



NSW National Parks and Wildlife Service

Draft Conservation Action Plan

Bilby (*Macrotis lagotis*)

This plan has been prepared in accordance with the requirements of s.78C of the National Parks and Wildlife Regulation 2019 (Reg.) in relation to an Asset of Intergenerational Significance (AIS) as declared under s.153G of the *National Parks and Wildlife Act 1974*.

Site details

AIS site	AIS-E0-218, AIS-E0-219, AIS-E0-220, AIS-E0-221
Site location	An area of 9,567 hectares in Mallee Cliffs National Park An area of 5,808 hectares in Pilliga CCA Zone 3 State Conservation Area An area of 4,296 hectares in Sturt National Park
NPWS contact	Senior Project Manager, NPWS feral predator-free areas - partnership projects

Environmental values

This table sets out the environmental values for which the land was listed as an AIS (Reg. 78C(3)(a)).

Identified values	Value description
Feral predator-free areas and important habitat to enable reintroduction, establishment and maintenance of viable wild populations of bilby, currently listed as extinct in NSW.	The bilby is currently restricted, in the wild, to arid spinifex and acacia shrublands. Not seen in NSW since the early 20th century, it currently only exists in the wild in NSW within feral predator-free areas. The bilby is a nocturnal omnivore that meets all its moisture requirements from its food, which includes insects, larvae, seeds, spiders, bulbs, fruit, fungi, and very small vertebrates. The bilby is considered an 'ecosystem engineer' as its diggings for food and burrows distribute seeds, accumulate leaf litter, and help water infiltrate the soil profile.

Key risks to environmental values

This table sets out the key risks to the environmental values of the land (Reg. 78C(3)(b)).

Key risks	Description
Inappropriate fire regimes	Inappropriate fire timing, frequency and/or intensity that alters vegetation composition and structure may lead to a reduction in suitable habitat and/or food availability and affect the persistence of the bilby at the sites.
Feral predators	Predation of the bilby by foxes, feral cats and wild dogs, in the event of an incursion into the feral predator-free area.
Feral herbivores and pigs	Competition for resources and degradation of bilby habitat by introduced herbivores, such as rabbits and goats, through grazing and trampling, in the event of an incursion into the feral predator-free area. Direct predation, competition, habitat degradation and/or disease transmission by feral pigs may lead to a decline of the bilby at the sites, in the event of an incursion into the feral predator-free area.
Interactions with native species	Competition for resources by native macropods through sheltering and foraging may lead to a reduction in suitable habitat and affect the persistence of the bilby at the sites.
Disturbance	Damage to the conservation fences and associated infrastructure from authorised maintenance activities, unauthorised activities, fires, floods and/or vandalism may increase the risk of feral predator, feral herbivore and/or feral pig incursion.
Inbreeding depression and loss of genetic diversity	Inbreeding depression within the bilby population that leads to a reduction in the survival of individuals and recruitment, may affect persistence of the species at the sites. Low genetic diversity that limits the ability of the bilby to adapt to the host environment, may affect persistence of the species at the sites.
Unsustainable population levels	Competition for resources and habitat within the bilby population in the feral predator-free area may increase to levels that exceed the carrying capacity of the environment. This may lead to resource depletion, habitat degradation and bilby population declines.

Conservation activities

This table sets out the conservation activities required to:

1. control, abate or mitigate the key risks and
2. maintain, restore and remediate the environmental values of the land (Reg. 78C(3)(c)).

Key risks	Impacted sites	Conservation activities
Inappropriate fire regimes	All sites	<ul style="list-style-type: none"> • Develop guidance on the appropriate fire management for the habitat of the bilby within 12 months of adoption of this plan and update as required. This guidance must provide for: <ul style="list-style-type: none"> - maintenance of an appropriate fire regime by developing and implementing a site-specific burn plan for the declared area - implementation of any required fire protection and response measures in the declared area - integration of site-specific requirements into NPWS and NSW Government bushfire planning, risk management and operational response arrangements. • Implement fire management consistent with the guidance.
Feral predators	All sites	<ul style="list-style-type: none"> • Maintain the density of feral predators (e.g. foxes, feral cats and wild dogs) inside the feral predator-free area at zero by responding to any incursions with trapping, baiting, shooting and other approved measures. • Implement trapping, baiting, shooting and other approved measures in a buffer area outside the conservation fences to reduce the risk of feral predator incursion. • Develop a feral predator incursion plan within 6 months of adoption of this plan, and in the event of an incursion implement feral predator control response. • Undertake regular assessments of conservation fences, and if required repair these fences, to ensure a reduced risk of feral predator incursions.
Feral pigs	All sites	<ul style="list-style-type: none"> • Maintain the density of feral pigs inside the feral predator-free area at zero, by responding to any incursions, with trapping, baiting, shooting or other approved measures.
Feral herbivores	All sites	<ul style="list-style-type: none"> • Maintain the density of large feral herbivores (e.g. goats) inside the feral predator-free area at zero, by responding to any incursions, with trapping, shooting or other approved measures such as mustering and removal. • To the extent practicable reduce the density of rabbits to zero, or to levels that are not having an ecologically significant impact on the bilby and maintain the densities at or below those levels by trapping, baiting, shooting or other approved measures.
Interactions with native species	All sites	<ul style="list-style-type: none"> • Assess the impact of native macropods on bilby populations at the sites and, if macropods are determined to be having a material adverse effect, undertake targeted macropod control to reduce competition.

Key risks	Impacted sites	Conservation activities
Disturbance	All sites	<ul style="list-style-type: none"> Undertake periodic reviews to identify whether authorised maintenance activities, unauthorised activities, fires, floods and/or vandalism are having an adverse impact on the conservation fences and associated infrastructure. If adverse impacts are observed implement actions to mitigate the impacts. This may include: <ul style="list-style-type: none"> installation of signs, threatened species marker posts or barriers to delineate sites and minimise impacts compliance activities. If required, develop and implement guidance for staff, utility managers, and/or contractors, about appropriate maintenance practices that minimise or prevent impacts to the bilby and its habitat.
Inbreeding depression and loss of genetic diversity	All sites	<p>In this context, each feral predator-free area is regarded as hosting a bilby sub-population (deme).</p> <ul style="list-style-type: none"> Conduct genetic analysis of the bilby sub-population at appropriate intervals, to support conservation and recovery of the species at the site and across all sub-populations. As required, maintain and improve the genetic diversity of bilby sub-populations through the translocation of suitable individuals.
Unsustainable population levels	All sites	<ul style="list-style-type: none"> Undertake periodic reviews to identify whether the bilby population is exceeding sustainable levels. If required, and as approved by the Secretary or delegate, implement measures to reduce or limit the bilby population and/or restore ecosystem function including trophic structure within the feral predator-free area. This may include: <ul style="list-style-type: none"> translocation of individuals to other locations reintroduction of native predators.

Other land management activities

Within the declared land there are existing assets and infrastructure of NPWS and other external service providers, including public utilities.

Maintenance operations (including inspection, emergency works and routine and standard maintenance) that are exempt development in accordance with the *Environmental Planning and Assessment Act 1979*, and which are performed on and around existing assets and infrastructure, are authorised under this conservation action plan (CAP) provided such operations are undertaken in a manner that aims to minimise the risk to the declared environmental values of the land and with any other required consents or approvals.

All maintenance operations on the declared land are to be undertaken in accordance with this CAP.

Measuring and reporting

This table sets out the requirements for measuring and reporting on health and condition (Reg. 78C(3)(d)).

Attribute	Metric	Method
Health and condition of the bilby at the sites	Population estimate	Design and implement monitoring, annually for 3 years from approval date on this CAP (initial monitoring period), to generate an estimate of the number of individuals at the sites. After the initial monitoring period, and subject to the approval of the Secretary or delegate, undertake monitoring every 2 years.

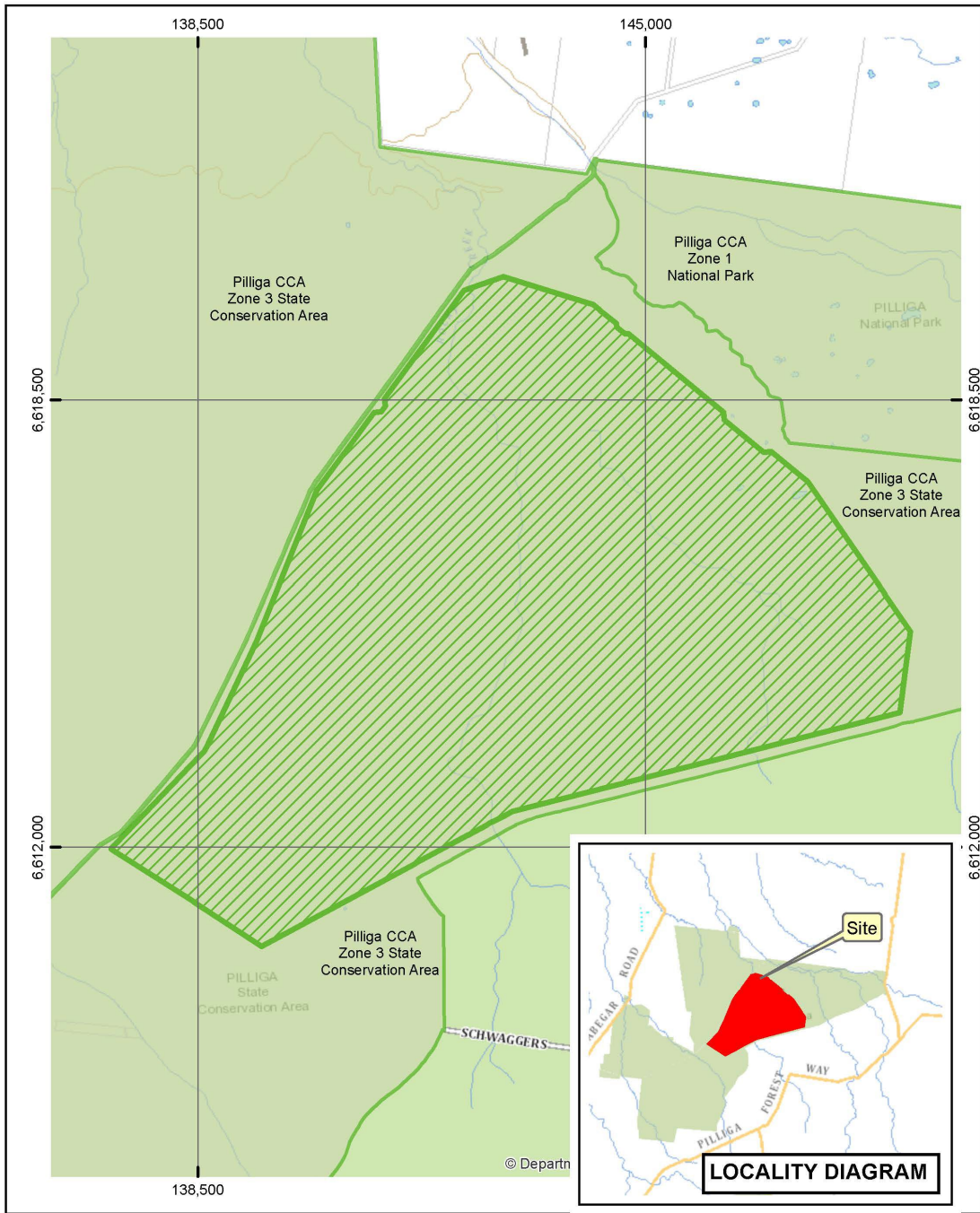
A report on the health and condition of the value for which this AIS was declared will be prepared and published on the Department of Climate Change, Energy, the Environment and Water website: www.environment.nsw.gov.au. The report will summarise the baseline and current health and condition of the values of the declared land and its overall trajectory.

Evaluation of conservation action plans



This CAP will be amended or replaced as new information becomes available that helps improve our management of the identified asset (Reg. 78H).

The Secretary must appoint a scientist, or a panel of scientists, to conduct a review, as soon as possible after the period of five years from the first approval of a CAP, to examine whether CAPs have been effectively implemented (Reg. 78J(1)).

Bilby (*Macrotis lagotis*)
Draft Conservation Action Plan





Legend

-  Declared Land
-  NPWS Estate

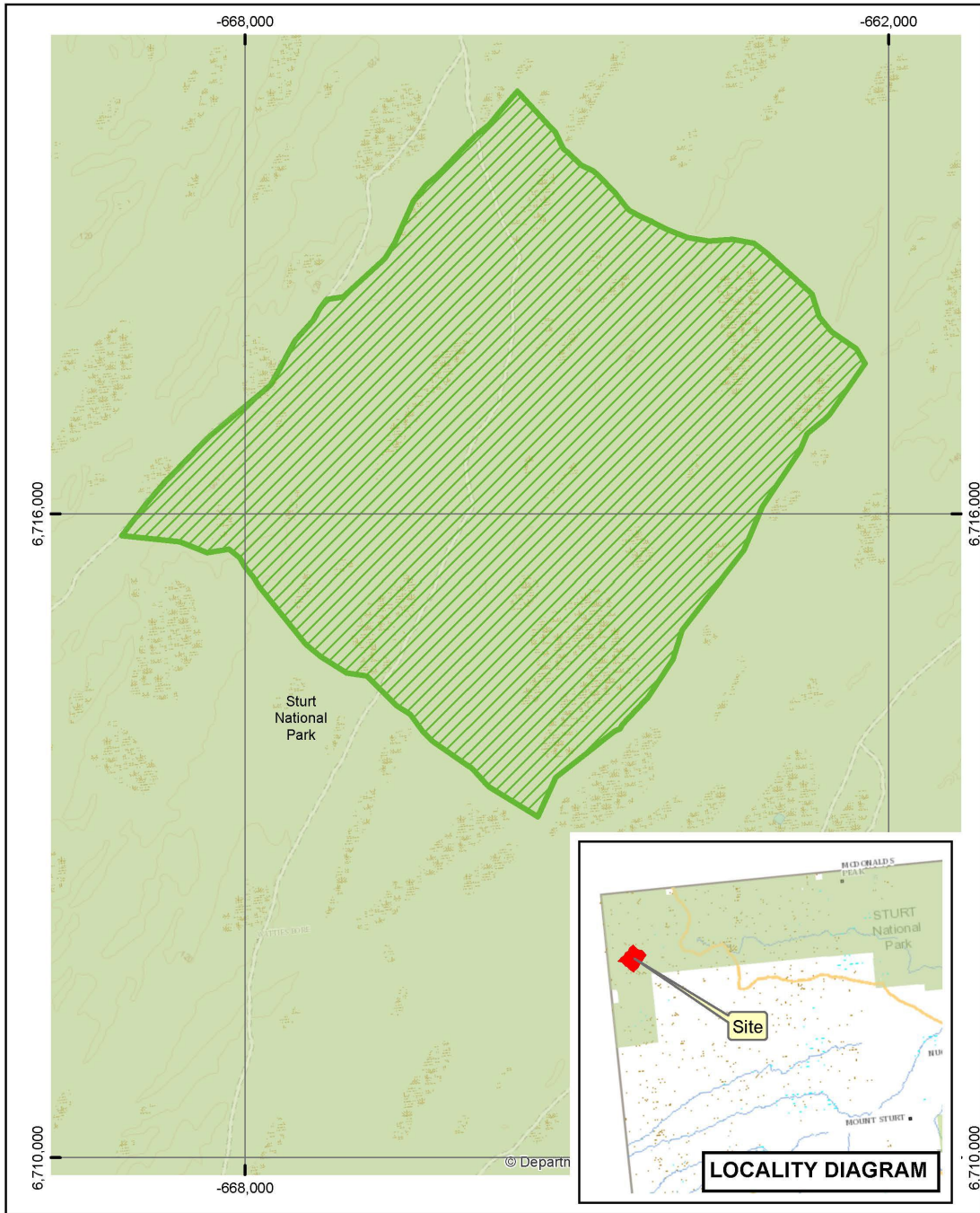
AIS-E0-218
Asset of Intergenerational Significance
Feral predator-free fenced area
partnership project
Pilliga CCA Zone 3
State Conservation Area

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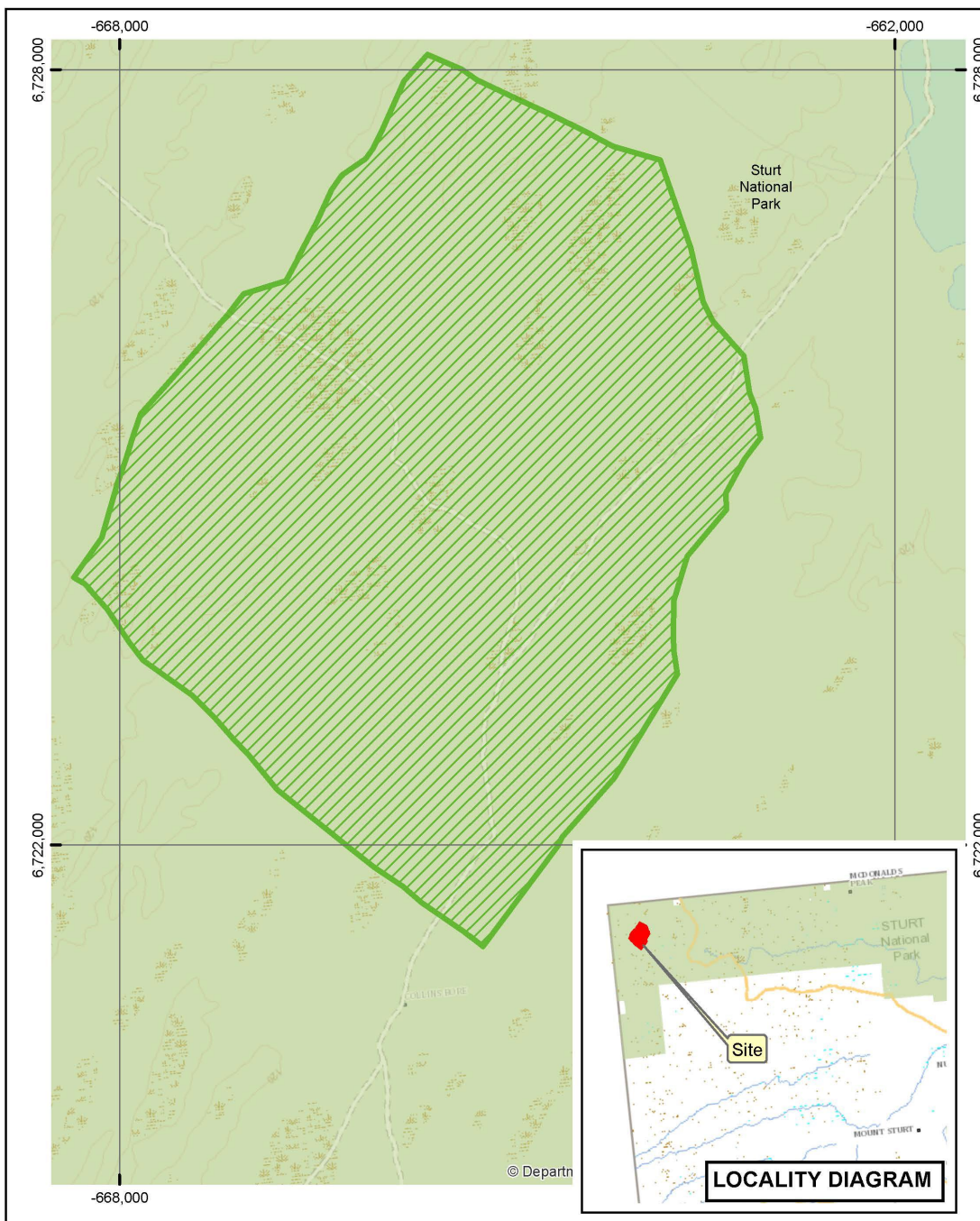
AIS-E0-219
Asset of
Intergenerational Significance
Feral predator-free fenced area
partnership project
Sturt National Park

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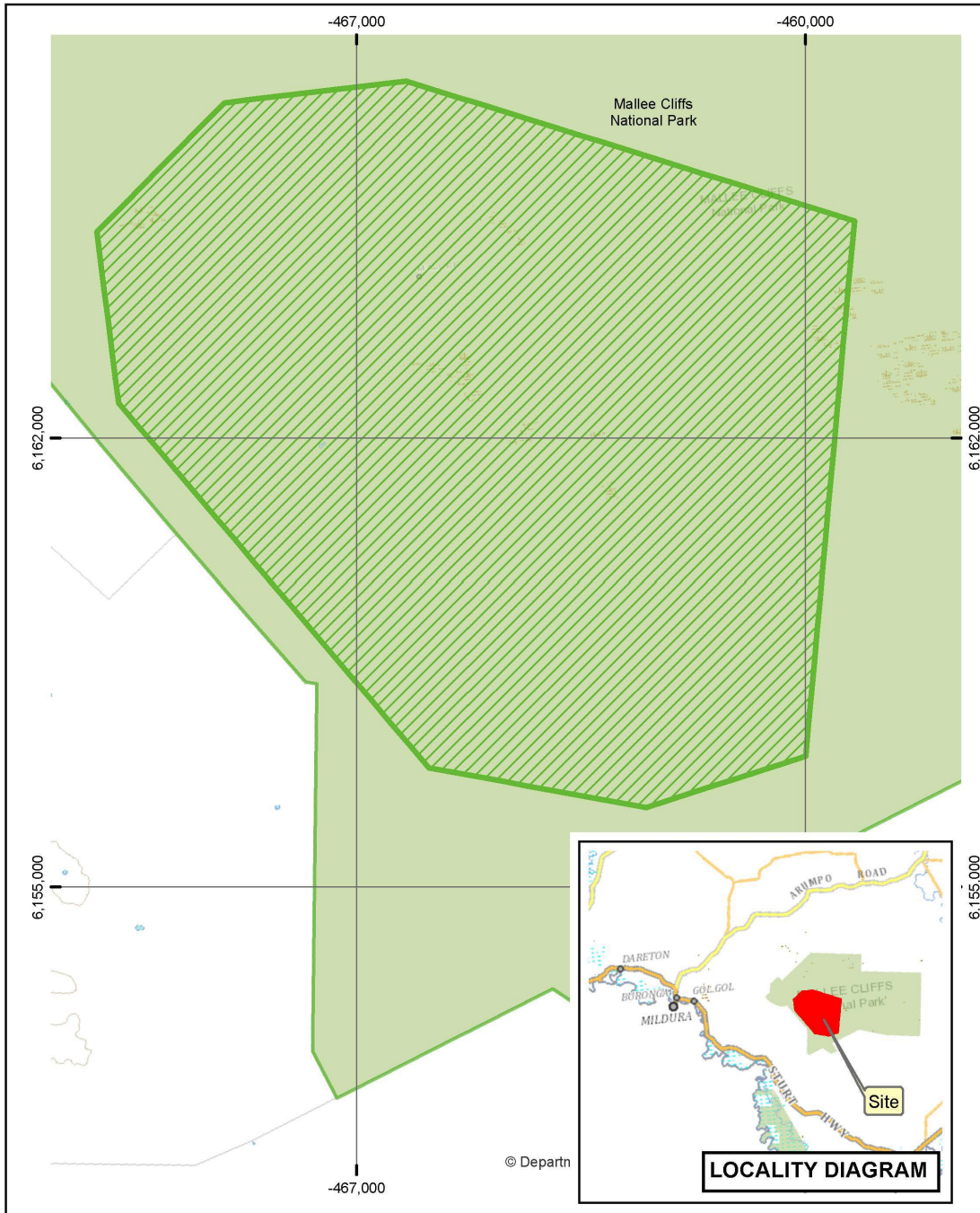
AIS-E0-220
Asset of
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
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Legend

-  Declared Land
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AIS-E0-221
Asset of
Intergenerational Significance
Feral predator-free fenced area
partnership project
Mallee Cliffs National Park

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Date prepared March 2024

Date approved

Approved by

Due for review

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