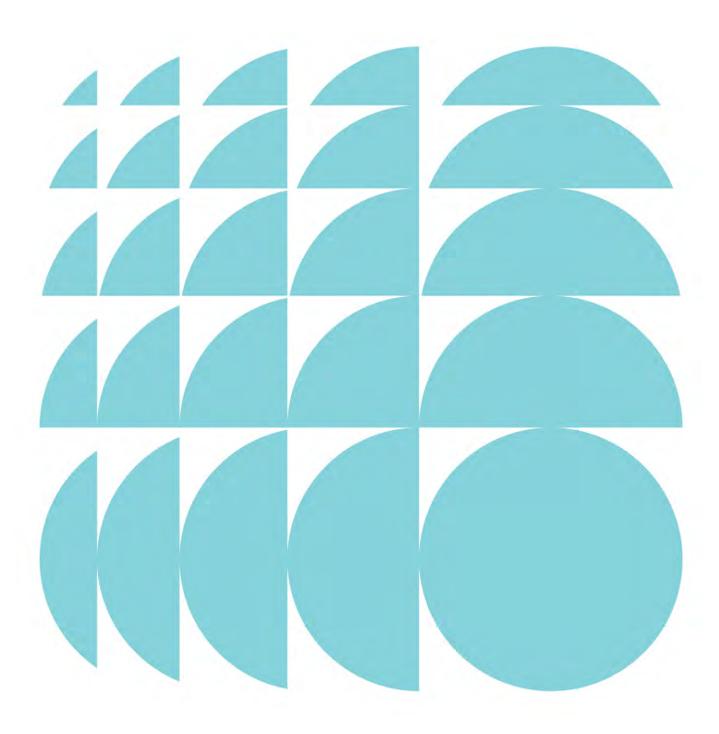
### **Social Impact Assessment**

### **FINAL REPORT**

Darlington Public School Corner of Golden Grove and Abercrombie Streets, Darlington

On behalf of Schools Infrastructure NSW

6 May 2020 | 2200026



CONTACT

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VERSION NO. DATE OF ISSUE REVISION BY APPROVED BY

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### **Executive Summary**

This report provides a Social Impact Assessment to support the redevelopment of Darlington Public School, within the City of Sydney Local Government Area (LGA). The assessment has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs), issued on 19 March 2019. The report addresses potential social impacts arising from the proposed development during both construction and operational phases.

### **Project overview**

The NSW Government is leading the expansions and upgrades of a number of schools across the state, aiming to address the need for improved education facilities to cater for population growth within the inner Sydney school catchments.

The redevelopment of Darlington Public School is intended to increase the capacity of the existing school while delivering a range of education benefits, to improve learning outcomes, health and wellbeing for students, families and staff. The scheme aims to continue to provide a sense of pride and identity for the local community, with the upgraded facility offering an improved educational hub and civic place.

The redevelopment proposal seeks approval for delivery of approximately 6000m2 of redevelopment within the existing school lots comprising:

- Preschool (60 places),
- 19 homebase classrooms,
- Library,
- · Admin area and staff facilities,
- Communal Hall.
- Landscaped areas.

### **Social Impact Assessment Methodology**

The assessment has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs), issued on 19 March 2019, requiring the preparation of a Social Impact Assessment (SIA) which includes assessment of the social consequences of the schools' relative location and decanting activities if proposed.

This SIA identifies and analyses the potential social impacts of the development, taking into consideration the potential environmental changes in the locality and how they may affect people's:

- · Way of life;
- Community;
- Access to and use of infrastructure;
- Services, and facilities;
- Culture;
- Health and wellbeing;
- Surroundings;
- Personal and property rights;
- Decision making systems, and;
- Fears and aspirations.

This SIA has been prepared to support the Environmental Impact Statement (EIS) for the Project. The comprehensive assessment of social impacts provides identifies the significance of the potential impacts, both positive and negative of the redeveloped Darlington Public School – during both construction and operation phases.

This report discusses mitigation measures for the likely negative social impacts and enhancement measures for the identified social benefits. It also identifies proposed methods for monitoring the social impacts over time.

To undertake the assessment, the following tasks were completed: analysis of the existing community and demographic environment, review of strategic policy drivers for the proposed development, identifying and assessing potential impacts, determining the significance of the impacts and identifying measures to manage or mitigate the Project's potential negative impacts and enhance the potential benefits.

### Study area - area of social influence

For the purposes of the study, the following "areas of social influence" have been defined:

- The site and the local community within the Primary Study Area (PSA), which includes the population located within the Darlington Public School Catchment, as identified by the NSW Department of Education.
- The Secondary Study Area is defined using relevant local government area boundaries, considering the population profile of the City of Sydney LGA, compared to the Greater Sydney Area.

These communities are likely to be affected by, or have an interest in the project.

The baseline analysis has identified the following important considerations for the redevelopment of Darlington Public School.

- The City of Sydney LGA is currently undergoing significant growth, with new population and housing driving demand for increased infrastructure including schools. Population forecasts prepared by demographic consultants (.id) for City of Sydney Council show that the number of 5-11 year olds living in the City of Sydney LGA is forecast to increase by 72% over twenty years, from 5,626 residents in 2016 to 9,677 residents in 2036.
- The residential population surrounding the site contains a high proportion of young people, including students attending university and living in group households, as well as households with children and lone person households.
- Analysis completed by Schools Infrastructure NSW indicates that the number of primary school students living
  in the Newtown Primary Cluster (the education planning catchment where the site is located), will grow by
  approximately 350 students between 2021 and 2036. This will result in a shortfall of 13 teaching spaces across
  the Cluster. Almost half of this growth will occur in the catchment of Darlington Public School.
- Darlington is an area currently undergoing significant change, including new education infrastructure and
  accommodation associated with University of Sydney, the development of the Central to Eveleigh corridor and
  redevelopment of Redfern-Waterloo. Urban renewal in these areas will result in increased demand for a range
  of education facilities within Darlington Public School's enrolment catchment.
- The site is located within a short walking distance to Redfern, home to an established Aboriginal and Torres
  Strait Islander community, and a focal point for Indigenous history in Sydney. 25% of Darlington Public School
  students, and 30% of staff are Aboriginal and Torres Strait Islander, and the school has a long history of
  celebrating Aboriginal education.
- The site is well-serviced by social infrastructure, including the University of Sydney's Darlington/Camperdown campus, Broadway Shopping Centre, Carriageworks and Redfern Station, as well as high quality open space and recreation areas such as Victoria Park.

### Stakeholder engagement

Stakeholder engagement has been undertaken by Schools Infrastructure NSW to inform the proposal to redevelop Darlington Public School. A consultation summary report is provided with the EIS, in accordance with the SEARs consultation requirement. This report identifies key consultation initiatives, issues raised and the project response as a result of consultation practices.

Key themes and responses that have emerged throughout the engagement process have been identified below.

Project delivery and staging, includingwhether students would remain on site during construction and if there
were alternative options such as re-locating to a temporary school during construction. Consideration has been
given to the management of student use of the site during construction, with the response proposing to
redevelop the school in stages, minimising the need to relocate students off-site.

- Landscaping opportunities to integrate food and rooftop gardens, green walls, shading and consideration of
  wildlife, trees and water. It is noted that some existing mature trees are to be retained, and individual agespecific play spaces will be provided.
- Design feedback indicated a preference for sustainable initiatives, organic lines to soften hard spaces, a
  modern but not clinical feel and connecting the library building into the landscaped areas. Encouragement of
  natural light, minimising overshadowing and maximising privacy were highlighted as issues of concern and
  consideration. Incorporating indigenous culture into the design remains a major consideration. The design will
  allow for teaching of Aboriginal culture both inside and outside the classroom with the design providing strong
  integration of art and display of Aboriginal culture.
- Artwork was a key talking point with feedback focused on retaining existing art and including incorporating new
  art spaces. Many of the school's existing artworks celebrate Aboriginal cultural heritage. The use of
  photography, digital mediums and canvas was suggested as ways of acknowledging artwork unable to be
  relocated. In response it is noted that all artworks, murals and objects will be retained where possible,
  integrating them into the new school design.
- Transport and access issues focussed on undercover bike and scooter parking, pram access, and pedestrian
  flows during drop off and pick up times and in wet weather. Traffic safety feedback concerned the proximity of
  the pedestrian crossing to the roundabout, requests for a kiss and drop zone and places for parents to wait near
  the school gates. The project team noted that many students travel to school by bicycle and scooter and
  undercover parking is to be provided. In addition, new pickup/drop off zones are proposed to ensure safety
  during busy periods.
- General feedback had a strong focus on sustainability, green technology and carbon neutrality with interest in the green design initiatives. General community feedback has been largely positive.
- Limited opportunities for shared use facilities at the site Schools Infrastructure NSW has engaged with City of Sydney and Carriageworks, who did not identify a desire to develop shared use facilities at this site. Schools Infrastructure NSW has identified that the nearby National Centre for Indigenous Excellence is interested in undertaking collaboration with Darlington Public School, to potentially identify opportunities for shared use.

### Summary of key social benefits and challenges

An assessment of the social impact categories, as defined within the *Social Impact Assessment Guideline (DPIE, 2017)*, has been undertaken with consideration to the issues identified through the baseline analysis.

Each category of impact is appraised with a significance of the impact based on the likelihood, consequence, and social risk rating. Overall, the level of impacts range from being low to moderate, with no major negative impacts identified in relation to the proposal.

Key challenges identified with the proposal relate to:

- The project may have some amenity impacts on surrounding residents and visitors during construction. Not only
  amenity but there may be some potential short term changes to sense of place in the primary study area during
  the construction phase associated with an increased construction workforce, resulting in unfamiliar visitors to
  the area. Any potential impacts will be managed in accordance with the Construction Management Plan.
- Construction impacts may have a slight impact on the health and wellbeing, and on the amenity of the school, for students and staff. Any potential impacts will be managed in accordance with the Construction Management Plan, and with Department of Education policy. Safety, and continued operations, will be given priority.
- There is a minor risk that the use of school infrastructure on the site would be disrupted during the construction
  phase due to construction activity. Students will not be decanted to another site during construction, and there
  may be impacts on learning environments associated with decanting, as well as amenity-related impacts.
  However, any potential impacts will be managed through a robust staging plan.

The most significant social benefits of the proposal relate to:

• The improvement in access to public school infrastructure in the City of Sydney LGA with the ability for the Darlington Public School to cater for a growth in demand for school enrolments and provision of high quality education spaces within the local area to benefit life-long learning outcomes for students.

- The school is within proximity to a range of social infrastructure in the form of community facilities, cultural and entertainment and commercial areas. The redevelopment of the school will present opportunities for the expanded school population to benefit from current and future programs and services offered by neighbouring facilities, in particular the spaces and services that may be offered by the University of Sydney. Future partnerships may be established to enhance student learning outcomes and engagement with the surrounding community.
- Improved enrolment opportunities to a school which is well connected to public and active transport networks.
   The expansion of the school will ensure the local population will be able to benefit from a school that is well connected to the Sydney CBD, ensuring reduced travel times, improved convenience and opportunities for active transport to school.
- Improved surroundings associated with the renewal of the site providing improvements to the local amenity of the area.
- Opportunities to celebrate the school and community's connection to Aboriginal or Torres Strait Islander culture, history and narratives through the design of the school.
- There are opportunities to engage with the broader City of Sydney community, potentially considering the use of shared use of the facilities at the school. It is recommended that engagement continue throughout the development stages to develop a program of how the school may be able to be used by other local community groups, outside school hours of operation.

### Mitigation and enhancement measures

This report presents measures developed to mitigate potential negative social impacts and enhance the benefits. The report recommends that some impacts are monitored and managed in collaboration with key stakeholders, to effectively address them if/ or when they arise.

It is noted that any potential construction impacts are to be managed through compliance with a comprehensive Construction Management Plan, with a communication plan recommended to be developed to ensure all neighbours and relevant parties are informed about the development. Safety for students, staff, visitors and residents is to be effectively managed, through comprehensive security management plans and crime prevention strategies during both the construction and operational phases.

Overall, it is considered that with a range of mitigation measures to manage identified risks in place, the project is anticipated to bring significant public benefits to the local and broader communities.

### 1.0 Introduction

### 1.1 Purpose and scope of this report

This Social Impact Assessment provides a concise assessment of envisaged social impacts – both positive and negative – associated with the proposed redevelopment of Darlington Public School, within the City of Sydney LGA. It also sets out proposed responses to these impacts, with a view to enhancing benefits and mitigating negative impacts.

The preparation of an SIA is a requirement of the Secretary's Environmental Assessment Requirements (SEARs) for the SSDA 20340 for the project. The SEARs and the response location is provided below in **Table 1**.

Table 1 Secretary's Environmental Assessment Requirements and response

SEARs Report	Response
Social impact assessment  Include an assessment of the social consequences of the schools' relative location and decanting activities if proposed.	Section 6.0

This report addresses the issues specified in the SEARs – during both construction and operational phases – as well as providing a holistic appraisal of the social impacts and benefits of the scheme.

This document analyses the:

- Strategic policy context, including relevant state and local government social and education infrastructure strategies;
- Local social context, including the demographic profile of the area, local social infrastructure and demand for education facilities, and outcomes of community consultation undertaken to date; and
- Forecast social impacts of delivering the proposed development at this location both positive and negative, including during construction.

It demonstrates how the proposed redevelopment of Darlington Public School meets community needs in the region – in this case, the need for improved access to high quality, contemporary educational facilities within the City of Sydney LGA.

This report has been developed primarily via a desktop review, drawing on the outcomes of stakeholder engagement that has been undertaken to inform the preparation of the development application. It represents a concise form of an SIA, as has been deemed appropriate for this project.

### 1.2 Overview - Darlington Public School redevelopment

The upgrade to Darlington Public School will provide new core facilities and flexible learning spaces to increase the capacity of Darlington Public School from 230 students to 437. Throughout the staged redevelopment of the school, students will remain on site.

The project is one of a number of expansions and upgrades of schools in the area by the NSW Government, which aims to address the projected enrolment growth in the surrounded area.

### 2.0 Purpose, objectives and scope of the assessment

### 2.1 Social Impact Assessment

The purpose of this Social Impact Assessment (SIA) is to assess the impacts of the development, both positive and negative, for all stages of the project lifecycle for the community and stakeholders. This report supports a State Significant Development Application (SSDA) for the redevelopment of Darlington Public School, on the corner of Golden Grove and Abercrombie Streets in Darlington. The assessment has been prepared by Ethos Urban on behalf of Schools Infrastructure NSW to accompany the Environmental Impact Statement.

Social Impact Assessment involves the analysis of social changes and impacts on communities that are likely to occur as a result of a particular development, planning scheme, or government policy decision.

### 2.2 Methodology and assessment framework

The SIA involves a number of steps, including the scoping of issues; identifying and assessing potential social impacts; determining the significance of these impacts, and identifying measures to manage or mitigate potential negative impacts and enhance potential benefits.

The methodology employed in preparing this SIA is designed to ensure that the social environment of communities potentially impacted by a project are properly accounted for and recorded, and anticipated impacts are adequately considered and assessed.

### Social Impact Assessment methodology

The assessment of social impacts has been based on the NSW DPIE Social Impact Assessment Guideline for state significant mining, petroleum production and extractive industry development, September 2017. It also draws on guidelines published by the International Association for Impact Assessment (IAIA), International principles for social impact assessment (Vanclay 2003), which defines Social Impact Assessment as:

'The process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment.' (2003, p.5)

The DPIE Guideline classifies social impacts in the following way, which forms the basis for this assessment:

- · Way of life: how people work, play and interact with one another on a day-to-day basis.
- Culture: people's shared beliefs, customs, values and language or dialect.
- Community: its cohesion, stability, character, services and facilities.
- Political systems: the extent to which people are able to participate in decisions that affect their lives, and the resources provided for this purpose.
- Environment: the quality of the air and water people use, the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to, the adequacy of sanitation; their physical safety; and their access to and control over resources.
- Health and wellbeing: people's physical, mental, social and spiritual wellbeing.
- Personal property rights: particularly when people are economically affected or experience personal disadvantage which may include a violation of their civil liberties.
- Fears and aspirations: their perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

As outlined in the IAIA Social Impact Assessment Guideline (2015), the assessment recognises that social impacts vary in their nature and can be: positive or negative; tangible or intangible (perception based); direct (caused by planned development itself), indirect (occurring as a result of a direct impact) interdependent (affecting each other) and/or cumulative (as a result of the incremental and combined impacts of one or more projects, including the

current and foreseeable future projects); experienced differently by different individuals or groups within a community, and experienced differently at the local, regional, state or national level.

Stages in the preparation of the social assessment are as follows:

- Baseline analysis of the existing socio-economic environment, involving:
  - Study area definition, including primary and secondary geographic areas likely to be impacted;
  - Review of relevant local and state policy frameworks;
  - Demographic analysis, including current and forecast communities.
- Stakeholder and community engagement: A comprehensive engagement program has been undertaken by Schools Infrastructure NSW with the feedback and key findings incorporated into the development of the design and project planning.
- Scoping of issues: Analysis of potential impacts during and post-construction, with each of the directly affected communities and other stakeholders identified in relation to the way they may be affected. Both positive and negative potential issues are identified.
- Identification of impacts as per DPIE Guideline parameters. The social impact assessment ultimately appraises the significance of each identified impact based on its duration, extent and sensitivity of impact 'receivers'. This results in a social risk rating for impacts, as per the social risk matrix shown in Figure 1 below.

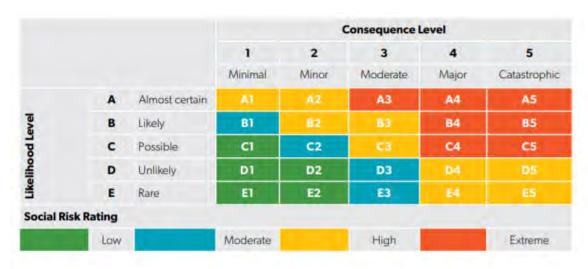


Figure 1 Social risk matrix

Source: NSW Department of Planning and Environment 2017 Social Impact Assessment Guideline (based on matrix used in Vanclay, F., et al. (2015) p.49)

## 2.3 Information sources and assumptions

Information sources used to prepare this SIA include:

- ABS Census of Population and Housing 2016
- Other ABS publications as referenced
- Profile.id (https://profile.id.com.au/sydney)
- Forecast.id (<a href="https://forecast.id.com.au/sydney">https://forecast.id.com.au/sydney</a>)
- Strategic Plan 2018-2022 NSW Department of Education, 2018;
- Design Guide for Schools Government Architect, 2018;
- Darlington Public School Strategic Plan 2018-2022 Darlington Public School, 2018;
- Eastern City District Plan Greater Sydney Commission, 2018;

- Draft Local Strategic Planning Statement City of Sydney, 2020; and
- Sustainable Sydney 2030: Community Strategic Plan City of Sydney 2017.

Assumptions applied to complete this SIA include:

- · Socio-economic data for each study area accurately reflects the community demographic profile;
- · The key findings of the background studies and technical reports are accurate;
- Outcomes of the community consultation and engagement undertaken to date accurately reflect community views, and
- All potential social impacts to the local community and special interest groups are identified.

# 3.0 Site context and proposed development

#### 3.1 Site and locational context

Darlington Public School is located on the corner of Golden Grove Street and Abercrombie Street, Darlington, within the City of Sydney Local Government Area. The school is adjacent to the University of Sydney Darlington Campus and within walking distance to Redfern and Macdonaldtown train stations. The site is legally described as Lot 100 in DP 623500 and Lot 592 in DP 7523049. The context of the site is shown in **Figure 2** and **Figure 3**.

The school is located in an area which comprises residential properties, including heritage-listed terraces and high and medium density housing. The local area is set to undergo a significant development of residential apartments that will increase the population in the school catchment area.

The school site is 7,250sqm, and there is currently 10.5sqm of outdoor space per student.

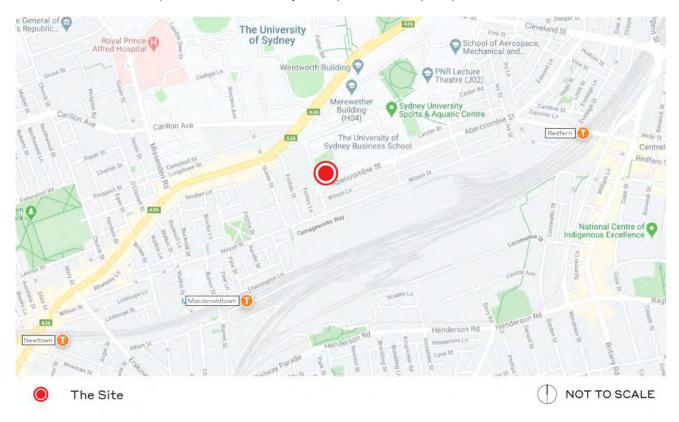


Figure 2 Site and locational context

Source: Ethos Urban



Figure 3 Aerial photograph of the site and surrounds

Source: Ethos Urban

## 3.2 Proposed development

The SSD application seeks consent for demolition of existing school buildings and construction of a new 2-3 storey building, increasing the school capacity from 230 to 437 students. The works also include replacement of the existing child-care facility (to the same capacity of 60 students), earthworks and landscaping.

The proposal is to develop the design and deliver approximately 6000m2 of redevelopment within the existing school lots comprising:

- Preschool (60 places),
- 19 homebase classrooms,
- · Library,
- · Admin area and staff facilities,
- Communal Hall,
- · Landscaped areas.

For a detailed project description refer to the EIS prepared by Ethos Urban.

As part of the project, existing buildings will be demolished to enable the new design to take advantage of the limited space available on site.

Schools Infrastructure NSW has identified that the upgrade to Darlington Public School will:

- · Improve the amenity of the school and provide increased learning spaces to meet future enrolment needs
- Provide the necessary learning spaces and pre-school to accommodate for the growth in the number of preschool and school aged children in the local community

- Improve access and safety to and throughout the school, including the provision of pram, bicycle and scooter parking
- · Preserve cultural and heritage aspects of the school that are important to the school and local community
- · Provide new landscaping and flora while preserving existing trees where possible
- Provide new outdoor play and learning spaces
- · Address existing issues relating to drainage and an uneven and sloping site
- Deliver new and refurbished classrooms that support and enable smart, flexible learning and teaching
- Provide educational opportunities that improve life long outcomes for Aboriginal students

An image of the proposed redevelopment is shown in Figure 4.



Figure 4 Proposed Darlington Public School redevelopment Source: FJMT.

# 4.0 Strategic policy context

The following section identifies the key social drivers for the site and scheme, based on a review of key relevant state and local policies and strategies, specifically relating to: (1) key education directions and (2) social strategy and social infrastructure directions.

#### 4.1 Introduction to reviewed policies

The following plans, policies and strategies have been reviewed to inform this assessment:

- · Education strategy drivers:
  - Strategic Plan 2018 2022 (NSW Department of Education, 2018)
  - School Assets Strategic Plan (NSW Schools Infrastructure, 2017)
  - Design Guide for Schools (Government Architect New South Wales, 2018)
  - 2018-2020 School Plan (Darlington Public School, 2018)
- Social strategy and social infrastructure drivers:
  - Eastern City District Plan (Greater Sydney Commission 2018)
  - Sustainable Sydney 2030 Community Strategic Plan 2017-2021 (City of Sydney, 2017)
  - Draft Local Strategic Planning Statement (City of Sydney, 2019).

The comprehensive review of state and local policies, strategies and documents that articulate the desired social outcomes for the site and locality – including social infrastructure directions – are provided at **Appendix A**.

#### 4.2 Education drivers relevant to the scheme

A review of the key education drivers for the scheme highlight the following social impact implications:

- The Eastern City District Plan identifies an 80% increase in children aged 5-19 between 2016 and 2036, and the NSW Department of Education has estimated an extra 42,850 students will need to be accommodated in government and independent schools to 2036. 22% of these additional students will live in City of Sydney LGA, where the site is located. There is a need to ensure public education infrastructure has the capacity to meet growing demand.
- Schools Infrastructure NSW has identified the need for schools to flexibly accommodate increasing student numbers with school expansions and modular buildings as well as the need to involve community in the upgrades of schools to establish the best way to distribute enrolment pressures.
- High quality education facilities and programs contribute to developing independent, critical thinking lifelong learners that are active citizens. Darlington Public School has committed to well-rounded educational experiences, including building skills of communication, collaboration, creativity and critical thinking. It is a school priority to improve connections with community partners in order to catalyse learning opportunities.
- There is a need to develop education facilities that are able to adapt to changing community needs over time.
   Government Architect NSW has emphasised the need for schools to cater for changing demographics and new teaching practices. Spaces must cater for collaborative spaces, display areas, student breakout spaces, teacher meetings, and reflective/quiet spaces.
- Research shows that higher activity levels of children are linked to health benefits through avoided medical costs, with increased play spaces in schools associated with increased physical activity in the school day.

## 4.3 Social strategy drivers relevant to the scheme

A review of the key social drivers for the scheme highlight the following social impact implications:

• It is a state and local government priority to deliver connected neighbourhoods which are accessible and include a network of jobs, housing and local services such as primary schools and social infrastructure within walking distance.

- There is an opportunity for schools to play a critical role as community hubs, providing facilities which are social
  connectors within the broader community and which foster healthy, culturally rich and resilient communities.
   Safe walking and cycling paths to schools can better connect schools with local communities while reducing
  local congestion.
- The NSW Government encourages the joint and shared use of school facilities by local communities to develop innovative and efficient ways to provide school and community infrastructure.

#### 5.0 Local social context

This section provides an overview of the site and the existing social context surrounding the site. It analyses the existing social characteristics of the community within the identified study areas to better understand the potential characteristics and context of the existing community that may be impacted by the proposed development.

#### **Key findings**

The review of the local social context for the proposed development identified the follow key implications for the social impact analysis:

- City of Sydney LGA is currently undergoing significant growth, with new population and housing driving demand
  for increased infrastructure including schools. Population forecasts prepared by demographic consultants (.id)
  for City of Sydney Council show that the number of 5-11 year olds living in the City of Sydney LGA is forecast to
  increase by 72% over twenty years, from 5,626 residents in 2016 to 9,677 residents in 2036.
- The residential population surrounding the site is mixed, with a high proportion of young people, including students attending university and living in group households, as well as households with children and lone person households.
- Analysis completed by Schools Infrastructure NSW notes that the number of primary school students living in the Newtown Primary Cluster (the education planning catchment where the site is located), will grow by approximately 350 students between 2021 and 2036, resulting in a shortfall of 13 teaching spaces across the Cluster. Almost half of this growth will occur in the catchment of Darlington Public School.
- The site is located within Darlington, in an area currently undergoing significant change, including new
  education infrastructure and accommodation associated with University of Sydney, and the development of the
  Central to Eveleigh corridor and redevelopment of Redfern-Waterloo. Urban renewal in these areas will result in
  increased demand for a range of education facilities in the area.
- The site is located within a short walking distance to Redfern, home to an established Aboriginal and Torres
  Strait Islander community, and a focal point for Indigenous history in Sydney. 25% of Darlington Public School
  students, and 30% of staff are Aboriginal and Torres Strait Islander, and the school has a long history of
  celebrating Aboriginal education.
- The site is well-serviced by social infrastructure, including the University of Sydney's Darlington/Camperdown campus, Broadway Shopping Centre, Carriageworks and Redfern Station, as well as high quality open space and recreation areas such as Victoria Park.
- Significant consultation has been undertaken to inform the design and development program for the school. Key themes identified through community consultation include the staging and management of students during construction, the need for open space to be diverse and multifunctional, and incorporating Aboriginal culture into the design is a key priority.

## 5.1 Study area definition: area of social influence

For the purposes of the Social Impact Assessment, the study areas chosen have taken into consideration the local social impacts as well as those likely to occur on a broader scale. Social impacts are likely to be greater in short term, relating to the immediate surrounds, for example impacts associated with the demolition and construction (i.e. amenity values, access, noise, air quality etc) will be very localised. Longer term impacts such as visual amenity, traffic, connectivity, crime and safety and community sense of place, are also anticipated to occur within the close proximity to the project.

The Primary Study Area represents local community within the immediate area. This area has been defined using an SA2 aligned as closely as possible to the enrolment catchment area for the school. The Secondary Study Area is defined using relevant local government area boundaries, considering the population profile of City of Sydney LGA. The demographic data has been primarily sources from the Australian Bureau of Statistics, 2016 Census.

The enrolment catchment for the school, and the SA2 that has been chosen to align with this catchment are shown in **Figure 5** and **Figure 6** respectively.



Figure 5 Enrolment catchment for Darlington Public School

Figure 6 Primary study area Source: Ethos Urban.

Source: schoolzones.net.au

## 5.2 Community profile

A demographic profile of the resident community within the school catchment has been prepared based on the results of the 2016 Census.

The results of the 2016 ABS Census have been used to identify key socio-economic and demographic characters of the suburb of Darlington, where the site is located, in comparison with the City of Sydney LGA and Greater Sydney.

#### Population and age structure

The usual resident population of the primary study area (as shown in **Figure 7**) increased by 29.0% between 2006 and 2016, from 21,252 residents in 2006 to 27,412 residents in 2016.

In 2016, 1.1% of the population of the primary study area were aged 5-9 years old, and 0.9% of residents were aged 10-14 years old.

The study area has a younger age profile compared with City of Sydney LGA and Greater Sydney:

- The median age in the study area is 30 years, compared with 32 across City of Sydney LGA.
- There is a lower proportion of children under 19 years compared with City of Sydney LGA as a whole:
  - 2.5% of people in the study area are aged 0 to 4 years, compared with 3.3% in City of Sydney LGA,
  - 1.1% of people in the study area are aged 5 to 9 years, compared with 1.9% in City of Sydney LGA,
  - 3.8% of people in the study area are aged 15 to 19 years, compared with 4.0% in City of Sydney.
- There is a significantly higher proportion of younger adults compared with City of Sydney LGA, and 17.5% of people in Darlington are aged 20 to 24 years, compared with 13.7% in City of Sydney LGA. This is likely due to the presence of student accommodation in this area, in association with University of Sydney.

The age structure of Darlington in 2016, in comparison with City of Sydney LGA, is shown in Figure 7.

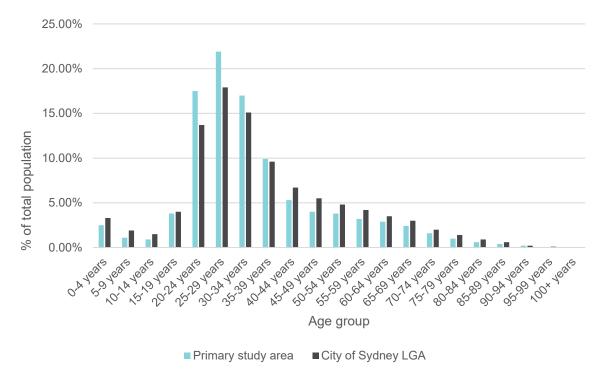


Figure 7 Age Structure, 2016

Source: ABS Census 2016, compiled and presented by Profile ID.

#### Household type

There is a significantly lower proportion of households with children living in the primary study area, compared with the City of Sydney LGA average:

- 10.1% of households are couples with children, compared with 10.9% of households across the City of Sydney LGA.
- 4.0% of households in the primary study area are one parent families, compared with 4.7% across the City of Sydney LGA.
- 19.9% of households in the primary study area are group households, compared with 15.5% across the City of Sydney LGA.
- 29.7% of households in the primary study area are lone person households, compared with 37.3% across the City of Sydney LGA.

#### **Cultural and linguistic diversity**

17.2% of residents in the primary study area speak a language were born in Australia, compared with 39.4% of residents across City of Sydney LGA.

Top languages other than English spoken in the primary study area include:

- Mandarin (15.1%)
- Thai (13.7%)
- Indonesian (8.5%)
- Korean (4.5%)

#### **Aboriginal and Torres Strait Island communities**

0.7% of residents in the primary study area are Aboriginal and/or Torres Strait Islander, compared with 1.2% of the City of Sydney LGA.

#### **Educational attainment**

Residents of the primary study area had comparatively high levels of educational attainment compared with City of Sydney LGA, and 26.1% of residents had completed a university degree, compared with 44.0% across City of Sydney LGA.

Many residents of Darlington are currently attending an educational institution. 43.3% of residents of Darlington are attending university, compared with 5.8% across City of Sydney LGA.

## Dwelling type and tenure

There is a significantly higher proportion of households living in flats, units or apartments within the primary study area (97.8%), compared with City of Sydney LGA (77.1%).

While the majority of dwellings around the school are semi-detached terrace houses, there is some higher density student housing in proximity to the site.

Two thirds of primary study area residents are renting (64.5%, compared with 62.2% of City of Sydney households).

## Forecast population growth

Population forecasts prepared by Forecast.id for City of Sydney Council (see: <a href="https://forecast.id.com.au/sydney">https://forecast.id.com.au/sydney</a>) show that the population of the LGA is forecast to increase from 224,211 in 2016 to 339,498 residents in 2036.

Over this period, the number of residents of the LGA aged between 5 to 11 years is expected to increase from 5,626 residents in 2016 to 9,677 residents in 2036.

#### 5.3 Darlington Public School profile

As identified within the Darlington Public School Annual Report (2018), in 2018:

- There were 228 students enrolled at the school, a slight decrease from 234 students in 2017,
- The school community is diverse:
  - 25% of students were from a non-English speaking background,
  - 25% of students were from an Aboriginal or Torres Strait Islander background.
- The workforce of Darlington Public School is made up of:
  - 13 teachers (including casual, part time and full-time staff)
  - 1 principal and 5 assistant principals
  - 1 school counsellor
  - 6 school administration and support staff
- 30% of Darlington PS workforce are from an Aboriginal or Torres Strait Islander background.
- The school site is 7,250sqm, and there is currently 10.5sqm of outdoor space per student. This is lower than some other schools in the Cluster (amount of outdoor space varies between 92.4sqm per student and 7.9sqm per student).

#### 5.4 Demand for education facilities

Population growth in the inner suburbs of Sydney has resulted in a significant increase in school enrolments, for public primary schools in the broad catchment.

Analysis completed by Schools Infrastructure NSW notes that the number of primary school students living in the Newtown Primary Cluster (the education planning catchment where the site is located), will grow by approximately 350 students between 2021 and 2036. Most of the growth is estimated to occur in the Darlington Public School catchment (+126 students) and Newtown North Public School (+97 students). Other schools in the Newtown Primary Cluster include Camdenville, Erskineville, Newtown North, Newtown, St Peters and Tempe Public School. It is estimated this will result in a shortfall of 13 teaching spaces across the Cluster.

The upgrade to Darlington Public School aims to address the projected enrolment growth in the Newtown Primary Cluster by providing appropriate core facilities, flexible learning spaces and the provision of an inspiring educational facility that meets community expectation.

#### 5.5 Local character

The site is located in a distinct local area, that is undergoing growth and change, including proximity to the University of Sydney, future Central to Eveleigh precinct and established Aboriginal community in Redfern.

#### **Proximity to University of Sydney**

Darlington Public School is located on the borders of University of Sydney's Darlington/Camperdown campus, and a large number of students live in the area or visit the campus and nearby services (e.g. Redfern Station) each day. Across all of University of Sydney's campuses, there are approximately 70,000 students enrolled.

The campus has recently undergone significant redevelopment, including the development of the Sydney Business School, close to the site, a multistorey building completed in 2015. There are also a number of buildings including student accommodation close to the site, including terraces along Darlington Road, student accommodation at 401 Abercrombie Street and Darlington House.

#### **Future Central to Eveleigh precinct**

The site is located within short walking distance to North Eveleigh precinct within the broader Central to Eveleigh precinct (see **Figure 8** over page). The *Central to Eveleigh Transformation Strategy* (NSW Government, November 2016) identifies the preliminary vision for North Eveleigh:

"North Eveleigh could provide new homes close to community facilities and cultural, education and work opportunities while retaining its important role in the operation of the rail network. The rail heritage assets in Eveleigh could be adapted for new and exciting uses." (p.10)

Existing plans for the transformation of this area aim to develop a new residential area close to existing cultural, education and employment opportunities in the area. The existing vision for the area identifies that building heights will be significantly increased, and a new 600-700 dwellings, as well as social infrastructure to support population growth, may be delivered in this area over the next 15 years.

The Strategy also identifies that new, permanent classrooms will need to be delivered in existing schools in the area to increase capacity.

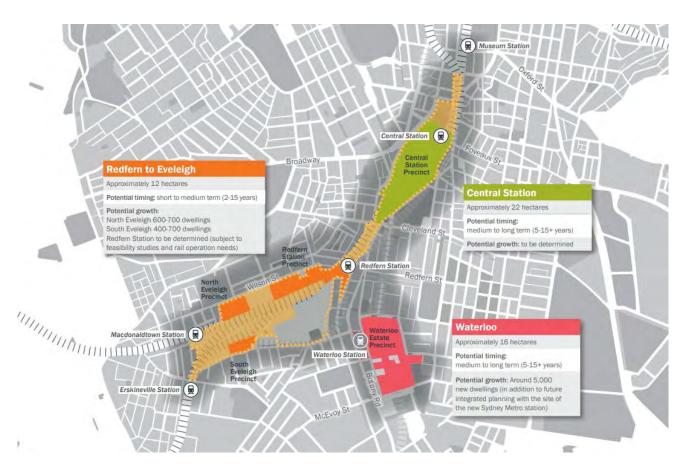


Figure 8 Central to Eveleigh precincts

Source: Central to Eveleigh Transformation Strategy, NSW Government, November 2016.

#### Proximity to Redfern - an established Aboriginal and Torres Strait Islander community

The site is located a short walk to Redfern, which is associated with a large and established Aboriginal and Torres Strait Islander community, as well as a concentration of social housing. The area is changing rapidly due to urban renewal and gentrification of the area.

Darlington Public School is located close to the site of "The Block", a concentration of public housing for Aboriginal and Torres Strait Islander people, owned by the Aboriginal Housing Company since the 1970s. This site has also been a focus for celebration of Aboriginal and Torres Strait Islander cultures, as well as political activism and protest. The site is currently being redeveloped to deliver high rise housing for 600 university students and 62 homes for Aboriginal and Torres Strait Islander families, in a project known as the Pemulwuy Project. The current site includes open space, street art and the Redfern Community Centre (see **Figure 9**).

Further to the east of the site, the concentration of social housing within Redfern Waterloo will shortly be redeveloped to deliver increased high density housing for a range of households, centred on the new Waterloo Metro Station.



Figure 9 Street art by Reko Rennie and local artists on the former site of The Block, Redfern Source: timeout.com

## 5.6 Social infrastructure analysis

A review of the existing local social infrastructure within walking distance of the site has been undertaken to inform this Social Impact Assessment and establish a baseline for the assessment of existing facilities (see **Figure 14** over page).

Residents, workers and visitors in the City of Sydney LGA have access to a wide range of social infrastructure in the form of community facilities, cultural and religious institutions, libraries and entertainment venues.

This assessment has identified and mapped the key social infrastructure within a local catchment of 800m from the site, a distance equivalent to a 10-15 minute walk (refer to **Figure 14**). However, it is noted that the railway poses a significant barrier to pedestrian accessibility towards Redfern and Waterloo.

Social infrastructure has been grouped into eight categories, as follows:

- Childcare;
- · Community centres;
- Cultural and creative facilities;
- Libraries;

- · Sport and recreation facilities;
- · Places of worship;
- Parks, and
- Education.

#### Childcare centres/preschool

There are a variety of child care facilities located within the Sydney CBD of which provide a range of educational programs for those aged 0 to 4 years, including Darlington Preschool (located on the site), Darlington Public School Out of School Hours Care (located on the site), KU Union Childcare Darlington, KU Carillion Avenue and Boundary Lane Children's Centre.

## **Community facilities**

Harry Burland Activity Centre is the closest community facility within walking distance of the site, which hosts a range of social, wellbeing and cultural programs for the local community.

Redfern Community Centre is also on the edge of the walking catchment of the site, and includes a sound recording studio, performance spaces, meeting rooms, outdoor amphitheatre, commercial kitchen, Elder's lounge and multipurpose rooms.



Figure 10 Redfern Community Centre

Source: sydneybarani.com.au

## **Cultural and creative facilities**

The site is within walking distance of a number of cultural and creative facilities, including Carriageworks, a contemporary multi-arts centre that hosts exhibitions and events; Verge Gallery, University of Sydney's art gallery, which is open to the public; and the future Chau Chak Wing Museum, a large exhibition and learning space containing University of Sydney's extensive natural history, archaeological and anthropological collections.



Figure 11 Carriageworks

Source: carriageworks.com.au



Figure 12 Chau Chak Wing Museum

Source: architectureau.com

#### Libraries

Newtown Library is located a 10-minute walk from the site. It is operated by City of Sydney and open to the public. University of Sydney also contains multiple libraries, however, these are not open to visitors who are not students at the university.

## Places of worship

There is one place of worship within walking distance of the site: St Michael's Melkite Catholic Cathedral.

#### Sport and recreation facilities

The site is located within walking distance of Sydney University Sports and Aquatic Centre, which contains:

- 50m heated indoor swimming pool
- 6 synthetic grass tennis courts (bookable online)
- 3 squash courts (bookable online)
- · Multi-function stadium
- Fitness studios
- Boxing gym
- Martial Arts dojo gym
- · Cafes.

The site is also located within walking distance of sportsgrounds at St Andrews Oval, St Pauls Oval and St Johns Oval, and City of Sydney's Victoria Park Pool is on the edge of the walking catchment.

On the other side of the rail line, the site is within walking distance to basketball courts and a skate park at South Eveleigh.



Figure 13 Sydney University Sports and Aquatic Centre

Source: Sydney Uni Sport and Fitness.

## Open space

The site is located within close proximity to high quality open spaces, including Victoria Park and Hollis Park.

#### **Education**

There are no primary schools located within a 10-15 minute walking distance of the site. However, the site is within walking distance to the University of Sydney's Camperdown/Darlington campus. This site is 72 hectares and includes libraries, art galleries, historical museums, and teaching and learning spaces for the following university

faculties: architecture, design and planning, arts and social sciences, business, engineering, law, medicine and health, science.

The site is also within walking distance of Eora TAFE.

## **Public transport**

The site is highly connected to the rest of Greater Sydney by train, bus, light rail and ferry connections. The site is within walking distance of Redfern Station, as well as buses along City Road.

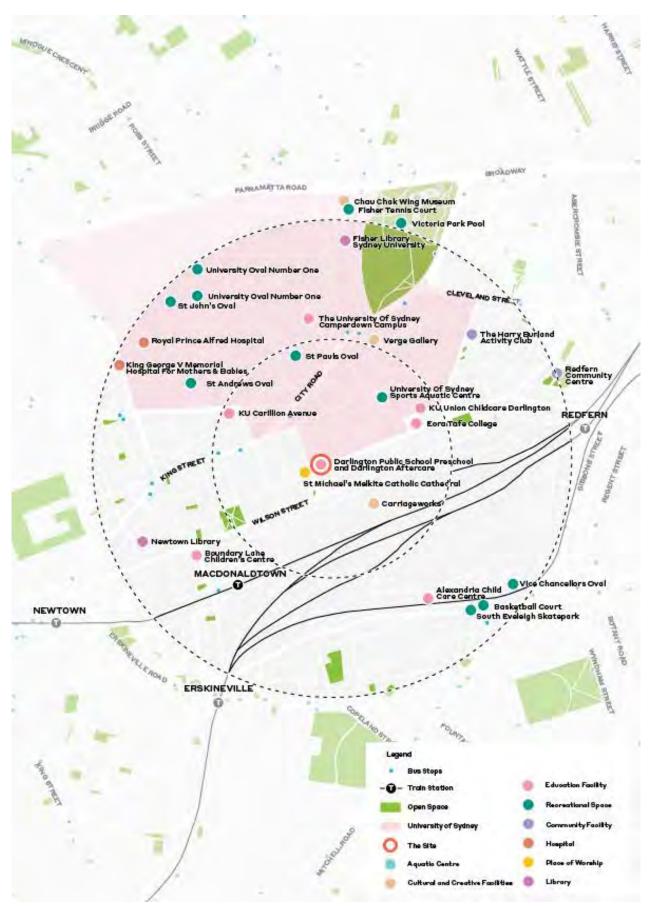


Figure 14 Social infrastructure within walking distance of the site

Source: Ethos Urban

## 5.7 Community and stakeholder engagement

Stakeholder Engagement has been undertaken by School Infrastructure NSW to inform the proposal to redevelop Darlington Public School. A consultation summary report is provided with the EIS, in accordance with the SEARs consultation requirement, identifying key consultation initiatives, issues raised and the project response as a result of consultation practices.

## Engagement activities undertaken to date

The table below describes the consultation and communication channels and activities that have been undertaken and the strategic intent of each activity.

Figure 15 Consultation activities undertaken to date

Figure 15 Consultation activities undertaken to date		
Consultation activity	Strategic intent	Key stakeholder group
Project Reference Group	Considerable efforts have been made throughout the project, and particularly from the design reset, to actively involve the school community in the design process.  The Project Reference Group has been very active in sharing feedback, and through PRG input, consultation activities have been designed and implemented to maximise school community awareness and participation in the project. 35 formal PRG meetings have been held since November 2017, typically on a monthly or bimonthly basis. Attendees include the School Principal, Deputy Principals, Director Education Leadership, SINSW project team, Mace Project team, Architect, School parents, School P&C representatives and Aboriginal community member representatives.  Ensuring the school community has had an opportunity to provide feedback and be informed about the project progress has ultimately led to a positive outcome resulting in revised Concept Designs that will meet the needs of the school community now and in the future.	School community
Community information sessions	Four information sessions were held at the Darlington Public School with members of the project team able to answer questions and provide information regarding technical details of the project. The sessions provided an opportunity for face to face engagement between the school communities, residents and staff, and members of the project team, and allow for Q&A and concerns to be raised. Information sessions are widely advertised through the communication channels via project webpage, information packs, project updates, social media updates, newspaper advertisements and fliers.  Recent community information sessions for Darlington Public School have included an interactive workshop component. This method of engagement has allowed an opportunity to hear and record much more detailed feedback, which the architect and project team have been able to incorporate into the revised Concept Plan and Schematic Design.	School community     Residents
Stakeholder meetings	Meetings with stakeholders to identify key issues related to the proposed development:  City of Sydney Council Government Architect NSW Transport for NSW Roads and Maritime Authority Local Aboriginal Land Council Registered Aboriginal Parties Aboriginal Land Rights Registrar National Centre of Indigenous Excellence Office of Environment and Heritage University of Sydney	Government and community stakeholders

Consultation activity	Strategic intent	Key stakeholder group
Communications (Project webpage, Information Pack, Project Updates, Social Media Updates, Newspaper Advertisements and Flyers)	Distribution of project information to stakeholders delivered via letterbox drop and school newsletter.	<ul><li>School community</li><li>Residents</li></ul>
Contact channels (Emails and 1300 project information number)	Direct responses to stakeholder and community contact.	<ul><li>School community</li><li>Residents</li></ul>
School community communication (Newsletters, flyers in school bags, P&C meetings)	Ongoing updates as required and direct responses to questions.	School community
Door knock to local residents	Door knock of Forbes Street, Wilson Street, Golden Grove Street and Abercrombie Street undertaken to understand community interest in the project and share information about project progress.	Residents

NSW Schools Infrastructure have identified that continued engagement will take place with stakeholders and communities during the statutory exhibition of the SSDA, as well as during future stages of the planning and development process. Specifically, School Infrastructure NSW will continue to work closely with the school community and City of Sydney to plan and coordinate potential future construction, should consent be granted.

#### Engagement outcomes to date

The feedback provided by stakeholders, the school community and local residents has informed the development and progression of the proposal to upgrade Darlington Public School.

Key themes that emerged throughout the engagement process have been identified below, along with the response to the alterations of the design and project scope to reflect community and stakeholder issues.

- **Project delivery** and staging and whether students would remain on site during construction and if there were alternative options such as re-locating to a temporary school during construction. Consideration has been given to the management of student use of the site during construction, with the response proposing to redevelop the school in stages, minimising the need to relocate students off-site.
- Landscaping including ideas for sustainability, such as solar energy, community, food and rooftop gardens, green walls, shading and consideration of wildlife, trees and water. it is noted that some existing mature trees are to be retained, and individual age-specific play spaces will be provided.
- Design feedback indicated a preference for sustainable initiatives, organic lines to soften hard spaces, a
  modern but not clinical feel and connecting the library building into the landscaped areas. Encouragement of
  natural light, minimising overshadowing and maximising privacy were highlighted as issues of concern and
  consideration. Incorporating indigenous culture into the design remains a major consideration. The design will
  allow for teaching of Aboriginal Cultural both inside and outside the classroom with the design providing strong
  integration of art and display of Aboriginal Culture.
- Artwork was a key talking point with feedback focused on identifying and retaining existing art and including space for new art. Many of the school's existing artworks celebrate Aboriginal cultural heritage. The use of photography, digital mediums and canvas was suggested as ways of acknowledging artwork unable to be relocated. In response it is noted that all artworks, murals and objects will be retained where possible, integrating them into the new school design.
- Transport and access issues focussed on undercover bike and scooter parking, pram access, and pedestrian
  flows during drop off and pick up times and in wet weather. Traffic safety feedback concerned the proximity of
  the pedestrian crossing to the roundabout, requests for a kiss and drop zone and places for parents to wait near
  the school gates. The project team noted that many students travel to school by bicycle and scooter and

undercover parking is to be provided. In addition, new pickup/drop off zones are proposed to ensure safety during busy periods.

- **General feedback** had a strong focus on sustainability, green technology and carbon neutrality with interest ain the green design initiatives. General community feedback has been largely positive.
- Limited opportunities for shared use facilities at the site Schools Infrastructure NSW has engaged with
  City of Sydney and Carriageworks, who did not identify a desire to develop shared use facilities at this site.
  Schools Infrastructure NSW has identified that the nearby National Centre for Indigenous Excellence is
  interested in undertaking collaboration with Darlington Public School, to potentially identify opportunities for
  shared use.

# 6.0 Social impact assessment

#### 6.1 Social impact assessment – framework and scope

The following section sets out the assessment of social impacts, that may arise from the proposed development both positive and negative –during construction and in relation to the operation of the completed school. A risk assessment has been undertaken, identifying the degree of significance of risk, including the envisaged duration, extent, and potential to mitigate/enhance and likelihood of each identified impact. The social risk matrix provided within the DPIE *Social Impact Assessment Guidelines (2017)* has been adapted for the purposes of undertaking this social and impact assessment of the proposed redevelopment of Darlington Public School.

Measures have been provided to enhance the social benefits and mitigate any potential negative impacts, during both construction and operation. *Guidelines (2017)*. A risk assessment, of the degree of significance of risk, has been undertaken.

The assessment specifically addresses the matters raised in the SEARs for the SSDA:

Include an assessment of the social consequences of the schools' relative location and decanting activities if proposed.

Social impacts of the development may be experienced differently by different parts of the community. This review identifies and analyses the potential social impacts of the development, from the points of view of the affected communities and stakeholders within the precinct. Key affected communities include:

- Local residents;
- · Adjacent neighbours;
- · Broader community in the locality;
- Visitors to surrounding infrastructure within the area, e.g. University of Sydney, Carriageworks;
- Current and future parents, families and guardians connected to the school;
- · Current and future students;
- · Current and future school staff, both teaching and non-teaching, and
- Education professionals in the City of Sydney LGA.

This report has considered how these affected communities and stakeholders are expected to experience the project during both construction and operation phases. In this context, it is noted that this Social Impact Assessment has been developed primarily via a desktop review, as stakeholder and community engagement has been undertaken separately and will continue throughout subsequent stages of the planning process. Information regarding consultation undertaken to date has been included in this desktop analysis.

As per the NSW DPIE SIA Guideline, the following social factors have been identified as key to this project and are assessed in the following section:

- Access to and use of infrastructure, services and facilities,
- · Way of life
- Community
- Culture
- Health and wellbeing,
- · Surroundings.

The proposal is unlikely to have an impact on fears and aspirations, decision making systems or personal and property rights, and therefore these social factors have not been explored.

#### Access to and use of infrastructure, services and facilities

Changes to the school site and surrounds will have a significant positive impact on access to and use of infrastructure, services and facilities within the locality by increasing access to education opportunities within the area. The redevelopment of Darlington Public School in the City of Sydney LGA will increase the availability of government primary school enrolment opportunities in the local school catchment area for up to 437 students, and will improve the quality of existing child care facilities on the site (while retaining the capacity of 60 students).

The proposed school does not include any purpose-built joint use or shared use facilities.

## **Potential impacts**

#### **During construction**

- Minor, short term impacts to the use of school infrastructure on the site for students, families and staff
  associated with disruption to the use of the site during the construction period. The construction has been
  planned in two stages to allow the existing staff and students to remain on site during construction. As per
  the staging plan, only un-used s
- Minor, short term impacts to the use of open space within the site by students and staff, as access to the open space within the school site will be disrupted by noise, vibration and other amenity impacts on the site. During the construction period, it is noted, 10sqm of open space per student will be maintained.
- Minor, short term impacts to access to child care services on the site, due to the demolition of the 60-place
  preschool on this site (which will be redeveloped through the project). This impact will be partially mitigated
  by temporarily relocating the child care on site (subject to a separate Development Application). Darlington
  Public School currently only has 20 preschool students enrolled, therefore, places for 20 children will be
  maintained during the construction phase.
- Potential minimal disruption to the use of surrounding social infrastructure, including University of Sydney
  Business School, St Michael's Catholic Melkite Cathedral and Carriageworks, associated with construction
  noise and vibration, traffic and pressure on parking, which may inconvenience or disrupt users of surrounding
  areas. The Acoustic Assessment completed by Acoustic Logic (2020) has noted that the construction activity
  will result in minimal noise and vibration impacts to surrounding social infrastructure.

## **During operation**

- Positive social impacts associated with the increased availability of enrolments to meet student demand in the inner suburbs of Sydney. The expansion of Darlington Public School will help to meet demand for school places generated by forecast population growth, which will result in a shortfall of 13 teaching spaces by 2036 across the Newtown Primary Cluster.
- Positive social impacts associated with improved access to public school infrastructure in the Darlington area. The expansion will increase accessibility to this essential education infrastructure for families in this area.
- Positive social benefits for staff at the school with access to improved, state of the art education facilities, aligning teaching programs with quality education spaces.

## Responses/ mitigation measures

- Explore opportunities to maximise active transport options to school for staff, students and their families across the school catchment area, through the incorporation of a green travel plan.
- Continue the engagement of stakeholders to identify opportunities to undertake shared use of school facilities (e.g. communal hall), with consideration to the school's opening hours, safety requirements, maintenance costs and broader community needs. Schools Infrastructure NSW has engaged with City of Sydney and Carriageworks, who did not identify a desire to develop shared use facilities at this site. Schools Infrastructure NSW has identified that the nearby National Centre for Indigenous Excellence is interested in undertaking collaboration with Darlington Public School, to potentially identify opportunities for shared use. Best practice guidelines for schools by GANSW recommend the design of the school facilities consider future populations who may co-use the space for educational purposes. It is important spaces are flexible and can adapt to the evolving needs and aspirations of the area.
- Ensure that community members (which may include future students and their families) are engaged and
  updated regarding the proposed development, as appropriate. There may be potential to explore
  opportunities for existing Darlington Public School students to provide input to the design details as the site is
  developed.
- It is recommended appropriate mechanisms to decant staff and students to other parts of the site are developed and included within the Change Management Plan.
- A clear governance structure and procedures are required in order to:
  - Establish a transparent authority framework to manage the project, enabling certainty and clarity of timing and project works for the relevant local and school community.
  - Provide a consistent and robust approach to the planning and delivery of Darlington Public School, ensuring a clear structure of reporting, decision-making and endorsement of key Darlington Public School documents and strategies.
  - Maintain clear lines of communication between Department of Education, Schools Infrastructure,
     Darlington Public School and other relevant stakeholders.

Summary	
Overall impact	Overall improved access to education opportunities will create a high positive impact on staff, students, families in Darlington and the inner city of Sydney. The expansion of the school, if well mitigated through programming and staffing, will ensure positive and diverse learning development of students.
	Negative social impacts associated with access to and use of infrastructure services and facilities are moderate during construction, but low during operation:
	Construction: C2 (possible minor)
	Operation: D1 (unlikely minimal)
Duration	Short term construction impacts with longer term educational and community benefit associated with increased access to education opportunities.
Likelihood of impact	Most likely to positively impact students, staff and community members.
Spatial extent	Access to quality educational opportunities will benefit the students and families located within the school's catchment, as per Schools Infrastructure NSW's demand analysis.
Sensitivity/importance	Moderate sensitivity to impacts, as improved access to educational opportunities is likely to impact on primary school aged children – a relatively vulnerable group who may be more sensitive to changes to routine.

Severity/scale	Moderate change associated with increased access to educational opportunities at the site as the site currently functions as a school and the proposal seeks to expand the existing education functions at the site.
Ability to adapt	Once school practices and educational programs are revised and consider the educational benefits associated with the new spaces, there is a high ability for students to adapt to new facilities.

#### Way of life

The proposed development is anticipated to have some direct impacts on the day to day functioning of local residents within the study area, as well as the students, families and staff of the school. The construction has been planned in two stages to allow the staff and students to remain on site, and students will be decanted to temporary buildings on site to ensure limited disruption to learning.

#### **Potential impacts**

#### **During construction**

- Minor, short term impacts to way of life for students, families and staff associated with disruption to the use of the site during the construction period, including:
  - Minor disruption to routines, including school pick up and drop off, changes to classroom locations, disruption to learning environments associated with construction noise. This will be minimised through active contractor management by NSW Schools Infrastructure.
  - Minor disruption associated with decanting activities within the site, as construction is likely to impact
    access to some parts of the school due to the establishment of hoarding. However, there will be minimal
    impacts on the active side.
- Potential negative social impacts to surroundings associated with increased traffic in the local area during the
  construction phase, including increased noise and vibration, including associated with heavy vehicle
  movements, pressure on resident and visitor parking (resulting in potential reduced accessibility of facilities
  and infrastructure in the area) and potential increased risks to pedestrian safety.
- Potential negative social impacts to surroundings associated with increased noise in the local area due to
  construction activity, including noise impacts associated with truck movements and construction equipment.
  These impacts are anticipated to be minor with the inclusion of appropriate management and mitigation
  measures.
- It is noted that construction is to be managed through compliance with a Construction Management Plan, with a communication plan to be developed to ensure all neighbours and relevant parties are informed about the development. A construction team member is to be included in the liaison team, with any construction complaints tracked and responded to through a register. A staging plan has also been developed to manage the impact of decanting on the operation of the school.

# **During operation**

- Positive social impacts associated with changes to way of life for families and potential future students living
  within the catchment area of the expanded Darlington Public School. There is currently limited access to
  government primary school places within this area, and expansion of the school at this site is likely to reduce
  travel times and improve convenience for residents of the Sydney CBD who would otherwise need to attend
  school outside of their local neighbourhoods.
- Positive social impacts to way of life associated with potential improvements to learning outcomes associated with the provision of new facilities and equipment as well as adaptable spaces to deliver high quality learning outcomes.
- Positive social impacts to way of life associated with increased employment opportunities in the local area for teaching and non-teaching staff associated with the expanded operation of the school.

#### Responses / mitigation measures

## **Potential impacts**

- It will be important to ensure that members of the school and local community are kept well informed of the construction phases and result of the redeveloped Darlington Public School, in relation to the success and benefits to the school and local neighbourhood.
- The implementation of the proposed construction management plan will be important to ensure that impacts
  to local residents' way of life as well as the school community (students, families and staff) are addressed and
  managed effectively.
- It is important that this construction management program is clear about the stages of construction, to allow continued and safe operation of the school while construction takes place and minimise the impacts of decanting on the school community.

Summary	
Overall Social Risk Rating and social benefit	The social risk rating is low – moderate with the overall rating of risk considered to be:  Construction: B1 (likely minimal)  Operation: E1 (rare minimal)
Likelihood level	There may be rare or unlikely minimal impacts to residents in the area in relation to their way of life. For students, families of students and staff the construction may impact their way of life at the school quite moderately. However, once the school is fully operational post construction, the way of life for students, staff and families is likely to greatly improve due to access to improved facilities.
Consequence level	The consequence of change to way of life as a result of construction is minor.
Duration	The impacts identified are likely to be temporary: occurring only during the construction phase.
Extent	The impact is likely to be experienced differently by individuals and groups. Students may be affected the most by the proposal, as their school routine may be interrupted. Families of these students are likely to be disrupted as well, if school drop off routines are changed, and students are required to adjust to changes throughout their schooling. Staff may be impacted through relocation of classrooms and education facilities.  Local residents, workers and visitors within the immediate catchment may be impacted, likely through traffic and construction impacts. These impacts will likely disrupt daily routines, amenity and access of surrounding residents.
Severity/ sensitivity	The impacts on the key stakeholders is not considered to be extreme or significant. Moderate impacts will be felt by these stakeholders during construction, and its likely younger students will experience this disruption to a greater degree as their way of life, and education routine is disrupted.
Potential to mitigate/ enhance	The potential to mitigate impacts is high, as construction management and effective engagement can be utilised to address and manage any concerns that stakeholders may have. Ongoing contact and engagement will be crucial to ensure stakeholders are informed about all changes that may impact them throughout the project.  Further to this, the proposed Construction Management Plan will be crucial to ensure that any foreseeable construction impacts are mitigated prior to them arising. It is noted that construction workers are to be encouraged to use public transport to the site to minimise disruption to the surrounding neighbourhood in relation to traffic. As such it is recommended that a green travel plan be put in place for construction workers to support active travel to and from the site.

#### Community, including its composition, cohesion, character, how it functions and sense of place

The proposed development is anticipated to have limited social impacts in terms of community composition, cohesion, character and sense of place in the local community. Darlington Public School has operated at this site since 1975, and is an established presence in the area.

## **Potential impacts**

#### **During construction**

- Potential changes to sense of place in the primary study area during the construction phase associated with increased construction workforce, resulting in unfamiliar visitors to the area. The relationship of the construction workers with the school may result in a temporary impact to sense of place for students and families.
- Potential changes to how the community functions in the surrounding area during the construction phase
  associated with changes to wayfinding, pedestrian and vehicular access within the local area due to the
  erection of hoarding, and other construction activity associated with the site, which may affect access to other
  social infrastructure in the area.
- Potential impacts to perceptions of safety associated with the volume of construction workers in the local area.

#### **Operational impacts**

- The redevelopment of the school site will result in an increased number of students and staff accessing the site, as the capacity of the school will almost double from 230 to 437 students. However, despite the increase in enrolment capacity it is not expected the composition or character of the school community or that of the local community area will significantly change as a result of the development.
- It is noted that the site is currently occupied by a functioning education precinct, and therefore changes to sense of place associated with the operational phase of the development are likely to be minimal, and may be positively enhanced, as the site is located adjacent to a number of other recently developed education facilities at University of Sydney.

## Responses / mitigation measures

- It is recommended that changes to the site are managed through continued historical documentation of the construction phase. Sense of place can be explored and celebrated further, with a visual story that identifies the transition of the site.
- To effectively integrate the changes on site, whilst allowing for individual identity to be maintained, ongoing
  engagement with stakeholders is encouraged to identify opportunities to strengthen links between the
  schooling community and the surrounding neighbourhood during construction and operation.
- It is recommended that the Darlington Public School Strategic Plan considers the links that can be created between the school community and local neighbourhood to identify how the new facilities and spaces on the site can be shared with the broader community.

Summary	
Overall Social Risk Rating and social benefit	There is overall positive social benefit to the local and broader community, with some construction impact may be experienced.  The social risk rating is considered low with the overall rating of risk is:  Construction: C1 (possible minimal)  Operation: E1 (rare minimal)
Likelihood	Very likely positive benefit. Possible impact during construction.  It is likely that during operation, there would be positive impacts on the community of the school and the local neighbourhood. While some impacts may be felt during construction, the improvement to the school and facilities will have a likely positive impact in the long term.
Consequence	The consequence will likely be minimal for both construction and operation.
Duration	Construction impacts are short term, operational benefits are longer term.

Potential impacts	
Severity/ sensitivity	Impacts are likely to be experienced differently by different groups and individuals. The greatest severity of impact is likely to be experienced during construction.
Extent	The impact during construction is likely to be experienced by the Darlington Public School community, including students and staff. Some potential impact to the local neighbours in the immediate vicinity.
Potential to mitigate/ enhance	There is a high potential to enhance the positive social impacts of the proposed development through taking account of social issues raised above in its delivery and ongoing operational management.

#### Culture: shared beliefs, customs, values and stories, and connections to land, places, buildings

The school has had a long connection to the site and local community and the location of the site forms part of the social history of the school and its community, with the provision of facilities that expand opportunities for students.

The school also has a strong connection to the Aboriginal or Torres Strait Islander community in the area. In 2018, 25% of students and 30% of staff were Aboriginal or Torres Strait Islander, and the school is located within walking distance of The Block, a cultural and historical focal point for the Aboriginal or Torres Strait Islander community in the local area and across NSW.

According to the Aboriginal Cultural Heritage Assessment Report (ACHAR) completed by GML (2020), the school is renowned for its connection with the local Aboriginal community, and creates programs to support Aboriginal or Torres Strait Islander students, and there are many elements of the existing school design which celebrate connections to Aboriginal narratives, including plantings and artwork.

The project team has undertaken significant consultation with Aboriginal or Torres Strait Islander stakeholders close to the site, and incorporating Aboriginal or Torres Strait culture and narratives is a key design objective.

## **Potential impacts**

The proposed development may have the following potential social impacts with relation to culture, including shared beliefs, customs, values and stories, and connections to land, places, and buildings (including Aboriginal culture and connection to country):

- Adjustment to the community's connection to place and heritage associated with the history of the site.
- The project has the potential to impact the community's connection to place. The site's ongoing heritage is important to the school community's sense of ownership over the site.' Changes to this site via the redevelopment may disrupt the community's connection to the site but only temporarily.
- There are potential positive social impacts associated with improved visibility and celebration of Aboriginal or Torres Strait culture and narratives within the design of the school. The existing school environment included strong Aboriginal or Torres Strait Islander cultural heritage values, and the ACHAR completed by GML (2020) recommend that these are embedded in the design of the school.

#### Responses / mitigation measures

- The improvement of the educational facilities will provide greater connection to the site, despite the short-term impacts during construction.
- Changes to sense of place associated with the proposed development could be mitigated via documentation of the history of the precinct.
- Opportunities to celebrate the area's connection to surrounding Aboriginal communities will be explored through public art and other opportunities identified in collaboration with relevant stakeholders.
- Implement the recommendations of the ACHAR developed during the planning process. The ACHAR recommends:
  - Darlington Public School's existing extensive art collection to be managed and recognised in the new school,
  - Landscape design to include native plants, linked with the environments of the class totems,
  - Emphasis connections between nature, Aboriginal heritage and the natural world in all elements of the design, e.g. a bush tucker garden, spaces for cross-cultural learning,

Design should be welcoming to the Aboriginal or Torres Strait Islander community, and requirements for cultural spaces (both internally and externally need to be considered and allowed to evolve as the new school grows.

#### Summary

## Overall Social Risk Rating and social benefit

It is considered the overall social risk rating of the proposal is negative/low with the overall rating of risk is:

Potential impacts	
	<ul><li>Construction: D2 (unlikely minor)</li><li>Operation: D1 (unlikely minimal)</li></ul>
Likelihood	The likelihood of social impact occurring is unlikely/rare.
Consequence	Minimal to minor during construction, minimal during operation.
Duration	Short term impacts with the loss of the use of the school grounds during construction phases may impact the shared connection to the site. Long term impact may arise if the school does not incorporate references to the site's cultural history.
Severity/ sensitivity	As the site has a large Aboriginal and Torres Strait Islander community, and is located close to Redfern, the community is sensitive to impacts to culture at the site.
Extent	Impacts are most likely to be experienced by users of the school community.
Potential to mitigate/ enhance	There is potential to mitigate the negative impacts and enhance the positive benefits of the proposed development by ensuring measures are employed to maintain cultural connection, values and stories to the site, place and building.

#### Health and wellbeing

Adequate school infrastructure is an integral component for the learning and development of school children, and they are a vital part of any healthy and thriving community. Best practice school development will optimise health, safe and secure spaces, while creating a welcoming environment for all.

## **Potential impacts**

#### **During construction**

- Potential minor impacts on the health and wellbeing of students and staff, where there may be added
  pressures on the access to education spaces, as well as potential impacts to wellbeing associated with the
  temporary disruption to learning environments for primary school students.
- Potential impacts to accessibility of outdoor space for students during construction, who require access to outdoor space for physical activity and learning and development.

#### **During operation**

 The proposed redevelopment and expansion will have long term benefits in that it will upgrade ageing buildings and provide improved teaching and learning spaces, and outdoor space.

## Responses / mitigation measures

- Explore opportunities for students to utilise outdoor spaces owned by University of Sydney or City of Sydney, subject to discussion with relevant stakeholders.
- The creation of a key point of contact within the school for the distribution of information will provide any families or stakeholders within the school the opportunity for any questions to be answered.

Summary	
Overall Social Risk Rating and social benefit	The overall social risk rating is considered low, with social benefit considered to be high in the contribution to improvements in health and wellbeing of the local school community. The social risk rating is considered low with the overall rating of risk is:  • Construction: D1 (unlikely minimal)  • Operation: E1 (rare minimal)
Likelihood	The likelihood level of social impact occurring is unlikely during construction and rare during operation.
Consequence	Minimal during construction and operation.
Duration	Limited impact during construction, however, care should be given to ensure that construction impacts do not deteriorate the health and wellbeing of those in the immediate vicinity of the site. The social benefits are realised long term, with improved facilities for all and flow on effects to health and wellbeing for the school community.
Severity/ sensitivity	Not considered to be of significant consequence or severity
Extent	Impacts are mostly likely to be experienced from existing stakeholders, however, the redevelopment may have long term flow on effects with the improved facilities at the school. The proposal is likely to have significant positive contributions in the long term.
Potential to mitigate/ enhance	Ability to enhance positive benefit is high, through an effective engagement and participation strategy that realises the needs of existing stakeholders, particularly staff and students in relation to their use of existing outdoor areas and current programs.

#### Surroundings - amenity

The operation of the expanded school is likely to result in impacts to the surroundings and amenity of the local area, primarily related to noise and traffic impacts, if not well managed.

Changes to amenity may relate to environmental factors such as noise, vibration and dust, community value, sense of place or cultural identity. Issues relating to noise and vibration have been assessed within the EIS and in the Noise and Vibration Assessment submitted with the development application.

#### **Potential impacts**

# **During construction**

- During the construction period, the duration of noise and vibration impact is expected to be short term and the impacts will be felt mostly by students, staff and nearby properties. These construction impacts have the potential to disrupt learning outcomes on site if not managed well.
- Potential negative social impacts to surroundings associated with increased traffic in the local area during the
  construction phase, including increased noise and vibration, including associated with heavy vehicle
  movements, pressure on resident and visitor parking (resulting in potential reduced accessibility of facilities
  and infrastructure in the area) and potential increased risks to pedestrian safety.

#### **During operation**

- Potential minor impacts on local amenity due to the increase in traffic and vehicle movements associated with
  the operation phase of the school if not well managed. There will be up to 437 students and their families, as
  well as staff, accessing the site during peak pick up and drop off times and throughout the day. Some students
  may access the site by car, which would result in:
  - Pressure on street parking in the area surrounding the school;
  - Increased congestion around the school and in local streets,
  - Potential risks to pedestrian safety, including safety of children being dropped off/picked up from school.

However, it is noted that a low percentage of parents drive their students to school, and there is an emphasis on green travel and on-site bike parking. Therefore, the impact is likely to be minor.

- Potential minor social impacts on local amenity due to increase in noise generated by the school site, associated with increased numbers of enrolments. An increased number of students at the site is likely to result in increased noise during key periods (i.e. before school, recess, lunch, sports activities). However, the school design includes noise attenuation elements that would help to minimise the impact of increase noise at this site.
- Potential positive social impacts to the surroundings of the local area associated with renewal of the site, including landscaping works throughout the site.
- As a result of the expansion and redevelopment of the existing school facilities, there will be significant improvements to the internal amenity of the campus, with teaching and learning facilities significantly improved. These are considered to result in an almost certain positive impact to users of the site.

## Responses / mitigation measures

- Mitigation measures set out in the Construction Management Plan will be implemented to reduce the impacts associated with noise and vibration (identified in the Environmental Noise and Vibration Assessment), visual amenity, and air quality impacts during the construction phase.
- Develop a Plan of Management for the school that identifies:
  - Strategies to coordinate increased traffic associated with school operations to minimise risks to pedestrians and inconvenience for existing residents, and
  - Methods for local residents to provide feedback to the school regarding excessive noise. However, school
    noise is likely to peak during the day and will therefore affect a limited number of local residents.
- Identify increased opportunities to encourage active transport for students / staff e.g. safe walk to school routes, bicycle parking within the school, bicycle training track included in landscape design. This is intended

# **Potential impacts**

to reduce the pressure on street parking and reduce school-related traffic on local roads. It is encouraged the City of Sydney implement more cycleways throughout the city, so the site is safely linked to established and safe cycling routes.

• Undertake and implement recommendations from relevant traffic studies undertaken as part of the project planning and development process.

Summary: Surroundings	
Overall Social Risk Rating and social benefit	Low Social Risk Rating, however positive social benefit anticipated in the redevelopment and expansion of existing facilities, having a flow on effect of improving overall amenity for the local area with increased activation in the public domain and an overall positive amenity outcome.  The social risk rating is considered low with the overall rating of risk is:  Construction: C2 (possible minor)  Operation: E1 (rare minimal)
Likelihood	The impacts are likely to be most prevalent during the construction of the school. However, improved amenity and surroundings is very likely following the completion of the construction.
Duration	The most impacts are likely to be experienced during the short term, during construction.
Consequence	The impact on the amenity is likely to be moderate during construction. It is noted that access to buildings and facilities during construction may be reduced.
Severity/ sensitivity	The consequences are likely to be moderate during construction but will be reduced during operation as the facilities and school grounds improve significantly.
Extent	Impacts are predicted to be felt by students, staff, visitors and some nearby residents during the construction phase.
Potential to mitigate/ enhance	High potential to mitigate any negative amenity impacts and enhance positive contributions, through Construction Management Plans and the development of a complaints register that records any issues and establishes whether any action needs to take place.

# 7.0 Concluding comments

This Social Impact Assessment (SIA) has been prepared to support this State Significant Development Application. The assessment has considered a range of social impacts arising from the SSDA, including impacts associated with access to education opportunities, access to social infrastructure, social impacts of construction, local amenity impacts and safety impacts.

As noted above, this SIA is based on a desktop review, drawing on the outcomes of community consultation that has been undertaken to date, as has been specified by Schools Infrastructure NSW, on the basis that further stakeholder and community engagement is planned to follow at subsequent stages of the planning process.

The SIA has demonstrated that the proposed redevelopment and expansion of Darlington Public School, within City of Sydney LGA, will bring a mix of positive and negative impacts – the latter primarily temporary, associated with the construction process.

There are many significant positive benefits arising from the proposal, more broadly there may be additional opportunities to improve connections and increase access to additional education opportunities amongst the Newtown Primary Cluster.

The proposed development is likely to generate limited negative social impacts, mostly associated with the construction phase, and with increased noise and traffic congestion associated with the operation of the school, due to the increase in the number of children enrolled at the school. However, it is considered that the negative impacts of the proposed development can generally be well mitigated through implementation of a Construction Management Plan and appropriate Plan of Management for the school, including management measures for construction vehicles and local traffic during construction.

On balance, the scheme will generate significant long term social benefits for the local area and the broader City of Sydney LGA.

# Appendix A. Strategic policy review

#### **Education strategy drivers**

The following section includes a review of state and local plans that articulated the desired outcomes for the site from an education perspective. The following documents have been reviewed:

- Strategic Plan 2018 2022 (NSW Department of Education, 2018)
- School Assets Strategic Plan (NSW Schools Infrastructure, 2017)
- Design Guide for Schools (Government Architect New South Wales, 2018)

#### **Strategic Plan 2018 - 2022**

#### **NSW Department of Education (2018)**

# Purpose & vision

The NSW Department of Education's (DoE) strategic plan aims to "prepare young people for rewarding lives as engaged citizens in a complex and dynamic society" (p.1)

#### **Key actions**

The strategic plan includes ten goals that set DoE's direction over the next five years and emphasises the importance of ensuring all children in NSW have access to a high quality education, are engaged in learning and can successfully transition to higher education, training and work. The following goal is relevant to the proposal:

 Goal 8: Our school infrastructure meets the needs of a growing population and enables future-focused learning and teaching (p.1)

## **School Assets Strategic Plan**

#### **NSW Schools Infrastructure (2017)**

# Purpose & vision

The NSW School Assets Strategic Plan is a high level document that aims to coordinate planning for and delivery of both new and expanded schools. The Plan encourages the joint and shared use of school facilities with local government and the private sector to develop innovative ways to provide school infrastructure.

The priorities of the Plan include:

- Ensuring that our schools can flexibly accommodate increasing student numbers with school expansions and modular buildings.
- Involving the community in new approaches to planning. Instead of upgrading education one school at a time, we are collaborating with the community to determine how best to distribute students and deliver new and upgraded facilities within an area or region.
- Making it easier for school infrastructure projects to start by streamlining the approvals in a new educationbased State Environmental Planning Policy.
- Investigating how we can better harness innovative technologies and equip our education facilities for the digital age.

#### **Design Guide for Schools**

#### **Government Architect (2018)**

# Purpose & vision

The Design Guide is an integrated design policy for the built environment of New South Wales. It establishes the value of good design and identifies key concepts, good process, and objectives for good design outcomes.

Aims of the Design Guide:

- . To promote and champion good design processes and outcomes for schools across NSW;
- To deliver schools that respond positively to their physical, social and environmental context; and
- To support the delivery of excellent learning environments.

#### **Key actions**

**Education SEPP Design Quality Principles** 

· Whole of life, flexible and adaptive

## **Design Guide for Schools**

- Allow for future adaptation to accommodate demographic changes, new teaching and learning approaches and the integration of new technologies;
- Take a whole of life cycle approach when considering cost and consider wider public benefits over time;
- Provide capacity for multiple uses, flexibility and change of use over time;
- Understand the potential impacts of future local projected growth; and
- Design learning spaces to cater for a range of learning styles and group sizes.

#### 2018-2020 School Plan

#### **Darlington Public School (2018)**

# Purpose & vision

The school plan focuses on three key areas for improvements which have been determined in consultation with the community. The plan demonstrates the school's alignment and commitment to excellence as part of public education in NSW to ensure the ongoing growth and development of Darlington Public School. School vision statement: *Educate on purpose*.

The school's ethos is: "all students receive strong educational foundations on which independent, critical thinking, lifelong learners are developed. Our goal is that all Darlington Public school students are able to use their educational opportunities to make a positive difference in their own lives and in the wider community." Three key directions guide the plan's implementation:

- Strategic Direction 1: Active, informed and connected citizens.
- Strategic Direction 2: Quality teaching and learning.
- Strategic Direction 3: Collaboration, innovation and leadership within and beyond the Newtown Schools Network.

#### Social strategy and social infrastructure drivers

The following section includes a review of state and local policies, strategies and documents that articulate the desired social outcomes for the site and locality, including social infrastructure directions. The following documents have been reviewed:

- Eastern City District Plan (Greater Sydney Commission 2018)
- Sustainable Sydney 2030 Community Strategic Plan 2017-2021 (City of Sydney, 2017)
- Draft Local Strategic Planning Statement (City of Sydney, 2019)

#### **Eastern City District Plan**

#### **Greater Sydney Commission (2018)**

# Purpose & vision

The Eastern City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision FOR Greater Sydney. The District plan informs local strategic planning statements and local environmental plans, the assessment of planning proposals as well as community strategic plans and policies.

The Plan is structured by four priorities which were first established within the Greater Sydney Region Plan. The four priorities are:

- Infrastructure and collaboration;
- · Liveability;
- · Productivity; and
- Sustainability.

The plan has identified the need to plan for early education and child care facilities and the need for innovative approaches to the use of land and floor space, including the co-location with compatible uses such as primary schools and office buildings, close to transport facilities. The NSW Department of Education estimated over 40,000 students will need to be accommodated in government and non-government schools in the District by 2036.

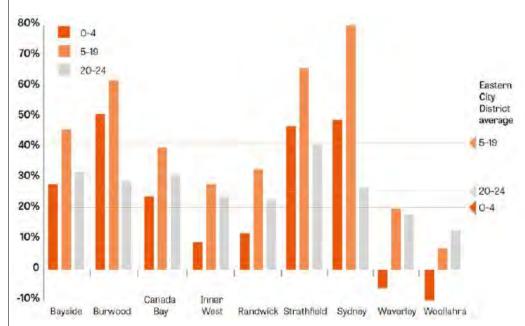


Figure 16 Eastern City District projected population change 2016-2036 by local government area: 0-4, 5-19 and 20-24 years

Source: NSW Department of Planning and Environment, 2016 New South Wales State and Local Government Area Household Projections and Implied Dwelling Requirements 2016 to 2036, NSW Government, Sydney

The Plan suggests an 80% increase in children aged 5-19 between 2016 and 2036, approximately half of which will be attending primary schools within the SCG.

#### **Eastern City District Plan**

The NSW Department of Education's *School Assets Strategic Plan Summary 2017* encourages the joint and shared use of school facilities with local government and the private sector to develop innovative ways to provide school infrastructure.

School Infrastructure NSW look to undertake school community planning to develop schools as community hubs. Educational and community facilities have been identified as social connectors, playing an important role in fostering healthy, culturally rich and resilient communities.

#### **Key actions**

Actions outlined within the plan of which directly relate to the proposal are outlined below:

- · Deliver social infrastructure that reflects the needs of the community now and in the future; and
- Optimise the use of available public land for social infrastructure.

#### Sustainable Sydney 2030 - Community Strategic Plan

#### City of Sydney (2017)

# Purpose & vision

The purpose of the Community Strategic Plan is to identify the community's main priorities and aspirations for the future and to identify how to achieve such goals. The overarching vision is for the city to be *Green, Global and Connected*.

The City identified the need to sustain adequate levels of services and social infrastructure during rapid population growth and increasing demand, including libraries, community centres, recreation facilities, parks and playgrounds. Additionally, there is a need for a more sophisticated approach to provide adaptable social infrastructure and maximising uses of existing social infrastructure so all can benefit. Shared private and public spaces and social infrastructure, such as parks, pools, libraries and community facilities, have been identified as essential to community cohesion and development.

#### **Key actions**

Key actions outlined within the Plan which relate to the proposal include:

- Advocate to other levels of government and the private sector to encourage their investment in essential social infrastructure, services, businesses and local jobs to meet the needs of the community; and
- Ensure there is equitable access to community facilities and places, parks and recreational facilities to support wellbeing in daily life.

#### **Draft Local Strategic Planning Statement**

# City of Sydney (2019)

# Purpose & vision

The draft Local Strategic Planning Statement sets out the 20-year vision for land use planning in the City of Sydney LGA. The statement reinforces the links between the NSW Government's strategic plans and the City's community strategic plan, Sustainable Sydney 2030, and the planning controls that guide development.

The statement will guide future changes to the planning controls in the City's local environmental plan (LEP) and development control plans (DCP). NSW government agencies will also use Planning Statements to inform their infrastructure planning and service delivery, such as schools, hospitals and transport, to support local communities.

#### **Key actions**

City of Sydney are committed to creating walkable neighbourhoods which are convenient, bike-friendly and promote healthy populations. Planning for the location of jobs, housing and local services – including fresh food, childcare, primary school and cultural infrastructure has been identified as important in achieving walkable neighbourhoods.

Applicable actions are listed below:

Action I2.1 - Ensure infrastructure including state infrastructure such as transit, health and education, is delivered in a timely manner, including through working with NSW Government using the Growth Infrastructure Compact model to identify the funding, staging and delivery responsibilities.

# Appendix B. Demographic profile

	Primary Study Area (SA2)	Secondary Study Area (City of Sydney LGA)	Greater Sydney
Demographics (2016)			
Population	27,412	208,382	4,823,987
Population Change (2006 to 2016)	+6,160	+51,802	+704,801
Males	13,815	107,852	2,376,766
Females	13,597	100,530	2,447,221
Males to Females	1.0 %	1.1 %	1.0 %
% of population aged 0 to 4	2.5 %	3.3 %	6.4 %
% of population aged 5 to 9	1.1 %	1.9 %	6.4 %
% of population aged 10 to 14	0.9 %	1.5 %	5.8 %
% of population aged 15 to 19	3.8 %	4.0 %	6.0 %
% of population aged 20 to 24	17.5 %	13.7 %	7.1 %
% of population aged 25 to 29	21.9 %	17.9 %	7.9 %
% of population aged 30 to 34	17.0 %	15.1 %	8.1 %
% of population aged 35 to 39	9.9 %	9.6 %	7.4 %
% of population aged 40 to 44	5.3 %	6.7 %	7.1 %
% of population aged 45 to 49	4.0 %	5.5 %	6.7 %
% of population aged 50 to 54	3.8 %	4.8 %	6.3 %
% of population aged 55 to 59	3.2 %	4.2 %	5.8 %
% of population aged 60 to 64	2.9 %	3.5 %	5.0 %
% of population aged 65 to 69	2.4 %	3.0 %	4.4 %
% of population aged 70 to 74	1.6 %	2.0 %	3.3 %
% of population aged 75 to 79	1.0 %	1.4 %	2.4 %
% of population aged 80 to 84	0.6 %	0.9 %	1.8 %
% of population aged 85 to 89	0.4 %	0.6 %	1.2 %
% of population aged 90 to 94	0.2 %	0.2 %	0.6 %
% of population aged 95 to 99	0.0 %	0.1 %	0.1 %
100 and over	0.0 %	0.0 %	0.0 %
Median age	30	32	36
Cultural and Language Diversity (2016)			
% of residents born in Australia	17.2 %	39.40 %	57.06 %
Most common ancestry	Chinese (24.4 %)	English (18.1 %)	English (19.4 %)
Second most common ancestry	Thai (11.8 %)	Chinese (13.4 %)	Australian (18.1 %)
Third most common ancestry	English (9.3 %)	Australian (11.9 %)	Chinese (7.8 %)
Fourth most common ancestry	Australian (5.2 %)	Irish (8.0 %)	Irish (6.6 %)
Fifth most common ancestry	Indonesian (4.7 %)	Scottish (5.3 %)	Scottish (4.9 %)
Most common language spoken	English (25.1%)	English (51.5%)	English (58.4%)
Second most common language spoken	Mandarin (15.1%)	Mandarin (9.9%)	Mandarin (4.7%)
Third most common language spoken	Thai (13.7%)	Thai (3.2%)	Arabic (4.0%)
Fourth most common language spoken	Indonesian (8.5%)	Cantonese (2.9%)	Cantonese (2.9%)
Fifth most common language spoken	Korean (4.5%)	Indonesian (2.2%)	Vietnamese (2.1%)
% of residents who speak English well or very well (who don't speak English at home)	46.6 %	30.0 %	29.3 %

Ethos Urban | 2200026 49

Stability of Residence and Overseas Arrivals (2016)

% of population living at the same address as one year ago	53.9 %	57.8 %	76.6 %
6 of population living at the same address as ive years ago	21.3 %	27.5 %	53.2 %
% of residents overseas one year ago	12.8 %	8.3 %	2.5 %
% of residents overseas five years ago	39.1 %	24.9 %	8.9 %
louseholds (2016)			
% Households in Couple with Children	10.1 %	10.9 %	37.4 %
6 Households in Couple with No Children	32.4 %	29.7 %	23.8 %
% Households in One Parents	4.0 %	4.7 %	11.1 %
% Households in Other Family	3.9 %	1.9 %	1.4 %
% Households in Lone Person	29.7 %	37.3 %	21.6 %
% Households as Group Households	19.9 %	15.5 %	4.7 %
Owellings (2016)			
Number of occupied dwellings	9,110	85,426	1,623,874
% as detached houses	0.2 %	2.0 %	56.9 %
% as semidetached houses	1.2 %	19.7 %	14.0 %
% as flats, units or apartments	97.8 %	77.1 %	28.1 %
% of dwellings owned outright	16.5 %	14.0 %	29.1 %
% of dwellings being purchased	13.8 %	19.9 %	33.2 %
% of dwellings being rented	64.5 %	62.2 %	34.1 %
Social Housing (%)	0.6 %	7.6 %	4.2 %
Average house loan repayment (\$/month)	\$1,875	\$2,105	\$2,009
Average household rent (\$/week)	\$702	\$557	\$462
Average household income (\$/week)	\$2,191	\$2,205	\$2,075
Average no. of persons per household	2.5	2.1	2.78
Education (2016)			
% of residents with a bachelor degree or above	39.8 %	44.1 %	28.3 %
% of residents with diploma or advanced liploma	10.9 %	8.4 %	9.3 %
% of residents with certificate III & IV	3.6 %	5.6 %	12.1 %
% of residents attending pre-school	0.9 %	6.6 %	5.5 %
% of residents attending primary school	2.4 %	29.1 %	25.6 %
% of residents attending secondary	3.1 %	21.9 %	19.9 %
% of residents attending technical or further educational institution	13.3 %	6.5 %	6.1 %
% of residents attending university or other ertiary institution	26.1 %	5.8 %	19.2 %
% of residents attending other type	21.4 %	1.5 %	3.3 %
Employment (2016)			
Employed	15,126	117,260	2,272,727
6 employment full time	52.7 %	69.5 %	65.1 %
% employed part time	42.6 %	26.2 %	30.0 %
Jnemployment rate	6.4 %	6.0 %	6.0 %
abour force participation rate	61.8 %	64.2 %	61.6 %
Employment-to-population	57.8 %	60.3 %	57.9 %
% employed in white collar occupations	72.8 %	83.6 %	73.2 %
% employed in blue collar occupations	24.5 %	14.5 %	24.8 %

Industry of Employment (2016)			
% of agriculture, forestry and fishing workers	0.2 %	0.2 %	0.4 %
% of mining workers	0.3 %	0.2 %	0.2 %
% of manufacturing workers	2.6 %	2.4 %	5.8 %
% of electricity, gas, water and waste services workers	0.3 %	0.4 %	0.8 %
% of construction workers	2.6 %	3.7 %	8.2 %
% of wholesale trade workers	2.0 %	2.4 %	3.6 %
% of retail trade workers	7.4 %	7.2 %	9.3 %
% of accommodation and food services workers	27.0 %	12.1 %	6.7 %
% of transport, postal and warehousing workers	2.1 %	3.0 %	5.0 %
% of information, media, and telecommunications workers	2.1 %	5.0 %	2.8 %
% of financial and insurance services workers	9.3 %	8.8 %	6.4 %
% of rental, hiring, and real estate services workers	2.3 %	2.1 %	1.9 %
% of professional, scientific, and technical services workers	12.7 %	16.6 %	9.8 %
% of administrative and support services workers	5.9 %	4.3 %	3.6 %
% of public administration and safety workers	2.8 %	5.8 %	5.5 %
% of education and training workers	3.4 %	7.4 %	8.0 %
% of health care and social assistance workers	6.9 %	8.2 %	11.6 %
% of arts and recreation services workers	1.6 %	2.9 %	1.7 %
% other services	2.1 %	2.8 %	3.6 %

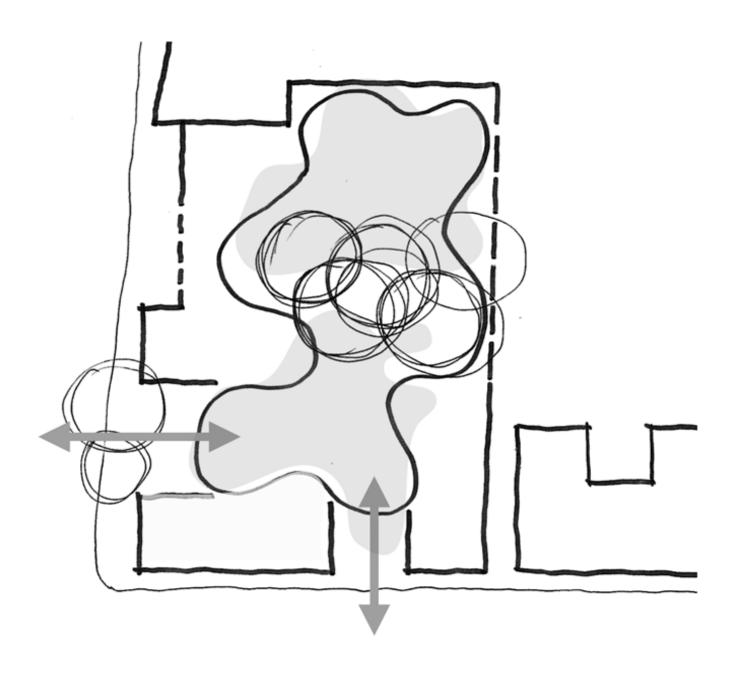
# **DARLINGTON PUBLIC SCHOOL REDEVELOPMENT**

# **Appendix P** — **Preliminary Site Investigation**

SSD-9914

**Prepared by Douglas Partners** 

For NSW Department of Education





Report on Preliminary Site Investigation - Contamination

Darlington Public School Upgrade 417 Abercrombie Street, Darlington, NSW

Prepared for Billard Leece Partnership Pty Ltd

Project 92277.00 April 2018





# **Document History**

#### Document details

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Document title	Report on Preli	minary Site Investigation	- Contamination	
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Report prepared for	Billard Leece P	artnership Pty Ltd		
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Status	Prepared by	Reviewed by	Date issued
Revision 0	Grant Russell	Christopher C Kline	16 April 2018

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Status	Electronic	Paper	Issued to
Revision 0	1	0	Billard Leece Partnership Pty Ltd - Mr Shane Wood

The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

	Signature	Date
Author	Ce (1.	16 April 2018
Reviewer	<b>750</b>	16 April 2018





# **Executive Summary**

Douglas Partners Pty Ltd (DP) was commissioned by Billard Leece Partnership Pty Ltd (BLP) to complete a Preliminary Site Investigation (PSI) of the Darlington Public School property located at 417 Abercrombie Street, Darlington, NSW (the site). DP understands that the site currently comprises an operational primary school and preschool. Redevelopment/upgrading works are proposed for the school complex. The site covers an approximate area of 0.72 ha and is located within the Local Government Area of the City of Sydney. A PSI is required as part of a master plan and concept design and to support future development applications being made with the City of Sydney.

The aim of the PSI is to provide preliminary contamination, salinity and acid sulphate soil information regarding the site's suitability for the proposed redevelopment/upgrading works.

The results of site walkover and desktop investigation identified the following AEC that had the potential for contamination of near surface soils and/or filling at the site:

- AEC1: Presence of former buildings and sheds (Hazardous building materials);
- AEC2: Presence of filling;
- AEC3: Presence of former and current sheds (potential chemical storage); and
- AEC4: Presence of a power pole.
- AEC5: Presence of a former road/laneway.

Targeted sampling was undertaken at 10 locations across the site within identified AEC in the vicinity of former/current site structures, areas of filling, the former road/laneway and a power pole onsite. The results of site inspection and soil sampling identified the following that will require remediation and/or risk assessment or further investigation for the site to be considered suitable for the proposed upgrading works and ongoing use as a primary/pre-school:

- TRH, PAH and lead impact was variously identified in shallow fill soils at two locations in the
  north western portion of the site and one location in the south eastern portion of the site. Fill at
  these locations requires remediation and/or risk assessment. Given the identification of slag and
  charcoal type material within fill at these locations contamination of the fill is potentially associated
  with historic sourcing of fill from an industrial site with blast furnace activities. Further
  investigation of fill soils across the site is also required to determine the presence or absence of
  additional contamination hotspots;
- TRH and zinc impact to shallow soils in the central eastern portion of the site requires further investigation; and
- Potential for ACM impact to shallow soils across the site. Whilst ACM was not identified in the PSI sampling, given the preliminary nature of the PSI; the demolition of numerous structures; and importation of filling, the presence of asbestos impacted soils at the site cannot be ruled out and requires further investigation.



With respect to site contamination the recommended further assessment should build on the information provided in this report with reference to National Environment Protection Council (NEPC, 1999) National Environment Protection Council (Assessment of Site Contamination) Measure 1999 (amended 2013) (NEPC, 2013). Further assessment should include intrusive investigations, sampling, analysis and assessment to determine land use suitability.

It is noted that a hazardous building materials assessment was also completed by DP at the time of the PSI to identify potential hazardous materials within the buildings so that protective measures can be implemented, if required, during redevelopment / upgrading works.



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# Report on Preliminary Site Investigation - Contamination Darlington Public School Upgrade 417 Abercrombie Street, Darlington, NSW

#### 1. Introduction

Douglas Partners Pty Ltd (DP) was commissioned by Billard Leece Partnership Pty Ltd (BLP) to complete a Preliminary Site Investigation (PSI) of the Darlington Public School property located at 417 Abercrombie Street, Darlington, NSW (the site) as shown on Drawing 1 (Appendix A). DP understands that the site currently comprises an operational primary school and preschool. Redevelopment/upgrade works are proposed for the school complex. The site covers an approximate area of 0.72 ha and is located within the Local Government Area of the City of Sydney. A PSI is required as part of a master plan and concept design and to support future development applications being made to the City of Sydney.

The aim of the PSI is to provide preliminary contamination, salinity and acid sulphate soil information regarding the site's suitability for the proposed redevelopment/upgrade works.

DP previously completed a Summary Geotechnical Investigation of the site in December 2009. The current PSI was completed concurrently with a Preliminary Geotechnical Investigation of the site.

# 2. Scope of Works

The PSI included completion of the following scope of works:

- Review of local topographic, soil, geological, salinity and acid sulphate soils mapping;
- Search of the NSW EPA Land Information records to confirm that there are no statutory notices or licences current on any parts of the site or nearby surrounds under the Contaminated Land Management Act 1997 and the Protection of the Environment Operations Act 1997;
- Search for groundwater bores on or adjacent to the site registered with the NSW Office of Water;
- Review of previous contamination reports for the site;
- Review of historical aerial photography for the site to identify Potential Areas of Environmental Concern (AEC);
- Review of Council Records;
- Undertaking a site visit and walkover to identify additional AEC;
- Preparation of a conceptual site model (CSM);
- Drilling of nine boreholes and targeted soil sampling at ten locations in the vicinity of identified AEC;
- Laboratory analysis of selected soil samples for contaminants of potential concern (COPC);



- Interpretation of laboratory results in accordance with current NSW EPA endorsed guidelines; and
- Preparation of this PSI report outlining the methodology and results of the investigation, and an
  assessment of the site's suitability for the proposed redevelopment/upgrade and ongoing use of
  the site as a primary/pre-school.

# 3. Site Description

#### 3.1 Site Identification

The site comprises the following land parcels as detailed in Table 1 below.

**Table 1: Study Area Identification** 

Lot / Deposited Plan	Current Land Use	Approx. Area (ha)		
Darlington Public School, 417 Abercrombie Street, Darlington NSW				
592 / 752049	Primary School	0.49		
100 / 623500	Primary School	0.23		
Total Ap	0.72			

#### 3.2 Site Description

The following site description is based on site inspection completed on 28 February 2018, field works completed on 17 March 2018 and review of Nearmap Imagery. Prominent site features are presented on Drawing 2 (Appendix A). Photographic Plates are presented in Appendix B.

The site is located within an area which consists of undulating topography comprising low lying and gently sloping hills with shallow soil cover. The site levels slope towards the southeast from between approximately RL 41, relative to Australian Height Datum (AHD), in the northwest portion of the site to approximately RL 33 in the southeast portion of the site.

The site is an irregular shaped property and is accessed via a driveway that leads from Golden Grove Street located to the west of the site and the School gate fronting Abercrombie Street to the south of the site. The site is comprised of two lots as described below.

#### Lot 592 DP 752049

The lot is roughly square shaped and comprises the majority of the school grounds and buildings. A large two storey rectangular building is located in the southwest corner of the lot which comprises several school offices and classrooms. The building is constructed of brick walls, concrete slab floors and sheet metal roofing. Several interior walls and ceilings of the building appeared to be constructed of fibre cement sheeting (FCS) suspected of containing asbestos. A courtyard is located to the immediate east of the building and is mostly concrete sealed with two small unsealed garden areas containing large trees and shrubs. Another brick building is located to the immediate east of the courtyard and is also constructed of brick walls, concrete slab floor and metal sheeting roofing. FCS interior walls and ceilings were also observed in portions of the building.



Another large rectangular shaped building is located across the central western portion of the lot and comprises the school hall and a number of classrooms. The building is constructed similarly to the other buildings onsite. An extension of the building is located to the immediate northwest. An area containing play equipment is located to the immediate east of the building. The play equipment area is sealed with a "soft-fall" safety surface material. A concrete path is located immediately adjacent east of the play area with an unsealed garden located further to the east.

Another S – shaped class room building is located across the central south eastern portion of the lot which is also constructed similarly to the other buildings onsite. The area to the immediate north of the S-shaped building is concrete sealed with unsealed gardens and a grassed area located further beyond in the north eastern portion of the lot.

#### Lot 100 DP 623500

The lot is roughly L – shaped and consists of a basketball court and playground area. The lot is elevated slightly above the remainder of the site (adjacent lot to the south) indicating the area has likely been historically filled. The majority of the area is sealed with asphalt and concrete. The far northern portion of the lot is elevated further above the remainder of the lot and is covered with a "soft-fall" safety surface material. Several large trees also exist within the northern portion of the site. An unsealed garden bed is located along the eastern boundary of the lot and contains several small shrubs.

# 3.3 Surrounding Landuse

The site is in a residential/educational precinct area with the landuse surrounding the property as follows:

North: A Sydney University building (residential and educational) with

Darlington Lane and residential properties beyond.

East: Sydney University student accommodation buildings (residential) with

Sydney University campus buildings beyond.

South: Abercrombie Street with residential properties beyond.

West: Golden Grove Street with residential properties beyond.

# 3.4 Regional Geology, Soils, Hydrogeology and Hydrology

Reference to the Sydney 1:100 000 Geological Series Sheet indicated that the site is underlain by Ashfield Shale (Rwa) of the Wianamatta Group of Triassic age. This formation typically comprises shale, carbonaceous claystone, laminite, fine to medium grained lithic sandstone and some minor coal bands.

Reference to 1:100 000 *Sydney* Geological Series Sheet 9030 (Edition 1), 1991 indicates that shallow soils at the site comprise Blacktown Soil Landscape (bt) which is characterised by topography of *'gently undulating rises on Wianamatta Group shales and Hawkesbury shale, with local relief to 30 m and slopes usually less than 5%'.* This is a residual landscape which the mapping indicates comprises up to two soil horizons that range from shallow to moderately deep red and brown podzolic soils on crests, upper slopes and well drained areas to yellow podzolic soils on lower slopes and in areas of poor drainage. These soils are typically of low fertility comprising moderately reactive high plasticity subsoils with poor drainage.



A search of the NSW Office of Water groundwater bore data was undertaken by DP on 1 March 2018 and identified one bore within 500m of the site and is detailed in Appendix C. Table 2 below provides a summary of information for the bore in question.

**Table 2: Summary of Groundwater Bore Search** 

Bore ID	Approx. Distance (m) / Direction from Site	Date of Installation	Bore Use	Total Depth (m)	Depth of Water Bearing Zones (m)
GW110247	Northwest/200 m	16/07/2009	Domestic Bore	210	22.0 to 23.0 74.0 to 76.0 188.0 to 188.5

Groundwater monitoring well GW110247 is located up hydraulic gradient of the site.

The nearest surface water receptor down-gradient of the site is Lake Northam located within Victoria Park approximately 850 m northeast of the site.

# 3.5 Acid Sulphate Soils

Review of NSW Government Office of Environment and Heritage Acid Sulphate Soils Risk mapping indicates that the site is classified as having 'no known occurrence of acid sulphate soil'.

#### 3.6 Sensitive Receptors and Environments

The nearest sensitive receptors and environments have been identified as follows:

- Current and future site occupants:
- Current and future site workers;
- The nearest residential properties located immediately adjacent to the site's northern and eastern boundaries; and nearby to the west beyond Golden Grove Street and to the south beyond Abercrombie Street;
- The primary environmental receptors down-gradient of the site is Lake Northam located approximately 850 m northeast of the site; and
- Groundwater beneath the site.

# 4. Review of Site History Information

A desktop review of site history information has been undertaken to identify AEC and related COPC which may arise from previous and current land uses. The desktop investigation was limited to the following:

- A review of previous available contamination investigations;
- A review of historical aerial photographs;



- NSW EPA data base searches;;
- Review of Council Records; and
- Listing of other potential site contamination issues based on DP experience with sites of a similar nature and scale.

Given that historical aerial photographs identified that the site and surrounds have been used for either residential or educational purposes since the 1950's a title search and SafeWork NSW Search for Hazardous Chemicals was not considered warranted.

The following sections detail the methodology of the desktop investigation.

# 4.1 Previous Contamination Investigations and Reports

# 4.1.1 DP (2009)

DP completed a Summary Geotechnical Investigation of the site in December 2009.

# 4.1.2 Parsons Brinkerhoff (2014) Asbestos in Grounds, Asbestos Management Plan

BLP provided DP a recent Asbestos Management Plan (AMP) produced for the site by Parsons Brinkerhoff (PB) in 2014. The AMP was an updated version of previous AMPs produced for the site in 2007 and 2013. In August 2007 FCS fragments containing asbestos were identified on the ground surfaces of the northern playground area at the site. In order to manage the risk of exposure to asbestos FCS fragments were removed from the ground surfaces in August 2007 and July 2013. In a previous inspection report it was proposed that the asbestos zone in the northern playground be encapsulated with an appropriate surface such as hard stand or raised mulch garden beds. The AMP outlines the plan for management of the identified asbestos impacted areas (zones).

The asbestos register in Section 3 of the AMP outlines the areas requiring management as:

- The northern playground area; and
- Northern and north eastern garden beds to school boundary walls.

The PB AMP recommended that the asbestos zone management should include regular inspections and maintenance. The PB AMP included a checklist (in Appendix A of the AMP) which recommended that the checklist be used whenever walkover inspections or maintenance is carried out. The AMP states that "the checklist is specific to the requirements of the grounds at the Darlington Public School and sets out the frequency of inspections required".

# 4.2 Historical Aerial Photography

Historical aerial photographs were reviewed to assist in identifying the history of the site and the surrounding area. Images from 1955, 1961, 1975, 1986 and 1991 were sourced from NSW Land and Property Information. Additionally, images from 2000, 2009 and 2014 were sourced from Google Earth and Nearmaps. All aerial photographs are provided in Drawings 3 to 10 respectively (Appendix A).



A summary of the review of historical aerial photography is detailed in the following table.

Table 3: Summary of Review of Historical Aerial Photographs

Year	Site / Surrounds	Description
	Site	Lot 592 – The majority of the lot appears to contain numerous residential semi-detached terrace dwellings and associated backyard sheds. A narrow laneway runs east – west direction through the central portion of the lot. A larger building structure is evident in the south eastern portion of the lot which may have been used for commercial/industrial purposes.  Lot 100 – The northern portion of the lot contains several residential semi-detached terraced dwellings and associated backyard sheds. A road runs across the southern portion of the lot.
1955	Surrounds	North – Darlington Lane is located to the immediate north of the site with a commercial / industrial building located adjacent to the immediate northwest of the site. Residential dwellings are located beyond further to the north.  East – Numerous semi-detached residential dwellings.
		South – Abercrombie Street with numerous semi-detached residential dwellings located beyond.  West – Golden Grove Street with larger commercial/industrial buildings located beyond.
	Site	The site appears similar to the previous historical aerial photograph.
1961	Surrounds	The majority of the surrounding areas appear similar to the previous aerial photograph.
1975	Site	Lot 592 - Several of the residential dwellings and sheds across the central, northern and western portions of the lot appear to have been demolished. A large rectangular building, that appears to be one of the current school buildings, has been constructed across the central western portion of the lot. The large commercial / industrial building previously in the south eastern portion of the lot appears to have been demolished and replaced with several smaller building structures. A large rectangular building has been constructed across the south western portion of the lot.  Lot 100 - Several of the residential dwellings and sheds across
		the northern portion of the lot appear to have been demolished.



Year	Site / Surrounds	Description
	Surrounds	Several of the residential dwellings to the east of the southern half of the site have been demolished and the land appears vacant.  The majority of the remainder of surrounding areas appear
		similar to the previous aerial photograph.
	Site	Lot 592 – Several buildings have been constructed in the south eastern portion of the lot. The north eastern portion of the lot has been completely cleared of structures and is now a grassed area.
		Lot 100 – All structures have been demolished and removed from the lot. The lot appears vacant and grass covered. The road previously running through the southern portion of the lot has also been removed and is replaced with grass.
1986	Surrounds	An asphalt sealed car park has been constructed to the north east of Lot 592 and large building constructed to the southeast of Lot 592.
		Several of the residential dwellings to the north east of Lot 100 have been demolished.
		Several of the commercial / industrial buildings to the west of the site have been demolished and redeveloped as a new residential complex.
		The majority of the remaining land surrounding the site appears similar to the previous aerial photograph.
	Site	The site appears similar to the previous historical aerial photograph.
1991	Surrounds	A number of residential dwellings to the northeast of the site have been demolished.  The majority of the remaining land surrounding the site appears similar to the previous aerial photograph.
2000	Site	The site appears similar to the previous historical aerial photograph.
2000	Surrounds	The majority of the land surrounding the site appears similar to the previous aerial photograph.
2009	Site	The majority of Lot 100 has been covered with an asphalt type material and transformed into a basketball court / playing area.  The remainder of the site appears similar to the previous historical aerial photograph.
	Surrounds	The majority of the land surrounding the site appears similar to the previous aerial photograph.



Year	Site / Surrounds	Description	
2018	Site	The site appears similar to the previous aerial photograph.	
	Surrounds	Several of the buildings to the east of the site have been refurbished or redeveloped	
		The majority of the remaining land surrounding the site appears similar to the previous aerial photograph.	

### 4.3 Regulatory (NSW EPA) Notices Search

A search of the NSW EPA website on 22 May 2017 indicated that:

- No Licences have been issued for the site under the Protection of the Environment Operations Act 1997:
- No Notices or Orders to investigate or remediate the site (or immediately adjacent sites)
  have been issued for the site under the Contaminated Land Management Act 1997; and
- The site (or immediately adjacent sites) is not recorded on the public list of NSW contaminated sites reported to the EPA.

A search of the POEO public register identified the following for nearby properties:

- A POEO licence issued to INTEC Ltd in 2001 and varied in 2004 for the property located at buildings on Maze Crescent, Darlington located approximately 350 m down gradient of the site. The licence was for "Hazardous, Industrial or Group A Waste generation or storage". The licence is no longer in force; and
- A POEO licence issued to John Holland in 2015 for "Land Based Extractive Activity". The
  property is located at the corner of Codrington and Abercrombie Streets Darlington located
  approximately 175 m down gradient of the site.

Given the distances and general down gradient location of the above properties it is considered unlikely that the properties present a significant contamination risk to the site.

Search results are presented in Appendix D.

# 4.4 Review of Council Records

A planning certificate issued under section 10.7 ((formerly section 149 (parts 2&5)) *Environmental Planning and Assessment Act 1979* (NSW) for the property was obtained from Council of City of Sydney. Review of the planning certificate identified the following for the property:

- The land does not include or comprises critical habitat or with a wilderness area;
- The land is not in a conservation area:
- The land is not an item of environmental heritage;
- The land is not proclaimed to be in a mine subsidence district;
- The land is not affected by a landslip policy;



- The land is not affected by bushfire provisions and has not been identified as bushfire prone land;
- The land is not affected by policies that restrict development due to tidal inundation;
- The land is not affected by policies that restrict development due to the likelihood of acid sulphate soils;
- Council's policy "Building in a Salinity Prone Environment" applies to the site;
- The land is affected by flood related development controls;
- The land is not biodiversity certified;
- The land is not listed on the loose fill asbestos register subject to Home Building Act 1989; and
- The land has not been identified as significantly contaminated or is not subject to a management order under the Contaminated Land management Act 1997.

An informal request was also made on 16 March 2018 to the City of Sydney under the *Government Information (Public Access) Act 2009* for information relating to site history, development applications and potential contamination at the property. An email reply provided by the City of Sydney on 21 March 2018 states that council representatives were unable to locate any information requested from their database.

Documents provided by Council are presented in Appendix E.

#### 4.5 Anecdotal Information

Discussion with the grounds keeper at the school and several school staff indicated fragments of ACM had previously been identified in an unsealed basement area beneath a school building in the central western portion of the site. It is unclear from the discussions whether the ACM fragments were removed. Access to the area was limited during site inspection and field works therefore the presence of ACM fragments beneath the building cannot be ruled out.

# 5. Preliminary Conceptual Site Model

#### 5.1 Potential Sources of Contamination (AEC)

#### **Hazardous Building Materials (AEC1)**

Historical aerial photographs and site inspection identified a number of residential dwellings and associated sheds previously located across the site which have since been demolished in the period between 1961 to 1984. Review of the AMP produced by PB has identified that fragments of asbestos containing materials were previously identified in the northern portion of the site which is now a sealed area subject to an AMP. Anecdotal information also suggests fragments of ACM have previously been identified beneath a building in the central western portion of the site.

There is therefore potential for contamination of shallow soils across the site to be impacted by hazardous building material related COPC including:

- Asbestos; and
- Lead.



# Areas of Filling (AEC2)

Review of aerial photographs and site inspection identified portions of the site, particularly the northern areas, have been historically filled.

There is therefore potential for soil impact at the site from fill of an unknown origin and building/demolition waste related COPC including:

- Total Recoverable Hydrocarbons (TRH);
- Benzene, toluene, ethylbenzene and xylenes (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Polychlorinated biphenyls (PCBs);
- Heavy metals (As, Cd, Cr, Cu, Pb, Hg, Ni and Zn);
- Organophosphate pesticides (OCPs);
- Organophosphate pesticides (OPPs); and
- Asbestos.

#### **Chemical and Fuel Storage (AEC3)**

Review of historical aerial photographs identified several sheds associated with the former residential dwellings onsite before they were demolished.

Many of the sheds may have been used for chemical and fuel storage therefore there is potential for contamination of shallow soils as the result of spillages and storage malpractice. COPC associated with chemical and fuel storage include:

- TRH:
- BTEX;
- PAHs;
- PCBs;
- Heavy metals;
- OCPs; and
- OPPs.

#### Power Pole (AEC4)

Site inspection identified one timber power pole located in the courtyard fronting Abercrombie Street in the southern portion of the site. Therefore there is potential for contamination of surface soils in the immediate vicinity of the power pole to be impacted by related COPC including:

- TRH;
- BTEX;
- PAHs; and
- OCPs.



#### Former Road / Lane Way (AEC5)

Review of historical aerial photographs indicates a former road/landway running in an east-west direction through the central portion of the site. Therefore there is potential for contamination of surface soils in the immediate vicinity of the former road from related COPC including:

- TRH;
- BTEX; and
- PAHs.

#### 5.2 Potential Receptors

The following potential human receptors (R) have been identified for the Site:

- R1 Construction and maintenance workers (during Site redevelopment);
- R2 Future site users following development of the Site; and
- R3 Land users in adjacent areas (residential).

The following potential ecological receptors (R) have been identified for the Site:

- R4 Local groundwater, and receiving water bodies;
- R5 Surface water bodies (offsite creeks); and
- R6 Local ecology. DP notes that potential ecological receptors are usually associated with the upper 2 m (root zone and habitation zone for many species) of the soil profile.

#### 5.3 Potential Pathways

Potential pathways for contamination include the following:

- P1 Ingestion and dermal contact;
- P2 Inhalation of fibres and/or dust and/or vapours;
- P3 Leaching of contaminants and vertical migration into groundwater;
- P4 Surface water run-off;
- P5 Lateral migration of groundwater providing base flow to watercourses; and
- P6 Direct contact with ecological receptors.

# 5.4 Summary of Potential Complete Pathways

A 'source - pathway - receptor' approach has been used to assess the potential risks of harm being caused to human or ecological receptors from contamination sources on or in the vicinity of the Sites, via exposure pathways. The possible pathways between the above sources (AEC1 - AEC4) and receptors (R1 to R6) are provided in Table 4 below. Assessment of the CSM was used to determine data gaps and the requirement for sampling and analysis to assess the suitability of the Sites for the proposed residential use.



**Table 4: Conceptual Site Model** 

Potential Source	Exposure Pathway	Receptor	Requirement for Additional Data and / or Management
AEC1: Presence of former buildings and sheds (Hazardous building materials)  AEC2: Presence of filling  AEC3: Presence of former sheds (potential fuel / chemical storage)  AEC4: Presence of a power pole  AEC5: Presence of a former road/laneway	P1 – Ingestion and dermal contact;  P2 – Inhalation of fibres and/or dust and/or vapours  P3 – Leaching of contaminants and vertical migration into groundwater.  P4 – Surface water runoff.  P5 – Lateral migration of groundwater providing baseflow to watercourses.  P6 – Direct contact of contaminated ground with ecological receptors.	R1 - Construction and maintenance workers.  R2 - Future site users following development of the site.  R3 - Land users in adjacent areas.  R5 - Surface water bodies.  R6 - Local groundwater and receiving water bodies.  R4 - Local ecology.	Given the identified potential contaminant sources, the initial fate (lay down mechanism) of potential contaminants is likely to be expressed firstly in surface soils.  An intrusive investigation is therefore required to quantify and assess potential contamination impact to surface soils.  (A further assessment of deeper soils and groundwater may be deemed necessary should significant contamination be identified in
			surface soils).

# 6. Field Work

Soil sampling was completed at a total of 10 locations across the site on 17 March 2018. Boring and surface sample locations are shown on Drawing 11, Appendix A. Soil samples were collected in each AEC as identified from the PSI desktop investigation (described in Section 5.1 and in 6.1).

The field investigation was designed in accordance with the seven step data quality objectives (DQO) process provided in Appendix F, Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended 2013 (NEPC, 2013). The DQO adopted for this PSI are provided in Appendix F.



# 6.1 Soil Sampling Methodology and Rationale

Soil sampling was completed at nine locations (BH1 to BH9) by boring with a Kubota KX018-4 1.7 tonne excavator fitted with a 150 mm power auger to a maximum depth of 3.0 metres below ground level (m bgl). Surface soil sampling (0.0 - 0.1 m bgl) at the power pole was completed with a shovel. Soil samples were collected based on identified AEC and visual observations during field work. Test bores/surface sampling locations and COPC analysis rationale for each AEC is presented as follows.

**Table 5: Location, Sampling and Analysis Rationale** 

Boring/ Surface Sample ID	Location and Sample Rationale	Sample Depths (mbg)	Laboratory Analysis
BH1	Location selected given former residential buildings and potential filling. Also general site coverage	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs and asbestos
BH2	Location selected given former residential buildings and potential filling. Also general site coverage	0.5	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs and asbestos
ВН3	Location selected given former residential buildings, possible sheds and filling.	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos
BH4	Location selected given former residential buildings, possible sheds and filling.	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos
BH5	Location selected given former road/laneway, residential buildings, possible sheds and filling.	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos
BH6	Location selected given former road/laneway, residential buildings, possible sheds and filling.  Also potential hazardous building materials subject to AMP	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos
BH7	Location selected given former residential buildings, possible sheds and filling.  Also potential hazardous building materials subject to AMP	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos



Boring/ Surface Sample ID	Location and Sample Rationale	Sample Depths (mbg)	Laboratory Analysis
BH8	Location selected given former residential buildings, possible sheds and filling.  Also potential hazardous building materials subject to AMP	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos
вн9	Location selected given former residential buildings, possible sheds and filling.	0.2	TRH, BTEX, Heavy metals (9), PAHs, OCPs, OPPs, PCBs, phenols and asbestos
Power Pole	Presence of power pole	0.0 - 0.2	TRH, BTEX, PAHs and OCPs

#### 6.2 Soil Sampling Procedures

All boring sampling data was recorded on bore logs (Appendix G) with all samples also recorded on chain-of-custody sheets. The general sampling procedure adopted for the collection of environmental samples is summarised below:

- Collection of soil samples was completed using disposable sampling equipment (new nitrile glove for each sample) from the drilling auger or the shovel. Samples were collected taking care to not include soil that was directly in contact with either the surface of auger or shovel;
- Transfer samples into laboratory-prepared glass jars, completely filled to ensure the headspace within the sample jar is minimised, and capping immediately to minimise loss of volatiles;
- Label sample containers with individual and unique identification, including project number, sample location and sample depth;
- Place the glass jars, with Teflon lined lid, into a cooled, insulated and sealed container for transport to the laboratory; and
- Collection of additional replicate samples at a rate of 10% for QA/QC requirements.

Samples designated for analysis were dispatched to NATA accredited laboratory Envirolab Services at Chatswood NSW for analysis of primary samples and intra-laboratory replicates.

#### 6.3 Site Assessment Criteria

The Site Assessment Criteria (SAC) applied in this PSI have been informed by the proposed land use (i.e. residential with accessible soils) and the CSM - which identified human and ecological receptors to potential contamination on the Site (refer to Section 6). Analytical results were assessed (as a Tier 1 assessment) against the investigation and screening levels as per Schedule B1, National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (NEPC, 2013).



Residential land use criteria with accessible soil were adopted given the Site is currently a primary and pre-school (as required by the ASC NEPM). The derivation of the SAC is included in Appendix F and the adopted SAC are listed in the analytical results table (Tables H1 in Appendix H).

#### 6.4 Field Work Observations and Results

Relatively uniform geological conditions were encountered across most of the Site and generally included the following strata:

- Fill or Clayey Silt topsoil, comprising minor gravel inclusions encountered from surface to 0.2 m bgl; overlying;
- Filling comprising grey mottled silty clay from 0.2 to 1.5 m bgl Slag and charcoal type gravel material was observed in fill at loactions BH2, BH5, BH7 and BH9; overlying
- Silty clay encountered at depths from 0.9 to 2.0 m bgl; and overlying
- Weathered sandstone or shale encountered at depths from 0.9 to 2.0 m bgl.

With the exception of BH1 and BH5 anthropogenic material including crushed bricks, ceramics and concrete were variously encountered in fill at all locations.

No free groundwater was observed in the bores during drilling for the short time that they were left open.

#### 6.5 Laboratory Analytical Results

The analytical results for the soil samples collected during this PSI are summarised in Table H1 in Appendix H, together with the adopted SAC. The laboratory certificate of analysis for this PSI is provided in Appendix I.

#### 6.5.1 TRH and BTEX

F2 compounds (TRH  $C_{16}$  -  $C_{34}$  - BTEX) were detected at concentrations exceeding ecological investigation level (120 mg/kg) in the shallow fill soil sample BH5/0.5 (150 mg/kg)

TRH  $C_{16}$  -  $C_{34}$  compounds were detected at concentrations exceeding ecological investigation levels (300 mg/kg) in the shallow fill soil samples BH2/0.5 (1200 mg/kg), BH5/0.2 (2400 mg/kg), BH6/0.2 (360 mg/kg) and BH9/0.2 (1100 mg/kg).

TRH and BTEX were not detected at concentrations exceeding SAC in remaining soil samples analysed.

#### 6.5.2 PAHs

Benzo(a)pyrene (BaP) was detected at concentrations in excess of environmental investigation levels (0.7 mg/kg) in shallow fill soil samples BH2/0.5 (22 mg/kg), BH5/0.2 (37 mg/kg), BH6/0.2 (5.1 mg/kg), BH7/0.2 (1.6 mg/kg).



BaP toxic equivalent (TEQ) contaminants were detected at concentrations exceeding residential health investigation levels (3 mg/kg) in shallow fill soil samples BH2/0.5 (33 mg/kg), BH5/0.2 (57 mg/kg) and BH6/0.2 (7.8 mg/kg).

Total PAHs were detected at concentrations exceeding the residential health investigation level (300 mg/kg) in the shallow fill soil sample BH5/0.2 (550 mg/kg).

PAHs were not detected at concentrations exceeding SAC in remaining soil samples analysed.

# 6.5.3 Heavy Metals

Lead was detected at concentration in excess of residential health investigation levels (300 mg/kg) in the shallow fill soil sample BH6/0.2 (650 mg/kg).

Zinc was detected at concentration in excess of environmental investigation levels (760 mg/kg) in the shallow fill soil sample BH9/0.2 (2100 mg/kg).

Heavy metals were not detected at concentrations exceeding SAC in remaining soil samples analysed.

# 6.5.4 Phenols

Phenols were not detected at concentrations exceeding SAC in all soil samples analysed.

#### 6.5.5 OCPs, OPPs and PCBs

OCPs, OPPs and PCBs were not detected at concentrations exceeding SAC in all soil samples analysed.

#### 6.5.6 Asbestos

Asbestos was not detected in all soil samples analysed.

Materials suspected of containing asbestos was not observed on sites surface soils or in fill at any of the sampling locations (despite being noted previously by other investigators and site users refer Sections 4.1 and 5.1, above).

#### 6.5.7 QAQC

A review of the adopted QA/QC procedures and results (Appendix J) indicates that the data quality indicators (DQIs) have generally been met. On this basis, the sampling and laboratory methods used during the investigation were found to meet the DQO for this project (as discussed in Appendix F).



#### 7. Discussion

# 7.1 TRH, PAH and lead Soil Impact

COPC including TRH in the form of longer chain compounds (TRH  $C_{10}$  –  $C_{16}$  and TRH  $C_{16}$  -  $C_{34}$ ), PAHs (BaP and BaP TEQ compounds) and lead were detected at concentrations exceeding SAC in the shallow fill samples (0.2 to 0.5 mbgl) collected at locations BH2, BH5, BH6 and BH7. Given that concentrations of COPC at locations BH2, BH5 and BH6 generally exceeded 250% of the adopted SAC's (particularly BaP in excess of HILs) these areas represent contamination hotspots. Soils in the vicinity of these locations therefore require remediation and/or risk assessment for the site to be considered suitable for the proposed building upgrades and ongoing use of the site as primary/pre-school. Further investigation would be required to define the lateral and vertical extent of impact to soils requiring remediation and/or risk assessment. It is noted that dark slag like material was observed in fill at locations BH2 and BH5 and flecks of dark charcoal type material observed in fill at BH7. Given the contaminants identified (longer chain TRH, PAHs and lead) there is potential that hotspot contamination may be associated with slag and charcoal deposits within the fill. Slag and charcoal type material are often associated with industrial blast furnace activities.

Given the random spatial distribution of the identified hotspots and the preliminary/limited nature of sampling the presence of other hotspots across the site cannot be ruled out. Further investigation, likely in the form of systematic sampling of fill across the site, is also required to determine the presence or absence of additional contamination hotspots.

Remediation of soils may not be warranted at locations BH7 given that concentration of BaP at this location exceeds EIL only and the area is generally sealed with a soft-fall safety surface material limiting ecological exposure to soils in this area.

# 7.2 TRH and Zinc Soil Impact at BH9

TRH  $C_{16}$  -  $C_{34}$  and zinc was detected at concentrations (>250%) exceeding the EIL only in the shallow soil sample collected at location BH9 in an unsealed area in the central eastern portion of the site. The area will require further investigation to determine whether the TRH and zinc concentrations are anomalous/isolated or indicative of widespread impact to shallow soils in the central eastern portion of the site. Further investigation of TRH and zinc can be completed at the time of additional hotspot investigation across the site. In the event widespread impact is identified, and the area is to remain unsealed, the soils in the area will require remediation and/or risk assessment for the site to be considered suitable for the ongoing use of the site as a primary school.

#### 7.3 Asbestos Soil Impact

Bonded ACM was identified by previous investigations on surface soils across the northern portions of the site. Whilst the PB AMP described that observable fragments across the northern portion of the site had been removed the mostly sealed area is now subject to the AMP. Any work in the northern portion of the site, as described in the AMP, where there is potential for ground disturbance must be completed with reference to the procedures in the AMP and in accordance with the relevant legislation, regulations and guidance documents including:

- NSW Work Health and Safety Act 2011;
- NSW Work Health and Safety Regulation 2017;



- The Safe Work Australia (SWA) Code of Practice: How to Manage and Control Asbestos in the Workplace, 2016: and
- The SWA Code of Practice: How to Safely Remove Asbestos, 2016.

Whilst field observations and laboratory analysis of soil samples collected from shallow fill soils across the site did not identify asbestos, the presence of asbestos impacted soils across the remainder of the site cannot be ruled out given:

- The preliminary and limited nature of the PSI sampling;
- Historical aerial photographs suggest demolition of former buildings and sheds across the entire site;
- Anecdotal information suggests bonded ACM fragments may also be present in other portions of the site, particularly beneath current buildings; and
- Site inspection of several interior walls and ceilings of the school buildings indicated construction of FCS materials suspected of containing asbestos.

Accordingly further investigation across the site is required to provide greater certainty regarding the presence or absence of asbestos in site soils (particularly the remainder of the site not subject to the AMP) in order for the site to be considered suitable for the proposed upgrades and ongoing use as a primary school.

#### 8. Conclusions and Recommendations

The results of site walkover and desktop investigation identified the following AEC that had the potential for contamination of near surface soils and/or filling at the site:

- AEC1: Presence of former buildings and sheds (Hazardous building materials);
- AEC2: Presence of filling;
- AEC3: Presence of former and current sheds (potential chemical storage);
- AEC4: Presence of a power pole; and
- AEC5: Presence of a former road/laneway.

Targeted sampling was undertaken at 10 locations across the site within identified AEC in the vicinity of former/current site structures, areas of filling, the former road/laneway and a power pole onsite. The results of site inspection and soil sampling identified the following that will require remediation and/or risk assessment or further investigation for the site to be considered suitable for the proposed upgrading works and ongoing use as a primary/pre-school:

TRH, PAH and lead impact was variously identified in shallow fill soils at two locations in the
north western portion of the site and one location in the south eastern portion of the site. Fill at
these locations requires remediation and/or risk assessment. Given the identification of slag and
charcoal type material within fill at these locations contamination of the fill is potentially associated
with historic sourcing of fill from an industrial site with blast furnace activities. Further investigation
of fill soils across the site is also required to determine the presence or absence of additional
contamination hotspots;



- TRH and zinc impact to shallow soils in the central eastern portion of the site requires further investigation; and
- Potential for ACM impact to shallow soils across the site. Whilst ACM was not identified in the PSI sampling, given the preliminary nature of the PSI; the demolition of numerous structures; and importation of filling, the presence of asbestos impacted soils at the site cannot be ruled out and requires further investigation.

With respect to site contamination the recommended further assessment should build on the information provided in this report with reference to National Environment Protection Council (NEPC, 1999) National Environment Protection Council (Assessment of Site Contamination) Measure 1999 (amended 2013) (NEPC, 2013). Further assessment should include intrusive investigations, sampling, analysis and assessment to determine land use suitability.

A hazardous building materials assessment was also completed by DP at the time of the PSI and Preliminary Geotechnical Investigation to identify potential hazardous materials within the buildings so that protective measures can be implemented, if required, during redevelopment/upgrading works.

#### 9. References

- 1. Department of Infrastructure Planning and Natural Resources (DIPNR, 2002) 'Salinity Potential in Western Sydney' map.
- 2. Parson Brinkerhoff. Asbestos in Grounds, Asbestos Management Plan, Darlington Public School, Darlington NSW, (Project reference 1735\_ASB\_150514\_AMP).
- 3. Nearmap website, https://go.nearmap.com/
- NSW Department of Planning and Environment Resources and Energy, Geological Survey of NSW 1:100 000 Sydney Geological Series Sheet 9030.
- 5. NSW Department of Primary Industries Office of Water website http://allwaterdata.water.nsw.gov.au/water.stm
- 6. NSW Government Office of Environment and Heritage Acid Sulphate Soils Risk Maps

#### 10. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report for this project at Darlington Public School, 417 Abercrombie Street, Darlington NSW in accordance with DP's proposal MAC180016.P.001.Rev1 dated 13 March 2018 and acceptance received from Michael Cashell dated 16 March 2018. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Billard Leece Partnership Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.



The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

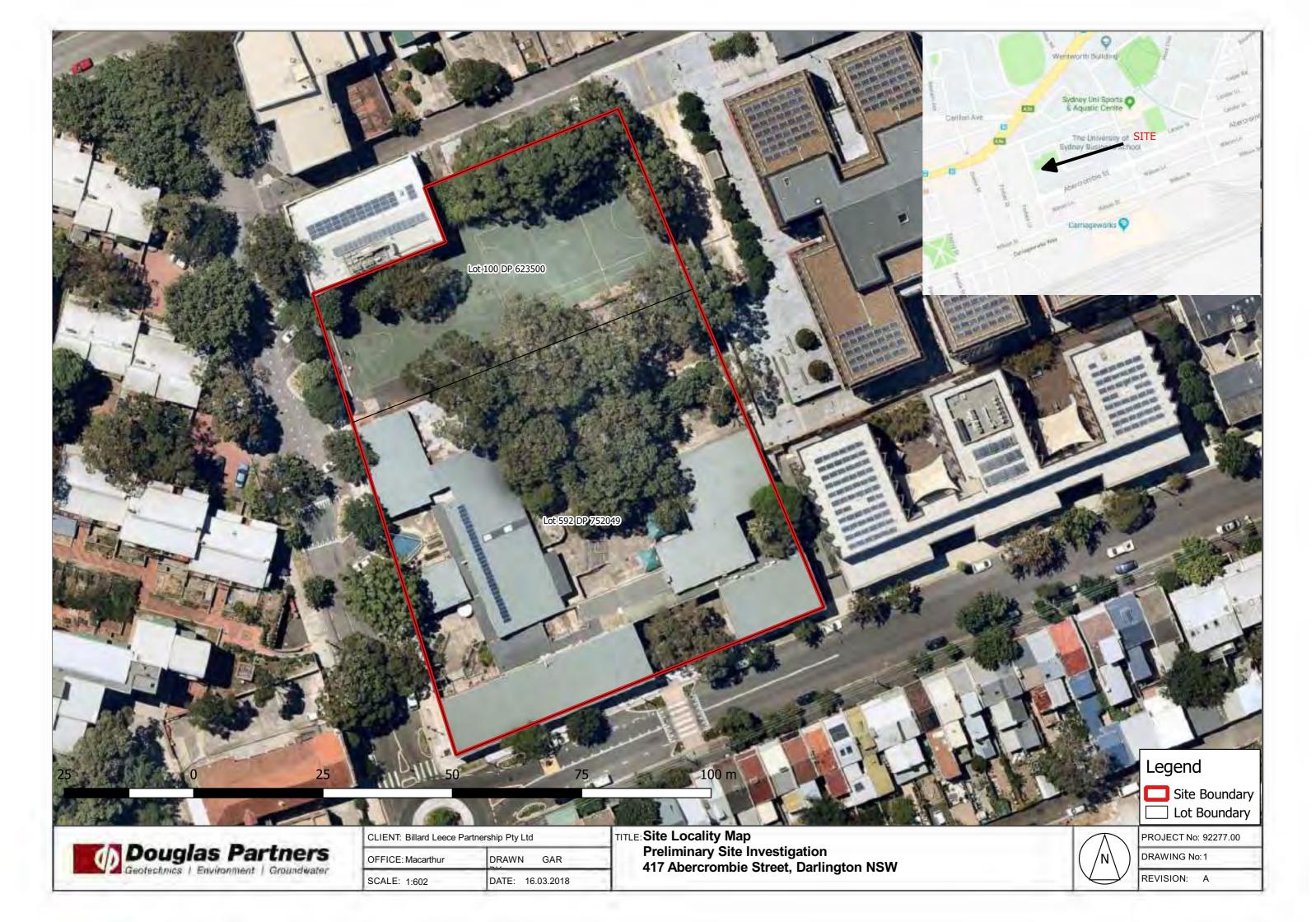
This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

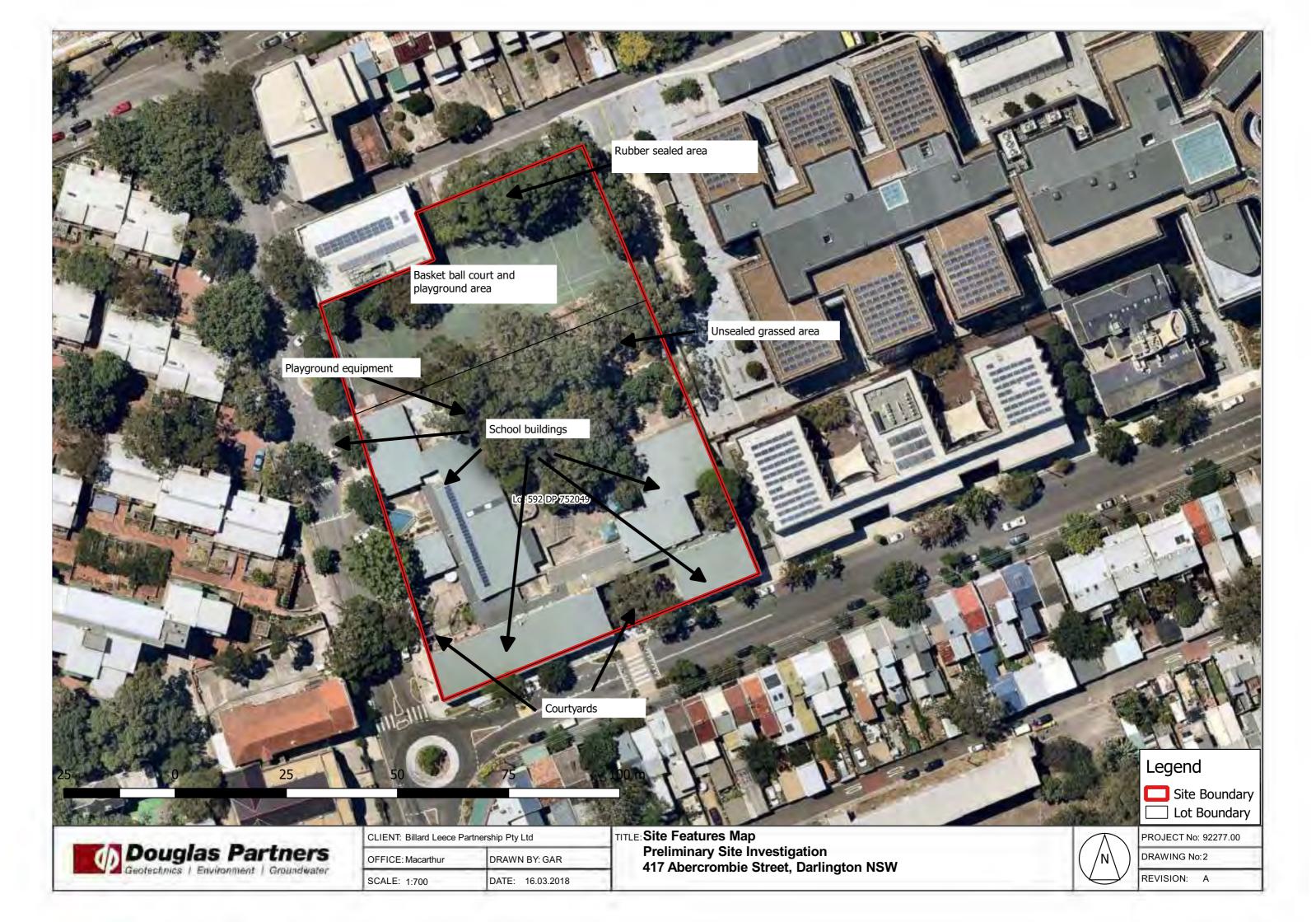
This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

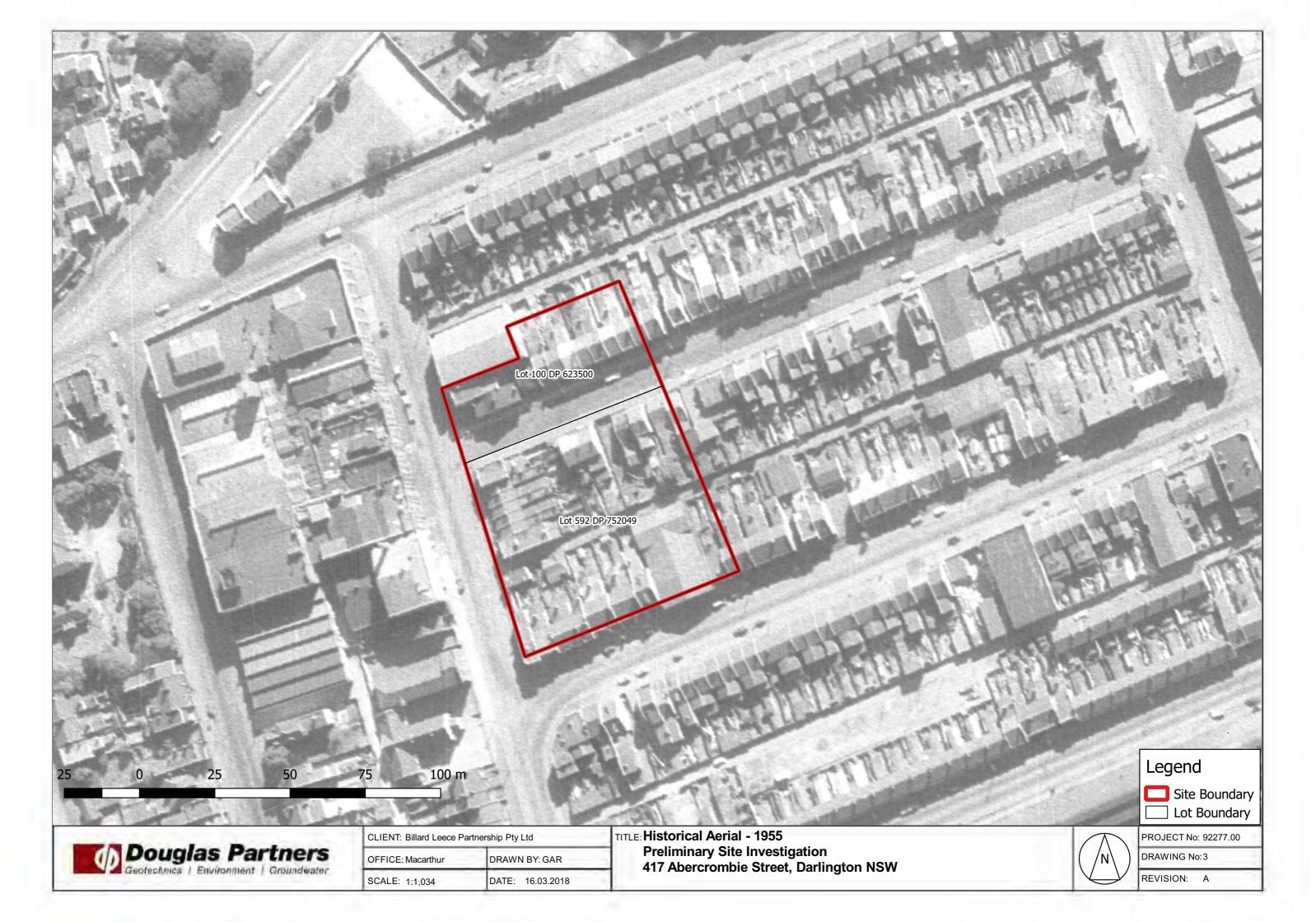
# **Douglas Partners Pty Ltd**

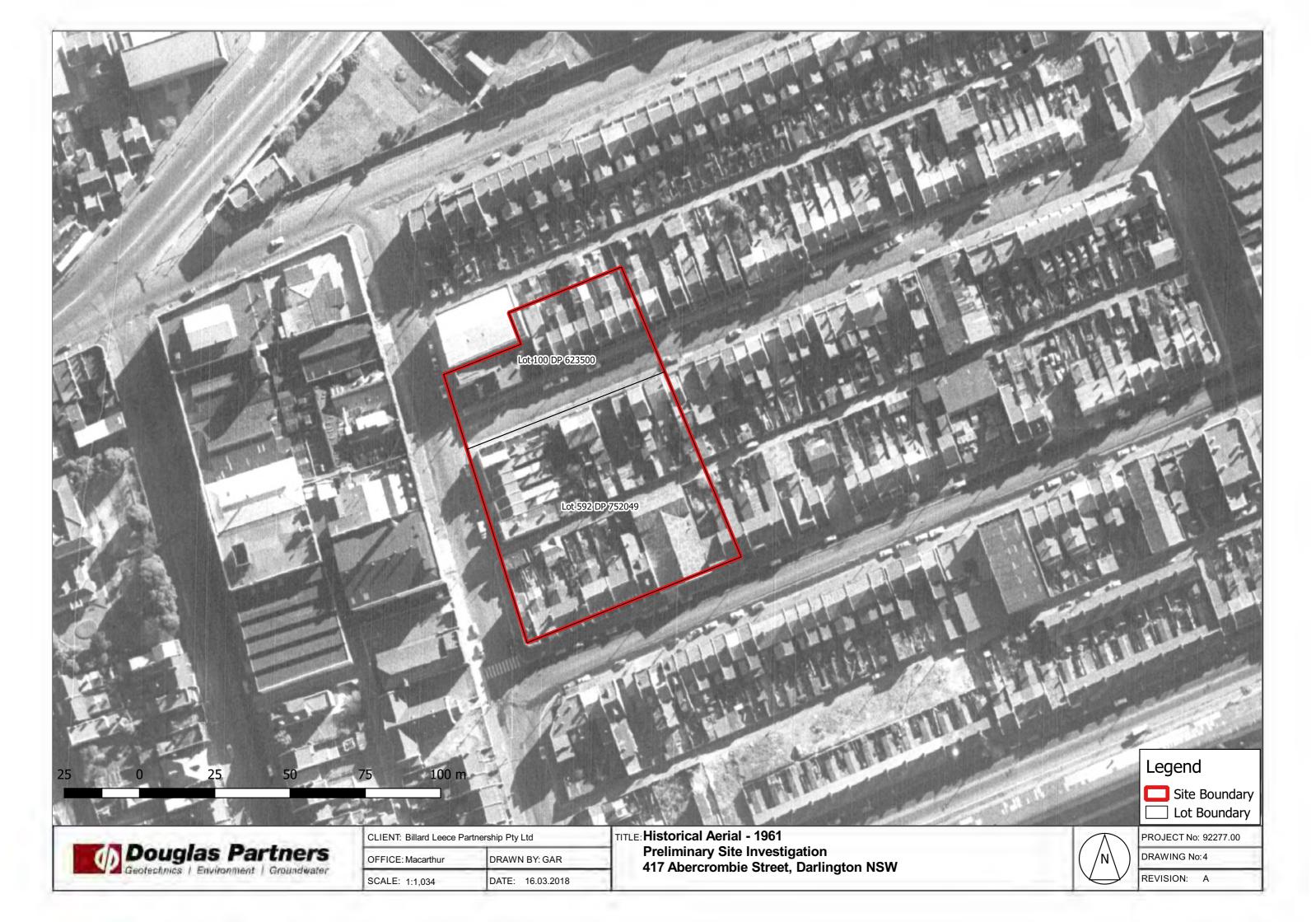
# Appendix A

Drawings 1 to 11











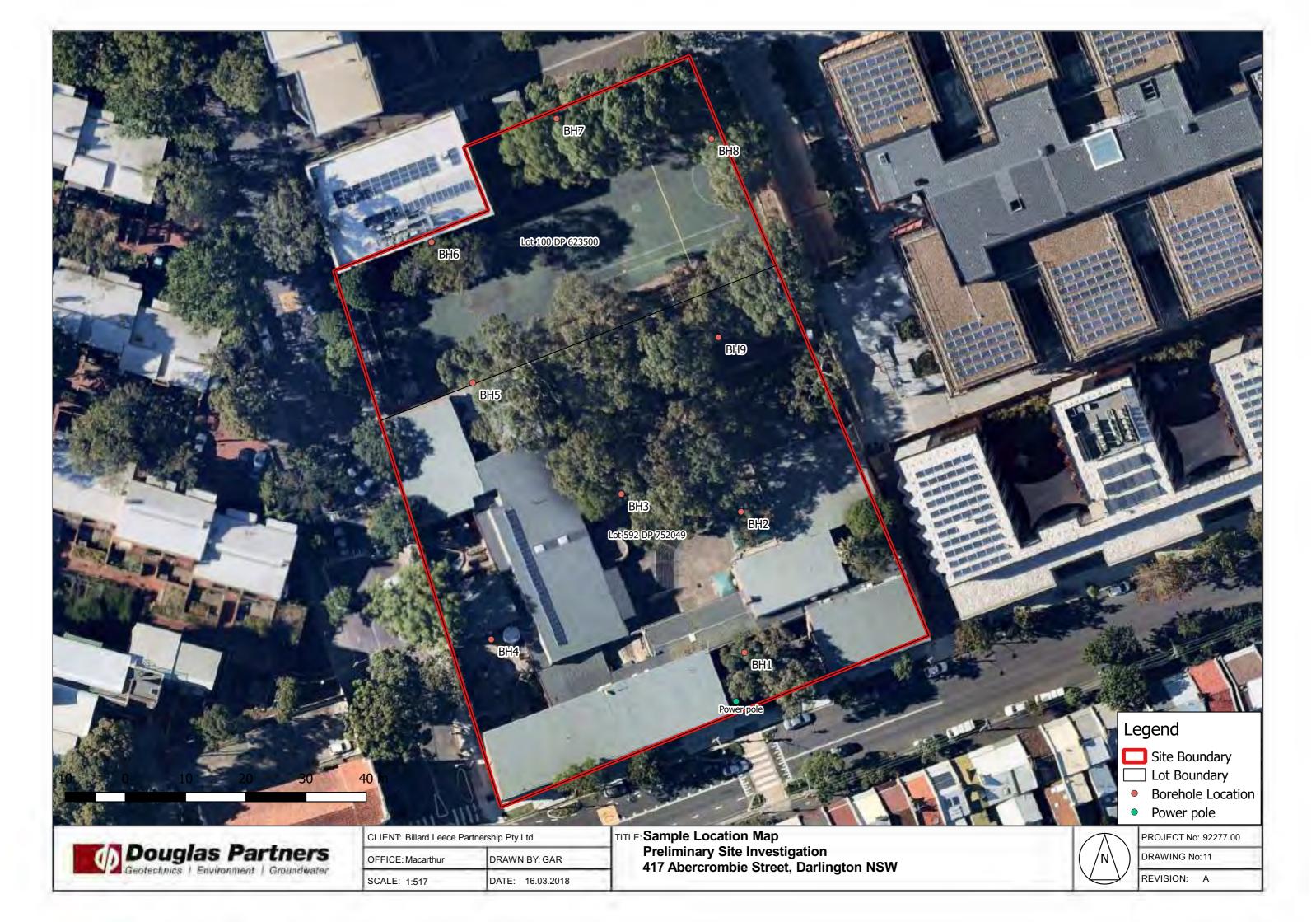












# Appendix B

Photographic Plates



Photograph 1 - South facing school building in south western portion of site with Abercrombie Street in foreground



Photograph 2 - Court yard area in southern portion of site

	Site Photographs	PROJECT:	92277.00
Douglas Partners	Preliminary Site Investigation	PLATE No:	1
Geolochivisi   Environment / Grountwaler	417 Abercrombie Street, Darlington NSW	REV:	0
	CLIENT: Billard Leece Partnership Pty Ltd	DATE:	16-Apr-18



Photograph 3 - Central portion of site



Photograph 4 - Basketball court area in northern portion of site

	Site Photographs	PROJECT:	92277.00
Douglas Partners	Preliminary Site Investigation	PLATE No:	2
Senterholes   Programment / Sententheeler	417 Abercrombie Street, Darlington NSW	REV:	0
	CLIENT: Billard Leece Partnership Pty Ltd	DATE:	16-Apr-18



Photograph 5 - Unsealed garden bed adjacent to sites eastern boundary



Photograph 6 - Far northern portion of site . Elevated area with rubber safety seal material covering majority of area.

	Site Photographs	PROJECT:	92277.00
Douglas Partners	Preliminary Site Investigation	PLATE No:	3
	417 Abercrombie Street, Darlington NSW	REV:	0
	CLIENT: Billard Leece Partnership Pty Ltd	DATE:	16-Apr-18



Photograph 7 - Central northern portion of site



Photograph 8 - Central southern portion of site

	Site Photographs	PROJECT:	92277.00
Douglas Partners	Preliminary Site Investigation	PLATE No:	4
Gentechtics   Procument / Genundester	417 Abercrombie Street, Darlington NSW	REV:	0
	CLIENT: Billard Leece Partnership Pty Ltd	DATE:	16-Apr-18



Photograph 9 - Playground area in central western portion of site with classroom building beyond



Photograph 10 - Golden Grove Street with Church and residential properties beyond to the west of site

	Site Photographs	PROJECT:	92277.00
Douglas Partners	Preliminary Site Investigation	PLATE No:	5
Senterhalita   Programment / Genundevelor	417 Abercrombie Street, Darlington NSW	REV:	0
	CLIENT: Billard Leece Partnership Pty Ltd	DATE:	16-Apr-18



Photograph 10 - Building used by Sydney University to the immediate northwest of site



Photograph 11 - Abercrombie Street to the south of site with residential properties beyond

	Site Photographs	PROJECT:	92277.00
Douglas Partners	Preliminary Site Investigation	PLATE No:	6
Gentlechtics   Proconnect / Gentlecher	417 Abercrombie Street, Darlington NSW	REV:	0
	CLIENT: Billard Leece Partnership Pty Ltd	DATE:	16-Apr-18

# Appendix C

NSW Office of Water Bore Search

3/1/2018 Groundwater data



Home About us Water Management Water Licensing Urban Water

Real-time data close this window

home help login contact customise

## **All Groundwater**

find a site

- All Groundwater Map
  - North Coast Region
  - Hunter Region
    Greater Sydney Region
    - ---Hawkesbury Riv...
    - Georges River Basin
      Wollongong Basin
  - **■** South Coast Region
  - Northwest Region
  - E Central West Region
  - Southwest Region
  - Far West Region
  - Great Artesian Basin

bandwidth • high low

glossary and metadata

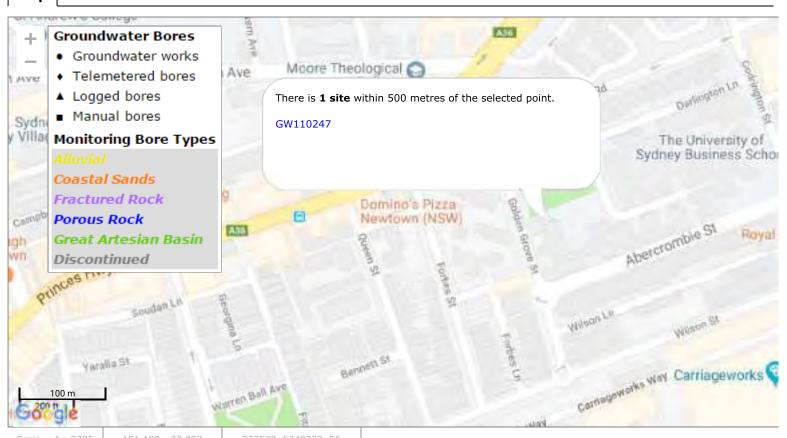
All Groundwater » All Groundwater Map » Greater Sydney Region

## **Hawkesbury River Basin**

bookmark this page

All data times are Eastern Standard Time

Map



## **NSW Office of Water Work Summary**

## GW110247

Licence: 10BL603148 Licence Status: CONVERTED

> Authorised Purpose(s): DOMESTIC Intended Purpose(s): DOMESTIC

Work Type: Bore

Work Status:

Construct.Method: Rotary Air

Owner Type: Private

Commenced Date: Completion Date: 16/07/2009

Final Depth: 210.00 m Drilled Depth: 210.00 m

Contractor Name: INTERTEC DRILLING SERVICES

**Driller:** William Crump

**Assistant Driller:** 

GWMA:

GW Zone:

Property: MOORE THEOLOGICAL COLLEGE CL

21 KING ST NEWTOWN 2042 NSW

Standing Water Level: 31.000

Salinity: Yield: 0.130

## **Site Details**

Site Chosen By:

County Form A: CUMBE Parish CUMBE.39 Cadastre 28//939363

Licensed:

Region: 10 - Sydney South Coast

CMA Map: River Basin: - Unknown

Area/District:

**Grid Zone:** 

Scale:

Elevation: 0.00 m (A.H.D.) Northing: 6248363.0 Latitude: 33°53'30.4"S Elevation Source: Unknown **Easting:** 332357.0 Longitude: 151°11'13.4"E

GS Map: -MGA Zone: 0 Coordinate Source: Unknown

## Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Туре	_	To (m)	Outside Diameter (mm)	 Interval	Details
1		Hole	Hole	0.00	2.50	204		Rotary Air
1		Hole	Hole	2.50	108.00	162		Down Hole Hammer
1		Hole	Hole	108.00	210.00	156		Down Hole Hammer
1	1	Casing	Pvc Class 9	-0.30	41.70	140		Suspended in Clamps, Screwed and Glued
1	1	Casing	Steel	-0.30	5.70	156		Suspended in Clamps, Driven into Hole

**Water Bearing Zones** 

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
22.00	23.00	1.00	Unknown			0.05			3750.00
74.00	76.00	2.00	Unknown			0.10			3300.00
188.00	188.50	0.50	Unknown	31.00		0.13			4400.00

# Geologists Log Drillers Log

From	То	Thickness	Drillers Description	Geological Material	Comments
(m)	(m)	(m)	·		
0.00	2.00	2.00	CLAY BROWN	Clay Loam	
2.00	4.50	2.50	CLAY GREY	Clay Loam	
4.50	22.00	17.50	SHALE GREY	Shale	
22.00	23.00	1.00	SHALE SOFT	Shale	
23.00	33.00	10.00	SHALE HARD	Shale	
33.00	74.00	41.00	SANDSTONE GREY	Sandstone	
74.00	76.00	2.00	SANDSTONE AND QUARTZ FINE	Sandstone	
76.00	134.00		SANDSTONE GREY	Sandstone	
134.00	135.50	1.50	SANDSTONE QUARTZ FINE	Sandstone	
135.50	153.50	18.00	SANDSTONE GREY	Sandstone	
153.50	154.00	0.50	SANDSTONE QUARTZ FINE	Sandstone	
154.00	168.00	14.00	SANDSTONE GREY	Sandstone	
168.00	170.00	2.00	SANDSTONE SHALE BEDDING	Sandstone	
170.00	188.00	18.00	SANDSTONE GREY	Sandstone	
188.00	188.50		SANDSTONE QUARTZ	Sandstone	
188.50	210.00	21.50	SANDSTONE GREY	Sandstone	

## **Remarks**

### \*\*\* End of GW110247 \*\*\*

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

# Appendix D

**NSW EPA Searches** 

## Home Contaminated land Record of notices

## Search results

Your search for: Suburb: DARLINGTON

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the <u>planning</u> <u>process</u>.

Search Again
Refine Search

## Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The <u>POEO public register</u>
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above

DECCW | Search results

search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register. POEO public register.

For

1 March 2018

## business and industry () ^

## For local government () ^

## Contact us

- **\** 131 555 (tel:131555)
- Online (http://www.epa.nsw.gov.au/about-us/contact-us/feedback/feedback-form)
- info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

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## Licence summary

Search Again

Return to Previous Page

### Summary Licence No: 11472

View this licence (PDF document 200 kb)

Licence holder: INTEC LTD Premises: INTEC LTD

Room 427, Building J01, Maze Crescent, the University of Sydney, DARLINGTON,

NSW. 2008

LGA: SYDNEY Catchment: Sydney Coast & Georges River Administrative \$760.00

fee:

Licence status: No\_longer\_in\_force

Activity type: Hazardous, Industrial or Group A Waste Generation or Storage Licence review: Complete date 07 Jun 2004

Due date 07 Jun 2009

Pollution incident management plan: No

**Notices** 

Number **Issue date** Notice type

1037711 07 Jun 2004 s.58 Licence Variation

#### **Annual Returns**

Start date	End date	<u>Date</u> received	Non- compliance	LBL data
18-Jul-2006	17-Jul-2007	10-Sep-2007		Not available
18-Jul-2005	17-Jul-2006	06-Sep-2006	No	Not available
18-Jul-2004	17-Jul-2005	12-Sep-2005	No	Not available
18-Jul-2003	17-Jul-2004	03-Sep-2004	No	Not available
18-Jul-2002	17-Jul-2003	09-Sep-2003	No	Not available
18-Jul-2001	17-Jul-2002	10-Sep-2002	No	Not available

## For business and industry ()

For local government ()

## Contact us

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♠ EPA Office Locations (http://www.epa.nsw.gov.au/about -us/contact-us/locations)

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Disclaimer (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

Privacy (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy) Copyright (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

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## **Notice summary**

Search Again Return to Previous Page

Summary of Notice No: 1037711 View report (PDF document 943 kb)

Organisation: INTEC LTD

Location: INTEC LTD
Room 427, Building J01, Maze Crescent, the University of Sydney, DARLINGTON,

NSW, 2008 LGA: SYDNEY

Catchment: Sydney Coast & Georges River
Issue date: 07 Jun 2004 Notice type: s.58 Licence Variation

Licence

Number <u>Name</u> **Licence status** 11472 INTEC LTD No longer in force

For business and industry ()

For local government () Contact us

**\** 131 555 (tel:131555)

**■** Online

(http://www.epa.nsw.gov.au/about -us/contact-us/feedback/feedback -form)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

♠ EPA Office Locations (http://www.epa.nsw.gov.au/about -us/contact-us/locations)

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Accessibility (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

Disclaimer (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)

Privacy (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy) Copyright (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

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## Licence summary

Search Again Return to Previous Page

Summary Licence No: 20362

View this licence (PDF document 152 kb)

Licence holder: JOHN HOLLAND PTY LTD

Premises: University of Sydney Darlington Campus

Corner Codrington and Abercrombie Streets, DARLINGTON, NSW, 2008

LGA: SYDNEY Catchment: Sydney Coast & Georges River

Administrative fee: \$1,830.00

Licence status: Surrendered Activity type: Land-based extractive activity

Licence review: Due date 20 Jan 2019

Pollution incident management

plan: Last tested 05 Sep 2014

**Applications** 

<u>Number</u> <u>Application type</u> <u>Current status</u> <u>Date received</u> 1526943 s.80 Surrender of Issued 05 Dec 2014

a Licence

**Notices** 

Number Issue date Notice type

<u>1526943</u> 08 Jan 2015 s.80 Surrender of a Licence

**Annual Returns** 

Start date End date LBL data **Date** Nonreceived compliance 06-Mar-2015 <u>yes</u> Not available 20-Jan-2014 08-Jan-2015

For business and industry ()

For local government () Contact us

**\** 131 555 (tel:131555)

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<u>Home Environment protection licences POEO Public Register Search</u> for licences, applications and notices

## Search results

Your search for: General Search with the following criteria

Suburb - DARLINGTON

returned 3 results

Export to excel		1 of 1 Pages			Search Again
NumberNam	<u>e</u>	<u>Location</u>	Type	<u>Status</u>	<u>Issued date</u>
11472 INTE	C LTD	Room 427, Building J01, Maze Crescent, the University of Sydney, DARLINGTON, NSW 2008	POEO licence	No longer force	in 17 Jul 2001
1037711INTE	C LTD	Room 427, Building J01, Maze Crescent, the University of Sydney, DARLINGTON, NSW 2008	s.58 Licence Variation	Issued	07 Jun 2004
<u>20362</u> JOHN	HOLLAND PTY LTE			Surrendere	ed20 Jan 2014
				_	7

27 February 2018

## For business and industry () For local Contact us government () **\** 131 555 (tel:131555) **■** Online (http://www.epa.nsw.gov.au/about -us/contact-us/feedback/feedback -form) info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au) ♠ EPA Office Locations (http://www.epa.nsw.gov.au/about

Accessibility (http://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)

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Suburb	Site Name	Site Address	Contamination Activity Type	EPA Management Class	Latitude	Longitude
				Regulation under CLM Act not		
CREMORNE	Shell Coles Express Service Station	225 Military ROAD	Service Station	required	-33.83063306	151.226223
		36 Kendall (Cnr Stephens Rd)		Regulation under CLM Act not		
CRESTWOOD	Former Caltex Depot Queanbeyan	AVENUE	Other Petroleum	required	-35.34615546	149.207807
				Regulation under CLM Act not		
CRINGILA	Cringila Public School	Sheffield STREET	Landfill	required	-34.4719665	150.8695522
				Regulation under CLM Act not		
CROA	Breen Holdings	Bate Bay ROAD	Other Industry	required	-34.03861737	151.1614114
				Regulation under CLM Act not		
CROWS NEST	Caltex Service Station	111-121 Falcon STREET	Service Station	required	-33.82868236	151.2060317
				Regulation under CLM Act not		
CROYDON	Caltex Service Station	404-410 Liverpool ROAD	Service Station	required	-33.88853994	151.115879
CROYDON	BP Ashfield	582-586 Parramatta ROAD	Service Station	Under assessment	-33.87399409	151.1267296
				Regulation under CLM Act not		
CROYDON PARK	Mobil Service Station	334 Georges River ROAD	Service Station	required	-33.89771626	151.0999194
				Regulation under CLM Act not		
CULCAIRN	Caltex Service Station	2883 Olympic HIGHWAY	Service Station	required	-35.67441635	147.0356845
				Regulation under CLM Act not		
CULLEN BULLEN	Baal Bone Colliery	Castlereagh HIGHWAY	Other Industry	required	-33.27193875	150.0587194
	Caltex Service Station (1 Manning			Regulation under CLM Act not		
CUNDLETOWN	River Drive)	Old Pacific HIGHWAY	Service Station	required	-31.89329598	152.5068225
				Regulation under CLM Act not		
CURL CURL	John Fisher Park	Corner Harbord and Abbott ROADS		required	-33.76352692	151.2798462
DACEYVILLE	Astrolabe Park	Cook AVENUE	Landfill	Regulation being finalised	-33.92963704	151.221773
_		(Rear of property) 12-14 Hamilton		Regulation under CLM Act not		
DAPTO	RailCorp Dapto	STREET	Other Industry	required	-34.50045405	150.787353
				Regulation under CLM Act not		
DARLINGHURST	Proposed Retail Unit	139-155 Palmer STREET	Unclassified	required	-33.87504688	151.2168106
DARLINGHURST	18-28 Neild Avenue, Darlinghurst	18-28 Neild AVENUE	Landfill	Under assessment	-33.87876581	151.2276546
	0 00 -			Contamination was addressed via	22.27.42.4	454.0450005
DARLINGHURST	Cross City Tunnel	Riley Street and William STREET	Service Station	the planning process (EP&A Act)	-33.87424636	151.2158305
DEE WHY	United Dee Why	1 The Strand STREET	Service Station	Under assessment	-33.75569207	151.2959451
				Regulation under CLM Act not	22 7456526	454 0000540
DEE WHY	Caltex Service Station	793-797 Pittwater ROAD	Service Station	required	-33.74566596	151.2920719
DEE 144.04	D. J. D. J. J. D. W. 5. 33	L BOAD		Contamination currently regulated	22 72024064	454 2076202
DEE WHY	Roche Products Dee Why Facility	Inman ROAD	Other Industry	under CLM Act	-33.73834964	151.2876392
				Regulation under CLM Act not	22 752462	454 0055005
DEE WHY	Dee Why Town Centre	Pittwater ROAD	Other Industry	required	-33.753169	151.2875805
DEALLIANA COLUDT	Service Station and Caravan Park	505 0 1 11 10 10 10	G G		22 00200205	450.0450.474
DENHAM COURT	Denham Court	505 Campbelltown ROAD	Service Station	Under assessment	-33.98208395	150.8459471
DENILIGUINI	Farman Daniliania Caltan Danat	116-118 Hardinge (Cnr Wood St)	Camilaa Shakiaa	Regulation under CLM Act not	25 52406005	144.0544507
DENILIQUIN	Former Deniliquin Caltex Depot	STREET	Service Station	required	-35.53196985	144.9544597
DENULICIUM	DD Danat (Dalis on But of the 1)	125 127 Handing STREET	Camilas Chabian	Regulation under CLM Act not	25 522242	144 054722
DENILIQUIN	BP Depot (Reliance Petroleum)	125 - 127 Hardinge STREET	Service Station	required	-35.53222124	144.9517397
DENULIQUIN	Farman Chall Dan at	142 447 Namina STREET	Oth an Batualaum	Regulation under CLM Act not	25 5242255	444.0534.60
DENILIQUIN	Former Shell Depot	143-147 Napier STREET	Other Petroleum	required	-35.5342355	144.953169

List current as of 9 February 2018 Page 22 of 77

## **Appendix E**

Council of City of Sydney Records and s149 (Parts 2&5) Certificate





DOUGLAS PARTNERS PTY LTD 8 WALER CRES SMEATON GRANGE NSW 2567

## **PLANNING CERTIFICATE**

Under Section 10.7 of the Environmental Planning and Assessment Act, 1979

Applicant: DOUGLAS PARTNERS PTY LTD

Applicant's reference: GRANT RUSSELL

Address of property: 417-445 Abercrombie Street , DARLINGTON NSW 2008

Owner: MINISTER of EDUCATION TRAINING & YOUTH AFFAIRS

**Description of land:** Lot 100 DP 623500, Lot 592 DP 752049

Certificate No.: 2018301707

Certificate Date: 19/03/18

Receipt No: 115246

**Fee:** \$80.00

**Paid:** 16/03/18

Title information and description of land are provided from data supplied by the Valuer General and shown where available.

Issuing Officer per **Monica Barone** Chief Executive Officer

## **CERTIFICATE ENQUIRIES:**

Ph: 9265 9333 Fax: 9265 9415



# PLANNING CERTIFICATE UNDER SECTION 10.7 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

## MATTERS AFFECTING THE LAND AS PRESCRIBED BY SCHEDULE 4 - ENVIRONMENTAL PLANNING & ASSESSMENT REGULATION, 2000, CLAUSES (1) - (2).

## **DEVELOPMENT CONTROLS**

The following information must be read in conjunction with and subject to all other provisions of the environmental planning instruments specified in this certificate.

### **ZONING**

## **Zone SP2 Infrastructure (Sydney Local Environmental Plan 2012)**

#### 1 Objectives of zone

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.

### 2 Permitted without consent

Nil

#### 3 Permitted with consent

Horticulture; Roads; Water storage facilities; Water treatment facilities; The purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose.

## 4 Prohibited

Any development not specified in item 2 or 3

### **PROPOSED ZONING**

This property is not affected by a draft zone.

## LOCAL PLANNING CONTROLS

Sydney Local Environmental Plan 2012 (as amended) – Published 14 December 2012 NSW Legislation Website.

Sydney Development Control Plan 2012 (as amended) - (commenced 14.12.2012)

Planning Proposal: Sydney Local Environmental Plan 2012 – Amendment to Clause 4.6

This Planning Proposal proposes an amendment to Sydney Local Environmental Plan 2012 to allow council to consider and assess development applications for playground equipment; sculptures & artworks; and community notice and public information signs, that may result in minor additional overshadowing to certain parks and public places in Central Sydney.

### **HERITAGE**

## State Heritage Register (Amendment To Heritage Act, 1977 Gazetted 2/4/99)

This property may be identified as being of state heritage significance, and entered on the State Heritage Register.

To confirm whether the site is listed under the Heritage Act 1977 a Section 167 Certificate should be obtained from the NSW Heritage Office by contacting the NSW Heritage office on (02) 9873 8500 for an application from or by downloading the application form from www.heritage.nsw.gov.au

## STATE PLANNING INSTRUMENTS

Full copies of State Environmental Planning Policies are available online at www.planning.nsw.gov.au.

## State Environmental Planning Policy No. 19 - Bushland in Urban Areas

This is a policy to protect and preserve bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. This policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

## State Environmental Planning Policy No. 32 - Urban Consolidation

This policy implements the principles of urban consolidation, including the orderly, economic use and development of land. The policy enables urban land which is no longer required for the purpose for which it is currently zoned or used to be redeveloped for multi-unit housing and related development.

**State Environmental Planning Policy No. 33 – Hazardous and Offensive Development** This policy aims to amend the definitions of hazardous and offensive industries; to render ineffective any environmental planning instruments not defining hazardous or offensive as per this policy; to control development of hazardous and offensive industries.

## State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals. To assist councils and developers, the Department, in conjunction with the Environment Protection Authority, has prepared Managing Land Contamination: Planning Guidelines.

## State Environmental Planning Policy No. 64 – Advertising and Signage

This policy aims to ensure that signage (including advertising):

Is compatible with the desired amenity and visual character of an area, and

- Provides effective communications in suitable locations, and
- Is of a high quality design and finish.

To this end the policy regulates signage (but not content) under Part 4 of the Act and provides limited time consents for the display of certain advertisements. The policy does not apply to signage that is exempt development under an environmental planning instrument. It does apply to all signage that can be displayed with or without consent and is visible from any public place or reserve, except as provided by the policy.

This policy should be read in conjunction with the Sydney Local Environmental Plan 2005, the City of Sydney Signage and Advertising Structures Development Control Plan 2005 and State Environmental Planning Policy No. 60 where these apply.

## State Environmental Planning Policy No. 65 - Design Quality of Residential Flat Buildings

This policy aims to improve the design quality of flats of three or more storeys with four or more self contained dwellings. The policy sets out a series of design principles for local councils to consider when assessing development proposals for residential flat development. The policy also creates a role for an independent design review panel and requires the involvement of a qualified designer in the design and approval process.

# State Environmental Planning Policy No.70 – Affordable Housing (Revised Schemes) (Gazetted 31.05.02)

The policy identifies that there is a need for affordable housing in the City of Sydney, describes the kinds of households for which affordable housing may be provided and makes a requirement with respect to the imposition of conditions relating to the provision of affordable housing (provided other requirements under the Act are met).

## State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

This Policy does not apply to land described in Schedule 1 (Environmentally sensitive land), or land that is zoned for industrial purposes, or land to which an interim heritage order made under the *Heritage Act 1997* by the Minister administering that Act applies, or land to which a listing on the State Heritage Register kept under the *Heritage Act 1997* applies.

The Policy aims to encourage the provision of housing (including residential care facilities) that will increase the supply and diversity of residences that meet the needs of seniors or people with a disability, and make efficient use of existing infrastructure and services, and be of good design.

## State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

Aims to ensure consistency in the implementation of the BASIX scheme throughout the State. This Policy achieves its aim by overriding provisions of other environmental planning instruments and development control plans that would otherwise add to, subtract from or modify any obligations arising under the BASIX scheme.

## State Environmental Planning Policy (State Significant Precincts) 2005

This Policy aims to identify development of economic, social or environmental significance to the State or regions of the State so as to provide a consistent and comprehensive assessment and decision making process for that development.

NB: This SEPP also contains exempt & complying provisions

# State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

This Policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State.

# State Environmental Planning Policy (Temporary Structures and Places of Public Entertainment) 2007

This Policy aims to ensure that suitable provision is made for ensuring the safety of persons using temporary structures or places of public entertainment.

### State Environmental Planning Policy (Infrastructure) 2007

This Policy aims to facilitate the effective delivery of infrastructure across the state.

NB: This SEPP also contains exempt & complying provisions

# State Environmental Planning Policy (Repeal of Concurrence and Referral Provisions) 2008

This Policy is an 'amending instrument' that removes or modifies referral and concurrence clauses within local environmental plans (LEPs), regional environmental plans (REPs) and State environmental planning policies (SEPPs).

# State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

This Policy Streamlines assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the Environmental Planning and Assessment Act 1979.

## State Environmental Planning Policy (Affordable Rental Housing) 2009

Establishes a consistent planning regime for the provision of affordable rental housing. The policy provides incentives for new affordable rental housing, facilitates the retention of existing affordable rentals, and expands the role of not-for-profit providers. It also aims to support local centres by providing housing for workers close to places of work, and facilitate development of housing for the homeless and other disadvantaged people. NOTE: Does not apply to land at Green Square or at Ultimo Pyrmont, or on southern employment land.

## State Environmental Planning Policy (Urban Renewal) 2010

The aims of this Policy are as follows:

- (a) to establish the process for assessing and identifying sites as urban renewal precincts,
- (b) to facilitate the orderly and economic development and redevelopment of sites in and around urban renewal precincts,
- (c) to facilitate delivery of the objectives of any applicable government State, regional or metropolitan strategies connected with the renewal of urban areas that are accessible by public transport.

#### State Environmental Planning Policy (State and Regional Development) 2011

The aims of this Policy are as follows:

- (a) to identify development that is State significant development,
- (b) to identify development that is State significant infrastructure and critical State significant infrastructure.
- (c) to confer functions on joint regional planning panels to determine development applications.

#### State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

The aims of this Policy are:

- (a) to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and
- (b) to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

# State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

The aim of this Policy is to facilitate the effective delivery of educational establishments and early education and care facilities across the state.

#### Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

This plan applies to land within the Sydney Harbour Catchment, as shown edged heavy black on the Sydney Harbour Catchment Map, being part of the Sydney Region declared by order published in Gazette No 38 of 7 April 1989 at page 1841.

This plan has the following aims with respect to the Sydney Harbour Catchment: to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected and maintained: as outstanding natural asset, and as a public asset of national and heritage significance, for existing and future generations; to ensure a healthy, sustainable environment on land and water; to achieve a high quality urban environment; to ensure a prosperous working waterfront and an effective transport corridor, to encourage a culturally rich and vibrant place for people; to ensure accessibility to and along Sydney Harbour and its foreshores; to ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity, to provide a consolidated, simplified and updated legislative framework for future planning.

# OTHER MATTERS AFFECTING THE LAND AS PRESCRIBED BY SCHEDULE 4 - E. P. & A. REGULATION, 2000. CLAUSES (3) - (10)

- (3) Complying Development
- (1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4),1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
- (2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4),1.18(1)(c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.
- (3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

**Note: All Exempt and Complying Development Codes:** Council does not have sufficient information to ascertain the extent of a land based exclusion on a property. Despite any statement preventing the carrying out of complying development in the Codes listed below, complying development may still be carried out providing the development is not on the land affected by the exclusion and meets the requirements and standards of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.* 

# General Housing Code & Commercial and Industrial (New Buildings and Additions) Code

Complying development **may not** be carried out on the land under the General Housing Code & the Commercial and Industrial (New Buildings and Additions) Code if because of the provisions of clause 1.17A, 1.18(1)(c3) & 1.19 (Land-based requirements for exempt and complying development) any of the following statements are **YES** 

of the Contaminated Land Management Act 1997. (Applies only to the Commercial and Industrial (New Buildings and Additions) Code.  Clause 1.17A(d). Has been identified as a property that comprises, or on which there is, an item that is listed on the State Heritage Register under the Heritage Act 1977 or that is subject to an interim heritage order under the Heritage Act 1977.	10
there is, an item that is listed on the State Heritage Register under the <i>Heritage Act 1977</i> or that is subject to an interim heritage order under the <i>Heritage Act 1977</i> .	
<ul> <li>Clause 1.17A(d) &amp; 1.18(1)(c3). Has been identified as a property that comprises.</li> </ul>	10
or on which there is, a heritage item or draft heritage item.	10
<ul> <li>Clause 1.17A(c). Has been identified as being within a wilderness area (identified under the Wilderness Act 1987.</li> </ul>	10
an environmentally sensitive area or by an environmental planning instrument as being within a buffer area, a river front area, an ecologically sensitive area, environmentally sensitive land or a protected area	10
<ul> <li>Clause 1.19(1)a.or 1.19(5)a Has been identified as being within a heritage conservation area or a draft heritage conservation area.</li> </ul>	10
<ul> <li>Clause 1.19(1)b or 1.19(5)b. Has been identified as being land that is reserved for a public purpose in an environmental planning instrument.</li> </ul>	10
Soils Map as being Class 1 or Class 2.	10
■ Clause 1.19(1)d or 1.19(5)e. Has been identified as land that is subject to a	10
biobanking agreement under part 7A of the threatened Species Conservation Act 1995 or a property vegetation plan under the Native Vegetation Act 2003.	
biobanking agreement under part 7A of the threatened Species Conservation Act 1995 or a property vegetation plan under the Native Vegetation Act 2003.	IO
biobanking agreement under part 7A of the threatened Species Conservation Act 1995 or a property vegetation plan under the Native Vegetation Act 2003.  Clause 1.19(1)f or 1.19(5)g. Has been identified by an environmental planning instrument, a development control plan or a policy adopted by the Council as being or affected by a coastline hazard, a coastal hazard or a coastal erosion hazard.	10
<ul> <li>biobanking agreement under part 7A of the threatened Species Conservation Act 1995 or a property vegetation plan under the Native Vegetation Act 2003.</li> <li>Clause 1.19(1)f or 1.19(5)g. Has been identified by an environmental planning instrument, a development control plan or a policy adopted by the Council as being or affected by a coastline hazard, a coastal hazard or a coastal erosion hazard.</li> <li>Clause 1.19(1)g or 1.19(5)h. Has been identified as being land in a foreshore area.</li> <li>Clause 1.19(1)h. Has been identified as land that is in the 25 ANEF contour or a higher ANEF contour. (Applies only to the General Housing Code)</li> </ul>	
<ul> <li>biobanking agreement under part 7A of the threatened Species Conservation Act 1995 or a property vegetation plan under the Native Vegetation Act 2003.</li> <li>Clause 1.19(1)f or 1.19(5)g. Has been identified by an environmental planning instrument, a development control plan or a policy adopted by the Council as being or affected by a coastline hazard, a coastal hazard or a coastal erosion hazard.</li> <li>Clause 1.19(1)g or 1.19(5)h. Has been identified as being land in a foreshore area.</li> <li>Clause 1.19(1)h. Has been identified as land that is in the 25 ANEF contour or a higher ANEF contour. (Applies only to the General Housing Code)</li> </ul>	IO .

## **Housing Alterations Code**

Complying development under the Housing Alterations Code may be carried out on the land.

# **Commercial and Industrial Alterations Code**

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

## **Subdivisions Code**

Complying development under the Subdivisions Code may be carried out on the land.

#### **Rural Housing Code**

The Rural Housing Code does not apply to this Local Government Area.

#### **General Development Code**

Complying development under the General Development Code **may** be carried out on the land.

#### **Demolition Code**

Complying development under the Demolition Code may be carried out on the land.

#### (4) Coastal Protection Act, 1979

The council has not been notified by the department of public works that the land is affected by the operation of section 38 or 39 of the coastal protection act, 1979.

#### (4A) Certain information relating to beaches and coasts

- (1) In relation to a coastal council an order has **not** been made under Part 4D of the coastal Protection Act 1979 in relation to temporary coastal protection works (within the meaning of that Act) on the land (or on public land adjacent to that land).
- (2) In relation to a coastal council: Council has **not** been notified under section 55X of the Coastal Protection Act 1979 that temporary coastal protection works (within the meaning of that Act) have been placed on the land (or on public land adjacent to that land)
- (4B) Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

In relation to a coastal council: The owner (or any previous owner) of the land has not consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

**Note**. "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the Local Government Act 1993.

#### (5) Mine Subsidence District

This land has not been proclaimed to be a mine subsidence district within the meaning of section 15 of the mine subsidence compensation act, 1961.

(6) Road Widening and/or Road Realignment affected by (a) Division 2 of Part 3 of the Roads act 1993 or (c) any resolution of council or other authority.

This land **is not** affected by road widening and/or road realignment under section 25 of the Roads Act, 1993 and/or resolution of Council or any other authority.

# (6) Road Widening and/or Road Realignment Affected by (b) any environmental planning instrument.

This land **is not** affected by any road widening or road realignment under any planning instrument.

#### (7) Council and other public authorities policies on hazard risk restrictions:

- (a) The land **is not** affected by a policy adopted by the Council that that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk; and
- (b) The land is not affected by a policy adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to on planning certificate issued by Council, that restricts the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation, subsidence, acid sulphate soils or any other risk.

#### (7A) Flood related development controls information.

The development on this land or part of this land is subject to flood related development controls refer to Clause 7.15 of Sydney Local Environment Plan 2012 and Section 3.7 of Sydney Development Control Plan 2012.

#### (8) Land reserved for acquisition

No environmental planning instrument, or proposed environmental planning instrument applying to the land, provides for the acquisition of the land by a public authority, as referred to in section 27 of the Act.

#### (9) Contribution plans

The following Contributions Plans apply to properties within the City of Sydney local government area. Contributions plans marked **YES** may apply to this property:

<ul> <li>Central Sydney Development Contributions Plan 2013 – in operation 9<sup>th</sup> July 2013</li> </ul>	NO
<ul> <li>City of Sydney Development Contributions Plan 2015 – in operation 1<sup>st</sup> July 2016</li> </ul>	YES
<ul> <li>Redfern Waterloo Authority Contributions Plan 2006 – in operation 16<sup>th</sup> May 2007</li> <li>Redfern Waterloo Authority Affordable Housing Contributions Plan – in operation 16<sup>th</sup> May 2007</li> </ul>	NO

#### (9A) Biodiversity certified land

The land has not been certified as biodiversity certified land.

#### (10) Biobanking Agreement

Council has not been notified of a biobanking agreement under Part 7A of the Threatened Species Conservation Act 1995.

# (11) Bush fire prone land

The land has not been identified as Bush fire prone land.

# (12) Property vegetation plans

Not Applicable.

# (13) Orders under Trees (Disputes Between Neighbours) Act 2006

Council has not been notified of an order which as been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land.

# (14) Directions under Part 3A

Not Applicable.

#### (15) Site compatibility certificates and conditions for seniors housing

- (a) The land to which the certificate relates is not subject to a current site compatibility certificate (seniors housing), of which Council is aware, in respect of proposed development on the land.
- (b) The land to which the certificate relates is not subject to any condition of consent to a development application granted after 11 October 2007 required by State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

#### (16) Site compatibility certificates for infrastructure

The land to which the certificate relates is not subject to a valid site compatibility certificate (infrastructure), of which Council is aware, in respect of proposed development on the land.

# (17) Site compatibility certificates and conditions for affordable rental housing

- (a) The land to which the certificate relates is not subject to a current site compatibility certificate (affordable rental housing), of which Council is aware, in respect of proposed development on the land.
- (b) The land to which the certificate relates is not subject to any terms of a kind referred to in clause 17(1) or 37(1) of State Environmental Planning Policy (Affordable Rental Housing) 2009 that have been imposed as a condition of consent to a development application in respect of the land.

## (18) Paper subdivision information

Not Applicable.

## (19) Site verification certificates

The land to which the certificate relates is not subject to a valid site verification certificate of which Council is aware.

#### (20) Loose-fill asbestos insulation

Not Applicable

## (21) Affected building notices and building product rectification orders

- (1)The land to which the certificate relates is not subject to any affected building notice of which Council is aware.
- (2) (a) The land to which the certificate relates is not subject to any building product rectification order of which Council is aware and has not been fully complied with.
- (b) The land to which the certificate relates is not subject to any notice of intention to make a building product rectification order of which Council is aware and is outstanding.

**Note.** The following matters are prescribed by section 59 (2) of the <u>Contaminated Land</u> Management Act 1997 as additional matters to be specified in a planning certificate:

(a) The land to which the certificate relates **is not** declared to be **significantly contaminated land** within the meaning of that act as at the date when the certificate is issued.

- (b) The land to which the certificate relates **is not** subject to a **management order** within the meaning of that act as at the date when the certificate is issued.
- (c) The land to which the certificate relates **is not** the subject of an **approved voluntary management proposal** within the meaning of that act at the date the certificate is issued.
- (d) The land to which the certificate relates **is not** the subject of an **ongoing maintenance order** within the meaning of that act as at the date when the certificate is issued.
- (e) As at the date when the certificate is issued, Council **has not** identified that a **site audit statement** within the meaning of that act has been received in respect of the land the subject of the certificate.

## PLANNING CERTIFICATE SECTION 10.7 (2) INFORMATION:

Information provided in accordance with planning certificate section 10.7 (2) has been taken from council's records and advice from other authorities but council disclaims all liability for any omission or inaccuracy in the information. Specific inquiry should be made where doubt exists.

# PLANNING CERTIFICATE UNDER SECTION 10.7 (5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

PLANNING CERTIFICATE SECTION 10.7 (5) ADVICE is current as at 12:00 noon two working days prior to the date of issue of this certificate. The following matters have been considered & details provided where information exists: easements in favour of council; parking permit scheme; heritage floor space restrictions; low-rental residential building; foreshore building line; tree preservation order.

#### **Contaminated Land Potential:**

Council records do not have sufficient information about the uses (including previous uses) of the land which is the subject of this section 149 certificate to confirm that the land has not been used for a purpose which would be likely to have contaminated the land. Parties should make their own enquiries as to whether the land may be contaminated.

#### **Hazard Risk Restriction:**

The City of Sydney Local Environmental Plan 2012 incorporates Acid Sulfate soil maps. Development on the land identified in those maps should have regard to Division 4 clause 7.16 of the LEP.

#### **Construction Noise and View Loss Advice:**

Intending purchasers are advised that the subject property may be affected by construction noise and loss or diminution of views as a result of surrounding development.

#### **City of Sydney Tree Preservation Order 2004 (TPO)**

This order applies to all land where South Sydney Local Environmental Plan 1998 applies and the City of Sydney Council or the Central Sydney Planning Committee is the relevant consent authority under the *Environmental Planning & Assessment* Act 1979. Contact Council's Contract and Asset Management section for more information.

# **Outstanding Notice & Order information**

In relation to this property, there **is not** an outstanding Order or Notice of Intention to issue an Order relating to Fire Safety (being an Order or Notice of Intention to issue an Order of type 6, 10, 11 under Section 121B of the Environmental Planning and Assessment Act, 1979). Further information about the Order or Notice of Intention to issue an Order may be obtained by applying for a certificate under Section 121ZP of the Environmental Planning and Assessment Act and Section 735A of the Local Government Act.

In relation to this property, there **is not** an outstanding Order or Notice of Intention to issue an Order (being an Order or Notice of Intention to issue an Order of a type other than relating to fire safety). Further information about the Order or Notice of Intention to issue an Order may be obtained by applying for a certificate under Section 121ZP of the Environmental Planning and Assessment Act and Section 735A of the Local Government Act.

#### **Residential & Visitor Parking Permit Schemes**

The City of Sydney co-ordinates a Resident Permit Parking Scheme and a Visitor Permit Parking scheme. This property may be restricted from participating in either scheme. Eligibility may change after the date of this certificate, as parking supply and other traffic demands change. For more information contact Council's call centre on 9265 9333.

#### **ADVICE FROM OTHER BODIES**

Advice provided in accordance with planning certificate section 10.7 (5) is supplied in good faith. Council accepts no liability for the validity of the advice given. (see section 10.7 (6) of the Environmental Planning and Assessment Act, 1979).

For information regarding outstanding notices and orders a CERTIFICATE FOR OUTSTANDING NOTICES OF INTENTION AND/OR AN ORDER UNDER SECTION 735A OF THE LOCAL GOVERNMENT ACT, 1993 AND SECTION 121ZP OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979 may be applied for at Sydney City Council.

Planning certificate section 10.7 (2), local planning controls are available for inspection at the following locations:

#### **General Enquiries:**

Telephone: 02 9265 9333 Facsimile: 02 9265 9415

#### **Town Hall House**

Level 2 Town Hall House 456 Kent Street Sydney 8am – 6pm Monday - Friday

#### **Glebe Customer Service Centre**

Glebe Library 186 Glebe Point Road Glebe 9am – 5pm Monday – Friday

## **Neighbourhood Service Centre Kings Cross**

50 Darlinghurst Road Potts Point 9am – 5pm, Monday – Friday 9am – 12pm Saturday

## **Neighbourhood Service Centre Redfern**

158 Redfern Street Redfern 9am-5pm Monday – Friday 9am – 12 Noon Saturday

### **Green Square Customer Service Centre**

The Tote 100 Joynton Avenue Zetland 10am-6pm Monday – Friday

State planning controls are available for inspection at the following locations:

**Sydney Harbour Foreshore Authority** (former Sydney Cove Authority and Darling Harbour Authority)
Level 6
66 Harrington Street

The Rocks

# **Department of Planning & Infrastructure Information Centre**

23-33 Bridge Street, Sydney NSW 2000

Where planning certificate section 10.7 (5) matters are supplied, complete details are available by writing to:
Chief Executive Officer
City of Sydney
G.P.O. Box 1591
Sydney NSW 2000

**End of Document** 

## **Grant Russell**

From: Peri Aria < paria@cityofsydney.nsw.gov.au>
Sent: Wednesday, 21 March 2018 7:23 AM

To: Grant Russell

Subject: RE: Informal Access to Information Request - Darlington Public School

**Categories:** Filed by Newforma

Hi Grant,

In response, I am unable to locate any information you requested in our database.

You may need to contact the Minister of Education Training & Youth Affairs or NSW Planning to obtain further information.

Regards,

Peri Aria Information Access Coordinator Data & Information Mgt



Telephone: +612 9246 7604 cityofsydney.nsw.gov.au

From: Grant Russell < Grant.Russell@douglaspartners.com.au>

Sent: Friday, 16 March 2018 2:07 PM

**To:** City of Sydney < <a href="mailto:council@cityofsydney.nsw.gov.au">council@cityofsydney.nsw.gov.au</a>>

Subject: Informal Access to Information Request - Darlington Public School

To whom it may concern,

Please find attached Informal Access to Information Request and letter of authorisation from site (Darlington Public School) owner to apply. We are basically after any information regarding development applications / consent and any information regarding potentially contaminating activities occurring on or near to site.

Regards

Grant Russell | Environmental Scientist

Douglas Partners Pty Ltd | ABN 75 053 980 117 | www.douglaspartners.com.au

18 Waler Crescent Smeaton Grange NSW 2567

P: 02 4647 0075 | F: 02 4646 1886 | M: 0418 116 545 | E: Grant.Russell@douglaspartners.com.au





Grant

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# Appendix F

Data Quality Objectives and Site Assessment Criteria



# Appendix F - 1 Data Quality Objectives

The PSI has been devised broadly in accordance with the seven step data quality objective (DQO) process which is provided in Appendix B, Schedule B2 of the *National Environment Protection* (Assessment of Site Contamination) Measure 1999 as amended 2013 (NEPC, 2013). The DQO process is outlined as follows:

#### F1.1 State the Problem

Redevelopment/upgrading works are proposed for the primary school and preschool located at the site. Desktop studies have identified the following potentially contaminating activities occurring onsite that have the potential to impact surface soils at the site:

- Current and former structures and sheds onsite (hazardous building materials);
- Filling of areas with material of an unknown origin;
- Current and former structures and sheds onsite (chemical and fuel storage); and
- Presence of a timber power pole onsite.

The "problem" to be addressed is the extent and nature of potential contamination at the site and whether the site is suitable for the proposed development.

The objectives of the investigation are as follows:

 Assess the contamination status of the site and the suitability of the site, from a contamination standpoint, for the proposed redevelopment/upgrading works and continued use of the site as a primary school and preschool.

### F1.2 Identify the Decision/Goal of the Study

The suitability of the site for the proposed redevelopment/upgrading works and continued primary school/preschool use was assessed based on the findings of the site walkover and a comparison of the analytical results for contaminants of potential concern (COPC) with the adopted site assessment criteria (SAC). The adopted SAC are provided in Section G2 below.

Based on the past land use, the main COPC are expected to be total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), organochlorine pesticides (OCP), heavy metals and asbestos. Other commonly found contaminants which may be present include phenols, organophosphate pesticides (OPP) and polychlorinated biphenyls (PCB).

The following specific decisions were considered as part of the PSI:

- Did field observation and analytical results identify potential contamination sources (AEC) which were not included in the preliminary CSM?
- Were COPC present in soil at concentrations that pose a potential risk to identified receptors?
- Is the data sufficient to make a decision regarding the abovementioned risks, the suitability of the site for the proposed development?



- Does contamination at the site, if encountered, trigger the Duty to Report requirements under the CLM Act 1997?
- Are there any off-site migration issues that need to be considered?

## F1.3 Identify Information Inputs

Inputs into the decisions are as follows:

- Review of regional geology, topography and hydrogeology information;
- Review of site history information;
- Completion of a site inspection;
- Soil samples were collected in the immediate vicinity of identified potential sources of contamination (AEC) across the Site from a total of nine boring locations and one surface soil sample location;
- The lithology of the Site as described in the bore logs (Appendix H);
- Field and laboratory QA/QC data to assess the suitability of the environmental data for the PSI (Appendix K);
- All analysis was undertaken at a NATA accredited laboratory; and
- Laboratory reported concentrations of contaminants of concern were compared with the NEPC (2013) criteria as discussed in Section F2.

## F1.4 Define the Study Boundaries

The site is located at 417 Abercrombie Street, Darlington NSW within the local government area of Council of the City of Sydney. The site covers an approximate total area of 0.72 hectares and is comprised of the following two lots:

- Lot 592 Deposited Plan 752049; and
- Lot 100 Deposited Plan 623500.

The Site location and boundaries are shown on Drawing 1, Appendix A.

The investigation was undertaken to a maximum depth of 3.2 m below ground level (bgl) across the Site.

Field investigations were undertaken on 17 March 2018 by a DP Environmental Scientist.



## F1.5 Develop the Analytical Approach (or decision rule)

The information obtained during the assessment was used to characterise the Site in terms of contamination issues and risk to human health and the environment. The decision rules used in characterising the site were as follows:

- The adopted SAC was the NSW Environment Protection Authority (EPA) endorsed criteria; and
- The contaminant concentrations in soil were compared to the adopted SAC to determine whether further investigation or remedial action was required.

Field and laboratory test results were considered useable for the assessment after evaluation against the following data quality indicators (DQIs):

- Precision a measure of variability or reproducibility of data;
- Accuracy a measure of closeness of the data to the 'true' value;
- Representativeness the confidence (qualitative) of data representativeness of media present on site;
- Completeness a measure of the amount of usable data from a data collection activity; and
- Comparability the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event.

The specific limits are outlined in the data QA/QC procedures and results (Appendix K).

#### F1.6 Specify the Performance or Acceptable Criteria

Decision errors for the respective COPC for fill and natural soils are:

- 1. Deciding that fill and natural soil at the Site exceeds the adopted SAC when they truly do not; and
- Deciding that fill and natural soil at the Site is within the adopted SAC when they truly do not.

Decision errors for the PSI were minimised and measured by the following:

- The sampling regime targeted each stratum identified to account for site variability;
- Sample collection and handling techniques were in accordance with DP's Field Procedures
   Manual:
- Samples were prepared and analysed by a NATA-accredited laboratory with the acceptance limits for laboratory QA/QC parameters based on the laboratory reported acceptance limits and those stated in NEPC (2013);
- The analyte selection is based on the available site history, past site activities and site features.
   The potential for contaminants other than those proposed to be analysed is considered to be low;
- The SAC were adopted from established and NSW EPA endorsed guidelines. The SAC have risk probabilities already incorporated; and
- A NATA accredited laboratory using NATA endorsed methods are used to perform laboratory analysis. Where NATA endorsed methods are not used, the reasons are stated. The effect of using non-NATA methods on the decision making process are explained.



## F1.7 Optimise the design for obtaining data

Sampling design and procedures that were implemented to optimise data collection for achieving the DQOs included the following;

- A NATA accredited laboratory using NATA endorsed methods were used to perform laboratory analysis;
- Additional soil samples were collected but kept 'on hold' pending details of initial analysis so that they could be analysed if further delineation was required; and
- Adequately experienced environmental scientists/engineers were chosen to conduct field work and sample analysis interpretation.

## Appendix F - 2 - Site Assessment Criteria

The Site Assessment Criteria (SAC) applied in the current investigation are informed by the preliminary CSM which identified human and environmental receptors to potential contamination on the site (refer to Section 5). Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising investigation and screening levels as per Schedule B1, *National Environment Protection (Assessment of Site Contamination) Measure* 1999, as amended 2013 (NEPC, 2013).

The investigation and screening levels applied in the current investigation comprise levels adopted for a recreational land use scenario with garden/accessible soil which includes childcare centres, preschools and primary schools.

#### F2.1 Health Investigation and Screening Levels

The generic Health Investigation Levels (HILs) and Health Screening Levels (HSLs) are considered to be appropriate for the assessment of human health risk associated with contamination at the site. The adopted soil HILs and HSLs for the potential contaminants of concern are presented in Table F2, with inputs into their derivation shown in Table F1.

As shown in Table F2 the adopted HSLs are based on a potential vapour intrusion pathway, as identified in the CSM. Although the CSM also identifies a direct contact pathway as well as construction worker receptors, the corresponding HSLs are significantly higher than those for the vapour intrusion pathway and are therefore not drivers for further assessment and/or remediation. As such the direct contact and intrusive maintenance worker HSLs have not been listed.



Table F1: Inputs to the Derivation of HSLs

Variable	Input	Rationale
Potential exposure pathway	Inhalation of vapours	Potential exposure pathways
Soil Type	Sand and sandy clay	Dominant soil type in surface soils (see Test Pit Logs – Appendix G)
Depth to contamination	0 m to <1 m	Potential contamination sources likely to impact surface soils

Table F2: HIL and HSL in mg/kg Unless Otherwise Indicated

Contaminan	its	HIL- A	HSL- A & B
	Arsenic	100	-
<u> </u>	Cadmium	20	-
-	Chromium (VI)	100	-
	Copper	6000	-
Metals	Lead	300	-
=	Mercury (inorganic)	40	-
<u> </u>	Nickel	400	-
<u> </u>	Zinc	7400	-
	Benzo(a)pyrene TEQ <sup>1</sup>	3	-
PAH	Total PAH	300	-
=	Naphthalene	-	4
	C6 - C10 (less BTEX) [F1]	-	40
	>C10-C16 (less Naphthalene) [F2]	-	230
TRH	>C16-C34 [F3]	-	-
	>C34-C40 [F4]	-	-
	Benzene	-	0.6
DIEV	Toluene	-	390
BTEX	Ethylbenzene	-	NL <sup>3</sup>
	Xylenes	-	95



Contaminants		HIL- A	HSL- A & B
	Aldrin + Dieldrin	6	-
	Chlordane	50	-
	DDT+DDE+DDD	240	-
	Endosulfan	270	-
ОСР	Endrin	10	-
	Heptachlor	6	-
	HCB	10	-
	Methoxychlor	300	-
ОРР	Chlorpyrifos	160	-
·	PCB <sup>2</sup>	1	-

#### Notes:

- 1 Sum of carcinogenic PAH
- 2 Non dioxin-like PCBs only.
- The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

## F2.2 Ecological Investigation Levels

Ecological Investigation Levels (EILs) and Added Contaminant Limits (ACLs), where appropriate, have been derived in NEPC (2013) for only a short list of contaminants comprising As, Cu, Cr (III), DDT, naphthalene, Ni, Pb and Zn. The adopted EILs, derived using the *Interactive (Excel) Calculation Spreadsheet* (Standing Council on Environment and Water (SCEW) website (<a href="http://www.scew.gov.au/node/941">http://www.scew.gov.au/node/941</a>) are shown in the following Table F4, with inputs into their derivation shown on Table F3.

Table F3: Inputs to the Derivation of EILs

Variable	Input	Rationale
Age of contaminants	"Aged" (>2 years)	Given the potential sources of soil contamination are from historic use, the contamination is considered as "aged" (>2 years);
рН	7.2	2 selected samples were tested for pH. The average pH value has been used as an initial screening.
CEC	18 cmolc/kg	2 selected samples were tested for CEC. The average CEC value has been used as an initial screening.



Variable	Input	Rationale
Clay content	10 %	Conservative value for initial screen
Traffic volumes	high	The Site is considered to be located within a high traffic area
State / Territory	New South Wales	-

Table F4: EIL in mg/kg

	Analyte	EIL
Metals	Arsenic	100
	Copper	230
	Nickel	250
	Chromium III	410
	Lead	1100
	Zinc	760
PAH	Naphthalene	170
ОСР	OCP DDT	

# F2.3 Ecological Screening Levels

Ecological Screening Levels (ESLs) are used to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene to terrestrial ecosystems. The adopted ESLs, based on a fine soil type are shown in the following Table F5.

Table F5: ESL in mg/kg

	Analyte	ESL <sup>1</sup>	Comments
TRH	C6 – C10 (less BTEX) [F1]	180*	All ESLs are low reliability apart from
	>C10-C16 (less Naphthalene) [F2]	120*	those marked with *  which are moderate
	>C16-C34 [F3]	300	reliability
	>C34-C40 [F4]	2800	
BTEX	Benzene	50	
	Toluene	85	
	Ethylbenzene	70	
	Xylenes	105	
PAH	Benzo(a)pyrene	0.7	



# **F2.4 Management Limits**

In addition to appropriate consideration and application of the HSLs and ESLs, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- · Fire and explosion hazards; and
- Effects on buried infrastructure e.g. penetration of, or damage to, in-ground services.

The adopted management limits, based on a fine soil type (Section 11.1), are shown in the following Table F6.

Table F6: Management Limits in mg/kg

	Analyte	Management Limit
TRH $C_6 - C_{10} (F1)^{\#}$		800
	>C <sub>10</sub> -C <sub>16</sub> (F2) <sup>#</sup>	1000
	>C <sub>16</sub> -C <sub>34</sub> (F3)	3500
	>C <sub>34</sub> -C <sub>40</sub> (F4)	10 000

<sup>#</sup> Separate management limits for BTEX and naphthalene are not available hence these have not been subtracted from the relevant fractions to obtain F1 and F2

#### F2.5 Asbestos in Soil

NEPC (2013) defines the various asbestos types as follows:

**Bonded ACM:** Asbestos containing material which is in sound condition, bound in a matrix of cement or resin, and cannot pass a 7 mm x 7 mm sieve.

**FA:** Fibrous asbestos material including severely weathered cement sheet, insulation products and woven asbestos material. This material is typically unbonded or was previously bonded and is now significantly degraded and crumbling.

**AF:** Asbestos fines including free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

Health Screening Levels (HSLs) for asbestos in soil, which are based on likely exposure levels for different scenarios, have been adopted in NEPC (2013) from the Western Australian Department of Health (WA DoH) publication Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia 2009 (WA DoH 2009).

On the basis of the proposed land use, and in accordance with Table 7, Schedule B1, NEPC (2013) the following asbestos HSLs have been adopted:



# Table F6: Health Screening Levels for Asbestos Contamination in Soil (% w/w)

Form of Asbestos	HSL
Bonded ACM	0.01%
FA and AF	0.001 %
All Forms of Asbestos	No visible asbestos for surface soil

# Appendix G

Bore Hole Logs

**CLIENT:** Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

LOCATION: 417 Abercrombie Street, Darlington, NSW

**SURFACE LEVEL:** 32.7 mAHD

**EASTING:** 332592 **NORTHING:** 6248235

**NORTHING**: 6248235 **DIP/AZIMUTH**: 90°/--

BORE No: 1

**PROJECT No:** 92277.00

**DATE:** 17/3/2018 **SHEET** 1 OF 1

$\overline{}$				Out of Out of							
	Donth	Description	hic				& In Situ Testing	_ <u> </u>	Dynamic Penetrometer Test (blows per 150mm)		
R	Depth (m)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water			
		Strata	0	T	De	Sar	Comments			5 10	15 20
		FILLING - brown sandy clayey silt with some roots and gravel		E	0.2						
32	0.5	FILLING - grey mottled red silty clay, MC <pl< td=""><td></td><td>D</td><td>0.5</td><td></td><td></td><td></td><td><b>L</b></td><td></td><td></td></pl<>		D	0.5				<b>L</b>		
	1 1.0	FILLING - grey mottled light brown sandy silty clay with very low strength, highly weathered shale bands		D	1.0				-1		
	1.5	SILTY CLAY - stiff to hard, brown silty clay with a trace of ironstone gravel, MC <pl< td=""><td></td><td>D</td><td>1.5</td><td></td><td></td><td></td><td>-</td><td></td><td></td></pl<>		D	1.5				-		
3	2	- becoming red mottled grey below 2.0m		D	2.0				-2		
		- with iron indurated bands below 2.5m		D	2.5						
: : 	3 3.0	Bore discontinued at 3.0m - limit of investigation		D	—3.0—				3		
59									-		

**RIG:** Kubota KX018-4 1.7t excavator **TYPE OF BORING:** 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SIT D IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
W Water seep
W Water level

LECEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

☐ Sand Penetrometer AS1289.6.3.3 ☐ Cone Penetrometer AS1289.6.3.2



**CLIENT:** Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

LOCATION: 417 Abercrombie Street, Darlington, NSW

**SURFACE LEVEL:** 33.7 mAHD

**EASTING**: 332591 **NORTHING**: 6248258 **DIP/AZIMUTH**: 90°/-- BORE No: 2

**PROJECT No:** 92277.00

**DATE**: 17/3/2018 **SHEET** 1 OF 1

		Docariotica	0	Sampling & In Situ Testing			& In Situ Testing		
R	Depth	Description of	Graphic Log	o o				Water	Dynamic Penetrometer Test (blows per 150mm)
	(m)	Strata	Gra	Type	Depth	Sample	Results & Comments	>	5 10 15 20
-	. 0.2 -	FILLING - brown sandy clayey silt with some gravel and roots  FILLING - brown sandy silty clay with gravel and crushed brick gravel, MC <pl, dark="" fill<="" gravel="" in="" like="" noted="" slag="" td="" was=""><td></td><td>E</td><td>0.2</td><td>0,</td><td></td><td></td><td></td></pl,>		E	0.2	0,			
		brick gravel, MC <pl, dark="" fill<="" gravel="" in="" like="" noted="" slag="" td="" was=""><td></td><td>B D</td><td>0.4 0.5</td><td></td><td></td><td></td><td></td></pl,>		B D	0.4 0.5				
33	· · ·			D	1.0				-1
-	- 1 1.0 - - -	SILTY CLAY - stiff to hard, brown and red silty clay with some ironstone gravel, MC <pl< td=""><td></td><td></td><td>1.0</td><td></td><td></td><td></td><td></td></pl<>			1.0				
32		- becoming grey mottled red below 1.7m		D	1.5				
	-2			D	2.0				- -2 -
31				D	2.5				
	3.0 - 3 3.0 -	Bore discontinued at 3.0m - limit of investigation		D	-3.0-				3
30									

**RIG:** Kubota KX018-4 1.7t excavator **TYPE OF BORING:** 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SIT D IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
W Water seep
W Water level

LECEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

□ Sand Penetrometer AS1289.6.3.3 □ Cone Penetrometer AS1289.6.3.2



**CLIENT:** Billard Leece Partnership Pty Ltd PROJECT: Darlington Public School Upgrade

**LOCATION:** 417 Abercrombie Street, Darlington, NSW

**SURFACE LEVEL:** 33.3 mAHD

**EASTING**: 332571 **PF** 

NORTHING: 6248261 DIP/AZIMUTH: 90°/-- BORE No: 3

**PROJECT No:** 92277.00

**DATE:** 17/3/2018 **SHEET** 1 OF 1

П			Description	U		Sam	pling a	& In Situ Testing						
చ	Dep (m	oth	of	Graphic Log	e				Water	Dynamic Penetrometer Test (blows per 150mm)				
	(111)	"	Strata	ي ا	Туре	Depth	Sample	Results & Comments	>	5 10 15 20				
			FILLING - brown clayey silt (topsoil)											
Ħ		0.1	FILLING - brown clayey sand and silty clay with some sandstone and basalt gravel	XX						<b>   </b>				
	-		sandstone and basalt gravel		Е	0.2								
-8	-			$\bowtie$										
Ħ	•				D/E	0.5								
	•	0.5	FILLING - grey brown clayey sand with some gravel and a trace of anthropogenics comprising crushed brick gravel,		D/E	0.5								
	•		dry											
	-			$\otimes$										
	-													
		0.9	SANDSTONE - extremely low strength, extremely weathered, grey sandstone		D_	4.0								
	- 1	1.0	Bore discontinued at 1.0m		—U—	—1.0—								
	_		- refusal on very low to low strength sandstone											
2														
32														
	_													
	_													
	-2									-2				
-25	-													
[ ]														
	-													
	-													
	-3									-3				
	-													
-8														
} }	-													
} }	-													
	-													
	-													
Ш														

**RIG:** Kubota KX018-4 1.7t excavator **TYPE OF BORING:** 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SIT D IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
W Water seep
W Water level

LEGEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

□ Sand Penetrometer AS1289.6.3.3 □ Cone Penetrometer AS1289.6.3.2



**CLIENT:** Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

LOCATION: 417 Abercrombie Street, Darlington, NSW

**SURFACE LEVEL:** 34.5 mAHD

**EASTING**: 332549 **NORTHING**: 6248237 **DIP/AZIMUTH**: 90°/-- BORE No: 4

**PROJECT No:** 92277.00

**DATE**: 17/3/2018 **SHEET** 1 OF 1

		$\overline{}$							1						
	Depth		Description	Graphic Log				& In Situ Testing	ē	Dynamic Penetrometer Test					
씸	(m)	'	of	irap Loc	Туре	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)					
Ц		$\perp$	Strata		É,	۵	Sal	Comments		5 10 15 20					
			CONCRETE	\(\cappa_{\cappa\cappa_{\cappa\cappa_{\cappa\cappa_{\cappa\cappa_{\cappa\cappa_{\cappa\cappa\cappa_{\cappa\c											
	0.12	2	FILLING - red, brown and grey silty clay with some gravel		Е	0.2									
	-		MC>PL			0.2				[ <b>L</b>					
	-			$ \rangle\rangle\rangle$											
Ħ	-		- becoming grey below 0.4m												
34	-			$\bowtie$	D/E	0.5									
ŀŀ				$\bowtie$						<u> </u>					
} }	-									}					
} }	-			$\otimes$											
} }	-		becoming brown with a trace of arrished coronice							-					
} }	- 1		- becoming brown with a trace of crushed ceramics (gravel-sized) below 0.9m	$\langle \rangle \rangle$	D/E	1.0				-1					
	-			$\langle \rangle \rangle$											
				$\langle \rangle \rangle$											
_	4	_			D	1.5									
33	1.5	5	SILTY CLAY - stiff to hard, brown silty clay with a trace of ironstone gravel, MC <pl< td=""><td></td><td>ן ט</td><td>1.5</td><td></td><td></td><td></td><td></td></pl<>		ן ט	1.5									
ľ	-		ironstone gravel, MC <pl< td=""><td><math>\mathbb{Z}</math></td><td></td><td></td><td></td><td></td><td></td><td></td></pl<>	$\mathbb{Z}$											
Ħ	-			$\mathbb{Z}$											
H	-														
} }	-									<u> </u>					
} }	-2				D	2.0				-2					
} }										- : : : :					
} }	-									-					
	-														
32					D	2.5									
			<ul> <li>becoming grey mottled red with iron indurated bands below 2.5m</li> </ul>			2.0									
			500W 2.5111												
	-														
Ħ															
Ħ	-3 3.0	아	Bore discontinued at 3.0m		—D—	-3.0-				3					
ŀŀ	-		- limit of investigation												
} }	-														
} }	-									<u> </u>					
} }										<u> </u>					
-2-	-														
} }	-														
	_														
		_								<del> </del>					

**RIG:** Kubota KX018-4 1.7t excavator **TYPE OF BORING:** 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
U Water sample
E Environmental sample

SAMPLING & IN SII D LESTINC
G as sample
P Piston sample
U Tube sample (x mm dia.)
W Water sample
W Water sample
W Water level

LEGEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

□ Sand Penetrometer AS1289.6.3.3 ⊠ Cone Penetrometer AS1289.6.3.2



**CLIENT:** Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

LOCATION: 417 Abercrombie Street, Darlington, NSW

SURFACE LEVEL: 34.9 mAHD

**EASTING**: 332546

**NORTHING**: 6248279 **DIP/AZIMUTH**: 90°/--

**BORE No:** 5

**PROJECT No:** 92277.00

**DATE**: 17/3/2018 **SHEET** 1 OF 1

		1		1				0.1.00 =						
	De	epth	Description	Graphic Log				& In Situ Testing	ē	Dynamic Penetrometer Test				
R	(n	n)	of	iap Log	Туре	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)				
Ц			Strata	0	Ĺ	۵	Sar	Comments		5 10 15 20				
		0.07	ASPHALTIC CONCRETE											
			FILLING - brown clayey sandy silt with some gravel, moist											
11	-	0.2	FILLING - brown and grey silty clay, MC <pl, dark="" fill<="" gravel="" in="" like="" noted="" slag="" td="" was=""><td></td><td>Е</td><td>0.2</td><td></td><td></td><td></td><td>†   <b> </b>      </td></pl,>		Е	0.2				†   <b> </b>				
	-		like gravel was noted in fill	$\otimes$						├ <b>:</b> ┌┛: : :				
} }	-									├ : <b> </b> : :				
} }	-			$\otimes$	D/E	0.5								
} }	-													
	-			$\rangle\rangle$										
	_									:ካ : :				
34	_			$\langle \rangle \rangle$										
	-1	1.0		XX	D,	1.0								
	•	1.0	SILTY CLAY - stiff to hard, light brown and grey silty clay with a trace of ironstone gravel, MC <pl< td=""><td>1/1</td><td>رت</td><td>1.0</td><td></td><td></td><td></td><td></td></pl<>	1/1	رت	1.0								
			with a trace of ironstone graver, MCSPL											
	-				U <sub>50</sub>									
11	-									† ! ! !				
1	-					1 45								
<b> </b>	-				D	1.45 1.5								
} }	-									-				
} }	-									-				
	-		haransin na anna an attiad timbé haransa hadan 4 Ona							-				
33	-		- becoming grey mottled light brown below 1.8m											
	-2				D	2.0				-2				
	_													
	_													
			- becoming grey mottled red below 2.4m											
Ħ	-				D	2.5								
	-													
<b>†</b> †	-													
<b> </b>	-													
32	-									· : : :				
} }	-3	3.0	Bore discontinued at 3.0m	1//	_D_	-3.0-				3				
} }	-		- limit of investigation							-				
	-													
	-													
	_													
	_													
	_													
	•													
	-													
31	-													
Ш														

RIG: Kubota KX018-4 1.7t excavator

TYPE OF BORING: 150mm SFA
WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SIT D IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level

LEGEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

□ Sand Penetrometer AS1289.6.3.3 □ Cone Penetrometer AS1289.6.3.2



CLIENT: Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

417 Abercrombie Street, Darlington, NSW LOCATION:

**SURFACE LEVEL:** 35.7 mAHD

**EASTING:** 332540 **NORTHING**: 6248306

**PROJECT No: 92277.00 DATE:** 17/3/2018 **DIP/AZIMUTH:** 90°/--SHEET 1 OF 1

**BORE No:** 6

П						Sa~	nlina	& In Situ Testing		
牊	De	epth	Description	phic g				a in Situ resting	Water	Dynamic Penetrometer Test (blows per 150mm)
۳	(n	n)	of Strata	Graphic Log	Type	Depth	Sample	Results & Comments	W	
-	-		FILLING - brown clayey sandy silt with some roots and gravel including crushed terracotta gravel, MC <pl< th=""><th></th><th>E</th><th>0.2</th><th>_ ഗ് _</th><th></th><th></th><th>5 10 15 20</th></pl<>		E	0.2	_ ഗ് _			5 10 15 20
35	-				D	0.5				
-	- - 1 -	1.0	SILTY CLAY - stiff to hard, brown mottled red silty clay with some ironstone gravel, MC <pl< td=""><td></td><td>D</td><td>1.0</td><td></td><td></td><td></td><td>-1</td></pl<>		D	1.0				-1
-	-		- becoming red mottled grey and light brown below 1.3m		D	1.5				
34	-2	2.0	SHALE - extremely low strength, extremely weathered, grey shale		D	2.0				-2
33	-		- with iron indurated bands below 2.5m		D	2.5				
32 ' ' ' '	-3	3.0	Bore discontinued at 3.0m - limit of investigation	<u> </u>	D	3.0				3
-	- -									

RIG: Kubota KX018-4 1.7t excavator TYPE OF BORING: 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

**SAMPLING & IN SITU TESTING LEGEND** 

Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level A Auger sample B Bulk sample BLK Block sample Core drilling
Disturbed sample
Environmental sample

LEGEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

☐ Sand Penetrometer AS1289.6.3.3 ☑ Cone Penetrometer AS1289.6.3.2



**CLIENT:** Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

LOCATION: 417 Abercrombie Street, Darlington, NSW

**SURFACE LEVEL:** 40.2 mAHD

**EASTING**: 332560 **NORTHING**: 6248326 **DIP/AZIMUTH**: 90°/-- BORE No: 7

**PROJECT No:** 92277.00

**DATE:** 17/3/2018 **SHEET** 1 OF 1

					Sampling & In Situ Testing					T 1		
	ע	epth	Description	Graphic Log				& In Situ Testing	_ ja	Dynamic Penetrometer Test		
R	(1	m)	of	l rap	Туре	Depth	Sample	Results & Comments	Water	Dynamic Penetrometer Test (blows per 150mm)		
			Strata	0	Ţ	De	Sar	Comments		5 10 15 20		
Г			FILLING - brown clayey silty sand with some gravel, moist									
ŀ	İ									† ! ! !		
-4	-				E	0.2				├ <b> </b> ! ! !		
ŀ	-			$\times$						-		
-	ļ	0.4		$\times$						<del>                                   </del>		
			FILLING - brown sandy silty clay with some gravel and crushed concrete gravel, MC <pl, and="" black="" charcoal="" dark="" fill<="" flecks="" glass="" in="" material="" noted="" of="" td=""><td></td><td>D/E</td><td>0.5</td><td></td><td></td><td></td><td>┆<del>┊</del>╏┋</td></pl,>		D/E	0.5				┆ <del>┊</del> ╏┋		
			black charcoal material noted in fill	$\langle \rangle \rangle$		0.0						
				$\otimes$								
	Ī											
ŀ	ŀ			$\bowtie$								
ŀ	-									† <b>_l</b>		
ŀ	- 1	1.0	SHALE - extremely low strength, extremely weathered,	XXX	D	1.0				-1		
-	-		grey shale							} <b>\</b>		
39-												
										5		
				===								
ľ	Ī				D	1.5				†		
ŀ	-									† ! ! !		
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-	-									ļ		
	-2				D	2.0				-2		
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				<u> </u>						ļ		
	-3	3.0		<u> </u>		-3.0-						
	- 3	3.0	Bore discontinued at 3.0m			-3.0-						
			- limit of investigation									
37	•											
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$\vdash$								1	L			

**RIG:** Kubota KX018-4 1.7t excavator **TYPE OF BORING:** 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

DRILLER: John

**REMARKS:** Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SIT D IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level

LEGEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH

□ Sand Penetrometer AS1289.6.3.3 ⊠ Cone Penetrometer AS1289.6.3.2



**CLIENT:** Billard Leece Partnership Pty Ltd **PROJECT:** Darlington Public School Upgrade

LOCATION: 417 Abercrombie Street, Darlington, NSW

**SURFACE LEVEL:** 40.8 mAHD

**EASTING:** 332586 **NORTHING:** 6248320

**NORTHING**: 6248320 **DIP/AZIMUTH**: 90°/--

BORE No: 8

**PROJECT No:** 92277.00 **DATE:** 17/3/2018

**DATE:** 17/3/2018 **SHEET** 1 OF 1

	_		Description	.je	Sampling & In Situ Testing					Dynamic Penetrometer Test				
R	De (n	pth n)	of	Graphic Log	Туре	Depth	Sample	Results & Comments	Water	(blows per 150mm)				
			Strata  FILLING - brown sandy clayey silt with rootlets and some gravel (topsoil)		1		Sa	Commonto		5 10 15 20				
	-	0.0			E	0.2				[ <b>'</b>				
	_	0.3	FILLING - brown clayey silty sand with some gravel and a trace of crushed concrete gravel, moist			0.4								
ŀ	-				B D/E	0.5								
40	-					0.6								
	- -1 -				D	1.0				-1				
	-	1.5	SILTY CLAY - stiff to hard, grey mottled light brown and red silty clay with some ironstone gravel, MC <pl< td=""><td></td><td>D</td><td>1.5</td><td></td><td></td><td></td><td></td></pl<>		D	1.5								
- 39	- - -2				D	2.0				-2				
-	-		- becoming grey mottled red with iron indurated bands below 2.5m		D	2.5								
38	- - -3	3.0			—D—	-3.0-				3				
-	-	2.0	Bore discontinued at 3.0m - limit of investigation			3.0								
37	-													

**RIG:** Kubota KX018-4 1.7t excavator **TYPE OF BORING:** 150mm SFA

DRILLER: John

LOGGED: LAH CASING: N/A

WATER OBSERVATIONS: No free groundwater observed whilst augering

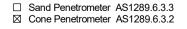
**REMARKS:** Location coordinates are in MGA94 Zone 56.

**SAMPLING & IN SITU TESTING LEGEND** 

A Auger sample
B Bulk sample
B Bulk Slock sample
C Core drilling
D Disturbed sample
E Environmental sample

SAMPLING & IN SIT D IESTING
G Gas sample
P Piston sample
V Water sample (x mm dia.)
W Water sample
Water seep
Water level

LEGEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)





CLIENT: Billard Leece Partnership Pty Ltd PROJECT: Darlington Public School Upgrade

417 Abercrombie Street, Darlington, NSW LOCATION:

SURFACE LEVEL: 34.6 mAHD

**EASTING**: 332587 **NORTHING**: 6248287 **DIP/AZIMUTH:** 90°/-- **PROJECT No: 92277.00 DATE:** 17/3/2018 SHEET 1 OF 1

**BORE No:** 9

| Depth of Strata  Depth (m)  Depth of Strata  Depth (m)  Depth of Strata  Depth of Sampling & In Situ Testing  Depth of Strata   Dynamic Penetrometer Test (blows per 150mm)  5 10 15 20 |
|--|---|
| FILLING - dark brown clayey silt (topsoil)   |   |
| FILLING - dark brown clayey silt (topsoil)  D1/E 0.2   |   |
|  |   |
|  |   |
|  |   |
| FILLING - brown clayey sand with gravel, some silty clay and crushed brick gravel, flecks of charcoal type material observed in clay clumps  |   |
| observed in clay clumps  B  B  D/E  0.5  |   |
| [-3] D/E 0.5 0.6   |   |
|  |   |
|  |   |
|  |   |
| 1 1.0 D 1.0  |   |
| SILTY CLAY - stiff to hard, red mottled grey silty day with  |   |
|  |   |
| 1.25   |   |
|  |   |
| D 1.5  |   |
| - becoming grey mottled red below 1.5m   |   |
|  |   |
|  |   |
|  |   |
| -2 D 20  | -2  |
|  |   |
|  |   |
|  |   |
|  |   |
| D 2.5  |   |
|  |   |
|  |   |
|  |   |
|  |   |
| Bore discontinued at 3.0m  | 3   |
| - limit of investigation   |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |

DRILLER: John RIG: Kubota KX018-4 1.7t excavator TYPE OF BORING: 150mm SFA

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. D1 is the duplicate sample of E at 0.2m

☐ Sand Penetrometer AS1289.6.3.3 ☑ Cone Penetrometer AS1289.6.3.2

**SAMPLING & IN SITU TESTING LEGEND** A Auger sample B Bulk sample BLK Block sample Core drilling
Disturbed sample
Environmental sample

Gas sample
Piston sample
Tube sample (x mm dia.)
Water sample
Water seep
Water level

LECEND
PID Photo ionisation detector (ppm)
PL(A) Point load axial test Is(50) (MPa)
PL(D) Point load diametral test Is(50) (MPa)
pp Pocket penetrometer (kPa)
S Standard penetration test
V Shear vane (kPa)

LOGGED: LAH



# Appendix H

Summary Table H1



Table H1 - Summary of Soil Sampling and Chemical Analysis Results (Results in mg/kg - unless specified)

						Heavy N	Metals					F	PAH				TI	RH			ВТ	EX					OCPs, OP	Ps & PCBs	5			
Sample Location	Sample Depth (m)	Sampling Date	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	B(a)P TEQ	B(a)P	Total PAH	Naphthalene	Phenols	C6-C10 less BTEX [F1]	>C10-C16 (less Naphthalene) [F2]	>C16-C34	>C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Aldrin + dieldrin	Chlordane	DDT + DDE + DDD	Endosulfan	Endrin	Heptachlor	нсв	Methoxychlor	Asbestos
Practical Q	uantitation L	imit (PQL)	4	0.4	1	1	1	0.1	1	1	0.5	0.05	0.1	1	5	25	50	100	100	0.2	0.5	1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Assessment Criteria														-																		
NEPC (201	3) HIL A / H	ISL A & B <sup>2</sup>	100	20	100	6000	300	40	400	7400	3	ND	300	4#	3000	40 #	230#	ND	ND	0.6 #	390 #	NL	95 #	6	50	240	270	10	6	10	300	ND
NEPC (	(2013) EIL	ESL <sup>2</sup>	100	ND	410 ###	230 ###	1100	ND	250 ###	760 ###	ND	0.7 ##	ND	170	ND	180##	120##	300 ##	2800 ##	50 ##	85 ##	70 ##	105 ##	ND	ND	180*	ND	ND	ND	ND	ND	ND
NEPC (2013	3) Managen	nent Limits	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	800	1000	3500	10000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
												Analy	tical Resul	ts of Bor	ring and	Surface	Sample	S														
BH1	0.2	17/03/2018	<4	4	10	28	46	<0.1	7	100	<0.5	0.08	0.79	<0.1	<5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
BH2	0.5	17/03/2018	5	<0.4	16	18	96	0.2	4	210	33	22	250	1.4	<5	<25	<50	1200	330	<0.2	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NAD
BH3	0.2	17/03/2018	6	<0.4	18	15	170	0.1	9	82	<0.5	0.3	3.1	<0.1	<5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
BH4	0.2	17/03/2018	7	<0.4	17	10	24	<0.1	14	24	<0.5	0.1	0.85	<0.1	<5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
BH5	0.2	17/03/2018	4	<0.4	9	48	120	0.3	4	69	57	37	550	3.5	<5	<25	150	2400	360	<0.2	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NAD
BH6	0.2	17/03/2018	10	1	54	120	650	0.6	42	560	7.8	5.1	66	0.3	<5	<25	<50	360	130	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
BH7	0.2	17/03/2018	10	<0.4	22	37	91	0.1	6	63	2.4	1.6	21	0.1	<5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
BH8	0.2	17/03/2018	5	<0.4	11	29	59	<0.1	11	73	0.7	0.5	5.2	<0.1	<5	<25	<50	100	100	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
BH9	0.2	17/03/2018	8	<0.4	17	21	76	<0.1	6	2100	<0.5	0.06	0.85	<0.1	<5	<25	<50	1100	620	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD
Powerpole	0.0 - 0.2	17/03/2018	-	-	-	-	-	-	-	-	<0.5	0.2	1.5	<0.1	-	<25	62	180	150	<0.2	<0.5	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-

Notes

All results in mg/kg on a dry weight basis unless specified

NAD - No Asbestos Detected

ND - Not detected

HIL - Health Investigation Level

<sup>2</sup> The HIL A/ HSL A/EIL / ESLs were based on National Environmental Protection Measures (NEPC) 2013

# HSL A and HSL B assuming silt (0m - <1m depth)

**Bold** - Concentration exceeding SAC

- Not analysed

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$\Delta$	NEII	MIA.	

Laboratory Certificate and Chain of Custody Documentation



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#### **CERTIFICATE OF ANALYSIS 187756**

Client Details	
Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Grant Russell
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details	
Your Reference	92277.00, Darlington Public School Contam
Number of Samples	21 Soil
Date samples received	21/03/2018
Date completed instructions received	21/03/2018

#### **Analysis Details**

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details	
Date results requested by	28/03/2018
Date of Issue	27/03/2018
NATA Accreditation Number 2901	. This document shall not be reproduced except in full.
Accredited for compliance with IS	O/IEC 17025 - Testing. Tests not covered by NATA are denoted with *

#### **Asbestos Approved By**

Analysed by Asbestos Approved Identifier: Jessica Hie Authorised by Asbestos Approved Signatory: Paul Ching

#### **Results Approved By**

Dragana Tomas, Senior Chemist
Jeremy Faircloth, Organics Supervisor
Leon Ow, Chemist
Long Pham, Team Leader, Metals
Nancy Zhang, Assistant Lab Manager
Nick Sarlamis, Inorganics Supervisor
Paul Ching, Senior Analyst
Priya Samarawickrama, Senior Chemist

**Authorised By** 

David Springer, General Manager



vTRH(C6-C10)/BTEXN in Soil						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25	<25	<25	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25	<25	<25	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	92	84	87	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-18
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	Powerpole
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25	<25	<25	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25	<25	<25	<25
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	82	90	84	85

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		187756-19	187756-20	187756-21
Your Reference	UNITS	D1	ТВ	TS
Date Sampled		17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25	[NA]
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25	[NA]
vTPH C <sub>6</sub> - C <sub>10</sub> less BTEX (F1)	mg/kg	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	102%
Toluene	mg/kg	<0.5	<0.5	103%
Ethylbenzene	mg/kg	<1	<1	103%
m+p-xylene	mg/kg	<2	<2	102%
o-Xylene	mg/kg	<1	<1	103%
naphthalene	mg/kg	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<1	<1	[NT]
Surrogate aaa-Trifluorotoluene	%	84	92	102

svTRH (C10-C40) in Soil						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	23/03/2018	22/03/2018	22/03/2018	23/03/2018
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50	<50	<50	<50	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100	730	<100	<100	1,800
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<100	600	<100	<100	810
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50	<50	<50	<50	150
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	150
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	<100	1,200	<100	<100	2,400
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	<100	330	<100	<100	360
Total +ve TRH (>C10-C40)	mg/kg	<50	1,500	<50	<50	2,900
Surrogate o-Terphenyl	%	101	#	95	94	#

svTRH (C10-C40) in Soil						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-18
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	Powerpole
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	23/03/2018	23/03/2018
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50	<50	<50	<50	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	230	<100	<100	340	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	190	<100	110	940	180
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50	<50	<50	<50	62
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	62
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	360	<100	100	1,100	180
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	130	<100	100	620	150
Total +ve TRH (>C10-C40)	mg/kg	490	<50	200	1,700	390
Surrogate o-Terphenyl	%	101	97	96	94	98

svTRH (C10-C40) in Soil		
Our Reference		187756-19
Your Reference	UNITS	D1
Date Sampled		17/03/2018
Type of sample		Soil
Date extracted	-	22/03/2018
Date analysed	-	23/03/2018
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	430
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	1,200
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	1,300
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	770
Total +ve TRH (>C10-C40)	mg/kg	2,100
Surrogate o-Terphenyl	%	94

PAHs in Soil						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Naphthalene	mg/kg	<0.1	1.4	<0.1	<0.1	3.5
Acenaphthylene	mg/kg	<0.1	4.6	0.1	<0.1	17
Acenaphthene	mg/kg	<0.1	0.8	<0.1	<0.1	1
Fluorene	mg/kg	<0.1	2.8	<0.1	<0.1	5.5
Phenanthrene	mg/kg	0.2	28	0.3	<0.1	82
Anthracene	mg/kg	<0.1	8.7	0.1	<0.1	22
Fluoranthene	mg/kg	0.2	39	0.5	0.2	98
Pyrene	mg/kg	0.2	41	0.5	0.2	93
Benzo(a)anthracene	mg/kg	0.1	20	0.3	0.1	48
Chrysene	mg/kg	<0.1	18	0.2	0.1	36
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	33	0.4	0.2	56
Benzo(a)pyrene	mg/kg	0.08	22	0.3	0.1	37
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	12	0.2	<0.1	18
Dibenzo(a,h)anthracene	mg/kg	<0.1	3.6	<0.1	<0.1	6.9
Benzo(g,h,i)perylene	mg/kg	<0.1	16	0.2	<0.1	22
Total +ve PAH's	mg/kg	0.79	250	3.1	0.85	550
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	33	<0.5	<0.5	57
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	33	<0.5	<0.5	57
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	33	<0.5	<0.5	57
Surrogate p-Terphenyl-d14	%	99	119	106	103	115

PAHs in Soil						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-18
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	Powerpole
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Naphthalene	mg/kg	0.3	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	1.4	0.6	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.6	0.2	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	8.0	2.8	0.4	0.1	0.1
Anthracene	mg/kg	2.3	0.8	0.2	<0.1	<0.1
Fluoranthene	mg/kg	12	3.3	0.8	0.2	0.3
Pyrene	mg/kg	11	3.3	0.8	0.3	0.3
Benzo(a)anthracene	mg/kg	5.9	1.7	0.4	<0.1	0.2
Chrysene	mg/kg	4.8	1.5	0.4	<0.1	0.1
Benzo(b,j+k)fluoranthene	mg/kg	8.1	2.5	0.8	<0.2	0.3
Benzo(a)pyrene	mg/kg	5.1	1.6	0.5	0.06	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	2.9	0.9	0.3	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.9	0.3	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	3.4	1.1	0.4	0.1	0.1
Total +ve PAH's	mg/kg	66	21	5.2	0.85	1.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	7.8	2.4	0.6	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	7.8	2.4	0.7	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	7.8	2.4	0.7	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	102	104	96	100

PAHs in Soil		
Our Reference		187756-19
Your Reference	UNITS	D1
Date Sampled		17/03/2018
Type of sample		Soil
Date extracted	-	22/03/2018
Date analysed	-	22/03/2018
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	0.2
Pyrene	mg/kg	0.2
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2
Total +ve PAH's	mg/kg	0.66
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	95

Organochlorine Pesticides in soil						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	23/03/2018	23/03/2018
нсв	mg/kg	<0.1	<1	<0.1	<0.1	<1
alpha-BHC	mg/kg	<0.1	<1	<0.1	<0.1	<1
gamma-BHC	mg/kg	<0.1	<1	<0.1	<0.1	<1
beta-BHC	mg/kg	<0.1	<1	<0.1	<0.1	<1
Heptachlor	mg/kg	<0.1	<1	<0.1	<0.1	<1
delta-BHC	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aldrin	mg/kg	<0.1	<1	<0.1	<0.1	<1
Heptachlor Epoxide	mg/kg	<0.1	<1	<0.1	<0.1	<1
gamma-Chlordane	mg/kg	<0.1	<1	<0.1	<0.1	<1
alpha-chlordane	mg/kg	<0.1	<1	<0.1	<0.1	<1
Endosulfan I	mg/kg	<0.1	<1	<0.1	<0.1	<1
pp-DDE	mg/kg	<0.1	<1	<0.1	<0.1	<1
Dieldrin	mg/kg	<0.1	<1	<0.1	<0.1	<1
Endrin	mg/kg	<0.1	<1	<0.1	<0.1	<1
pp-DDD	mg/kg	<0.1	<1	<0.1	<0.1	<1
Endosulfan II	mg/kg	<0.1	<1	<0.1	<0.1	<1
pp-DDT	mg/kg	<0.1	<1	<0.1	<0.1	<1
Endrin Aldehyde	mg/kg	<0.1	<1	<0.1	<0.1	<1
Endosulfan Sulphate	mg/kg	<0.1	<1	<0.1	<0.1	<1
Methoxychlor	mg/kg	<0.1	<1	<0.1	<0.1	<1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Surrogate TCMX	%	96	102	103	104	108

Organochlorine Pesticides in soil						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-19
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	D1
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
нсв	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	89	90	90	94

Organophosphorus Pesticides						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	23/03/2018	23/03/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<1	<0.1	<0.1	<1
Bromophos-ethyl	mg/kg	<0.1	<1	<0.1	<0.1	<1
Chlorpyriphos	mg/kg	<0.1	<1	<0.1	<0.1	<1
Chlorpyriphos-methyl	mg/kg	<0.1	<1	<0.1	<0.1	<1
Diazinon	mg/kg	<0.1	<1	<0.1	<0.1	<1
Dichlorvos	mg/kg	<0.1	<1	<0.1	<0.1	<1
Dimethoate	mg/kg	<0.1	<1	<0.1	<0.1	<1
Ethion	mg/kg	<0.1	<1	<0.1	<0.1	<1
Fenitrothion	mg/kg	<0.1	<1	<0.1	<0.1	<1
Malathion	mg/kg	<0.1	<1	<0.1	<0.1	<1
Parathion	mg/kg	<0.1	<1	<0.1	<0.1	<1
Ronnel	mg/kg	<0.1	<1	<0.1	<0.1	<1
Surrogate TCMX	%	96	102	103	104	108

Organophosphorus Pesticides						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-19
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	D1
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	89	90	90	94

PCBs in Soil						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	23/03/2018	23/03/2018
Aroclor 1016	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aroclor 1221	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aroclor 1232	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aroclor 1242	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aroclor 1248	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aroclor 1254	mg/kg	<0.1	<1	<0.1	<0.1	<1
Aroclor 1260	mg/kg	<0.1	<1	<0.1	<0.1	<1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Surrogate TCLMX	%	96	102	103	104	108

PCBs in Soil						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-19
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	D1
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	98	89	90	90	94

Acid Extractable metals in soil						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
Arsenic	mg/kg	<4	5	6	7	4
Cadmium	mg/kg	4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	16	18	17	9
Copper	mg/kg	28	18	15	10	48
Lead	mg/kg	46	96	170	24	120
Mercury	mg/kg	<0.1	0.2	0.1	<0.1	0.3
Nickel	mg/kg	7	4	9	14	4
Zinc	mg/kg	100	210	82	24	69

Acid Extractable metals in soil						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-19
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	D1
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
Arsenic	mg/kg	10	10	5	8	12
Cadmium	mg/kg	1	<0.4	<0.4	<0.4	0.5
Chromium	mg/kg	54	22	11	17	11
Copper	mg/kg	120	37	29	21	20
Lead	mg/kg	650	91	59	76	34
Mercury	mg/kg	0.6	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	42	6	11	6	7
Zinc	mg/kg	560	63	73	2,100	3,300

Misc Soil - Inorg						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-19
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	D1
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Inorg - Soil			
Our Reference		187756-1	187756-14
Your Reference	UNITS	BH1 0.2	BH8 0.2
Date Sampled		17/03/2018	17/03/2018
Type of sample		Soil	Soil
Date prepared	-	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018
pH 1:5 soil:water	pH Units	6.9	7.5

CEC			
Our Reference		187756-1	187756-14
Your Reference	UNITS	BH1 0.2	BH8 0.2
Date Sampled		17/03/2018	17/03/2018
Type of sample		Soil	Soil
Date prepared	-	22/03/2018	22/03/2018
Date analysed	-	22/03/2018	22/03/2018
Exchangeable Ca	meq/100g	12	19
Exchangeable K	meq/100g	0.4	0.5
Exchangeable Mg	meq/100g	1.4	2.5
Exchangeable Na	meq/100g	0.10	<0.1
Cation Exchange Capacity	meq/100g	14	22

Moisture						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
Moisture	%	6.9	12	18	12	5.3

Moisture						
Our Reference		187756-11	187756-12	187756-14	187756-16	187756-18
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2	Powerpole
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Date analysed	-	23/03/2018	23/03/2018	23/03/2018	23/03/2018	23/03/2018
Moisture	%	14	13	15	17	28

Moisture		
Our Reference		187756-19
Your Reference	UNITS	D1
Date Sampled		17/03/2018
Type of sample		Soil
Date prepared	-	22/03/2018
Date analysed	-	23/03/2018
Moisture	%	23

Asbestos ID - soils						
Our Reference		187756-1	187756-3	187756-4	187756-6	187756-9
Your Reference	UNITS	BH1 0.2	BH2 0.5	BH3 0.2	BH4 0.2	BH5 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	27/03/2018	27/03/2018	27/03/2018	27/03/2018	27/03/2018
Sample mass tested	g	Approx. 20g	Approx. 35g	Approx. 45g	Approx. 50g	Approx. 50g
Sample Description	-	Brown coarse- grained soil & rocks				
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected				
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils					
Our Reference		187756-11	187756-12	187756-14	187756-16
Your Reference	UNITS	BH6 0.2	BH7 0.2	BH8 0.2	BH9 0.2
Date Sampled		17/03/2018	17/03/2018	17/03/2018	17/03/2018
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	27/03/2018	27/03/2018	27/03/2018	27/03/2018
Sample mass tested	g	Approx. 15g	Approx. 55g	Approx. 15g	Approx. 20g
Sample Description	-	Brown coarse- grained soil & rocks			
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected			
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
	Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
	Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.  Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:-  1. 'EQ PQL'values are assuming all contributing PAHs reported as <pql 'eq="" 2.="" <pql="" actually="" all="" and="" and<="" approach="" are="" as="" assuming="" at="" be="" calculation="" can="" conservative="" contribute="" contributing="" false="" give="" given="" is="" least="" may="" most="" not="" pahs="" positive="" pql.="" present.="" reported="" td="" teq="" teqs="" that="" the="" this="" to="" zero'values="" zero.=""></pql>
	is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL.  3. 'EQ half PQL'values are assuming all contributing PAHs reported as <pql a="" above.<="" and="" approaches="" are="" between="" conservative="" half="" hence="" least="" mid-point="" most="" pql.="" stipulated="" td="" the=""></pql>
	Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
	Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONT	ROL: vTRH	(C6-C10).	BTEXN in Soil			Du		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date extracted	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			23/03/2018	1	23/03/2018	23/03/2018		23/03/2018	23/03/2018
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-016	<25	1	<25	<25	0	94	85
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-016	<25	1	<25	<25	0	94	85
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	80	70
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	88	80
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	98	91
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	101	93
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	101	93
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	94	1	96	90	6	97	86

QUALITY CONT	QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil							Duplicate				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]		
Date extracted	-			[NT]	19	22/03/2018	22/03/2018			[NT]		
Date analysed	-			[NT]	19	23/03/2018	23/03/2018			[NT]		
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-016	[NT]	19	<25	<25	0		[NT]		
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-016	[NT]	19	<25	<25	0		[NT]		
Benzene	mg/kg	0.2	Org-016	[NT]	19	<0.2	<0.2	0		[NT]		
Toluene	mg/kg	0.5	Org-016	[NT]	19	<0.5	<0.5	0		[NT]		
Ethylbenzene	mg/kg	1	Org-016	[NT]	19	<1	<1	0		[NT]		
m+p-xylene	mg/kg	2	Org-016	[NT]	19	<2	<2	0		[NT]		
o-Xylene	mg/kg	1	Org-016	[NT]	19	<1	<1	0		[NT]		
naphthalene	mg/kg	1	Org-014	[NT]	19	<1	<1	0		[NT]		
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	19	84	86	2		[NT]		

QUALITY CO	NTROL: svT	RH (C10	-C40) in Soil		Duplicate Spike				Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date extracted	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	23/03/2018
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-003	<50	1	<50	<50	0	109	116
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-003	<100	1	<100	<100	0	94	90
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-003	<100	1	<100	<100	0	108	#
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-003	<50	1	<50	50	0	109	116
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-003	<100	1	<100	120	18	94	90
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-003	<100	1	<100	<100	0	108	#
Surrogate o-Terphenyl	%		Org-003	103	1	101	100	1	102	108

QUALITY CO	NTROL: svT	RH (C10	-C40) in Soil		Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	22/03/2018	22/03/2018		[NT]	
Date analysed	-			[NT]	19	23/03/2018	23/03/2018		[NT]	
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-003	[NT]	19	<50	<50	0	[NT]	
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-003	[NT]	19	430	550	24	[NT]	
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-003	[NT]	19	1200	1400	15	[NT]	
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-003	[NT]	19	<50	<50	0	[NT]	
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-003	[NT]	19	1300	1700	27	[NT]	
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-003	[NT]	19	770	990	25	[NT]	
Surrogate o-Terphenyl	%		Org-003	[NT]	19	94	94	0	[NT]	

QUALIT	Y CONTRO	L: PAHs	in Soil			Du		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date extracted	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	92	110
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	91
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	0.2	<0.1	67	99	122
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.1	67	90	#
Pyrene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.1	67	92	#
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	96	#
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	0.08	0.06	29	93	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	112	1	99	102	3	115	113

QUALI	TY CONTRO	L: PAHs	in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	22/03/2018	22/03/2018			[NT]
Date analysed	-			[NT]	19	22/03/2018	22/03/2018			[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	19	0.1	0.1	0		[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	19	0.2	0.2	0		[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	19	0.2	0.2	0		[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	19	<0.2	<0.2	0		[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	19	<0.05	0.05	0		[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	19	<0.1	<0.1	0		[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	19	0.2	0.2	0		[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	19	95	94	1		[NT]

QUALITY CON	TROL: Organo	chlorine l	Pesticides in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date extracted	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			23/03/2018	1	22/03/2018	22/03/2018		23/03/2018	23/03/2018
НСВ	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	98	102
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	97
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	90	93
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	81	85
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	84	87
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	112
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	100	113
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	112
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	82	84
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	80	91
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	96	1	96	99	3	116	126

QUALITY C	ONTROL: Organo	chlorine F	Pesticides in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	22/03/2018	22/03/2018			[NT]
Date analysed	-			[NT]	19	23/03/2018	23/03/2018			[NT]
НСВ	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	19	<0.1	<0.1	0		[NT]
Surrogate TCMX	%		Org-005	[NT]	19	94	84	11		[NT]

QUALITY CONT	ROL: Organ	ophosph	orus Pesticides			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date extracted	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			23/03/2018	1	22/03/2018	22/03/2018		23/03/2018	23/03/2018
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	90	112
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	76	87
Dimethoate	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	93	95
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	98	101
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	73	91
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	106	109
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	98	111
Surrogate TCMX	%		Org-008	96	1	96	99	3	110	106

QUALITY CON	ΓROL: Organ	ophospho	orus Pesticides			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	22/03/2018	22/03/2018			[NT]
Date analysed	-			[NT]	19	23/03/2018	23/03/2018			[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	19	<0.1	<0.1	0		[NT]
Surrogate TCMX	%		Org-008	[NT]	19	94	84	11		[NT]

QUALIT	Y CONTRO	L: PCBs	in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date extracted	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			23/03/2018	1	22/03/2018	22/03/2018		23/03/2018	23/03/2018
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	100	105
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	96	1	96	99	3	110	106

QUAI	ITY CONTRO	L: PCBs	in Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	19	22/03/2018	22/03/2018			[NT]
Date analysed	-			[NT]	19	23/03/2018	23/03/2018			[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	19	<0.1	<0.1	0		[NT]
Surrogate TCLMX	%		Org-006	[NT]	19	94	84	11		[NT]

QUALITY CONT	ROL: Acid E	xtractable	e metals in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date prepared	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			23/03/2018	1	23/03/2018	23/03/2018		23/03/2018	23/03/2018
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	109	90
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	4	4	0	102	91
Chromium	mg/kg	1	Metals-020	<1	1	10	11	10	108	91
Copper	mg/kg	1	Metals-020	<1	1	28	28	0	112	127
Lead	mg/kg	1	Metals-020	<1	1	46	46	0	104	110
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	101	100
Nickel	mg/kg	1	Metals-020	<1	1	7	8	13	105	96
Zinc	mg/kg	1	Metals-020	<1	1	100	110	10	102	#

QUALITY CONT	ROL: Acid E	xtractable	e metals in soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	19	22/03/2018	22/03/2018			[NT]
Date analysed	-			[NT]	19	23/03/2018	23/03/2018			[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	19	12	7	53		[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	19	0.5	0.6	18		[NT]
Chromium	mg/kg	1	Metals-020	[NT]	19	11	13	17		[NT]
Copper	mg/kg	1	Metals-020	[NT]	19	20	30	40		[NT]
Lead	mg/kg	1	Metals-020	[NT]	19	34	38	11		[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	19	<0.1	<0.1	0		[NT]
Nickel	mg/kg	1	Metals-020	[NT]	19	7	8	13		[NT]
Zinc	mg/kg	1	Metals-020	[NT]	19	3300	2100	44		[NT]

QUALITY	CONTROL	Misc Soi	l - Inorg			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	187756-3
Date prepared	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Date analysed	-			22/03/2018	1	22/03/2018	22/03/2018		22/03/2018	22/03/2018
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	99	95

QUALITY	CONTROL:	Misc Soi	il - Inorg			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	11	22/03/2018	22/03/2018		[NT]	[NT]
Date analysed	-			[NT]	11	22/03/2018	22/03/2018		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	11	<5	<5	0	[NT]	[NT]

QUALITY	CONTROL:	Misc Ino	rg - Soil			Du	plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			22/03/2018	[NT]	[NT]	[NT]	[NT]	22/03/2018	
Date analysed	-			22/03/2018	[NT]	[NT]	[NT]	[NT]	22/03/2018	
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

QU		Du	plicate	Spike Recovery %						
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			22/03/2018	14	22/03/2018	22/03/2018		22/03/2018	
Date analysed	-			22/03/2018	14	22/03/2018	22/03/2018		22/03/2018	
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	14	19	19	0	104	
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	14	0.5	0.5	0	114	
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	14	2.5	2.5	0	104	
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	14	<0.1	<0.1	0	103	[NT]

Result Definiti	ons							
NT	Not tested							
NA	Test not required							
INS	Insufficient sample for this test							
PQL	Practical Quantitation Limit							
<	Less than							
>	Greater than							
RPD	Relative Percent Difference							
LCS	Laboratory Control Sample							
NS	Not specified							
NEPM	National Environmental Protection Measure							
NR	Not Reported							

<b>Quality Contro</b>	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking	Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & F. Coli levels are less than

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

#### **Laboratory Acceptance Criteria**

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

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Revision No: R00

#### **Report Comments**

PAH's in soil:

# Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

svTRH (C10-C40) in Soil - # Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

Organochlorine Pesticides, OP and PCB in soil (sample 3,9) - PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.

Acid Extractable metals in soil - # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

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Project Name:	Darlington Public School Contam		<u> </u>	To:	Envirolab Services
Project No:	92277 00	Sampler:	Grant Russell		12 Ashley Street, Chatswood, NSW, 2087
Project Mgr:	Grant Russell .	Mob. Phone:	Q418 116 545	Attn:	Tania Nolaras
Email:	Grant.Russell@Douglaspartners.com	m.au;	_	Phone:	(02) 9910 6200 Fax: (02) 9910 6201
Date Required:	Standard	Email:	tnotaras@envirolabservices.com.au		

nain vedoired:	Siark.	ira (i								Email:	ากอเ	arasggen	viroiaose.	vices com.au
		pled	Sample Type	Container Type										
Sample (D	Lab ID	Date Sampled	S - Soil W - water	G - Glass P - Plastin	Combo Ba	CEC	£.	TRH & BTEX	PAH	Comba 8			PPH	Notes/preservation
BH1-0.2	1	-47/03/48-	<u> </u>	—G/P—	x	x	×							
BH2 0.2	2	17/03/18	S	G/P			·						Х	
BH2 0.5	7	17/03/18	S	GтР	x									
BH3 0.2	4,	17/03/18	s	G/P	х				<u>.</u>					
BH3 0.5	5	17/03/18	Ś	G/P				18					х	
BH4 0.2	6	17/03/18	Ş	G/P	×				- · ·	2 mg 77 mg				
BH4 0.5	ブ	17/03/18	5	G/P				ı	187	1 1.	Þ		×	
BH4 1.0	S	17/03/18	s	G/P			_	Die Ge	- Products	13:30		, ,2, 2	×	
BH5 0.2	٩,	17/03/18	S	G/P	x			ella Tir	er September 1	(F	123	ن		
BH5 0.5	/b	17/03/18	s	G/P	<u> </u>			2					×	
BH602	n	17/03/18	s	G/P	×									
BH7 0 2	12	17/03/18	ş	G/P	×									
BH7 0.5	13	17/03/18	3	G/P								-	х	
	Lab Report No:													
Send Results to: Douglas Partners Pty Ltd Address 18 Waler Crescent, Sn												Fax: (02) 4646 1886		
Relinquished by		.oc .						Transported to laboratory by:						
Signed: 4/2	4	<i>e</i>		Date & Time	e:	20/0	3/2018	Receive	d by: 🛮 🗸	HLS	. JG	21	2/19	13+30



Project Name:	Dadin	gton Pub.ic	School Co	ntam						To:	Envirolab Services				
Project No:	92277	7.00			Sampler: Grant Russell				12 Ashley Street, Chatswood, NSW, 2067			I\$W 2067			
Project Mgr:	Grant	Ruşşell			Mob. P		0418 1°	16 545		Altn:					
Email:	<u>G</u> ran	t.Russeli@	Douglas:	artners.com						Phone:	(02)	9910 620	10	Fax:	(02) 9910 620
Date Reguired:	Stand	lard				-				Email:	inota	កន់ខំ(ភូមិឃ	virolabaer	vices.co	n.au
18775b		Palc	Sample Type	Container Type					Analytes						
Sample ID	Lab ID	Date Sampled	S - Soil W - water	G - Glass P - Plastic	Сощью Вя	CEC	玉	TRH & BTEX	РАН	Combo 8			PioH	Note	es/preservation
BH8102	141 -	17/03/18 I		G7P	x		<u> </u>			$\vdash$	[			·	
BH8 0.5	15	17/03/18	S	G/P									×		
BH9 0.2	16	17/03/18	ş	G/P	×										
BH9 0.5	17	17/03/18	s	G/P								•	х		
Powerpole	18	17/03/18	s	G/P				×	х						••-
D1	19	17/03/18	s	G/P						x					
тв	J.3	-	\$	- G				х		i					
TS	21	-	9	С				×							
										<u>;</u> —				<u> </u>	
							- —	, -							
Lab Report No: Send Results to		<u>756</u> Dougles Pár				Valer Cre					hone: ((	02) <b>4</b> 647	7 0075	Fax:	(02) 4646 188

20/03/2018 Received by:

Date & Time:

Signed:



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

## **SAMPLE RECEIPT ADVICE**

Client Details	
Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Grant Russell

Sample Login Details	
Your reference	92277.00, Darlington Public School Contam
Envirolab Reference	187756
Date Sample Received	21/03/2018
Date Instructions Received	21/03/2018
Date Results Expected to be Reported	28/03/2018

Sample Condition	
Samples received in appropriate condition for analysis	YES
No. of Samples Provided	21 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12.3
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments	
Nil	

## Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Total Phenolics (as Phenol)	pH1:5 soil:water	CEC	Asbestos ID - soils	On Hold
BH1 0.2	✓	✓	<b>✓</b>	✓	✓	✓	✓	✓	<b>✓</b>	✓	✓	
BH2 0.2												✓
BH2 0.5	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH3 0.2	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH3 0.5												✓
BH4 0.2	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH4 0.5												✓
BH4 1.0												✓
BH5 0.2	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH5 0.5												✓
BH6 0.2	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH7 0.2	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH7 0.5												✓
BH8 0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH8 0.5												✓
BH9 0.2	✓	✓	✓	✓	✓	✓	✓	✓			✓	
BH9 0.5												✓
Powerpole	✓	✓	✓									
D1	✓	✓	✓	✓	✓	✓	✓	✓				
ТВ	✓											
TS	✓											

The '\sqrt{'} indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.** 

## Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

# Appendix J

QA/QC



## **Appendix J**

## **Data Quality Assurance and Quality Control Assessment**

## J1 Data Quality Indicators

Field and laboratory procedures were assessed against the following data quality indicators (DQIs):

**Table J1: Data Quality Indicators** 

DQI	Performance Indicator	Acceptable Range		
Precision				
Field considerations	SOPs appropriate and complied with	Field staff follow SOPs in the DP Field Procedures  Manual		
	field replicates	Precision average relative percent difference (RPD) result <5 times PQL, no limit; results >5 times PQL, 0% - 30%		
Laboratory considerations	laboratory duplicates	Precision average RPD result <5 times PQL, no limit; results >5 times PQL, 0% - 50%		
	laboratory-prepared volatile trip spikes	Recovery of 60-140%		
Accuracy (bias)				
Field considerations	SOPs appropriate and complied with	Field staff to follow SOPs in the DP Field Procedures  Manual		
Laboratory considerations	Analysis of:			
	laboratory-prepared volatile trip spikes	Recovery of 60-140%		
	Laboratory-prepared trip blanks (field blanks)	<pql< td=""></pql<>		
	method blanks (laboratory blanks)	Recovery of 60-140%		
	matrix spikes	Recovery of 70-130% (inorganics); 60-140% (organics)		
	matrix spike duplicates	Recovery of 70-130% (inorganics); 60-140% (organics); Recovery 70 "low" to 130% "high" indicates interference		
	surrogate spikes	Recovery of 70-130% (inorganics); 60-140% (organics)		
	laboratory control samples	Recovery of 70-130% (inorganics); 60-140% (organics)		
Completeness				
Field considerations	All critical locations sampled	All critical locations sampled in accordance with the DQO's (Appendix D)		
	SOPs appropriate and complied with	Field staff to follow SOPs in the DP Field Procedures  Manual		
	Experienced sampler	Experienced DP Environmental Engineer to conduct field work and sampling		
	Documentation correct	Maintain COC documentation at all times		
	Sample holding times complied with	Sample holding times complied with		



DQI	Performance Indicator	Acceptable Range		
Laboratory considerations	All critical samples analysed according to DQO's	All critical locations analysed in accordance with the DQO's		
	Appropriate methods and PQLs	Appropriate methods and PQLs have been used by the contract laboratory		
	Sample documentation complete	Maintain COC documentation at all times		
Comparability				
Field considerations	Same SOPs used on each occasion	Field staff to follow SOPs in the DP Field Procedures  Manual		
	Experienced sampler	Experienced DP Environmental Scientist/Engineer to conduct field work and sampling		
	Same types of samples collected	Same types of samples collected		
Laboratory considerations	Sample analytical methods used (including clean-up)	Methods to be NATA accredited		
	Sample PQLs (justify/quantify if different)	Consistent PQLs to be used		
	Same laboratories (justify/quantify if different)	Same analytical laboratory for primary samples to be used		
Representativeness				
Field considerations	Appropriate media sampled according to DQO's (Appendix D)	Appropriate media sampled according to DQO's (Appendix D)		
	All media identified in DQO's sampled	All media identified in DQO's sampled		
Laboratory considerations	All samples analysed according to DQO's	All samples analysed according to DQO's		

Notes to Table 1:

SOP - Standard Operating Procedure

DQO - Data Quality Objectives (Appendix D)

### J2 Field Quality Assurance and Quality Control

The field QC procedures for sampling as prescribed in the standard operating procedures (SOPs) in the Douglas Partners *Field Procedures Manual* were followed at all times during the assessment. All sample locations and media were in accordance with the DQO (i.e. as per scope of work in DP's proposal).

## J2.1 Sampling Team

Sampling was undertaken by an experienced DP Environmental Scientist.

#### **J2.2** Sample Collection and Weather Conditions

Sample collection procedures and dispatch are reported in body of the report. Sampling was undertaken during sunny and hot conditions.



#### J2.3 Logs

Logs for each soil sampling location were recorded in the field. The individual samples were recorded on the field logs along with the sample identity, location, depth, initials of sampler, duplicate locations, duplicate type and site observations. Logs are presented in Appendix H.

#### J2.4 Chain-of-Custody

Chain-of-Custody information was recorded on the Chain-of-Custody (COC) sheets and accompanied samples to the analytical laboratory. Signed copies of COCs are presented in Appendix J, prior to the laboratory certificates.

#### J2.5 Sample Splitting Techniques

Replicate samples were collected in the field as a measure of precision of the results. Field replicates samples for soil were collected from the same location and an identical depth to the primary sample. Equal portions of the primary sample were placed into the sampling Kars and sealed. The sample was not homogenised in a bowl to prevent the loss of volatiles from the soil. Replicate samples were labelled with a DP identification number, recorded on DP logs, so as to conceal their relationship to their primary sample from the analysing laboratory.

### J2.6 Duplicate Frequency

Field sampling comprised intra-laboratory duplicate sampling, at a rate of approximately one duplicate sample for every ten primary samples.

#### J2.7 Relative Percentage Difference

A measure of the consistency of results for field samples is derived by the calculation of relative percentage differences (RPDs) for duplicate samples. RPDs have only been considered where a concentration is greater than five times the practical quantitation limit (PQL).

#### J2.7.1 Intra-Laboratory Replicate Analysis

Replicates were tested to assess data 'precision' and the reproducibility within the primary laboratory (Envirolab Pty Ltd) as a measure of consistency of sampling techniques. One replicate sample was analysed. The Relative Percent Difference (RPD) between replicate results is used as a measure of laboratory reproducibility and is given by the following:

$$RPD = \frac{(Replicate result 1 - Replicate result 2)}{(Replicate result 1 + Replicate result 2)/2} \times 100$$

The RPD can have a value between 0% and 200%. An RPD data quality objective of up to 30% is considered to be within the acceptable range.



The comparative results of analysis between primary and duplicate samples are summarised in the table below. Where one or both results were below the PQL, an RPD was not calculated.

Table J2: RPD Results

Sample	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn
BH9/0.2	8	<0.4	17	21	76	<0.1	6	2100
D1	12	0.5	11	20	34	<0.1	7	3300
Difference	4	-	6	1	42	-	1	1200
RPD (%)	40	-	42.9	4.9	76.36	-	15.38	44.4

Notes:

Bold RPD >30

Concentration of either paired duplicated not greater than five times PQL

D1 = Inter-laboratory duplicate

All RPD values were within the acceptable range of  $\pm$  30 with the exception of:

- Arsenic in inter-laboratory duplicate pair BH9/0.2 and D1;
- Chromium in inter-laboratory duplicate pair BH9/0.2 and D1;
- Lead in inter-laboratory duplicate pair BH9/0.2 and D1;
- Zinc in inter-laboratory duplicate pair BH9/0.2 and D1;

The exceedances are considered either likely due the low levels of metals detected and /or to the heterogeneity of the soil. The exceedances are not considered to affect the results of the investigation. Overall, the intra-laboratory and inter-laboratory comparisons indicate that the sampling technique was consistent and repeatable and therefore acceptable precision was achieved.

### J3 Laboratory Quality Assurance and Quality Control

Envirolab Services was used as the primary laboratory. Appropriate methods and PQLs were used by the laboratory. Sample methods were NATA accredited (noting the exception for fibrous asbestos (FA) and asbestos fines (AF) quantification to 0.001% w/w).

#### J3.1 Surrogate Spike

This sample is prepared by adding a known amount of surrogate, which behaves similarly to the analyte, prior to analysis to each sample. The recovery result indicates the proportion of the known concentration of the surrogate that is detected during analysis and is used to assess data 'accuracy'. Results within acceptance limits indicate that the extraction technique was effective.



#### J3.2 Reference and Daily Check Sample Results – Laboratory Control Sample (LCS)

This sample comprises spiking either a standard reference material or a control matrix (such as a blank of sand or water) with a known concentration of specific analytes. The LCS is then analysed and results compared against each other to determine how the laboratory has performed with regard to sample preparation and analytical procedure and is used to assess data 'accuracy'. LCSs are analysed at a frequency of one in 20, with a minimum of one analysed per batch.

#### J3.3 Laboratory Duplicate Results

These are additional portions of a sample which are analysed in exactly the same manner as all other samples and is used to assess data 'precision'. The laboratory acceptance criteria for duplicate samples are: in cases where the level is <5Xpql - any RPD is acceptable; and in cases where the level is >5xPQL - 0-50% RPD is acceptable.

#### J3.4 Laboratory Blank Results

The laboratory blank, sometimes referred to as the method blank or reagent blank is the sample prepared and analysed at the beginning of every analytical run, following calibration of the analytical apparatus and is used to assess data 'accuracy'. This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, it can be determined by processing solvents and reagents in exactly the same manner as for samples. Laboratory blanks are analysed at a frequency of 1 in 20, with a minimum of one per batch.

## J3.5 Matrix Spike

This is a sample duplicate prepared by adding a known amount of analyte prior to analysis, and then treated exactly the same as all other samples. The recovery result indicates the proportion of the known concentration of the analyte that is detected during analysis and is used to assess data 'accuracy'. The laboratory acceptance criteria for matrix spike samples are generally 70 - 130% for inorganic/metals; and 60 - 140% for organics; and 10 - 140% for SVOC and speciated phenols.

#### J3.6 Results of Laboratory QC

The laboratory QC for surrogate spikes, LCS, laboratory duplicate results, laboratory blanks and matrix spikes results are reported in the laboratory certificate of analysis.

The laboratory quality control samples were within the laboratory acceptance criteria. It is considered that an acceptable level of laboratory precision and accuracy was achieved and that surrogate spikes, LCS, laboratory duplicate results, laboratory blanks and matrix spike results were of an acceptable level overall. On the basis of this assessment, the laboratory data set is considered to have complied with the DQIs.



#### J3.7 Overall Assessment of QA/QC

Specific limits associated with sample handling and laboratory QA/QC was assessed against the DQIs and a summary of compliance is presented in the following table.

**Table J5: Data Quality Indicators** 

DQI	Performance Indicator	Acceptable Range	Compliance
Precision			
Field considerations	SOPs appropriate and complied with	Field staff follow SOPs in the DP Field Procedures Manual	С
	field replicates	Precision average relative percent difference (RPD) result <5 times PQL, no limit; results >5 times PQL, 0% - 30%	С
Laboratory considerations	laboratory duplicates	Precision average RPD result <5 times PQL, no limit; results >5 times PQL, 0% - 50%	O
	laboratory-prepared volatile trip spikes	Recovery of 60-140%	С
Accuracy (bias)			
Field considerations	SOPs appropriate and complied with	Field staff to follow SOPs in the DP Field Procedures Manual	C
Laboratory considerations	Analysis of:		
	laboratory-prepared volatile trip spikes	Recovery of 60-140%	С
	laboratory-prepared trip blanks (field blanks)	<pql< td=""><td>С</td></pql<>	С
	method blanks (laboratory blanks)	Recovery of 60-140%	С
	matrix spikes	Recovery of 70-130% (inorganics); 60- 140% (organics)	С
	matrix spike duplicates	Recovery of 70-130% (inorganics); 60- 140% (organics); Recovery 70 "low" to 130% "high" indicates interference	С
	surrogate spikes	Recovery of 70-130% (inorganics); 60- 140% (organics)	С
	laboratory control samples	Recovery of 70-130% (inorganics); 60- 140% (organics)	С
Completeness			
Field considerations	All critical locations sampled	All critical locations sampled in accordance with the SAQP	С
	SOPs appropriate and complied with	Field staff to follow SOPs in the DP Field Procedures Manual	С
	Experienced sampler	Experienced DP Environmental Scientist/Engineer to conduct field work and sampling	С
	Documentation correct	Maintain COC documentation at all times	С
	Sample holding times complied with	Sample holding times complied with	С



DQI	Performance Indicator	Acceptable Range	Compliance
Laboratory considerations	All critical samples analysed according to SAQP	All critical locations analysed in accordance with the SAQP	С
	Appropriate methods and PQLs	Appropriate methods and PQLs have been used by the contract laboratory	С
	Sample documentation complete	Maintain COC documentation at all times	С
Comparability			
Field considerations	Same SOPs used on each occasion	Field staff to follow SOPs in the DP Field Procedures Manual	С
	Experienced sampler	Experienced DP Environmental Scientist/Engineer to conduct field work and sampling	С
	Same types of samples collected (filtered)	Field filtering for metals	NA
Laboratory considerations	Sample analytical methods used (including clean-up)	Methods to be NATA accredited	С
	Sample PQLs (justify/quantify if different)	Consistent PQLs to be used	С
	Same laboratories (justify/quantify if different)	Same analytical laboratory for primary samples to be used	С
Representativeness			
Field considerations	Appropriate media sampled according to DQOs	Appropriate media sampled according to DQOs	С
	All media identified in DQOs sampled	All media identified in DQOs sampled	С
Laboratory considerations	All samples analysed according to DQOs	All samples analysed according to DQOs	С

Notes to Table 5: C – Compliance

PC – Partial Compliance NC – Non-Compliance NA – Not Applicable

SOP – Standard Operating Procedure DQO – Data Quality Objectives

A review of the adopted QA/QC procedures and results indicates that the DQIs have generally been met with compliance and a minor partial-compliance. On this basis, the sampling and laboratory methods used during the investigation were found to meet DQOs for this project.

# Appendix K

About this Report

# About this Report



#### Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

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#### **Borehole and Test Pit Logs**

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

#### Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

 In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;

- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report;
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

#### Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions.
   The potential for this will depend partly on borehole or pit spacing and sampling frequency:
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

## About this Report

#### **Site Anomalies**

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

#### **Information for Contractual Purposes**

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

#### **Site Inspection**

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

# Rock Descriptions



#### **Rock Strength**

Rock strength is defined by the Point Load Strength Index  $(Is_{(50)})$  and refers to the strength of the rock substance and not the strength of the overall rock mass, which may be considerably weaker due to defects. The test procedure is described by Australian Standard 4133.4.1 - 2007. The terms used to describe rock strength are as follows:

Term	Abbreviation	Point Load Index Is <sub>(50)</sub> MPa	Approximate Unconfined Compressive Strength MPa*
Extremely low	EL	<0.03	<0.6
Very low	VL	0.03 - 0.1	0.6 - 2
Low	L	0.1 - 0.3	2 - 6
Medium	М	0.3 - 1.0	6 - 20
High	Н	1 - 3	20 - 60
Very high	VH	3 - 10	60 - 200
Extremely high	EH	>10	>200

<sup>\*</sup> Assumes a ratio of 20:1 for UCS to  $ls_{(50)}$ . It should be noted that the UCS to  $ls_{(50)}$  ratio varies significantly for different rock types and specific ratios should be determined for each site.

#### **Degree of Weathering**

The degree of weathering of rock is classified as follows:

Term	Abbreviation	Description
Extremely weathered	EW	Rock substance has soil properties, i.e. it can be remoulded and classified as a soil but the texture of the original rock is still evident.
Highly weathered	HW	Limonite staining or bleaching affects whole of rock substance and other signs of decomposition are evident. Porosity and strength may be altered as a result of iron leaching or deposition. Colour and strength of original fresh rock is not recognisable
Moderately weathered	MW	Staining and discolouration of rock substance has taken place
Slightly weathered	SW	Rock substance is slightly discoloured but shows little or no change of strength from fresh rock
Fresh stained	Fs	Rock substance unaffected by weathering but staining visible along defects
Fresh	Fr	No signs of decomposition or staining

#### **Degree of Fracturing**

The following classification applies to the spacing of natural fractures in diamond drill cores. It includes bedding plane partings, joints and other defects, but excludes drilling breaks.

Term	Description
Fragmented	Fragments of <20 mm
Highly Fractured	Core lengths of 20-40 mm with some fragments
Fractured	Core lengths of 40-200 mm with some shorter and longer sections
Slightly Fractured	Core lengths of 200-1000 mm with some shorter and longer sections
Unbroken	Core lengths mostly > 1000 mm

## Rock Descriptions

## **Rock Quality Designation**

The quality of the cored rock can be measured using the Rock Quality Designation (RQD) index, defined as:

RQD % = <u>cumulative length of 'sound' core sections ≥ 100 mm long</u> total drilled length of section being assessed

where 'sound' rock is assessed to be rock of low strength or better. The RQD applies only to natural fractures. If the core is broken by drilling or handling (i.e. drilling breaks) then the broken pieces are fitted back together and are not included in the calculation of RQD.

#### **Stratification Spacing**

For sedimentary rocks the following terms may be used to describe the spacing of bedding partings:

Term	Separation of Stratification Planes
Thinly laminated	< 6 mm
Laminated	6 mm to 20 mm
Very thinly bedded	20 mm to 60 mm
Thinly bedded	60 mm to 0.2 m
Medium bedded	0.2 m to 0.6 m
Thickly bedded	0.6 m to 2 m
Very thickly bedded	> 2 m

## Sampling Methods



#### Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thinwalled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

#### **Test Pits**

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the insitu soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

#### **Large Diameter Augers**

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

#### **Continuous Spiral Flight Augers**

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low

reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

#### **Non-core Rotary Drilling**

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

#### **Continuous Core Drilling**

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

#### **Standard Penetration Tests**

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

 In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

> 4,6,7 N=13

In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

15, 30/40 mm

## Sampling Methods

The results of the SPT tests can be related empirically to the engineering properties of the soils.

# Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.

## Soil Descriptions



## **Description and Classification Methods**

The methods of description and classification of soils and rocks used in this report are based on Australian Standard AS 1726-1993, Geotechnical Site Investigations Code. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

#### Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

Туре	Particle size (mm)
Boulder	>200
Cobble	63 - 200
Gravel	2.36 - 63
Sand	0.075 - 2.36
Silt	0.002 - 0.075
Clay	<0.002

The sand and gravel sizes can be further subdivided as follows:

Туре	Particle size (mm)
Coarse gravel	20 - 63
Medium gravel	6 - 20
Fine gravel	2.36 - 6
Coarse sand	0.6 - 2.36
Medium sand	0.2 - 0.6
Fine sand	0.075 - 0.2

The proportions of secondary constituents of soils are described as:

Term	Proportion	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	20 - 35%	Sandy Clay
Slightly	12 - 20%	Slightly Sandy Clay
With some	5 - 12%	Clay with some sand
With a trace of	0 - 5%	Clay with a trace of sand

Definitions of grading terms used are:

- Well graded a good representation of all particle sizes
- Poorly graded an excess or deficiency of particular sizes within the specified range
- Uniformly graded an excess of a particular particle size
- Gap graded a deficiency of a particular particle size with the range

#### **Cohesive Soils**

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

Description	Abbreviation	Undrained shear strength (kPa)
Very soft	VS	<12
Soft	S	12 - 25
Firm	f	25 - 50
Stiff	st	50 - 100
Very stiff	vst	100 - 200
Hard	h	>200

#### **Cohesionless Soils**

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

Relative Density	Abbreviation	SPT N value	CPT qc value (MPa)
Very loose	vl	<4	<2
Loose	1	4 - 10	2 -5
Medium dense	md	10 - 30	5 - 15
Dense	d	30 - 50	15 - 25
Very dense	vd	>50	>25

# Soil Descriptions

#### Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil derived from in-situ weathering of the underlying rock;
- Transported soils formed somewhere else and transported by nature to the site; or
- Filling moved by man.

Transported soils may be further subdivided into:

- Alluvium river deposits
- Lacustrine lake deposits
- · Aeolian wind deposits
- · Littoral beach deposits
- Estuarine tidal river deposits
- Talus scree or coarse colluvium
- Slopewash or Colluvium transported downslope by gravity assisted by water.
   Often includes angular rock fragments and boulders.

## Symbols & Abbreviations



#### Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

#### **Drilling or Excavation Methods**

С	Core drilling
R	Rotary drilling
SFA	Spiral flight augers
NMLC	Diamond core - 52 mm dia
NQ	Diamond core - 47 mm dia
HQ	Diamond core - 63 mm dia
PQ	Diamond core - 81 mm dia

#### Water

$\triangleright$	Water seep
$\nabla$	Water level

#### **Sampling and Testing**

Α	Auger sample
В	Bulk sample
D	Disturbed sample
E	Environmental sample
U <sub>50</sub>	Undisturbed tube sample (50mm)
W	Water sample
рр	Pocket penetrometer (kPa)
PID	Photo ionisation detector
PL	Point load strength Is(50) MPa
S	Standard Penetration Test
V	Shear vane (kPa)

#### **Description of Defects in Rock**

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

#### **Defect Type**

В	Bedding plane
Cs	Clay seam
Cv	Cleavage
Cz	Crushed zone
Ds	Decomposed seam
F	Fault
J	Joint
Lam	Lamination

Parting

Sheared Zone

V Vein

Pt

Sz

#### Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h	horizontal
V	vertical
sh	sub-horizontal
sv	sub-vertical

#### **Coating or Infilling Term**

cln	clean
СО	coating
he	healed
inf	infilled
stn	stained
ti	tight
vn	veneer

#### **Coating Descriptor**

ca	calcite
cbs	carbonaceous
cly	clay
fe	iron oxide
mn	manganese
slt	silty

#### **Shape**

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

#### Roughness

ро	polished
ro	rough
sl	slickensided
sm	smooth
vr	verv rough

#### Other

fg	fragmented
bnd	band
qtz	quartz

## Symbols & Abbreviations

## **Graphic Symbols for Soil and Rock**

#### General

2	7.0	3	

Asphalt



Road base



Concrete



Filling

#### Soils



Topsoil



Peat



Clay



Silty clay



Sandy clay



Gravelly clay



Shaly clay



Silt



Clayey silt



Sandy silt



Sand



Clayey sand



Silty sand



Gravel



Sandy gravel



Cobbles, boulders



Talus

## **Sedimentary Rocks**



Boulder conglomerate



Conglomerate



Conglomeratic sandstone



Sandstone



Siltstone Laminite



Mudstone, claystone, shale



Coal



Limestone

#### **Metamorphic Rocks**



Slate, phyllite, schist



Gneiss



Quartzite

## Igneous Rocks



Granite



Dolerite, basalt, andesite



Dacite, epidote



Tuff, breccia



Porphyry