School Infrastructure NSW

October 2022

Biodiversity Management Plan

Jindabyne Education Campus

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Biodiversity Management Plan
Jindabyne Education Campus

School Infrastructure NSW

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A	20/10/2022	Draft for review
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	Name	Date	Signature
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Reviewed by:	Selga Harrington	21/10/2022	
Approved by:	Selga Harrington	21/10/2022	

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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Abbreviations

BAM	Biodiversity Assessment Method
BC Act	NSW Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BMP	Biodiversity Management Plan
BOS	NSW Biodiversity Offset Scheme
CEMP	Construction Environmental Management Plan
DPE	NSW Department of Planning and Environment
EEC	Endangered Ecological Community
EPA	NSW Environment Protection Authority
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
FM Act	NSW *Fisheries Management Act 1994*
Ha	Hectares
MNES	Commonwealth Matters of National Environmental Significance
NSW	New South Wales
PCT	Plant Community Type
SAII	Serious and Irreversible Impact
TEC	Threatened Ecological Community

1 Introduction

1.1 Purpose and objectives

This Biodiversity Management Plan (BMP) is a sub-plan of the Construction Environmental Management Plan (CEMP) for the Jindabyne Education Campus project (the Project). Construction of the Jindabyne Education Campus comprises a new primary school and a new high school at Jindabyne.

The purpose of this BMP is to describe how impacts on flora and fauna associated with the project will be managed throughout the duration of the construction of the project. Works are to be implemented in accordance with the mitigation measures and management strategies contained within this sub-plan.

The project's likely potential impacts to flora and fauna have been assessed within the Biodiversity Development Assessment Report (BDAR) (WSP 2022). This report confirmed the likely potential for impacts to flora and fauna to occur during the project's construction. However, it concluded that providing the identified mitigation and management strategies are implemented, any residual impacts related to the proposed works would not be significant. This sub-plan applies to all aspects of flora and fauna management for the project, during the construction phase of the project.

The objectives of the BMP sub-plan include:

- ensure controls and procedures are implemented during construction activities to avoid, minimise or manage potential adverse impacts to flora and fauna within and adjacent to the project
- to describe the measures to be implemented to minimise flora and fauna impacts
- ensure appropriate measures are implemented to address the relevant Conditions of Consent (CoC)
- ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 4 of this plan.

1.2 Conditions of consent

Table 1.1 outlines the conditions of consent for the project under B21 that are addressed within this BMP.

Table 1.1 Conditions of Consent relevant to the Biodiversity Management Plan

COC	Condition	Associated management procedure
CoC B21a	Be prepared by a suitably qualified and experienced person/s	This Plan, Section 1.4
CoC B21b	Identify areas of land where impacts on biodiversity are to be avoided as outlined in the Biodiversity Development Assessment Report (BDAR) prepared by WSP Australia Pty Ltd and dated July 2022 and set out how these areas will be protected from construction impacts	This Plan, Section 4.1
CoC B21c	Set out the measures identified in the BDAR to minimise, mitigate and manage impacts on biodiversity, including timing and responsibility for delivery of the measures	This Plan, Section 4.2

1.3 Site location

The site of the proposed new education campus at Jindabyne is located within the western extent of the existing Jindabyne Sport and Recreation Centre at 207 Barry Way (101 DP1019527). The site is located within the Snowy Monaro Regional local government area and is approximately 2.2 km south of the Jindabyne town centre.

The majority of the site is undeveloped and contains maintained grasslands and scattered trees. Much of the surrounding land comprises remnant grassland, woodland and agricultural land.

1.4 Biodiversity Management Plan preparation

This Biodiversity Management Plan has been prepared based on the Biodiversity Development Assessment Report (WSP 2022) by personnel as outlined in Table 1.2.

Table 1.2 Personnel

Name	Role	Qualifications
Toby Lambert	Technical Executive, Ecology Team Leader – technical review	Bachelor of Environmental Science Accredited BAM Assessor
Selga Harrington	Regional Team Manager, Ecology South – report preparation including technical review.	Bachelor of Science (Hons) Accredited BAM Assessor
Lucy Gill	Graduate Ecologist – report preparation	Bachelor of Environmental Science and Management (Hons)

2 Environmental requirements

2.1 Legislation

Legislation relevant to flora and fauna management includes:

- Environment Protection and Biodiversity Conservation Act 1999
- NSW Environmental Planning and Assessment Act 1979
- National Parks and Wildlife Act 1974
- Biodiversity Conservation Act 2016
- Biosecurity Act 2015
- Pesticides Act 1999.

Relevant provisions of the above legislation that applies to ecological management and conservation are detailed in Table 2.1.

Table 2.1 Principal legislation and regulation

Legislation and regulation	Relevance
Environment Protection and Biodiversity Conservation Act 1999	Under the EPBC Act, a person must not take an action that has, or will have, or is likely to have a significant impact on any matter of national environmental significance (MNES) without approval from the Federal Minister.
NSW Environmental Planning and Assessment Act 1979	Provides for project environmental assessment and approval.
National Parks and Wildlife Act 1974	The Act and regulation provision for the protection and conservation of habitat, ecosystems, ecosystem processes, and biological diversity.
Biodiversity Conservation Act 2016	This Act provides framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity. Under this Act, it is an offence to: — damage habitat of threatened species or ecological community — picking a plant that is a threatened or protected species, or part of a threatened ecological community — harm animals that is a threatened or protected species, or part of a threatened ecological community.
Biosecurity Act 2015	The Act and regulation provision to establish biosecurity zones within Australia to monitor, control and respond to pests and diseases.

Legislation and regulation	Relevance
Pesticides Act 1999	This Act promotes the protection of human health, environment, property and trade in relation to the use of pesticides. It is an offence under the Act to: — use a pesticide that harms or damages a person or property, a non-target animal or plant — use a pesticide that harms a threatened species or protected animal — possess or use an unregistered pesticide without a permit, or contrary to the approved label — fail to comply with the label or permit while using a pesticide — keep a registered pesticide in a container without a label — possess or use a restricted pesticide without authorisation — EPA may make pesticide control orders which prohibit use or possession of restricted pesticides. Removal and treatment of weeds within the project site must be in accordance with this act.

2.2 Guidelines and standards

Table 2.2 lists the non-statutory guidelines, standards and recovery plans that are relevant to this plan.

Table 2.2 Guidelines and standards

Guidelines and standards
Codes of Practice
NSW Department of Planning, Industry and Environment. 2018. Code of Practice for injured, sick and orphaned macropods.
NSW Department of Planning, Industry and Environment. 2021. Code of Practice for injured, sick and orphaned possums and gliders.
Office of Environment & Heritage (OEH). 2011. Code of Practice for injured, sick and orphaned protected fauna.
Disease
NSW Government, Department of Planning, Industry and Environment. Saving our Species (SoS). 2020. Hygiene guidelines – protocols to protect priority biodiversity areas in NSW from *Phytophtora cinnamomi,* myrtle rust, amphibian chytrid fungus and invasive plants.
Relevant recovery plans, priority action statements and best practice guidelines
BirdLife Australia. 2020. Temperate Woodland Bird Conservation Action Plan.
Department of Agriculture and Water Resources. 2017. Australian Pest Animal and Weed Strategy 2017–2027.
Department of Agriculture, Water and the Environment. 2021. Conservation advice for *Leucochrysum albicans subsp. Tricolor* (Hoary Sunray).
Department of Climate Change, Energy, the Environment and Water. 2007. Introducing the NSW threatened species priorities action statement (PAS), DECC NSW.
Department of Climate Change, Energy, the Environment and Water. 2008. Approved Conservation Advice for *Calotis glandulosa* (Mauve Burr-daisy).

Guidelines and standards
Department of Environment, Climate Change and Water. 2010. National recovery plan for *Prasophyllum petilum.* DECCW (NSW), Hurstville.
Invasive Plants and Animals Committee. 2016. Australian Weeds Strategy 2017 to 2027, Australian Government Department of Agriculture and Water Resources, Canberra.
National Parks and Wildlife Service. 2003. Management of native birds that show aggression to people.
Sinclair, S.J. 2010. National Recovery Plan for the Hoary Sunray *Leucochrysum albicans var. tricolor*. Department of Sustainability and Environment, Melbourne.

3 Existing environment

The following section is a summary of that described in detail in the BDAR (WSP 2022).

3.1 Site description

The site of the proposed new education campus at Jindabyne is located within the western extent of the existing Jindabyne Sports and Recreation Centre at 207 Barry Way (101 DP1019527). The site is located within the Snowy Monaro Regional local government area and is approximately 2.2km south of the Jindabyne town centre. The majority of the site is undeveloped and contains maintained grasslands and scattered trees. Much of the surrounding land comprises remnant grassland, woodland and agricultural land.

3.2 Vegetation and threatened ecological communities

Only one Plant Community Type (PCT) occurs in in the subject land, Snow Gum – Candle Bark woodland on broad valley flats of the tablelands and slopes, South Eastern Highlands Bioregion (PCT 1191).

This PCT is part of the Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion as listed as Critically Endangered under the BC Act. This Threatened Ecological Community (TEC) is identified as a threatened entity at risk of a Serious and Irreversible Impact (SAII).

Trees may be absent from this TEC as a consequence of tree removal under pastoral management and grazing by domestic stock. As such, areas of derived native grassland corresponding to PCT 1191 within the subject land are considered to be part of this TEC.

There were also areas of non-native vegetation that were classed as Miscellaneous ecosystems (exotic trees/shrubs). A list of exotic species and weeds recorded on site is provided in Table 3.3 in Section 3.4.

3.3 Threatened and migratory species

3.3.1 Flora

Table 3.1 outlines the threatened plant species have potential habitat on site (PCT1191) and may be present:

Table 3.1 Threatened flora species

Scientific name	Common name	BC Act status	EPBC Act status
Calotis glandulosa	Mauve Burr-daisy	Vulnerable	Vulnerable
Leucochrysum albicans var. tricolor	Hoary Sunray	–	Endangered
Prasophyllum petilum	Tarengo Leek Orchid	Endangered	Endangered
Swainsona sericea	Silky Swainson-pea	Vulnerable	–
Thesium australe	Austral Toadflax	Vulnerable	Vulnerable

3.3.2 Fauna

No threatened fauna species were detected on site, however the site contains a number of hollow-bearing trees which provide important habitat for fauna including threatened species. Threatened species that may use these hollows and migratory species that may occur on site are outlined in Table 3.2.

The project area does not contain any large stick nests that would be appropriate for use by raptor species. However, there is a Little Eagle nest located approximately 220 metres to the north-west of the project area.

There are no threatened fauna species SAII entities that would be affected by the project.

Table 3.2 Threatened fauna and migratory species

Common name	Scientific name	BC Act status	EPBC Act status	Likelihood
Migratory Marine Birds				
Fork-tailed Swift	*Apus pacificus*	–	Marine, Migratory	Moderate
Migratory Terrestrial Species				
White-throated Needletail	*Hirundapus caudacutus*	–	Vulnerable, Migratory	Moderate
Satin Flycatcher	*Myiagra cyanoleuca*	–	Migratory	High
Birds				
Gang-gang Cockatoo	*Callocephalon fimbriatum*	Vulnerable	Endangered	Moderate. Potential habitat available on site
Mammals				
Eastern Pygmy-possum	*Cercartetus nanus*	Vulnerable	–	Moderate. Potential habitat available on site

3.4 Exotic species and weeds

Exotic species and High Threat Weeds were present within the project area. A total of 24 introduced species of plant were recorded within the project area, including 5 species of High Threat Weeds (Table 3.3).

Table 3.3 Exotic and weed species recorded within project area

Status	Scientific name	Common name	Biosecurity duty
High Threat Weeds	*Bromus diandrus*	Great Brome	**General Biosecurity Duty** – prevent, eliminate or minimise spread
	Crataegus monogyna	Hawthorn	**General Biosecurity Duty** – prevent, eliminate or minimise spread
	Rumex acetosella	Sheep Sorrel	**General Biosecurity Duty** – prevent, eliminate or minimise spread
	Hypericum perforatum	St Johns Wart	**General Biosecurity Duty** – prevent, eliminate or minimise growth **Regional Recommended Measure** – land managers should mitigate spread, plant should not be bought, sold, grown or released into the environment

Status	Scientific name	Common name	Biosecurity duty
	Pyracantha sp.	Firethorn	**General Biosecurity Duty** – prevent, eliminate or minimise spread
Exotic species	*Bromus hordeaceus*	Soft Brome	**Due diligence –** prevent spread where possible
	Petrorhagia nanteuilii	–	**Due diligence –** prevent spread where possible
	Echium plantagineum	Paterson's Curse	**General Biosecurity Duty** – prevent, eliminate or minimise spread
	Avena barbata	Bearded Oats	**Due diligence –** prevent spread where possible
	Arenaria leptoclados	Lesser Thyme-leaved Sandwort	**Due diligence –** prevent spread where possible
	Verbascum thapsus	Great Mullein	**Due diligence –** prevent spread where possible
	Hirschfeldia incana	Shortpod Mustard	**Due diligence –** prevent spread where possible
	Trifolium arvense	Haresfoot Clover	**Due diligence –** prevent spread where possible
	Vulpia myuros	Rat's Tail Fescue	**Due diligence –** prevent spread where possible
	Taraxacum officinale	Common Dandelion	**Due diligence –** prevent spread where possible
	Hordeum leporinum	Wall Barley	**Due diligence –** prevent spread where possible
	Hypochaeris radicata	Flatweed	**Due diligence –** prevent spread where possible
	Cirsium vulgare	Spear Thistle	**General Biosecurity Duty** – prevent, eliminate or minimise spread
	Erodium cicutarium	Common Stork's-bill	**Due diligence –** prevent spread where possible
	Plantago lanceolata	Ribwort Plantain	**Due diligence –** prevent spread where possible
	Potentilla recta	Sulphur Cinquefoil	**Due diligence –** prevent spread where possible
	Lolium perenne	Perennial Ryegrass	**Due diligence –** prevent spread where possible
	Salvia coccinea	Scarlet Sage	**Due diligence –** prevent spread where possible
	Marrubium vulgare	Horehound	**General Biosecurity Duty** – prevent, eliminate or minimise spread

3.5 Impacts and offsets

Direct impacts on biodiversity identified for the project include:

- clearing of native vegetation, consistent with Critically Endangered Ecological Community (Table 3.4)
- clearing of fauna habitat and areas connecting threatened species habitat, such as movement corridors
- impacts to fauna from vehicle strikes.

Table 3.4 Impacts to threatened ecological community

Threatened ecological community	Area (ha) in development site
Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion	2.29 ha total consisting of: — 0.80 ha of woodland — 1.49 ha of derived grassland.

In addition to the direct impacts of the project, a number of indirect impacts were identified including:

- reduced viability of adjacent habitat due to edge effects
- reduced viability of adjacent habitat due to noise, dust or light spill
- transport of weeds and pathogens from the site to adjacent vegetation
- loss of breeding habitat provided by hollow bearing trees
- trampling of threatened flora species
- rubbish dumping
- wood collection
- removal and disturbance of rocks, including bush rock.

4 Mitigation measures

4.1 Avoidance

The Biodiversity Development Assessment Report (BDAR) assessed the impacts to biodiversity and provided credit calculation to offset the project. An application for payment into the Biodiversity Conservation Fund was submitted to fulfil the offset obligation for the project.

Clearing of native vegetation must not occur outside the area assessed for clearing in the BDAR as shown in Figure 4.1. Native vegetation clearing must be less than 2.29 ha total and consisting of:

- less than 0.80 ha of woodland
- less than 1.49 ha of native derived grassland.

The land where impacts on biodiversity are to be avoided are shown in Figure 4.1. Temporary construction fencing is required around these areas to protect biodiversity during construction.

4.2 Mitigation measures

The environmental management approach has been developed to be consistent with the regulatory requirements for management of biodiversity impacts, identified as likely to be encountered during the construction and operational phases of the project. Specific measures and requirements to address impacts on flora and fauna are outlined in Table 4.1.

Table 4.1 Mitigation and management measures

Mitigation measure (action)	Timing	Responsibility	Source of requirement
Nest boxes will be provided to minimise habitat loss to hollow-bearing fauna (and species that may be living in the buildings) in accordance the following requirements: — hollow-bearing trees will be marked/tagged and mapped in a pre-clearing survey — the size, type, number and location of nest boxes required will be based on the results of the pre-clearing survey. Seventy per cent of nest boxes will be installed one month prior to any hollow-bearing vegetation removal, with all nest boxes to be installed within six months from the date of the commencement of clearing.	Pre-construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B7) This Plan
Biodiversity exclusion zones (temporary fencing) for retained vegetation (Figure 4.1), will be clearly identified on the ground by a suitably qualified ecologist prior to the commencement of construction. Fencing will remain in place for the duration of the project, and only removed upon completion of the project.	Pre-construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B7 and 8)

Mitigation measure (action)	Timing	Responsibility	Source of requirement
Construction workforce will be supplied with sensitive area maps (showing clearing boundaries and exclusion zones) including updates as required (Figure 4.1).	Construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B7 and B9)
All employees and contractors working on site will undergo site induction training relating to flora and fauna management issues. The induction training will address elements related to flora and fauna management including: — existence and requirements of this sub-plan — relevant legislation — flora and fauna mitigation and management measures — procedure to be implemented in the event of an incident.	Construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B9)
Clearing of native vegetation will be monitored against the approved clearing (see Section 5.3).	Construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B10)
The threatened species unexpected finds protocol (Appendix B) will be implemented if threatened flora and fauna species, not assessed in the biodiversity assessment, are identified in the disturbance area.	Construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B12) Appendix B
Relocate habitat features (e.g. fallen timber, hollow logs) from the development footprint to adjacent retained vegetation where practicable.	Construction	Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B13) This Plan
Implement hygiene protocols including: — vehicles and other equipment to be used during clearing phases in the construction zone and general construction equipment (such as excavators, graders etc.) are to be visibly free of soil, seeds and plant material before entering the site to prevent the introduction of weeds and pathogens — weed and pathogen management (provided in Appendix C) to control spread of weeds or pathogens.	Construction	All site staff Site Supervisor or Site Environmental Officer	CoC B21c (BDAR reference B14) Appendix C Arrive Clean, Leave Clean Guidelines
Prepare a vegetation management plan to regulate activity in vegetation and habitats adjacent to the school. The plan may include controls on rubbish disposal, wood collection, rock collection, fire management, and disturbance to nests and other niche habitats.	Operation	School Infrastructure NSW Grounds keeper/Maintenance contractor	CoC B21c (BDAR reference B15) This Plan

Mitigation measure (action)	Timing	Responsibility	Source of requirement
Provide for the ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation and habitat on, or adjacent to, the development to industry best practice and standards.	Operation	School Infrastructure NSW Grounds keeper/ Maintenance contractor	CoC B21c (BDAR reference B16)

Notes: BDAR mitigation measure B11, which requires timing of works to avoid critical life cycle events (i.e. breeding and nursing) of threatened species, has been removed from this list of mitigation measures due to the absence of threatened species on site. In the instance of an unexpected find, this condition would be reconsidered. BDAR mitigation measures 1-4 apply to design phase and have not been included as part of the construction sub-plan.

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Jindabyne School

Figure 4.1
Impact Avoidance

Legend

- Watercourses
- Subject Land
- Extent of clearing assessed in BDAR
- High value vegetation requiring exclusion fencing (PCT 1191)

Coordinate system: GDA 1994 MGA Zone 55

Scale ratio correct when printed at A3

1:2,000 Date: 20/10/2022

Data sources: - DNRME, TMR, Translink, Geoscience Australia

5 Compliance and monitoring

5.1 Roles and responsibilities

The organisational structure and overall roles and responsibilities will be outlined within the CEMP. Specific responsibilities for the implementation of biodiversity controls are outlined in Section 4 of this plan.

5.2 Training

All employees and contractors working on site will undergo site induction training relating to flora and fauna management. The induction training will address the following aspects of flora and fauna management:

- existence and requirements of this sub-plan
- relevant legislation and guidelines, as stated in Section 2 of this plan (Table 2.1 and Table 2.2)
- flora and fauna mitigation measures, as stated in Section 4 of this plan (Table 4.1)
- procedure to be implemented in the event of an accident.

Further details regarding staff induction and training will be outlined in the CEMP.

5.3 Inspections and monitoring

Regular monitoring for flora and fauna will assess the effectiveness of mitigation measures implemented for the flora and fauna present (or potentially present) on site.

Inspections of biodiversity aspects will occur during the construction phase of the project. This will involve weekly inspections and monitoring of:

- site environmental fencing
- vegetation clearance extents
- weed monitoring
- erosion and sediment controls.

The details of additional environmental monitoring protocols and procedures will be outlined within the CEMP.

5.4 Non-conformances

Any non-conformances (i.e. not meeting nominated environmental objectives or targets, not complying with environmental legislation or other requirements) will have corrective and/or preventative actions identified and implemented.

6 Review and improvement

6.1 Continual improvement

Continual improvement of this plan will be achieved by the ongoing evaluation of environment management performance against the proposed mitigation and management strategies, environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continual improvement process will be designed to:

- identify areas of opportunity for improvement of environmental management and performance
- determine the cause or causes of non-conformances and deficiencies
- develop and implement a plan of corrective and preventative action to address non-conformances and deficiencies
- verify the effectiveness of the corrective and preventative actions
- document any changes in procedures resulting from process improvement
- make comparisons with objectives and targets.

6.2 Plan update

Pending the processes described in the CEMP, this may result in the need to update or revise this sub-plan. This will occur as needed.

Only the site environmental representative, or delegate, has the authority to change any of the environmental management documentation. In terms of approval of updates or amendments to this sub-plan, this is to be carried out by the environmental representative who will verify that the amendments are consistent with the project approval.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure, which will be outlined within the CEMP.

7 Limitations

This Report is provided by WSP Australia Pty Limited (*WSP*) for School Infrastructure NSW (*Client*) in response to specific instructions from the Client and in accordance with WSP's proposal dated 18 March 2021 and agreement with the Client dated 7 October 2022 (*Agreement*).

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8 References

Department of Agriculture and Water Resources (2017). Australian Pest Animal and Weed Strategy 2017–2027.

Department of Climate Change, Energy, the Environment and Water (2022). Threatened species and communities. Available: https://www.dcceew.gov.au/environment/biodiversity/threatened

Department of Environment (2015). Arrive Clean, Leave Clean – Guidelines to help prevent the spread of invasive plant diseases and weeds threatening our native plants, animals and ecosystems.

Mecone (2021). Jindabyne Education Campus Environmental Impact Statement.

NSW Department of Planning and Environment (2022). Threatened species profile search. Available: https://www.environment.nsw.gov.au/threatenedspeciesapp/

NSW Department of Primary Industries (2022a). Threatened species lists. Available: https://www.dpi.nsw.gov.au/fishing/threatened-species/what-current

NSW Department of Primary Industries (2022b). NSW WeedWise. Available: https://weeds.dpi.nsw.gov.au/

NSW Government, Department of Planning, Industry and Environment. Saving our Species (SoS). 2020. Hygiene guidelines – protocols to protect priority biodiversity areas in NSW from *Phytophtora cinnamomi,* myrtle rust, amphibian chytrid fungus and invasive plants.

Royal Botanic Gardens (2022). "Plantnet – The Plant Information Network System of Botanic Gardens Trust Version 2.0." 2022, from http://plantnet.rbgsyd.nsw.gov.au/.

State Government of NSW and Department of Planning and Environment (2022). NSW State Vegetation Type Map, https://datasets.seed.nsw.gov.au/dataset/nsw-state-vegetation-type-map [Accessed 2022].

WSP (2022). Jindabyne Education Campus Biodiversity Development Assessment Report.

Appendix A

Clearing protocols

A1 Clearing protocols

To prevent injury and mortality of fauna during the clearing of vegetation, an experienced and licensed wildlife carer and/or ecologist will be present to capture and relocate fauna where required. The Vegetation clearing protocol as outlined below will be followed.

A1.1 Mark hollow-bearing trees

Clearly mark all trees containing hollows which are to be removed based on hollow bearing tree survey and mapping.

Signage and flagging will be erected around the trees until they are deemed as 'cleared' by a qualified ecologist and can be removed.

A1.2 Clearing

A chainsaw is preferable to heavy machinery to remove native vegetation in any areas where there would only be partial clearing. Clearing will be undertaken using the 'two stage process', specifically:

Stage 1 – Non habitat tree removal

When vegetation, that may provide habitat for native fauna, is proposed to be removed the area will be surveyed immediately (proceeding night & day of clearing) prior to clearing, to:

- obtain updated information on fauna and fauna habitat resources present; and
- capture and relocate non-mobile fauna, such as reptiles and frogs and key habitat features such as active bird nests or scare animals away.

Following clearing, re-check after clearing to ensure no animals have become trapped or injured during clearing operations.

Stage 2 – Habitat tree removal

Any habitat trees (hollow –bearing or with nests) proposed to be felled will be 'bumped and shaken' and remain for up to 24–48 hours or as per Ecologist(s) recommendations as to allow any potential fauna time to relocate from the tree.

When removing hollow-bearing trees:

- an ecologist/wildlife handler (spotter) should be present at each tree to be removed to look for signs of animal movement in the tree to be cleared. The spotter should be able to communicate directly with plant operators
- the operator will be skilled in removing habitat trees and the two-stage clearing procedure. The ecologist will discuss the method of felling (i.e. orientation, equipment etc.) with the operator to ensure animal welfare is considered
- prior to clearing hollow-bearing trees, an excavator or loader is to hit the trunk as high up the tree as possible several times. Wait at least 30 seconds. Repeat this process several times
- where possible, habitat trees are to be knocked with an excavator bucket or other machinery used for clearing to create only enough disturbance to encourage any remaining fauna to move from the tree, or at least show themselves prior to felling. Excessive knocking of the tree must not take place
- the tree is to be left for several minutes before being felled as gently as possible
- once the hollow-bearing limb or hollow-bearing tree is on the ground, it will be inspected carefully by an ecologist and fauna would be captured, processed and, if healthy, relocated. before the next limb/tree is removed
- if taking the tree down in stages, remove non-hollow-bearing limbs first. Then remove hollow-bearing limbs.
- injured fauna will be taken to a local vet for treatment or WIRES or similarly-qualified and licensed personnel will be contacted to collect and treat any injured individuals.

Handling wildlife:

- direct contact with any wildlife should be avoided wherever possible
- fauna mortality as well as rescued and relocated fauna will be recorded
- if the animal is not injured or stressed, it may be released nearby in an area that is not to be disturbed by the Project construction, in accordance with the following:
  - sites identified as suitable release points by the Project Ecologist or WIRES rescuer
  - release will be into similar habitat as close to the original area as possible
  - if the species is nocturnal, release will be carried out at dusk; and
  - release would generally not be undertaken during periods of heavy rainfall.

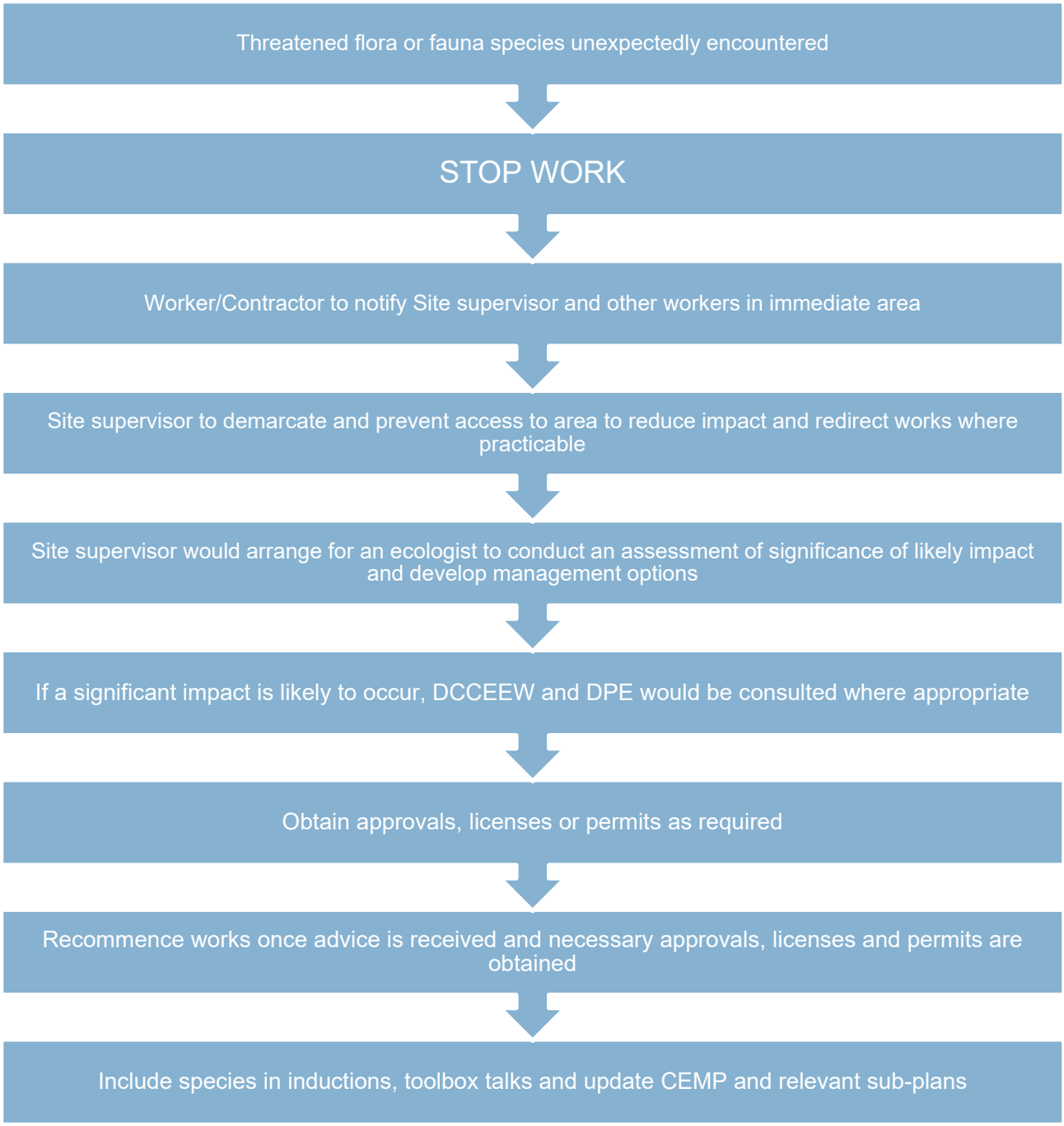
Appendix B

Unexpected Threatened Species Find protocols

B1 Unexpected Threatened Species Find protocols

In the event an unexpected threatened species is encountered during site works, the protocol outlined below must be followed.

B1.1 Protocol



B1.2 Reporting

A record of the unexpected finds should be maintained by the contractor and should include the following details:

- date, time and location of unexpected find
- details regarding assessment by the Environment Manager, site supervisor (and advice from suitably qualified ecologist or specialist)
- actions undertaken before work recommenced.

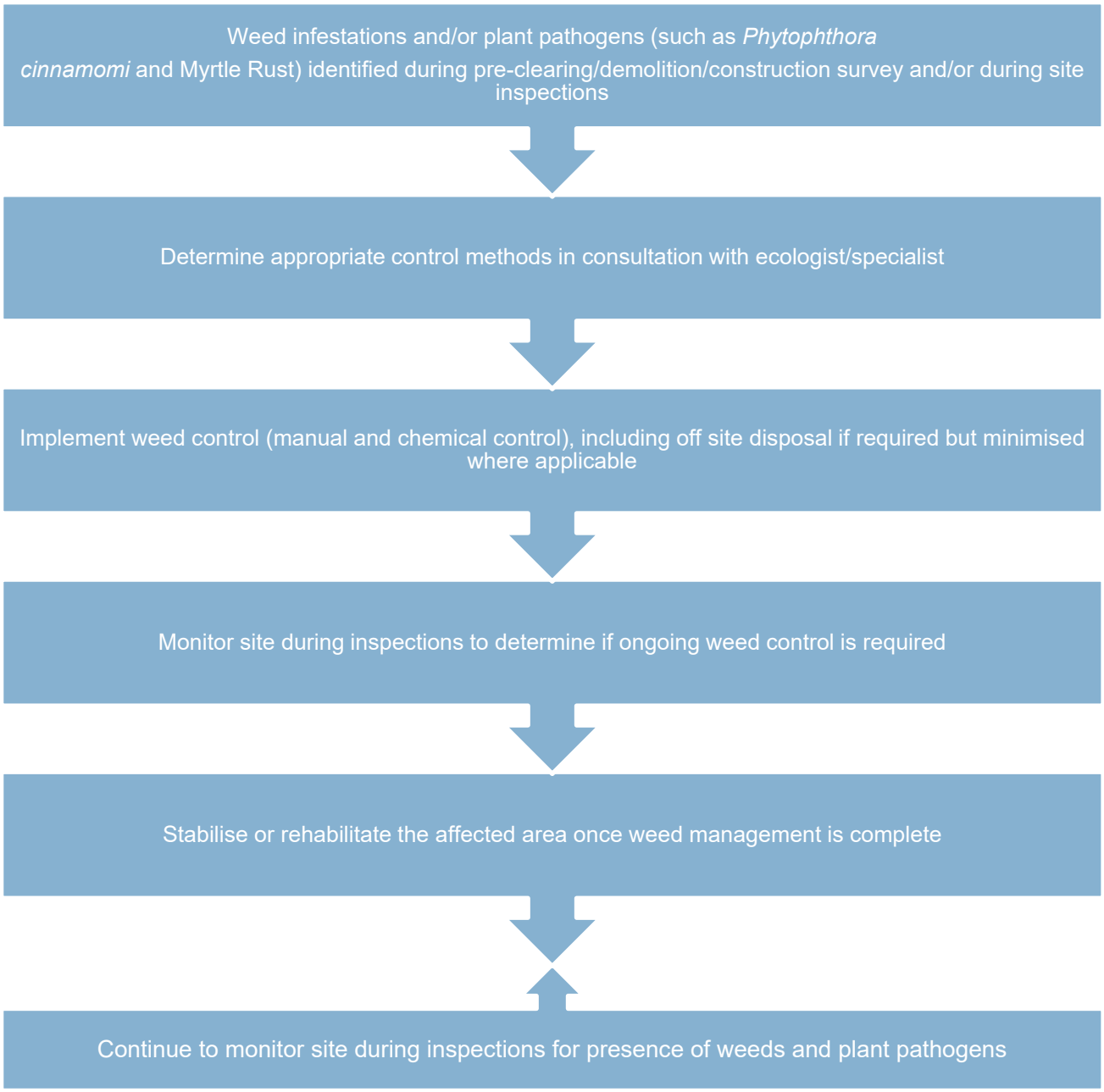
Appendix C

Hygiene protocols for management of weeds and pathogens

C1 Hygiene protocols

This protocol describes the weed and pathogen management and control strategies to be implemented during site works.

C1.1 Protocol



C1.2 Weed and pathogen control methodology

Weeds within the site would be controlled according to control plans and measures recommended in the *NSW Weed Control Handbook* (DPI 2018). If weeds or pathogens are introduced to the site by the project, the aim would be eradication from the site.

C1.2.1 Manual control

- Weeds requiring hand or mechanical removal, including contaminated topsoil, would require disposal by encapsulation (deep burying) or to an approved waste management facility.
- Carry out mechanical means of control (such as mowing or slashing) where feasible in proximity to waterways and aquatic environments.
- Machinery involved in weed management activities require deep cleaning to remove any plant material or soil, prior to commencement of construction.

C1.2.2 Chemical (pesticide) control

- Only pesticides registered for use near water may be used near waterways and aquatic environments.
- Avoid applying pesticides:
  - on hot days when plants are stressed
  - after the seed has set
  - within 24 hours of rain or when rain is imminent
  - when winds will cause drift of pesticides into non-target areas.
- Keep a record of pesticide application. This must be maintained by the contractor and must include the following:
  - who applied the pesticide
  - date of pesticide application
  - details of pesticide used (full product names)
  - where the pesticide was applied (to what weed and in what location)
  - amount of pesticide used (total amount use, rate of application, area covered)
  - weather conditions during pesticide application.

C1.2.3 Minimising spread of weeds and pathogens

The following three steps should be followed to reduce spread of weeds and/or pathogens

1 **Check**

- Check personnel, clothing, footwear, backpacks and equipment for soil, plant material and other debris.
- Check exterior and interior of vehicles and machinery for soul, plant material and other debris.

2 **Clean**

- Remove all soil, plant material and other debris using a brush and clean water.
- If dirty, wash hands with soap and water.
- Remove seeds from clothing, footwear, tools and equipment by hand. Seeds that are difficult to remove can sometimes be scraped off clothing with a sharp tool but use caution. Where possible, have a co-worker double-check that you have removed all seeds.
- Remove all soil, plant material and other debris from the interior of vehicle and machinery using vacuum or dustpan and brush. Place debris in a bag and dispose of at an offsite licensed facility.
- If Myrtle Rust is detected on site, disinfect equipment and exterior of vehicles with disinfectant.

3 Dry

- Where practical, ensure hands, clothing, footwear, vehicles, machinery and equipment are dry before proceeding.

C1.2.4 Disposal of weeds

- All weed plant material and topsoil containing weed plant material should be disposed of at an offsite licensed facility.
- Securely cover loads of weed-contaminated material to prevent weed plant material falling or blowing off vehicles between site and disposal location.

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