Conservation Action Plan

Haloragodendron lucasii

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-E0-041, AIS-E0-042, AIS-E0-043, AIS-E0-044
Site location	An area of 293 hectares in Ku-ring-gai Chase National Park An area of 12 hectares in Garigal National Park
NPWS contact	Team Leader Conservation, Greater Sydney 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 *Haloragodendron lucasii*	*Haloragodendron lucasii* is an erect, hairless clonal shrub 1.5 metres tall. The species has creamy white flowers and is associated with dry sclerophyll forest. It grows in moist sandy loam soils in sheltered aspects and on gentle slopes below cliff-lines near creeks in low, open woodland. It is an endangered plant with the largest population for this species occurring in Ku-ring-gai Chase National Park and a small population in Garigal National Park.

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	Too-frequent or too-intense fires may deplete the rootstocks of existing populations. This risk is exacerbated by the fragmented distribution of the species and small population size at the sites.
Disturbance	Damage to individual plants and habitat through trampling and compaction by unauthorised visitor access and use of the site. This risk is exacerbated by the fragmented distribution of the species and small population size at the sites.
Pathogens, diseases and microorganisms	Infection by *Phytophthora cinnamomi* can result in mortality of individual plants.
Weeds	Habitat degradation by invasion of weeds to the extent that recruitment or establishment of plants is prevented.

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	• Develop guidance on the appropriate fire management for the habitat of *Haloragodendron lucasii* by 30 June 2022 and update as required. This guidance must provide for: - 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.
Disturbance	All sites	• Where required, install signage and fencing to reduce the likelihood of unauthorised visitor use and/or to avoid significant impacts from authorised use.
Pathogens, diseases and microorganisms	All sites	• Implement hygiene protocols as outlined in the DPIE Hygiene Guidelines (as published at 25 October 2021), as varied by any written advice from the Secretary from time to time for the purposes of the declared areas. • Develop an emergency response plan by 30 June 2022 and update the plan, as required. • Implement the emergency response plan in the event of an outbreak or evidence of serious impact of pathogenic phytophthora.
Weeds	All sites	• Remove weed species that negatively impact on areas occupied by *Haloragodendron lucasii*, such as preventing the recruitment or establishment of plants, by targeted application of physical and chemical weed control.
All risks	All sites	• Collect and store plant stems from a genetically representative sample, to maintain an ex-situ population. • Augment population with ex-situ material if the species declines below the population as identified in the 2022 population census.

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 taken 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)).

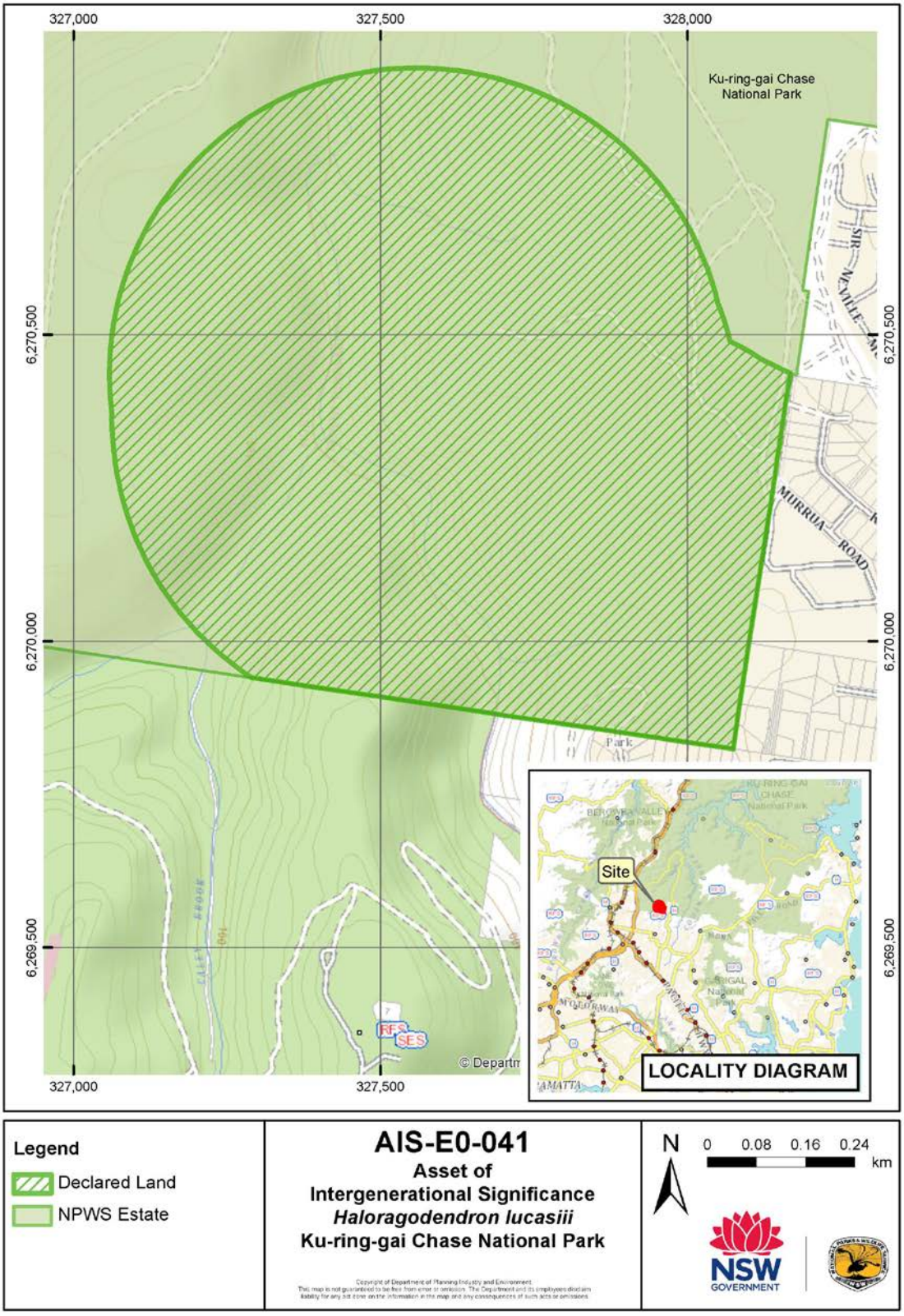
Attribute	Metric	Method
Health and condition of the *Haloragodendron lucasii* population	Population census: number of established stems	Design, and implement every three years, a survey to count the number of established stems in the population. The first survey is to be conducted by 30 June 2022.

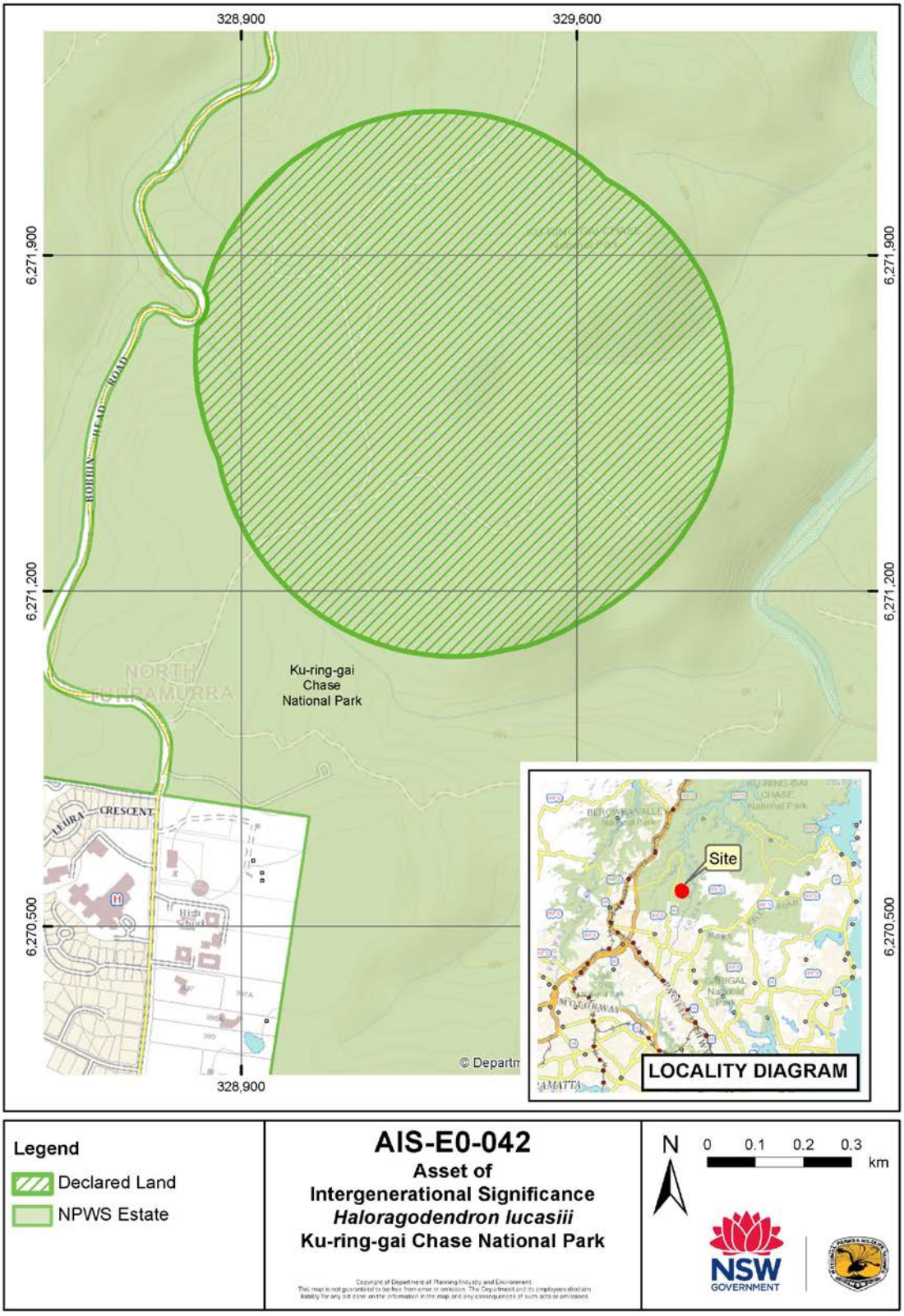
A report on the health and condition of the value for which this AIS was declared will be prepared and published on the Department of Planning and Environment, Environment, Energy and Science website. The report will summarise the baseline and current health and condition of the values of the declared 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)).


327,000
327,500
328,000
6,270,500
6,270,000
6,269,500
Ku-ring-gai Chase
National Park
MURRUA ROAD
Site
LOCALITY DIAGRAM
RFS
SES
Legend
Declared Land
NPWS Estate
AIS-E0-041
Asset of
Intergenerational Significance
Haloragodendron lucasiii
Ku-ring-gai Chase National Park
N
0 0.08 0.16 0.24
km
NSW
GOVERNMENT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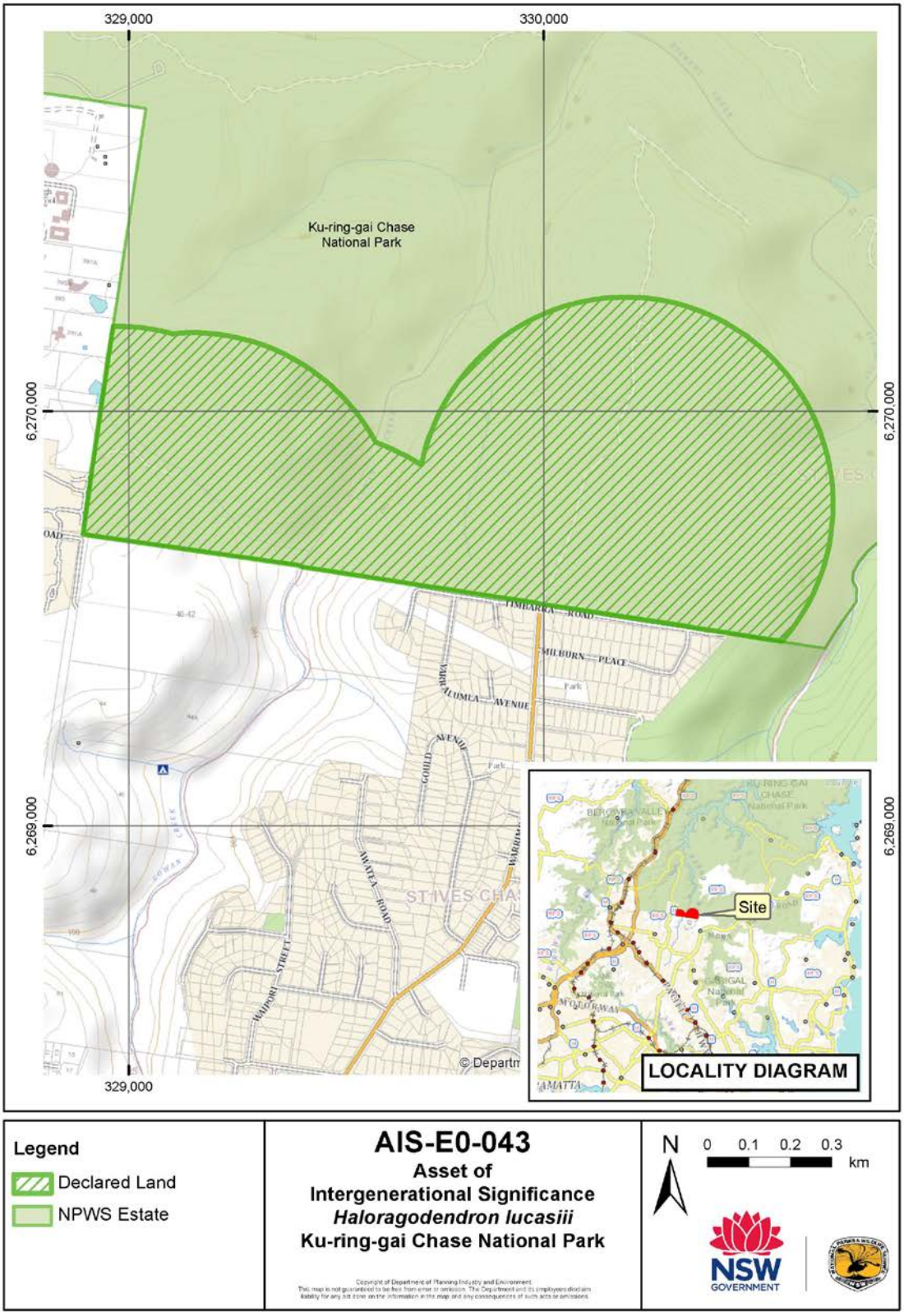
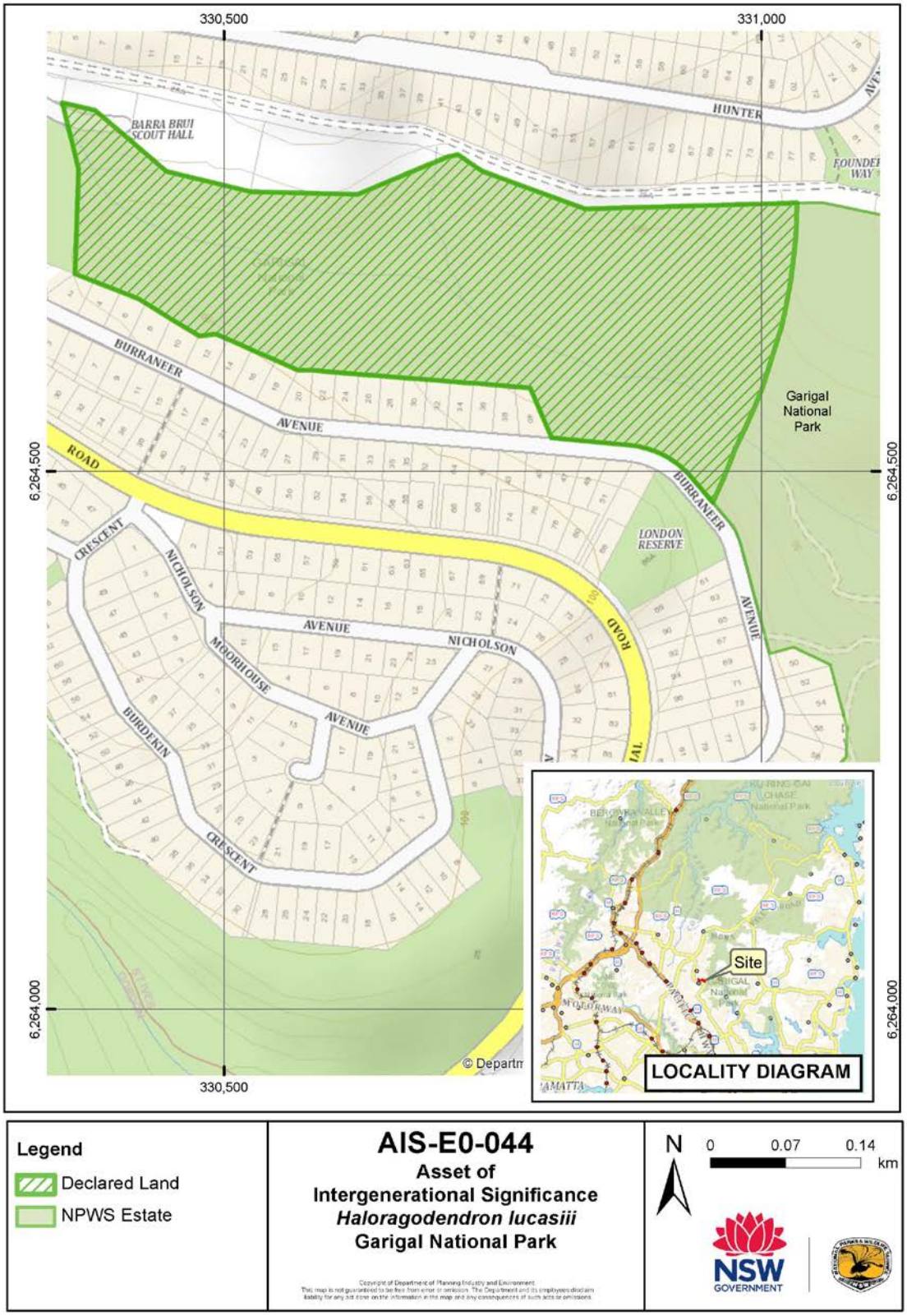
329,600
6,271,900
6,271,200
6,270,500
BOBBIA HEAD ROAD
Ku-ring-gai
Chase
National Park
NORTH TURRAMURRA
LEURA CRESCENT
High School
Site
LOCALITY DIAGRAM
Legend
Declared Land
NPWS Estate
AIS-E0-042
Asset of
Intergenerational Significance
Haloragodendron lucasii
Ku-ring-gai Chase National Park
N
0 0.1 0.2 0.3
km
NSW
GOVERNMENT


329,000
330,000
6,270,000
6,269,000
Ku-ring-gai Chase
National Park
TIMBARRA ROAD
MILBURN PLACE
WARRIMOOMA AVENUE
GOULD AVENUE
WARRIMA
WATTLE ROAD
WAIPORI STREET
ST IVES CHASE
© Departm
Site
LOCALITY DIAGRAM
Legend
Declared Land
NPWS Estate
AIS-E0-043
Asset of
Intergenerational Significance
Haloragodendron lucasiii
Ku-ring-gai Chase National Park
N
0 0.1 0.2 0.3
km
NSW
GOVERNMENT


330,500
331,000
6,264,500
6,264,000
HUNTER
BARRA BRUI SCOUT HALL
BURRANEER
AVENUE
ROAD
Garigal National Park
LONDON RESERVE
CRESCENT
NICHOLSON
MOORHOUSE
BURDEKIN
Site
LOCALITY DIAGRAM
Legend
Declared Land
NPWS Estate
AIS-E0-044
Asset of
Intergenerational Significance
Haloragodendron lucasii
Garigal National Park
N
0
0.07
0.14
km
NSW GOVERNMENT

Date prepared	October 2021
Date approved	5 February 2022
Approved by	Atticus Fleming, Deputy Secretary NPWS
Due for review	February 2027

Environment, Energy and Science, Department of Planning and Environment,
Locked Bag 5022, Parramatta NSW 2124
Phone: 1300 361 967; email: info@environment.nsw.gov.au; www.environment.nsw.gov.au
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