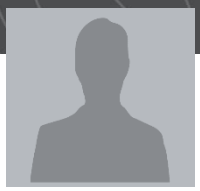
**Darlington Public School – Redevelopment – Bio-diversity Plan in accordance with Condition B16**

| Condition | Condition requirements | Document reference |
|---|---|---|
| B16 | The Biodiversity Management Sub-Plan (BMSP) must address, but not be limited to, the following: | |
| | (a) the mitigation measures and actions set out in the Biodiversity Development Assessment Report dated 12 May 2020 and prepared by Eco Logical Australia; and | Section 2.1, Page 6 |
| | (b) additional mitigation measures and actions for Microbats set out in Table 2 of the supplementary letter dated 30 July 2020 and prepared by Eco Logical Australia. | Section 2.2, Page 11 |



# Belinda Failes ECOLOGIST

Belinda has been working as an ecologist with Eco Logical Australia since 2011, and has been involved in the monitoring of, and preparation of reports for, threatened flora and endangered ecological communities, as well as the preparation of Vegetation Management Plans (VMP), Part 3A and Section 5A Assessments under the EP&A Act, Local Environment Studies, and Species Impact Statements (SIS). Belinda has built on the skills she learned while studying a Master of Wildlife Management at Macquarie University through on-going professional development, and is skilled in both flora and fauna identification.

## QUALIFICATIONS

- Master of Wildlife Management (Macquarie University)
- Bachelor of Environmental Science, (University of Newcastle)
- Accredited BAM Assessor (BAAS18159)
- Senior First Aid Certificate
- OHS Construction Induction Certificate – White Card
- Rail Industry Safety Induction (RISI) Card
- Working at heights
- Tree Rescue training
- Basic Tree Climbing training

## PROJECT EXPERIENCE

**BIOBANKING AND BIOCERTIFICATION**

- One Tree Bay East Biobak
- One Tree Bay West Biobank
- Lake Wollumboola Biobank
- Tullawalla Biobank
- Duffys Forest Gum Club Biobank
- Culburra Biocertification
- Callala Biocertification
- Mount Gilead rezoning Biocertification
- Teralba Quarry Biobanking
- Ingleside rezoning Biocertification

**BIODIVERSITY DEVELOPMENT ASSESSMENT REPORTS**

- Swans HQ Moore Park
- Northside Private Hospital
- Wicks Road BDAR
- Chatswood Education Precinct BDAR
- Loreto BDAR
- Darlington Public School BDAR
- Randwick Campus Redevelopment BDAR

**FLORA AND FAUNA IMPACT ASSESSMENTS**

- Numerous over Sydney

**VEGETATION MANAGEMENT PLANS**

- Bunya, Doonside Landscaping DA
- Richmond Road Upgrade, Marsden Park, RMS
- The Hills Shire Council Weed Management Plan
- Hills M2 Corridor Weed Management Plan
- Edmondson Park Development
- Schofields Defence Housing Association
- Glenfield Stage 3
- Campbelltown Comprehensive Koala Plan of Management – field work

**MONITORING FIELD WORK**

- Moolarben Mine Monitoring – flora and fauna monitoring
- Wivenhoe Bird Monitoring

**RELOCATION**

- Bunya Cumberland Plain Land Snail
- South West Growth Centres - translocation of Cumberland Plain Land Snail

**PRE-CLEARANCE SURVEYS**

- Hamlyn Terrace
- Greta Freight Train Upgrade, Greta
- Tomago industrial development
- M5 surreys

**CONSTRAINTS ASSESSMENT**

- Menangle Park Wastewater
- Harbord Diggers
- Wolgan Valley Road – Cranbrook School

# Darlington Public School Redevelopment- Biodiversity Management Sub-Plan Condition B16

## AW Edwards

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A TETRA TECH COMPANY

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## DOCUMENT TRACKING

| | |
|---|---|
| **Project Name** | Darlington Public School Redevelopment- Biodiversity Management Sub-Plan Condition B16 |
| **Project Number** | 20SYD - 17216 |
| **Project Manager** | Belinda Failes |
| **Prepared by** | Belinda Failes and Julia Ryeland |
| **Reviewed by** | Belinda Failes |
| **Approved by** | Nicole McVicar |
| **Status** | **Final** |
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### ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from AW Edwards



Template 2.8.1

# Contents



# List of Figures



# List of Tables

# Abbreviations

| Abbreviation | Description |
|---|---|
| BAM | Biodiversity Assessment Method |
| BC Act | *Biodiversity Conservation Act 2016* |
| BDAR | Biodiversity Development Assessment Report |
| BMSP | Biodiversity Management Sub-Plan |
| DPIE | Department of Planning, Industry and Environment |
| ELA | Eco Logical Australia Pty Ltd |
| EP&A Act | *Environmental Planning and Assessment Act 1979* |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act 1999* |
| FFA | Flora and Fauna Assessment |
| PCT | Plant Community Type |
| PM | Project Manager |
| SE | Site Ecologist |
| SS | Site Supervisor |
| SSD | State Significant Development |

# Darlington Public School Redevelopment – Biodiversity Management Sub-Plan in accordance with Condition B16

This Biodiversity Management Sub-Plan (BMSP) was written to satisfy consent condition B16 of the Darlington Redevelopment State Significant Development (SSD 9914). This BMSP forms a sub-component to the Environmental Management Plan (EMP) as per condition B11. This management plan has been prepared for all phases of stage 1 and 2 of the project.

**Table 1: Condition B16 quickfind chart**

| Condition | Condition requirements | Document reference |
|---|---|---|
| B16 | The Biodiversity Management Sub-Plan (BMSP) must address, but not be limited to, the following: | |
| | (a) the mitigation measures and actions set out in the Biodiversity Development Assessment Report dated 12 May 2020 and prepared by Eco Logical Australia; and | Section 2.1<br>Page 6 |
| | (b) additional mitigation measures and actions for Microbats set out in Table 2 of the supplementary letter dated 30 July 2020 and prepared by Eco Logical Australia. | Section 2.2<br>Page 11 |

# 1. Introduction

Eco Logical Australia Pty Ltd (ELA) was engaged by AW Edwards to prepare a Biodiversity Management Sub-Plan (BMSP) for the proposed redevelopment of Darlington Public School, 417 – 445 Abercrombie Street (Figure 1). ELA was previously involved in the preparation of the Biodiversity Development Assessment Report (BDAR) (ELA 2020a) for the demolition and redevelopment of the school and a Flora and Fauna Assessment (FFA) report for the early works (ELA 2020b).

## 1.1 Condition B16 - BMSP

According to the Condition B16 of the development consent of the Darlington Redevelopment State Significant Development (SSD 9914), a BMSP is required prior to the commencement of construction and must include the following:

- mitigation measures and actions set out in the Biodiversity Development Assessment Report dated 12 May 2020 and prepared by Eco Logical Australia
- additional mitigation measures and actions for Microbats set out in Table 2 of the supplementary letter dated 30 July 2020 and prepared by Eco Logical Australia.

The BMSP will be used in conjunction with the Environmental Management Plan (EMP) as per Condition B11 of the SSD consent conditions.

Relevant consent conditions can be found in Appendix A and a summary of the site habitat values are provided in Section 1.2.

This BMSP has been written to satisfy Condition B16 and has been prepared for the associated construction works for the proposed development, such that it:

- Identifies measures to protect the environment.
- Defines roles and responsibilities during proposed works.
- Identifies any external approvals needed.
- Identifies consultation and communication needs.
- Describes the monitoring and reporting regime.

The following recommendations and safeguards are based on the following assessments:

- Eco Logical Australia. 2020a Darlington Public School Redevelopment– Biodiversity Development Assessment Report. Prepared for School Infrastructure NSW.'
- Eco Logical Australia 2020b. Darlington Public School - Flora and Fauna Assessment Report. Prepared for School Infrastructure NSW.'
- Eco Logical Australia 2020c. supplementary letter dated 30 July 2020.

The BMSP (Table 2) has been prepared in accordance with the NSW DPIE *Code of Practice for Injured, Sick and Orphaned Protected Fauna 2011* and ELA's *Pre-clearance and clearance standard operating procedure* (ELA 2020). Additional microbat mitigation measures during the removal of buildings have been provided in Table 3.

## 1.2 Biodiversity values and offsets

The development footprint has been assessed under the Biodiversity Assessment Method 2017 (BAM) established under Section 6.7 of the NSW *Biodiversity Conservation Act 2016* (BC Act) and in relation to the requirements of the Sydney Local Environmental Plan 2012 and Development Control Plan 2012. The BDAR has classified the native vegetation as conforming to Plant Community Type (PCT) *1281 Turpentine - Grey Ironbark open forest on shale in the lower Blue Mountains, Sydney Basin Bioregion* (Figure 2). Although components of this PCT corresponds to *Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion* listed as critically endangered under the BC Act and Commonwealth *Environment Protection and Biodiversity Act 1999* (EPBC Act), this vegetation is planted native vegetation and therefore does not correspond to a threatened ecological community. Under the BAM, two ecosystem credits were required to offset the removal of 0.16 ha of PCT 1281.

Two planted threatened flora species. *Eucalyptus scoparia* (Wallangarra White Gum), and *Eucalyptus nicholii* (Narrow-leaved Black Peppermint) were recorded on site. These species are not considered locally indigenous species and have been planted. No additional consideration of these species is therefore required under the BAM.

A habitat assessment conducted by ELA during 2019 identified two hollow-bearing trees which will be impacted by the works. No targeted surveys were conducted for threatened species, however, advise from the Department of Planning, Industry and Environment (DPIE) has indicated that additional investigation of microbat habitat within the building cavities is required. As a result, additional monitoring works are required prior to demolition works in the buildings. These works have been provided in this report.

Consent was given for the proposed Darlington redevelopment on the condition that these credits were retired and a BMSP was developed for the site (Appendix A). The following information relates to the BMSP and microbat mitigation measures as per Condition 16 of the SSD consent conditions.

## 1.3 How to use this report

This report provides information for contractors and site supervisors on the management of fauna and flora during and prior to construction works. The report provides the following resources:

- Biodiversity Management Plan - Table 2
- Microbat mitigation measures - Table 3
- Responsibilities of personnel - Table 4
- Check list of conditions of consent - Appendix A
- Team induction sign off sheet - Appendix B
- Complaints recording template – Appendix C
- Phone and emergency contact list - Appendix D
- Site biodiversity inspection checklist – Appendix E
- Fauna rescue and release procedure - Appendix F
- Unexpected threatened species find procedure - Appendix G
- Introduction and spread of weeds and pathogen procedure – Appendix H
- Re-use of native habitat feature strategy - Appendix I.


**Figure 1: Development footprint**


**Figure 2: Vegetation communities and habitat features recorded within the site**

# 2. Implementation and Operation

## 2.1 Biodiversity Management Plan

Safeguards to manage potential biodiversity impacts are detailed in Table 2**,** together with who is responsible for their implementation, and at what stage of works. Procedural forms and check lists can be found in the appendices of this report, for logging complaints (Appendix C), emergency contacts (Appendix D) and weekly checklists (Appendix E).

It is understood that the removal of vegetation including two hollow-bearing trees will occur in late February – March 2021. It is also understood that the demolition of existing buildings will not occur until 2022. ELA will conduct a pre-clearance survey to identify recent fauna activity in the vegetation in preparation of the tree removal and supervise the removal of vegetation. Management of microbats within the buildings will occur prior to demolition works in 2022 (Table 3). ELA will conduct specific microbat pre-clearance surveys prior to the demolition of existing buildings.

Person responsible for implementation: PM – Project Manager; SS – Site Supervisor; SE – Site Ecologist; All – All Site Personnel

**Table 2 Biodiversity Management Plan**

| Environmental Action | Timeframe | Monitoring | Responsible Person |
|---|---|---|---|
| **OBJECTIVE: GENERAL** | | | |
| All project staff and contractors will be inducted on the biodiversity sensitivities of the work site(s) and relevant safeguards prior to commencement such as:<br>• Potential presence of threatened microbats within tree hollows or within cavities of buildings.<br>• Fauna present on site during works including potential for fauna to inhabit the hollow-bearing trees<br>• Identification of vegetation to be retained and 'No-Go' areas.<br>• Stop works if fauna present and contract the SE. | Prior to works | Induction Records | PM |
| Work site will be delineated and 'no go' zones around the perimeter of the project site (if applicable) will be marked prior to commencement of works. | Prior to works | Weekly checklist, after rainfall or changed in site conditions | PM, SS |
| Trees proposed for retention (if applicable) are to be protected during all works strictly in accordance with AS4970-2009 Protection of Trees on Development Sites. At a minimum a 1.8 m high chain-wire fence is to be erected at least three metres from the base of each tree and is to be in place prior to works | Prior to works | Weekly checklist, after rainfall or changed in site conditions | PM, SS |

| Environmental Action | Timeframe | Monitoring | Responsible Person |
|---|---|---|---|
| commencing. All areas within the root protection zone are to be mulched with composted leaf mulch to a depth of not less than 100 mm. A sign is to be erected indicating the trees are protected. The installation of services within the root protection zone is not to be undertaken without prior consent from DPIE. All tree removal is to be undertaken by a suitably qualified and insured arborist. | | | |
| DPIE will be notified immediately of any complaints in relation to management of biodiversity issues. | As required | Complaint Register | SS |
| **OBJECTIVE: REDUCE HARM TO BIODIVERSITY (PRIOR TO WORKS)** | | | |
| Pre-clearance survey for onsite fauna and habitat features to identify potential for harm to fauna during clearance. Habitat feature include both naturally occurring (i.e. hollows, stags, nests) and man-made (i.e. infrastructure suitable for microbats). Survey efforts during the FFA identify hollow-bearing trees, but further investigation should be undertaken to confirm details of these habitat features.<br>A pre-clearance survey should be conducted to:<br>• Determine habitat features present.<br>• Record location, size and type of habitat feature.<br>• Check for fauna present in the zone of disturbance and scare or remove them before beginning operations.<br>• Mark all habitat features which require an ecologist on site to supervise their removal.<br><br>It is important that pre-clearance survey includes survey of infrastructure to be removed or altered, as these may provide habitat to microbats. All mitigation measure and methodology for pre-clearance surveys for microbats are detailed in Table 2.<br><br>All fauna rescue and relocation procedures are provided in Appendix F. If unexpected threatened species are found during pre-clearance or clearance activities, please refer to Appendix G. | Prior to works | Weekly checklist | PM, SS, SE |
| Installation of nest boxes to replace all hollows identified and any potential microbat habitat throughout the infrastructure to be remove. All hollows identified during pre-clearance surveys that are to be removed, should be replacement with artificial hollows or nest boxes at a recommended ratio of one to one nest boxes for every tree hollow. This should include nest boxes designed specifically for microbats, birds and possums. | Prior to works | Weekly checklist | SS, SE |

| Environmental Action | Timeframe | Monitoring | Responsible Person |
|---|---|---|---|
| Supervision by a qualified ecologist / licensed wildlife handler is required during removal of habitat trees (i.e. trees which contain hollows or nests). Where possible, the removal of hollow-bearing trees should occur outside of spring breeding season. | Prior to works | Weekly checklist | SS, SE |
| The control of weeds is required throughout all onsite activities. Wash down equipment and vehicles prior to and after use, to manage the introduction and spread of weed propagules. All weeds are to be treated prior to becoming an environmental threat according to best management practices (see Appendix H for protocols and procedures). Priority weeds located within the site includes *Asparagus aethiopicus* and *Celtis sinensis.* | All works | Weekly checklist | All |
| Sediment control works and dust suppression measures are to be done in accordance with the Sediment, Erosion and Dust Control plans prepared by Bonacci. Soil and erosion control measures such as sediment fencing, clean water diversion must be in place prior to commencement of construction works. | Prior to works | Weekly checklist | SS, SE |
| **OBJECTIVE: REDUCE HARM TO BIODIVERSITY (DURING WORKS)** | | | |
| On commencement of works, all staff working on site should be trained and briefed on protocols if microbats or other fauna are found during any stage of works. All work should be ceased if wildlife are encountered and if not on site, the project ecologist should be called immediately to relocate fauna. | During construction | Weekly checklist | PM, SS, SE |
| Clearance should be staged, with vegetation without habitat features (i.e. not marked during pre-clearance surveys) removed first, followed by the habitat features under the supervision of a qualified ecologist. Staged clearing should include limits on the amount of clearing of buildings each day and or vegetation. Recommended staging includes clearing of one building per day. | During construction | Weekly checklist | PM, SS, SE |
| The site ecologist is to be present during removal of identified habitat features, including hollow bearing trees and potential microbat habitat (i.e. suitable infrastructure being removed).<br>Habitat features should be removed in the following manner:<br>• Remove all non-hollow bearing vegetation prior to the removal of habitat features.<br>• After clearing of non-habitat features, re-check to ensure no fauna have become trapped or injured during clearing operations. Any fauna found should be safely located to nearby habitat.<br>• Leave habitat features standing for at least one night after other clearing to allow any fauna the opportunity to remove themselves after site disturbance.<br>• On the day of habitat feature removal, visually inspect all vegetation remaining and infrastructure for the presence of fauna. | During construction | Weekly checklist | PM, SS, SE |

| Environmental Action | Timeframe | Monitoring | Responsible Person |
|---|---|---|---|
| • Before felling stag/habitat tree, tap along trunk using an excavator or loader to scare fauna from the openings. Repeat several times. The aim of this procedure is to 'substantially' shake the tree. The majority of fauna will exit the tree during this process.<br>• Re-check after felling stag/habitat tree to ensure no fauna have become trapped or injured during clearing operations. Any fauna found should be safely located to nearby habitat.<br>• Fell stags/habitat trees into the zone of disturbance to avoid damaging adjacent vegetation.<br>• Take care when moving equipment near vegetation to be retained.<br>• For infrastructure, surveys before, during and after building removal should be conducted, ceasing work if a microbat or other fauna are observed.<br><br>If native fauna is identified within the project site, the Fauna Rescue and Release Procedure found in Appendix F must be adhered to. Any injured fauna is to be appropriately cared for and released on site where appropriate. Refer to Appendix F for further details. Catch and relocate any found fauna to identified relocation sites (Appendix I). | | | |
| A short report detailing the pre-clearance and clearance works is to be provided to DPIE within 10 days of completion. | During construction | Weekly checklist | PM, SE |
| Ensure that no plant, equipment, or stockpiles are positioned under the drip line of retained trees. | During construction | Weekly checklist | SS, All |
| Stags/tree hollows are to be salvaged from trees removed and placed within nearby vegetation if possible. Suitable sites for hollow salvaged will be assessed during pre-clearance, but potential sites are outlined below. This is to be done under the direction of the Site Ecologist (see Appendix I for further information). | During construction | Weekly checklist | SS, SE |
| The site ecologist is to be present during removal of identified stags/habitat trees to ensure native fauna is not accidentally injured and to relocate any identified fauna. If fauna is found on the construction site during construction works, stop work – all native fauna is protected. Do not touch animal but wait for it to leave. If injured fauna is found, the site ecologist is to relocate to the nearest local vet or call WIRES or a rescue agency. If a threatened fauna species is identified, stop works and notify DPIE. Refer to Appendix G for further guidance. | During construction | Weekly checklist | All |
| To reduce the spread of pathogens and diseases, ensure Arrive Clean, Leave Clean Guidelines (Department of the Environment, 2015) are adhered to:<br>• Ensure all clothing, hats, footwear, tools, equipment, machinery and vehicles are free of mud, soil and organic matter before entering and exiting bushland | During construction | Weekly checklist | SS, All |

| Environmental Action | Timeframe | Monitoring | Responsible Person |
|---|---|---|---|
| • Ensure any soil, plants or other materials entering the site are certified free of weeds and pathogens.<br>A dedicated washdown location, at the entry/exit of the site is to be determined prior to construction works. If weeds or pathogens are known to be present within the development site, Appendix H must be adhered to. | | | |
| **OBJECTIVE: REDUCE SPREAD OF PRIORITY WEEDS (ALL WORKS)** | | | |
| Wash down equipment and vehicles prior to and after use, to manage the introduction and spread of weed propagules. | Prior to works, during construction | Weekly checklist | All |
| All weeds are to be treated prior to becoming an environmental threat according to best management practices. | During construction, completion of works | Weekly checklist | SS |
| **OBJECTIVE: REDUCE POTENTIAL NOISE IMPACTS TO NATIVE FAUNA** | | | |
| If practical, avoid simultaneous operation of noisy plant within discernible range of retained vegetation. | During construction | Weekly checklist | All |
| Works will only occur during the following times: Monday to Friday 7:00 am to 5:00 pm, Saturday 8:00 am to 1:00 pm. Works will not operate after sunset to minimise indirect impacts to threatened fauna species in proximity. | During construction | Weekly checklist | SS |
| Maximise the distance between noisy plant items and nearby residential receivers and potential fauna habitat. | During construction | Weekly checklist | All |
| Orient equipment such as offensive noise carriers away from residential receivers and potential fauna habitat. | During construction | Weekly checklist | All |
| Plant used intermittently is to be throttled or shut down when not required. | During construction | Weekly checklist | All |

## 2.2 Microbats management actions

Microbat mitigation measures will be required prior to the demolition of existing buildings. These measures are detailed in Table 2 and should be conducted in conjunction with Table 1.

**Table 3: Mitigation measures for microbats**

| Action | Outcome | Timing | Responsibility |
|---|---|---|---|
| All project staff and contractors will be inducted on the biodiversity sensitivities of the work site(s) and relevant safeguards prior to commencement such as:<br>• Potential presence of threatened microbats within tree hollows or within cavities of buildings.<br>• Identification of vegetation to be retained and 'No Go' areas.<br>• Stop works if fauna present and contact project ecologist for recommendations. | All staff entering the development site are fully aware of all the ecological values present within the site and environmental aspects relating to the development and know what to do in case of any environmental emergencies | To occur for all staff entering/working at the development site. Site briefings should be updated based on phase of the work and when environmental issues become apparent. | All |
| Compensatory hanging bat boxes (recommended up to two) should be installed under the supervision of an ecologist prior to removal of buildings. These should be located within the development site. | Replacement of habitat features removed. | Prior to and during clearing works | All |
| Project ecologist or a qualified wildlife handler should be appointed prior to the demolition of any buildings.<br>The project ecologist must also hold a Biodiversity Licence and Animal Care and Ethics Committee approval as well as current Australian Bat Lyssavirus (ABLV) vaccination. | Relocation of fauna in a sensitive manner | Prior to and during clearing works | SE |
| Pre-clearance survey of the buildings are required prior to demolition works.<br>A survey of infrastructure should include:<br>• Visual inspection of all roof cavities with a hand-held torch.<br>• Visual inspection of all cracks and crevices, internally and externally throughout all buildings to be removed/disturbed with a hand-held torch.<br>• Auditory surveys across the site using an Anabat.<br>If microbats are found, bats will need to be excluded from the site through blocking all entrance points suitable for microbats and installing one-way valves that allow microbats to exit but not enter back into the infrastructure. Emergence (dusk and dawn) surveys need to be conducted if microbats are found to ensure all microbats have relocated before works commence. | Identification of fauna within buildings | Prior to and during clearing works | SE |

| Action | Outcome | Timing | Responsibility |
|---|---|---|---|
| Staged clearing should be conducted to allow microbat species to self-relocate (if required) during the stage of the project.<br>Staged clearing should include limits on the amount of clearing of buildings each day and or vegetation. Recommended staging includes clearing of one building per day.<br>Daily pre-clearance surveys are to be conducted by the project ecologist / qualified wildlife handler within the vegetation and buildings prior to removal.<br>Inspections should include use of a bright torch to inspect the building and its cavity before removal. If access into the roof cavity is not feasible then stag watching at dusk or dawn with thermal imagery sensor or the use of an ultrasonic device (anabat) left overnight may be required to monitor the use of the buildings for microbat activity prior to demolition. If microbats are located utilising the building, the project ecologist is to advise on the best method. This may include use of exclusion structures if an entrance location can be found or additional nocturnal surveys prior to demolition works. | Relocation of fauna in a sensitive manner | Prior to and during clearing works | PM, SE |

## 2.3 Structure and Responsibility

The organisation chart outlined in Figure 3 identifies the reporting lines for the key contractor and sub-contractor personnel responsible for environmental management, as well as the DPIE interface. Details of personnel responsibilities are outlined in Table 4. Contact details for these personnel are included in Appendix D.

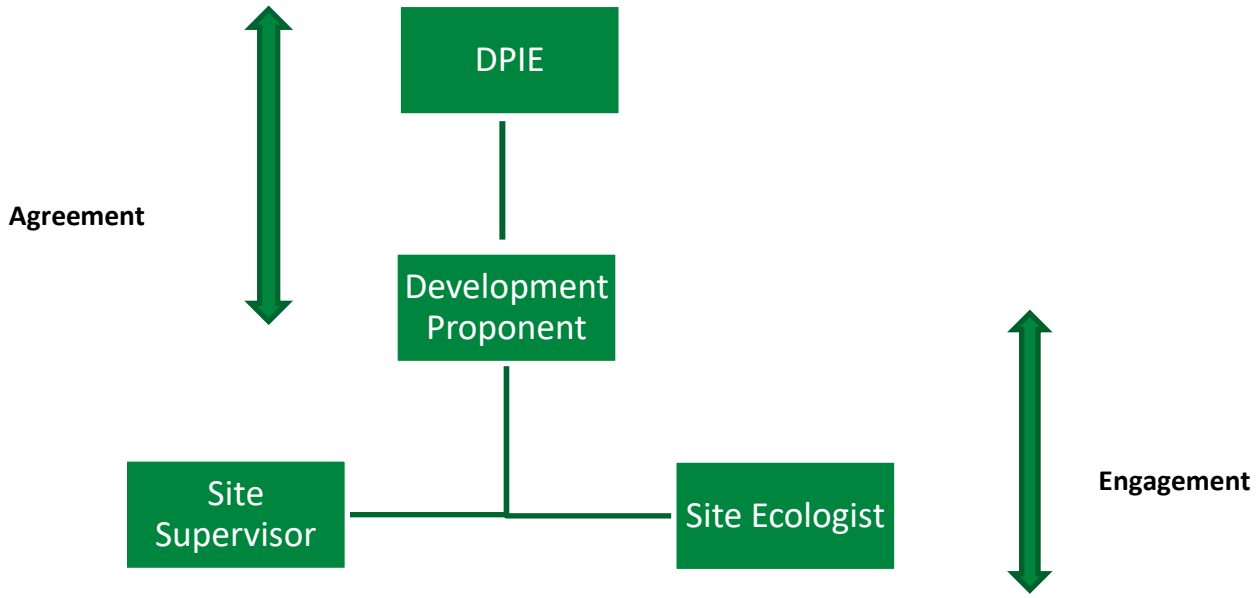


**Figure 3 Project organisation chart**

**Table 4 Responsibilities of personnel**

| Role | Name, Position and Company | Responsibility |
|---|---|---|
| Project Manager | **AW Edwards** | • Reviews DA Conditions of Consent and BMSP.<br>• Notifies DPIE of changes to the project scope of works and updates the BMSP, if required.<br>• Requires the contractor to adhere to the approved works.<br>• Accountable for contractor's and subcontractor's environmental performance.<br>• Reports any non-compliance to DPIE. |
| Site Supervisor | **Construction Contractor** | • Issues stop work orders, if required.<br>• Records any community complaints (Appendix C) and notifies Project Manager.<br>• Responsible for site management, BMSP compliance, including subcontractors.<br>• Facilitates environmental induction and toolbox talks for site personnel.<br>• Undertakes minimum of weekly environmental inspections (or after environmental conditions change).<br>• Ensures proponent, DPIE and community are notified of commencement of works.<br>• Initiates corrective actions.<br>• Reports BMSP non-conformances to the Project Manager.<br>• Reports incidents.<br>• Notifies the Project Manager if the BMSP needs revising. |
| Staff | **Construction Contractor**<br>&<br>**Ecological Contractor (ELA)** | • Comply with the BMSP.<br>• Monitor and maintain controls.<br>• Report breaches of the BMSP and potential / actual incidents to Site Supervisor<br>• Report incidents.<br>• Stop work and reports to Site Supervisor in the event of unexpected finds (e.g. native fauna).<br>• Record any community complaints and notify the Site Supervisor (Appendix C). |

# Appendix A Conditions of Consent

**PART B PRIOR TO COMMENCEMENT OF CONSTRUCTION**

**Construction Environmental Management Plan**

**B16**. The Biodiversity Management Sub-Plan (BMSP) must address, but not be limited to, the following:

a) the mitigation measures and actions set out in the Biodiversity Development Assessment Report dated 12 May 2020 and prepared by Eco Logical Australia. (see Table 2).

b) additional mitigation measures and actions for Microbats set out in Table 2 of the supplementary letter dated 30 July 2020 and prepared by Eco Logical Australia (see Table 3).

**Biodiversity**

**B23**. Prior to the commencement of vegetation clearing, the class and number of ecosystem credits in the table below must be retired to offset the residual biodiversity impacts of the development.

**B24**. The requirement to retire credits in condition B23 may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the class and number of ecosystem credits, as calculated by the Biodiversity Offsets Payment Calculator.

**B25**. Evidence of the retirement of credits or payment to the Biodiversity Conservation Fund in satisfaction of condition B23 must be provided to the Planning Secretary prior to carrying out development that will impact on biodiversity values.

This document satisfies Condition B16.

ELA has provided input into the retirement of ecosystems to address Condition B23-25. ELA has provided advice regarding the retirement of funds to the Biodiversity Conservation Trust and has assisted in the application forms and submission of the required credit reports to Macie on behalf of Schools Infrastructure. ELA can notify AW Edwards once the funds have been secured.

# Appendix B Team Induction Sign-Off Sheet

The following personnel certify the works will be carried out in accordance with the BMSP. This form is to be completed by the Project Manager and signed by all staff following environmental inductions.

| Name | Position / Company | Signature | Date |
|---|---|---|---|
| | Project Manager<br>**TBC** | | |
| | Site Supervisor / Contractor<br>**TBC** | | |
| | Staff<br>**TBC** | | |
| | Staff<br>**TBC** | | |
| | Staff<br>**TBC** | | |
| | Staff<br>**TBC** | | |
| | Staff | | |
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| | Staff<br>**TBC** | | |
| | Staff | | |
| | **TBC** | | |
| | Staff | | |
| | **TBC** | | |
| | Staff | | |
| | **TBC** | | |
| | Site Ecologist<br>**TBC** | | |

# Appendix C Complaints Recording Template

| Date | Received by phone / email / letter | Complaint | Name | Address | Contact | Follow-up Actions | Date Complete |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
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# Appendix D Phone and Emergency Contact List

| Organisation | Name | Position | Contact Number |
|---|---|---|---|
| **Project Contacts** | | | |
| TBC | TBC | Project Manager | TBC |
| TBC | TBC | Site Supervisor | TBC |
| TBC | TBC | Site Ecologist | TBC |
| DPIE | TBC | TBC | TBC |
| **Emergency Contacts** | | | |
| Emergency Services | - | - | 000 |
| Prince of Wales Hospital | - | - | 02 9382 2222 |
| City of Sydney | | Natural Resources Department | 02 0265 9333 |
| Environment Protection Authority | - | - | 131 555 |
| SafeWork NSW | - | - | 131 050 |
| Fire and Rescue NSW | - | - | 02 9265 2999 |
| State Emergency Services (SES) | | | 132 500 |
| WIRES | - | - | 1300 094 737 |
| Origin Energy | | | 132 461 |
| Energy Australia | | | 133 466 |
| Transgrid System Operations | | | 1800 027 253 / 9284 300 |
| Police Assistance Line (PAL) | | | 131 444 |
| Gas – Agility | | | 131 909 |
| Poisons Information | | | 131 126 |
| Telstra | | | 132 200 |
| RMS | | | 132 213 |

# Appendix E Site Biodiversity Inspection Checklist (Weekly)

| Constructor Details | Site Supervisor - Environmental Checklist |
|---|---|

Project Title: Darlington Primary School Redevelopment

Site Inspected: Darlington Primary School Redevelopment

Time & Date: Weather:

**Biodiversity**

- All contractors are required to be briefed on sensitive biodiversity values on site and environmental procedures ☐
- All tree protection works are installed and 'No-Go' zones clearly marked ☐
- Pre-clearance surveys conducted of buildings and vegetation by ecologist ☐
- No plant, equipment or stockpiles are positioned under the drip line of retained trees. ☐
- The Site Ecologist was present during stag/habitat tree removal and displaced fauna has been relocated. ☐

**Priority Weeds**

- Equipment and vehicles have been washed down prior to and after use, to manage the introduction and spread of weed propagules and pathogens in accordance with Appendix H. ☐

**Noise**

- Simultaneous operation of noisy plants within discernible range of a sensitive receiver has been avoided. ☐
- The distance between noisy plant items and nearby residential receivers and potential fauna habitat has been maximised. ☐
- Equipment such as offensive noise carriers have been oriented away from residential receivers and potential fauna habitat. ☐
- Plants used intermittently have been throttled or shut down when not required. ☐

Inspected by: Signature:

Actions: By Who: Date Completed:

# Appendix F Fauna Rescue and Release Procedure

The following Fauna Rescue and Release Procedure has been prepared in accordance with the NSW Department of Planning, Industry and Environment *Code of Practice for Injured, Sick and Orphaned Protected Fauna 2011.*

## NATIVE FAUNA ENCOUNTER

If native fauna is encountered during pre-clearance or clearance surveys, the decision tree outlined in Table 5 should be adhered to by the qualified ecologist.

**Table 5: Decision tree on how to respond to a native fauna encounter**

| Is the animal sick, injured, likely to have been injured or an orphan? | | | |
|---|---|---|---|
| **YES** | | **NO** | |
| Is death imminent or highly likely regardless of the care available? | | Is the animal creating a nuisance for the public or in a dangerous location? | |
| **YES** | **NO** | **YES** | **NO** |
| Arrange for the animal to be humanely euthanised by a suitably qualified person. | Rescue the animal and arrange for a vet or experienced fauna rehabilitator to assess it. | Advise people to avoid the animal or relocate it to a suitable nearby location. | Do not intervene. |

## RESCUING OF NATIVE FAUNA

If rescuing of the animal is chosen to be the most suitable option, the following must be adhered to:

- Assessment of all risk to fauna from environmental hazards and from capture.
- Confirmation that the correct rescue equipment for the type and size of fauna is at hand.
- Confirmation that a sufficient number of trained personnel for that species and size are present.

## TRANSPORTATION OF RESCUED NATIVE FAUNA

When transporting the rescued native fauna to a veterinary surgery or rehabilitation facility such as WIRES, the following must be adhered to:

- Ensure transport methods and container sizers are appropriate for the species, size, strength and temperament of fauna. This may include incorporating padding walls and ensuring no ingestible surfaces are present. Containers must also be designed and positioned so breathing is not restricted.
- Transportation containers are kept as an appropriate temperature for the species (note a range of 25 – 27◦C is appropriate for most species and ages;31◦C is appropriate for unfurred joeys and 21◦C is appropriate for echidnas, platypuses and frogs).
- Transportation containers are well ventilated.
- Ensure containers holding snakes and bats include a visible warning label outlining the danger.

- Ensure transportation containers are not left in the back of uncovered utility vehicles or car boots.
- During transportation, adult fauna should not be fed or watered during trips lasting less than a few hours. Dependent young may require feeding during shorter trips.
- Attain approval by a veterinarian before use of medication to facilitate transport.
- Ensure fauna transport is the sole purpose of the trip.

### RELOCATION OF NATIVE FAUNA

If the encountered native fauna does not require rescuing however, is required to be located outside of the construction site, the following must be adhered to:

- A suitable environment must be identified prior to relocation, this is one that:
  - Contains appropriate habitat and adequate good resources.
  - Is occupied by members of the same species.
  - Does not place the animal at a high risk of injury.
  - Is not outside of an area which the fauna would not normally cross (i.e. brush-tail possums rarely move more than 50 m however; wombats have a radius of approximately 50 km).

### SUITABLE LOCATION OF FAUNA RELEASE

Suitable location for fauna will be limited to vegetation within 50 m proximity to the site. This includes Forbes Street Reserve located 40 m north-west of the site.

# Appendix G Unexpected Threatened Species Find Procedure

If a threatened flora or fauna species is unexpectedly encountered within the project site, the following procedure should be followed.

**Has a threatened flora or fauna species unexpectedly been encountered?**

**YES**

**STOP WORK** and notify the Site Supervisor and Project Manager. The Project Manager is to notify DPIE.

Is an impact likely to occur?

| **YES** | **NO** |
|---|---|
| Consult with DPIE and obtain approvals, licences or permits as appropriate[i]<br>Recommence works once advice is south and necessary approvals, licenses and permits are obtained. | Recommence work and maintain regular inspections. |

# Appendix H Introduction and spread of weed and pathogens procedure

Construction works on development sites have the potential to introduce and promote the spread of weed species. This procedure is intended to prevent or minimise the spread of priority weed species. During construction, the Project Manager and Site Supervisor should adhere to best practice methods for weed management, which include:

- Mowing or slashing areas infested with weeds before they seed. This may reduce the propagation of new plants.
- Program works from least to most weed infested areas.
- Clean machinery, vehicles and footwear before moving to a new location.
- Securely cover loads of weed-contaminated material to prevent weed plant material falling or blowing off vehicles.
- Dispose of weed-contaminated soil at an appropriate waste management facility.
- Remove weeds immediately onto suitable trucks and dispose of without stockpiling.

## WEED MANAGEMENT PLAN

If the development site is highly infested, a Weed Management Plan may be warranted as a sub-plan to the Construction Environmental Management Plan, which may include:

- Identification and description of weed infested areas within the site.
- Recommendations for managing weeds.
- Weed control methods.
- Measures to prevent the spread of weeds.
- A monitoring program to measure the success of weed management.
- Communication strategies to improve contractor awareness of weeds and weed management.

Pathogens are agents such as bacterium, virus or fungus that cause disease in flora and fauna, which are be spread on footwear, vehicles or machinery. The four most common pathogens found in NSW include:

- **Phytophthora (*Phytophthora cinnamomi*):** A soil-borne fungus that attacks the roots of native plant species, causing them to rot and eventually die.
- **Chytrid fungus (*Batrachochytrium dendrobatdis*):** A waterborne fungus that affects native frog species.
- **Myrtle rust (*Uredo rangelli*):** An introduced fungus that attacks young leaves, shoot tips and stems of Myrtaceous plants (such as Bottle Brush, Tea Tree, Lilly Pilly and Turpentine), eventually killing the plant.

Construction works on development sites have the potential to promote the spread of pathogens. This procedure is intended to prevent or minimise the spread of pathogens if they have been identified within the development site. If the occurrence of pathogens is known within the locality, a test for presence through soil or water tests should fire be undertaken. If pathogens are present, during construction, the Project Manager and Site Supervisor should adhere to best practice methods for pathogens (Table 6).

**Table 6: Best practice hygiene protocols to prevent the spread of pathogens**

| Pathogen | Best Practice Hygiene Protocols |
|---|---|
| **Phytophthora** | • Minimise work during excessively wet or muddy conditions.<br>• Programming of works should always move from uninfected areas to infected areas.<br>• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.<br>• All personnel (including visitors) to be inducted on Phytophthora management measures for the site. Provide vehicle wash down facility.<br>• Restrict vehicles to designated tracks, trails and parking areas.<br>• Provide parking and turn-around points on hard, well-drained surfaces.<br>• Provide boot wash down facility.<br>• Restrict personnel to designated tracks and trails.<br>• Use a certified supply of plants and soil that is disease-free.<br>• Retain all potentially affected materials within the contaminated area.<br>• Ensure stockpiles of mulch, topsoil and fill material are separated to avoid potential contamination and spread. |
| **Chytrid Fungus** | • Minimise work during excessively wet or muddy conditions.<br>• Programming of works should always move from uninfected areas to infected areas.<br>• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.<br>• All personnel (including visitors) to be inducted on chytrid management measures for the site.<br>• Provide vehicle wash down facility.<br>• Restrict vehicles to designated tracks, trails and parking areas.<br>• Provide parking and turn-around points on hard, well-drained surfaces.<br>• Provide boot wash down facility.<br>• Disinfect with cleaning products containing benzalkonium chloride or 70% methylated spirits in 30% water.<br>• Disinfect hands or change gloves between the handling of individual frogs and between each site.<br>• Only handle frogs when necessary. Use the 'one bag-one frog' approach.<br>• To avoid cross contamination, generally avoid transferring water between two or more separate waterbodies. |
| **Myrtle Rust** | • To determine if Myrtle Rust is known within the locality of the development site, the following should be undertaken:<br>  ○ Use of The DPI Myrtle Rust Management Zone map (www.dpi.nsw.gov.au/biosecurity/plant/myrtle-rust/zones)<br>  ○ Consultation with Blacktown City Council for additional rust records and risk assessments.<br>  ○ Photograph potentially infected plants and send to: biosecurity@industry.nsw.gov.au for confirmation.<br>• Programming of works should always move from uninfected areas to infected areas.<br>• Set up exclusion zones with fencing and signage to restrict access into contaminated areas.<br>• All personnel (including visitors) to be inducted on Myrtle rust management measures for the site.<br>• Provide vehicle wash down facility.<br>• All vehicles and machinery to be washed with Truckwash®(or equivalent).<br>• Restrict vehicles to designated tracks, trails and parking areas.<br>• For medium-long term projects, install a concrete wash down bay which will capture the water in a trench or bunded area.<br>• Water used for wash downs must not be used for dust control.<br>• Personnel working in an infected site should shower and launder clothes (especially hats) before moving to another bushland site.<br>• Provide boot wash down facility. |

| Pathogen | Best Practice Hygiene Protocols |
|---|---|
| | • Footwear and equipment to be cleaned of soil/mud then sprayed with 70% methylated spirits in 30% water.<br>• Use a certified supply of plants and soil that is disease-free (the Australian Nursery Industry *Myrtle Rust Management Plan* (McDonald 2011) provides best practice Myrtle rust management that is to be expected from suppliers).<br>• Plant material should be buried on site if possible.<br>• Do not dispose of waste at another bushland site.<br>• Buried material sites must be mapped to prevent re-exposure, especially if located near utility easements.<br>• If material cannot be buried advice should be sought from Blacktown City Council. |

# Appendix I Re-Use of Native Habitat Features Strategy

## RELOCATION OF WOODY DEBRIS AND BUSH ROCK

Many native fauna species utilise wood debris and bush rock for shelter, basking to hide from predators, find food and avoid extreme weather. When woody debris and bush rock are required to be removed from a development site, consideration should be given to finding suitable locations for re-use of these important habitat features.

| Term | Definition |
|---|---|
| **Woody Debris** | Trees and wood, whether living or dead, at least 100 mm in diameter and 500 mm long, including hollows. |
| **Bush Rock** | Loose rock occurring on rock or soil surfaces. |

Prior to relocation of woody debris and bush rock, consultation should be undertaken with Blacktown City Council and the site ecologist to determine a suitable location for re-use to ensure it does not have a negative impact on the receiving environment. For example, in areas of high-quality bushland, there may already be enough suitable hollows, fallen logs or bush rock and adding more may cause unnecessary disturbance e or create a fire hazard.

If a suitable relocation area has been agreed upon by DPIE and the proponent, the Project Manager and Site Supervisor should ensure the following best practice methods are undertaken during relocation:

- Removal, stockpiling, transportation and relocation of woody debris and/or bush rock is carried out in a manner that minimises disturbance to native vegetation (including the canopy, shrubs, dead trees, fallen timber and groundcover species) or bush rock.
- The spread of any weeds or pathogens that may be in the soil is avoided when relocating woody debris and bush rock from stockpiles.
- The Site Ecologist is consulted with to provide advice on positioning woody debris and bush rock in designated relocation areas.
- Topsoil disturbance is kept to a minimum and is not heaped up against woody debris or bush rock because of the potential to provide habitat for rabbits.
- Woody debris is placed evenly across the site.
- Where woody debris is to be mulched the Project Manager and/or Site Supervisor should ensure that weeds are separated from native vegetation.

## USE OF NEST BOXES

Nest boxes can be used to provide supplementary breeding habitat and shelter for hollow-dependant fauna where hollows have been removed. All hollow-bearing trees that are proposed for removal, should be replaced with nest boxes. The installation of one nest box for every hollow-bearing tree removed is recommended. These nest boxes should be monitored annually for three years to determine usage.

If the installation of nest boxes is required, the following must be considered in consultation with the Site Ecologist:

- The target species.
- The tree hollow preferences of native hollow-dependant fauna known or likely to occur in the locality.
- The sizes, types and quantities of potential tree hollows to be removed.
- The sizes, types and quantities of tree hollows existing in adjacent areas.
- The design, materials and quantity of nest boxes required.
- Whether the nest boxes are required to fill a short-term gap in the availability of hollows (e.g. during construction) or to compensate for the long term reduced availability of hollows.
- Monitoring and maintenance of the nest boxes.