West Culburra

Construction Environmental Management Plan
Development Operational Environmental Management Plan

Sealark Pty Limited, C/- Allen Price Pty Ltd

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Document Tracking

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Declaration of Accuracy

EPBC requirement	2023/09524
EPBC Number	2023/09524
Project name	West Culburra Residential Subdivision, NSW
Proponent and ABN/CAN	Sealark Pty Ltd - 075 795 587
Proposed/Approved action	To construct a residential development and associated infrastructure, as varied by the variation request dated 8 August 2024.
Location of the action	Culburra Road, West Culburra (Part Lot 1 DP 1305809, Part Lot 3 DP 1279350, Part Lot 1 DP 1279350 and Part Lot 1 DP 631825)
Date of preparation	4 February 2026
Person accepting responsibility for the Environmental Management Plan	Andrew Whitford, Principal Consultant, Eco Logical Australia

In making this declaration, I am aware that section 491 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2025 (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed 

Full name (please print) Andrew Whitford

Organisation (please print) Eco Logical Australia

Date 06/03/2026

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Abbreviations

Abbreviation	Description
ACR	Annual Compliance Reporting
ASL	Above Sea Level
CEMP	Construction Environment Management Plan
BC Act	*Biodiversity Conservation Act 2016*
BDAR	Biodiversity Development Assessment Report
DA	Development Application
DAWE	Department of Agriculture, Water and the Environment (superseded)
DBH	Diameter at Breast Height
DCCEEW	Department of Climate Change, Energy, the Environment and Water
ELA	Eco Logical Australia
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA	Environmental Protection Agency
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
ER	Environmental Representative
ESCP	Erosion and Sediment Control Plan
GPS	Global Positioning System
HBT	Hollow Bearing Tree
IWCMS	Integrated Water Cycle Management Strategy
LGA	Local Government Area
LLS	Local Land Services
MNES	Matters of National Environmental Significance
MSDS	Material Safety Data Sheet
OEH	Office of Environment & Heritage
OEMP	Operations Environmental Management Plan
PAH	Polycyclic Aromatic Hydrocarbons
PAL	Police Assistance Line
PM	Project Manager
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SCC	Shoalhaven City Council
SDS	Safety Data Sheets
SE	Site Ecologist
SOP	Safety Operational Procedure
SS	Site Supervisor
SSD	State Significant Development
SWMS	Safety Work Method Statement
SWMP	Soil and Water Management Plan
TBD	To be determined
TEC	Threatened Ecological Community
VENM	Virgin Excavated Natural Material
VMP	Vegetation Management Plan
WH&S	Work Health & Safety
WIRES	Wildlife Information Rescue and Education Service

1. Introduction

This Management Plan has been prepared to function as both a Construction Environmental Management Plan (CEMP) and a Development Operational Environmental Management Plan (OEMP) by Eco Logical Australia Pty Ltd (ELA) on behalf of Sealark Pty Ltd for the proposed West Culburra mixed-use subdivision development and associated infrastructure at Culburra Road, West Culburra (Part Lot 1 DP 1305809, Part Lot 3 DP 1279350, Part Lot 1 DP 1279350 and Part Lot 1 DP 631825, formerly Lots 5 and 6 DP 1065111) Shoalhaven. The Culburra Sewage Treatment Plant (STP) is located on part of Lot 1 DP 631825. The concept approval for the West Culburra development does encompass part of Lot 1 DP 631825. These lands fall within Shoalhaven Local Government Area (LGA). A maximum of 45.99 ha of native vegetation in various condition states and 1.98 ha of cleared land, along adjacent road reserves, would be affected by the proposed action through vegetation clearing. The West Culburra Action area (Figure 2) consists of the proposed development footprint and the Vegetation Management Plan (VMP) area.

1.1. State and federal approvals for the project

The proposed action has a long assessment history at State level under Part 3A and Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). In 2013 Sealark Pty Ltd submitted a development application (DA) for a mixed-use subdivision under the NSW EP&A Act (SSD 3846) and in December 2021, this DA was approved subject to the commitment that:

> *The developer will prepare a Construction Environmental Management Plan for subsequent staged subdivision approval by Shoalhaven City Council including education of workers in the approvals and conditions requiring compliance (including soil erosion and sediment controls, flora and fauna and aboriginal archaeological considerations).*
>
> *The developer will prepare a Development Operational Environmental Management Plan for subsequent staged subdivision approval by Shoalhaven City Council to oversee future management and maintenance of the development site.*

Table 1 provides a summary of the DA Conditions of Approval (SSD 3846) and how they have been addressed in this management plan.

Additionally, the proposed action was referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and was determined a Controlled Action under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) due to the potential significant impacts on the following Matters of National Environmental Significance (MNES):

- *Pteropus poliocephalus* (Grey-headed Flying-fox)
- *Petaurus australis* (Yellow-bellied Glider)
- *Callocephalon fimbriatum* (Gang-gang Cockatoo)
- PCT 4019: Coastal Alluvial Bangalay Forest
    - Associated with the TEC Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions under the BC Act.
    - Associated with TEC River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria under the EPBC Act.
- PCT 4051: South Coast Lowland Red Gum-Swamp Oak Forest

- Associated with Coastal Swamp Oak (*Casuarina glauca)* Forest of NSW and SE QLD under the EPBC Act.

Table 2 provides a summary of the Conditions of Approval under the EPBC Act and how they have been addressed in this management plan.

Table 1: DA Conditions of Approval (SSD 3846) requirements

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
1	B11	*Prior to the issuing of a Subdivision Works Certificate, the Applicant must prepare a Soil and Water Management Plan for the Concept Proposal to the satisfaction of Council and generally in accordance with the requirements nominated in Section 8.3 of the IWCMS and Section 7 of the Addendum IWCMS. The Plan must:*	Section 4.5
	B11a	*be prepared by a suitably qualified and experienced person(s);*	Section 1.2
	B11b	*be consistent with the water quality objectives of the Healthy Estuaries for Healthy Oysters Guidelines (NSW Department of Primary Industries, 2017), NSW Oyster Industry Sustainable Aquaculture Strategy (OISAS) (NSW 2006), and Shoalhaven City Council Development Control Plan 2014;*	Section 4.5
	B11c	*include detailed erosion and sediment controls developed in accordance with the relevant requirements of Managing Urban Stormwater: Soils and Construction – Volume 1: Blue Book (Landcom, 2004) guideline; and*	Section 4.5
	B11d	*include procedures for maintaining erosion and sediment controls in efficient working order for the duration of construction works associated with approved stages of the Concept Proposal.*	Section 4.3.1, and Section 4.5
3	B13	*The Applicant must conduct formal consultation with the Aboriginal Community in accordance with clause 60 of the National Parks and Wildlife Regulation 2019.*	Section 2.3
4	B14	*The consultation activities described in Condition B13 must be undertaken prior to the commencement of Construction. The outcomes of consultation and any amendments made to the Concept Proposal to address Aboriginal cultural values and heritage impacts must be detailed in an Aboriginal Cultural Heritage Assessment report, which is to be submitted to Council.*	Section 2.3
2	B15	*Prior to commencement of construction of any approved stage of the Concept Proposal, an Aboriginal Cultural Heritage Management Plan must be prepared for:*	Section 2.3 and Section 4.7
	B15a	*the Crookhaven River middens located in the Foreshore Reserve as identified in the Sealark Supplementary Report to the Aboriginal Cultural Heritage Assessment, prepared by Dr Johan Kamminga, dated 14 April 2020;*	Section 2.3 and Section 4.7
	B15b	*other already identified places of cultural significance and any identified in ongoing consultation with the Aboriginal community;* *to ensure the ongoing conservation, management, and protection of the area.*	Section 2.3 and Section 4.7
3	B16	*The ACHMP required by condition B15 must:*	
	B16a	*Be prepared in collaboration with representatives of the Aboriginal community by a suitably qualified and experienced person;*	Section 2.3 and Section 4.7
	B16b	*Be in accordance with conservation of cultural significance as identified by the Aboriginal Community;*	Section 2.3 and Section 4.7
	B16c	*Ensure an appropriate management buffer zone to conserve the significance of the Crookhaven middens being no less than 40 metres from the outside edge of the middens;*	Section 2.3 and Section 4.7

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
	B16d	*Detail the practical measures for the management and conservation of the middens (including who is responsible for the implementation of those measures) and outline the routine of ongoing protective care including periodic monitoring and maintenance; and*	Section 2.3 and Section 4.7
	B16e	*Include details of how the maintenance program would be funded over the long-term and support ongoing Aboriginal engagement.*	Section 2.3 and Section 4.7
4	B17	*Inductions should be delivered to all contractors regarding the significance of Aboriginal cultural heritage, prior to any on site works. The induction should be provided by local Aboriginal people and cover all significant Aboriginal heritage values and procedures related to Aboriginal objects, known sites, and unexpected finds.*	Section 1.5, Section 2.3 and Section 4.7
5	B18	*Where disturbance is proposed in the immediate vicinity of known Aboriginal sites and objects, testing should be undertaken where practicable and feasible, such as Dprobe or auger hole transects or other such archaeological subsurface testing methodology to determine the nature and extent of the site and objects, so as to minimise any direct and indirect impacts.*	Section 2.3 and Section 4.7
6	B19	*All archaeological subsurface testing, or other such archaeological field investigations should be undertaken with engagement of the Aboriginal Community, supported as appropriate by suitably qualified and experienced archaeologists with expertise in Aboriginal cultural heritage.*	Section 2.3 and Section 4.7
7	B21	*If unrecorded or unexpected Aboriginal sites or objects are identified prior to or during the course of development, all works in the immediate vicinity of the works shall cease and Heritage NSW should be notified. Further works should not be carried out in the area unless and until permitted to do so by Heritage NSW, subject to any conditions imposed by Heritage NSW. The Planning Secretary may also require a supplementary Aboriginal heritage impact assessment report to be submitted to the Planning Secretary for approval.*	Section 2.3
8	B22	*Prior to construction of any approved stage of the Concept Proposal, the Applicant must provide a report to Council documenting consultation with the Aboriginal Community, in relation to the interpretation of Aboriginal heritage values within the Concept Proposal area or amendments to the concept design to ensure ongoing conservation of Aboriginal heritage.*	Section 2.3
9	B23	*Subsequent to detailed design of the Concept Proposal, and subject to any further consultation, heritage assessment or investigation, given the potential for Aboriginal Objects in the development area, an Aboriginal Heritage Impact Permit should be obtained, where required, with any subsequent development application for the Concept Proposal.*	Section 2.3
10	B24	*During works, known areas of Aboriginal heritage significance, including objects, and sites, should be protected from harm with suitable protective fencing or other such measures*.	Section 2.3 and Section 4.7
11	C1	*The Applicant must undertake water quality monitoring as nominated in the IWCMS (in particular Section 9.3) and as modified by the Addendum IWCMS (in particular Section 6.3) at the locations nominated on Map 41 of the IWCMS.*	Section 4.4
12	C2	*Pre-construction monitoring of surface waters, groundwater, shellfish sites and photo monitoring sites shall:*	Section 4.4
	C2a	*occur at a minimum frequency of once a month for a minimum period of 18 months prior to construction work commencing on site;*	Section 4.4

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
	C2b	*include at least two wet weather events, prior to commencement of construction works.* *Note: The Applicant is encouraged to complete more frequent monitoring over a longer period to provide a robust baseline data set.*	Section 4.4
13	C3	*Construction phase monitoring of surface waters, stormwater infrastructure, groundwater, shellfish sites and photo monitoring sites shall occur at a minimum frequency of once a month.*	Section 4.4
14	C4	*Post-construction monitoring of surface waters, stormwater infrastructure, groundwater, shellfish sites and photo monitoring sites shall:*	Section 4.4
	C4a	*occur at a minimum frequency of once every three months;*	Section 4.4
	C4b	*following any sewage overflow event for a period of two years following the completion of each stage;*	Section 4.4
	C4c	*for stormwater infrastructure, the monitoring shall include at least two wet weather events per year for two years following the completion of each stage. After the two-year period, the frequency of monitoring can be reviewed based on the results of previous monitoring, and the frequency amended with the approval of the Council.*	Section 4.4
15	C5	*The results of on-going water quality and other monitoring shall be collated and reviewed in an Annual Report prepared by a suitably qualified consultant experienced in fresh and saltwater chemistry including natural, stormwater and groundwater systems (IWCMS Section 9.4). The annual report shall include at a minimum:*	Section 4.4
	C5a	*data summaries and analysis of all water quality information collected;*	Section 4.4
	C5b	*comparison of water quality information relative to base line data collected in pre-construction phase and justification of any differences between the pre-construction information and the water quality data collected in the construction and/ or operational phases*	Section 4.4
	C5c	*an analysis of photographs collected at each photo point;*	Section 4.4
	C5d	*details, including a log, of any environmental pollution incidents and the response to those incidents;*	Section 4.4
	C5e	*details of any significant maintenance or remedial works undertaken in respect of the stormwater management system or sewage management scheme; and*	Section 4.4 and Section 4.6
	C5f	*any recommendations for improvements to existing stormwater management infrastructure that are seen as necessary in continuing to achieve the aims and objectives of the IWCMS.* *The Annual Report shall be submitted to Council within 2 months of the collection of the data set contained in the Annual Report. The Applicant shall undertake any additional remedial works deemed necessary by Council within 1 month (or other agreed time frame) of the receipt of the direction from Council. The annual Report is not required to be provided after handover of the stormwater infrastructure to the Council or as otherwise approved by the Planning Secretary.*	Section 4.4
16	C6	*In the event of monitoring indicating unacceptable water quality, the corrective actions nominated in Section 6.2 of the IWCMS shall be implemented by the Applicant. An unacceptable water quality trigger event ("trigger event") is deemed to have occurred when trigger values identified in Table 16 of Addendum IWCMS are exceeded as follows:*	Section 4.4

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
	C6a	*during construction: (i) surface waters, groundwater, shellfish sites: trigger value being exceeded any two consecutive samplings; (ii) stormwater infrastructure and photo monitoring sites: on trigger value being exceeded.*	Section 4.4
17	C7	*When a trigger event occurs, Council shall be immediately notified. A report detailing the review of the trigger event and the proposed corrective action shall be submitted to Council for approval. The investigation of the trigger event and the completion of remedial works shall be undertaken to the satisfaction of Council within a period of 3 months or other period agreed with Council.*	Section 4.4
18	C8	*Interim trigger values for undertaking corrective action are as follows:*	Section 4.4
	C8a	*Surface waters: Table 55 from IWCMS*	Section 4.4
	C8b	*Stormwater Infrastructure: Table 56 from IWCMS*	Section 4.4
	C8c	*Groundwater: Table 58 from IWCMS*	Section 4.4
	C8d	*Shellfish: Table 59 from IWCMS*	Section 4.4
	C8e	*Additional non-quantitative triggers for stormwater quality: Table 57 from IWCMS*	Section 4.4
	C8f	*Photo Monitoring: Table 60 from IWCMS*	Section 4.4
19	C13	*Prior to the commencement of construction of the first stage of the Concept Proposal, the Applicant must prepare a Stormwater Management Plan (SMP) in accordance with the addendum IWCMS and update the SMP as necessary for each subsequent stage. The SMP must:*	Section 4.6
	C13a	*be prepared by a suitably qualified and experienced person, whose appointment has been endorsed by the Council;*	Section 4.6
	C13b	*detail the design of all components of the stormwater management system for the Concept Proposal;*	Section 4.6
	C13c	*demonstrate that the stage and all preceding stages can satisfy the requirements of Condition B4;*	Section 4.6
	C13d	*confirm design and efficacy of stormwater treatment measures based on the performance of treatment measures built in prior stages in accordance with Condition B6;*	Section 4.6
	C13e	*address Condition B7 in relation to the ability to reduce the number of treatment devices and use non-proprietary devices and provide the asset lifecycle costs for all treatment devices to be provided to Council;*	Section 4.6
	C13f	*be in accordance with applicable Australian Standards;*	Section 4.6
	C13g	*ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Soils and Construction – Volume 1: Blue Book (Landcom, 2004);*	Section 4.6
	C13h	*detail the monitoring and maintenance regime to ensure the stormwater management system continues to perform for the duration of construction and operation, including details of how the maintenance program would be funded over the long-term.*	Section 4.6
20	C16	*Prior to construction of any stage of the Concept Proposal, the Applicant must prepare a water quality monitoring program for baseline monitoring, construction monitoring and postconstruction monitoring of surface waters in the Crookhaven River estuary and in the catchment of Lake Wollumboola and sections of lake fringe at appropriate locations. The program must:*	Section 4.4

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
	C16a	*be designed by a suitably qualified and experienced independent expert, whose appointment has been endorsed by the Council;*	Section 4.4
	C16b	*include baseline monitoring of surface waters for a period of no less than 18 months prior to commencement of construction. Sampling should at minimum every two months, with additional sampling for a minimum of three wet weather events;*	Section 4.4
	C16c	*include sampling at 8 sites within Curleys Bay/Billys Bay, including 2 sites each within Billys Bay, between Crow Island and the northern boundary of the Concept Proposal site, within the south eastern portion of Curleys Bay and within the northern part of Curleys Bay (near the existing Culburra township). In addition, 2 sites must be sampled within each of 2 control locations, selected outside any potential influence from the Project. Selection of control locations and sites within locations must be subject to approval by the independent expert;*	Section 4.4
	C16d	*at each site, a minimum of 2 replicate samples must be collected for chemical analysis of metals (As, Cr, Cu, Hg, Pb, Se and Zinc) and organic contaminants (organochlorines and PAHs), bacteria and suspended sediment. Additionally, at each site a calibrated water quality probe must be used to record 2 replicate sets of measures each at the water surface and bottom, for water temperature, salinity/conductivity, pH, dissolved oxygen and turbidity;*	Section 4.4
	C16e	*the catchment of Lake Wollumboola, namely Wattle Creek and associated fringing lake habitats must be sampled over a baseline period of 18 months. Water quality must be sampled using a calibrated probe at locations where water is present at sites extending from the junction at Culburra Road to the lake and at a comparable number of sites within 2 other creeks within the Lake Wollumboola catchment. At least 2 replicate samples must be collected at each site and time, an include measurements of water temperature, salinity/conductivity, pH, dissolved oxygen and turbidity. In addition, 2 water samples must be collected at each site and time for measurement of metals (As, Cr, Cu, Hg, Pb, Se and Zinc), suspended sediment and hydrocarbons;*	Section 4.4
	C16f	*during the baseline period a progress report must be prepared when the final methodology for the baseline has been determined and approved by the independent expert, and then at 6-monthly intervals until the end of the baseline period;*	Section 4.4
	C16g	*upon completion of the baseline period a report must be prepared including methods, rigorous statistical analyses comparing temporal and spatial factors and recommendations for further work. The findings of the baseline must be presented to NSW DPI (Fisheries, NSW DPI, NSW EPA, the oyster industry and as part of the Community Engagement Strategy and made available on website established by the Applicant; and*	Section 4.4
	C16h	*the design of ongoing monitoring during and post-construction for oyster aquaculture must be determined on the basis of the information acquired for the baseline and be subject to the review and endorsement of the independent expert.*	Section 4.4
21	C17	*Prior to construction of any stage of the Concept Proposal, the Applicant must prepare an aquatic ecology monitoring program for baseline monitoring, construction monitoring and postconstruction monitoring of aquatic ecology in the Crookhaven River estuary and in the catchment of Lake Wollumboola and sections of lake fringe at appropriate locations. The program must:*	Section 4.4

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
	C17a	*be designed by a suitably qualified and experienced independent expert, whose appointment has been endorsed by the Council;*	Section 4.4
	C17b	*include baseline monitoring for aquatic ecology for a period of no less than 18 months prior to commencement of construction. Sampling must occur at a minimum frequency of every two months, with additional sampling for a minimum of three wet weather events;*	Section 4.4
	C17c	*within the Crookhaven River estuary sampling must occur at 6 sites within Curleys Bay/Billys Bay, including 2 sites each: a) within Billys Bay, b) between Crow Island and the northern boundary of the Project site, and c) within the south eastern portion of Curleys Bay. In addition, 2 sites must be sampled within each of 2 control locations, selected outside of any potential influence from the Project. Selection of control locations and sites within location must be subject to approval by the independent expert;*	Section 4.4
	C17d	*replicated, quantitative sampling of flora and fauna should be undertaken in saltmarsh, mangrove, seagrass habitats, with sampling methods to be determined and subject to approval by the independent expert;*	Section 4.4
	C17e	*within the catchment of Lake Wollumboola, habitat descriptions and surveys of macroinvertebrates and fish must be undertaken in locations or permanent or semipermanent water within Wattle Creek and extending to the mouth of the creek at the Lake. Additionally, surveys must be undertaken at a comparable number of sites within 2 other creeks within the Lake Wollumboola catchment. Invertebrates are to be sampled quantitatively, not relying on rapid assessment methods (e.g. the AusRivAS methodology). Fish are to be sampled by replicated electrofishing. Sampling must occur once in each season and following at least 2 wet weather events and after a significant bushfire event, if one occurs during the baseline period;*	Section 4.4
	C17f	*during the baseline period a progress report must be prepared when the final methodology for the baseline has been determined and approved by the independent expert, and then at 6-monthly intervals until the end of the baseline period.*	Section 4.4
	C17g	*upon completion of the baseline period a report must be prepared including methods, rigorous statistical analyses comparing temporal and spatial factors and recommendations for further work. The findings of the baseline will be presented to NSW DPI (Fisheries) and EPA and as part of the Community Engagement Strategy, and made available on a website established by the Applicant.*	Section 4.4
	C17h	*the design of ongoing monitoring during and post-construction for aquatic ecology must be determined on the basis of the information acquired for the baseline and be subject to the review and endorsement of the independent expert.*	Section 4.4
22	C18	*Prior to construction of any stage of the Concept Proposal, the Applicant must prepare an oyster monitoring program for baseline monitoring, construction monitoring and post-construction monitoring of environmental indicators and oyster condition around selected oyster leases in the Crookhaven River estuary. The program must:*	Section 4.4
	C18a	*be designed by a suitably qualified and experienced independent expert, whose appointment has been endorsed by the Council;*	Section 4.4
	C18b	*include baseline monitoring for indicators associated with oyster aquaculture and must be undertaken for a period of no less than 18 months prior to commencement of construction. Sampling must*	Section 4.4

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
		occur at a minimum frequency of every two months, with additional sampling for a minimum of 3 wet weather events;	
	C18c	*sampling must occur at high use leases and opportunistic leases as defined by Marine Pollution Research and at 2 leases at the northern end of Curleys Bay. In addition, 2 oyster leases must be sampled within each of 2 control locations, selected outside of any potential influence from the Project. Selection of oyster leases in the northern part of Curleys Bay and the control locations must be approved by the independent expert;*	Section 4.4
	C18d	*at each lease identified in C18I, a minimum of two replicate samples of surface water must be collected for chemical analysis of metals (As, Cr, Cu, Hg, Pb, Se and Zinc) and organic contaminants (organochlorines and PAHs), bacteria (and other pathogens as may be recommended by the oyster industry or the Environmental Auditor) and suspended sediment. Additionally, at each site a calibrated water quality probe will be used to record two replicate sets of measures each at the water surface and bottom, for water temperature, salinity/conductivity, pH, dissolved oxygen and turbidity;*	Section 4.4
	C18e	*subject to consultation with the oyster industry, 6 oysters must be collected from each lease for chemical analysis of oyster tissue, as an indicator of potential bioaccumulation. Contaminants to be tested for include metals (As, Cr, Cu, Hg, Pb, Se and Zinc) and organic contaminants (organochlorines and PAHs) and bacteria (and other pathogens as may be recommended by the oyster industry or the independent expert). If the oyster industry is not forthcoming with approval for using oysters being grown at selected leases, naturally occurring oysters (as may occur on mangrove peg roots, rocky shores, etc.) should be collected and analysed; and*	Section 4.4
	C18f	*during the baseline period a progress report must be prepared when the final methodology for the baseline has been determined and approved by the Environmental Auditor, and then at 6-monthly intervals until the end of the baseline period. Upon completion of the baseline period a report must be prepared including methods, rigorous statistical analyses comparing temporal and spatial factors and recommendations for further work. The findings of the baseline will be presented to NSW DPI (Fisheries), NSW EPA and as part of the Community Engagement Strategy, and made available on a website established by the Applicant.*	Section 4.4

Table 2: EPBC Act approval (EPBC 2023/09524) condition requirements

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
1	1a	*The approval holder must not Clear outside of the Action area.*	Table 8 Section 1.3, Appendix A and Appendix B
	1b	*The approval holder must not Construct outside of the Action area.*	Table 8 Section 1.3, Appendix A and Appendix B
2	2a	*The approval holder must not clear More than 45.99 ha of Grey-headed Flying-Fox habitat.*	Table 8 Section 1.3, Appendix A and Appendix B
	2b	*The approval holder must not clear More than 37.81 ha of Yellow-bellied Glider habitat.*	Table 8 Section 1.3, Appendix A and Appendix B
	2c	*The approval holder must not clear More than 37.81 ha of Gang-gang Cockatoo habitat.*	Table 8 Section 1.3, Appendix A and Appendix B
3	3a	*To avoid and mitigate harm to protected matters, the approval holder must within 48 hours prior to clearing, ensure that a suitably qualified field ecologist inspects all potential foraging habitat for the Gang-gang Cockatoo, Grey-headed Flying-fox and Yellow-bellied Glider,*	Section 2.2 and Section 2.2.1.2
	3b	*To avoid and mitigate harm to protected matters, the approval holder must ensure that, if protected matters are identified in the Action area, the suitably qualified field ecologist uses techniques to encourage them to leave any tree, using non-invasive techniques, prior to that tree or any adjacent tree being felled,*	Section 2.2.2
	3c	*To avoid and mitigate harm to protected matters, the approval holder must ensure that the suitably qualified field ecologist has the authority to cease clearance for sufficient time to enable relocation of protected matters to an appropriate nearby habitat area if required,*	Section 2.2 and Section 2.2.2
	3d	*To avoid and mitigate harm to protected matters, the approval holder must ensure that clearing does not recommence until the suitably qualified field ecologist is satisfied that any protected matter has safely moved out of the area to be cleared, and*	Section 2.2 and Section 2.2.2.1
	3e	*To avoid and mitigate harm to protected matters, the approval holder must ensure that all fencing that is installed in the Action area is fauna safe fencing.*	Section 2.2.3 and Section 4.3
4	4	*Prior to the commencement of the Action the approval holder must submit a Construction Environmental Management Plan and a Vegetation Management Plan to the department for the Minis'er's approval. The approval holder must not commence the Action unless the Minister has approved the Construction Environmental Management Plan and a Vegetation Management Plan in writing.*	Section 1.2
5	5	*To avoid and mitigate harm as a result of the Action on protected matters, the approval holder must commence implementing the approved Construction Environmental Management Plan and approved Vegetation Management Plan no later than the commencement of the Action. The approval holder must continue to implement the approved Construction Environmental Management Plan until the completion of construction and the approved Vegetation Management Plan until the expiry date of this approval or as otherwise* agreed *upon and approved by the Minister.*	Section 1.2
6	6a	*The approval holder must achieve the following environmental outcomes in the approved Construction Environmental Management Plan and approved Vegetation Management Plan by implementing the*	*West Culburra Construction Environment*

Ref.	Condition no.	Consent condition requirements	Where it is addressed in this management plan
		Construction Environmental Management Plan: To prevent and avoid any unapproved harm to protected matters and mitigate unavoidable and accidental harm to protected matters during clearing and construction.	*Management Plan* (this document).
7	7	*The Construction Environmental Management Plan and Vegetation Management Plan must be prepared by a* suitably qualified ecologist. *All commitments, including environmental outcomes, management measures, corrective measures, trigger values and performance indicators in the Construction Environmental Management Plan and Vegetation Management must be* SMART *and based on referenced or included evidence of effectiveness. The Construction Environmental Management Plan and Vegetation Management must be consistent with the* Environmental Management Plan Guidelines*, and must include:*	Table 8, Section 3, Section 4, Appendix A and Appendix B
	7a	details of the relevant *protected matters* and a reference to *EPBC Act* approval conditions to which the plan refers,	Table 2, Section 1.1 and Section 2
	7b	*a table of commitments made in the plan to achieve the environmental outcomes, and a reference to exactly where these commitments are detailed in the plan,*	Appendix B
	7c	*commitments capable of ensuring that the environmental outcomes are achieved,*	Appendix B
	7d	*reporting and review mechanisms to demonstrate compliance with the commitments made in the plan,*	Section 5, Appendix C and Appendix D
	7e	*an assessment of risks relating to achieving the environmental outcomes and risk management strategies and/or mitigation measures that will be applied to address identified risks,*	Table 7 Section 3 and Appendix A
	7f	*impact avoidance, mitigation and/or repair measures, and the timing of those measures,*	Section 1.4, Section 1.5, Section 2.2, Section 3, Section 4, Section 5, Table 8, Appendix A, Appendix B, , 0, Appendix C, Appendix D, Appendix E, Appendix F, Appendix G,
	7g	*controlling feral pests, including measures relevant to the Threat Abatement Plan for Predation by Feral Cats,*	Section 4.8
	7h	a monitoring program, which must include:	
	i.	*performance indicators,*	Table 8
	ii.	*trigger values for corrective measures,*	Table 8 and Appendix B
	iii.	*the timing and frequency of monitoring, ensuring monitoring is capable of detecting trigger values and changes in the performance indicators, and*	Section 5, Table 8, 0 Appendix C, and Appendix D
	iv.	*proposed corrective measures if trigger values are reached.*	Table 8, Appendix A and Appendix B
	7i	*references to other relevant plans or conditions of approval (including state or territory approval conditions).*	Section 4, Appendix E, Appendix F Appendix G

1.2. Purpose of this document

This management plan identifies environmental management practices to be followed during and after construction to ensure direct and indirect impacts are minimal and low risk, including to known Matters of National Environmental Significance (MNES) within the Action area. This management plan will need to be submitted to the department for the Minister's approval prior to the commencement of the Action and implemented until after completion of construction.

This management plan will be accompanied by a Vegetation Management Plan (VMP) which will address management specifications and requirements for the VMP area. VMP will need to be submitted to the department for the Minister's approval prior to the commencement of the Action and implemented until the expiry of the approval or as otherwise agreed upon and approved by the Minister.

In summary, this management plan is intended to satisfy the requirements of SSD 3846 and EPBC 2023/09524.

This management plan has been prepared by Restoration Ecologists with over 5 years' experience in environmental works and a relevant Bachelor of Science degree and has been prepared in line with the Environmental Management Plan guidelines from DCCEEW (2024a) and Shoalhaven City Council's Environmental Management Plan Guideline (SCC 2016).

1.3. Site description

The development area (Figure 3) covers a total area of approximately 68 hectares. The development area is comprised of both remnant native vegetation and cleared land. The development area is located approximately 15 km south-east of Nowra adjacent to the existing suburb of Culburra Beach in the Shoalhaven Local Government Area (LGA).

For the purposes of this management plan, the Action area is categorised as follows:

- Development area: This is the proportion of the Action area within the proposed development footprint where construction works will be taking place. The approval holder must not clear outside of this area without approval.
- VMP area: This is the proportion of the Action area to be retained and managed by the associated VMP for this Control Action, referred to as the VMP area. Development is not occurring within this area.

1.3.1. Development footprint

The proposed Development Footprint (Figure 3) consists of approximately 400 residences along with shopping and dining additions to the current town centre, 13 industrial land parcels, and new sporting fields and reserves. It also includes the development of:

- A street network of roads, access ways and parking
- Services, including water, sewer and electricity infrastructure
- Detention basins to capture and treat run-off captured by road kerbs and gutters and stormwater treatment
- Bushfire management infrastructure

1.3.2. Access and site compound

Vehicular access to the site will vary during the construction phase as approved by Council (Figure 3).

A wheel wash station is recommended to be installed at all entries and exits from the site (Figure 3) to prevent sediment leaving the construction area and to allow for disinfection procedures (Appendix F). A site compound location has yet to be assigned within the Action area.

Construction vehicles will not have access to the VMP area without the supervision of a suitably qualified ecologist or bush regenerator. Existing site access tracks can be used until alternative access can be made, but in this case the VMP area must have temporary fencing either side of the access track. Temporary fencing where the development area borders the VMP area will be required and sediment fencing will also be required in accordance with the approved Soil and Water Management Plans (SWMP). Thesecontrols must be maintained at all times while construction is occurring in adjacent areas.

1.3.3. Construction timeframe and duration

Works are expected to commence in 2025 labelled as early works and are to include but are not limited to the following:

- utility connections;
- lead-in works;
- service diversions;
- roundabout construction;
- access road construction - lead in/lead out road works from Culburra Road to the Residential Precinct;
- water quality facilities;
- under-scrubbing and preliminary site preparation works of development area;
- vegetation management and environmental protection works; and/or
- superlot (paper) subdivision of Precincts, reserves and foreshore areas.

Works are expected to be staged from 2026 to 2035 as the following stages:

- Residential Stage 1 – 2026
- Residential Stage 2 – 2027
- Residential Stage 3 – 2028
- Residential Stage 4 and Industrial Stage 1 – 2029
- Residential Stage 5 – 2030
- Residential Stage 6 and Town Centre Stage 1 – 2031
- Residential Stage 7, Industrial Stage 2 and Town Centre Stage 2 – 2032
- Town Centre Stage 3 – 2033
- Town Centre Stage 4 – 2034
- Town Centre Stage 5 – 2035

The timeframes in which these stages of construction will take place are estimates and are subject to change, however if these timeframes are altered, this will not trigger a required alteration to this management plan.

1.3.4. Construction work hours

Construction work on site will conform to Environmental Protection Agency (EPA) noise guidelines (EPA 2020), and will generally occur between the following hours:

Monday to Saturday	7.00am to 5.00pm
Sunday or Public Holidays	No work

1.3.5. Plant and equipment

A comprehensive plant and equipment list has not yet been finalised and provided for these works.

1.3.6. Onsite VMP area

There will be no construction activities within the onsite VMP area. which has the potential to house the following MNES and will be managed in accordance with the VMP (ELA 2026):

- *Pteropus poliocephalus* (Grey-headed Flying-fox)
- *Petaurus australis* (Yellow-bellied Glider)
- *Callocephalon fimbriatum* (Gang-gang Cockatoo)
- PCT 4019: Coastal Alluvial Bangalay Forest
    - Associated with the TEC Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions under the BC Act.
    - Associated with TEC River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria under the EPBC Act.
- PCT 4051: South Coast Lowland Red Gum-Swamp Oak Forest
    - Associated with Coastal Swamp Oak (*Casuarina glauca)* Forest of NSW and SE QLD under the EPBC Act.

Requirements for the ongoing management of the VMP area are provided in the *West Culburra Vegetation Management Plan,* prepared by Eco Logical Australia in 2025 for Sealark Pty Limited, C/- Allen Price Pty Ltd.

The VMP will, at a minimum, meet the following commitments as per *Determination of Development Application By Grant Of Consent No: SSD 3846* (2021):

- A vegetated foreshore reserve (in current natural state) that exceeds 100m in width between the edge of the foreshore road reserve and the Mean High-Water Mark and the Crookhaven River, referred to as Foreshore Reserve East and Foreshore Reserve West.
- a vegetated woodland reserve (in current natural state) which provides a natural entry feature to the Culburra Beach village, referred to as Woodland Reserve.

The VMP area consists of a total of approximately 15 ha of native vegetation, of which approximately 5 ha is associated with the threatened ecological communities (TECs) of the MNES. Through ongoing management, the proposed VMP will ensure the VMP areas are improved over time and increase

carrying capacity and ecosystem integrity associated with the MNES throughout the landscape over the coming years.

1.4. Roles and responsibilities

As per Condition A19 and A20 of the *Determination of Development Application by Grant of Consent* (SSD 3846) an Environmental Representative (ER) must be appointed for the Concept Proposal to oversee the implementation of the conditions of consent. The conditions are as follows:

Condition A19: The Applicant must appoint an Environmental Representative (ER) for the Concept Proposal to oversee the implementation of the conditions of this consent. The ER must be a suitably qualified and experienced person who was not involved in the preparation of the EIS, is independent from the design and construction personnel for the Concept Proposal and whose appointment has been approved by the Planning Secretary.

Condition A20: The ER must for the duration of construction works associated with approved stages of the Concept Proposal:

a. receive and respond to communication from the Planning Secretary in relation to the environmental performance of the development;

b. consider and inform the Planning Secretary on matters specified in the terms of this consent;

c. consider and recommend to the Applicant any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community;

d. review documents required to be submitted under this consent and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this consent and if so:

i) make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or

ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary/Department for information or are not required to be submitted to the Planning Secretary/Department);

e. regularly monitor the implementation of the documents required under this consent to ensure implementation is being carried out in accordance with the document and the terms of this consent;

f. as may be requested by the Planning Secretary, help plan, attend or undertake audits of the development commissioned by the Department including scoping audits, programming audits, briefings and site visits;

g. as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints; and

h. prepare and submit to the Planning Secretary and other relevant regulatory agencies regular reports providing the information set out in the ER Protocol under the heading "Environmental Representative Monthly Reports". The reporting frequency and timeframe must be agreed with the Planning Secretary, prior to the commencement of any works associated with approved stages of the Concept Proposal.

The roles and responsibilities of the ER as well as other personnel involved in the lifetime of the project are shown in Table 3. At the time of writing, the personnel for these positions have not been appointed. Once personnel for these positions are known, their information will be updated.

Table 3: Environmental management roles and responsibilities

Role	Information	Responsibility
Project Manager (Development)	Name: **TBC** Position: Company: Contact:	• Reviews this management plan. • Notifies relevant contractors of changes to the project scope of works and updates this management plan, if required. • Requires the contractor to adhere to the planning approval/approval decision. • Reports any non-compliance to Shoalhaven Council and the DCCEEW/Minister. • Ensures the community are notified of commencement of works.
Environmental Representative Appointed as per Department of Planning, Housing and Infrastructure (DPHI) protocols (Approved)	Name: **Cameron Weller and John Hutchison** Position: Principal Environmental Representative and Alternative Environmental Representative respectively Company: Hutchison Weller Contact: 02 8969 6071 info@hutchisonweller.com	• Reviews management plan • Requires the contractor to adhere to the planning approval/approval decision. • Reports any non-compliance to Shoalhaven Council and the DCCEEW/Minister. • Receive and respond to communication from the Planning Secretary in relation to the environmental performance of the development. • Consider and recommend to the Applicant any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community. • In conjunction with the Site Supervisor and Site Ecologist, develop an Environmental Control map and ensure it remains relevant and up to date. • Review documents required to be submitted under this consent and any other documents that are identified by the Planning Secretary. • Monitor the implementation of the documents required under this consent to ensure implementation is being carried out in accordance with the document and the terms of this consent • Prepare and submit to the Planning Secretary and other relevant regulatory agencies regular reports providing the information set out in the ER Protocol. The frequency of which will be agreed with the Planning Secretary prior to works with each approved stage.
Site Supervisor (Contractor)	Name: **TBC** Position: Company: Contact:	• Issues stop work orders, if required. • Records any community complaints (Appendix C) and notifies the Project Manager and other relevant consultants. • Responsible for site management, CEMP/OEMP compliance, including subcontractors. • Facilitates environmental induction and toolbox talks for site personnel. • Undertakes minimum of weekly environmental inspections (or after environmental conditions change). • Initiates corrective actions. • Reports CEMP/OEMP non-conformances to the Project Manager. • Reports incidents. • Notifies the Project Manager if this management plan needs revising.
Construction personnel/Team	Name: **TBC** Position: Company:	• Comply with the CEMP/OEMP. • Monitor and maintain controls.

Role	Information	Responsibility
members (Contractor)	Contact:	• Report breaches of the CEMP/OEMP and potential / actual incidents to Site Supervisor • Report incidents. • Stop work and reports to Site Supervisor in the event of unexpected finds (e.g., potential contamination, fauna or heritage items). • Record any community complaints and notify the Site Supervisor (Appendix C).
Project Ecologist	Name: TBC Position: Company: Contact:	• Comply with the CEMP/OEMP. • Monitor and maintain controls. • Report breaches of the CEMP/OEMP and potential / actual incidents to Site Supervisor • Report incidents. • Stop work and reports to Site Supervisor in the event of unexpected finds (e.g., potential contamination, fauna or heritage items). • Record any community complaints and notify the Site Supervisor (Appendix C).

1.5. Environmental training

To ensure that this management plan is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of this management plan. The following environmental training will be undertaken.

1.5.1. Ecological values/constraints

The Action area holds several sensitive ecological values and constraints, including but not limited to:

- locations of hollow bearing trees (HBTs),
- locations of identified threatened species, and,
- areas of vegetation to be retained and restored (as per VMP, ELA 2026)

The locations of these features are shown in Figure 1. The locations of HBTs and threatened species are derived from the Biodiversity Development Assessment Report (BDAR) (ELA 2025) and the specific number and location of these features have the potential to change over time. New instances of these features are to be updated throughout the lifetime of the project. This map is to be provided to all contractors on site and made available at the site office. Additional information surrounding some of the above features are identified in Section 2.1.

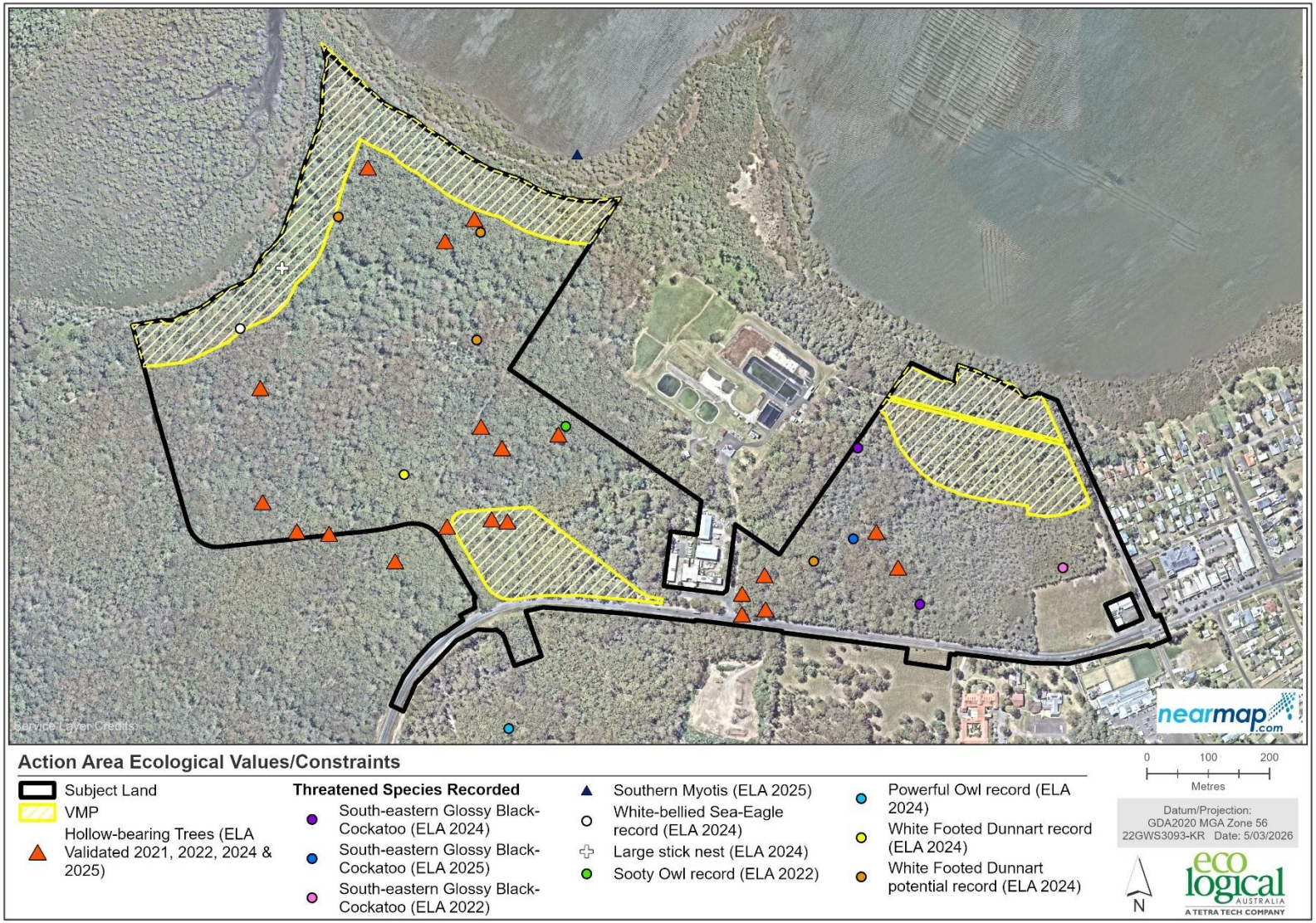


Figure 1: Ecological values/constraints of the Action area

1.5.2. Environmental induction

All personnel, including sub-contractors, are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. The Project Manager will conduct the environmental component of the site induction. The environmental component will include an overview of:

- Relevant details of this management plan including purpose and objectives
- Key environmental issues in the Action area,
    - Threatened Ecological Communities (TECs)
        - PCT 4019: Coastal Alluvial Bangalay Forest
        - Associated with the TEC Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions under the BC Act.
        - Associated with TEC River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria under the EPBC Act.
        - PCT 4051: South Coast Lowland Red Gum-Swamp Oak Forest
        - Associated with Coastal Swamp Oak (*Casuarina glauca)* Forest of NSW and SE QLD under the EPBC Act.
        - The induction material is to include visual representation of the above TECs to ensure they can be identified by all personnel that carry out works within the action area.
        - The induction is to include the reporting procedures if these TECs are found. The personnel to report this information to will be the ER and the Project Ecologist.
    - Threatened fauna with the potential to be within the action area
        - *Pteropus poliocephalus* (Grey-headed Flying-fox)
        - *Petaurus australis* (Yellow-bellied Glider)
        - *Callocephalon fimbriatum* (Gang-gang Cockatoo)
        - The induction material is to include visual representatives of the above fauna to ensure they can be identified by all personnel that carry out works within the action area.
        - Induction material is to include that if fauna is found, staff are to relay details and report to the ER or the Project Ecologist to undergo the proper fauna procedures.
    - A map of known HBTs, nests, and known locations of breeding species.
    - Additional key environmental issues within the Action area such as, potential guidance as to the management of Aboriginal Heritage site locations, the importance of erosion and sediment control, details surrounding pre-clearance protocols, the importance and specifics surrounding vehicle hygiene and fauna awareness
- Relevant conditions of environmental approvals
- Specific environmental management requirements and responsibilities, including Aboriginal Heritage management

- Mitigation measures for the control of environmental issues
- Environmental incident response
- Provide an up-to-date Environmental Control Map

A record of all environment inductions will be maintained and kept on-site.

1.5.3. Toolbox talks and pre-start meetings

Toolbox talks will be used to raise awareness and educate personnel on construction related environmental and safety issues. The toolbox talks will be used to ensure environmental awareness continues during construction and will be done at the beginning of every day. Attendance is mandatory and attendees are required to sign an attendance form. A record of each toolbox talk must be maintained.

Along with the days site safety topics, toolbox talks will be tailored to specific environmental issues including:

- Vegetation clearing controls
- Fauna management
- Biodiversity values and conservation areas
- Erosion and sedimentation control
- Weed management
- Aboriginal Heritage management
- Hygiene protocol
- Noise
- Housekeeping and waste
- Dust control
- Emergency and spill response
- Concrete washout
- Works in and near riparian areas where relevant

Where there are new and/or significant concerns that the site manager feels the requirement to address with those on site, a pre-start meeting or a formal handover can be undertaken. A pre-start meeting or formal handover is a tool used to informing the workplace of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works coordination issues with other trades, hazards and other information that could be relevant to the day's work in a more formal environment.

The daily toolbox talks will be conducted for the site workforce before the commencement of work each day shift or where changes occur during a shift. Toolbox talks can be project-wide and/or held for specific work areas. The environmental component of these meetings will include any environmental issues that could potentially be impacted by, or impact on, the day's activities. All attendees will be required to sign on and acknowledge their understanding of the issues explained.

The topics discussed, dates delivered, and a register of attendees will be recorded, and the records maintained.

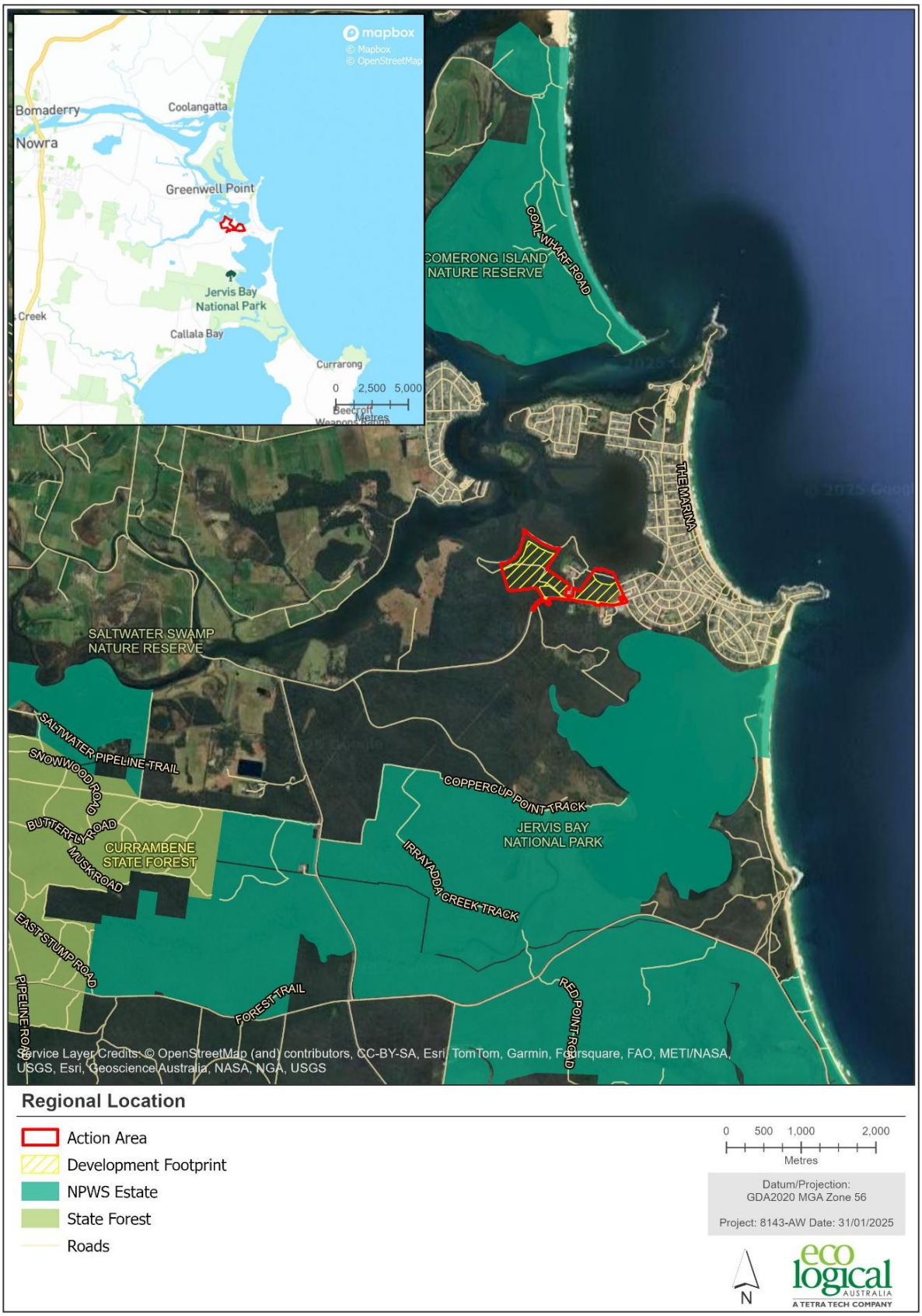


Figure 2: Location of the Action area.

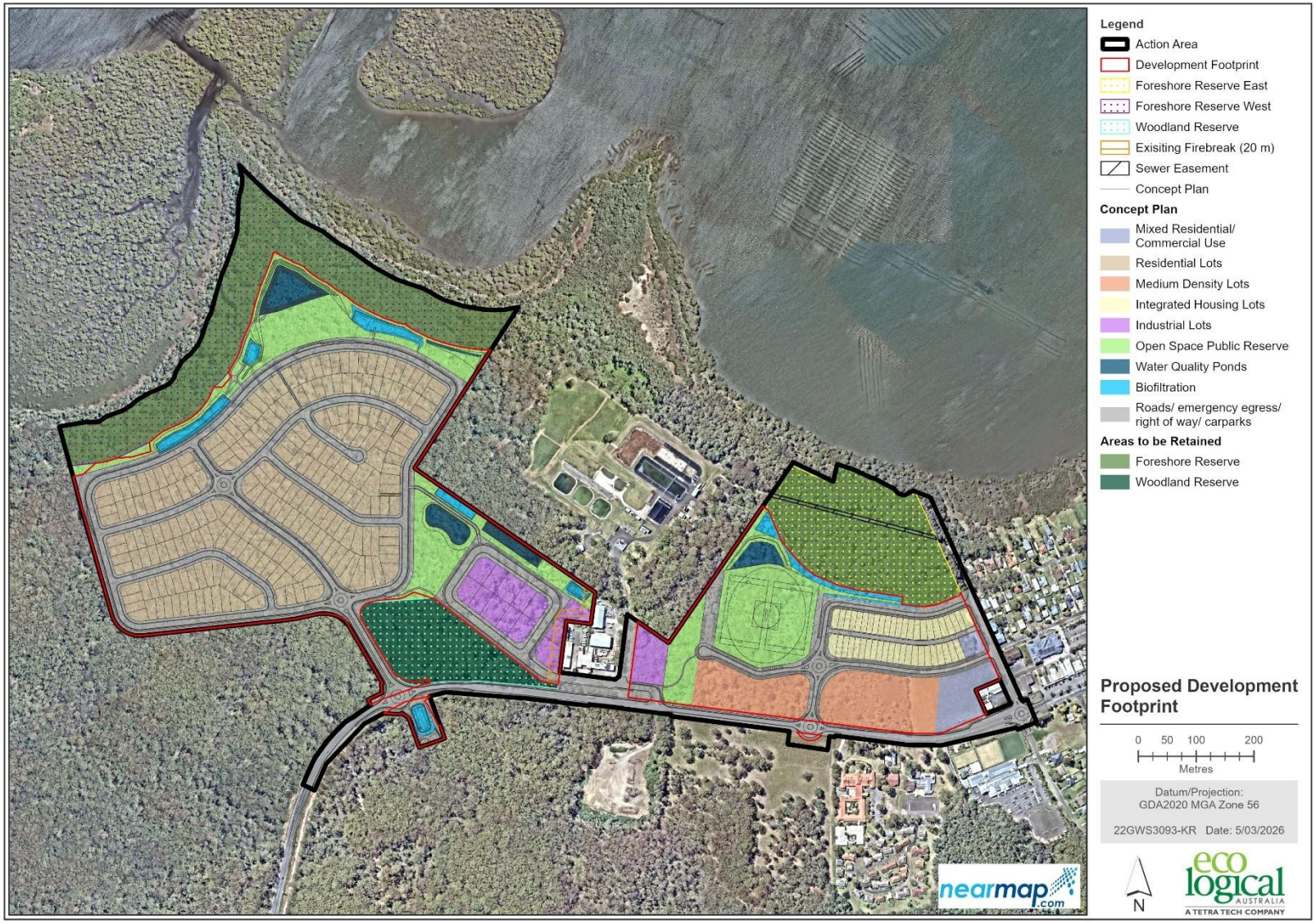


Figure 3: Development footprint, including fencing and site access

2. Environmental management

2.1. MNES within the Action area

ELA developed an EPBC Act referral supporting document for the West Culburra residential development (ELA 2022) and have partaken in a BDAR (ELA 2025) with the following supporting details regarding the MNES and how the proposed development will impact these MNES. Critical habitat of the below MNES and the presence of MNES is required to be recorded during pre-clearance surveys of the Action area.

The Action area considers six MNES which are as follows:

- *Pteropus poliocephalus* (Grey-headed Flying-fox)
- *Petaurus australis* (Yellow-bellied Glider)
- *Callocephalon fimbriatum* (Gang-gang Cockatoo)
- PCT 4019: Coastal Alluvial Bangalay Forest
    - Associated with the TEC Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions under the BC Act.
    - Associated with TEC River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria under the EPBC Act.
- PCT 4051: South Coast Lowland Red Gum-Swamp Oak Forest
    - Associated with Coastal Swamp Oak (*Casuarina glauca)* Forest of NSW and SE QLD under the EPBC Act.

For any clearing that takes place in the development footprint the following must be adhered to in relation to the above MNES:

- Condition 2*: The approval holder must not clear:*
    - *More than 45.99 ha of Pteropus poliocephalus (Grey-headed Flying-fox) habitat*
    - *More than 37.81 ha of Petaurus australis (Yellow-bellied Glider) habitat*
    - *More than 37.81 ha of Callocephalon fimbriatum (Gang-gang Cockatoo) habitat*
    - *Within the Stewardship sites*
- *Condition 3: To avoid and mitigate harm to the above MNES, the approval holder must:*
    - *within 48 hours prior to clearing, ensure that a suitably qualified field ecologist inspects all potential foraging habitat for the Callocephalon fimbriatum (Gang-gang Cockatoo), Pteropus poliocephalus (Grey-headed Flying-fox) and Petaurus australis (Yellow-bellied Glider),*
    - *ensure that, if protected matters are identified in the proposed Action area, the suitably qualified field ecologist uses techniques to encourage them to leave any tree, using non-invasive techniques, prior to that tree or any adjacent tree being felled,*
    - *ensure that the suitably qualified field ecologist has the authority to cease clearance for sufficient time to enable relocation of protected matters to an appropriate nearby habitat area if required,*

- *ensure that clearing does not recommence until the suitably qualified field ecologist is satisfied that any protected matter has safely moved out of the area to be cleared, and*
- *ensure that all fencing that is installed in the proposed Action area is fauna safe fencing.*

2.1.1. Grey-headed Flying-fox within the Action area

Targeted survey for Grey-headed Flying-fox has not been completed across the Action area as the subject land is not within 200m of a camp (ELA 2025). The Action area is likely to provide foraging habitat for the Grey-headed Flying-fox in the form of winter flowering Eucalypts and other flowering and fruiting native species. Individuals occupying camps near the Action area may utilise the foraging habitat in the Action area as part of a mosaic of foraging resources throughout the locality.

The draft National Recovery Plan for the Grey-headed Flying-fox defines habitat critical to the survival of the species as natural habitat that is patches which (DAWE 2021):

- contain native species that are known to be productive as foraging habitat during the final weeks of gestation, and during the weeks of birth, lactation and conception (August to May)
- contain native species used for foraging and occur within 20 km of a nationally important camp as identified on the Department's interactive flying-fox web viewer, or
- contain native and or exotic species used for roosting at the site of a nationally important Grey-Headed Flying-Fox camp as identified on the Department's interactive flying-fox web viewer.

The plan also notes that foraging resources which provide resources in times of food shortage or winter flowering species may also be critical to the survival of the species. This can include *Eucalyptus tereticornis* and *Eucalyptus crebra,* both of which were identified in the Action area (DAWE 2021).

The approval holder must not clear more than 45.99 ha of Grey-headed Flying-fox habitat.

A map of the surrounding habitat and distribution within 20 km of the Action area is seen in Figure 4**.**

2.1.2. Yellow-bellied Glider within the Action area

The Action area is considered to form marginal foraging habitat because:

- The Action area is comprised of regrowth forest, dominated by Eucalypts < 40 years old and lacking maturity and old growth forest
- The Action area contains a very sparse distribution of HBTs
- Where HBTs are present, they have a DBH of < 100 cm..

It is likely that the surrounding landscape provides more suitable foraging habitat and potential breeding habitat due to the higher presence and abundance of HBTs and forest containing old growth canopy.

According to the conservation advice, habitat critical to the survival of the Yellow-bellied Glider includes areas containing (DAWE 2022a):

- Large, contiguous areas of floristically diverse forest dominated by winter flowering and smooth-barked Eucalypts with mature living HBTs
- Areas identified as refuges under future climate change scenarios
- Short or long-term post fire refuges

- Habitat corridors that facilitate the dispersal of the species between fragmented habitats
- Areas in which some trees have evidence of use for sap extraction.

The Action area contains nine (9) canopy species from the Myrtaceae family, of which four are listed as known glider feed trees (CoA 2022), some of which (*Eucalyptus pilularis, Eucalyptus punctata, Eucalyptus longifolia*) are smooth-barked species. The Action area does not include mature living HBTs consistent with the description in the conservation advice (trees with a DBH > 100 cm). As such, this condition is partially met.

The approval holder must not clear more than 37.81 ha of Yellow-bellied Glider habitat.

A map of the surrounding habitat and distribution within 10 km of the Action area is seen in Figure 5.

2.1.3. Gang-gang Cockatoo within the Action area

This species has not been observed within the Action area (ELA 2025). The Action area is likely to provide foraging resources for this species and PCTs 4019 and 3273 have the potential to house suitable hollows to the species, which include the following qualities:

- Eucalypt HBTs at least 3m above the ground and with a hollow diameter of 7 cm or larger

The foraging habitat within the Action area is likely utilised as part of a range of foraging resources throughout the locality. According to the conservation advice for the Gang-gang Cockatoo, any foraging habitat that could be used in the breeding and non-breeding season is considered critical habitat (DAWE 2022b). The Gang-gang prefers old growth forest and woodland with an abundance of HBTs. The Action area supports foraging habitat for this species and therefore meets the DAWE (2022b) definition of critical habitat.

The approval holder must not clear more than 37.81 ha of Gang-gang Cockatoo habitat.

A map of the surrounding habitat and distribution within 10 km of the Action area is seen in Figure 6.

2.1.4. PCT 4019: Coastal Alluvial Bangalay Forest within the Action area

The Action area houses 5.62 ha of Coastal Alluvial Bangalay Forest, which is associated with the threatened ecological communities (TECs) *Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions* and *River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria*.

The key diagnostic and condition thresholds required of *Swamp Sclerophyll Forst on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions* include (NSW 2004):

- Occurs in the South East Corner and Sydney Basin Bioregions
- Typically occurs <20m above sea level (ASL) on small floodplains or where larger floodplains adjoin lithic substrates or coastal sand plains
- Associated with humic clay loams and sandy loams on waterlogged or periodically inundated alluvial flats and drainage lines associated with coastal floodplains
- Occurs as an open forest but can occur as a scrub where tree species are low and dense
- Species composition can vary and is determined by the frequency and duration of waterlogging and the texture, salinity nutrient and moisture content of the soil

- In the Sydney Basin Bioregion the dominant canopy is generally *Eucalyptus robusta* (Swamp Mahogany) and *Melaleuca quinquenervia* (Paperbark) and in the South East Corner Bioregion the dominant canopy is generally *Eucalyptus botryoides* (Bangalay) and *Eucalyptus longifolia* (Woollybutt)

The key diagnostic and condition thresholds required of *River-flat Eucalypt Forest on Coastal Floodplains of Southern New South Wales and Eastern Victoria* include (DCCEEW 2020):

- Occurs in the South East Corner and Sydney Basin Bioregions, in eastern Victoria and southeastern New South Wales
- Occurs in catchments of the eastern and southern watershed of the Great Dividing Range
- Typically occurs <50m ASL and occurs on alluvial landforms related to coastal river floodplains and associated sites where transient water accumulates
- Does not occur on soils that are primarily marine sands or aeolian sands
- Occurs as a tall, closed forest, tall open forest, closed forest, open forest, tall woodland or woodland
- The canopy cover is at least 20% and is dominated by Eucalyptus species
- >/= 30% of the total perennial understorey vegetation cover is comprised of native species and the ground cover richness is >/= four native species per sample plot
- The minimum patch size is >/= 0.5 ha

The proposed action is expected to remove approximately 4.5 ha of Coastal Alluvial Bangalay Forest.

A map of the impacted extent can be seen in Figure 7.

2.1.5. PCT 4051: South Coast Lowland Red Gum-Swamp Oak Forest within the Action area

The Action area houses 3.99 ha of South Coast Lowland Red Gum-Swamp Oak Forest, which is associated with the TEC Coastal Swamp Oak (*Casuarina* glauca) Forest of NSW and SE QLD. The stand of Coastal Swamp Oak (*Casuarina* glauca) Forest of NSW and SE QLD was found to meet the following key diagnostic and condition thresholds required of this TEC (ELA 2022):

- Occurs in the Sydney Basin Bioregion
- Occurs in a coastal catchment <50 m ASL, on a coastal floodplain on a lake margin where the soils are periodically inundated
- Has a forest structure with canopy > 10% cover
- Has a canopy dominated by *Casuarina glauca*.

The proposed action is not expected to remove any Coastal Swamp Oak (*Casuarina glauca)* Forest of NSW and SE QLD.

A map of the impacted extent can be seen in Figure 8.

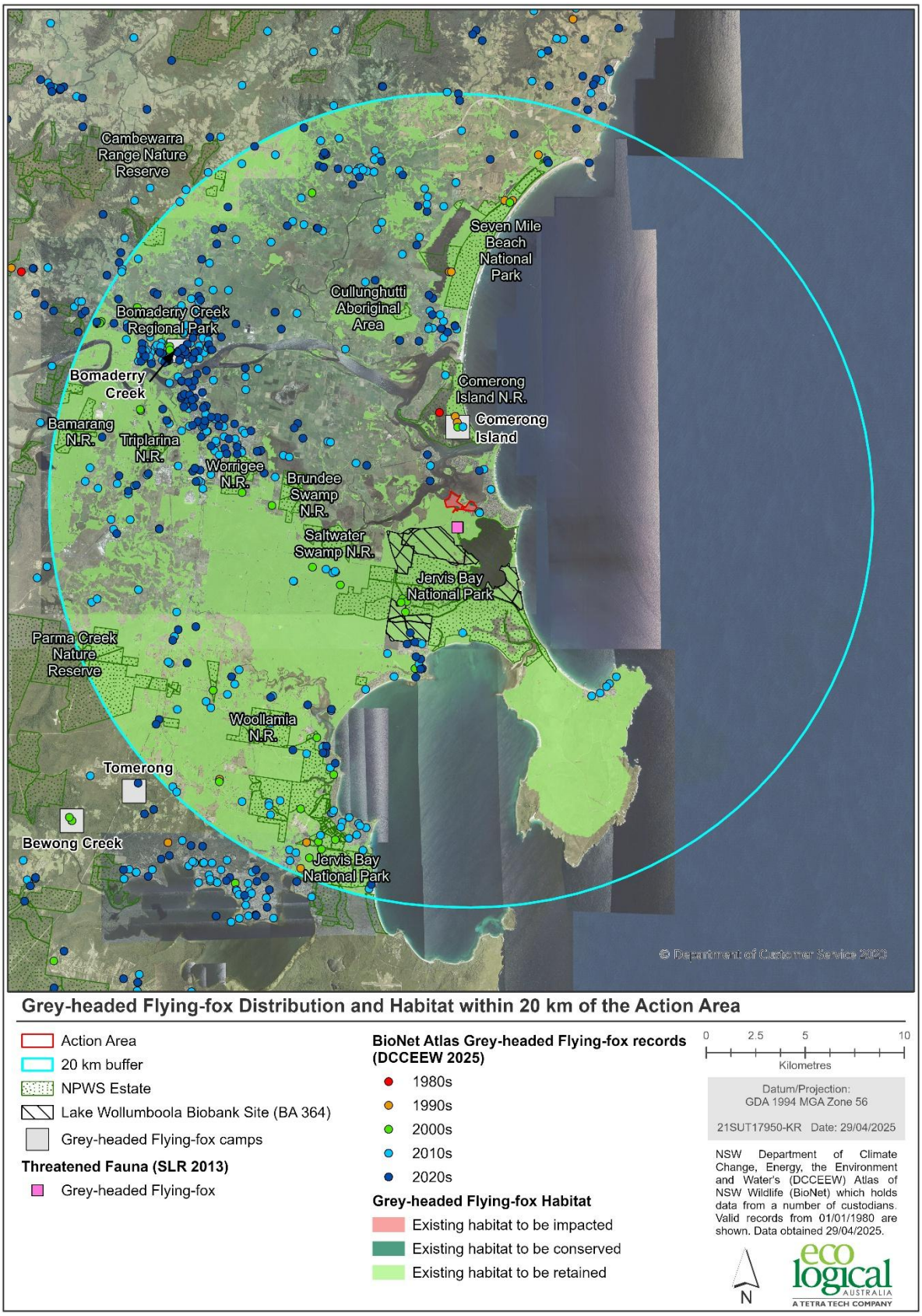


Figure 4: Grey-headed Flying-fox distribution and habitat within 20 km of the Action area

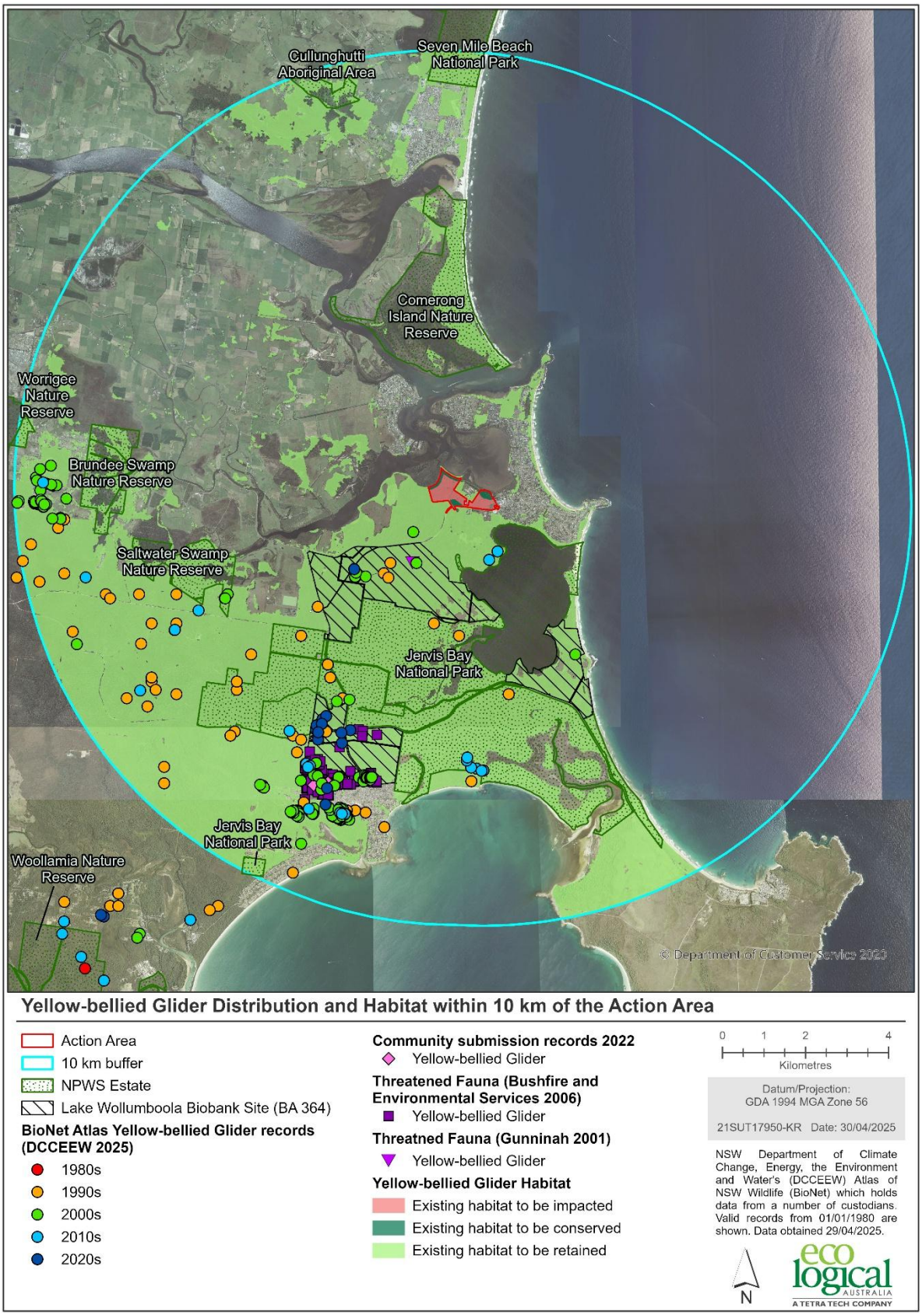


Figure 5: Yellow-bellied Glider distribution and habitat within 10 km of the Action area

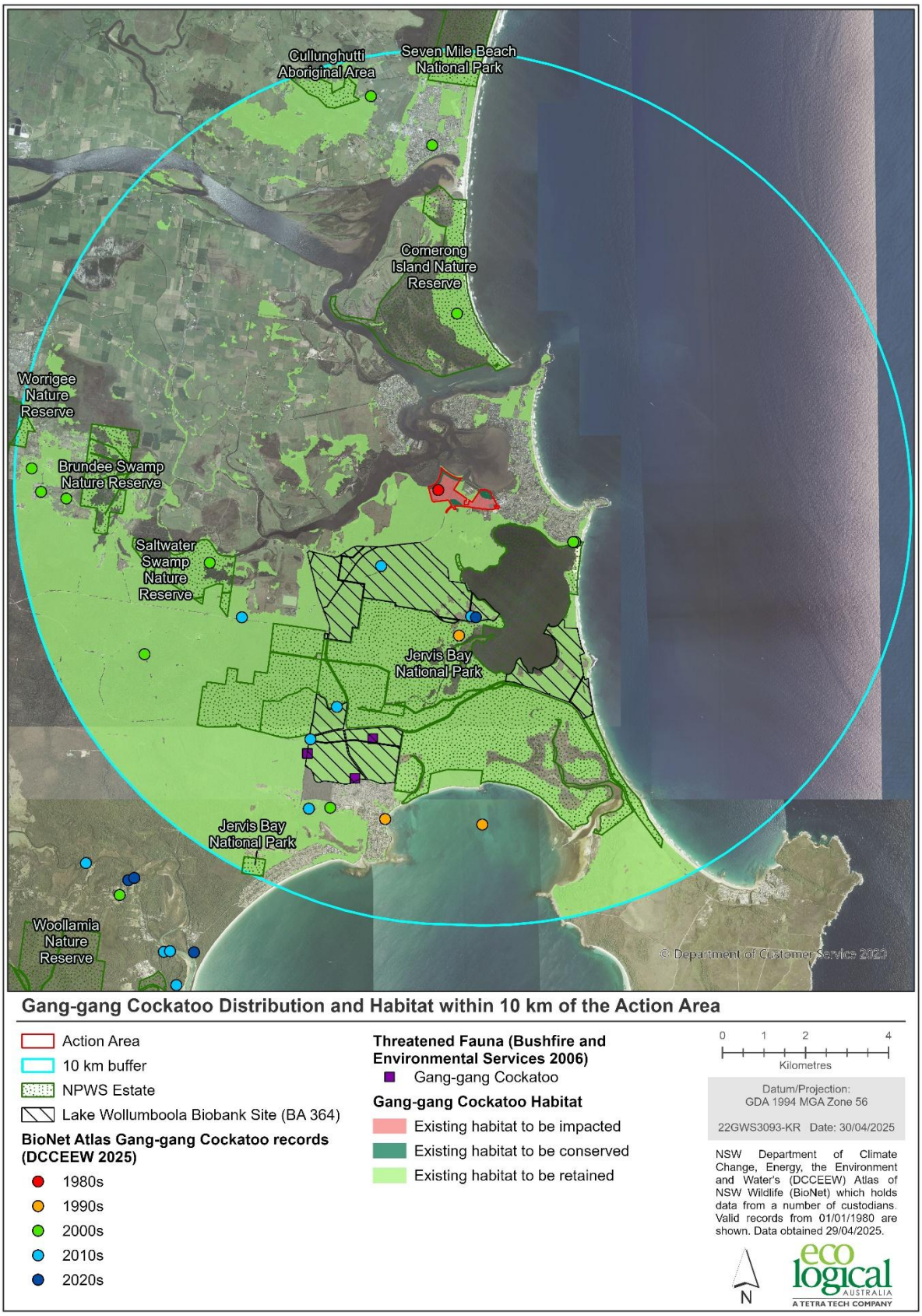


Figure 6: Gang-gang cockatoo records and habitat within 10 km of the Action area

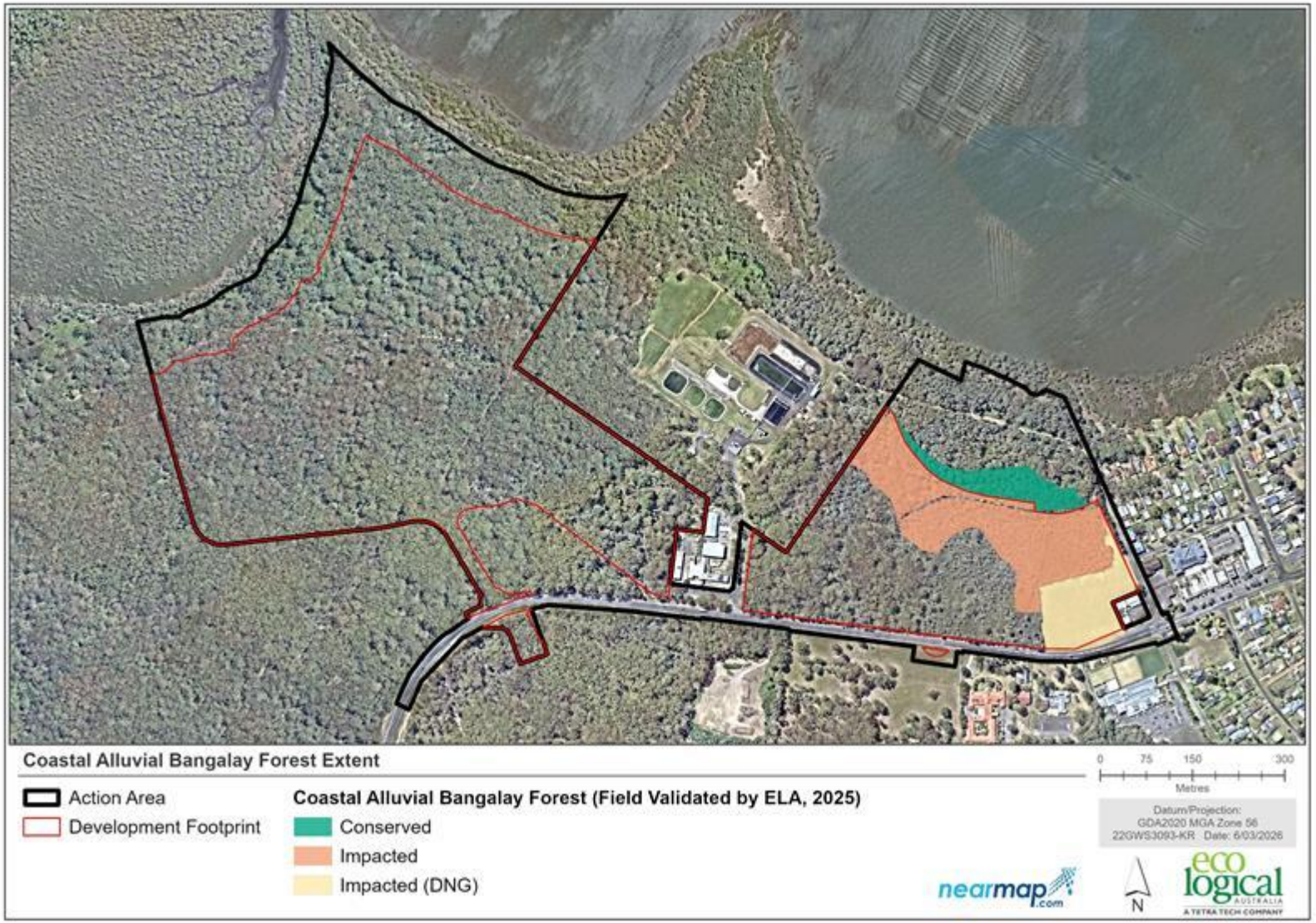


Figure 7: Coastal Alluvial Bangalay Forest within the Action area

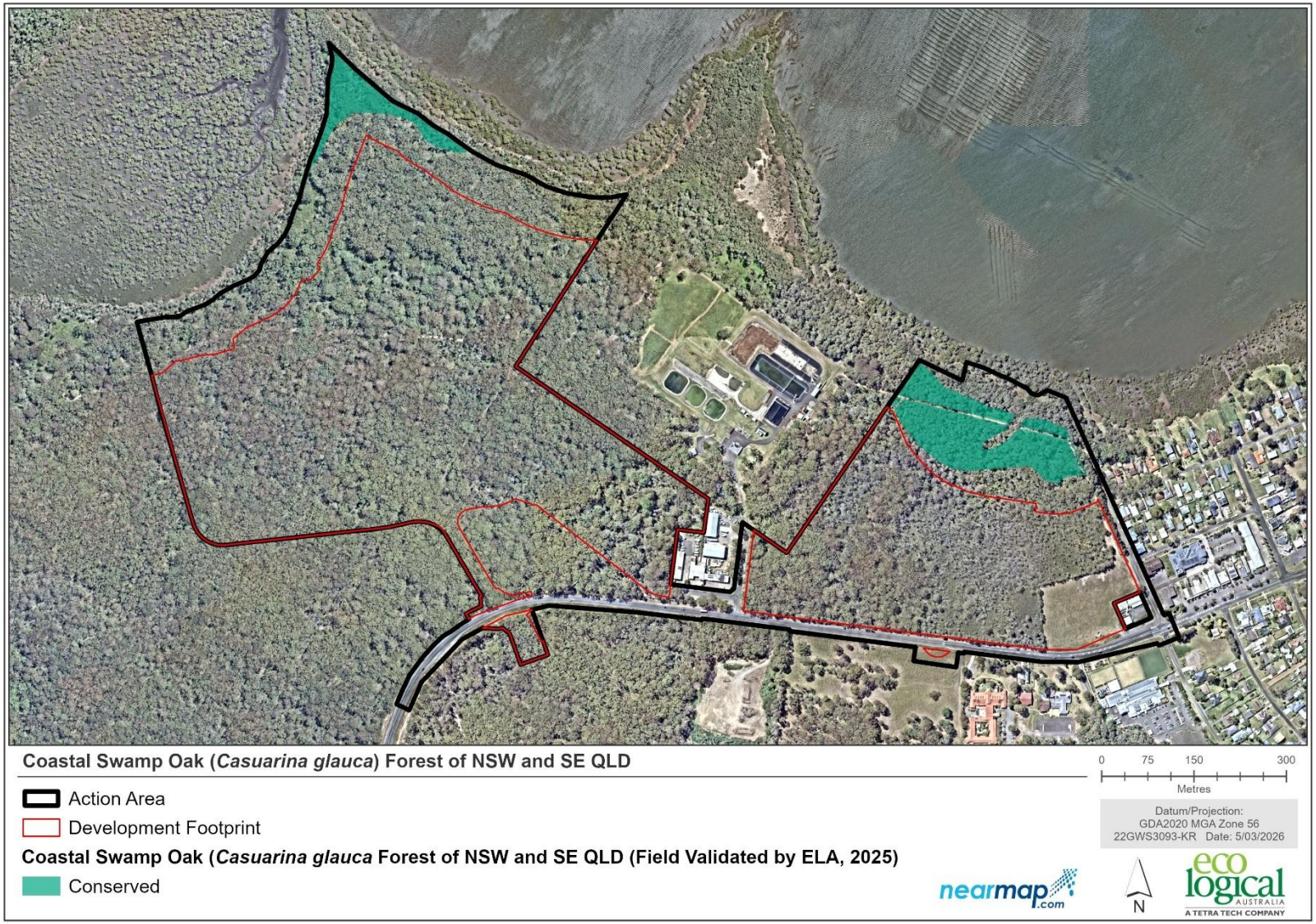


Figure 8: Coastal Swamp Oak (*Casuarina glauca)* Forest of NSW and SE QLD within the Action area

2.2. Detailed description of works and tree removal protocol

2.2.1. Prior to construction

2.2.1.1. Design and fencing

Design measures to avoid and/or reduce impacts to biodiversity values including the MNES in Section 2.1 are:

- Permanent protection of the VMP area (approximately 15 ha).
- Design of subdivision layout, including perimeter roads, water quality basins and Asset Protection Zones to reduce impacts to and protect VMP areas.
- Temporary and permanent protection fencing is to be erected around the areas identified in Figure 3 when appropriate, consistent with the provision outline in the VMP (ELA 2026).
- Transport of machinery, equipment and materials to the site and establishment of a site storage and parking areas. These specific locations within the development footprint are not yet confirmed.
- Installation of the sediment and erosion protection as per the Soil and Water Management Plan in accordance with Conditions B11 and B12 of the DA SSD 3846.
- Installation of informative signage alongside the VMP boundary along with the placement of the temporary, and eventually, permanent fencing as shown in Figure 3.

2.2.1.2. Pre-clearance surveys

The protection of diversity is important in fostering the long-term health of native ecological communities. There is some likelihood that vegetation removal during development can result in the displacement of fauna. Therefore, contractors must take care during clearance activities to minimise impacts/disruption to fauna. The *Bringing the bush back* manual (DoIPNR, 2003) provides practical management techniques to assist practitioners to minimise impacts to native fauna during revegetation works.

Pre-clearance surveys will be undertaken in the development footprint by a qualified ecologist at least one week prior to the commencement of clearing, unless otherwise stated by consent conditions. The location of habitat features will be recorded using a handheld GPS (accuracy of 5-15 m) and marked with high visibility spray paint or flagging tape. Habitat features include habitat trees, log piles, stags, dens and burrows. Habitat trees are considered any tree with a hollow > 1 m above ground level, as well as trees harbouring nests or containing decorticating bark. Habitat features must be inspected for signs of fauna occupancy or present fauna from the ground via visual inspections using binoculars for those above eye level and a held torch for those features close the ground. During the preclearance survey the following details will be recorded:

- All habitat considered critical habitat, and in this case foraging habitat to the fauna MNES in Section 2.1:
    - Grey-headed Flying-fox: winter flowering Eucalypts and other flowering and fruiting native species.
    - Yellow-bellied glider: large, contiguous areas of floristically diverse forest dominated by winter flowering and smooth-barked Eucalypts with mature living HBTs

    - Gang-gang Cockatoo: old growth forest and woodland with an abundance of HBTs with most foraging occurring in the canopy of *Eucalyptus* spp.
- Any MNES present
- Location:
    - Locations of all habitats features within the clearance footprint by GPS and with flagging tape and/or spray paint.
- Habitat feature description:
    - Habitat feature ID
    - Type (Hollow, stag, nest, den, burrow (etc.)
    - Tree species
    - HBTs along with the number and size class of each hollow
        - Small = <10cm
        - Medium = 10-20 cm
        - Large = 20-30 cm
        - Extra-large =>30cm
- Any other key habitat feature fauna may use for refuge e.g. log piles / windrows, fallen trees with hollows, rocky outcrops, arboreal termitaria, dens, large and dense Lantana thickets, etc.
- Signs of occupancy if present (i.e. scratch marks, faeces and nesting material)
- Any bird nests or possum dreys
- Intended fauna relocation sites.

Council should be notified of the results of the pre-clearance survey. Marked habitat features must be left undisturbed until all other vegetation on site is cleared. The number of hollows to be replaced within the area to be cleared will be identified and recorded during the preclearance inspection and installed prior to the removal of the hollow bearing trees.

Vegetation removal must be undertaken in a staged or mosaic pattern and any scheduled removal of hollow bearing trees should be undertaken outside peak bird breeding times (spring to summer), where practical. When clearing vegetation in the development footprint, a qualified fauna ecologist must be present to capture and release any displaced fauna, following the procedures outlined in Section 2.2.2.

2.2.1.3. Contractor inductions

All project personnel and contractors will undergo environmental induction training before commencing work on site. Information to be addressed during this training will include:

- areas of foraging habitat assigned to each of the fauna MNES across the Action area (including the development footprint)
- areas subject to the VMP which are no-go areas
- how to identify / recognise each of the MNES
- procedures to be followed if any MNES are found injured in the proximity of works areas

- the site supervisor will be inducted into how to complete the daily site inspections for the MNES, and the procedure to follow if a MNES be identified
- stop works procedure if any MNES are found during construction or any onsite works.

2.2.2. Clearance works

Following the completion of the pre-clearance survey, vegetation classified as non-habitat can be cleared (Phase 1) under ecologist supervision. 48 hours before habitat clearing, a suitably qualified field ecologist must inspect all potential foraging habitat for the Gang-gang Cockatoo, the Grey-headed Flying-fox and the Yellow-bellied Glider. If these species are found, trees must be gently tapped using the bucket of an excavator or loader to encourage resident fauna to self-relocate prior to clearing. Additionally, 24 hours before habitat clearing, marked habitat trees must be gently tapped using the bucket of an excavator or loader to encourage resident fauna to self-relocate. Clearing of habitat features must begin at least 48 hours after the removal of all other vegetation.

Council is required to provide contact details for a relevant employee who will be available and able to receive information about species encountered during clearance works. Habitat trees are recommended to be cleared in the following process:

- Prior to commencement of clearing works, all habitat features must be inspected for fauna occupancy.
- Where required by approval conditions or at the recommendation of the site or project ecologist, HBTs will be sectionally dismantled by a climbing arborist. Otherwise, soft felling techniques will be used to clear habitat trees. This involves excavating around the tree roots to loosen the tree, then gently nudging it to ensure it falls slowly, minimizing impact on any potential resident fauna. It is also recommended excavator operators have a grab attachment at their disposal to assist in felling the tree softly.
- Felling stags/habitat trees into the zone of disturbance to avoid damaging adjacent vegetation.
- Conducting post-clearing checks to ensure no fauna are trapped or injured, relocating any found to nearby retained habitat.
- If native fauna is identified within the project site, the injured fauna and rescue and release of fauna can be found in Appendix G must be adhered to.
- All fauna found during clearing activities is to be captured if possible and relocated off-site to adjacent habitat.
- Exercise caution when operating equipment near retained vegetation.
- Distribute logs from felled trees into retained vegetation areas where fire risk is minimal to provide habitat for ground-dwelling fauna. Hollows will be relocated to nearby bushland or retained vegetation for reuse as hollow-bearing logs.

If relocation of native fauna is required, the ecologist has authority to order a temporary halt to clearance works while relocation is completed and until the ecologist is satisfied that the individual has safely moved out of the area being cleared. A qualified ecologist must be present at all times during clearance works. Any clearing within the Action area is restricted to the development footprint and no clearing is permitted in the VMP area.

During habitat clearing supervision, the following details are to be recorded for each fauna encounter:

- Habitat feature details: ID, type and location
- Fauna encountered: species, count and age class

- Relocation site, and justification if different from those identified in the pre-clearance survey
- Fauna fate

Council should be notified of the results of the clearance works, and whether any native or threatened species were identified during the works.

2.2.2.1. MNES foraging tree removal

Prior to the commencement of clearing each day, a qualified ecologist will complete an assessment of the area to be cleared to detect the presence of any MNES. Clearing can commence once the inspection is complete.

If any MNES are identified, works in the immediate vicinity must cease until the respective MNES have moved on from the clearing area of its own accord. If any MNES remain within the area to be cleared after three days, measures which are consistent with best practice will be undertaken to ensure no harm to the MNES. This would be discussed with the Project Ecologist and would generally involve:

- works in the vicinity to cease until the individuals have moved on
- potential relocation of earthworks to an area unlikely to pose a threat to individuals present and until the Project Ecologist is satisfied any MNES have moved on
- consultation with WIRES and other wildlife groups about relocating the individuals.

2.2.2.2. Hollow-bearing tree and habitat removal

A qualified ecologist must be present during clearing of HBTs and key habitat features to minimise the risk of harm to native animals. HBTs could contain fauna at the time of clearing and therefore such fauna has the possibility of being placed under stress, injured or killed during tree felling via:

- Being nocturnal or in torpor, and unable to escape prior to the tree falling.
- Collapse of the hollow when it impacts the ground
- Collision with internal walls or via being thrown out when the tree falls.
- Being present as young e.g. eggs or nestlings

Prior to the commencement of clearing, hollows or habitat trees within the development footprint will be inspected for any resident fauna.

If, during pre-clearance surveys and clearance works, a native species is found to be using the action area for breeding purposes a stop works protocol will be required. This stop works protocol is as follows:

- Stop clearing works to notify the Site Supervisor and Project Manager.
- If an impact is not likely to occur to the breeding individual, works can recommence while regular inspections are maintained on the individual.
- If an impact is to occur to the breeding individual, the site ecologist will reassess how works recommence.
    - If the site ecologist determines the breeding individual is coming to an end in its breeding cycle, works will remain halted in that location while the breeding cycle concludes.
    - If the site ecologist determines the breeding individual should be relocated, the breeding individual along with the young must be taken to a wildlife rescue facility with appropriate

resources (i.e. a wildlife rescue that has access to an incubator for nests with unhatched eggs) to resume the breeding cycle.

- If the species found to be breeding is a threatened species, clearance in that location will be halted until the end of the breeding period for the species (i.e. the young have fledged). A buffer surrounding the breeding individual of no less than 20m, or as otherwise advised by the site ecologist, will be established until the end of the breeding period for the species. Clearance of other locations can continue during this time. Monitoring will be required to ensure the breeding season has come to an end before clearing commences.

If threatened species are encountered, proper approvals, licenses and permits must be obtained if not already done so.

Where fauna are present in hollows, the hollow bearing limbs or spouts will be sectionally lopped and lowered by a suitably qualified tree climbing arborist. The sectional lop and lower method allows the hollow limb to be safely lowered to the ground and inspected by a suitably qualified ecologist. Hollows are to be immediately inspected by the ecologist once the tree / limb is felled or lowered (within WH&S guidelines) for injured individuals or abandoned offspring, and appropriate measures undertaken. If the hollow has collapsed and there is the possibility fauna is buried, the material must be thoroughly searched.

If hollows cannot be confidently determined not to contain fauna, the fallen tree must either be allowed to sit overnight in a safe area where it will not be subject to disturbance for the rest of the day; or can be sectioned by chainsaw to clear hollows of fauna. The ecologist must supervise these activities and work closely with the chainsaw operator and climber to minimise the risk of fauna being injured during sectioning, such as via:

- using a torch or endoscope to identify a point where the hollow can be cut without risk of injuring fauna
- blocking any holes with a rag before commencing cutting to minimise risk of fauna attempting to escape during chainsaw works.

If the end of the hollow cannot be determined, the chainsaw method must not be used. All captured nocturnal animals will be placed within a suitable bag and / or directly into a suitable container (e.g. Elliot trap with nesting material, pet carrier, customised plastic box with ventilation, etc.), and stored until dusk in a cool, quiet area out of direct sun or at risk of ant infestation. Unharmed animals will then be 'soft-released' at dusk in nearby habitat via opening the container and allowing the animal to leave on its own volition. Diurnal fauna are to be relocated and released immediately after capture into the VMP area to minimise stress and allow the animal to find shelter. Any injured or fauna incapable of independent survival are to be taken into care by wildlife rescue. Rehabilitated animals are to be released in the retained habitat directly on / or adjacent to the site, preferably as close to the animal's remaining home range, unless otherwise specified as legally applicable.

The ecologist will capture any resident animals injured or not evacuating and undertake appropriate emergency actions if required e.g. transport animal to veterinary treatment (care at proponent's cost) or care by wildlife rescue (WIRES, RSCPA etc). Best practice is to notify the wildlife rescue prior to the commencement of works.

Animals which are severely injured are to be immediately taken to an approved vet (all clearing of habitat features must be temporarily halted if a qualified ecologist is not present) for treatment including euthanasia where relevant.

Hollows removed will be re-installed in conservation areas to be retained under the supervision of a suitably qualified ecologist.

2.2.2.3. Nest removal

If a bird nest is found to be active (i.e. with nestlings), where possible, clearing could be delayed until the young have fledged, or, if deemed appropriate by the site ecologist, the nest could be relocated. If a nest is found that belongs to one of the above MNES (Section 2.1) the nest may need to remain until the young have fledged.

Nests detected before tree is felled

The species of bird will be identified and depending on the species' conservation status, the nest may need to remain untouched until the chicks have fledged, or relocated if the site ecologist determines that to be an appropriate action. If the site ecologist concludes the nest is able to be removed from the site but not relocated, a wildlife carer with access to incubators must be found to care for the nest. The nest will be visually inspected from the ground to observe any eggs or nestlings. If the nest is not visible from the ground, a cherry picker, drone or tree climber can be used to view the nest. If a nest is active (contains nestlings or eggs) and is not a threatened species, the information in the following paragraph will apply if works cannot be delayed.

Nests detected after tree is felled

If a nest is found containing eggs or nestlings after a tree is felled, wildlife rescue will be immediately contacted to collect them. Eggs or nestlings will be placed in appropriate bags (calico bags for eggs, and bags with towels for nestlings) to be kept as warm as possible until wildlife rescue collects them.

2.2.2.4. Removal of other key refuge habitats

These include:

- hollow logs
- large log piles
- materials such as abandoned vehicles, construction debris (excluding asbestos contaminated materials), roofing sheets, etc.
- bushrock / boulders / rocky outcrops.

These features will be marked during pre-clearing surveys or checks. These features will be cleared and natural materials will be re-installed in conservation areas prior to clearing commencing in the area in efforts to avoid damage to the habitat features once works commence. The clearance and re-installation of the natural materials to be retained will be done under the supervision of a suitably qualified ecologist.

Trees (and shrubs) removed within the development footprint may be of further use by providing suitable habitat features within the VMP area as stags, logs, hollows, debris, leaf litter, mulch or be used for soil stability and brush matting material in cleared areas, as well as a source of nutrient cycling. If vegetation is to be removed, natural timber >10 cm diameter including tree barrels and fallen logs/ branches, should be retained for use within the VMP area where suitable. Exotic vegetation is to be taken off-site and must not be used as mulch. Exotic timber is not recommended to be used as habitat enhancement but can be used only if approved by a suitably qualified and experienced restoration ecologist and will not regrow. Reuse of any vegetation, including mulch, within the VMP area needs to be approved by a suitably qualified and experienced restoration ecologist to ensure it does not impact on the ability of the site to achieve the performance criteria.

Where hollow-bearing trees are removed from the development footprint, best practice for habitat management recommends that nest boxes be installed in the VMP area at the following rates to compensate for hollow removal:

- Microbats – 1 nest box for every small hollow (<5cm) removed (species suitable)
- Birds (parrot species) – 1 nest box for every 5-15cm hollow removed (species suitable)
- Possums/gliders – 1 nest box for every 5-15cm hollow removed (species suitable).

The placement of all faunal habitat augmentation features and the nest box installation is to be carried out under the supervision of a qualified ecologist.

Suitable quantities of viable seed and genetic material present that can be reasonably collected will be collected for plant propagation uses and suitable quantities of timber is to be cut into logs to be utilised as ground habitat for native fauna.

2.2.3. Post construction work

Fences and signage will be maintained by the proponent until construction has been completed and/or until the land associated with the corresponding fencing and signage is handed over to Council. Council will be responsible for the ongoing maintenance of any required permanent fences and signage (i.e. fencing and signage surrounding the VMP area) once it has been handed over. Following the completion of construction, a report is prepared by a suitably qualified ecologist to demonstrate that all fences and signage has been installed correctly and is functioning.

2.3. Aboriginal heritage

2.3.1. Assessment history

An Aboriginal Cultural Heritage Assessment (ACHA) (AA 2024a) was undertaken on Lot 1 and Lot 3 DP 1279350 at Culburra Road, Culburra Beach completed under Aboriginal Heritage Impact Permit (AHIP) #5076. The locations of the Aboriginal Heritage sites found within the Action area are shown in Figure 9.

The ACHA and the following Aboriginal Cultural Heritage Management Plan (ACHMP) was undertaken to address and satisfy conditions B13 through to B24 of the Concept Approval DA (SSD 3846) and to assess the significance of Aboriginal Heritage sites and objects within the Action area as part of the development applications being prepared in accordance with the Concept Approval DA (SSD 3846) under Part 4 of the *Environmental Planning and Assessment Act 1979* (Table 1).

Further information surrounding the Aboriginal Heritage sites in and adjacent to the Action Area as well as the consultation and involvement from the Aboriginal Community in the development of the ACHMP can be found in the ACHA (2024a) and ACHMP (2024b) located on the West Culburra Development website (https://www.sealark.com.au/property-development-projects/west-culburra/).

2.3.2. Artefacts present within the action area

The ACHA Austral Archaeology (AA) (2024a) identified 14 Aboriginal Heritage sites within the Action area. Seven of these sites will fall within the VMP area and will not be impacted by proposed development. Seven of these sites fall within the development footprint and will be impacted by the development. The Aboriginal Heritage Information Management System (AHIMS) sites that fall within the development footprint include:

- AHIMS #52-5-1077

- AHIMS #52-5-1112
- AHIMS #52-5-1113
- AHIMS #52-5-1114
- AHIMS #52-5-1116
- AHIMS #52-5-1117
- AHIMS #52-5-1118

2.3.3. Mitigation measures

Mitigation measures and management recommendations for sites within the development footprint have been provided for in the ACHA (AA 2024a). Any works in proximity to the sites must follow the measures outlined in the ACHA, as identified below:

- Before works occur, the Proponent is to apply to Heritage NSW for an AHIP to destroy the Aboriginal Heritage sites within the development footprint (Figure 9). These sites (and all other Aboriginal objects) are protected under Section 90 of the NSW National Parks and Wildlife Act 1974 (NPW Act). Due to this the total 17 Aboriginal objects collected under the approved AHIP will be required to be reburied at a nominated location chosen from consultation with the local Aboriginal Community.
- Prior to any works within the vicinity of AHIMS #52-5-1077 (Figure 9), the site will be culturally excavated by the Aboriginal Community. The conditions to be met surrounding this excavation can be found in Section 7.4 of the ACHMP (AA 2024b).
- Prior to vegetation clearance activities throughout the development area, Sealark Pty Ltd will engage the Aboriginal Community to undertake a seed collection program and propagation from endemic or culturally significant flora.
- Prior to vegetation clearance activities, a reasonable attempt must be made to engage members of the Aboriginal Community for a smoking ceremony.
- Temporary boundary fencing must be installed no less than:
    - 40 metres from any midden associated with the Crookhaven River Midden Complex.
    - 10 metres from the listed boundary of any AHIMS registered artefact site.
    - And is to be either steel construction fencing, or parawebbing.
- Fencing is to be installed on the AHIMS site boundary to prevent impacts outside the AHIP area and at the boundary of the proposed construction works to protect sites outside the study area.
- All site workers involved in construction activities will complete cultural awareness training, which is to be determined through consultation with the Aboriginal Community, prior to starting works.

A map of the AHIMS site locations within the Action area as well as in proximity to the Action area (AA 2024a) is shown in Appendix H.

As per the ACHMP (AA 2024b), an incidental finds policy is to be established, to preserve any cultural materials unearthed during the ground disturbance activities associated with the West Culburra project. The following must be adhered to:

- Aboriginal objects are protected under the NPW Act regardless of if they are registered on AHIMS or not. If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, Heritage NSW must be notified under section 89A of the NPW Act. Appropriate management and avoidance or approval under a section 90 AHIP must be sought if Aboriginal objects are to be moved or harmed.
- Incidental finds are to be added to the West Culburra artefact assemblage, as identified during test excavations in 2023, and reburied with these. Consultation with the Aboriginal Community is ongoing, and the final location of this reburial is to be determined.
- Artefact materials recovered in this capacity will be considered as having been subject to a cultural collection, and there will be no requirement to analyse any such collected materials.
- In the extremely unlikely event that human remains are found, works must immediately cease, and the NSW Police will be contacted. If the remains are suspected to be Aboriginal in origin, Heritage NSW and the Aboriginal Community must also be contacted at this time to assist in determining appropriate management.
    - The notification to the Aboriginal Community and Heritage NSW is to include details of the remains and their location.
    - An appropriate “no-go” area must be established. The extents of this area will be determined through consultation with NSW Police, Heritage NSW, the Aboriginal Community, and (if necessary) a suitably qualified archaeologist.

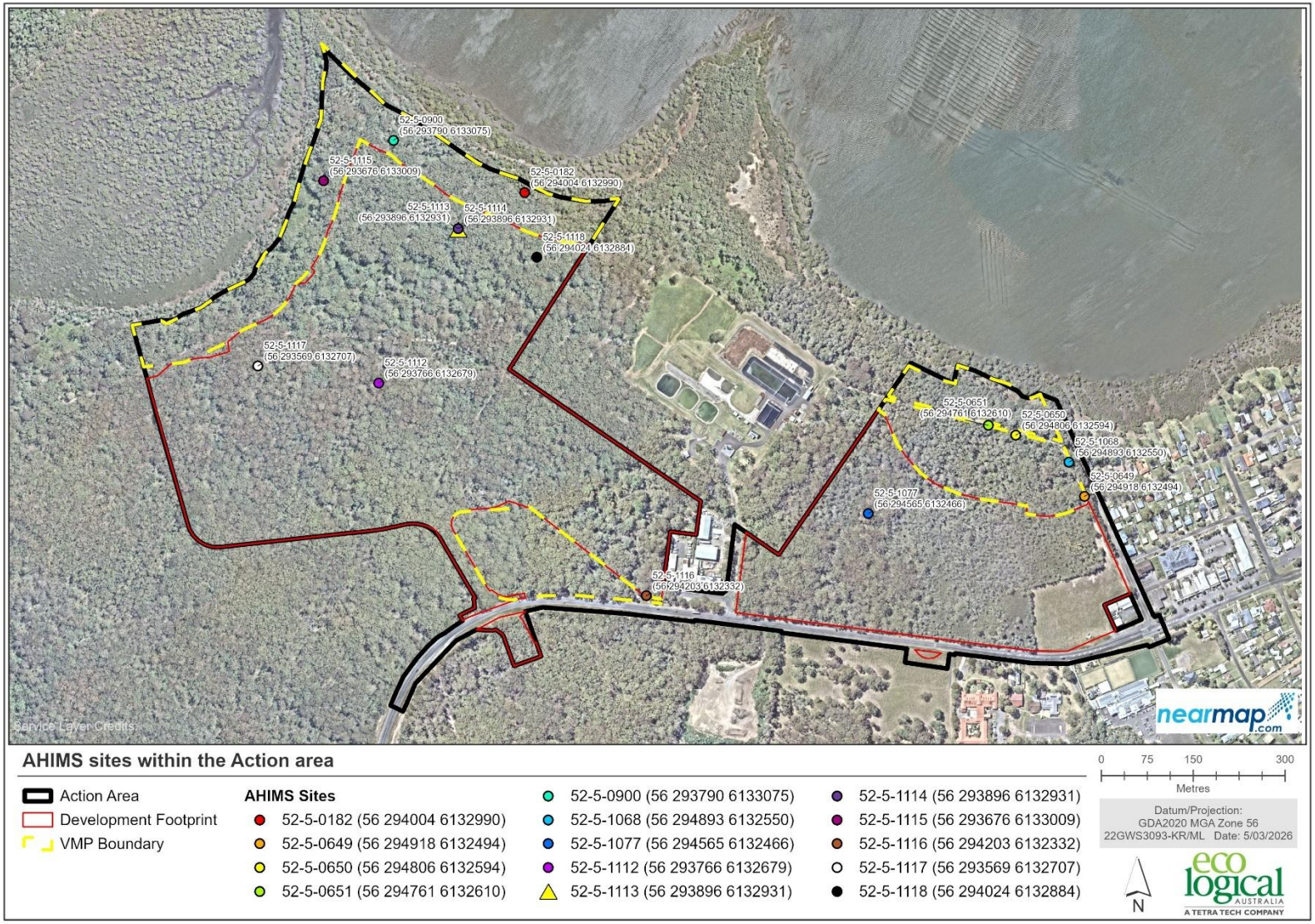


Figure 9: AHIMS site locations within the Action area

3. Environmental risks and controls

3.1. Potential environmental risks

The proposed action has the potential to pose the following environmental risks to biodiversity values:

- Threatened Ecological Communities
  - Clearing of remnant vegetation beyond approved development footprint
  - Weed dispersal and introduction throughout the Action Area
  - Erosion and sedimentation impacting VMP areas
  - Possible dumping of soils or other materials in VMP areas
  - Introduction of plant pathogens such as *Phytophthora cinnamomi* into the VMP areas or other areas of retained vegetation
  - Spread of litter and rubbish into VMP areas
  - Stormwater flow into VMP areas from detention areas
  - Increased access to/recreational use of VMP areas
- Fauna
  - Loss of fauna habitat beyond the approved development footprint
  - Injury/death of fauna during vegetation clearing
  - Indirect impacts to fauna associated with construction noise and light
  - Direct impact from vehicle collision
  - Contamination by hazardous material (fuels, chemicals, oils) spills
  - Contaminated by rubbish/waste
  - Pollution through sedimentation and stormwater runoff
- Harm/loss of value to Aboriginal Heritage sites or objects.

3.2. Risk assessment for potential impacts

A qualitative risk assessment methodology has been applied to the environmental risks in accordance with *Environmental Management Plan Guidelines, Department of the Environment Commonwealth of Australia 2014.*

Each environmental risk identified within Section 3.1 has been rated in terms of likelihood of occurring and the consequences to the MNES present and other fauna likely to be within the Action area if it did occur using the criteria in Table 4 and Table 5. These ratings were then combined to generate a risk rating of low, medium, high or severe (Table 6). The risk assessment for each of the potential environmental impacts before and after mitigation is described in Appendix A; the assessment describes the mitigation measures proposed to minimise each risk and assesses the residual risk levels after implementation of mitigation measures.

Table 4: Definition of likelihood of occurrence

Likelihood	Definition
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances

Table 5: Definition of consequence

Consequence	Definition
Minor	Minor incident of environment damage that can be reversed
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts
High	Substantial instances of environmental damaged that could be reversed with intensive efforts
Major	Major loss of environmental amenity and real danger of continuing
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage

Table 6: Risk framework

		Consequences				
		Minor	Moderate	High	Major	Critical
Likelihood	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

3.3. Management uncertainty and adaptive implementation

Appendix A also identifies the risks to achieving the environmental objectives of this management plan in terms of the scientific, ecological or budgetary uncertainties that may prevent the desired outcome from being achieved, how the desired outcome is being monitored/detected by trigger values and likely adaptive management measures if the desired outcome is not met.

The main uncertainties in achieving the objectives of this management plan are:

- Poor implementation of identified mitigation measures.
- Inadequate induction/training of project staff leading to miscommunications of the actions to be implemented and/or matters to be protected.
- Insufficient funds provided by the approval holder to implement the management actions identified

The risk of these uncertainties arising is reduced by the monitoring program proposed that will ensure that staff training and induction programs are implemented, records of these programs are retained, and daily, weekly, monthly monitoring and site audits against a checklist are undertaken to detect any

incidents of non-compliance with appropriate corrective actions identified and implemented through an adaptive management program (Section 5).

3.4. Environmental objectives, performance targets and indicators

Appendix B provides the environmental objectives relevant to each protected matter and approval condition, the performance targets for each objective, the commitments (management actions) made to achieve each objective, the responsible party for undertaking the management action, the performance indicators for each management action, and the timing and frequency of each action.

3.5. Contingency response and corrective actions

The monitoring inspection checklist provided in Appendix D provides the opportunity to identify appropriate corrective/adaptive management actions that are specific to the issue should an incident of non-compliance arise.

Appendix A provides some indicative adaptive management measures for each of the potential impacts identified as project risks.

3.6. Emergency preparedness and incident management

In the event of an environmental incident causing or threatening 'material harm' to the environment (indicatively, costing more than $10,000 in clean-up (refer s.148 of the *Protection of the Environment Operations Act 1997*), the following persons/authorities must be notified in this order:

- Firstly call 000, only if the incident presents an immediate threat to human health or property.
- Notify the project team immediately
- Notify the ER
- Notify each authority immediately, in this order:
    - NSW EPA – 131 555
    - NSW Health, Public Health Unit – Wollongong Office – Public Health Officer on call (02 4221 6700) or for urgent matters outside of business hours contact the Wollongong Hospital (02 4222 5000) and ask for the Public Health Officer
    - SafeWork NSW – 131 050
    - Fire and Rescue NSW – 9265 2999
    - Shoalhaven Council – 1300 293 111
    - WIRES – 1300 094 737

Immediate verbal communication is required to each relevant authority. This is to be followed by notification in writing within seven days of the date on which the incident occurred, per section 101 of the Protection of the *Environment Operations (General) Regulation 2009*. The environmental controls to be managed by the Site Supervisor and all personnel at all relevant stages of the project are presented in Table 7.

A comprehensive list of emergency and incident contacts are shown in Appendix I.

Table 7: Incident management

Issue	Control measure
General site issues	Conduct induction training for all personnel to alert them of sensitive areas in the work zone, environmental controls via this plan and controls within the Safe Work Method Statement (SWMS) and emergency controls. Induction training must also include any other relevant induction information. Establish a register of complaints to record complainant contact information, details of complaint and action taken to address the complaint. A template is provided in Appendix C.
Sediment and Erosion	Ensure all soil is managed consistent with the relevant Soil and Water Management Plan (Section 4.5). Ensure all boundaries between the development footprint and the VMP area have installed sediment fencing as per Section 4.5 and exclusion fencing is installed as per the VMP (ELA 2026) and Section 4.3.
Water Quality	No materials would be allowed to enter waterways or stormwater drains, at any time.
Flora and Fauna	Machinery movement will be contained with the construction footprint in areas of cleared land. If fauna is found on the construction site, stop work in the area. Do not touch animals but wait for them to leave. If you are unsure or if the individual looks injured call an ecologist immediately for advice, or WIRES or a rescue agency.
Aboriginal/Historic Heritage	Unexpected finds – works will cease, the relic will not be moved, and the project manager will be contacted as soon as possible Stop work if human remains are found and contact NSW Police
Chemical management and spills	Store chemicals (including fuel) in secondary containers with a lid; If chemicals are to be stored overnight, they must be stored properly as per SafeWork NSW (2025) and in accordance to the chemicals Material Safety Data Sheet (MSDS). An adequate spill kit must be available on site at all times. Spills would be cleaned up immediately and waste materials disposed to a licensed waste facility in accordance with a current Material Safety Data Sheets (MSDS).
Contaminated Land	If contaminated materials are found during construction, access will be restricted by using marker tape. If potential asbestos is encountered, contact a certified asbestos assessor to assess and remove any hazard. If any spoil is tested this management plan will be amended to include specific controls for the treatment of the hazard. If applicable, ensure imported topsoil is accompanied by documentation stating it is Virgin Excavated Natural Material (VENM).
Onset of sudden rain	Sediment and erosion control measures will be checked and secured.

4. Environmental management measures and performance criteria

4.1. Environmental Management Measures

Table 8 details the overarching Environmental Management Measures for the Action area and specifies the environmental action, the timeframe in which it is to take place, the monitoring to be done and the person responsible for the action's implementation.

The persons responsible for implementation will be categorised as:

- Developer Project Manager – Project Manager (PM)
- Contractor Site Supervisor – Site Supervisor (SS)
- Contractor site personal – All
- Independent Site Ecologist -Site Ecologist (SE)

4.2. Implementation of management actions and performance measures

Appendix B details the requirements for implementation of measures to meet management objectives, performance targets and indicators, monitoring, the identification of responsibilities and timeframes for implementation of measures to protect the ecologically sensitive communities and fauna within the Action area.

Table 8: Environmental Management Measures

Objective	Environmental action	Timeframe	Monitoring	Responsible person
General: To minimise the risk of environmental incidents and complaints and to effectively manage them if they occur.	All project staff and contractors will be inducted on the environmental sensitivities of the work site(s) and relevant safeguards prior to commencement. This must include other relevant contractor Induction information, if applicable.	Prior to works	Induction records	SS
	Sign off on an agreement with all other relevant contractors to cover issues of indemnity, roles and responsibilities and conditions of operation.	Prior to works	Induction records	PM
	Other relevant contractors will be notified immediately of any complaints relating to management of environmental issues.	As required	Complaints register	SS
	To ensure compliance with Section 148 of the Protection of the Environment Operations Act 1997, each relevant authority must be notified of any pollution incidents.	As required	Incident reports	PM
	Work site will be delineated and 'no go' zones/the VMP area will be marked prior to commencement of works. A surveyor is to clearly mark the boundary of the construction site.	Prior to works	Weekly checklist, after rainfall or change in site conditions	PM, SS
	Temporary bushland protection fencing and signage is to be installed as indicated in Figure 3 prior to any construction being undertaken. Temporary fencing, sediment fencing and signage is to be installed as per Section 4.3 of *West Culburra Construction Environment Management Plan* (this document) and the VMP (ELA 2026).	Prior to works	Weekly checklist, after rainfall or changed in site conditions	PM, SS
	The relevant authorities will be notified if damage occurs to an area (vegetation, etc.) outside of the nominated work area.	As required	Weekly checklist Incident reports	PM
	Shoalhaven City Council (SCC) and the DCCEEW will be notified immediately of any complaints in relations to management of environmental health.	As required	Complaints register Incident reports	SS
	Ensure all equipment is in good working order.	During construction	Weekly checklist	All
Topography, geology and soils: No offsite erosion and sedimentation	The Soil and Water Management plan must be adhered to (Section 4.5). Additional general control measures include: • Works will not take place during or immediately after heavy rain, • Vehicles are to be kept within designated areas. • Stabilisation of all disturbed areas with native mulch from onsite vegetation Controls will be in place prior to the commencement of works and maintained throughout the construction phase until the site is landscaped or suitably revegetated.	Prior to works at site establishment and maintained during works	Weekly checklist, after rainfall or a change in site conditions	PM, SS

Objective	Environmental action	Timeframe	Monitoring	Responsible person
	These requirements shall be in accordance with *Managing Urban Stormwater: Soils and Construction (Blue Book*) Landcom (2004).			
	Inspect erosion controls regularly (daily during workdays) and after rainfall. Fix damaged controls immediately. Remove accumulated sediment or waste material from within the sediment controls regularly.	As required	Weekly checklist, after rainfall or a change in site conditions	SS
	Leave erosion and sediment controls in place until after the works are completed and the soil has stabilised.	Prior to works	Weekly checklist, after rainfall or a change in site conditions	SS, All
Topography, geology and soils: Reduce potential of pollution of soil from chemical spill or discovery of Asbestos and other contaminants.	Stop works, notify other relevant contractor if any contamination (e.g. asbestos, discoloured soil, chemical or petrol odours, refuse or leachate) is discovered and isolate that location of the site. Undertake clean up as required.	Site establishment and during works	Weekly checklist, incident reports. Reassessment to occur after changes in site conditions or after rainfall.	SS
	For any excess spoil where potentially, contaminating activities have been identified on site this material will be tested and classified prior to leaving site. For any excess spoil material classified as contaminated, disposal of this material will be at an appropriately licensed landfill in accordance with the EPA (2014) Waste Classification Guidelines.	As required	Incident reports	SS
	Store all chemicals (e.g., fuel, oil) in appropriate bunding/storage systems within the approved storage facility and ensure appropriate spill kits are carried with the equipment and present onsite.	During construction	Weekly checklist	All
	Weather forecast will be checked daily to ensure that the site can be prepared for high rainfall.	During construction	Weekly checklist	SS
	Prior to use at construction site, machinery is to be appropriately cleaned, degreased, and serviced.			
	Carry associated Safety Data Sheets (SDS) for all chemicals.	During construction	Weekly checklist	All
Water quality and hydrology: No pollution of waterways by water discharge	Pre-construction, construction and post-construction water quality monitoring, additional water quality monitoring, aquatic ecology monitoring and oyster aquaculture monitoring as per Section 4.4 is undertaken.	Prior to works, during works and post works where required.	Weekly/monthly checklist, after wet weather events	PM, SE
	Soil and Water Management Plan control measures undertaken as in Section 4.5.	Site establishment and during works	Weekly checklist, after rainfall or changes in site conditions.	SS

Objective	Environmental action	Timeframe	Monitoring	Responsible person
	Works may be required to cease if groundwater is intercepted. If groundwater is intercepted and dewatering is required, the proponent/successful contractor may need to obtain an Aquifer Interference approval from the Department of Planning and Environment. The contractor must also monitor groundwater extraction during construction and obtain a licence if needed. As per DPIE (2022) the requirements for excavation must be adhered to.	Site establishment and during works	Weekly checklist, after rainfall or changes in site conditions.	SS
	Vehicles/machinery will not be refuelled near open cut or exposed soil where leaching is a risk or near waterways.	Site establishment and during construction	Weekly checklist, after rainfall or changes in site conditions.	SS
Air quality: No off-site dust impacts and air pollution minimised	Cover stockpiles and loads to prevent wind-generated dust and debris. Follow the dust management actions outlined in Appendix E.	During construction	Weekly checklist and complaints register	All
	Vehicles and equipment will not be left idle when not in use, will be regularly serviced and maintained and free from visible smoke. Minimise use of machinery for required activity only.	During construction	Weekly checklist and complaints register	All
	Works must be minimised during high wind periods.	During construction	Weekly checklist and complaints register	All
	Plant and equipment must be maintained in accordance with manufacturer's specifications to ensure that it is in proper and efficient condition and must be regularly inspected to ascertain that fitted emission controls are operating efficiently.	During construction	Weekly checklist and complaints register	All
	Vehicles to maintain recommended speed.	During construction	Weekly checklist and complaints register	All
	Look for excessive dust generation and slow down if needed.	During construction	Weekly checklist and complaints register	All
Waste and hazardous materials: No pollution to land	It is recommended that resource management options for the project follow this hierarchy: • Avoid unnecessary resource consumption • Recover resources (including reuse, reprocessing, recycling and energy recovery) • Dispose (as a last resort)	During construction	Weekly checklist	SS
	Collected waste will be classified prior to disposal in line with the EPA (2014) waste classification guidelines. Waste transported off-site is only to be transported to a place that can lawfully receive the waste.	During construction	Weekly checklist	SS

Objective	Environmental action	Timeframe	Monitoring	Responsible person
	An adequate number of bins must be placed on site. Waste bins would be stored away from waterways. Waterproof covers would be used during rain and site shutdown (i.e. weekends and nights) to prevent entry of water, pest animals and blown litter. Work areas of the project site must be kept clean and free of litter at all times.	Prior to works and during construction	Weekly checklist	SS
	A portable toilet would be located on a flat surface and maintained regularly.	During construction	Weekly checklist	SS
	Any excess spoil or waste material must be kept in designated stockpile during construction works. Removal and appropriate disposal of general waste generated by the contractors during the works and on completion of works is the responsibility of the contractors unless advised differently.	During construction	Weekly checklist	SS
Aboriginal and non-Aboriginal heritage: No damage to know or unknown heritage items	Should an unexpected Aboriginal object be identified during construction, work in the immediate vicinity of the find is to stop and the area must be fenced off with suitable markers (star pickets, flagging or barrier mesh) in accordance with Section 146 of the Heritage Act 1977. SCC Project Manager is to be notified along with the Heritage Council of NSW. Engage an archaeologist to determine the significance of the find, and if required, determine the notification, consultation, and approval requirements. Works must not recommence until written approval has been provided to do so.	As required	Weekly checklist and Incident reports	All/SS
	If human remains are discovered, works must immediately cease, and the NSW Police will be contacted. If the remains are suspected to be Aboriginal, the OEH will also be contacted at this time to assist in determining appropriate management	As required	Weekly checklist and Incident reports	All
	In accordance with Section 146 of the Heritage Act 1977, if an archaeological relic (such as a deposit or artefact) is uncovered during works, work must cease in the affected area and a qualified archaeologist contacted to assess the find. Further advice and clarification will be sought from the Heritage Council of NSW, or the Heritage Division under delegation regarding assessment and approvals, if required.	As required	Weekly checklist and Incident reports	All/SS
Noise and vibration: Minimise construction and operation noise and vibration	Undertake construction works during the recommended hours in Section 1.3.4 to minimise noise disruption.	During construction	Weekly checklist and complaints register	SS
	Ensure all plant and equipment used is maintained regularly and operated in a proper and efficient manner.	During construction	Weekly checklist and complaints register	All/SS
	Avoid simultaneous operation of noisy plant within range of sensitive receiver (within 400m of a location where people are likely to work, occupy or reside). Maximise the distance between noisy plant items and nearby residential receivers and potential fauna habitat.	During construction	Weekly checklist and complaints register	All
	Orient equipment such as offensive noise carriers away from residential receivers and potential fauna habitat.	During construction	Weekly checklist and complaints register	All

Objective	Environmental action	Timeframe	Monitoring	Responsible person
	Plant used intermittently is to be throttled or shut down when not required.	During construction	Weekly checklist and complaints register	All
	Residents and other sensitive receivers must be notified of any works that are likely to be noisy at least five days prior to those works being carried out.	Prior to works and during construction	Weekly checklist and complaints register	SS
Biodiversity values: Reduce harm to biodiversity and spread of priority weeds	The site ecologist is to undertake a pre-clearance survey across the whole development area to identify and mark habitat trees and/or hollow-bearing trees. The site ecologist it to be present during removal of identified habitat trees. Habitat/hollow-bearing trees must be removed in the following manner: • Check for fauna in the zone of disturbance before clearing and assist in moving them along or remove them before beginning operations. • Remove all non-hollow bearing vegetation prior to the removal of the habitat tree • After clearing, re-check to ensure no fauna have become trapped or injured during clearing operations. Any fauna found must be safely located to nearby habitat. • Leave habitat tree standing for at least one night after other clearing to allow any fauna the opportunity to remove themselves after site disturbance. • Before felling habitat tree, tap along trunk using an excavator or loader to scare fauna from the hollows. 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. • Re-check after felling habitat tree to ensure no fauna have become trapped or injured during clearing operations. Any fauna found must be safely located to nearby habitat. • If taking the habitat tree down in stages, the non-hollow-bearing branches should be removed before the hollow-bearing branches are removed. • Fell trees into the zone of disturbance to avoid damaging adjacent vegetation. • Take care when moving equipment near vegetation to be retained. Where possible, logs from the felled trees will be distributed into areas of vegetation to be retained where it would not be considered a fire hazard. This would provide additional potential habitat for ground dwelling fauna such as reptiles and small mammals.	Prior to works	Weekly checklist	PM, SS, SE
	Where the felling of hollow-bearing trees is required, this is to be conducted under the supervision of a fauna ecologist to ensure appropriate animal welfare procedures are taken, particularly for threatened species. Hollows of high quality or with fauna recorded residing within must be sectionally dismantled for relocation and all hollows must be inspected for occupation, signs of previous activity and potential for reuse. Subsequent hollows of retention value are to be relocated to nearby conservation areas. If these are placed as on ground habitat and are not reattached to a new recipient tree, then they are to be replaced	During construction	Weekly checklist	SS, SE

Objective	Environmental action	Timeframe	Monitoring	Responsible person
	with appropriately sized nest boxes, or carved hollows using a HollowHog tool. Boxes ill be constructed with weatherproof timber (marine ply), fasteners and external paint and appropriately affixed to a recipient tree under the guidance of a fauna ecologist. If a threatened species is found to be occupying the hollow, and the species is observed and validated to be breeding or nesting, the clearing of the hollow bearing tree must stop until the young have fledged. Clearance of other locations with a suitable buffer from the breeding threatened species, to be advised by the ecologist, can undergo works during this time. If a threatened species is found to be occupying the hollow, and the species is not observed to be breeding or nesting then the hollow section is to be reattached to a recipient tree within the nearby conservation areas as selected and directed by the fauna ecologist. The welfare and temporary holding of the residing animal(s) is at the discretion of the fauna ecologist. The hollow section will be well secured in the recipient tree in a manner that will not compromise the current or future health of that tree, unless a carved hollow is installed.			
	Educational signage will be erected where the project site borders the VMP area and will adhere to the VMP (ELA 2026) and Section 4.3.	Prior to works	Weekly checklist	SS
	Ensure that no plant, equipment, or stockpiles are positioned under the drip line of retained trees.	During construction	Weekly checklist	SS, All
	As per Condition 3 of EPBC (2023/09524), during any tree removal, an experienced and suitably qualified field ecologist is to be present to re-locate any displaced fauna that becomes disturbed during this activity. Any injured fauna is to be appropriately cared for and released on site where appropriate.	During construction	Weekly checklist	SS, SE
	Trees shall be lopped to minimise the risk of injury or mortality to fauna, such as top down lopping, with lopped sections gently lowered to the ground by a suitably qualified climbing arborist, and/or by lowering whole trees to the ground with the “grab” attachment of a machine.	During construction	Weekly checklist	SS, SE
	Tree hollows are to be salvaged from trees removed and placed within the bushland areas. This is to be done under the direction of the Site Ecologist.	During construction	Weekly checklist	SS, SE
	The site ecologist is to be present during vegetation clearance 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 Council.	During construction	Weekly checklist	All
	Future residents to be informed of the presence MNES within the VMP area and prevent dumping of rubbish/green waste or trampling of vegetation/habitat.	Completion of works	Educational signage	PM
	To reduce the spread of pathogens, disease and priority weeds 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

Objective	Environmental action	Timeframe	Monitoring	Responsible person
	• Any soil, plants or other materials entering the site are certified free of weeds and pathogens A dedicated washdown location, at the entry/exit of the site is to be determined prior to construction works. Equipment will be washed down prior to and after use.			
	Planting of exotic species is not permitted unless it is a part of an approved landscape plan.	At all times	N/A	All
	Permanent fencing is to be installed following construction works in accordance to the VMP (ELA 2026).	Completion of works	N/A	PM, SS
Community concerns: To protect public safety, reduce impacts to traffic and visual impacts to the community	Notify neighbours when light impacts are anticipated.	Prior to works	Complaint records	PM
	Position lighting in residential areas to direct light away from houses where possible.	During construction	Weekly checklist	All
	Vehicles, material, and equipment must be positioned to minimise impacts to public access and parking.	During construction	Weekly checklist	All
	Heavy vehicles, if required, will be restricted to specified routes.	During construction	N/A	All
	Temporary fencing of the site to prevent public access during construction and maintenance of fencing.	During construction	N/A	SS/All

4.3. Fencing and interpretation signage

4.3.1. Fencing during the construction period

The edge of the VMP area where it borders the development footprint is to be fenced with temporary construction fencing to prevent civil construction machinery from entering the VMP area unless under supervision from a suitably qualified ecologist or bush regenerator. Temporary fencing may consist of steel construction fencing, parawebbing, or bunting, and will be installed on the boundary of the Action area to protect against unauthorised access and prevent accidents as per Work Health and Safety (WHS) regulations. These fences are required to be properly maintained across the VMP area. Anyone onsite at this stage in VMP works is required to undergo necessary site inductions.

4.3.2. Permanent fencing and management of unauthorised access

The VMP area must be protected from disturbance by unauthorised access at the end of the construction period using permanent fencing or barriers. Examples of suitable fencing are provided in Figure 10, but any fencing which allows for fauna movement but restricts motorised vehicle access into the VMP area is suitable. This fencing must be properly maintained and restrict motorised vehicle access into the VMP area while also being fauna safe, defined by *EPBC (2023/09524)* as fencing that does not use barbed wire, allows the safe passage of protected matters and has sufficient space between wires to allow for fauna movement (Appendix J). Where the VMP area is continuous with bushland then boundary marking will be used instead to delineate the VMP area.

Rural fencing

Bollard fencing

Figure 10: Examples of suitable fencing to border the VMP area

4.3.3. Signage and gates

During the construction period, temporary signage will be installed on the construction fencing to notify there is to be no entry into the VMP area (without an ecologist or bush regenerator present).

Permanent signage willbe positioned at strategic locations to advise the public of the importance of the bushland and its habitat. Signage should also contain the following information:

> *The vegetation within this area is protected. Activities such as firewood collection, bush rock removal, picking of native flowers and dumping of garden waste are prohibited*.

Locked gates, bollards or other barrier types will be required at access points to prevent unauthorized vehicular or trail bike access but allow authorised access such as bush regeneration contractors.

4.4. Water quality, aquatic ecology and oyster aquaculture monitoring

Water quality, aquatic ecology and oyster aquaculture monitoring as well as environmental impact management measures must be implemented as per Condition C1 through C4 and Conditions C16 – 18 of the *Determination of Development Application By Grant Of Consent No: SSD 3846* (2021) as well as the *Mod 1 Supplementary Integrated Water Cycle Management Strategy 661 Culburra Road, Culburra Beach, NSW 2540* (IWCMS) (Martens 2025). The IWCMS (Martens 2025), which supersedes previous IWCMS reports, can be accessed at the West Culburra Development website (https://www.sealark.com.au/property-development-projects/west-culburra/). Where matters are not included in this current IWCMS, the information in the original IWCMS (Martens 2020) and Addendum IWCMS (Martens 2021) is to be relied on which can be accessed at the West Culburra Development website (https://www.sealark.com.au/property-development-projects/west-culburra/).

4.5. Soil and water management plan

As per Condition B11 of the *Determination of Development Application By Grant Of Consent No: SSD 3846* (2021), a Soil and Water Management Plan as part of a Construction Environmental Management Plan, will be developed and implemented prior to any on-ground works. Sealark Pty Ltd will be preparing number of SWMPs for different portions of the project. These Plans can be accessed at https://www.sealark.com.au/property-development-projects/west-culburra/. All SWMPs must be compliant with the 'Blue Book' (Landcom 2004) and requirements of Concept Plan's IWCMS.

Prior to construction commencement, sediment fencing will be required around the construction area to prevent sediment moving into the VMP area and off site during the construction period thus limiting the spread of weed propagules contained within soil sediments.

4.6. Stormwater management plan

A stormwater management plan will be provided on a stage-by-stage- basis, as per Condition C13 of the *Determination of Development Application By Grant Of Consent No: SSD 3846* (2021). Once developed, the Stormwater Management Plan for this project will be available at the West Culburra Development website (https://www.sealark.com.au/property-development-projects/west-culburra/).

The stormwater management plan will address engineering considerations, whilst placing a strong focus on managing indirect impact and maintaining the biodiversity, ecological health, and positive water quality benefits across the Action area. The objectives of the stormwater quality management strategy will be to ensure that post-development pollutant loads are consistent with Council stormwater pollutant load reduction target.

4.7. Aboriginal cultural heritage management plan

An ACHMP (2024b) has been provided, as per Condition B15 of the *Determination of Development Application By Grant Of Consent No: SSD 3846* (2021). The ACHMP will ensure the proper management, conservation and buffer zones of the middens within the Action area, specifically Crookhaven River middens located in the Foreshore Reserve. The ACHMP (2024b) has been developed based on the information gathered from the ACHA (2024a). Both of these documents can be accessed via the West Culburra Development website (https://www.sealark.com.au/property-development-projects/west-culburra/).

4.8. Feral cat management

The cost and methodology of pest control within the CEMP/OEMP area is the responsibility of the landowner. This will be undertaken by suitably qualified contractors and where required, in consultation with relevant authorities, LLS or SCC feral pest reporting guidelines (SCC 2025) and will be undertaken when necessary and when monitoring concludes the presence of domestic and feral cats is disruptive on native fauna and vegetation. In particular, predation by cats is a key threatening process under the EPBC Act and reducing the effects of cats on native biodiversity is an important part of pest control management.

Under the Threat Abatement Plan for predation by feral cats (DCCEEW 2024b) there are actions that are the responsibility of local governments which could be applicable to pest control in the Action area (if cats are identified in the action area). As per the requirement of Condition 7g within the EPBC Act Approval (EPBC 2023/09524) "*controlling feral pests, including measures relevant to the Threat Abatement Plan for Predation by Feral Cats" **some*** relevant objectives and available management actions as per *Objective 9: Reduce cat impacts around areas of human habitation and infrastructure* of the Threat Abatement Plan (DCCEEW 2024b) can include:

- *Establish cat-free suburbs near areas of high biodiversity value.*
- *Work with local communities to build support for expanding areas requiring 24/7 cat containment.*
- *Improve waste management so feral cat populations are not supported by access to refuse and introduced rodents.*
- *Disseminate information to local residents about the One Health benefits of reducing feral cat populations for improving outcomes for people and livestock production as well as wildlife.*
- *Implement feral cat control in consultation with local government staff. The following control measures can be used dependant on the appropriateness to the location:*
    - *Where feasible lend traps to community members and discourage trap-neuter-release.*
    - *Trapping and shooting.*
    - *Managing fire and grazing to maintain a complex ground vegetation layer (to reduce cats' hunting success.*
    - *Manipulating species interactions, for example be reducing rabbit and introduced rodent populations.*
- *Develop incentive programs for registration, identification and desexing packages, especially in areas of socioeconomic disadvantage.*

Sealark Pty Ltd intends to control impacts of domestic cats on the West Culburra site through administrative actions by prohibiting the ownership of cats and creating a cat free suburb by including clauses within sales contracts and S88B Instruments for properties located in the Action area. If the ownership of cats is not prohibited, at minimum, cats will be required to be kept inside the properties. Additionally, Sealark Pty Ltd is collaborating with LLS to implement a cat control program on the West Culburra site. Further details surrounding control measures to be implemented to control impacts of feral and domestic cats in the VMP area and local fauna are discussed in the VMP (ELA 2026). Additionally, a comprehensive cat management plan will be developed for the West Culburra site and is

expected to compliment feral animal control programs on neighbouring Biodiversity Stewardship Sites, assuming cats are identified within the action area. To date, no feral cat activity has been identified during remote camera monitoring.

5. Monitoring

This management plan includes a comprehensive monitoring program to ensure that management commitments are effectively implemented, and any incidents of non-compliance are detected and appropriate corrective actions developed and implemented as part of an adaptive management program.

The Project Manager will be responsible for ensuring that all staff induction and training programs are implemented, and all monitoring requirements are undertaken.

The purpose of the monitoring program is to ensure that this management plan's objectives are met.

The implementation of this management plan will be audited throughout the construction stage and post construction where required.

5.1. Monitoring and non-compliance

Regular environmental inspections are to be undertaken of all work activities being carried out at the project site in accordance with Appendix B and the checklist at Appendix D. Inspections shall be carried out in conjunction with personnel responsible for a particular work area and shall include the following:

- Inspections of key environmental issues as per Appendix A and Appendix B, recorded on an Environmental Site Inspection Checklist (Appendix D) – site supervisory staff as part of their daily duties shall conduct daily inspections of the site (incl. all subcontractor activities), and issues noted in daily diaries if applicable. Near misses or non-compliances will be investigated, documented and reported with appropriate corrective action taken and documented.
- Regular Site Inspections – formal inspections by the Project Manager and Project Ecologist recorded on an Environmental Site Inspection Checklist (Appendix D) will be undertaken. Near misses or non-compliances shall be investigated, documented and reported with appropriate corrective action taken and documented within clearly defined timeframes.
- Monthly audits – monthly audits by the Project Manager, recorded on a monthly audit Checklist will be undertaken. Near misses or non-compliances shall be investigated, documented and reported with appropriate corrective action taken and documented within clearly defined timeframes.

Where a site or operational condition that does not comply, in accordance with Approval Condition 33 of the EPBC (2023/09524), the approval holder must notify the department electronically within 2 business days of the non-compliance and include the following details:

- any condition or commitment made in a plan which has not been, or may have not been, complied with,
- a short description of the incident, and
- the location (if applicable, including co-ordinates), date and time of the incident.

A report must be provided to the department in writing within 12 business days of becoming aware on the incident. In some instances, further investigation or monitoring may be required to establish whether the CEMP/OEMP has been adequately implemented, or whether the work is compliant with relevant legislation, guidelines and statutes. In these instances, an independent party, such as an Environmental Representative, may need to carry out the investigation or monitoring.

The report must specify the following:

- all corrective measures and investigations which the approval holder has already taken in respect of the incident;
- the potential impacts of the incident;
- the method and timing of any corrective measures that the approval holder proposes to undertake to address the incident; and
- any variation of these conditions or revision of a plan that will be required to prevent recurrence of the incident and/or to address its consequences.

The notification to the relevant authority of emergency or incident of which results in the loss or damage to Protected Matters, the release of contaminants and subsequent pollution to water, air or land, will include the following information.

- The location of the emergency or incident
- A short description of the incident
- The name and telephone number of the designated contact person
- The time of the release
- The time the incident occurred
- The suspected cause of the release
- The environmental harm caused, threatened, or suspected to be caused by the release
- Actions taken to prevent any further release and mitigate any environmental harm caused by the release.

In addition to the inspections and monitoring undertaken by the approval holder described above, the approval holder will be implementing the management plans and monitoring/reporting program for the VMP area.

The VMP will provide the baseline data (permanent photo monitoring points and floristic/structural data) for the condition of the vegetation in the VMP areas. These monitoring sites are required to be assessed on an annual basis to provide an audit of vegetation health and condition, extent of exotic plant cover, presence/extent of feral animal species, presence of rubbish and erosion (refer to VMP (ELA 2026)) and adaptive management actions implemented.

5.2. Records management

In accordance with Condition of Approval 21 of EPBC (2023/09524), the approval holder must maintain accurate and complete compliance records.

To meet this requirement, the following records must be kept on-site:

- all environmental training records, including signed and dated:
  - environmental inductions
  - environmental toolbox talks
  - pre-start meetings
- all fauna preclearing records

- all daily, weekly and monthly environmental inspection reports
- CEMP/OEMP audit reports
- all compliance reports
- all non-conformances and incidents reports.

Additionally, in accordance with Condition A21 of SSD 3846 as follows:

A21. The Applicant must make the following information and documents (as they are obtained or approved) publicly available on its website and keep the information up to date, to the satisfaction of the Planning Secretary:

a. the documents referred to in condition A6 of this consent;

b. all current statutory approvals for the Concept Proposal;

c. all approved strategies, plans and programs required under the conditions of this consent;

d. the proposed staging plans for the Concept Proposal;

e. minutes of community meetings;

f. regular reporting on the environmental performance of the Concept Proposal in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;

g. a comprehensive summary of the monitoring results of the Concept Proposal, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;

h. a summary of the current stage and progress of the Concept Proposal;

i. contact details to enquire about the Concept Proposal or to make a complaint;

j. reports prepared as part of any Independent Audit of the Concept Proposal and the Applicant's response to the recommendations in any audit report; and

k. any other matter required by the Planning Secretary.

Sealark Pty Ltd has developed a publicly available website regarding the West Culburra Development and associated documents, available at: https://www.sealark.com.au/property-development-projects/west-culburra/.

5.3. Annual compliance reporting

In accordance with Condition of Approval 26 of EPBC (2023/09524), the approval holder must prepare a compliance report for each 12-month period following the commencement of the action.

The approval holder must:

- *ensure each compliance report is consistent with the* Annual Compliance Report Guidelines*, Commonwealth of Australia 2023.*
- *within 20 business days following the end of each ACR period, in a format that is easily accessible and downloadable, publish on the website:*
  - *each compliance report, and*

    - *a shapefile showing all clearing of protected matters, and their habitat, undertaken within the ACR period.*
- *Exclude or redact sensitive biodiversity data from each compliance report and shapefile published on the website or otherwise provided to a member of the public.*
- *If sensitive biodiversity data is excluded or redacted from a version of a compliance report published or otherwise provided to a member of the public, submit the full compliance report to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website or otherwise provided to a member of the public.*
- *If sensitive biodiversity data is excluded or redacted from a version of a shapefile published or otherwise provided to a member of the public, submit the full shapefile to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website or otherwise provided to a member of the public.*
- *The approval holder must notify the department electronically, within 5 business days of each date of publication that the compliance report has been published on the website. In this notification, the approval holder must provide the department with the web address for where the compliance report and related shapefile are published on the website.*
- *The approval holder must keep each compliance report and related shapefile published on the website from the first date which that compliance report must be published and until the expiry date of this approval.*

The report must include:

- *accurate and complete details of compliance and any non-compliance with:*
    - *each condition attached to this approval decision, and*
    - *all commitments made in each plan,*
- *a schedule of all plans in effect in relation to these conditions during the ACR period,*
- *accurate and complete details of how each plan was implemented during the ACR period, and*
- *if any incident occurred, accurate and complete details of each incident.*

5.4. Independent audit

As per Approval Condition 35 of EPBC (2023/09524), the approval holder must ensure an independent audit of compliance with the conditions is conducted for every audit period and the approval holder must:

- *submit details of the proposed independent auditor and their qualifications to the department within 10 business days following the end of each audit period.*
- *ensure the scope of each independent audit is sufficient to determine the compliance status for each condition of approval, and each commitment made in each plan.*
- *ensure the criteria for each independent audit and the undertaking of each independent audit are consistent with the Independent Audit and Audit Report Guidelines.*

- *submit an audit report to the department for written agreement from the department within 3 months following the end of each audit period, or as otherwise directed by the Minister in writing.*
- *ensure each audit report is completed to the satisfaction of the Minister and is consistent with the Independent Audit and Audit Report Guidelines to the extent that the Independent Audit and Audit Report Guidelines are consistent with these conditions.*
- *publish each audit report on the website, in a format that is easily accessible and downloadable, within 10 business days of the date the department agrees to that audit report in writing.*
- *notify the department within 5 business days of the date the audit report is published on the website. In this notification, the approval holder must provide the department with the web address for where the audit report is published on the website.*
- *keep each audit report published on the website from the first date which that audit report must be published and until the expiry date of this approval.*

6. References

Allen Price Pty Ltd 2024. *Staging Report West Culburra Concept Proposal for Sealark Pty Ltd.* March 2025. Project Reference: N25405.

Austral Archaeology (AA) 2024a. *West Culburra, Culburra Beach, New South Wales Aboriginal Cultural Heritage Assessment.* Prepared for Sealark Pty Ltd. Online resource: https://www.sealark.com.au/property-development-projects/west-culburra/

Austral Archaeology (AA) 2024b. *West Culburra, Culburra Beach, New South Wales Aboriginal Cultural Heritage Management Plan.* Prepared for Sealark Pty Ltd. Online resource: https://www.sealark.com.au/property-development-projects/west-culburra/

Australian/New Zealand Standard (AS 4282-1997) 1997. Control of the obtrusive effects of outdoor lighting.

Department of Agriculture, Water and the Environment (DAWE) 2022a. *Conservation Advice for Petaurus australis australis (Yellow-bellied glider (south-eastern)).* http://www.environment.gov.au/biodiversity/threatened/species/pubs/87600-conservation-advice-02032022.pdf

Department of Agriculture, Water and the Environment (DAWE) 2022b. *Conservation Advice for Callocephalon fimbriatum (Gang-gang Cockatoo).* http://www.environment.gov.au/biodiversity/threatened/species/pubs/768-conservation-advice-02032022.pdf

Department of Agriculture, Water and the Environment (DAWE) 2021. *National Recovery Plan for the Grey-headed Flying fox* (Pteropus poliocephalus). Pteropus poliocephalus (Grey-headed Flying-fox) - DCCEEW

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2024a. *Environmental management plan guidelines.* Environmental Management Plan Guidelines

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2024b. *Threat abatement plan for predation by feral cats 2024*, Department of Climate Change, Energy, the Environment and Water, Canberra.

Department of Climate Change, Energy, the Environment and Water (DCCEEW) 2020. *Conservation Advice for the River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria.* Conservation Advice for the River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria

Department of Infrastructure, Planning and Natural Resources (DoIPNR) 2003. *Bring the Bush Back to Western Sydney.* Online resource: https://www.aabr.org.au/images/stories/resources/manuals/bringing_the_bush_back.pdf

Department of Planning and Environment 2022. *Minimum requirements for building site groiundwater investigations and reporting.* Online resource: https://publications.water.nsw.gov.au/watergroupjspui/bitstream/100/792/1/Minimum_requirements_for_building_site_groundwater_investigations_and_reporting.pdf

Eco Logical Australia (ELA) 2025a. *West Culburra Mixed Use Development Biodiversity Development Assessment Report.* Prepared for Sealark Pty Ltd.

Eco Logical Australia (ELA) 2026a. *West Culburra Vegetation Management Plan.* Prepared for Sealark Pty. Ltd.

Eco Logical Australia (ELA) 2022. *West Culburra Residential Development EPBC Act Referral – Supporting Documentation.* Prepared for Sealark Pty Ltd.

Environment Protection Authority (EPA) 2014. *Waste Classification Guidelines.* Waste classification guidelines | EPA

Environment Protection Authority (EPA) 2020. *Draft Construction Noise Guideline.* Draft Construction Noise Guideline

Landcom 2004. *Soils and Construction 'Blue Book'* 4th Ed. Blue-Book-Hip-Pocket-Handbook-2004.pdf (seec.com.au)

NSW Department of Environment and Conservation 2004. *Yelow-bellied Glider Feed Trees.* Food trees for yellow-bellied gliders - natural resource management information note

NSW Independent Planning Commission 2021. *Determination of Development Application by Grant of Consent (SSD 3846).*

NSW Government 2025. *Managing groundwater in NSW.* Online resource: Managing groundwater in NSW | NSW Government Water

NSW Government 2009. *Protection of the Environment Operations (General) Regulation 2009.* Online resource: Protection of the Environment Operations (General) Regulation 2009 - NSW Legislation

NSW Government 2004. *Swamp sclerophyll forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions – endangered ecological listing.* Swamp sclerophyll forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions - endangered ecological listing | Final determination 2004 | Environment and Heritage

SafeWork NSW 2025. *Have proper storage and handling systems.* Online resource: https://www.safework.nsw.gov.au/hazards-a-z/hazardous-chemical/general-requirements/general-requirements-accordion/have-proper-storage-and-handling-systems.

Shoalhaven City Council 2016. *Environmental Management Plan Guideline.*

Wildlife Friendly Fencing 2003. *Wildlife friendly fencing brochure.* Accessed online (8/5/2025): https://wildlifefriendlyfencing.org/project/

Appendix A Potential impacts and proposed mitigation measures for MNES and other fauna within the Action area during construction

Potential impact	Risk before mitigation measures			Management objective/ desired outcome	Scientific, Ecological and/or budgetary uncertainties that may prevent desired outcome	Management action/mitigation measure commitment	Potential risk after mitigation	Trigger, detection/monitoring activity	Adaptive implementation program and measures/corrective actions
	Likelihood	Consequence	Risk						
Loss of fauna habitat and remnant vegetation beyond the approved footprint	Possible	High	Medium	To ensure no clearing occurs beyond the approved footprint. Additionally, ensure ecological communities such as the Coastal Alluvial Bangalay Forest, the Coastal Swamp Oak Forest and Mangroves are not impacted more than the approved footprint.	None	Ensure that all staff are inducted and aware of ecological sensitivities, including the location of all VMP areas and sensitive ecological communities including the locations of: • Coastal Alluvial Bangalay Forest • South Coast Lowland Red Gum-Swamp Oak Forest • Mangroves Temporary and permanent fencing and permanent signage must be erected consistent with the VMP (ELA 2026) and Section 4.3, and be properly maintained. Fencing and signage will be constructed prior to the commencement. Any trees or parts thereof appropriate for use as fauna habitat within the VMP area are to be identified by a suitably experienced ecologist and salvaged for re-use within the VMP area.	Low-Medium	Staff induction and training records. Weekly inspection of VMP fencing. Incident reports.	Repairs to fencing as required. Restoration of damaged vegetation or habitat if required.
Weed dispersal and introduction through the Action area/VMP area	Likely	Moderate	Medium	To prevent the introduction and spread of invasive weeds to the VMP area	Not undertaking daily inspections and proper cleaning of machinery	Prior to entering and leaving the site, all vehicles and equipment involved in clearing and weed removal works must be cleaned to remove soil and plant material (Refer to Hygiene Protocol - Appendix F). During vegetation clearing and weed removal, weed species must be stockpiled separately and disposed of at an appropriate waste disposal facility.	Low	Pre-start checklists. Daily checks of vehicles. Weekly inspection records and incident reports. VMP site monitoring and annual reports.	Weed control and monitoring of VMP area.
Introduction of soil pathogens to the VMP area	Possible	High	Medium	To prevent the introduction of soil pathogens to the VMP area	Not undertaking daily inspections and proper cleaning of machinery	Prior to entering and leaving the site, all vehicles and equipment involved in construction, clearing and weed removal works must be cleaned to remove soil and plant material (Refer to Hygiene Protocol - Appendix F). Implementation of the Soil and Water Management Plan (SWMP – Section 4.5).	Low	Pre-start checklists. Daily checks of vehicles. Weekly inspection records and incident reports. VMP site monitoring and annual reports. Training and inductions surrounding soil pathogens.	Monitoring of VMP areas and chemical treatment of any Phytophthora outbreaks.
Erosion/sedimentation/stormwater flow impacting the VMP area	Possible	Moderate	Medium	To prevent additional erosion/sedimentation and water flow into the VMP area wherever possible	Not undertaking proper maintenance of required fencing installation measures	Prior to commencement sediment fencing must be erected and maintained throughout the construction phase consistent with the VMP (ELA 2026) and Section 4.5. Implementation of the Soil and Water Management Plan (SWMP – Section 4.5).	Low	Weekly inspection of VMP site fencing Weekly inspection records and incident reports. VMP site monitoring and annual reports.	Monitoring of VMP area.
Dumping of soils/other materials/rubbish into VMP area	Likely	Minor	Low	To prevent the dumping of soils and additional waste into the VMP area	Not undertaking proper maintenance of required fencing installation measures	Temporary and permanent fencing and permanent signage must be erected consistent with the VMP (ELA 2026) consistent with the VMP (ELA 2026) and Section 4.3. Fencing and signage will be constructed prior to the commencement. Permanent fencing will be maintained where the VMP boundary meets the boundary of other land uses.	Low	Weekly inspection of VMP site fencing Weekly inspection records and incident reports. VMP site monitoring and annual reports.	Monitoring of VMP area.

Potential impact	Risk before mitigation measures			Management objective/ desired outcome	Scientific, Ecological and/or budgetary uncertainties that may prevent desired outcome	Management action/mitigation measure commitment	Potential risk after mitigation	Trigger, detection/monitoring activity	Adaptive implementation program and measures/corrective actions
	Likelihood	Consequence	Risk						
Increased access to the VMP area	Likely	Minor	Low	To reduce the impacts to the VMP area caused by additional human activity	None	Temporary and permanent fencing and permanent signage must be erected consistent with the VMP (ELA 2026) and Section 4.3, and be properly maintained. Fencing and signage will be constructed prior to the commencement. Permanent fencing will be maintained where the VMP boundary meets the boundary of other land uses.	Low	Weekly inspection of VMP site fencing Weekly inspection records and incident reports. VMP site monitoring and annual reports.	Monitoring of VMP area.
Loss of fauna habitat beyond the approved development footprint	Possible	High	Medium	To ensure that no clearing occurs beyond the approved footprint • No more than 45.99 ha of Grey-headed Flying-fox habitat • No more than 37.81 ha of Yellow-bellied Glider habitat • No more than 37.81 ha of Gang-gang Cockatoo habitat	None	Ensure all staff are inducted and aware of ecological sensitivities, including the location of the VMP area and the following MNES: • Gang-gang Cockatoo • Yellow-bellied Glider • Grey-headed Flying-fox Temporary and permanent fencing and permanent signage must be erected consistent with the VMP (ELA 2026) and Section 4.3 and be properly maintained. Fencing and signage will be constructed prior to the commencement. Any trees or parts thereof would be appropriate for use as fauna habitat within the VMP area are to be identified by a suitably experienced ecologist and salvaged for re-use within the VMP area.	Low-Medium	Staff induction and training records. Weekly inspection of VMP fencing. Incident reports.	Repairs to fencing as required. Restoration of damaged vegetation or habitat if required.
Injury/death of MNES and other fauna during vegetation clearing	Likely	High	High	To avoid any direct death/injury to wildlife, in particular the MNES	Insufficient funds allocated to pre-clearance surveys	Hollow-bearing trees within the action area that potentially contain roosting and breeding habitat for fauna must be identified by a suitably qualified ecologist prior to clearing activities. During works, Section 2.2 must be adhered to and implemented for any tree clearing works. Any threatened species identified during the project will be recorded in compliance and audit reports.	Low	Staff induction & training records. Pre-clearance survey reports. Incident reports.	Increase level of inspection of hollows prior to clearing. Ensure slow/soft-drop technique of tree clearing is being followed.
Harm/loss of value to Aboriginal Heritage sites or objects.	Possible	Major	High	To avoid harming Aboriginal Heritage sites or objects that Sealark Pty Ltd has not applied to impact.	Insufficient training on conservation and protection of Aboriginal sites or procedure of unexpected finds.	Before works occur, the Proponent is to apply to Heritage NSW for an AHIP to destroy the Aboriginal Heritage sites within the development footprint. Aboriginal objects are protected under the NPW Act regardless of if they are registered on AHIMS or not. If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, Heritage NSW must be notified under section 89A of the NPW Act. Appropriate management and avoidance or approval under a section 90 AHIP must then be sought if Aboriginal objects are to be moved or harmed. Incidental finds are to be added to the West Culburra artefact assemblage, as identified during test excavations in 2023, and reburied with these. Consultation with the Aboriginal Community is ongoing, and the final location of this reburial is to be determined. Artefact materials recovered in this capacity will be considered as having been subject to a cultural collection, and there will be no requirement to analyse any such collected materials. In the extremely unlikely event that human remains are found, works must immediately cease, and the NSW Police will be contacted. If the remains are suspected to be Aboriginal in origin, Heritage NSW and the Aboriginal Community must also be contacted at this time to assist in determining appropriate management. • The notification to the Aboriginal Community and Heritage NSW is to include details of the remains and their location. • An appropriate “no-go” area must be established. The extents of this area will be determined through consultation with NSW Police, Heritage NSW, the Aboriginal Community, and (if necessary) a suitably qualified archaeologist.	Medium	Staff induction & training records.	Consultation with the Aboriginal Community to rectify any accidental impact.

Potential impact	Risk before mitigation measures			Management objective/ desired outcome	Scientific, Ecological and/or budgetary uncertainties that may prevent desired outcome	Management action/mitigation measure commitment	Potential risk after mitigation	Trigger, detection/monitoring activity	Adaptive implementation program and measures/corrective actions
	Likelihood	Consequence	Risk						
Indirect impacts to fauna associated with construction lighting	Possible	Minor	Low	To reduce potential impacts to fauna from lighting directed into the VMP area	None	Works will be undertaken from 7.00am to 5.00pm, Monday to Saturday, with no work to be carried out on Sundays or Public Holidays. Lighting to comply with Australian Standard 4282 – Control of the obtrusive effects of outdoor lighting. Position and direct lights away from the VMP area.	Low	Checking of position and angle of lights installation of street lighting.	Adjust angle of lights.
Indirect impacts to fauna associated with construction noise	Possible	Minor	Low	To reduce potential impacts to fauna from excessive construction noise	None	Work involving the use of machinery of any description will only be carried out from 7.00am to 5.00pm, Monday to Saturday, with no work to be carried out on Sundays or Public Holidays. All plant and equipment to be maintained and operated as per manufacturer's specifications and to be inspected prior to work. Any faulty plant or equipment is be stood down until repaired. Limit idling/ revving of engines on mobile and stationary machines and shut down any equipment not in use. Limit the use of horns or other audible signals on mobile equipment to a practical extent. Promptly respond to complaints and modify practices.	Low	Pre-start checklists. Maintenance logbooks. Incident reports. Random Checks.	Any faulty plant or equipment is be stood down until repaired. Promptly respond to complaints and modify practices.
Direct impact from vehicle collisions	Possible	High	Medium	To avoid and reduce potential roadkill	Insufficient funds allocated to implement/install mitigation measures	**Construction Phase** Construction traffic to utilise clearly defined access and egress points (Figure 3) to and from the development site that avoid the retained areas of high-quality vegetation or areas likely to be used by MNES. Construction traffic within the development site to keep to designated routes where possible. Parking and equipment and material laydown areas to be located away from VMP areas. Construction traffic is to adhere to construction zone speed limits across the site. Exclusion fencing will be installed prior to site works commencing to delineate the limit of areas impacted by the works and accessible by construction traffic. **Operational Phase** Where possible local roads will have a speed limit restriction of 50km/h. Roadside vegetation adjacent to VMP areas will be managed by the landholder to minimise the height of ground cover and therefore increase the visibility of any roadside fauna.	Low-Medium	Training and induction records. Pre-clearance surveys. Monitoring of fencing. Annual monitoring for threatened species and MNES within the Action area.	Cessation of construction activities if fauna are present in immediate work area as directed by Project Ecologist.
Direct impacts from domestic animals entering VMP areas	Likely	Moderate	Medium	To avoid and reduce potential for disturbance to the MNES and other fauna from domestic animals within the VMP area once the proposed action is finished	None	**Construction phase** Implementation of the VMP (ELA 2026). Temporary and permanent fencing and permanent signage must be erected consistent with the VMP (ELA 2026) and Section 4.3 and be properly maintained. Fencing and signage will be constructed prior to the commencement. Signage is to be erected to notify the prohibition of cats and dogs within the VMP area. **Operational Phase** In public open spaces, all dogs will be required to be kept under control by their owners, in accordance with Local Government and Companion Animal Act dog ownership regulations. Dogs will be required to be on a leash when entering the VMP areas. All public areas will be effectively signposted by Council regarding dog exercise provisions. Easily accessible information for residents regarding the requirements for cats and dogs within the Action area is recommended to be provided by the landowner or Council online.	Low	Routine inspection of open space areas and any relevant off-leash areas by Council. Record of community information package.	Additional inspections of open space areas if applicable. Additional community information package and community education programs if monitoring finds native fauna are being impacted by domestic animals.

Potential impact	Risk before mitigation measures			Management objective/ desired outcome	Scientific, Ecological and/or budgetary uncertainties that may prevent desired outcome	Management action/mitigation measure commitment	Potential risk after mitigation	Trigger, detection/monitoring activity	Adaptive implementation program and measures/corrective actions
	Likelihood	Consequence	Risk						
						Sealark will implement a cat free subdivision where the ownership of cats is prohibited or, at a minimum, enforce cat owners to ensure cats remain within their properties at all times. The landowner, in consultation with LLS or Council, will undertake pest control of cats where monitoring deems it required. Further details surrounding mechanisms of pest control for the West Culburra site can be found within the VMP (ELA 2026). Under the *Threat Abatement Plan* for predation by feral cats 2024 (DCCEEW 2024) local governments have a responsibility to control pests, which could be applicable to the Action area, if feral cats are identified. It is recommended Council encourages communities to support 24/7 cat containment in the event West Culburra is not implemented as a cat free subrub.			
Contamination by hazardous materials/spills/rubbish	Possibly	Moderate	Medium	To avoid and reduce the potential for contamination to take place within the Action area.	Not undertaking proper training and induction measures	Ensure that all staff are inducted and aware of ecological sensitivities, including the presence of MNES and the VMP area. Ensure all staff are properly trained in the equipment and materials that are used. Ensure all Safety Operating Procedures (SOPs), Safety Work Method Statements (SWMS) and Risk Assessments are established, included in trainings and inductions, and available at all times to staff. All plant and equipment to be maintained and operated as per manufacturer's specifications and to be inspected prior to work. Any faulty plant or equipment is be stood down until repaired. The development and implementation of a strategy to dispose of construction waste must be undertaken.	Low	Training and induction records. Review of safety documents. Pre-start checklists. Maintenance logbooks. Incident reports. Random Checks.	Monitoring of VMP area. Restoration of areas impacted. Any faulty plant or equipment is be stood down until repaired.
Development impacting water quality/aquatic ecology/oyster aquaculture in the surrounding environment to the project	Likely	High	High	To avoid and reduce the potential for construction activities impacting water quality, aquatic ecology and oyster aquaculture. Specifically, levels of As, Cr, Cu, Hg, Pb, Se, Zn, organic contaminants, bacteria, suspended sediment, water temperature, salinity/conductivity, pH, dissolved oxygen and turbidity are within acceptable levels, as per SSD 3846. As well as to avoid and reduce impacts to recorded flora, fauna, macroinvertebrates, fish and oysters	Insufficient funds allocated to mitigation measures Not undertaking proper training and induction measures	Implementation of the Soil and Water Management Plan (SWMP – Section 4.5 Temporary and permanent fencing and permanent signage must be erected consistent with the VMP (ELA 2026) and Section 4.3 and be properly maintained. Fencing and signage will be constructed prior to the commencement. Ensure all staff are properly trained in the equipment and materials that are used. Ensure all Safety Operating Procedures (SOPs), Safety Work Method Statements (SWMS) and Risk Assessments are established, included in trainings and inductions, and available at all times to staff. All plant and equipment to be maintained and operated as per manufacturer's specifications and to be inspected prior to work. Any faulty plant or equipment is be stood down until repaired. Ensure monitoring is done where and when required as per Section 4.4 and the IWCMS (2025).	Medium	Training and induction records. Pre-start checklists. Maintenance logbooks. Incident reports. Monitoring data recorded. Reports provided when required as per Section 4.4.	Corrective measures are implemented if required. Restoration of areas impacted. Continuous monitoring of indicative data. Any faulty plant or equipment is to be stood down and repaired. Modification of practices where possible.

Appendix B Management actions, outcomes and commitments to protect ecological communities and fauna

Management objective	Performance target	Management actions/measure	Monitoring activity	Performance indicators	Responsibility	Timing and frequency	Where it is addressed in this management plan
To ensure construction works are completed in accordance with project approvals to minimise negative impacts to MNES/fauna in the Action area and the surrounding environment.	No disturbance to or clearing of any vegetation / habitat beyond the approved project footprint as a result of construction activity. • No more than 45.99 ha of Grey-headed Flying-fox habitat • No more than 37.81 ha of Yellow-bellied Glider habitat • No more than 37.81 ha of Gang-gang Cockatoo habitat	Ensure that all staff are inducted and aware of ecological sensitive areas (as indicated in Figure 7 and Figure 8), including the location of the VMP area and for relevant staff regarding the detailed description of works and tree removal protocol in Section 2.2.	Weekly inspection of fencing and any unauthorised disturbance of VMP areas Incident reports	Staff training and induction undertaken & records retained Toolbox talks undertaken Pre-start meetings held Up to date Environmental Control Map Incident reports acted on Records of daily, weekly inspection of signage / fencing and issues rectified as necessary	Project Manager	At all times	Section 1.3.1, Section 1.3.6 and Section 2.1
	Prepare a Construction Environmental Management Plan for subsequent staged subdivision approval by Shoalhaven City Council including education of workers in the approvals and conditions requiring compliance (including soil erosion and sediment controls, flora and fauna and Aboriginal archaeological considerations).	Preparation and implementation of *West Culburra Construction Environment Management Plan* (this document) prepared for Sealark Pty Ltd c/- Allen Price Pty Ltd.	Approval of the CEMP/OEMP by the required authorities. Pre-clearance reports Weekly inspections of construction management Annual monitoring of the VMP areas All other monitoring done as per Section 4.4. Incident reports	Staff training and induction undertaken and records retained Toolbox talks undertaken/pre-start meeting held when required. Incident reports acted on Records of daily, weekly inspection of signage/fencing and issues rectified as necessary VMP monitoring and annual reports Monitoring and reporting done as per Section 4.4. No signs of human or domestic animal activity such as but not limited to bike tracks, general rubbish, animal tracks etc. Commitments in Appendix B met.	Project Manager	Throughout the project until the completion of construction.	*West Culburra Construction Environment Management Plan* (this document).
	Construct and dedicate water quality control measures to the requirements of SCC which are in accordance with the Concept Plan's IWCMS and Concept Plan approval requirements.	Monitoring done as per Section 4.4. Ensure contaminated water used on site Is controlled and is disposed of properly.	Monthly monitoring of water quality where required prior to works and during construction and following wet weather events Monitoring every three months where required of water quality post construction Additional water quality monitoring, aquatic ecology monitoring and oyster aquaculture monitoring every two months and following wet weather events All water being used onsite (e.g. dust management, cleaning, processes) is to be managed appropriately on site in accordance with a water management plan or similar to ensure there is no water movement into the surrounding retained bushland or foreshore.	The collection of water quality monitoring data when required and the production of an annual report to SCC. The collection of the additional water quality monitoring, aquatic ecology monitoring and oyster aquaculture monitoring data and progress reports prepared when methodologies have been approved, every six months following and on completion of the baseline period.	Project Manager, Site Ecologist, Contractor	From 18 months prior to works, during construction and two years post construction following each stage dependent on the monitoring as per Section 4.4. Throughout the project.	Section 4.4
	Maintain the water quality monitoring and control measures as outlined in the Concept Plan's	Monitoring done as per Section 4.4.	Monthly monitoring of water quality where required prior to works and during construction	The collection of water quality monitoring data when required and the production of an annual report to SCC.	Project Manager, Site Ecologist	From 18 months prior to works, during construction and two years post construction following each	Section 4.4 and Appendix B

Management objective	Performance target	Management actions/measure	Monitoring activity	Performance indicators	Responsibility	Timing and frequency	Where it is addressed in this management plan
	IWCMS and Concept Plan approval requirements.		and following wet weather events Monitoring every three months where required of water quality post construction Additional water quality monitoring, aquatic ecology monitoring and oyster aquaculture monitoring every two months and following wet weather events	The collection of the additional water quality monitoring, aquatic ecology monitoring and oyster aquaculture monitoring data and progress reports prepared when methodologies have been approved, every six months following and on completion of the baseline period Recording if trigger levels are reached. Undertaking of mitigation measures if required		stage dependent on the monitoring as per Section 4.4.	
	Implement and maintain a soil and water management plan to control sediment and erosion during construction in accordance with the 'Blue Book' and requirements of Concept Plan's IWCMS and maintain a logbook during the operational phase of all control measures.	Implementation and maintenance of fencing surrounding the VMP area. Erosion control within the VMP area throughout the life of the project as required. Implementation of the Soil and Water Management Plan (SWMP – Section 4.5).	Weekly inspections of fencing Annual monitoring as per Section 4.4	No evidence of noticeable erosion incidents or changes in soil distribution throughout the Action area, specifically at monitoring points Monitoring and annual reports as per Section 4.4	Project ecologist/ Project manager/ Construction manager All staff to be observant of the quality of fences	At all times	Section 4.5
	Implement and enforce control of domestic and feral cats within the Action area.	The following feral cat control measures can be used dependant on the appropriateness to the location (DCCEEW 2024b); • *Where feasible lend traps to community members and discourage trap neuter release.* • *Trapping and shooting.* • *Managing fire and grazing to maintain a complex ground vegetation layer (to reduce cats' hunting success).* • *Manipulating species interactions, for example by reducing rabbit and introduced rodent populations.* • *Develop incentive programs for the registration, identification and desexing packages of domestic cats, especially in areas of socioeconomic disadvantage.* It is the intention for Sealark Pty Ltd. to prohibit the ownership of cats and create a cat free suburb by including clauses within sales contracts and S88B Instruments located in the Action area. If the ownership of cats is not prohibited, at minimum, cats will be required to be kept inside the properties at all times. Sealark Pty Ltd. will also engage directly with LLS to take part and undertake the cat control program established in the Illawarra. Further details surrounding mechanisms of pest control for the West Culburra site can be found within the VMP (ELA 2026).	Opportunistic monitoring and recording by staff and residents within the Action area. Annual monitoring as per the VMP (ELA 2026). Monitoring of fauna predation throughout the project. Complaints records. Reporting and recording through FeralScan	No evidence of predated local fauna No sightings/recordings of domestic/feral cats Monitoring and annual reports as per the VMP (ELA 2026)	Project ecologist/ Project manager All staff involved in the project to be observant and record sightings	At all times	Section 4.8
To prevent any inadvertent damage to MNES and the VMP area present in the Action area.	Protective fencing around VMP areas maintained at all times during construction phase.	Temporary protective fencing must be erected around the VMP area and any trees identified for retention/salvage, prior to clearing activities commencing to minimise any inadvertent damage. Permanent fencing must be erected around the VMP area in place of the temporary fencing once the construction phase is complete. Signage must be erected alongside the temporary and permanent fencing.	Weekly inspection of fencing and any unauthorised disturbance of the VMP area Incident reports	Staff training and induction undertaken and records retained Toolbox talks undertaken Pre-start meetings held Up to date Environmental Control Map Incident reports acted on Records of daily, weekly inspection of signage/fencing and issues rectified as necessary	Construction Manager Project Ecologist All staff to be observant of quality of fencing	At all times	Section 4.3

Management objective	Performance target	Management actions/measure	Monitoring activity	Performance indicators	Responsibility	Timing and frequency	Where it is addressed in this management plan
		Fencing and signage must be erected as per Section 4.3 and the VMP (ELA 2026).					
To prevent injury/death of MNES/fauna.	No death or injury of fauna, specifically the MNES of concern in the Action area or other threatened species, during vegetation clearing as a result of construction activities.	The tree clearing protocol (Section 2.2) is to be implemented for any tree removal. Hollow-bearing trees within open space areas that potentially contain roosting and breeding habitat for threatened species or native fauna must be identified by a suitably qualified ecologist and where possible, retained.	Pre-clearing report Incident report	Project ecologist present during all clearing works Daily tree clearing reports Incident reports acted on	Project Ecologist Project Manager All Staff	Pre-clearing and Pre-construction	Section 2.2
	Prevent disturbance to fauna during breeding or impacts to migratory species.	Strict pre-clearing protocols must be observed when removing tree hollows, including timing outside of the key breeding season (spring and summer) where possible, inspection of hollows by a climbing arborist prior to removal, sectional dismantling of hollows by a climbing arborist, staged removal of vegetation. Stage vegetation clearing.	Pre-clearance reports and clearance reports.	Project Ecologist is present during all clearing works and is involved within scheduling works. Clearance reports show little disturbance of fauna. Works are timed to avoid critical life cycle events such as breeding or nursing	Contractor Project Ecologist	During felling	Detailed description of works and tree removal protocol2.2
	Lighting impacts on fauna, especially nocturnal and diurnal fauna, is minimised.	Light pollution can be reduced by limiting the duration of spotlight illumination, reducing the brightness of lights where possible, installing shield fixtures to reduce light scattering, and using narrow-spectrum light sources to reduce the wavelengths likely to interfere with animal behaviour and promote weed growth. High priority areas where the implementation of measures to reduce light pollution is considered would be located adjacent to retained native vegetation (foreshore reserves and the western boundary). Wildlife friendly lighting (i.e. filtered yellow-green and amber LEDs wavelength of 590 nm with light shield protection controlling light spill) will be considered adjacent to retained bushland areas (such as timers and dimmers as per the wildlife guidelines – DCCEEW 2023). ELA notes that lighting along roads must still meet the Australian Standard AS1158 and the Public Lighting Design Brief (PLDB) issued by Shoalhaven Council. Conduct works during daylight hours.	Monitoring of nocturnal and diurnal fauna throughout the operation.	Nocturnal and diurnal are found to be within suitable habitat and not negatively impacted.	Project Manager/Landscape Designer/Ecologist	During operation.	Appendix B
	Reduce noise impacts associated with development.	Implement noise barriers where possible. Undertake construction works during regular business hours (Section 1.3.4). Ensure equipment is in proper working order.	Toolbox talks/Pre-start checklists Daily equipment checks. Incident reports Complaints records	Staff training and induction undertaken and records retained Toolbox talks undertaken Pre-start meetings held Incident reports and complaints acted on	Project Manager	Throughout the life of the project.	Appendix A and Appendix B
	To control dust and maintain air quality during construction.	Dust management controls to be implemented during construction and operations. If water is being used to manage dust, ensure contaminated water is managed appropriately on and off site in accordance with a water management plan or similar	Toolbox talks/Pre-start checklists Incident reports Complaints records	Toolbox talks undertaken Pre-start meetings held Incident reports and complaints acted on	Project Manager Contractor	During construction and operations.	Section 1.5.3, Appendix A , Appendix B and Appendix E

Management objective	Performance target	Management actions/measure	Monitoring activity	Performance indicators	Responsibility	Timing and frequency	Where it is addressed in this management plan
To increase habitat values in the VMP areas.	The VMP area includes at a minimum: A vegetated foreshore reserve (in current natural state) that exceeds 100m in width between the edge of the foreshore road reserve and the Mean High-Water Mark and the Crookhaven River. A vegetated woodland reserve (in current natural state) which provides a natural entry feature to the Culburra Beach village.	Ensure concept plans and boundaries meet this minimum requirement.	Concept plan approvals.	The VMP boundaries are found to be accurate and temporary fencing as per Section 4.3 is erected.	Project ecologist/ Project manager/ Construction manager	Prior to works	Section 1.3.6
	Fauna habitat features retained on-site or salvaged for reuse in on-site conservation areas.	Any trees, or parts thereof, that would be appropriate for use as fauna habitat, is to be identified by a suitably experienced ecologist and salvaged for re-use within the on-site VMP areas. Hollows to be removed will be retained and reused within the foreshore reserves within the subject land. Following the pre-clearance survey, a nest box and retained hollow plan will be prepared. Nest boxes and retained hollows will be installed by a qualified arborist in the adjacent vegetation to replace hollows removed at a minimum ratio of 1:1 (i.e. 1 nest box/retained hollow of similar sized entrance for each hollow removed) (unless replaced with carved hollows). Carving hollows into the trees using a Hollow Hog machine is preferred where possible rather than the installation of an artificial nest box or installation of a salvaged hollow. Boxes / drilled hollows will be chosen to match the likely target species of each hollow and be installed prior to removal of HBTs to allow fauna to move/be relocated to nest boxes prior to removal of hollow-bearing trees and be maintained and monitored for 5 years.	Pre-clearance reports	Woody material salvaged and relocated to VMP areas in accordance with the VMP (ELA 2026) VMP monitoring and annual reports. Installing artificial habitats for fauna in adjacent retained vegetation and habitat to replace the habitat resources lost and encourage animals to move from the impacted site, e.g. retaining hollows and adding nest boxes if appropriate	Project ecologist/ Project manager/ Construction manager/ Arborist	Prior to vegetation removal and During tree clearing	Section 2.2 and Section 5
	No signs of erosion or sedimentation within the VMP area.	Implementation and maintenance of fencing surrounding the VMP area. Erosion control within the VMP area throughout the life of the project as required. Implementation of the Soil and Water Management Plan (SWMP – Section 4.5).	Weekly inspections of fencing and any unauthorised disturbance of VMP areas Annual monitoring of the VMP	No evidence of noticeable erosion incidents or changes in soil distribution throughout the VMP area, specifically at monitoring points. VMP monitoring and annual reports	Project ecologist/ Project manager/ Construction manager All staff to be observant of the quality of fences	At all times	Section 4.5, and Section 5
	No signs of human or domestic animal disturbance within the VMP area.	Implementation and maintenance of temporary and permanent fencing and signage surrounding the VMP area as per Section 4.3 and the VMP (ELA 2026).	Weekly inspections of fencing and any unauthorised disturbance of VMP areas Annual monitoring of the VMP Incident reports	Staff training and induction undertaken and records retained Toolbox talks undertaken Pre-start meetings held Incident reports acted on Records of daily, weekly inspection of signage/fencing and issues rectified as necessary VMP monitoring and annual reports No signs of human or domestic animal activity such as but not limited to bike tracks, general rubbish, animal tracks etc.	Construction Manager Project ecologist All staff to be observant of the quality of fences	At all times	Section 4.3, Section 5 and Appendix B
	Preparation of a Vegetation Management Plan for the foreshore	Preparation and implementation of the VMP that is currently in the development process.	Approval of the VMP by the required authorities.	Staff training and induction undertaken and records retained	Construction Manager	Throughout the project approval.	Section 1.2

Management objective	Performance target	Management actions/measure	Monitoring activity	Performance indicators	Responsibility	Timing and frequency	Where it is addressed in this management plan
	and woodland reserves to guide future management of this land.		Weekly inspections of construction management Annual monitoring of the VMP areas Incident reports	Toolbox talks undertaken Pre-start meetings held Incident reports acted on Records of daily, weekly inspection of signage/fencing and issues rectified as necessary VMP monitoring and annual reports No signs of human or domestic animal activity such as but not limited to bike tracks, general rubbish, animal tracks etc.	Project ecologist All staff to be observant of the quality of fences		
	Staff entering the site are fully aware of all environmental aspects relating to the development and know what to do in case of environmental emergencies.	Staff training and site briefing to communicate environmental features to be protected and measures to be implemented. All staff working on the project will undertake an environmental induction as part of their site familiarisation. Site briefings will be updated based on phase of the work. This induction will include items such as: • Site environmental procedures (vegetation management, sediment and erosion control, exclusion fencing) • Sensitive environments (foreshore) • Threatened species habitat in reserves • What to do in case of environmental emergency (chemical spills, fire, injured fauna) • Key contacts in case of environmental emergency • What to do in the case of finding a threatened species • What to do in the case of finding fauna on the site	Toolbox talks/Pre-start checklists Weekly checks Incident reports	Staff training and induction undertaken and records retained Toolbox talks undertaken Pre-start meetings held Incident reports acted on	Project manager All staff	To occur for all staff entering / working at the site and when environmental issues become apparent	Section 1.5, and Section 3.
To prevent the introduction and spread of invasive weeds to the VMP area.	No weeds dispersed or introduced to VMP areas as a result of construction activity.	Prior to entering and leaving the site, all vehicles and equipment involved in construction, clearing and weed removal works must be cleaned to remove soil and plant material (Refer to Hygiene Protocol – Appendix F). During vegetation clearing and weed removal, weed species are to be stockpiled separately and disposed of at an appropriate waste disposal facility.	Daily checks of vehicles Weekly inspection records Incident reports VMP monitoring and annual reports that assess weed cover	Pre-start checklists completed Daily checks of vehicles undertaken as determined by retained records Incident reports acted on VMP monitoring and annual reports completed	All staff	All times	Section 1.3.2, Section 4.3, Section 5 and Appendix B
To prevent the introduction of soil pathogens to VMP areas.	No record or evidence of soil pathogens introduced to VMP areas as a result of construction activity.	Prior to entering and leaving the site, all vehicles and equipment involved in construction, clearing and weed removal works must be cleaned to remove soil and plant material (Refer to Hygiene Protocol – Appendix F). Implementation of the Soil and Water Management Plan (SWMP – Section 4.5).	Daily checks of vehicles Weekly inspection records Incident reports VMP monitoring and annual reports that assess weed cover	Toolbox talks and where required pre-start checklists completed Daily checks of vehicles undertaken as determined by retained records Incident reports acted on VMP monitoring and annual reports completed	All staff	All times	Section 1.3.2, Section 4.3, Section 4.5, Section 5 and Appendix B

Environmental Inspection Checklist and Corrective Action Required

Environmental Inspection Checklist – West Culburra	Compliance (Yes or No)	Corrective Actions/Maintenance Required (and due date)	Corrective Actions/Maintenance Completed (Signature/date of responsible manager)
Site/work zone inspected:			
Time & Date: Weather:			
VMP area			
Loss or damage to vegetation in VMP areas as a result of construction activity			
Protective fencing/ barrier erected around all VMP areas			
No damage to protective fencing/ barrier erected around all VMP areas			
Weed species stockpiled separately from other waste			
Vehicles/ plant entering and leaving site free of soil and weeds			
Erosion and/or sedimentation impacting VMP areas			
Deposition of dust impacting VMP areas			
Spread of litter and/or waste into VMP areas			
Fauna			
Loss of fauna habitat beyond approval			
Habitat trees (with hollows and/or nests) in VMP area are not damaged			
Trees or parts thereof to be re-used within VMP areas			
Detailed work protocol (Section 2.2) is implemented for any tree clearing			
Injury or death of threatened fauna during clearing			
Road mortality of any threatened fauna during construction			
Dam dewatering protocol is implemented for any dam dewatering			
Evidence of fauna disturbance from excessive construction noise			
Waterways			
Pre-construction water quality monitoring undertaken (once a month for 18 months and after two wet weather events)			

Environmental Inspection Checklist – West Culburra	Compliance (Yes or No)	Corrective Actions/Maintenance Required (and due date)	Corrective Actions/Maintenance Completed (Signature/date of responsible manager)
During construction water quality monitoring undertaken (once a month)			
Post construction water quality monitoring undertaken (once every three months and after any sewage overflow for two years after the completion of each stage)			
Post construction water quality monitoring undertaken of stormwater infrastructure (once every three months, after any sewage overflow for two years after each stage and after two wet weather events per year for two years after the completion of each stage)			
Monitoring of additional water quality, aquatic ecology and oyster aquaculture (every two months for 18 months prior to works and after three wet weather events)			
Hazardous materials/ fuels stored securely in designated storage area			
Spill kits are available on-site in designated areas (including near fuel /haz material storage and refuelling zones) and well stocked			
No evidence of any spills or turbidity plumes in receiving water			
Refuelling/ servicing of plant/ vehicles to occur off-site or in a designated area away from water bodies/ drainage lines			
Site and waterways are free of rubbish and wastes (except within designated waste receptacles)			
Waste containers are not filled beyond capacity			
Waste containers are located away from water bodies / drainage lines			
Concrete wash-out area lined with suitable material / bunded and not filled beyond capacity			
Erosion and sediment controls are in place as per the Soil and Water Management Plan			
No evidence of run off/ sedimentation downslope of any sediment controls or offsite			
Other			
Inspected by: **Signature:** **Date:**			

Appendix C Complaints recording template

Date	Received by phone/email/fax/letter	Complaint	Name	Address	Contact	Follow-up actions	Date complete

Appendix D Site environmental inspection checklist

Contractor Details	Site Supervisor – Environmental Checklist	
Project Title West Culburra Residential Subdivision, NSW Site Inspected Culburra Road, West Culburra. West Culburra Residential Subdivision, NSW		
Time & Date	Weather	
Checklist		Yes/No
Soil erosion and sedimentation controls		
Erosion and sediment controls have been installed in accordance with the SWMP.		
Erosion controls have been checked daily and after rainfall. Damaged controls were fixed immediately, and accumulated sediment or waste has been removed from within the sediment controls regularly.		
The weather has been checked to ensure heavy rain periods are known in advance and works can be scheduled accordingly.		
When possible, disturbed areas have been stabilised with native mulch from onsite vegetation		
Pollution and soil contamination		
All chemicals (e.g., fuel, oil) are in appropriate bunding/storage systems within the approved storage facility.		
All appropriate spill kits are carried with the equipment.		
Machinery has been appropriately cleaned, degreased, and serviced prior to use at the site and/or entry into the waterway.		
All equipment is in good working order.		
Associated Safety Data Sheets (SDS) for all chemicals are present on site.		
Biodiversity		
All collectable floristic material such as native vegetation seed stock and woody fruit has been collected for use in landscaping and rehabilitation works on site.		
Hollow bearing trees visibly tagged.		
No plant, equipment or stockpiles are positioned under the drip line of retained trees.		
The Site Ecologist was present during tree removal and displaced fauna has been relocated.		
Tree removal has been undertaken by lowering whole trees to the ground with the 'grab' attachment of a machine.		
Tree hollows have been salvaged from trees removed and placed within the bushland areas. This is to be done under the direction of the Site Ecologist.		
Priority weeds		
Equipment and vehicles have been washed down prior to and after use, to manage the introduction and spread of weed propagules		
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.		
Residents and other sensitive receivers have been notified of any works that are likely to be noisy at least five days prior to those works being carried out.		
Water quality		
Pre-construction water quality monitoring undertaken (once a month for 18 months and after two wet weather events or when required by the Consent Authority)		
During construction water quality monitoring undertaken (once a month or per the IWCMS)		

Contractor Details	Site Supervisor – Environmental Checklist	
Post construction water quality monitoring undertaken (once every three months and after any sewage overflow for two years after the completion of each stage)		
Post construction water quality monitoring undertaken of stormwater infrastructure (once every three months, after any sewage overflow for two years after each stage and after two wet weather events per year for two years after the completion of each stage)		
Monitoring of additional water quality, aquatic ecology and oyster aquaculture (every two months for 18 months prior to works and after three wet weather events)		
Air quality		
Works have been minimised during high wind periods.		
Dust suppression has been applied as required to limit excessive dust generation.		
Plant and equipment have been regularly inspected to ascertain that fitted emission controls are operating efficiently.		
Plant and equipment have been maintained in accordance with manufacturer's specifications to ensure that it is in a proper and efficient condition.		
Machinery has not been running while not in use.		
Waste		
All wastes have been classified in accordance to the Waste Classification Guidelines (EPA 2014) prior to disposal and transported to a licensed waste disposal facility.		
Any excess spoil or waste material has been kept in a designated stockpile during construction works.		
All waste has been removed from the site on completion of the works.		
Upon completion of waste disposal, all original disposal receipts issued by the receiving waste facility have been retained in a waste register as evidence of proper disposal.		
Work areas of the project site have been kept clean and free of litter, including cigarette butts, at all times.		
Traffic		
Vehicles, materials and equipment have been positioned to minimise impacts to public access and parking.		
Visual impacts		
Community or neighbours have been notified where light impacts are anticipated.		
Inspected by:	**Signature:**	
Actions:	**By Who:**	**Date Completed:**

Appendix E Dust management control plan

The following strategies are suggested to minimise dust from this project during the bulk earthworks stage:

- Optimise the haulage route on-site to minimise travel
- Minimise speed along haul road to 15 km/hr on unsurfaced roads and 25 km/hr on surfaced roads
- Use water cart regularly along haul roads
- Keep a daily site log observing wind, rain, dust leaving the site, dust on flora and any actions where relevant
- Minimise the use of stockpiles, alternatively cover, seed or fence
- Ensure all trucks moving on/off site are covered
- As soon as practical, landscape/plant any disturbed areas that are completed

Appendix F Hygiene procedures for vehicles and machinery to control the introduction and spread of *Phytophthora cinnamomi*

Guidelines taken from "Arrive Clean, Leave Clean" (Commonwealth of Australia, 2015)

Undertake visual inspections to confirm that vehicles, plant and equipment and footwear, are free of clods of soil, slurry (water and soil mixture) and plant material. Use facilities specifically designed for cleaning vehicles, plant and equipment and footwear.

Vehicles, machinery and large equipment

Use a wash-down facility for vehicles and machinery pay particular attention to cleaning mud flaps and tyres and undercarriage. Dispose of wash-down water so that it drains back into a low area away from waterways. If this is not possible, empty it into a waste container for responsible disposal offsite. Do not allow mud and wash-down effluent to drain into bushland and surface waters, such as rivers, creeks, reservoirs and dams. Don't drive through wash-down water.

Footwear, small equipment and hand tools

Set up a wash-down area for participants to wash and dry their face and hands and clean their footwear before entering and exiting the site. To clean footwear, first use a hard brush or stick to remove as much mud, soil and organic matter as possible before disinfecting with a solution of 70% ethanol or methylated spirits in 30% water—applied through a spray bottle or a footbath. Collect all removed mud, soil and organic matter in a bag or bucket, and keep it out of clean bushland.

Appendix G Wildlife injury and rescue/release procedure

Injury procedure

If any threatened fauna be observed near the works area, then the following procedure must be followed:

1. Contact the site supervisor.
2. The site supervisor reviews if the animal is at risk of being harmed.
3. If yes, all works in the vicinity of the animal (works in other areas can continue in other areas of the site at an approved distance from the animal) must be halted and the project ecologist contacted to conduct a "catch and release" in order to safely remove the animal from risk.
4. If the animal is not at risk of being harmed and can move on of its own accord, then works must be halted in the vicinity of the animal until it moves on (works can continue in other areas of the site). If the animal is not capable of moving on of its own accord, then the following steps will ensue.

If an animal is found within the study site that is injured the following procedure must be implemented:

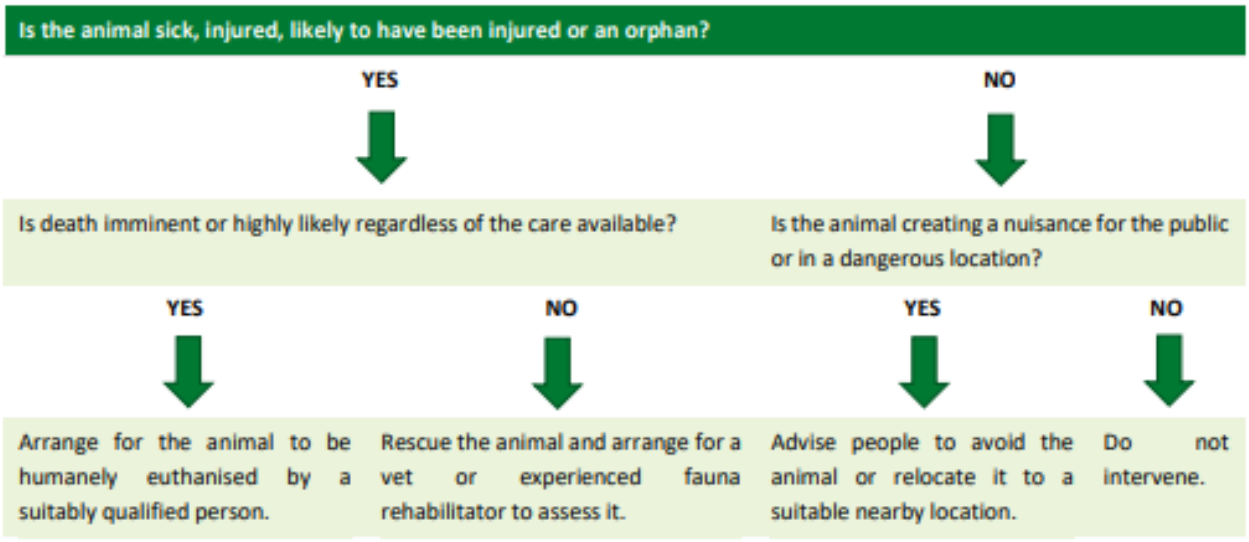
1. Contact the site supervisor.
2. The site supervisor determines the most appropriate person to engage:
    a. Project ecologist for any non-aquatic fauna
    b. Aquatic ecologist for any aquatic fauna
    c. The Wildlife Information and Rescue Services (WIRES), who will respond to all sick, injured or orphaned native wildlife queries.
3. If the injuries are too great for the animal to be relocated, then the animal must be taken to a WIRES Wildlife Carer or Veterinary Clinic.

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

Native fauna encounter

If native fauna is encountered during pre-clearance or clearance surveys, the decision tree outlined in Table G1 is to be adhered to.

Table G1: Decision tree on how to respond to a native fauna encounter



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 could 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; however, it is recommended advise from wildlife carers such as WIRES is requested prior to undertaking feeding.
- 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: o 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).

Unexpected threatened species find procedure

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

Table G2: Decision tree on how to respond to a unexpected or threatened species find

Appendix H AHIMS sites in the Action area and in proximity to the Action area (AA 2024a)

Figure 4.3 - Identified AHIMS sites in proximity to the study area

22054 - Culburra Road, Culburra Beach NSW - ACHA

Source: NSW LPI Aerial

Drawn by: ARH Date: 2024-06-03

AUSTRAL ARCHAEOLOGY

Appendix I Emergency and project contacts

Organisation	Name	Position	Contact Number
Project Contacts			
TBD	TBC	Project Manager	
TBD	TBC	Site Supervisor	
TBD	TBC	Project Ecologist	
TBD	TBC	Project Arborist	
TBD	TBC	Bushfire Consultant	
Department of Climate Change, Energy, the Environment and Water		Environmental Compliance Branch Division	1800 110 395
Shoalhaven City Council		General Enquiries	1300 293 111
TBD	TBC	Environmental Representative	
Representatives of the Jerrinja Aboriginal Community	TBC	Advisory Group/Site Officer	
Representatives of Sealark Pty Ltd.	TBC	Advisory Group	
Representatives of Council	TBC	Advisory Group	
Emergency Contacts			
Emergency Services	-	-	000
Shoalhaven Hospital	-	-	02 4423 9500
Shoalhaven Water	-	-	02 4429 3214
Environment Protection Authority	-	-	131 555
SafeWork NSW	-	-	131 050
Fire and Rescue NSW	-	-	02 9265 2999
State Emergency Services	-	-	132 500
WIRES	-	-	1300 094 737
Endeavour Energy	-	-	131 003
TransGrid System Operations	-	-	1800 222 537
Police Assistance Line (PAL)	-	-	131 444
AGL	-	-	131 245
Poisons Information	-	-	131 126
Telstra	-	-	132 200
Opticomm	-	-	02 8252 3600
Service	-	-	137 788
NSW Rural Fire Service	-	-	1800 679 737/02 8741 5555

Appendix J Fauna Friendly Fencing brochure (Wildlife Friendly Fencing 2025)

A tale of two fences

In the city

Louise lives in the city near a park and found a glider caught on a barbed wire security fence. She worked with the Council to find a solution. The Council replaced the barbed wire with plain wire and planted more trees near the fence to shorten the gliding distance.

Glider membranes are extremely vulnerable to barbed wire

In the country

Geoff, who lives on a rural property with cattle, found a flying-fox caught on his barbed wire fence. The bat had come to feed on a nearby native shrub.

Geoff decided to keep the shrub as it was an important feed tree for various animals. He covered the top two strands of barbed wire near the shrub with polypipe painted white.

What can you do?

- Encourage wildlife friendly fencing in your local area. Talk to neighbours, councils, fencing contractors and suppliers. Familiarise yourself with the information on our website.
- Monitor barbed wire fences in your local area. Report any entangled animals to your local wildlife rescue organisation, found at **www.fauna.org.au** . Enter it online, search for Entangled Wildlife Australia.

Do not approach a trapped animal as it is likely to stress, struggle and do more damage. Wait for an experienced rescuer who will untangle the animal with minimal further injury. Do not handle flying-foxes.

WIRES NATIONAL GRANTS PROGRAM Tolga Bat Hospital

wildlife friendly fencing

wildlifefriendlyfencing.org

This project received grant funding from WIRES through their annual National Grants Program 2023.

Doing some fencing? Make it wildlife friendly!

wildlifefriendlyfencing

86% of recorded wildlife entanglements occur on the top strand of barbed wire fences

Fences close to water prevent wetland birds from landing and taking off safely.
www.ozcranes.net

Each year thousands of animals face a cruel death entangled on barbed wire fences.

Many nocturnal animals like bats, gliders and owls fail to see the fence or cannot clear the height in windy conditions. Over 75 wildlife species have been recorded as fence victims.

Kangaroos and emus can get hung up on plain wire and mesh fences. If the fence is too high the animals' legs can become caught in a twist of wire.

Low wires and tension droppers may prevent larger animals from squeezing through the fence

Wildlife need to move freely and safely across our landscape unless being purposely excluded for safety reasons.

These kangaroos failed to jump the high fence and were caught by their legs. Blocked by the dropper, they could not scramble through or under the fence.

Designing friendly fences

Stop and think

Do I really need a fence? How will a fence affect the local wildlife? Could a line of native trees do the job?

Avoid barbed wire

Avoid barbed wire as a top strand, especially on fences likely to be hotspots for entanglement of wildlife – on ridge lines, near feed trees, across wildlife corridors, over or near water bodies. For hotspots:

- go barbless on the top strand to prevent most entanglement
- increase visibility of the fence to help wildlife see it.

Safe-twist barbless wire

Go barbless – work with the same tools and skillset as for barbed, but scratch-free. Barbed wire on the other 3 strands is less likely to entangle wildlife, but consider going barbless on other strands also.

Whites Wires began manufacturing barbless wire in Albury NSW in late 2022. Easier to use than plain wire.

Increase visibility

White electric fence tape (preferably 40mm wide), metal tags or split white polypipe are all very effective at improving the visibility of a wire fence. Electrified fences are also friendly unless fitted too close to barbed wire. Animals can be caught and unable to escape the electric shocks.

Nettings pliers and clips make this a quick easy job. Best spacing about every 30cms.

Friendly fencing in action

Go to our website for details of the range of available white sighter wires. This includes nylon coated, solid nylon and electric wires.

Wise placement of a fence can make a big difference. To avoid the risk of a tangle hotspot on the ridgeline this fence was placed below the ridge.

Split white polypipe cut lengthwise and into 30-40cm lengths increases visibility. Do not use on cattle fences unless secured well with cable ties or the like.

White electric fence tape and metal tags are ideal for security fences where the barbs need to remain. They move in the wind and the tags catch any light at night.

WFF is safe and effective for wildlife, people and livestock.