

Conservation Action Plan

Broad-toothed rat (*Mastacomys fuscus*)

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-E0-160, AIS-E0-189, AIS-E0-194, AIS-E0-214, AIS-E0-215, AIS-E0-216, AIS-E0-217
Site location	An area of 13280 hectares in Kosciuszko National Park
NPWS contact	Team Leader - Conservation, Southern Ranges Branch

Environmental values

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

Identified value(s)	Value description
Important habitat for broad-toothed rat	The vulnerable broad-toothed rat is a compact rodent with a short, wide face and ears, and long, dense, fine fur. The species lives in a complex of constructed runways in dense vegetation of heathland, grass and sedge environments, or under the snow in winter.

Key risks to environmental values

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

Key risk(s)	Description
Inappropriate fire regimes	Inappropriate fire frequency and intensity that alters vegetation composition, structure and function of broad-toothed rat habitat may lead to a reduction in suitable habitat and food availability and affect the persistence of the species at the sites. This risk is exacerbated by the lack of understanding of population size and genetic diversity across the species distribution.
Feral predators	Predation of broad-toothed rat by foxes and feral cats.
Weeds	Habitat degradation through invasion, establishment, intensification and spread of weeds (e.g., exotic grasses and sedges) to the extent that the area of suitable habitat is reduced.
Feral herbivores	Competition and habitat degradation of the broad-toothed rat habitat by introduced herbivores, such as deer, horses, rabbits and hares, through grazing and trampling.
Feral pigs	Competition and habitat degradation, by feral pigs through rooting, digging and eating vegetation.
Anthropogenic climate change	Changes to weather patterns and climatic conditions as a result of anthropogenic climate change that increases the frequency and severity of fire and drought conditions (e.g., resulting in decrease in snow fall in Kosciuszko) may exceed the adaptive capacity and reduce survivorship of the broad-toothed rat at the sites. This risk is exacerbated by the lack of understanding of population size and genetic diversity across the species distribution
Disturbance	Authorised infrastructure maintenance activities (e.g., construction and maintenance of roads and trails) and visitor use that leads to degradation of habitat.

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 risk(s)	Impacted site(s)	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 broad-toothed rat within 12 months of the 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 areas - implementation of any required fire protection and response measures in the declared areas - 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. • Implement supplementary shelter, food and water to maintain individuals after extreme fire events until habitat has sufficiently recovered.
Feral predators	All sites	<ul style="list-style-type: none"> • To the extent practicable, reduce the density of foxes to a level that is not having an ecologically significant impact on broad-toothed rat and maintain the density at or below that level by baiting, trapping, and shooting. • To the extent practicable, reduce the density of cats to a level that is not having an ecologically significant impact on broad-toothed rat and maintain the density at or below that level by undertaking periodic feral cat control (e.g., shooting, trapping or other approved methods).
Weeds	All sites	<ul style="list-style-type: none"> • Remove weed species to the extent required to ensure weeds do not have a negative impact on broad-toothed rat by targeted application of physical, biological and/or chemical weed control.
Feral herbivores	All sites	<ul style="list-style-type: none"> • To the extent practicable, reduce feral deer, rabbit and hare densities to levels that are not having an ecologically significant impact on the broad-toothed rat, and maintain those densities at or below those levels by trapping, shooting and other approved integrated control measures. • To the extent practicable, reduce the density of feral horses to a level that is not having an ecologically significant impact on broad-toothed rat by trapping, mustering and removal, and ground shooting in accordance with a wild horse plan of management approved by the Secretary.

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Key risk(s)	Impacted site(s)	Conservation activities
Feral pigs	All sites	<ul style="list-style-type: none"> To the extent practicable, reduce the density of feral pigs to a level that is not having an ecologically significant impact on the broad-toothed rat, and maintain the density at or below that level, by baiting, trapping, shooting.
Anthropogenic climate change	All sites	<ul style="list-style-type: none"> If a decline in species trajectory is attributed to impacts of anthropogenic climate change, investigate ex-situ management of population.
Disturbance	All sites	<ul style="list-style-type: none"> Undertake periodic reviews to identify whether infrastructure maintenance and visitor use is having an adverse impact on broad-toothed rat. If adverse impacts are observed implement actions to mitigate the impacts. This may include: <ul style="list-style-type: none"> upgrade/realignment of trails to avoid known habitat installation of signage or more discrete marking systems to delineate exclusion areas to prevent slashing or herbicide use near sites. Installation of barriers or other suitable protective structures to minimise impacts from unauthorised visitor use and access. rehabilitation of areas affected by unauthorised tracks.

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 broad-toothed rat population	Population estimate	Design and implement monitoring every 2 years, to generate an estimate of the number of individuals in the population.
	Area of occupancy	Design and implement an assessment every 2 years, to calculate the area of occupancy and determine distribution of broad-toothed rat at the sites.

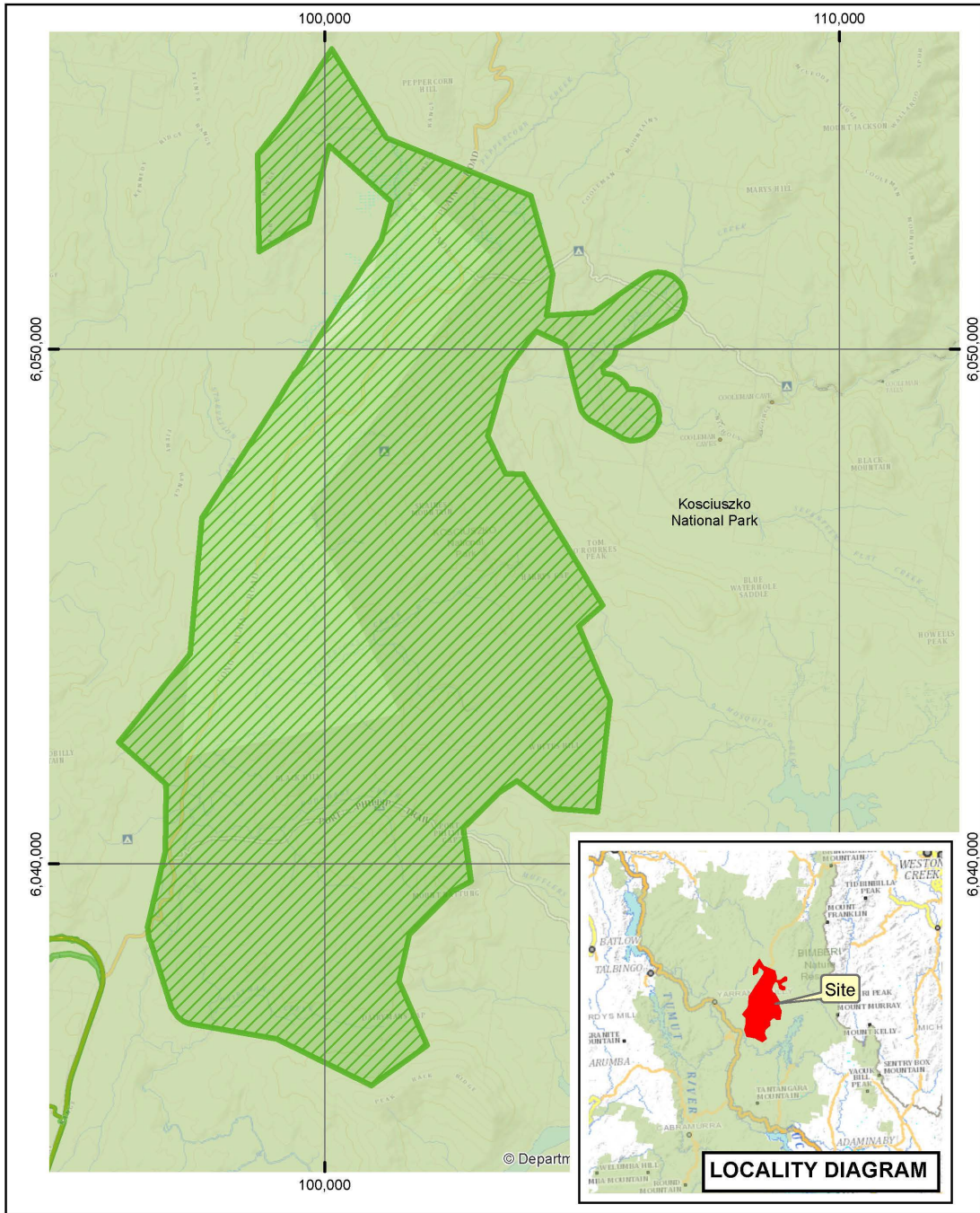
A report on the health and condition of the value for which this AIS was declared will be prepared and published on the Department of Planning and Environment website: www.environment.nsw.gov.au. The report will summarise the baseline and current health and condition of the values of the declared land 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 assets (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)).

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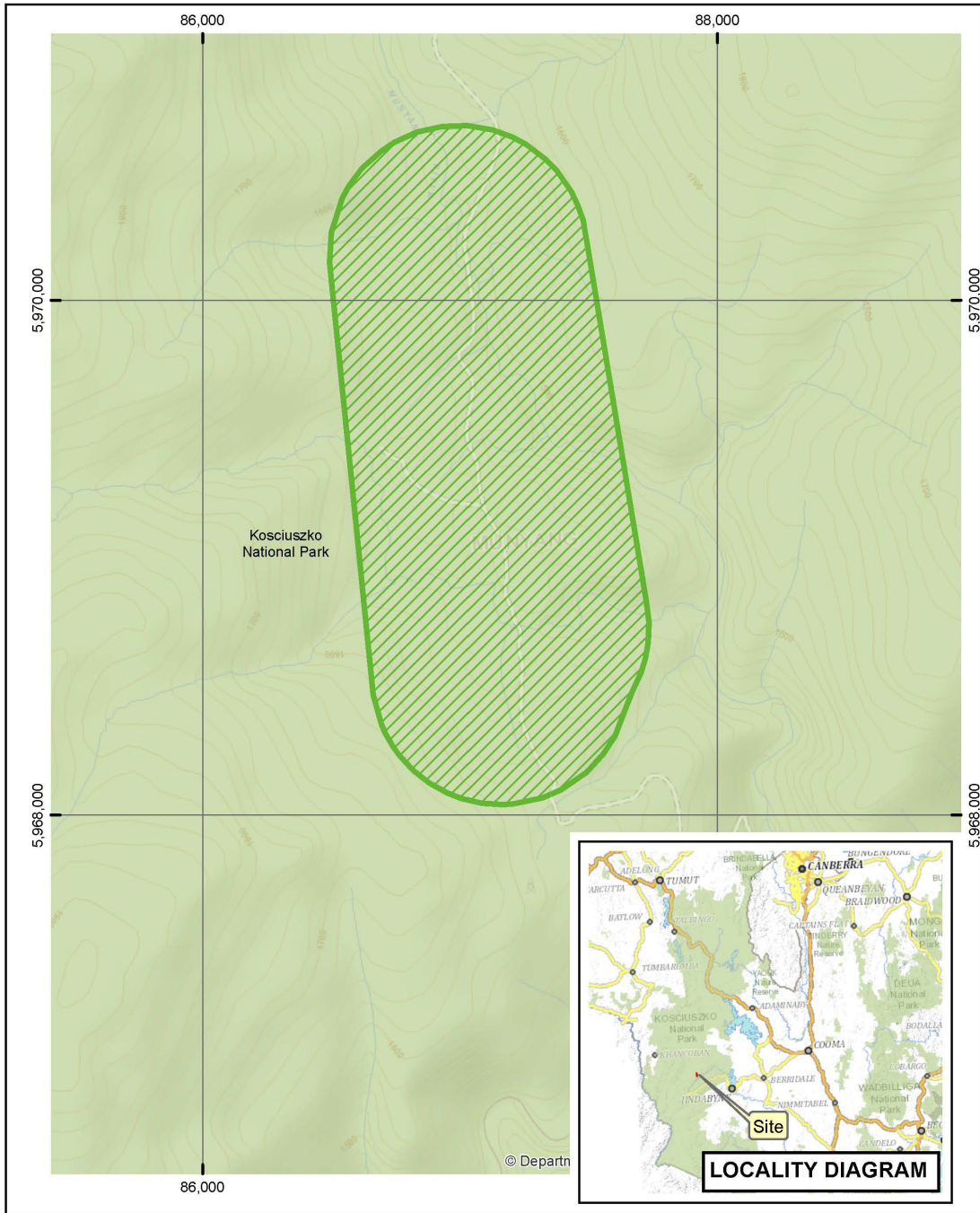
Legend	
	Declared Land
	Alpine she-oak skink (<i>Cyclodomorphus praealtus</i>)
	Broad-toothed rat (<i>Mastacomys fuscus</i>)
	NPWS Estate

AIS-E0-160
Asset of Intergenerational Significance
Alpine she-oak skink (*Cyclodomorphus praealtus*) and Broad-toothed rat (*Mastacomys fuscus*)
Kosciuszko National Park



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Broad-toothed rat (*Mastacomys fuscus*)
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Legend


-  Declared Land
-  NPWS Estate

AIS-E0-189
Asset of
Intergenerational Significance
Broad-toothed rat
(*Mastacomys fuscus*)
Kosciuszko National Park

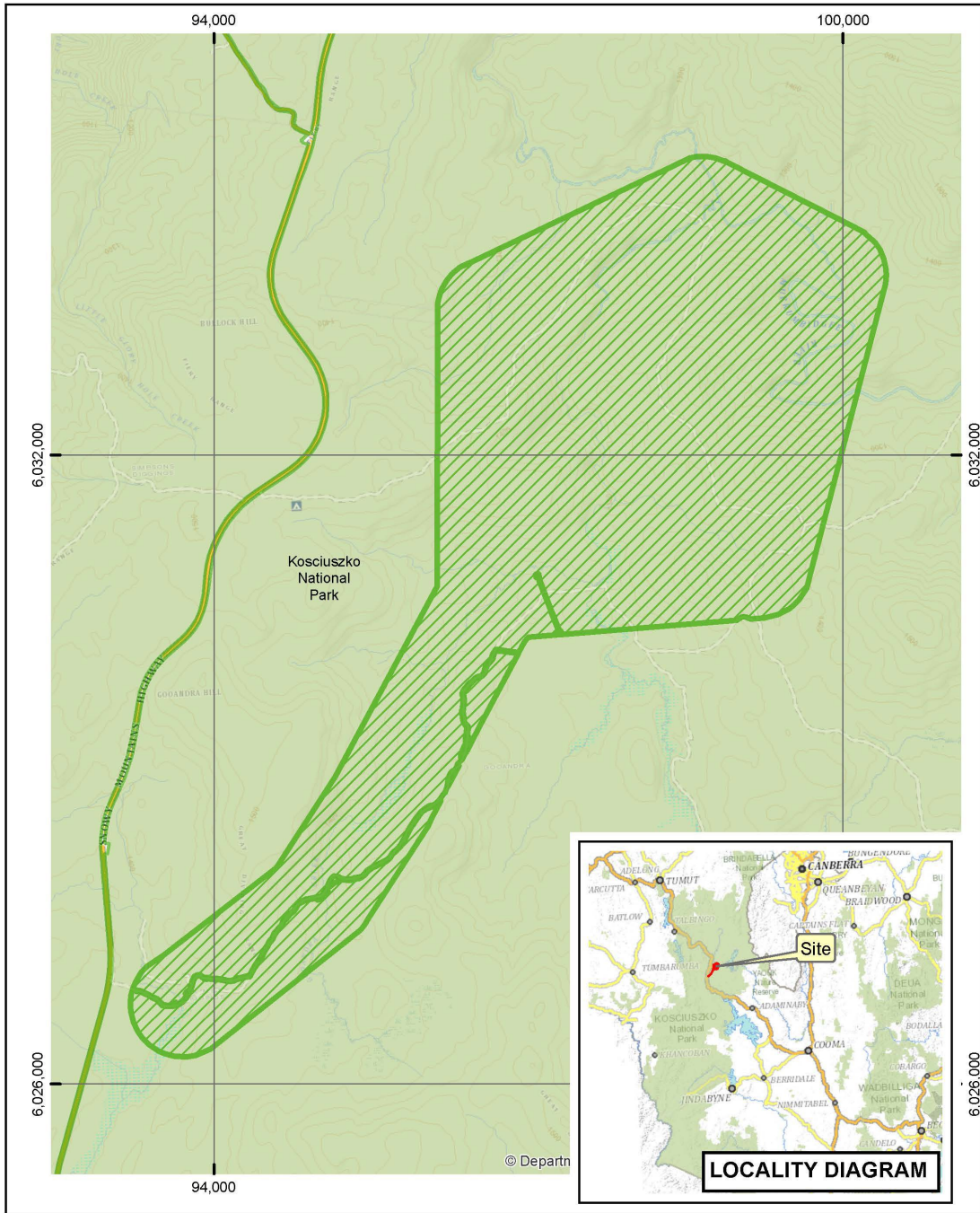
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 GOVERNMENT



Broad-toothed rat (*Mastacomys fuscus*)
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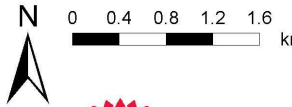
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-  Declared Land
-  NPWS Estate


AIS-E0-194
Asset of
Intergenerational Significance
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Kosciuszko National Park

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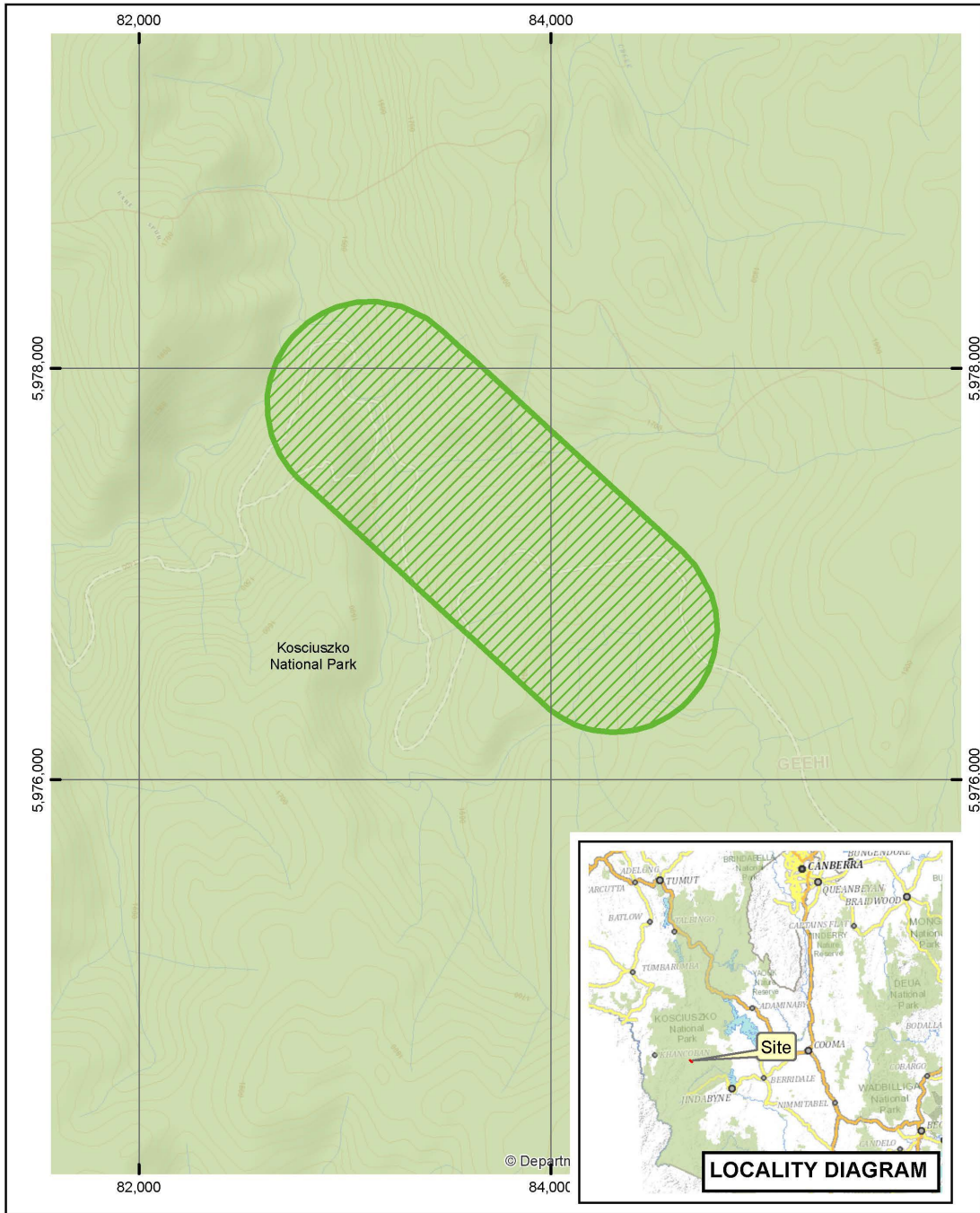
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GOVERNMENT



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Legend

-  Declared Land
-  NPWS Estate

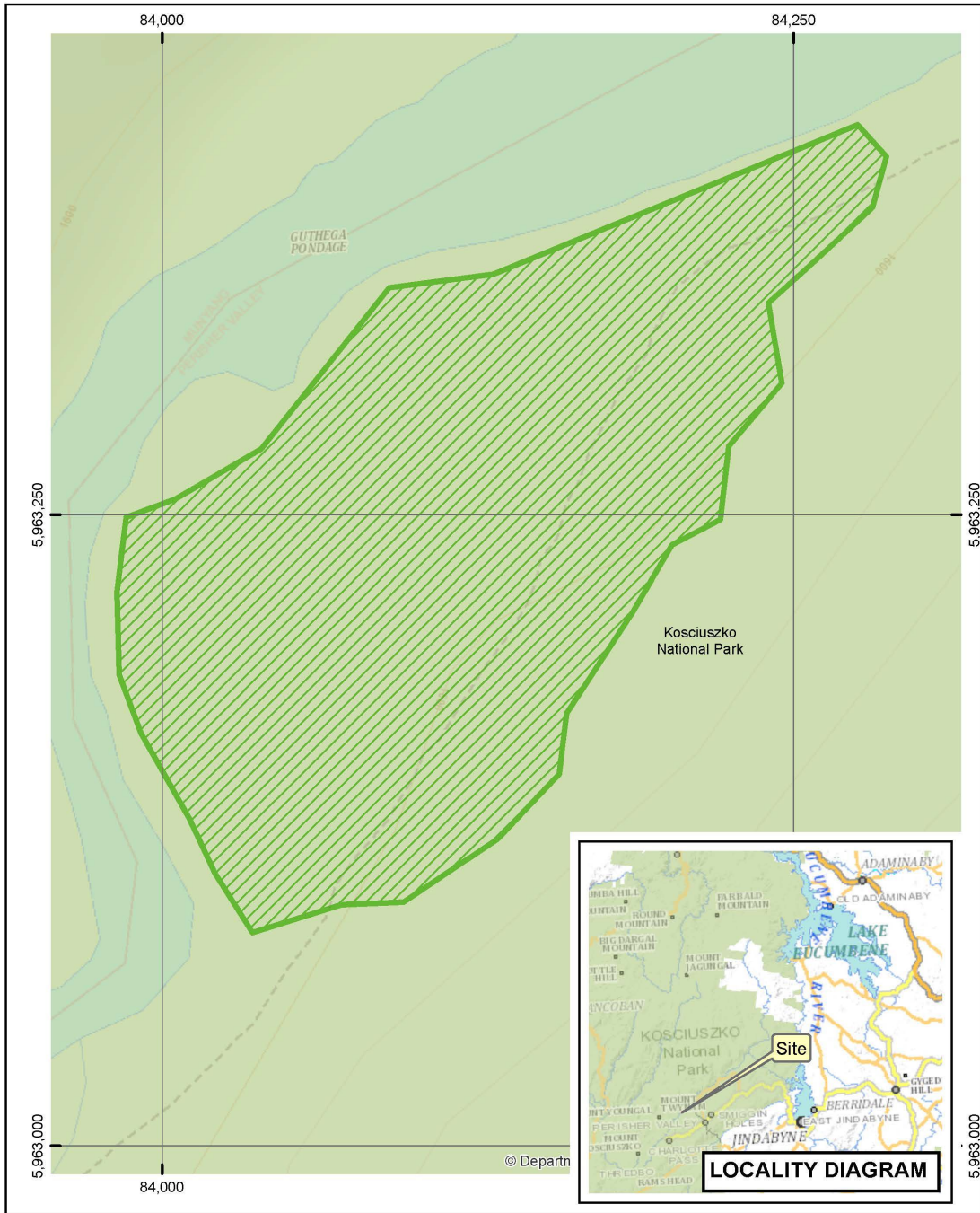
AIS-E0-214
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Legend


-  Declared Land
-  NPWS Estate

AIS-E0-215
Asset of
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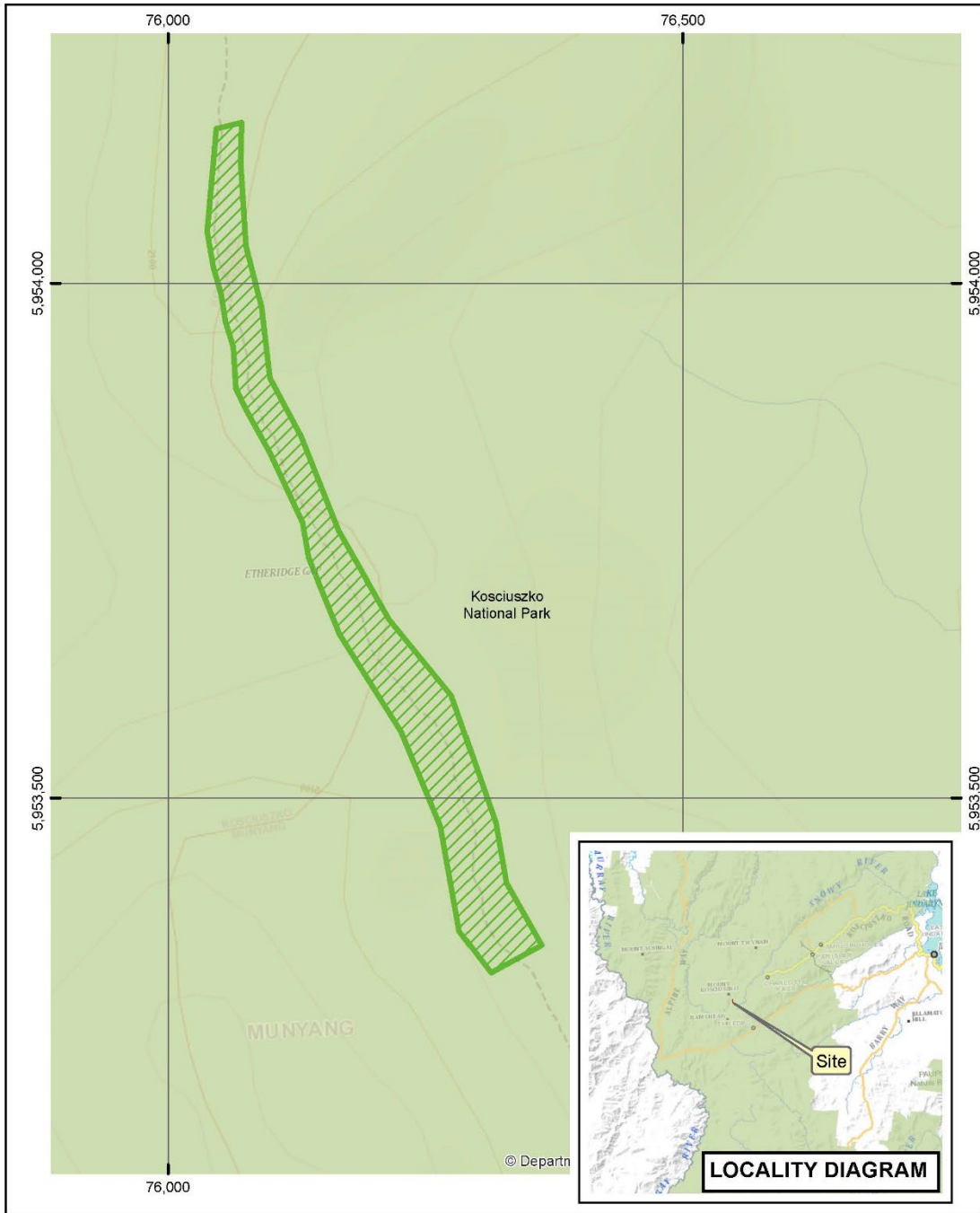
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NSW
GOVERNMENT



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Legend

-  Declared Land
-  NPWS Estate

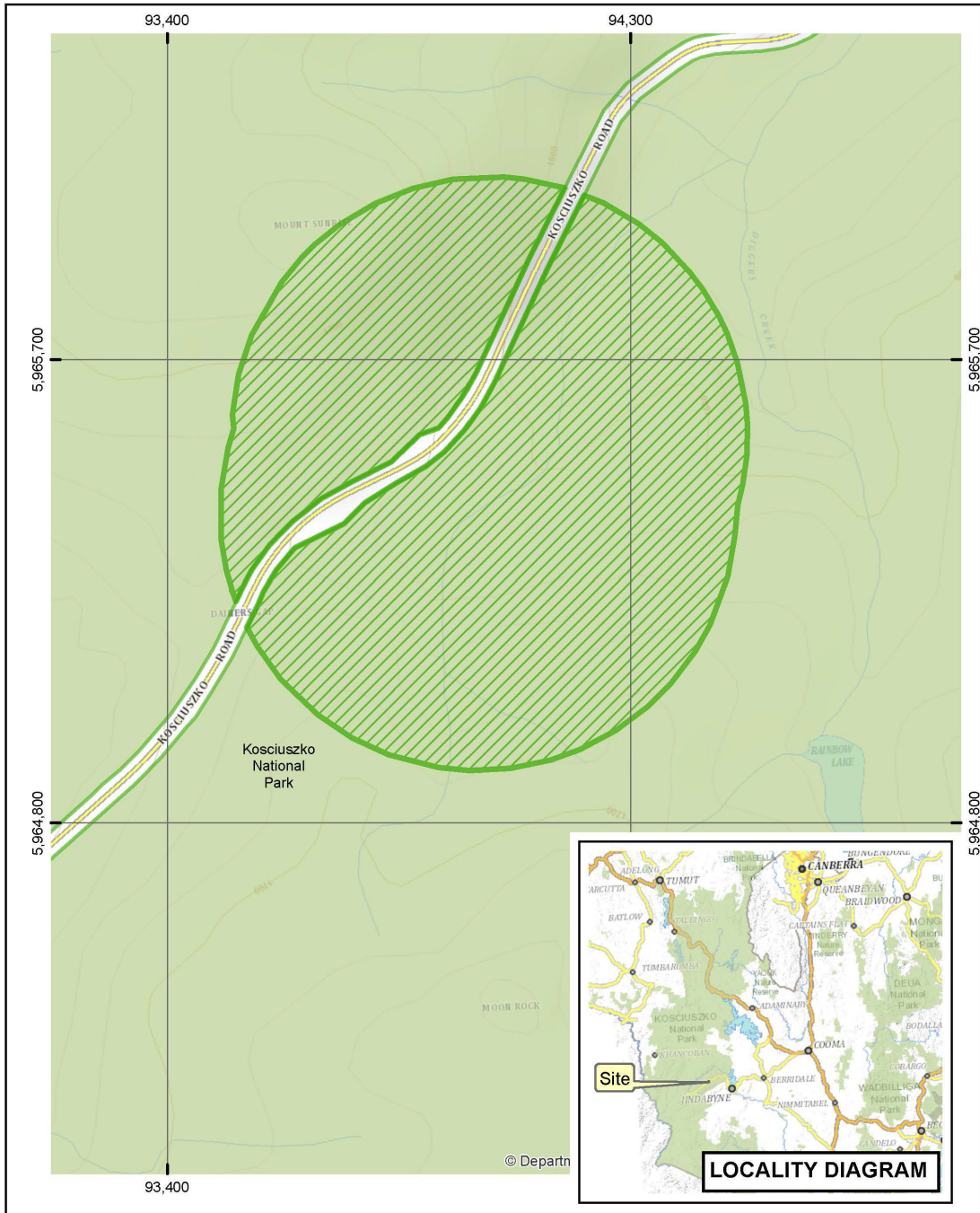
AIS-E0-216
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Legend

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Date prepared	March 2023
Date approved	June 2023
Approved by	Atticus Fleming, Acting Coordinator General, Environment and Heritage Group
Due for review	June 2028

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