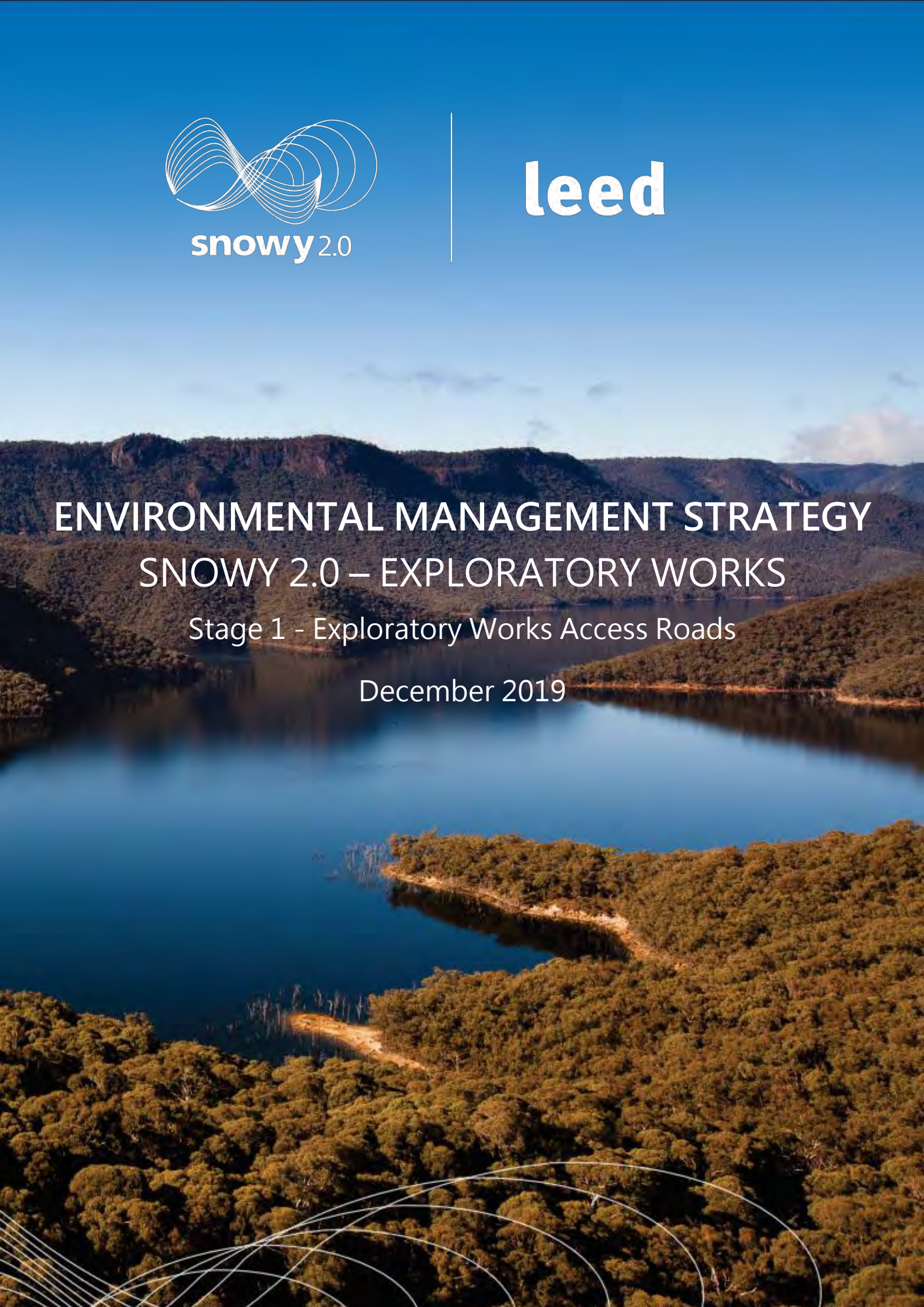

ENVIRONMENTAL MANAGEMENT STRATEGY

SNOWY 2.0 – EXPLORATORY WORKS

Stage 1 - Exploratory Works Access Roads

December 2019

Environmental Management Strategy

Stage 1 – Exploratory Works for Access Roads

Rev 1

Report Snowy 2.0 - Exploratory Works - Environmental Management Strategy | Prepared for Snowy Hydro Limited | 16 December 2019

Document Control

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Abbreviations and Glossary

AFL	Deed of Agreement for Lease (18 December 2018)
AHD	Australian Height Datum
AHMP	Aboriginal Heritage Management Plan
AQHMP	Aquatic Habitat Management Plan
ANZECC	Australian and New Zealand Environment and Conservation Council
AS	Australian Standard
AQMP	Air Quality Management Plan
BCD	Biodiversity and Conservation Division
BMP	Biodiversity Management Plan
CLMP	Contaminated Land Management Plan
CMS	Construction Method Statements
CoA	Conditions of Approval for the Snowy 2.0 Exploratory Works project
Contractor	For the Exploratory Works for Access Roads – Leed Construction Pty Ltd
CSSI	Critical State Significant Infrastructure
CMRP	Compliance Monitoring and Reporting Program
DoI Water	NSW Department of Industry – Lands and Water
DPIE	NSW Department of Planning, Industry and Environment *Formerly* NSW Department of Planning and Environment
EEC	Endangered Ecological Communities
EIS	*Environmental Impact Statement Exploratory Works for Snowy 2.0*
EMMP	Excavated Material Management Plan
EMS	Environmental Management Strategy
Environmental aspect	Defined by AS/NZS ISO 14001:2004 as an element of an organisation's activities, products or services that can interact with the environment
Environmental impact	Defined by AS/NZS ISO 14001:2004 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects
Environmental objective	Defined by AS/NZS ISO 14001:2004 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve
Environmental policy	Statement by an organisation of its intention and principles for environmental performance
Environmental target	Defined by AS/NZS ISO 14001:2004 as a detailed performance

	requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA	NSW Environment Protection Authority
EP (Bushfire)	Emergency Plan (Bushfire)
ERMP	Emergency Response Management Plan
EWMS	Environmental Work Method Statement
GWMP	Groundwater Management Plan
HNHMP	Historic and Natural Heritage Management Plan
KNP	Kosciusko National Park
MTMP	Maritime Traffic Management Plan
NOAMP	Naturally Occurring Asbestos Management Plan
NVMP	Noise and Vibration Management Plan
NPWS	National Park and Wildlife Service
OEH	Office of Environment and Heritage
POEO Act	*Protection of the Environment Operations Act 1997*
REMM	Revised Environmental Management Measures
RMP	Rehabilitation Management Plan
RTS or Submissions Report	*Response to Submissions Exploratory Works for Snowy 2.0*
Secretary	Secretary of the Department of Planning and Environment
Snowy 2.0	A pumped hydro-electric expansion of the Snowy Scheme that will link the two existing reservoirs of Tantangara and Talbingo through underground tunnels, and include a new underground power station with pumping capabilities
Snowy Hydro	Snowy Hydro Limited
SSI	State Significant Infrastructure
Submissions Report	*Response to Submissions Exploratory Works for Snowy 2.0*
POEO Act	*Protection of the Environment Operations Act 1997*
Project, the	Snowy 2.0 – Exploratory Works
SWMP	Surface Water Management Plan
TARP	Trigger Action Response Plan
TRMP	Talbingo Recreational Management Plan
TMP	Traffic Management Plan
WMP	Water Management Plan
Waste MP	Waste Management Plan

1 Introduction

1.1 Background

Snowy Hydro Limited (Snowy Hydro) is the proponent of the Snowy 2.0 project which is a pumped hydro-electric storage and generation project proposed to address increasing demands for renewable energy supplies. Snowy 2.0 involves linking Talbingo and Tantangara reservoirs within the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme) and building an underground power station between the two reservoirs.

Snowy Hydro proposes to carry out Exploratory Works prior to the main construction works for the Snowy 2.0 project. The Exploratory Works will inform detailed design and reduce overall project risk.

On 7 March 2018 the NSW Minister for Planning declared Snowy 2.0 to be State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI) under the *Environmental Planning and Assessment Act 1979* (EP&A Act) on the basis that it is critical to the State for environmental, economic or social reasons.

The Environmental Impact Statement for the Exploratory Works for Snowy 2.0 was submitted to Department of Planning and Environment in July 2018 and publicly exhibited between 23 July 2018 and 20 August 2018. A total of 58 submissions were received during the public exhibition period, including four from special interest groups and 54 individual community submissions. In October 2018, the response to submissions was prepared (*Response to Submissions Exploratory Works for Snowy 2.0*).

Following consideration of this document and the Environmental Impact Statement, approval was granted by the Minister for Planning on 7 February 2019.

On 8 May 2019 this Environmental Management Strategy and associated management plans were approved by the Minister for Planning.

As the Project has progressed and scope changes and design improvements have been identified, Snowy Hydro Limited sought a Modification to the exploratory works consent which has been submitted to DPIE as MOD1 and which was approved by DPIE on 2 December 2019.

1.2 Purpose

This Environmental Management Strategy (EMS) presents the framework for environmental management for Stage 1 of Snowy 2.0 - Exploratory Works (the Project).

This EMS has been prepared to address the requirements of the Infrastructure Approval, the *Environmental Impact Statement Exploratory Works for Snowy Hydro 2.0*, and the revised environmental management measures within the *Response to Submissions Exploratory Works for Snowy 2.0* (RTS or Submissions Report).

This EMS also addresses the requirements of the RTS to prepare a CEMP for the project. To limit duplication, a separate CEMP has not been prepared, and instead this EMS has been prepared to meet both the requirements of the conditions of the Approval in the preparation of an EMS, and any requirements in the RTS for the CEMP.

The purpose of this EMS is to provide a structured approach to the management of environmental issues during Stage 1b of the project. Implementing this EMS will ensure that the Contractors engaged by Snowy

Hydro, and therefore Snowy Hydro themselves, meet regulatory and approval requirements in a systematic manner. In particular, this EMS:

- describes the project and activities to be undertaken;
- describes the strategic framework for environmental management of the project;
- identifies the approvals, licences and permits that relate to the project;
- describes the roles and responsibilities of personnel in relation to environmental management;
- describes the procedures that will be implemented for community consultation and notification, and complaints management;
- outlines a monitoring regime for construction.

In addition to these targets, the strategy is designed to meet the following objectives and to align with the already strong commitment Snowy Hydro has to environmental protection as a long-term employer and stakeholder within the Kosciusko National Park region:

- comply with all legislative requirements;
- construct the Project in accordance with the conditions of the Infrastructure Approval, the revised environmental management measures and any other environmental approvals;
- engage with stakeholders and the broader community, minimise complaints and respond to any complaints within a suitable timeframe;
- continuously improve environmental performance; and
- recognition of the role of National Parks and Wildlife Service (NPWS) as landlord under the Deed of Agreement for Lease (AFL).

In accordance with condition 3 of Schedule 4 of the Infrastructure Approval, a Staging Plan outlining the proposed staging of management plans has been submitted to Department of Planning, Industry and Environment (DPIE) for the agreement of the Planning Secretary. This Staging Report was prepared to address the proposed staging of the project and to provide detail on the application of the conditions of the Infrastructure Approval for each stage, and consequently, the submission of the post-approval documents which are required to be prepared.

1.3 Consultation

In accordance with the conditions of the Infrastructure Approval, many of the management plans, strategies and programs which are required to be prepared for the Project, are to be developed in consultation with relevant stakeholders and agencies.

Consultation required for these management plans, strategies and programs is detailed within Table 1.1, with ‘S’ indicating that the document is to be prepared to the satisfaction of that agency and ‘C’ indicating that consultation is required.

Table 1.1 Consultation required for the management plans, strategies and programs

Document	Condition or requirement	Timing of document	Dept of Planning & Environment	National Parks and Wildlife Service	NSW Environment Protection Authority	Department of Primary Industries – Fisheries	Department of Industry - Water	Office of Environment and Heritage	Relevant Registered Aboriginal Parties	NPWS Tumut Brungle Gundagai Aboriginal Community Executive Advisory Committee	Snowy Valleys Council	Snowy Monaro Regional Council	Roads and Maritime Services	NSW Rural Fire Services
Environmental Management Strategy	Condition 1 of Sch 4	Prior to development	S											
App B1 - Biodiversity Management Plan, which includes:	Condition 6 of Sch 3; REMM ECO01; REMM ECO04	Prior to construction	S	C		C*		C						
• Weed and Feral Animal Management Plan	Section 4.11.4 of the RTS													
App B2 - Water Management Plan, which includes: • Surface Water Management Plan • Groundwater Management Plan	Condition 34 of Sch 3 REMM SOIL02	Prior to construction	S	C	C	C	C							
App B3 - Aboriginal Heritage Management Plan	Condition 14 of Sch 3; REMM HER01	Prior to development that could affect the Aboriginal heritage items	S	C				C	C	C				
App B4 - Historic & Natural Heritage Management Plan	Condition 20 of Sch 3; REMM HER03	Prior to development that could affect the historic or natural heritage items	S	C				C						
App B5 - Traffic Management Plan	Condition 46 of Sch 3; REMM TRA01	Prior to development	S	C							C	C	C	
App B6 - Emergency Plan (Bushfire)	Condition 54 of Sch 3; REMM PUS02	Prior to development		S										C*
App B7 - Excavated Material Management Plan	Condition 29 of Sch 3; REMM CON02	Prior to carrying out any excavation	S	S	C									
App B11 - Aquatic Habitat Management Plan	Condition 8 of Sch 3	Prior to construction in Talbingo Reservoir, Yarrangobilly River and Wallaces Creek	S	C		C								
App B12 - Worker – Recreational Management Plan	Condition 2 of Sch 3	Prior to construction	S	C										
Required to be prepared by the EIS or RTS														
Contaminated Land Management Plan	REMM CON01	Prior to construction												
Naturally Occurring Asbestos Management Plan	REMM CON01	Prior to construction												
Noise and Vibration Management Plan	REMM KNP01; REMM NOI01	Prior to construction												
Air Quality Management Plan	REMM AIR01	Prior to commencement												
Waste Management Plan	RTS 4.11.3	Prior to construction												
Emergency Response Plan, which includes: • Flood Emergency Response Plan	REMM PUS01 Section 4.1.7 of the RTS	Prior to construction												
Landscape Management Plan	REMM KNP06; REMM SOIL03	Within 6 months of carrying out development												

S – Satisfaction; C – Consultation
* This process is required by the REMMs or background environmental documents.

The draft EMS was issued to stakeholder agencies in November 2018. Comments were received from National Parks and Wildlife Service on 7 December 2018 and have been incorporated into this EMS. The comments received, and responses provided through the agency review process, will be collated within a separate document.

As required by condition 1 of Schedule 4, the EMS and relevant management plans will be submitted to Department of Planning and Environment.

1.4 Plans prepared to the satisfaction of DPIE

The EMS and relevant management plans (as required by the Approval) will be submitted to Department of Planning and Environment for confirmation that the document has been prepared to the satisfaction of the Secretary.

As required by the conditions, the Emergency Plan (Bushfire), Excavated Material Management Plan and the Rehabilitation Management Plan will also be prepared to the satisfaction of National Parks and Wildlife Service.

Following approval / acceptance of the document, the Proponent and Contractor will be responsible for the implementation of this EMS.

1.5 Distribution

The Contractor's Environment Manager will coordinate the preparation, review and distribution, as appropriate, of the environmental documents. During construction, environmental documents will be stored at the site office and can be accessed by request to the Contractor's Environment Manager.

The EMS and relevant management plans, programs or strategies will be made available to all personnel and subcontractors either by hard copy of through the project document control system. An electronic copy will also be placed on the Project website. This document is uncontrolled when printed.

Registered copies will be distributed to:

- Snowy Hydro's Representative;
- Snowy Hydro's Environment Manager;
- the Contractor's Project Manager;
- the Contractor's Environment Manager.

1.6 Review and improvement

1.6.1 Revision

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the Contractor's Environment Manager to prepare the revised documents.

In accordance with condition 4 of Schedule 4 of the Infrastructure Approval, within three months, unless otherwise agreed with the Planning Secretary, of:

(a) the submission of an incident report under condition 5;

(b) the submission of an audit report under condition 7; and

(c) the approval of any modification to the conditions of the Infrastructure Approval; or

(d) a direction of the Planning Secretary under condition 4 of schedule 2;

the Contractor's Environment Manager (acting on behalf of Snowy Hydro) must review, and if necessary revise, the strategies, plans, and programs required under the Infrastructure Approval to the satisfaction of the Planning Secretary.

Where this review leads to revisions in any such document, then within four weeks of the review, the revised document will be submitted to the Planning Secretary for approval, unless otherwise agreed with the Planning Secretary.

Where any revisions to the approved management plans, strategies or programs are made, the revised document will be issued to the Snowy Hydro for certification / acceptance of the changes prior to submission to DPIE for approval. In accordance with condition 3 of Schedule 4, revised strategies, plan or programs may be prepared without undertaking consultation with all parties nominated under the applicable condition in this approval. Any updates to other management plans which form part of the environmental management system however were not required by the approval, are to be submitted to Snowy Hydro for review and certification / acceptance.

Only the Environment Manager, or delegate, has the authority to change any of the environmental management documentation.

Should the EMS or management plans not require review or revision under condition 4, then they will be reviewed at least annually by the Contractor's Environment Manager.

The approved EMS will be held in the Contractor's site office and be available upon request. Revised versions of the EMS will be made available through the processes described in Section 1.5.

1.6.2 Continuous improvement

Continuous improvement of this Strategy will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

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

2 Project description

Snowy 2.0 responds to major and unprecedented challenges faced by the New South Wales energy system and broader National Electricity Market. These challenges relate to rising energy costs, a deterioration in the energy systems reliability, and a transition away from coal-fired, dispatchable, base-load power to intermittent renewable wind and solar power.

Snowy 2.0 involves linking Talbingo and Tantangara reservoirs within the existing Snowy Mountains Hydro-electric Scheme (Snowy Scheme) and building an underground power station between the two reservoirs. This will increase the current Snowy Scheme generation capacity by almost 50%. The increased quick-start generation and large-scale storage capacity provided by Snowy 2.0 will increase the security and reliability of the National Electricity Market.

The Exploratory Works package will occur prior to the main construction works for Snowy 2.0, with the Exploratory Works being undertaken to inform detailed design and overall reduce project risk. Exploratory Works are required to obtain detailed geological data for the proposed location of the underground power station.

The original EIS Exploratory Works scope includes:

- an exploratory tunnel about 3.1 km long to the site of the underground power station;
- horizontal and other test drilling, investigations and analysis in situ at the proposed cavern location and associated areas, and around the portal construction pad, access roads and excavated rock management areas all within the disturbance footprint;
- a portal construction pad for the exploratory tunnel. This will provide the entrance structure to the tunnel and an area for infrastructure and equipment needed to support tunnelling activities;
- an accommodation camp for the Exploratory Works construction workforce;
- road works and upgrades to enable access and haulage routes during Exploratory Works. This includes upgrades to 26 km of existing roads and creating about 2 km of new roads;
- barge access infrastructure to enable access and transport by barge on Talbingo Reservoir. This includes one new barge ramp at Talbingo Spillway in the northern part of Talbingo Reservoir and one new barge ramp at Middle Bay near Lobs Hole at the southern part of Talbingo Reservoir;
- excavated rock management, including subaqueous placement within Talbingo Reservoir. Up to 750,000 m^3 of excavated rock will need to be tested for its geochemical properties (ie whether the rock is reactive or non-reactive) before being managed by a combination of the following options:
  - re-use - suitable material can be used as construction materials for roads or similar. Some materials will be provided to NPWS for use in road maintenance and upgrades in other areas of KNP;
  - on land placement - material will be temporarily placed in one of two on land emplacement areas.
  - subaqueous placement within Talbingo Reservoir – suitable material will be placed at a suitable location within Talbingo Reservoir, subject to a number of water quality controls and monitoring; and
- services infrastructure such as diesel-generated power, water and communication;

- post-construction revegetation and rehabilitation, management and monitoring.

Having regard to the design changes identified in Modification 1, the scope now comprises the following listed in Table 1.1 below:

Table 2.1 New scope items for EW (Stage 1 & 2) as a result of MOD1

Stage 1	
Lobbs Hole Substation	Additional disturbance area required for the construction power connection to an existing transmission line (Line 2) at Lobs Hole for power supply to the Exploratory Works accommodation camp and construction areas. This will provide a reliable and long-term source of construction power and will reduce the reliance on diesel generation and associated on-site storage requirements and emissions. Works in this area will include establishing a substation, connection infrastructure, access roads and ancillary construction areas; This will include: • construction of a 330/33 kV substation within Kosciuszko National Park and adjacent to Line 2, which forms a 330-kV connection between Upper Tumut Switching Station and Yass Substation; • geotechnical investigation works to inform the detailed design of the construction power substation; • replacement of one transmission support structure (Structure 54) within the existing transmission easement. This will involve removal of the existing structure and establishment of one new steel lattice tower, approximately 50 m in height; • short overhead 330 kV transmission line connections (approximately 100 m in length) between the substation and the new Structure 54; • 33 kV feeder connection between the substation and the Exploratory Works construction power network. This will be either overhead lines or underground cables; • establishment and upgrade of access tracks and roads to the new substation and transmission line structures; • installation of a fibre optic communication link into the new substation from the approved communication network; and • ancillary activities, including brake and winch sites, crane pads, site compounds and equipment laydown areas. (Illustrated Appendix A7 Figure 1i)
Camps Bridge and Wallaces Creek	• additional disturbance area around Camp Bridge and Wallaces Creek Bridge required for improved constructability of the crossings. Works within these areas will include vegetation clearing, levelling earthwork, erection of falsework, sediment controls, laydown, parking and movement of equipment; (Illustrated in Appendix A7 Figures 1h and 1i of this plan and Modification 1 Assessment Report Figure 3.9)
Lobs Hill Ravine Road and Construction Boundary Changes	• minor changes to the project boundary identified through detailed design including: – revised road upgrade for Lobs Hole/Ravine Road to improve access, drainage and safety; – minor additions to construction areas for design optimisation. • removal of dangerous trees on Lobs Hole Ravine Road. This will involve either complete or partial removal of up to 91 trees that have been

	identified to pose a safety risk to road users on Lobs Hole Ravine Road and Mine Trail Road; (Illustrated in Appendix A7, Figures 1d, 1e, 1f and 1i)
Operating Hours	• modify operating hours from existing 7 am to 6pm to sunrise to sunset
Miscellaneous	• continued use of existing communications towers within KNP that were previously approved by the NPWS under a separate review of environmental factors (REF R – Wallaces Creek Geotechnical drilling) environmental impact assessment carried out under the NSW National Parks and Wildlife Act 1974 (NPW Act) and its regulation for the geotechnical investigation program; and • increase in peak traffic volumes. Additional vehicles will be required to access the site to facilitate construction of Exploratory Works, however no change in impacts to the road network are expected. (location of communications towers illustrated in Appendix A7 Figures 1a, 1f, 1l)
Stage 2	
Borehole drilling and geophysical surveys	• Borehole drilling and geophysical surveys for further geotechnical investigation of the Snowy 2.0 power station and power waterway at Marica, Talbingo and Tantangara; • clearing of up to 2.79 hectares (ha) of additional vegetation for access tracks and drilling pads. • About 1.33 ha within Smokey Mouse potential habitat; • trimming of overhanging dangerous branches on adjacent trees (these trees will not require removal); • mulching of trees and vegetation; • establishment of an additional 1 km of access tracks (4 m wide), including minor earthworks, • placement of geofabric (as required) and import of stabilised material; • establishment of eight drilling pads and boreholes at top of the cavern area, with an area of 900 m2 per pad, including minor earthworks, placement of geofabric (as required) and import of stabilised material (as required); • undertaking geophysical surveys near Talbingo and Tantangara reservoirs; • establishment of two drilling pads and boreholes at both Tantangara and Talbingo with an area of • 900 m2 per pad, including approximately 400 m of additional access tracks and minor earthworks (as required); • establishment of in-reservoir boreholes including one in Talbingo Reservoir and two in Tantangara Reservoir; • drilling of additional nested vertical boreholes at each of the drilling pads up to a depth of 1,100 m; • conversion of the investigation boreholes into monitoring bores; • undertaking geophysical surveys; and • rehabilitation of the drilling pads and access tracks following completion of works • ongoing maintenance of existing access tracks required for geotechnical investigations within KNP

	(Illustrated in (Illustrated in Appendix A7 Figure 1j, 1k, 1l, 1m and 1n)
Talbingo Laydown	Outside of KNP, SHL is proposing to add four laydown locations to facilitate the construction of the communications cable linking Lobs Hole with the Tumut 3 Power Station. These are proposed on existing hardstand areas along Talbingo Reservoir within Snowy Hydro owned land. (Illustrated in Appendix A7, Figure 1o)
Tantangara Access	Two additional geotechnical boreholes are required to facilitate the detailed design of cuttings, bridge foundations, retaining wall foundations, and drainage structures near Nungar Creek (Illustrated in Appendix A7, Figure 1m and 1n)

The regional location of the project is identified in Figure 2.2 and elements of the project are identified in Appendix A7.

The Exploratory Works is estimated to take around 30 to 34 months to complete.

As with most of the existing Snowy Scheme, the majority of Snowy 2.0 is within Kosciuszko National Park. Snowy Hydro has been working with NSW National Parks and Wildlife Service (NPWS) since the announcement of Snowy 2.0 to ensure long term management objectives for Kosciuszko National Park are considered in project development.

The Project has been designed in a way that avoids and minimises impacts to Kosciuszko National Park where possible. This has included the planning of access roads and construction areas to avoid impacting the heritage listed Washington Hotel ruins at Lobs Hole, and Smoky Mouse habitat along Upper Lobs Hole Ravine Road. It also includes designing road upgrades to minimise impacts to geodiversity features including a block stream and a fossil outcrop along Lower Lobs Hole Ravine Road. The former copper mine at Lobs Hole is also considered a geoheritage site, however it is also a source of known contamination and has therefore been avoided as much as possible to prevent disturbance.

While there are some unavoidable impacts during construction, the Exploratory Works will allow for a number of longer-term benefits and contributions to Kosciuszko National Park through a biodiversity offset program, improved access roads and recreational facility upgrades. The completion of Exploratory Works will also allow for the greater benefits of Snowy 2.0 to be realised.

2.1 Construction activities and sequencing

Exploratory Works will be delivered in three stages:

- **Stage 1a – Pre-construction Minor Works -** pending the approval process, works may commence in the first quarter of 2019. The scope of pre-construction minor works includes dilapidation studies, survey work, borehole installation, site office establishment, minor access roads, installation of monitoring equipment, installation of erosion and sediment controls, archaeological salvage and minor clearing;

- **Stage 1b – Exploratory Works Access Roads (EWAR)** - pending the approval process, works may commence in the first quarter of 2019. The scope includes roadworks and upgrades to enable access and haulage routes during Exploratory Works;

- **Stage 2 – Exploratory Works** - pending progress with Stage 1, works may commence in quarter three of 2019. The scope for Stage 2 will be the remainder of the Exploratory Works, including the exploratory tunnel, portal construction pad, accommodation camp and excavated rock management. Stage 2 also includes subaqueous emplacement within Talbingo Reservoir.

To present the staging of plans a separate Staging Report has been prepared and was submitted to Department of Planning and Environment. Timing of the Exploratory Work stages is presented below in Figure 2.2.

Figure 2.1 Timing of Exploratory Works stages

This Environmental Management Strategy has been prepared for Stage 1 of the Exploratory Works project and will be revised prior to commencement of Stage 2 works.

2.2 Stage 1 – Exploratory Works Access Roads

The Exploratory Works Access Roads will provide early access to the tunnel portal located to the east of the Talbingo Reservoir, and to Talbingo Reservoir itself. The works include upgrades to and/or construction of the following internal roads:

- Ravine Road;
- Mine Trail Road;
- Lobs Hole Road;
- Spillway Road;
- Wharf Road.

The EWAR will be undertaken by Leed Engineering. The scope includes but is not limited to the following:

- setting out the works including delineation of site boundaries;
- establishment of all site facilities required and removal upon completion, including all temporary safety and security measures required;
- locating and protecting all public and private utility services;
- maintenance of the existing roadway and associated infrastructure;
- clearing and grubbing of vegetation including creation of mulch and compost;
- establishment of short term and long-term erosion and sedimentation control systems and devices including detention and sedimentation basins;

- removal and disposal of existing infrastructure including pipes, culverts, drainage channels and other minor structures;
- excavation and stockpiling of topsoil;
- earthworks including excavation of cuttings, construction of fills including selected zone material, and placement of excess spoil in stockpile;
- winning of additional material from the Main Access Tunnel portal area should there be a shortfall of fill materials;
- progressive opening to traffic;
- treatment of cut and fill slope batter surfaces including slope retention systems where shown;
- construction of clean and dirty water drainage systems including culverts, open and subsoil drainage systems;
- construction of pavements including subgrades and pavements and road surfacing;
- design, supply, construction of temporary structures / bridges over Wallace Creek and the Yarrangobilly River and removal of completion;
- construction of permanent bridges over Wallace Creek and the Yarrangobilly River;
- installation of road furniture including but not limited to barriers, line marking, guide posts and road signs;
- placement / replacement of topsoil and revegetation and other surface treatments to disturbed earth surfaces including lining of open drains;
- clean up and restoration of work areas and areas disturbed by the contractor.

The additional EWAR scope as a result of MOD1 will include:

- construction of a 330/33 kV substation within Kosciuszko National Park and adjacent to Line 2, which forms a 330-kV connection between Upper Tumut Switching Station and Yass Substation;
- geotechnical investigation works to inform the detailed design of the construction power substation;
- replacement of one transmission support structure (Structure 54) within the existing transmission easement. This will involve removal of the existing structure and establishment of one new steel lattice tower, approximately 50 m in height;
- short overhead 330 kV transmission line connections (approximately 100 m in length) between the substation and the new Structure 54;
- 33 kV feeder connection between the substation and the Exploratory Works construction power network. This will be either overhead lines or underground cables;
- establishment and upgrade of access tracks and roads to the new substation and transmission line structures;

- installation of a fibre optic communication link into the new substation from the approved communication network; and

- ancillary activities, including brake and winch sites, crane pads, site compounds and equipment laydown areas.

- minor changes to the project boundary identified through detailed design including:

    - additional disturbance area around Camp Bridge and Wallaces Creek Bridge required for improved constructability of the crossings. Works within these areas will include vegetation clearing, levelling earthwork, erection of falsework, sediment controls, laydown, parking and movement of equipment;

    - additional disturbance area required for the construction power connection to an existing transmission line at Lobs Hole. Works in this area will include establishing a substation, connection infrastructure, access roads and ancillary construction areas;

    - revised road upgrade for Lobs Hole/Ravine Road to improve access, drainage and safety; and

    - minor additions to construction areas for design optimisation.

- removal of dangerous trees on Lobs Hole Ravine Road. This will involve either complete or partial removal of up to 91 trees that have been identified to pose a safety risk to road users on Lobs Hole Ravine Road and Mine Trail Road;

- continued use of existing communications towers within KNP that were previously approved by the NPWS under a separate review of environmental factors (REF R – Wallaces Creek Geotechnical drilling) environmental impact assessment carried out under the NSW National Parks and Wildlife Act 1974 (NPW Act) and its regulation for the geotechnical investigation program; and

- increase in peak traffic volumes. Additional vehicles will be required to access the site to facilitate construction of Exploratory Works, however no change in impacts to the road network are expected.

The works are proposed to commence in the first quarter of 2019.

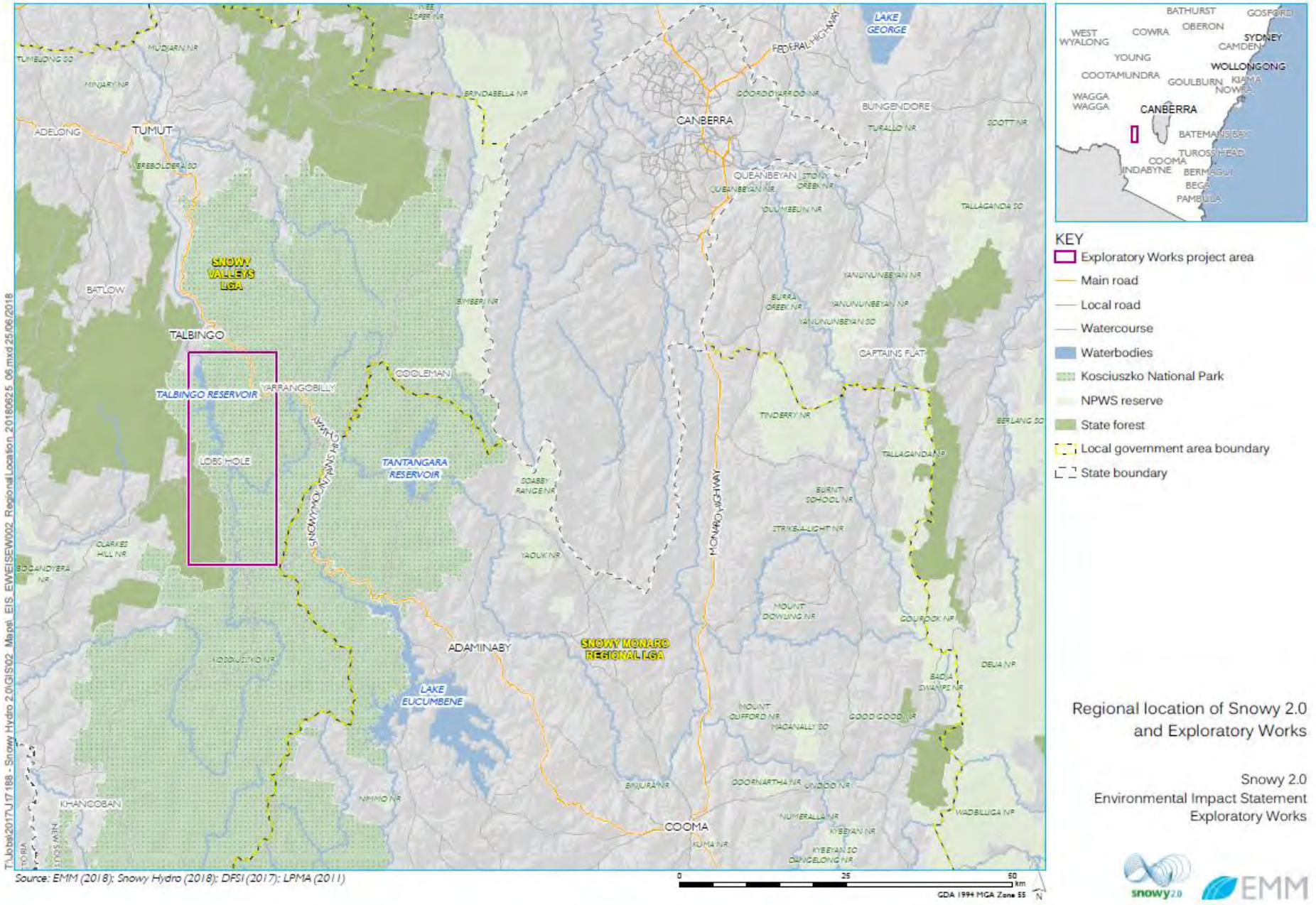


Figure 2.2 Regional location of Snowy 2.0 – Exploratory Works (EIS, EMM)

2.3 Construction hours

Construction works associated with the Project will only be undertaken during the following approved hours, except as approved otherwise through the out of hours works procedure in Appendix B of the Noise and Vibration Management Plan:

- for Upper Lobs Hole Ravine Road:
  - sunrise to sunset;

  (*Note: Sunrise and sunset times are to be taken from the nearest Bureau of Meteorology centre)*
- unless otherwise approved by the Secretary of DPIE, for those construction activities on those parts of the site located outside of Kosciusko National Park:
  - 7 am to 6 pm Monday to Saturday;
  - at no time on Sundays and NSW public holidays.

The following construction activities may be undertaken outside these hours without the approval of the Secretary:

- the delivery of materials requested by the NSW Police Force or other authorities for safety reasons; or
- emergency work to avoid the loss of life, property and/or material harm to the environment.

Note – outside of Kosciusko National Park relates to the parts of the site that are adjacent to the township of Talbingo.

2.4 General changes

Refinements to the project may occur during detailed design or changed circumstances throughout construction. Design changes or changes in scope will be communicated to the Contractor's Environment Manager either through formal change processes or via informal communications.

Proposed changes are to be assessed by the Contractor for consistency against the approved project. The Contractor's Environment Manager will undertake an assessment of the proposed changes for potential impacts and compare them to the proposed impacts for the assessed and approved project.

Once prepared, consistency assessments will be submitted to Snowy Hydro for determination by Snowy Hydro's Representative. Changes that are not consistent with the Infrastructure Approval will require modification under Section 5.25 of the EP&A Act and determination by the Minister for Planning. If required, the EMS and management plans will be updated to incorporate any additional potential environmental impacts or management measures that resulted from the proposed changes. Any revisions or updates to the approved EMS and management plans must be submitted to Department of Planning and Environment for review and approval. Where any revisions to the approved management plans, strategies or programs are made, the revised document will be issued to the Snowy Hydro for certification / acceptance of the changes prior to submission to DPIE for approval. Any updates to other management plans which form part of the environmental management system however were not required by the approval, are to be submitted to Snowy Hydro for certification / acceptance.

3 Planning

3.1 Legal and other requirements

A register of legal and other requirements for the project is included in Annexure A1. This register will be maintained by the Contractor throughout the project and updated as required, for instance with new/amended approvals and licences, to be in line with updated legislation, standards and codes of practice, or as a result of management reviews or internal or external audits.

Any changes made to the legal requirements register will be communicated to the wider team where necessary through toolbox talks, specific training and other methods detailed in Section 4. Any update to the register will be considered to be minor in nature and could be approved by Snowy Hydro.

3.2 Conditions of Approval

Table 3.1 Conditions relevant to the EMS

Condition	Requirement	Where addressed
Environmental Management		
Environmental Management Strategy		
Schedule 4, condition 1	Prior to carrying out any development under this approval, the Proponent must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:	This document EMS - Section 1.4
	(a) provide the strategic framework for environmental management of the development;	EMS - Section 4
	(b) identify the statutory approvals that apply to the development;	EMS - Section 3.4 EMS - Appendix A1
	(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	EMS - Section 4.2
	(d) describe the procedures that would be implementedto:	
	• keep the local community and relevant agencies informed about the development being carried out;	EMS - Section 5.1.2, Appendix A6
	• receive, handle, respond to, and record complaints;	EMS - Section 5.2, Appendix A6
	• resolve any disputes that may arise during the course of the development;	EMS - Section 5.2.1
	• respond to any non-compliance;	EMS - Section 7
	• respond to emergencies; and	EMS - Section 6.3
	(e) include:	
	• copies of any strategies, plans and programs approved under the conditions of this approval; and	EMS - Appendix B
	• a clear plan depicting all the monitoring to be carried out in relation to the development.	EMS - Section 7.2
Schedule 4, condition 2	The Proponent must implement the approved Environmental Management Strategy for the development.	EMS - Section 1.4
Updating & Staging of Strategies, Plans or Programs		

Condition	Requirement	Where addressed
Schedule 4, condition 3	To ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development, the Proponent may submit revised strategies, plans or programs required under this approval at any time. With the agreement of the Planning Secretary, the Proponent may also submit any strategy, plan or program required by this approval on a staged basis. The Planning Secretary may approve a revised strategy, plan or program required under this approval, or the staged submission of any of these documents, at any time. With the agreement of the Planning Secretary, the Proponent may prepare the revised or staged strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this approval. *Notes:* • *While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.* • *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*	EMS - Section 1.6.1
Revision of Strategies, Plans or Programs		
Schedule 4, condition 4	Within 3 months, unless otherwise agreed with the Planning Secretary, of: (a) the submission of an incident report under condition 5 below; (b) the submission of an audit report under condition 7 below; and (c) the approval of any modification to the conditions of this approval; or (d) a direction of the Planning Secretary under condition 4 of schedule 2; the Proponent must review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Planning Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Planning Secretary for approval, unless otherwise agreed with the Planning Secretary. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.*	EMS - Section 1.6.1
Incident Notification		
Schedule 4, condition 5	The Department must be notified in writing via the Major Projects portal immediately after the Proponent becomes aware of a Level 2 or above incident on site (refer to Appendix A4 for classifications). The notification must identify the development, including the application number, and set out the location and nature of the incident.	EMS - Section 6.2.1
Non-compliance notification		
Schedule 4, condition 6	The Department must be notified in writing via the Major Projects portal within 7 days after the Proponent becomes aware of any non- compliance. The notification must identify the development, including the application number, set out the condition of approval that the development is non-compliant with, the way in which it does not comply, the reasons for the non-compliance (if known) and what actions have been taken, or will be taken, to address the non-compliance.	EMS - Section 7.5
Reporting		
Compliance reporting		
Schedule 4, condition 7	The Proponent must provide regular compliance reporting to the Department and NPWS on the development in accordance with the relevant *Compliance Reporting* requirements *(*DPE2018).	EMS - Section 7.4

Condition	Requirement	Where addressed
Regular Reporting		
Schedule 4, condition 8	The Proponent must provide regular reporting on the environmental performance of the development on its website in accordance with the reporting requirements in any strategies, plans or programs approved under the conditions of this approval.	EMS - Section 7.4

3.3 Revised environmental management measures

Environmental safeguards and management measures are included in the EIS in Section 6.3. During preparation of the Submissions Report, revised environmental management measures were developed and are included in Section 8 of the Submissions Report.

There are no revised environmental management measures relevant to the EMS. Those measures relevant to the management plans are detailed within each management plan.

The revised environmental management measures relevant to the EMS are listed in Table 3.2 below.

Table 3.2 Revised environmental management measures relevant to EMS

Impact	Reference #	Revised environmental management measures	Where addressed
Impacts to soil resources	SOIL01	Soil management procedures (including stripping, stockpiling and application) will be implemented as part of the CEMP. The objectives of soil management will be to: • preserve as much of the topsoil and subsoil as possible; • minimise the risk of contamination; • minimise the risk of any topsoil degradation or compaction during construction and following reinstatement; • ameliorate subsoil where required for use in rehabilitation works; • minimise topsoil mixing with unsuitable soil and spoil materials during stripping and stockpiling; and • ensure reinstatement of soil horizons in the correct order and required depths to allow for rehabilitation.	This REMM is considered to be most appropriately addressed within the Excavated Material Management Plan, rather than directly within the EMS itself. REMM SOIL01 has therefore been included in Table 2.2 and addressed in Section 5 of the Excavated Material Management Plan.
Geodiversity – rock streams	GEO01	Measures to avoid and minimise impacts to geodiversity features will be implemented as part of the CEMP and include: • digging the road deeper into the rock stream should be avoided where practical, and excavations that take place to widen the road should be undertaken on the upslope side of the road; • appropriate drainage should be constructed under the road to ensure no build-up of water occurs above the road, within the rock stream, during heavy rain; • educational signage should be provided in a nearby suitably widened area to provide information on the periglacial rock stream geoheritage features; • if any works are required to stabilise upslope sections of rock stream it is recommended that open mesh wire fencing is used so the general public and scientists can see and appreciate the architecture of the deposit.	This REMM is considered to be most appropriately addressed within the Historic and Natural Heritage Management Plan, rather than directly within the EMS itself. REMM GEO01 has therefore been included in Table 2.2 and addressed in Section 5 of the Historic and Natural Heritage Management Plan.

		Building a solid wall or spraying concrete on the upslope side should be avoided.	
Geodiversity – fossiliferous beds	GEO02	Measures to avoid and minimise impacts to geodiversity features will be implemented as part of the CEMP and include: • representative excavated spoil is to be preserved off site so that palaeontologists (from various research organisations) can look through the fresh material and collect fossil specimens for scientific research and curation in their respective collections; and • depending on the option of road upgrades to be implemented, interpretive signs could be installed in an appropriate location near the cuttings to highlight features in the exposures, provided the fossils were protected from being easily collected.	This REMM is considered to be most appropriately addressed within the Historic and Natural Heritage Management Plan, rather than directly within the EMS itself. REMM GEO02 has therefore been included in Table 2.2 and addressed in Section 5 of the Historic and Natural Heritage Management Plan.
Spills of hydrocarbons	WAT11	Procedures to address spills and leaks will be developed and implemented as part of the CEMP.	This REMM is considered to be most appropriately addressed within the Water Management Plan, rather than directly within the EMS itself. REMM WAT11 has therefore been included in Table 2.2 and addressed in Section 5 the Surface Water Management Plan (Appendix A of the Water Management Plan).

3.4 Approvals, permits and licences

Snowy Hydro and/or the Contractor will obtain licences, permits and approvals as required by law for the Stage1 work scope and maintain them as required throughout delivery of the project. The Contractor shall comply with all relevant legal requirements. Copies of licences, approvals and permits relevant to the scope shall be held on site with files available for audit and inspection purposes.

The licences, approvals and permits that are likely to be required for the Exploratory Works is provided in Appendix A1.

The Contractor is to ascertain from the appropriate authorities what approvals, licences and permits are required for the work scope and obtain each necessary approval, licence and permit not obtained by Snowy Hydro prior to the commencement of any work which relates to that approval, licence, notification or permit.

A summary of the approvals, licences and permits detailed in Appendix A1 is shown in Table 3.3.

Table 3.3 Approvals, licences and permits summary table

Legislation	Requirement	Relevant agency	Responsibility	Timing
Environmental Planning and Assessment Act 1979	Infrastructure Approval under the EP&A Act	Department of Planning, Industry and Environment (DPIE)	Snowy Hydro	Prior to the commencement of the relevant infrastructure.
Protection of the Environment Operations Act 1997	Environment Protection Licence (EPL)	Environment Protection Authority (EPA)	Snowy Hydro initially then transferred to Contractor	Prior to the commencement of the relevant scheduled activity.
Water Management Act 2000	Water access licence (s60 of the *Water Management Act 2000*)	Department of Industry – Water (DoI)	Snowy Hydro / Contractor	The *Water Management (General) Regulation 2018* provides exemptions for the requirement to obtain water access licences. A person is exempt from section 60A (1) and (2) of the Act in relation to the taking of water from a water source if the person is specified in any provision of Part 1 of Schedule 4, and takes water for any of the purposes. Part 1 of Schedule 4 lists access licence exemptions. Relevant exemptions are detailed below. Clause 5 provides an exemption for any public authority engaged in the use of water for dust suppression. Clause 9 exempts water bore testing by pump test if carried out as part of an approved project under the EP&A Act. Clause 10 exempts monitoring bores. Clause 11 exempts a person engaged in the operation of hydro-electric station in relation to the water required for the purpose of generating hydro-electric power. Water access licences will therefore not be required if Snowy Hydro are using the water for dust suppression; pump testing a bore; or monitoring. Any other water required for construction purposes will however require a water access licence. Consultation with DoI will continue in finalising approval requirements. Mining is the 'winning or removal of materials by methods such as excavating, dredging drilling or tunnelling for the purpose of obtaining minerals or petroleum...'. As this is not occurring as part of the Exploratory Works project, it is considered that an approval under section 60I is not applicable. Consultation with DoI will however continue in finalising approval requirements.
	Water use approval (s89) or water management work approval (s90) of the *Water*	Department of Industry – Water	Snowy Hydro / Contractor	Certain approvals and authorisations are not required for approved State significant infrastructure (SSI). In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring a water use approval or water management

Legislation	Requirement	Relevant agency	Responsibility	Timing
	Management Act 2000			work approval.
	Aquifer interference approval may be required in accordance with section 91 of the *Water Management Act 2000*	Department of Industry – Water	Snowy Hydro / Contractor	Certain approvals and authorisations are not required for approved State significant infrastructure (SSI). In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring an activity approval, but not an aquifer interference approval. Aquifer interference approvals are not currently enabled under the *Water Management Act 2000*. Consultation with DoI Water will continue in finalising approvals requirements.
Roads Act 1993	Road occupancy licence	Roads and Maritime Services	Contractor	Prior to relevant works and / or road occupancy.

3.5 Standards and guidelines

The main standards and guidelines relevant to this EMS include:

- ISO 14001 *Environmental Management System* (2015);
- *Guideline for the preparation of Environmental Management Plans* (DIPNR, 2004);
- *Environmental Management – Exploratory Works for Snowy 2.0*, Exploratory Works Roads Tender (2018);
- Roads and Maritime QA Specification G38 – *Soil and Water Management*;
- Roads and Maritime QA Specification G40 – *Clearing and Grubbing*.

Compliance standards, policies and guidelines relevant to the Project are detailed in the respective management plans**.** The requirements of these standards have been taken into account in the preparation of the EMS and will be considered by the Contractor during the preparation of the Environmental Work Method Statements / Construction Method Statements.

4 Environmental management system

4.1 Environmental management framework

The framework of the environmental management documents has been designed to comply with the requirements of *ISO 14001 Environmental Management Systems*. The EMS comprises relevant sections from Snowy Hydro's Management System, the overarching EMS (this document), and a number of supporting documents (i.e. issue specific environmental management plans) providing more detailed environmental management requirements.

The framework for environmental management for the Snowy 2.0 - Exploratory Works project is outlined in Figure 4.1.

4.1.1 Environment Policy

The Snowy Hydro Environment Policy is provided in Appendix A2.

The Environment Policy describes Snowy Hydro's commitment to environmental performance and compliance with legislative and regulatory requirements.

The Environment Policy is displayed on Snowy Hydro's website and is communicated to staff and Contractors via inductions and ongoing awareness programs. It will be the requirement of the Contractor to communicate both Snowy Hydro's Environment Policy and their own respective Environmental Policy to project personnel.

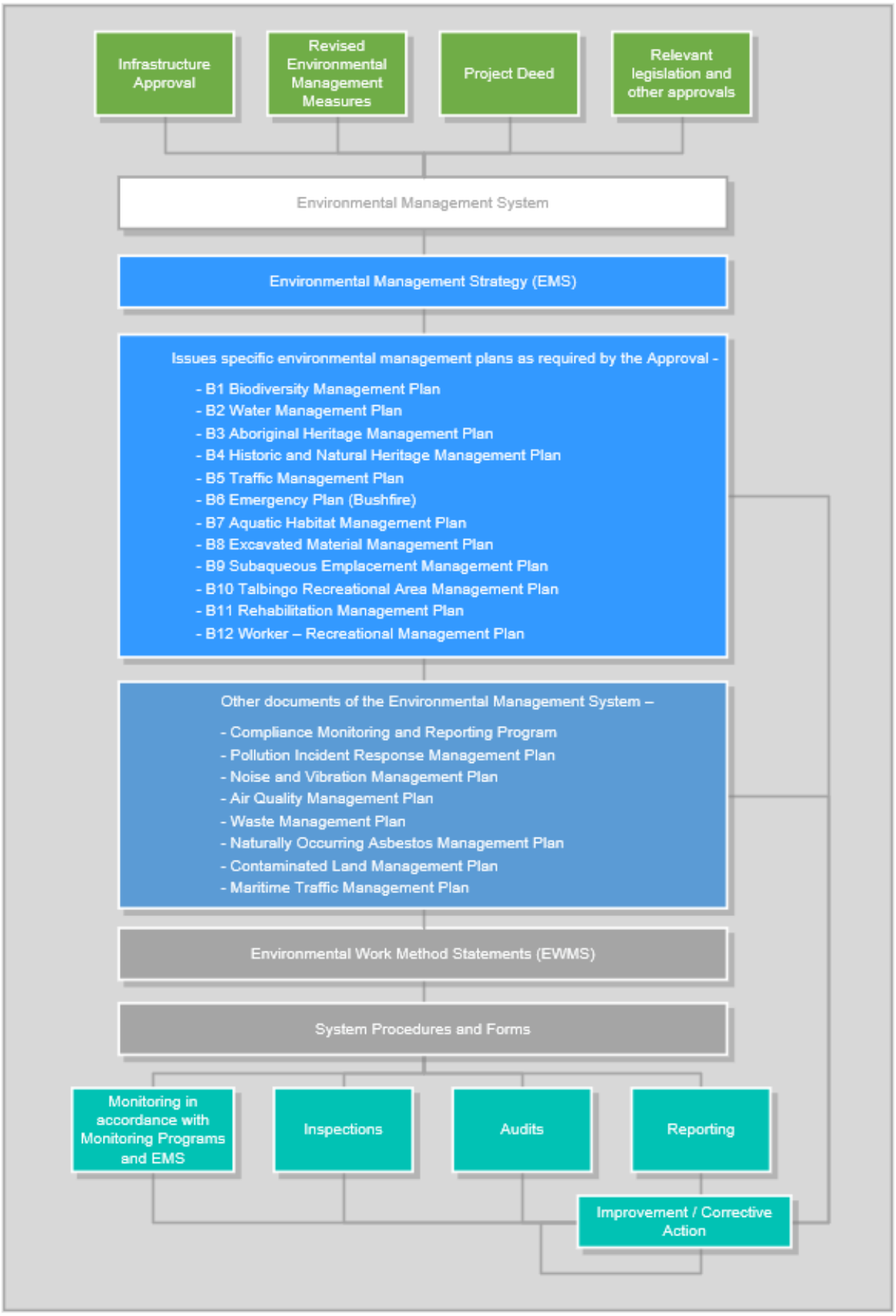


Figure 4.1 Environmental Management System

4.1.2 Objectives and targets

As a means of assessing environmental performance, environmental objectives and targets have been established. These objectives and targets have been developed in consideration of the key issues identified through the EIS and RTS. The objectives and targets are consistent with Snowy Hydro's Environment Policy and will assist in determining whether the commitments of the policy are being met.

Environmental objectives for the Project are provided below in Table 4.1.

Table 4.1 Objectives and targets

Objective	Target	How monitored and measured
Comply with all legislative requirements	• Full compliance with statutory approvals.	Audits, compliance reporting and tracking, inspections, monitoring.
Construct the Project in accordance with the conditions of the Infrastructure Approval, the revised environmental management measures and any other environmental approvals	• No regulatory infringements (PINs or prosecutions). • No formal regulatory warning	Audits, compliance reports, inspections, monitoring.
Engage with stakeholders and the broader community, minimise complaints and respond to any complaints within a suitable timeframe	• Disseminate regular Project updates and other information to keep the community informed of the project. • Record and respond to complaints within a timely manner.	Review complaints register and timeliness of response, compliance reporting and tracking, audits.
Continuously improve environmental performance	• Develop and maintain a program of ongoing environmental training. • Capture lessons learnt where required from environmental incidents to minimise repeat issues. • Encourage and reward innovation and effort throughout the workforce.	Compliance reporting and tracking, induction records, training delivered, lessons learnt disseminated.

4.1.3 Environmental Management Strategy

The EMS is the overarching management tool in relation to environmental performance during Project delivery. The EMS describes the construction environmental management framework for the Project and the system for minimising and managing environmental risks. The EMS will be reviewed and amended to incorporate additional requirements as required, changes to the project team, organisational structure and responsibilities or as improvements to procedures and methodologies develop (refer Section 1.6).

The EMS and relevant management plans have been prepared in consideration of the Infrastructure Approval, the revised environmental management measures presented in the RTS, *ISO 14001 Environmental Management Systems* and the *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004).

This EMS outlines the environmental management practices and procedures that are to be followed during the construction of this project. It provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled.

As detailed within Section 2.2, Exploratory Works will be delivered in three stages:

- Stage 1a – Pre-construction minor works;
- Stage 1b - Exploratory Works Access Roads (EWAR);
- Stage 2 – Exploratory Works.

This EMS and the management plans have been prepared for Stage 1b of the project.

All plans which have been prepared for Stage 1b works will be revised prior to commencement of Stage 2 works.

It must be noted that not all plans are required to be prepared for the Stage 1b works. An example includes the Subaqueous Emplacement Management Plan which is required to be prepared prior to emplacing excavated material in the designated subaqueous emplacement area. Such plans will be prepared after the commencement of the Stage 1b works and prior to the relevant activity or impact. Timing of the preparation and implementation all plans will be in accordance with the conditions of the Infrastructure Approval.

Table 4.2 and Figure 4.2 provide detail relating to the timing and application of all plans required for the Snowy 2.0 Exploratory Works.

4.1.4 Environmental management plans

A number of environmental management plans are required to support the EMS. They document the aspects, impacts, management measures and monitoring requirements for each key environmental aspect.

The Approval conditions and REMMs define the content and issues to be addressed in most of the management plans. Table 4.2 details the management plans required to be prepared and their timing.

Table 4.2 EMS and management plans

Plan	Timing and application	Has the plan been prepared for Stage 1a?	Has the plan been prepared for Stage 1b?	Will the plan be revised and reissued for Stage 2?
Environmental Management Strategy	Prepared prior to development	Yes	Yes	Yes
Appendix B1 Biodiversity Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B2 Water Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B3 Aboriginal Heritage Management Plan	Prepared prior to development that could affect the Aboriginal heritage items referenced in the Approval	No	Yes	Yes
Appendix B4 Historic and Natural Heritage Management Plan	Prepared prior to development that could affect the historic and natural heritage items referenced in the Approval	No	Yes	Yes
Appendix B5 Traffic Management Plan	Prepared prior to development	Yes	Yes	Yes
Appendix B6 Emergency Plan (Bushfire)	Prepared prior to development	Yes	Yes	Yes

Plan	Timing and application	Has the plan been prepared for Stage 1a?	Has the plan been prepared for Stage 1b?	Will the plan be revised and reissued for Stage 2?
Appendix B7 Aquatic Habitat Management Plan	Prepared prior to development in Talbingo Reservoir, Yarrangobilly River and Wallaces Ck	No	Yes	Yes
Appendix B8 Excavated Material Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B9 Subaqueous Emplacement Management Plan	Prepared prior to emplacing excavated material in the designated subaqueous emplacement area	No	No	Yes – will be prepared prior to emplacement
Appendix B10 Talbingo Recreational Area Management Plan	Prepared prior to installing barge infrastructure	No	No	Yes – will be prepared prior to installing barge infrastructure
Appendix B11 Rehabilitation Management Plan	Within 6 months of carrying out the development	No	No	Yes – will be prepared within 6 months
Appendix B12 Worker – Recreational Management Plan	Prior to construction	No	Yes	Yes
Appendix B13 Noise and Vibration Management Plan	During construction (detailed in the RTS)	No	Yes	Yes
Appendix B14 Air Quality Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B15 Waste Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B16 Contaminated Land Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B17 Naturally Occurring Asbestos Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B18 Emergency Response Management Plan	Prepared prior to construction	No	Yes	Yes
Appendix B19 Maritime Traffic Management Plan	Prepared prior to any waterway traffic movements	No	No	Yes

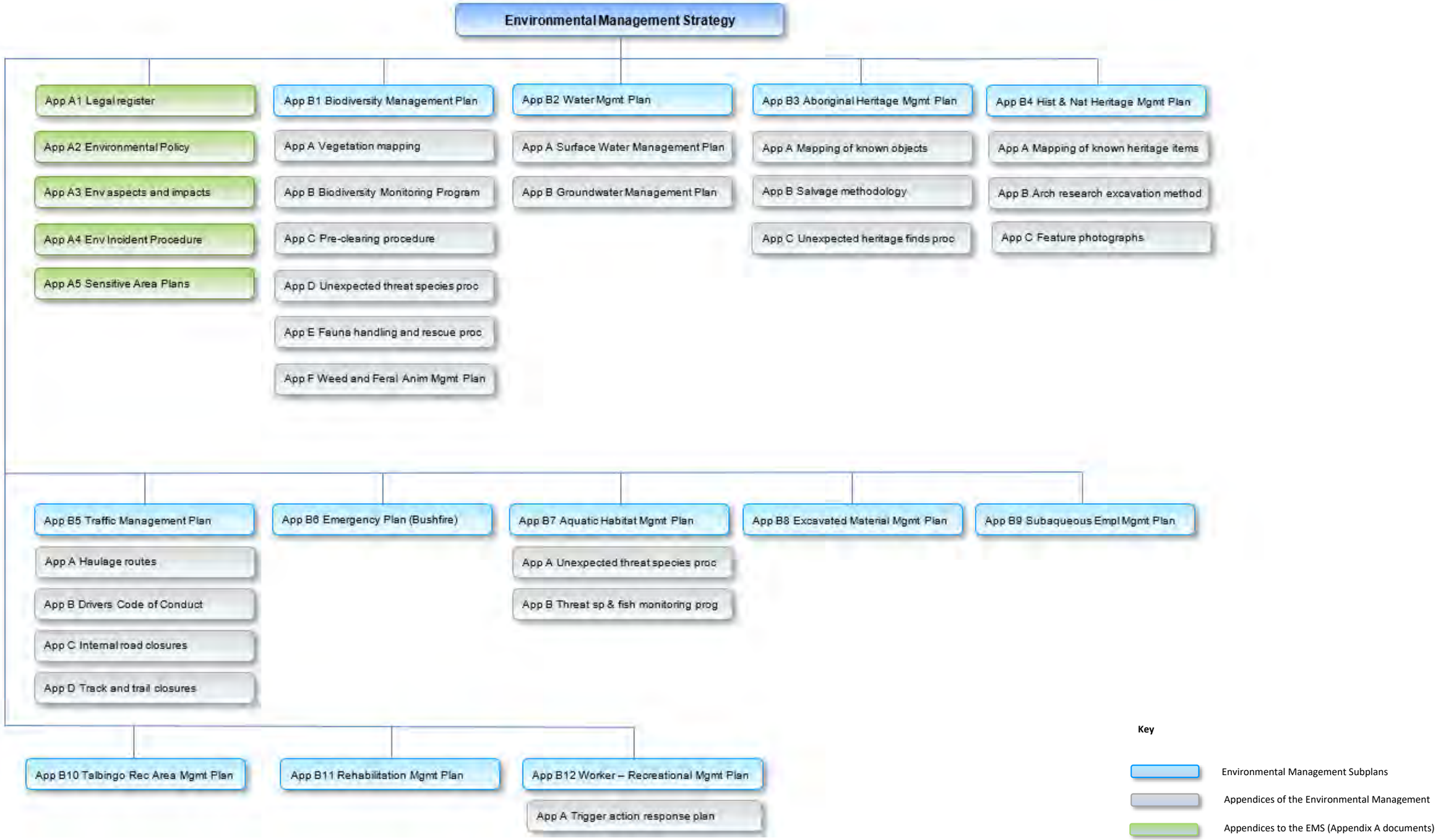


Figure 4.2 Environmental framework

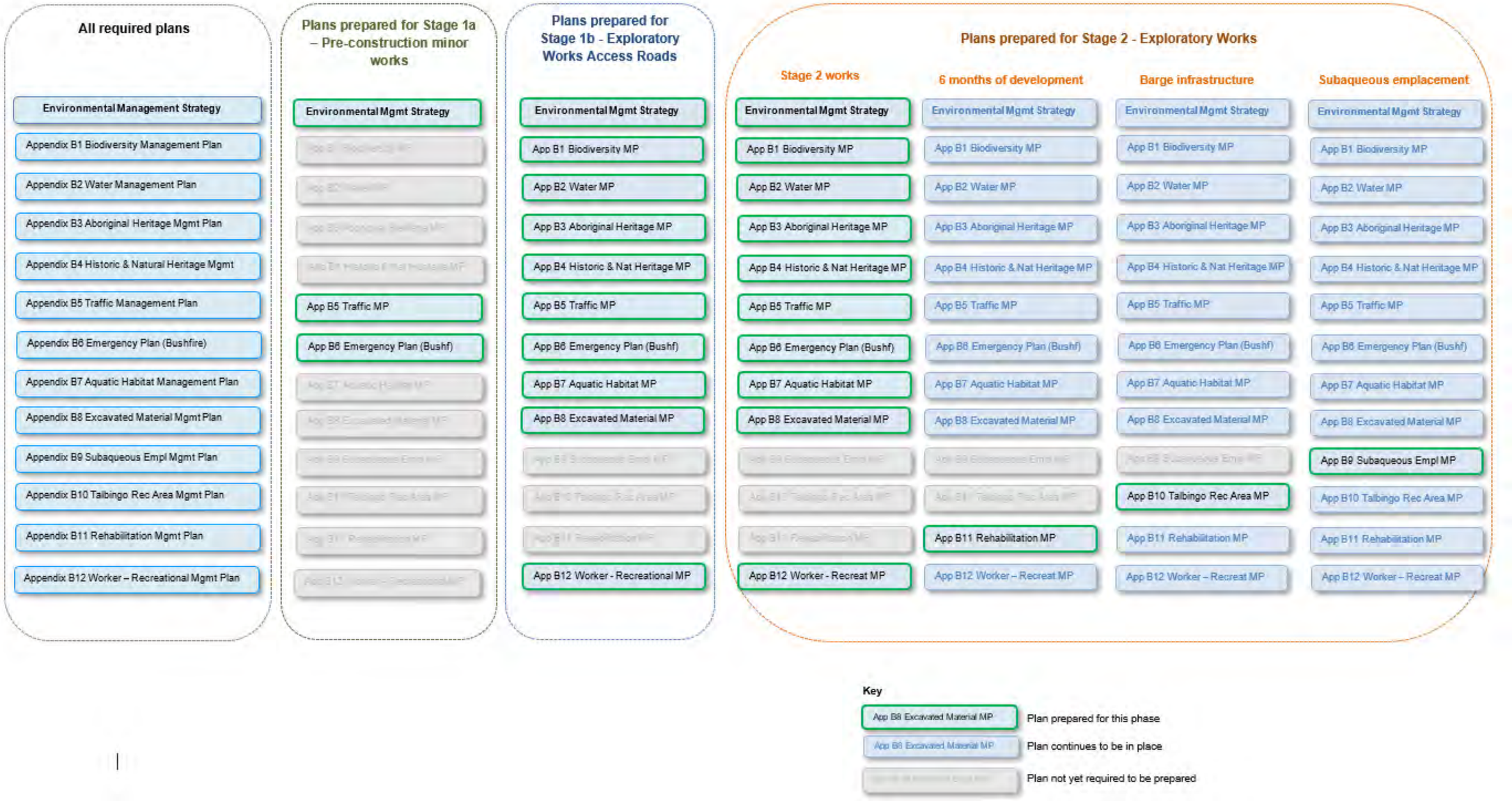


Figure 4.3 **Sequence and requirement of management plans**

4.1.5 Compliance tracking

The Compliance Monitoring and Reporting Program will be implemented by the Contractor prior to and during construction, or for a longer period as determined by the Secretary based on the outcomes of independent environmental audits and regular compliance reviews submitted through the Compliance Reports.

A complete list of the Approval conditions and revised environmental management measures (REMMs) are included in the project's Compliance Monitoring and Reporting Program. The timing, compliance status, responsibility and evidence or reference of compliance will be included in the compliance reports undertaken as described in the Compliance Monitoring and Reporting Program.

The *Compliance Reporting* guidelines advise that compliance reports must be provided for a project if the conditions of consent require the proponent to notify the Department of the commencement date of the relevant stage.

Condition 6 of Schedule 2 of the Infrastructure Approval requires that the Department and National Parks and Wildlife Service (NPWS) must be notified in writing of the date of commencement of:

- any public road closures;
- pre-construction minor works;
- road upgrade works;
- construction on site;
- the subaqueous emplacement trial;
- the completion of the exploratory tunnel works; and
- the decommissioning of the development and rehabilitation of the site.

Reports will be submitted prior to these stages commencing and in accordance with Section 7.4 of this EMS, unless otherwise agreed with the Department of Planning and Environment. Where two stages occur at the same time, the one report will be prepared that addresses both of these stages. Where a Six-Monthly Report is due at the same time as the submission of a stage related compliance report, the Six-Monthly Report will be combined within the stage-related compliance report.

The compliance tracking tables form an integral part of this periodic review. These tables establish a format for recording compliance and include:

- a description of the environmental obligation;
- the stage of the project to which it relates;
- status;
- responsibility.

4.1.6 Environmental Work Method Statements

Environmental work method statements (EWMSs) or Construction Method Statements (CMSs) will be prepared for all activities that carry an inherent level of environmental risk. EWMSs or CMSs will be prepared prior to the commencement of relevant construction activities on site and will incorporate relevant mitigation measures and controls from management sub plans. EWMSs / CMSs will be prepared to identify risks, ensure sound environmental practices are implemented, and to minimise the risk of environmental incidents or system failures. EWMSs / CMSs are to be designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

EWMSs / CMSs will be developed by the Contractor for at least the following activities:

- activities that impact on environmentally sensitive areas;
- vegetation clearing and grubbing;
- working in waterways;
- temporary waterway crossings;
- working platforms in or adjacent to waterways;
- sediment basin construction and maintenance;
- dewatering;
- topsoil stripping;
- concreting activities (where required);
- rock processing and sorting, stockpiling and transporting (spoil management);
- drainage works;
- bridgeworks.

All construction personnel and sub-contractors undertaking a task governed by an EWMS must participate in training on the EWMS and acknowledge that they have read and understood their obligations prior to commencing work.

Regular monitoring, inspections and auditing against compliance with the EWMS will be undertaken by Project management, quality, and environmental personnel to ensure that all controls are being followed and that any non-conformances are recorded and corrective actions implemented.

4.1.7 Sensitive area plans

To aid in the identification and protection of significant environmental features associated with the project, a set of Sensitive Area Plans (SAPs) have been prepared. The SAPs are included in Appendix A5 and have been passed on to the Contractor for use during construction.

The sensitive area plans include information relating to (for example):

- the location of Kosciusko National Park;
- endangered ecological communities;
- watercourses;
- heritage items;
- threatened species; and
- sensitive receivers.

The SAPs are working documents and will be updated throughout construction, as required.

4.1.8 Progressive erosion and sediment control plans

Progressive erosion and sediment control plans (ESCPs) are to be developed and will show the site layout and approximate location of erosion and sediment control structures on site. They will be developed by the Contractor for all work areas prior to commencing activities and will be updated by the Contractor as changes occur on site.

Environmental staff will typically develop the ESCPs in consultation with Project Engineers, Superintendents or Foremen. This will ensure that erosion and sediment control management is incorporated into the planning stage of construction activities and is coordinated in its approach. A suitably qualified and experienced soil conservationist shall review all ESCPs prior to their implementation. To be suitably qualified and experienced, the soil conservationist must be a certified professional in erosion and sediment control (CPESC) (or equivalent) and have at least five years experience as a soil conservationist.

ESCPs will be regularly reviewed as site conditions change and flow paths are altered (e.g. the reshaping of drainage lines to direct sediment laden runoff to sediment basins). Once approved all revisions will be controlled and allocated an appropriate revision number. Progressive ESCPs will be reviewed and endorsed by the Contractor and soil conservationist (as required).

ESCPs will generally be prepared on detailed drainage diagrams, however topographic maps (aerials) may also be utilised. ESCPs will incorporate title, date and revision number; details regarding the implementation period and staging; and the location of temporary and permanent erosion and sediment control measures proposed to treat stormwater prior to discharge.

ESCPs are designed for use as a practical guide and may be produced in conjunction with EWMSs for more detailed environmental mitigation measures (if required).

4.1.9 Procedures, forms and other documents

The Project's environmental management system procedures, forms and other documents provide instructions and records related to both environmental and non-environmental activities throughout the Project.

Procedures and forms used will be developed and implemented by the Contractor. Records will be held on site by the Contractor in electronic / hard copy form.

4.1.10 Hold points

The Contractor will be required to develop a procedure and forms to meet the requirements of the relevant Hold Point and submit this to Snowy Hydro prior to works commencing. The works will not commence until the Hold Point has been approved or released.

A Hold Point request will be required for such activities as:

- submission of EWMSs / CMSs;
- environmental non-conformances notifiable to EPA;
- vegetation clearing;
- unexpected finds of heritage or contaminated land;
- erosion and sediment control plans;
- assurance monitoring and audit programs;
- sediment basin sizing;
- installation and operation of sediment flocculation systems (as required).

4.1.11 Document control and records

Records shall be developed and maintained by the Contractor including;

- training records;
- incident reports;
- audit and inspection forms;
- monitoring results;
- volume of waste to landfill, waste recycled and waste disposed of offsite.

The Contractor shall maintain all records generated as a result of environmental management and make these available on request to Snowy Hydro.

4.2 Roles and responsibilities

4.2.1 Organisational structure

The organisational structure is shown in Figure 4.4.

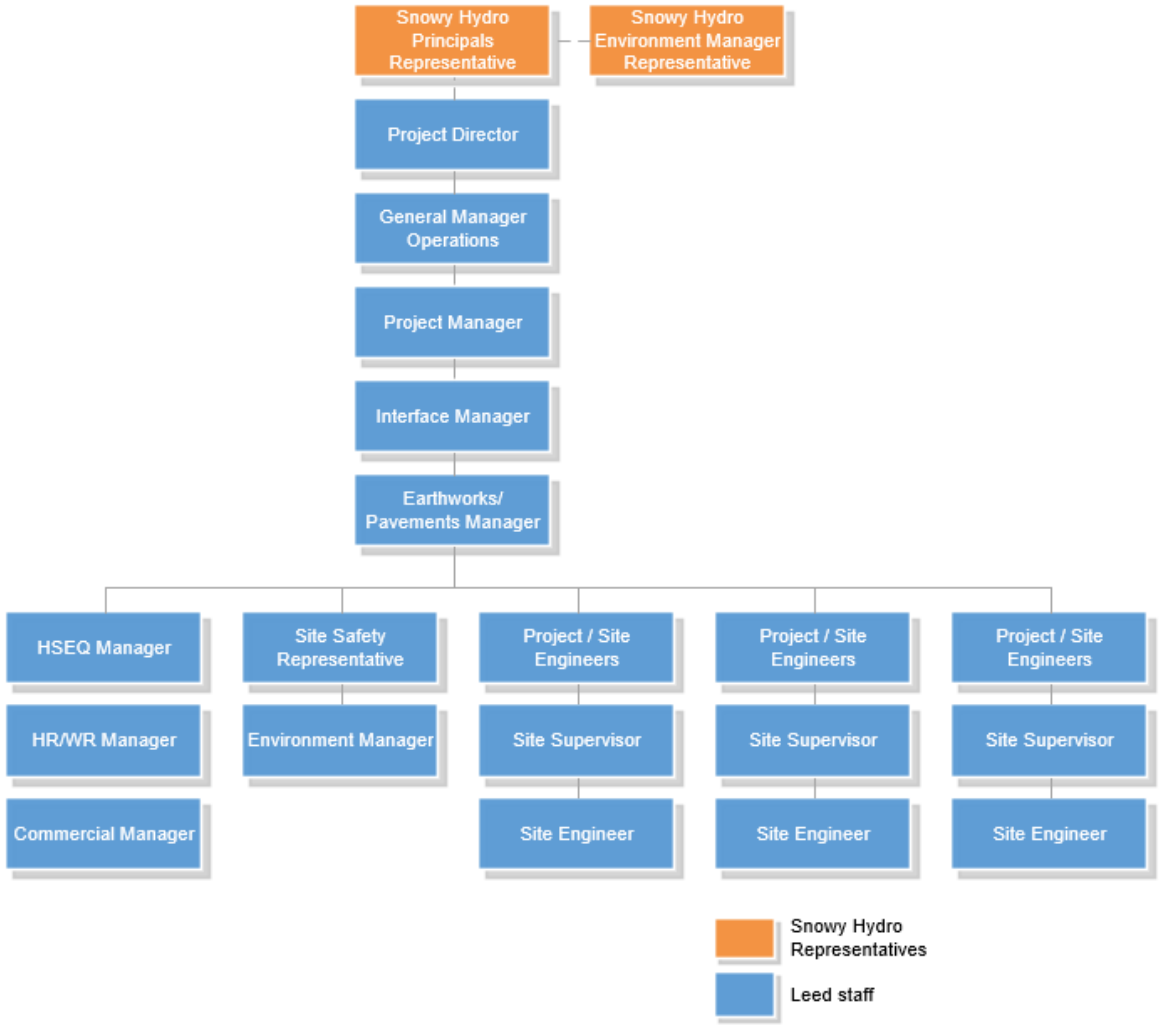


Figure 4.4 Organisational chart

4.2.2 Roles and responsibilities

The Contractor will ensure that appropriate resources are available to effectively manage the implementation of the EMS during delivery of the project. The Contractor shall ensure that:

- there is an adequate level of experience within management and supervision;
- there are sufficient number of trained and skilled workers to carry out that work;
- inspection, verification and auditing are carried out in a timely and efficient manner.

Snowy Hydro Environment Manager

The environmental responsibilities of the Snowy Hydro Environment Manager include (but are not limited to):

- review any environmental management plans and related documents prepared for the Project;

- review minor Project refinements that are consistent with the Project environmental assessment and approval documentation and recommend they be determined to the Snowy Hydro Project Director;
- monitor the environmental performance of the Project in relation to Snowy Hydro requirements;
- Hold Point releases.

Snowy Hydro Principal's Representative

The environmental responsibilities of the Snowy Hydro Representative include (but are not limited to):

- evaluate and advise on compliance with Snowy Hydro environmental requirements;
- review and approve any environmental management plans for the Project or related activities that are not required to be approved by the Secretary of the Department of Planning and Environment;
- Hold Point releases.

Contractor's Project Manager

The Project Manager is responsible for delivery of the construction stage of the Project to ensure that impacts are minimised and obligations are met. The responsibilities of the Project Manager include (but are not limited to):

- include the environment into all aspects of project planning;
- allocate adequate project resources to ensure effective development, implementation and maintenance of this EMS;
- ensure all works comply with relevant regulatory and Project requirements and that the requirements of this EMS are implemented;
- liaise with Snowy Hydro and other government authorities as required;
- ensure that all personnel receive appropriate training, including details of the environmental and community requirements;
- review the performance of environmental management monthly;
- co-ordinate the Contractor's action in emergency situations and allocate required resources;
- stop work immediately if an unacceptable impact on the environment is likely to occur.

Contractor's Environment Manager

The responsibilities of the Contractor's Environment Manager include (but are not limited to):

- advising on environmental matters specified in the conditions of Approval, EMS and specification/s;
- liaising with the Snowy Hydro Environment Manager and with all relevant authorities on environmental matters;
- obtain and update all environmental licences, approvals and permits as required by the Contractor;

- implementation, monitoring and updating of the EMS, management plans and EWMSs/CMSs remain current with the progress of the Works;
- carrying out regular inspections weekly and auditing of the works to ensure that environmental safeguards are being followed;
- identifying where the implemented environmental measures are not meeting the targets set, and identifying areas where improvement can be achieved;
- preparing monthly reports outlining the works that have been undertaken and the achievements that have been met, as well as identifying those areas where improvements were made;
- facilitating environmental induction and toolbox talks for all site personnel;
- specific authority to stop work on any activity where the Environment Manager deems it necessary to prevent environmental nonconformities;
- notification to Snowy Hydro and the relevant parties of any environmental incidents and manage close out of these;
- report any legal non-compliances to the Project Manager and Snowy Hydro;
- maintain all environmental records;
- provide monthly reports outlining the works that have been undertaken, any achievements and any aspects of site that require improvement.

Contractor's Senior Project and Site Engineers

The responsibilities of the Senior Project and Site Engineers include (but are not limited to):

- provide input into the preparation of environmental planning documents as required;
- ensure that instructions are issued and adequate information provided to employees that relate to environmental risks;
- seek advice from the Environmental Site Representative (Contractor's Environment Manager or a member of the environmental team) if there is a perceived risk of impacts.
- ensure that the works are carried out in accordance with the requirements of the EMS, including the implementation of all environmental controls;
- identify resource needs for implementation of EMS requirements and related documents;
- take action in the event of an emergency and allocate the required resources to minimise the environmental impact;
- report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent and Environmental Site Representative;
- be familiar with the EMS.

Contractor's Site Supervisors

The Site Supervisors report to the Senior Project Engineers and are responsible for the Projects onsite compliance with the requirements of the EMS. The responsibilities of the Site Supervisors include (but are not limited to):

- communicate with all personnel and sub-contractors regarding compliance with the EMS and site-specific environmental issues;
- notification of environmental incidents;
- co-ordinate the implementation of the EMS for their area of responsibility;
- undertake site inspections as required;
- co-ordinate the implementation and maintenance of pollution control measures for their area of responsibility;
- identify resources required for implementation of the EMS;
- report any activity that has resulted, or has the potential to result, in an environmental incident or environmental harm immediately to the Environment Manager;
- stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Manager and Environment Manager.

All personnel

All personnel (including subcontractors) have an obligation to protect the environment through carrying out their own work with due diligence. In particular they must:

- comply with the relevant requirements of the EMS, or other environmental management documents as instructed by a member of the Project's management;
- participate in the mandatory Project/site induction program;
- comply with instructions/directions given by Site Management and the Environmental Site Representative;
- stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Superintendent or Environment Manager.

Subcontractors

Subcontractors can present the greatest environmental risks to a project due to:

- their detachment from the main construction delivery teams, and therefore the potential for poor communication regarding environmental risks;
- the large number of subcontractors on a Project; and
- subcontractors operating under a different management system for each project (therefore knowledge of Project-specific requirements may be reduced).

Environmental requirements and responsibilities are to be specified by the Contractor to sub-contractors in the contract documentation. As part of the selection process, consideration should also to be given to their past environmental performance.

Subcontractors working on the Project will be required to:

- undertake their works in accordance with the EMS;
- observe subcontract and statutory requirements relating to environmental protection and other environmental legislation and to follow instructions issued by the Project management and supervisory personnel;
- attend the Project induction and awareness training (such as daily pre-starts);
- co-operate fully with site emergency incident procedures.

The work of subcontractors shall be monitored by the Contractor through the site inspection process. Observations will be made by relevant personnel to assess the effectiveness of the environmental protection measures being used on site by the subcontractor and to assist with determining compliance with the requirements of the EMS.

4.3 Environmental risk management

4.3.1 Environmental risk

Over the life of the Project, project, risks will be identified, assessed and controlled through the use of a number of different risk management tools, primarily risk assessments.

A risk management approach will be used to determine the severity and likelihood of an activity's impact on the environment and to prioritise its significance.

The objectives of the risk assessment are to:

- identify activities/aspects, events or outcomes that have the potential to adversely affect the local environment and/or human health/property;
- qualitatively evaluate and categorise each risk item;
- assess whether risk issues can be managed by environmental protection measures;
- qualitatively evaluate residual risk with implementation of measures.

An environmental risk assessment has been undertaken for the Exploratory works and is included as Appendix A3. This risk assessment details the environmental aspects identified for the Project, the initial risk category prior to appropriate management strategies, and reference to the appropriate document which detailing proposed mitigation strategies.

The initial project risk assessment workshop will identify significant environmental aspects and impacts that could eventuate during construction of the project and is central to the selection of appropriate environmental safeguards. Aspects and impacts will be identified for all construction activities that contribute to harm or impact on the environment including, air, noise, water, heritage, waste and biodiversity.

The ongoing determination of environmental aspects and impacts will be achieved through the risk management process, which results in the development of a list of environmental risks (aspects and impacts), and a corresponding risk mitigation strategy and risk ranking for each risk. Each environmental risk is categorised, based on the following:

- the environmental aspect;
- type of potential impact (or consequence); and
- likelihood of occurrence.

A risk matrix for the Project is provided below in Table 4.3.

Table 4.3 Risk matrix

Consequence	Likelihood				
	1	2	3	4	5
	Rare	Unlikely	Possible	Likely	Almost Certain
A - Severe	Medium	High	High	Extreme	Extreme
B - Major	Medium	Medium	High	High	Extreme
C - Moderate	Low	Medium	Medium	High	High
D - Minor	Low	Low	Medium	Medium	Medium
E - Negligible	Low	Low	Low	Low	Medium

The following descriptions within Table 4.4 are used to determine the likelihood and consequence of an event.

Table 4.4 Likelihood and consequence table

Likelihood	Description
Almost certain	Is expected to occur during the project, 90% or > probability
Likely	Will probably occur during the project, 50%-90% probability
Possible	Might occur at some time during the project, 10-50% probability
Unlikely	Could occur at some time during the project, 2-10% probability
Rare	Only occur in exceptional circumstances, < 2% probability
Consequence	**Description**
Negligible	Negligible Discharge Low-level direct impacts on the physical environment (water, soil, air) within work area. Impacts easily remedied. No identifiable impact on flora or fauna.
Minor	Uncontrolled Discharges in Minor Quantities (1-3 years) direct impact on physical environment (water, soil, air) that may impact on flora or fauna. Loss of individuals of common native flora or fauna. May extend outside of work area.

Moderate	Moderate Breach of Environmental Statutes Medium term (3-10 years) impacts on populations of native flora/ fauna including loss of indivi of threatened species. Significant impacts on physical environment.
Major	Major Breach of Environmental Statutes Medium-LT (>10 years) physical impacts likely to cause impacts to flora/fauna populations, or direct impacts to flora/fauna. Adverse impacts to significant heritage items.
Severe	Shutdown of Project Due to Environmental Breach Permanent impacts to populations of significant flora or fauna (e.g. threatened) highly significant heritage items, complete removal of habitat of threatened species or significant impairment of ecosystem function.

4.3.2 Environmental risk register

The Contractor will maintain the environmental risk register to address risks specific to the scope. Risks will be required to be reviewed on a regular basis and will also be reviewed in response to incidents, changes in legal requirements, change in project scope, findings of inspections and audits and management reviews.

4.4 Training and awareness

Environmental training and awareness is an important means to positively influence the attitude of workers engaged in the project whilst ensuring they are aware of their obligation and the requirements of this EMS. Internal and on-the-job training will be provided by the Contractor on a regular basis for all employees and subcontractors.

Three main forms of training will be provided on site will include the site induction, toolbox training and environmental awareness training.

Records of induction and training will be kept on site within databases held by the Contractor. The database will include the topic of the training carried out, dates, names and trainer details. Inductees will be required to sign-off that they have been informed of the environmental issues and that they understand their responsibilities.

The Contractor will develop and implement a training matrix to ensure that training requirements are identified and that relevant personnel receive the necessary training to correctly implement environmental requirements in their work areas.

4.4.1 Site induction

All personnel (including sub-contractors) will be required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. This is done to ensure all personnel involved in the project are aware of the requirements of the EMS and to ensure the implementation of environmental management measures. The Contractor's Environment Manager (or delegate) will prepare the environmental component of the site induction and submit it to the Snowy Hydro Environment Manager prior to commencing the training. The Contractor's Environment Manager (or delegate) will monitor its implementation during the course of the project.

The environmental component will include an overview of the following elements:

- relevant details of the EMS;
- relevant conditions of environmental licences, permits and approvals;
- key environmental issues, i.e. protection of Kosciusko National Park, heritage sites and water management;
- information relating to the location of environmental constraints;
- relevant environmental management requirements and responsibilities;
- management measures for the control of environmental issues;
- notification and response requirements in the event of unexpected finds (ie for heritage, contaminated land or threatened species);
- regulatory penalties and consequences of non-compliance;
- incident response and reporting; and
- emergency response and evacuation (fire and flooding).

Short-term visitors will be required to be accompanied by inducted personnel at all times.

A record of all environment inductions will be maintained and kept on-site by the Contractor. Amendments to the induction may be made at any time as a result of work modifications or amendments to this EMS or related documentation.

4.4.2 Toolbox talks and environmental awareness

Toolbox talks, environmental awareness training and construction methodology briefings will be delivered by the Contractor as necessary to achieve a suitable level of workforce awareness and competence appropriate to the activities. Toolbox talks will also be tailored to specific environmental issues relevant to upcoming works or previous incidents and will include general and specific discussion of the key environmental aspects of the Project.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

4.4.3 Daily pre-start meetings

Daily pre-starts will be conducted by the Contractor's Supervisors prior to the start of work each day to inform workers of key safety, environmental and activity coordination considerations and other information that may be relevant in the performance of the day's work. Records of pre-starts meetings will be maintained and kept by the Contractor on site.

5 Communication and complaints management

5.1 Communication

Snowy Hydro and their Contractors are committed to ensuring effective consultation is undertaken on a regular basis at all levels of the project. A high level of communication is an important factor in the successful and correct delivery of environmental outcomes on the project and it will ensure environmental performance is continually communicated, understood and improved across the project.

5.1.1 Internal communication

The methods of communication on site will include:

- pre-start meetings;
- inductions;
- toolbox talks;
- alerts, bulletins and / or initiatives;
- Environmental Work Method Statements / Construction Method Statements.

The Contractor will discuss environmental issues as a regular component of their toolbox and site meeting agenda. Environmental notice boards will be established to inform personnel of relevant environmental information such as minutes of meetings, results of monitoring, performance standards, environmental incident alerts and Principal environmental notices. The notice boards will be refreshed periodically with up-to-date information.

The Contractor will present environmental communications to its workforce on a minimum weekly basis. This will include information on the management of environmental risks or key site environmental issues as required. Records of the topics, attendance and presenter's name will be maintained.

5.1.2 External communication

i Stakeholder

External communication with stakeholders such as government agencies is often required during project delivery. Communication can be for various matters including:

- organising government agency site inspections;
- through consultation on management plans;
- through notification of relevant incidents.

Regular compliance reporting to DPIE and NPWS will occur in accordance with the reporting requirements detailed in Section 7.4. Reporting to EPA will occur in accordance with the requirements of the POEO Act and the Environment Protection Licence as detailed within Section 7.5.

Incidents shall be reported in accordance to DPIE, EPA and NPWS in accordance with the notification requirements detailed in Section 6.2 of this EMS.

Contact details of external stakeholders are provided in Table 5.1.

Table 5.1 Stakeholder details

Agency	Phone
NPWS	1300 072 757
DPIE	1300 305 695
EPA	131 555 (Environment Line)
OEH	9995 5000
Snowy Valleys Council	1300 275 782 (business hours and after hours)
Snowy Monaro Regional Council	1300 345 345 (business hours and after hours)
Fire and Rescue NSW	000 (emergency) 9265 2999 (general enquiries)

ii Community communication

A comprehensive community communication procedure that will be implemented for the work has been provided in Appendix A6.

5.2 Complaint management

A comprehensive complaints management procedure that will be implemented for the work has been provided in Appendix A6.

5.2.1 Dispute resolution

Where a complaint cannot be resolved by the community staff, it will be referred through the dispute resolution process described below.

Wherever possible, disputes will be resolved directly between the Contractor and the stakeholder.

If the dispute cannot be resolved to the satisfaction of the parties involved, the complaint will be referred to Snowy Hydro's Representative for further resolution.

If the dispute cannot be resolved, senior project staff and an independent facilitator may become involved to assist the parties to reach a mutually agreeable solution.

6 Incidents and emergencies

6.1 Environmental incidents

Environmental incidents will be managed and reported using the Snowy Hydro Quality Management System procedure '*QP14-07 - Incident Management Procedure*' (Procedure).

In accordance with the Infrastructure Approval, an Environmental Incident is defined as 'an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance', with material harm being defined as unauthorised harm that involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, OR results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

For the purpose of Snowy Hydro's procedure, an Environmental Incident is an unplanned event impacting or potentially impacting the environment with consequences as defined in the Incident Classification Matrix provided within Appendix A of the Procedure. A Regulatory Compliance Incident is an event which results in or increases the risk of non-compliance with a regulatory obligation. This includes but is not limited to non-compliance with licence conditions and non-compliance with general performance standards.

Environmental incidents and regulatory compliance incidents may include the following events caused by the works:

- chemical spills and leaks (including hydrocarbons);
- unauthorised discharge of contaminated waters to the environment;
- clearing or damage to vegetation outside of the designated clearing areas;
- unauthorised damage or interference to threatened species, endangered ecological communities or critical habitat;
- unauthorised death or injury of native fauna;
- unauthorised impact to heritage items, artefacts or sites;
- any potential breach of legislation, including a potential breach of a safeguard;
- unauthorised dumping of waste;
- breaches of hygiene management requirements;
- fires which result from project works.

The Incident Management Procedure provides details of:

- the criteria for classifying environmental incidents and regulatory compliance incidents;
- processes for first response and further actions required in emergency or crisis situations;

- processes for reporting and internal and external notification of an environmental incident and regulatory compliance incident;
- incident investigation, action and closeout.

All efforts will be undertaken to avoid and reduce impacts of incidents. A decision may need to be made by the supervisor and/or manager to suspend work. A supervisor/manager may request additional staff be deployed to the site to provide additional capacity or capability to manage the incident.

Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident and regulatory compliance incident.

An emergency spill response procedure is provided within the Surface Water Management Plan. This procedure will be used in the event of an oil, fuel or chemical spill on land or water.

6.2 Incident reporting

All workers (employees and contractors) are responsible for ensuring timely and effective initial internal reporting of Incidents that they are involved with or witness.

Snowy Hydro are to be informed of any environmental incidents or regulatory compliance incidents immediately verbally and within 24 hours in writing. The written notification is to occur through completion of the 'incident notification form'. Information provided must be facts only, not statements of opinion or assumptions.

Any information or documents which the Contractor may provide to regulatory agencies in response to an incident will be provided to Snowy Hydro beforehand for the information of, or where relevant review by, Snowy Hydro. Snowy Hydro are also to be provided details of all correspondence provided to agencies when it is issued.

Within 7 days of the incident occurring, the Contractor will provide Snowy Hydro with a detailed report of the incident and any further reports as may be requested.

The Contractor and / or sub-contractor will participate in any investigations undertaken by Snowy Hydro and at the direction of the Snowy Hydro Environment Manager.

6.2.1 Incident reporting in accordance with the conditions

The Contractor will immediately notify Snowy Hydro of an incident which arises through the Infrastructure Approval. The notification must be in writing to enable notification to DPIE and NPWS and must include the time and date of the incident, details of the incident (including location) and any non-compliance with the approval. Snowy Hydro will then immediately notify DPIE and NPWS. Notification to DPIE and NPWS must be in writing via the Major Projects portal.

Non-compliances will be reported in accordance with Section 7 of this Strategy.

All written requirements of the Secretary or relevant public authority, which may be given at any point in time, to address the cause or impact of an incident must be complied with, within any timeframe specified by the Secretary or relevant public authority.

6.2.2 Incident reporting in accordance with the POEO Act

The Contractor will notify EPA of pollution incidents on or around the site via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the POEO Act. The circumstances where this will take place include:

a) If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial.

b) If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds $10,000.

6.2.3 Incident reporting in accordance with the Deed of Agreement for Lease

In accordance with the Project Requirements of the Lease, if an incident occurs Snowy Hydro are obliged to provide NPWS with regular reporting on the incident in a form setting out the particular information regarding the incident. This form shall be sent via the Major Projects portal .

6.2.4 Management actions

Management actions that will be implemented in response to an incident are detailed below in Table 6.1.

Table 6.1 Environmental incident management actions

Management Action	Responsibility
All suspected environmental incidents will be reported to Snowy Hydro immediately verbally and within 24 hours in writing.	Contractor
Incidents that require notification to DPIE will be reported in accordance with the requirements of the Infrastructure Approval and section 6.2.1 of this EMS.	Contractor / Snowy Hydro
Incidents that require notification to NPWS will be reported in accordance with the requirements of the Deed of Agreement for Lease and in accordance with section 6.2.3 of this EMS.	Snowy Hydro
The cause will be investigated as soon as reasonably practicable (generally within 24 hours of the incident).	Contractor
The responsible Contractor will undertake any required remediation works or measures.	Contractor
The incident will be reviewed to ensure that the measures are appropriate in responding to the incident and minimising the potential for recurrence.	Contractor / Snowy Hydro
The responsible Contractor will provide a briefing to all site personnel following the investigation of a confirmed environmental incident. The briefing will include any identified construction process improvements that could prevent reoccurrence of the same environmental incident.	Contractor

6.3 Environmental emergencies

Appendix B of the EMS includes an Emergency Plan (Bushfire) and an Emergency Response Management Plan (ERMP).

The Incident Management Procedure defines an emergency as an event that injures people, adversely affects the environment, or damages assets, and requires a coordinated deployment of emergency resources to provide a first response.

The ERMP will be implemented in the event of an environmental emergency arising during construction. The Emergency Plan (Bushfire) will be implemented in the event of an environmental emergency which is

a bushfire. Further details for safety related emergencies is documented in the Contractor's Safety Management Plan.

An emergency spill response procedure is provided within the Surface Water Management Plan. This procedure will be used in the event of an oil, fuel or chemical spill on land or water.

7 Inspections, monitoring and auditing

7.1 Environmental inspections

Implementation of a regular program of inspections is an essential part of the success of work activities. The effectiveness of environmental protection measures described in this EMS and management plans will be inspected and assessed on a weekly basis by the Contractor's environmental staff. The weekly checklist for the project will be developed by the Contractor prior to commencement of construction. The purpose of the checklist is to:

- provide a surveillance tool to ensure that safeguards are being implemented;
- identify where problems might be occurring;
- identify where sound environmental practices are not being implemented; and
- facilitate the identification and early resolution of problems.

Any non-conformances identified through the checklist process will be highlighted and an environmental inspection report (minor issues) or an environmental incident report completed.

The checklist will remain 'open' until:

- the issue has been resolved;
- a new or revised procedure has been established and implemented; or
- training has been provided to relevant personnel/ sub-contractors.

The findings of inspections will be discussed at toolbox meetings and concerns raised will be considered by the Contractor's project management team for review or improvement of the environment procedures.

In addition, the Contractor's Environment Manager and Supervisors and Snowy Hydro environment staff will jointly undertake regular inspections of works sites, and in particular critical activities throughout construction of the Project. Stakeholders such as DPIE and EPA will be invited to attend relevant inspections. Inspections will typically occur on a weekly or fortnightly basis depending on the complexity and anticipated risks associated with the stage of construction. Deficiencies and required actions will be analysed and prioritised at the completion of the inspection and timeframes for implementation of corrective actions agreed.

An inspection schedule is provided in Table 7.1.

Table 7.1 Inspection schedule

Activity	Frequency	Location	Responsibility	Record
Environmental Site Inspection	Weekly	Site wide	Contractor's Environment Manager	Site inspection checklist
Joint Environmental Site Inspection	Fortnightly	As requested by Snowy Hydro	Snowy Hydro, Contractor's Environment Manager and Foreman / engineer	Snowy Hydro inspection report
Rainfall Inspection (assessed when there is a greater than 80% potential for 10mm or greater rainfall)	Within 3 hours of the start of a rainfall event during work hours* Within 24 hours of the start of a rainfall event (or on the following working day)*	Site wide	Contractor's Environment Manager or nominated representative	Site inspection checklist

* The events are to cause runoff to occur (ie when rainfall exceeds 10mm in a 24 hour period).

7.2 Monitoring

Monitoring will be undertaken for environmental aspects of the Project to confirm the adequacy of implementation of the management measures and will highlight any non-conformances or potential non-conformances across the life of the Project. Specific monitoring programs have been developed for high risk aspects of the Project and these are included within the relevant management plans.

The monitoring programs have been developed to address the requirements of the conditions of the Infrastructure Approval. In general these require that:

- baseline data available, additional data to be obtained and timing;
- the parameters to be monitored and the location and frequency;
- the reporting of monitoring and analysis results against relevant criteria;
- methods that will be used to analyse the monitoring data; and
- procedures to identify and implement additional mitigation measures where results of monitoring are unsatisfactory; and
- any consultation to be undertaken in relation to the monitoring programs.

The timing, frequency, methodology, locations and responsibilities for the proposed environmental monitoring programs are specified in the respective management plans and summarised in Table 7.2. A plan depicting the monitoring to be undertaken is shown in each relevant plan. The monitoring programs range from those involving formal sample collection, analysis and measurement, to those involving a more qualitative assessment.

Table 7.2 Environmental monitoring summary

Activity	Management Plan	Frequency	Responsibility	Record	Timing
Receiving waters – Yarrangobilly River Wallaces Creek Talbingo Reservoir	Surface Water Management Plan	Water quality monitoring (comprehensive) – 12 times per year for each location upstream and downstream of the project Continuous monitoring for flow, pH and conductivity at nominated locations	Contractor	Field sampling and testing records and laboratory tests reports	All construction
Surface water – construction disturbance areas and access roads	Surface Water Management Plan	Water quality monitoring (comprehensive) – 4 times per year at least once during wet weather Daily basic testing during wet weather events	Contractor	Field sampling and testing records and laboratory tests reports	All construction
Groundwater	Groundwater Management Plan	Monthly monitoring of groundwater wells	Contractor	Field sampling and testing records and NATA tests reports	During all tunnelling activities and associated operations
Weeds	Weeds and Feral Animal Management Plan	Monthly monitoring following initial identification of weeds	Contractor	Weed monitoring report	All construction
Feral Animals	Weeds and Feral Animal Management Plan	Spot checks through environmental inspections.	Contractor	Feral animal monitoring report	During all tunnelling activities and associated operations
Threatened species – Smoky Mouse Booroolong Frog	Biodiversity Management Plan	See Table 7.3	Snowy Hydro / Contractor	See Table 7.3	All construction
Threatened species – Murray Crayfish	Biodiversity Management Plan	One survey at Yarrangobilly and one at Wallaces Creek. Site areas include 50 m upstream and downstream of crossings.	Snowy Hydro / Contractor	Targeted visual surveys will record the condition of aquatic habitat and the presence of any threatened aquatic species with a specific a focus on Murray crayfish	During dredging and subaqueous rock placement
Excavated rock	Excavated Material Management Plan	Weekly inspection of excavated tunnel rock placement area. Laboratory testing of rock sampled at the frequency described in the Excavated Material Management Plan	Contractor	Inspection report Laboratory test report	During tunnel rock excavation

Table 7.3 Biodiversity Monitoring schedule

Task	Pre-construction (baseline)	During construction	Post-construction
Smoky Mouse habitat characteristics monitoring	Four monitoring events per year (quarterly)	Four monitoring events per year (quarterly)	Four monitoring events per year (quarterly)
Smoky Mouse occupancy monitoring	Six monitoring events per year, with each monitoring event defined as one month deployment of cameras	Six monitoring events per year, with each monitoring event defined as one month deployment of cameras	Six monitoring events per year, with each monitoring event defined as one month deployment of cameras
Smoky Mouse population monitoring	Four monitoring events per year (quarterly), with each monitoring event defined as four nights of trapping	Four monitoring events per year (quarterly), with each monitoring event defined as four nights of trapping	Four monitoring events per year (quarterly), with each monitoring event defined as four nights of trapping
Booroolong Frog population monitoring	Two separate nocturnal monitoring events during the breeding season (November to mid-December) per year	Two separate nocturnal monitoring events during the breeding season (November to mid-December) per year	Two separate nocturnal monitoring events during the breeding season (November to mid-December) per year
Booroolong Frog habitat characteristics monitoring	Annually, and after any surface water incidents	Annually, and after any surface water incidents	Annually, and after any surface water incidents
Booroolong Frog surface water quality monitoring	Refer to the Surface water monitoring program (SWMoP)	Refer to the Surface water monitoring program (SWMoP)	Refer to the Surface water monitoring program (SWMoP)
Weeds presence/absence monitoring	One monitoring event during January 2019	Bi-annually (seasonally based)	Bi-annually (seasonally based)
Weed cover monitoring	One monitoring event during January 2019	Bi-annually (spring and autumn)	Bi-annually (spring and autumn)
Phytophthora presence/absence monitoring	Four monitoring events per year (quarterly)	Four monitoring events per year (quarterly)	Four monitoring events per year (quarterly)
Other monitoring (dieback)	To be determined pending outcome of weed monitoring program	To be determined pending outcome of weed monitoring program	To be determined pending outcome of weed monitoring program
Feral herbivores presence/absence monitoring	One monitoring event during January 2019	Four monitoring events per year (quarterly), with each monitoring event lasting 30 days	Four monitoring events per year (quarterly), with each monitoring event lasting 30 days
Feral herbivores abundance monitoring	One monitoring event during January 2019	Four monitoring events per year (quarterly), with one monitoring event defined as four nights	Four monitoring events per year (quarterly), with one monitoring event defined as four nights
Feral predators presence/absence monitoring	One monitoring event during January 2019	Four monitoring events per year (quarterly), with each monitoring event lasting 30 days	Four monitoring events per year (quarterly), with each monitoring event lasting 30 days
Feral predators abundance monitoring	One monitoring event during January 2019	Four monitoring events per year (quarterly), with one monitoring event defined as four nights	Four monitoring events per year (quarterly), with one monitoring event defined as four nights

7.2.1 Exceedances

Irrespective of the type of monitoring conducted, the results will be used to identify potential or actual problems arising from construction processes. Where monitoring results are outside of the expected range, the process described below will be implemented:

- the results will be analysed by the Contractor's Environment Manager or Environmental Coordinator in more detail with the view of determining possible causes for the exceedance including a review of the potential construction activities impacting that site of the exceedance;
- a site inspection will be undertaken;
- relevant personnel will be contacted and advised of the problem;
- an agreed action will be identified; or
- action will be implemented to rectify the problem.

The Snowy Hydro Environment Manager will be advised of any exceedances and implemented actions within the monthly report.

Any exceedances which may result in a non-compliance of the conditions, will be reported in the relevant Compliance Report and as required within Section 7.4, 7.5 and 7.7 of the EMS.

Monitoring outcomes which exceed certain thresholds may be subject to the implementation of a trigger action response plan (TARP). These have been developed and provided within the relevant management plans to allow prompt identification of unpredicted impacts and to guide the implementation additional management measures and corrective actions should certain conditions arise. They provide potential indicators to the exceedances beyond those predicted, assigning a hierarchy of alarms or trigger levels to each potential indicator, specifying appropriate responses and when these should be applied.

7.3 Auditing – internal and external

The purpose of auditing is to assess compliance with the EMS and associated plans, the Approval and any relevant legal and other requirements (eg licences, permits, regulations, Snowy Hydro contract documentation).

7.3.1 Internal audits

Internal auditing will be undertaken on a minimum six-monthly basis throughout the Project or more frequently where required based on the environmental risk. The Contractor will submit an integrated audit schedule to Snowy Hydro for acceptance at the commencement of the project. The audit schedule will be maintained by the Contractor for the duration of the project and updated on minimum six-monthly basis or when any change is made to the schedule.

An audit checklist will be developed by the Contractor and amended as necessary to reflect changes to this EMS, subsequent approvals and changes to Acts, regulations or guidelines. The Contractor will submit the completed audit checklists/reports to Snowy Hydro. The findings arising from internal audits will be recorded as corrective actions and managed to close out in agreed time frames.

7.3.2 External audits

An independent audit, commissioned and paid by the proponent, will be conducted within one year of the commencement of construction and every three years thereafter, unless the Planning Secretary directs otherwise. The audit is to be carried out in accordance with the Independent Audit requirements (DPE 2018, by a suitably qualified lead auditor and an experienced independent team of experts, whose appointment has been endorsed by the Secretary. Within 12 weeks of commissioning this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to DPIE, together with a response to any recommendations and a timetable for implementation.

As deemed necessary by Snowy Hydro, Snowy Hydro will conduct an audit of the EMS, management plan or contract requirements, including the EPL on the Contractor. Snowy Hydro will provide the Contractor with a copy of the audit reports, identifying non-compliance and corrective actions required.

Audit findings will be recorded in the quality system database by the Contractor for action and close out. The action register will detail the source of the action (e.g. audit, inspection or other), the action required, target close out date, actual close out date and the person responsible for the action item. These action items will be implemented to the satisfaction of the Secretary. Further details are provided in Section 7.7 in relation to non-conformance and corrective action.

7.4 Compliance tracking and reporting

A Compliance Monitoring and Reporting Program has been developed in accordance with condition 7 of Schedule 4 of the Infrastructure Approval, and will be implemented for the duration of construction.

The environmental obligations identified for the Project have been incorporated into the Compliance Monitoring and Reporting Program. The compliance reporting required to occur as part of the conditions is provided in Table 7.4.

Table 7.4 Regular compliance reporting (as required by DPIE's *Compliance Reporting* guidelines)

Report	Activity	Timing / Indicative date	Frequency	Responsibility	Recipient
Stage related Compliance Report	Any public road closures	Report to be submitted to the Planning Secretary prior to commencement of the public road closure Date dependent on program and commencement date of project	Single report prior to construction	Contractor and Snowy Hydro	DPIE and NPWS
Stage related Compliance Report	Pre-construction minor works	Report to be submitted to the Planning Secretary prior to commencement of pre-construction minor works February / March 2019	Single report prior to construction	Contractor and Snowy Hydro	DPIE and NPWS
Stage related Compliance Report	Road upgrade works	Report to be submitted to the Planning Secretary prior to commencement of road upgrade works	Single report prior to construction	Contractor and Snowy Hydro	DPIE and NPWS

Report	Activity	Timing / Indicative date	Frequency	Responsibility	Recipient
Stage related Compliance Report	Pre-construction	Report to be submitted to the Planning Secretary prior to commencement of construction	Single report prior to construction	Contractor and Snowy Hydro	DPIE and NPWS
Construction Compliance Report	Construction	Reporting required for the duration of construction August / September 2019 February / March 2020 August / September 2020 February / March 2021	6 monthly from the commencement of construction	Contractor Snowy Hydro for Snowy Hydro conditions	DPIE and NPWS
Pre-completion	Pre-completion	Report to be prepared prior to completion of the project Date to be advised closer to pre-completion	Single report	Contractor Snowy Hydro for Snowy Hydro conditions	DPIE and NPWS

Compliance reports required for submission prior to the subaqueous emplacement trial and prior to the completion of exploratory tunnel works will be prepared as part of the Stage 2 works.

The compliance reports will be prepared by the Contractor and will include:

- details of the activities undertaken during the reporting period;
- compliance status summary;
- non-compliances;
- incidents;
- community complaints;
- compliance tables that include:
  - a unique identification number (ID);
  - the compliance requirement to be complied with;
  - the stage of the project to which the compliance requirement applies;
  - the proposed monitoring methodology for each compliance requirement; and
  - the evidence to be collected to assess compliance with each compliance requirement.

The compliance reports will be submitted to DPIE and NPWS via the Major Projects portal and will be placed on the project website.

Procedures for rectifying any non-compliances identified during environmental auditing, review of compliance or incident management are also documented in the Compliance Monitoring and Reporting Program.

7.5 Reporting non-compliances

The Contractor is to notify Snowy Hydro as soon as possible and at least within 24 hours of becoming aware of a non-compliance.

In accordance with condition 6 of Schedule 4 of the Infrastructure Approval, the Contractor is to prepare a report for Snowy Hydro within 5 days of becoming aware of the non-compliance which details:

- the application number;
- set out the condition of approval that the project is non-compliant with;
- the way in which it does not comply;
- the reasons for the non-compliance (if known); and
- what actions have been taken, or will be taken, to address the non-compliance.

Snowy Hydro will notify DPIE in writing via the Major Projects portal within 7 days of becoming aware of any non-compliance, with the details provided above.

7.6 Other reporting

The Contractor's engaged on the project are required to prepare and submit various reports to Snowy Hydro and to undertake their own reporting needs including those under the conditions of Approval. A summary of these reports is provided in Table 7.5.

Table 7.5 Other reporting requirements

No.	Report	Requirement	Timing	Responsibility	Recipient
1	Monthly environmental report	For incorporation in Project Monthly Reports including environmental statistics (ie incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues.	Monthly	Contractor's Environment Manager	Snowy Hydro
2	EPL Monthly Report	As required by the EPL	As required by the EPL	Contractor's Environment Manager	EPA (as required) and Snowy Hydro
3	EPL Annual Return		Annual based on date of EPL issue	Contractor's Environment Manager	EPA and Snowy Hydro

No.	Report	Requirement	Timing	Responsibility	Recipient
4	Monitoring results	Report on monitoring data recorded and potential exceedances against criteria. Reporting for environmental performance also required on the website as detailed in item 6.	Monthly	Contractor's Environment Manager, Environmental Officer(s)	Snowy Hydro
5	Snowy Hydro and/or EPA environmental inspection reports	Response to matter raised in Snowy Hydro and/or EPA site inspections.	As required. Timing of close out of actions dependent on risk. Response to report typically every week for Snowy Hydro inspection reports.	Contractor's Environment Manager, Environment Officer(s)	Snowy Hydro / EPA
6	Website updates	Provide regular reporting on the environmental performance of the project on the website	In accordance with the reporting requirements in any strategies, plans or programs or at least monthly	Contractor's Environment Manager and Snowy Hydro	Public
7	Environmental risk assessment workshop	Conducted for each construction stage, work changes and significant issues.	Prior to construction during development of EMS and as required thereafter	Contractor's Environment Manager	Snowy Hydro

7.7 Non-conformance, corrective and preventative action

A non-conformance is the failure to comply with the requirements of this EMS and supporting documentation. Where a non-conformance has been identified, a correction action/preventative action will be developed and implemented to minimise the potential for recurrence.

In the event of a non-conformance the following will occur:

- the nature of the event will be investigated by the Contractor's Environment Manager;
- advice may be sought from a specialist;
- monitoring may be undertaken;
- the effectiveness or need for new/additional controls will be reviewed;
- an appropriate preventative and corrective action will be implemented;
- strategies will be identified to prevent reoccurrence;
- environmental documentation will be reviewed and revised; and

- the activities may be stopped, if necessary by the Contractor's Environment Manager in consultation with the Project Director. A hold will be placed on the area until appropriate actions have been undertaken.

Corrective actions may be generated from a number of sources, including but not limited to incidents, audits, inspections and management reviews. Corrective actions will be systematically managed to ensure issues raised are recorded and closed out in a timely manner.

Corrective/preventative actions will be entered into the Contractor's quality system database and include detail of the issue raised, the action required, and timing and responsibilities. The database will be reviewed regularly to ensure actions are closed out as required. The close out details shall include the date closed and the name of the person verifying completion of the required action. The corrective actions register shall be provided to Snowy Hydro at the regular site meetings.

8 Documentation

8.1 Records

The Contractor's Environment Manager is responsible for maintaining all environmental management documents as required by the draft baseline conditions, the EPL, this EMS, the Contract, and any other licences and approvals. The following records are those that will be generated through delivery of the project:

- monitoring and inspection records;
- correspondence with public authorities;
- induction and training records;
- site specific records such as those prepared for dewatering and water management, out of hours works, clearing records, unexpected finds etc;
- waste classification records, waste disposal and recycling records, and section 143 notices for transporting and disposing of waste;
- plans, strategies and reports, and revisions thereof, to ensure compliance with the Approval and EPL;
- reports on environmental incidents, environmental non-conformances, and corrective actions;
- compliance reports, monthly reports and annual reports;
- audit reports.

All environmental management documents are subject to ongoing review and continual improvement.

Only the Environmental Site Representative, or delegate, has the authority to change any of the environmental management documentation.

All relevant schedules/ records will be on site at all times during the construction stage. The Contractor's Environment Manager is to make available all environmental records to Snowy Hydro and if requested, provide this information on a regular basis, or upon Snowy Hydro request provide this information in a timely manner (ie within 24 hours).

8.2 Document and data control

The Contractor's Environment Manager will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above. During construction, environmental documents will be stored at the main site office and can be accessed on request to the Contractor's Environment Manager.

A document and data control procedure will be implemented to control the flow of documents and data within the Contactor's teams and between the Contractor and the Snowy Hydro, stakeholders and sub-contractors.

Documents and data that are to be issued and liable to change will be controlled to ensure that they are approved before issue and that the current issue or revision is known to and available to those requiring them. Controlled documents and data will be uniquely identified and will bear a defined revision number recorded on each page of the document.

After a number of changes have been made to a document it will be withdrawn and reissued as a new revision. Data will be issued on a revision basis only. Obsolete documents and data may be kept for contractual or other reasons but will be clearly marked 'superseded'.

Appendix A1

Legal and other requirements

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
General					
Environmental Planning and Assessment Act 1979	All	Section 5.19	Approval of the Minister required to carry out State significant infrastructure (SSI). Comply with the conditions of the Infrastructure Approval and the revised environmental management measures from the Submissions Report.	Snowy Hydro	Yes Snowy Hydro including the Exploratory Works is declared to be Critical State significant infrastructure (CSSI) with the declaration coming into effect on 9 March 2018. Exploratory Works may be carried out without development consent under Part 4 of the EP&A Act, however application for approval of the CSSI is to occur. The Environmental Impact Statement for the Exploratory Works for Snowy 2.0 was submitted to Department of Planning and Environment in July 2018 and publicly exhibited between 23 July 2018 and 20 August 2018. In October 2018, the response to submissions was prepared (*Response to Submissions Exploratory Works for Snowy 2.0*). **Approval for the Exploratory Works project was granted by the Minister for Planning on 11 February 2019.**
Environment Protection and Biodiversity Conservation Act 1999	Proposed action	Section 28	A person must no take an action that has, will have or is likely to have a significant impact on any of the matters of national environmental significance without approval.	-	No The Australian Alps National Parks and Reserves; and the Snowy Mountains Scheme are both listed on the Australian National Heritage List. The *Environment Protection and Biodiversity Conservation Act 1999* aims to protect matters of national environmental significance (MNES) including national heritage places. MNES relevant to Exploratory Works are nationally threatened species and ecological communities, and national heritage places. On 28 May 2018, a referral was submitted for a proposed action under the EPBC Act for the Exploratory Works. On 10 July 2018, the Assistant Minister for the Environment confirmed that Exploratory Works was not a controlled action and therefore, did not require any further assessment or approval under the *Environment Protection and Biodiversity Conservation Act 1999*. **On the same day, the Assistant Minister declared that the Exploratory Works is a class of action to which Section 28 of the EPBC Act (ie activities of Commonwealth agencies) does not apply.**
National Parks and Wildlife Act 1974	Kosciuszko National Park		All activities on reserved land must be consistent with the objects and purpose of the NPW Act. All activities within KNP must be consistent with the KNP *Plan of Management* in accordance with Part 5 of the *National Parks and Wildlife Act 1974*.	Snowy Hydro	Yes The KNP PoM incorporates the Snowy Management Plan, which is set out in Schedule 2 of the Snowy Management Plan Procedures Agreement dated 3 June 2002. Snowy Hydro is required, under Part 4 of the *National Parks and Wildlife Regulation 2009*, to comply with the environmental management obligations imposed on the company under the Snowy Management Plan.

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					Should approval be granted for Exploratory Works, the Snowy Management Plan Procedures Agreement will be reviewed and updated as required.
Snowy Hydro Corporatisation Act 1997	All	Section 37	Section 37(2) of the *Snowy Hydro Corporatisation Act 1997* entitles Snowy Hydro to grant a lease, licence, easement or right of way over KNP, for the purposes of the existing Snowy Scheme development.	Snowy Hydro	Yes The Snowy Park Lease was granted to Snowy Hydro in 2002 and has a term of 75 years. The lease covers land where surface infrastructure associated with Snowy Hydro has been constructed. Section 41(5) of the *Snowy Hydro Corporatisation Act 1997* provides that development that is for a purpose for which a lease has been granted under Part 6 of the Act, is taken to be authorised under the *National Parks and Wildlife Act 1974*. The new proposed surface infrastructure works within KNP associated with the Exploratory Works are not covered by the existing Snowy Park Lease. **Minor amendments will therefore be required to the *Snowy Hydro Corporatisation Act 1997* to enable extension of the Snowy Park Lease to include the areas that will be accessed and occupied by Snowy Hydro during Exploratory Works.**
	Water use	Section 23	Part 5, Section 23 of the *Snowy Hydro Corporatisation Act 1997* provides rights for Snowy Hydro to collect water from rivers, streams and lakes within the Snowy water catchment; to divert water; to store that water and to use water to generate electricity. The Snowy Water Licence is a statutory instrument issued under Part 5 of the *Snowy Hydro Corporatisation Act 1997*.	-	The rights are subject to section 32 of the *Snowy Hydro Corporatisation Act 1997* and Part 1 of Chapter 3 of the *Water Management Act 2000.* Section 32 states that a person may be granted an access licence, water use approval or water supply work approval under the *Water Management Act 2000* in relation to water authorised by the Snowy water licence. Part 1 of Chapter 3 of the *Water Management Act 2000* relates to basic landholder rights including domestic and stock rights, harvestable rights and native title rights. These are not applicable to the Exploratory Works project. **The *Response to Submissions Exploratory Works for Snowy 2.0* (RTS) recommended in Section 4.4.1 that Snowy Hydro explore with Department of Industry (DoI) the scope for the Snowy Water Licence to be utilised by agreement to enable water to be used for limited purposes associated with the Exploratory Works.**
Protection of the Environment Operations Act 1997	Scheduled activity	Section 47 Section 48	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity, unless the premises are licensed by the EPA.	Snowy Hydro then transferred to Contractor. Any initial application will not include marine based	The EPA provided a submission on the EIS and advised that an EPL would be required for: • Land based extractive activities; • Marine based extractive activities (for the dredging component of the proposal). The submission also stated that in addition to these, ancillary activities that may be reflected within an EPL would include the operation and

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
				extractive activities and would need to be applied for by the contractor. It remains the responsibility of the Contractor to ensure that all works are carried out in accordance with relevant legislative requirements.	discharge from the sewage treatment plant and process water treatment plant. The EIS advised that chemical storage may also be applicable. In accordance with Schedule 1 of the POEO Act, scheduled activities which may be relevant to the Exploratory Works include: **9 Chemical storage** In the event that: • General chemicals storage – capacity to store more than 20 tonnes of pressurised gases, 200 tonnes of liquified gases or 2000 tonnes of chemicals is stored; • On-site generated chemical waste storage – storing on site at any time more than 5 tonnes of any chemical substance produced on site that is prescribed waste; • Petroleum products storage – capacity to store more than 200 tonnes (liquified gases) or 2000 tonnes (chemicals in any other form); An EPL would be required for the scheduled activity of chemical storage. As there is currently no proposal to store chemicals above these amounts, an EPL is not considered to be required. In the event that this changes, it will be the responsibility of the Contractor to apply for this EPL. **13 Concrete works** A concrete batch plant may be required for Exploratory Works. This scheduled activity does not apply to concrete batching (refer clause 13 of Schedule 1). It is therefore considered that an EPL for concrete works is not required. **15A Contaminated groundwater treatment** Groundwater from the tunnelling works will be treated as required, however any analytes / parameters which required treatment would likely be due to the naturally high background levels (and not due to contaminated groundwater). Should the treatment of contaminated groundwater occur, with the system having a capacity of more than 100 megalitres per year of contaminated water, then an EPL will be applied for. **16 Crushing, grinding or separating** In the event this activity occurs and the plant has a capacity to process more than 150 tonnes of materials per day or 30,000 tonnes of materials per year, then an EPL will be required.

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					19 Extractive activities **Land-based extractive activity** - means the extraction, processing or storage of extractive materials, either for sale or re-use, by means of excavation, blasting, tunnelling, quarrying or other such land-based methods. **Water-based extractive activity -** means clay, sand, soil, stone, gravel, rock, sandstone or similar substances that are not minerals within the meaning of the *Mining Act 1992.* **A water based extractive activity EPL will be required for dredging.** **Extraction on land is not occurring for the purpose of sale or re-use. Further discussions are required with EPA in relation to this scheduled activity.** **36 Sewage treatment** Relates to the operation of sewage systems and applies if the system has a processing capacity that exceeds 2500 persons equivalent or 750 kilolitres per day whichever is the greater. The sewage treatment system is not expected to exceed these volumes however in the event that this may occur, an EPL would be required. **39 Waste disposal (application to land)** This scheduled activity relates to the 'application to land of waste received from off site…' Material will not be received on the project from off site. **Non-scheduled activities** The POEO Act permits under section 43 that EPLs can be issued for the carrying out of non-scheduled activities for the purpose of regulating water pollution. An EPL for this purpose is not required, but does provide a defence to the offence of polluting waters. **A land based extractive activity EPL will be required for Exploratory Works tunnelling as discussed with the EPA.** **A water based extractive activity EPL will be required for dredging.** **Should the Contractor undertake any scheduled activities (such as crushing, grinding or separating) as part of their works, an EPL that covers this activity will be required to be obtained.**
	Harming the environment	Section 115 Section 116	Do not risk harming the environment by wilfully or negligently:	Contractor	Yes

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
		Section 117	• disposing of waste unlawfully. • causing any substance to leak, spill or otherwise escape (whether or not from a container); or • causing any controlled substance to be emitted into the atmosphere.		Management measures included within the Surface Water Management Plan, the Waste Management Plan and the Air Quality Management Plan.
	Notification of pollution incidents	Section 148	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	Snowy Hydro / Contractor	Yes Included within the CEMP.
	PIRMP prepared if EPL required	Section 153A-F	Requires the holder of an EPL to prepare a pollution incident response management plan (PIRMP)	Snowy Hydro / Contractor	**PIRMP to be prepared.**
	Control equipment	Section 167	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	Contractor	Yes Included within the Surface Water Management Plan.
Roads Act 1993	Road use	Section 138	Road occupancy licences (ROLs) required for any activity likely to impact on traffic flow	Contractor	Yes **ROLs will be required to be obtained by the Contractor.**
Rural Fires Act 1997	Bushfire prone land	Section 100B	Bush fire safety authority	-	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under section 100B of the *Rural Fires Act 1997.*
Environmentally Hazardous Chemicals Act 1985	Hazards and risks	Section 28	The legislation aims to minimise the risks to human health and the environment from hazardous industrial chemicals. Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	Contractor	Prescribed activities are activities which, by reason of a chemical control order, may lawfully be carried on only under the authority of a licence. Prescribed activity is defined in the *Environmentally Hazardous Chemicals Act 1985* as 'in relation to a chemical or any chemical waste, means the act of manufacturing, processing, keeping, distributing, conveying, using, selling or disposing of the chemical or waste or any act related to any such act.' A licence to carry out an activity prohibited by a chemical control order must be obtained from EPA. EPA currently have five chemical control orders in place for: • aluminium smelter wastes containing fluoride and / or cyanide; • dioxin-contaminated waste materials; • organotin waste materials; • polychlorinated biphenyl compounds; • scheduled chemical wastes.

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					There is no known handling of these substances which would occur, however should the requirements of the *Environmentally Hazardous Chemicals Act 1985* be triggered, then a licence may be required. **Should the requirements of this legislation be triggered, licences to carry out an activity prohibited by a chemical control order will be obtained from EPA.**
Dangerous Goods (Road and Rail Transport) Act 2008	Hazards and risks	Section 9	Ensure that dangerous goods are transported in a safe manner.	Contractor	Dangerous goods are required to be transported in a safe manner. Vehicles that transport dangerous goods are required to be licensed. Drivers transporting dangerous goods are required to be licensed. **Licences to transport dangerous goods will be obtained if required.**
Pesticides Act 1999	Hazards and risks	Section 12 Section 13 Section 14 Section 15 Section 17	Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label. Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. Compliance with pesticide codes of practice is required.	Contractor	The Contractor is required to undertake project works in accordance with relevant legislative requirements including (if required), the application of pesticides in accordance with the *Pesticides Act 1999.* **In the event that an unregistered pesticide is used, a permit will be required to be obtained.**
National Greenhouse and Energy Reporting Act 2007 and Regulations 2008	Greenhouse gas emissions	-	Accounting and reporting of greenhouse gases produced and energy consumed during construction.	Snowy Hydro / Contractor	Yes Applicability dependent on thresholds.
Water					
Protection of the Environment Operations Act 1997	Water pollution	Section 120 Section 122	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any EPA licence.		Yes Management measures have been incorporated within the Surface Water Management Plan.
Water Management Act 2000	Water access licence	Section 60A	Do not take water from a water source (a lake, river or estuary or place where water occurs naturally on or below the surface of the ground, and includes coastal waters) without an access licence.	Snowy Hydro / Contractor	Yes The *Water Management Act 2000* applies to areas of New South Wales that have a water sharing plan. The project area is subject to the following water sharing plans: • *Water sharing plan for the Murrumbidgee unregulated and alluvial water sources 2012*, Upper Tumut surface water source;

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					• *Water sharing plan for the NSW Murray Darling Basin Fractured Rock Groundwater Sources 2011*, Lachlan Fold Belt Murray Darling Basin Groundwater Source; and • *Water sharing plan for the South Coast Groundwater Sources 2016*, Lachlan Fold Belt Coast Groundwater Source. Section 60A of the *Water Management Act 2000* requires that a water access licence be obtained to extract water from a water source. The *Water Management (General) Regulation 2018* does however provide exemptions for the requirement to obtain water access licences. Section 18 of the *Water Management (General) Regulation 2018* states that a person is exempt if the person is specified in any provision of Part 1 of Schedule 5 of the *Water Management (General) Regulation 2018* and takes water for any of those purposes. Relevant exemptions from Part 1 of Schedule 5 are detailed below: • Clause 5 provides an exemption for any public authority lawfully engaged in the use of water for dust suppression. • Clause 9 exempts water bore testing by pump test if carried out as part of an approved project under the EP&A Act. • Clause 10 exempts monitoring bores. • Clause 11 exempts a person engaged in the operation of hydro-electric station in relation to the water required for the purpose of generating hydro-electric power. Water access licences would therefore not be required if Snowy Hydro are using the water for dust suppression; pump testing a bore; or monitoring. **Any other water required for construction purposes would however require a water access licence**. **Consultation with DoI will continue in finalising approval requirements.**
	Access licence for mining	Section 60I	Access licences for mining	-	Appendix N of the EIS advises that DoI Water have advised that an access licence for mining is required. Section 60I relates to mining and a definition of this is provided within section 60I(4). Mining is the 'winning or removal of materials by methods such as excavating, dredging drilling or tunnelling for the purpose of obtaining minerals or petroleum...'. As this is not occurring as part of the Exploratory Works project, it is considered that an approval under section 60I is not applicable. **Consultation with DoI will however continue in finalising approval requirements.**

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
	Water use approval	Section 89	A water use approval confers a right on its holder to use water for a particular purpose at a particular location.	-	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring a water use approval under section 89.
	Water management works approval	Section 90	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.	-	No There are three kinds of water management work approvals, namely, water supply work approvals, drainage work approvals and flood work approvals: • A water supply work approval authorises its holder to construct and use a specified water supply work at a specified location. • A drainage work approval confers a right on its holder to construct and use a specified drainage work at a specified location. • A flood work approval confers a right on its holder to construct and use a specified flood work at a specified location. Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring a water management work approval under section 90.
	Activity approvals	Section 91 Section 91E Section 91F	Controlled activity approvals and aquifer interference approvals.	-	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring an activity approval under section 91. Exemptions to controlled activity approvals are also included within the *Water Management (General) Regulation 2018* which states that a public authority is exempt from 91E(1) of the Act in relation to all controlled activities that it carries out in, on or under waterfront land. Section 91E and section 91F relate to offences for carrying out a controlled activity or aquifer interference without a controlled activity approval or aquifer interference approval. As stated, due to the fact that the project is SSI, these approvals are not required.
Water Act 1912 Note that this Act is being progressively repealed by the *Water Management Act 2000*	Surface water	Section 21B	Obtain a licence or permit for construction or use of 'work' for purposes including the taking and using of water	-	The *Water Act 1912* does not apply to areas where a water sharing plan is in place. The project is subject to the following water sharing plans: • *Water sharing plan for the Murrumbidgee unregulated and alluvial water sources 2012*, Upper Tumut surface water source; • *Water sharing plan for the NSW Murray Darling Basin Fractured Rock Groundwater Sources 2011*, Lachlan Fold Belt Murray Darling Basin Groundwater Source; and

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					• *Water sharing plan for the South Coast Groundwater Sources 2016*, Lachlan Fold Belt Coast Groundwater Source. As the project is subject to water sharing plans, the *Water Management Act 2000* applies. Under section 60A of the *Water Management Act 2000*, a water access licence is required to extract water.
	Groundwater	Section 112 Section 121A	Obtain a licence where interference with groundwater is likely to occur.	-	The EIS advises that in Section 4.5 of Appendix C that monitoring bore licences are required under the *Water Act 1912*. The *Water Act 1912* does not apply to areas where a water sharing plan is in place. As the project is subject to water sharing plans, the project works are governed by the *Water Management Act 2000*.
	Floodplains	Section 180	Obtain an approval for controlled works. These include works which occur on a designated floodplain, which can prevent land from being flooded or which can affect water flow to or from a river or lake.	-	The *Water Act 1912* does not apply to areas where a water sharing plan is in place. As the project is subject to water sharing plans, the project works are governed by the *Water Management Act 2000.*
Biodiversity					
Biodiversity Conservation Act 2016	Flora and fauna		Legislation responsible for the conservation of biodiversity in NSW through the protection of threatened flora and fauna species, populations and Endangered Ecological Communities (EECs). The BC Act, together with the *Biodiversity Conservation Regulation 2017*, established the Biodiversity Offsets Scheme.	Snowy Hydro	Yes A Biodiversity Offsets Strategy has been incorporated into the RTS.
Biosecurity Act 2015	Weed management	Section 22	Under Part 3 of the *Biosecurity Act 2015*, landowners or land managers have a general biosecurity duty to prevent, eliminate or minimise the biosecurity risk posed or likely to be posed by priority weeds. A biosecurity risk exists where priority weeds have the potential to negatively impact on agriculture, industry, the liveability of our city, human health or the environment. Invasive weeds are known as 'Biosecurity Matter' or 'Priority Weeds'.	Contractor	Yes The *Riverina Regional Strategic Weed Management Plan 2017 - 2022* (RLLS 2017) outlines how government, industry, and the community will share responsibility and work together to identify, minimise, respond to and manage weeds within the Riverina Region, which includes the Exploratory Works project area. The plan also supports regional implementation of the Biosecurity Act. Blackberry (*Rubus fruticosus* species aggregate), a weed of national significance and State Priority was identified within the Exploratory Works survey area. The *Biosecurity Act 2015* requires mandatory measures are implemented as per Part 2, Division 8, clause 33 of the NSW *Biosecurity Regulation 2018*; a person must not import into the State or sell.

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					Sweet Briar (*Rosa rubiginosa*), identified within the Exploratory Works survey area, is identified in Appendix 2 of RLLS (2017) as another weed of concern to the Riverina Region. Weeds identified in Appendix 2 may be subject to the General Biosecurity Duty, as outlined in the *Biosecurity Act 2015*, and may be a focus for local management plans and coordinated campaigns by the community and other stakeholders in the region. A Weed and Feral Animal Management Plan will be prepared and implemented for the project.
Fisheries Management Act 1994	Dredging or reclamation	Section 199 Section 201	Provide the Minister for Primary Industries 28 days notice of planned dredging or reclamation work.	Contractor / Snowy Hydro	Yes Section 201 requires a person to obtain a permit for dredging or reclamation. Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under section 201 of the *Fisheries Management Act 1994.* Section 5.23 of the EP&A Act is silent on s199 and therefore the requirement for notification remains. **Section 199 requires a government authority to give notice of dredging or reclamation. This is not relevant to Stage 1 works.**
	Mangroves, seagrasses and marine vegetation	Section 205	Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.	Not applicable	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under section 205 of the *Fisheries Management Act 1994.*
	Fish passage	Section 219	Do not block fish passage without a permit	Not applicable	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under section 219 of the *Fisheries Management Act 1994.*
Heritage					
Heritage Act 1977	Heritage	Section 57	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council.	Not applicable	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under Part 4 of the *Heritage Act 1977.* Section 57 is within Part 4 of the *Heritage Act 1977.*
		Section 139	An excavation permit is required under certain circumstances. A person must not disturb or excavate land with knowledge or reasonable cause to	Not applicable	No

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
			suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed; or a person must not disturb or excavate land on where a relic has been discovered or exposed.		Certain approvals and authorisations are not required for approved SSI projects In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under section 139 of the *Heritage Act 1977.*
		Section 146	Notify the heritage Council on discovery of a relic.	Contractor / Snowy Hydro	Yes A person who is aware or believes that he or she has discovered or located a relic must within a reasonable time notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require. Notification requirements are included within the Historic Heritage Management Plan.
National Parks and Wildlife Act 1974	Aboriginal places and objects	Section 86 Section 90	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent. Section 86 creates the offence and section 90 creates the requirement to obtain a permit to impact an Aboriginal object, place, land, activity or person.	Not applicable	No Certain approvals and authorisations are not required for approved SSI projects. In accordance with s 5.23 of the EP&A Act, SSI projects are exempt from requiring approvals under section 90 of the *National Parks and Wildlife Act 1974.*
		S89A	Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	Snowy Hydro / Contractor	Yes Notification requirements are included within the Aboriginal Heritage Management Plan.
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Protection of areas and objects	Section 20	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	Snowy Hydro / Contractor	Yes
		Section 22	Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	Snowy Hydro / Contractor	Yes
Contaminated material					
Protection of the Environment Operations Act 1997	Land pollution	Section 142A – Section 142E	Do not cause or permit land pollution other than under authority of a licence or regulation (however it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed	Contractor	Yes

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
			landfill and which is operated in accordance with the regulations.)		
Contaminated Land Management Act 1997	Reporting contamination	Section 60	Duty to report contamination.	Snowy Hydro / Contractor	Yes If project activities have caused land contamination, or a landowner becomes aware of land that is contaminated, there is a legal duty under section 60 of the *Contaminated Land Management Act 1997* to notify the EPA. The level of contaminants in the soil is to be above the *National Environmental Protection (Assessment of Contamination) Measure 1999*; or meet the criterion prescribed by the regulations; or the contaminant has or will enter neighbouring land, the atmosphere, groundwater or surface water.
Noise					
Protection of the Environment Operations Act 1997	Plant maintenance and operation	Section 139	Do not operate plant if it emits noise caused by failure to maintain or operate the plan in a proper and efficient manner.	Contractor	Yes
Protection of the Environment Operations Act 1997	Materials management	Section 140	Do not cause noise by failing to properly and efficiently deal with materials.	Contractor	Yes
Waste					
Protection of the Environment Operations Act 1997	Littering	Part 5.6A	Do not litter in a public place or an open private place. Do not litter from a vehicle. Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises. Do not deposit advertising material on or in vehicles.	Contractor	Yes
	Waste and transportation	Part 3.2 Section 47 Schedule 1	Do not undertake a scheduled waste activity unless in accordance with an environment protection licence.	Contractor	Yes A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the placing of excess fill material onto properties. Section 143 notices should be obtained in accordance with the Waste Management Plan for the application of any waste off site. Any transport of trackable waste should be undertaken by a person licensed to transport such waste.
		Section 143	Only transport waste to a facility that can lawfully accept the waste.		Yes

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
					Section 143 Notices are to be obtained for waste that is sent to a facility / premise outside of the project boundary in accordance with the Waste Management Plan.
		Section 115	Do not dispose of waste in a manner that harms or is likely to harm the environment.		Yes Relevant management measures have been included in the Waste Management Plan.
Protection of the Environment Operations (Waste) Regulation 2005	Waste and transportation	Regulation cl.49	Comply with general requirements for the transport of waste.	Contractor	Yes For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.
		Regulation Part 3	Comply with record keeping requirements in relation to the transport of certain types of waste.	Contractor	Yes
Local Government Act 1993	Wastewater	Section 68	Section 68 of the LG Act requires approval of the relevant local council to build/install and operate a sewage management system.	Contractor	The EIS advises that approval from Snowy Valleys Council will be required prior to the construction of the sewage treatment plant. **Consultation is ongoing in relation to this approval and any approvals which may be required will be obtained prior to operation of sewage treatment.**
Notification requirements (summarised from the details above)					
Protection of the Environment Operations Act 1997	Notification of pollution incidents	Section 148	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	Contractor / Snowy Hydro	Yes
Fisheries Management Act 1994	Dredging or reclamation	Section 199 Section 201	Provide the Minister for Primary Industries 28 days notice of planned dredging or reclamation work.	Contractor / Snowy Hydro	Yes Section 199 requires a government authority to give notice of dredging or reclamation.
Heritage Act 1977	Notify the Heritage Council on discovery of a relic	Section 146	Notify the Heritage Council on discovery of a relic.	Contractor / Snowy Hydro	Yes A person who is aware or believes that he or she has discovered or located a relic must within a reasonable time notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require. Notification requirements are included within the Historic Heritage Management Plan.

Legislation	Activity / aspect	Reference	Requirement	Responsibility	Applicable
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Protection of areas and objects	Section 20	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	Snowy Hydro / Contractor	Yes
National Parks and Wildlife Act 1974	Aboriginal places and objects	Section 89A	Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	Snowy Hydro / Contractor	Yes
Contaminated Land Management Act 1997	Reporting contamination	Section 60	Duty to report contamination.	Snowy Hydro / Contractor	Yes If project activities have caused land contamination, or a landowner becomes aware of land that is contaminated, there is a legal duty under section 60 of the *Contaminated Land Management Act 1997* to notify the EPA. The level of contaminants in the soil is to be above the *National Environmental Protection (Assessment of Contamination) Measure 1999*; or meet the criterion prescribed by the regulations; or the contaminant has or will enter neighbouring land, the atmosphere, groundwater or surface water.

Appendix A2

Environmental Policy

ENVIRONMENT POLICY

Purpose

Snowy Hydro is committed to protecting the environment from harm arising from its business operations and will demonstrate this through actions based on the following principles and beliefs:

Statement

Protecting the environment from harm is important and worthwhile for environmental, economic and social reasons.

- We aim to avoid harm when planning for and carrying out work.
- Using water, energy and other resources efficiently benefits the environment and the business.

Complying with environmental legislation and regulatory requirements is the minimum standard we will meet.

Continually improving our systems and on ground practices is critical to achieving our commitment and is underpinned by:

- An evidence based understanding of our impacts on the environment in which we operate;
- Setting clear objectives and targets;
- Ensuring appropriate resources skills and practices for our workforce and contractors;
- Monitoring results and adjusting practices when required.

By openly communicating on our progress and performance we will demonstrate our commitment and capability.

Accountability

Managers and Supervisors:

- Ensuring and providing opportunities for employees and contractors to acquire and maintain the skills and knowledge necessary to carry out work in line with our environmental principles.
- Leading continual improvement and identifying opportunities to improve environmental performance and management efficiency.

All employees and contractors:

- Being aware of and accountable for their own actions and contribution to environmental performance.
- Identifying, assessing and controlling environmental hazards, managing risks and communicating whenever necessary.
- Reporting all incidents promptly and fully.
- Ensuring they acquire and maintain the skills and knowledge necessary to carry out work in line with our environmental principles, and
- Adhering to environmental procedures and providing feedback on their efficiency and effectiveness

Paul Broad
Chief Executive Officer
December 2017

Appendix A3

Environmental aspects and impacts register

Snowy Hydro Exploratory Works **Revision: 8 November 2018**

Element	Primary Aspects/Activities	Potential Impact	Initial risk rating			Primary Administrative Management	Other Controls	Residual risk rating			Responsibility
			Consequence	Likelihood	Risk Score			Consequence	Likelihood	Risk Score	
Biodiversity	Vegetation clearing Earthworks/Roadworks Waterway crossings Transport of materials and equipment Subaqueous rock placement Dredging	Loss of vegetation Loss of vegetative habitat Loss of aquatic habitat Injury or mortality of fauna Injury or mortality of aquatic species Distrubance of riparian areas Fragmentation of habitat Introduction and spread of weeds, pests and pathogens	B	5	**E**	Biodiversity Management Plan Excavated Rock Management Plan Dredge Environmental Management Plan Landscape Management Plan Sensitive Area Plans	Pre-clearing procedure Exclusion zones and defined clearing limits Fauna and habitat surveys by ecologist Clearing EWMS development, briefing and training Two-stage clearing process Re-use of cleared material Progressive stabilisation and rehabilitation Weed and pathogen hygiene protocols Weed identification and eradication Restriction to travel through Smoky Mouse habitat at night Restrictions to in-stream works during fish breeding season Restrictions to areas of riparian disturbance Use of silt curtains Use of drop chute for subaqueous placement Restrictions to subaqueous placement locations Appropriate selection and use of in-stream materials Appropriate location and design of water intakes Appropriate location and design of water discharge locations Construction phase monitoring and response criteria Regular inspection of controls	C	3	**M**	Contractor
Water	Earthworks/Roadworks Existing contamination Waterway crossings Rock emplacement Potential acid forming materials Subaqueous rock placement Storage of hazardous substances Dredging Tunnelling and blasting Operation of the accommodation camp	Contamination of surface water Contamination of ground water Reduction in groundwater level Degradation of water quality Loss of amenity Increased sediment and nutrient loads within waterways Loss of groundwater dependant ecosystems or species Damage to karst features	B	5	**E**	Surface Water Management Plan Groundwater Management Plan Erosion and Sediment Control Plans Soil Management Plan Excavated Rock Management Plan Dredge Environmental Management Plan Tunnel Blasting Management Plan Landscape Management Plan	Staged clearing Clean water diversions Erosion and sediment controls Sediment basins and treatment of water Progress stabilisation and rehabilitation Monitoring weather forecasts Manage work prior to and during periods of wet weather Process and waste (effluent) water treatment systems Bunded fuel, oil and chemical storage Spill kits readily available and workers trained in their use Regular inspection and maintenance of vessels, plant and equipment Refuelling and washdown in designated areas Containment of water leaving contaminated areas Use of silt curtains Use of drop chute for subaqueous placement Regular testing of excavated rock for PAF characteristics Defined treatment process for excavated rock with PAF characteristics Construction phase monitoring and response criteria Regular inspection of controls	D	3	**M**	Contractor
Land	Earthworks/Roadworks Existing contamination Potential acid forming materials Natural occurring asbestos Storage of hazardous substances Potential acid forming materials Tunnelling Rock emplacement	Contamination of soils Spread of contamination across the site Degradation of topsoils and subsoils Loss of topsoils and subsoils Loss of visual amenity Loss of geodiversity features - fossils, bolder screes Changes to landform and natural water flows	C	4	**H**	Soil Management Plan Contaminated Land Management Plan Naturally Occurring Asbestos Management Plan Geodiversity Management Plan Excavated Rock Management Plan Landscape Management Plan Sensitive Area Plans	Exclusion zones and defined clearing limits Control the number and location of access tracks across the site Minimise vegetation removal and soil disturbance Implement topsoil stripping and stockpiling procedures Bunded fuel, oil and chemical storage Spill kits readily available and workers trained in their use Regular inspection and maintenance of vessels, plant and equipment Refuelling and washdown in designated areas Identify and isolate areas of pre-existing contamination Develop remediation action plans prior to disturbance of contaminated materials where required Appropriately manage the placement of differing soil types Establish exclusion zones around geodiversity features Control stockpile location, size and stabilise when in place for long periods Regular testing of excavated rock for PAF characteristics Defined treatment process for excavated rock with PAF characteristics Minimise soil distrubance in areas potentially containing naturally occurring asbestos Protect topsoil stockpiles Re-establish topsoil to correct depths Progressively stabilise and relegate the site	C	3	**M**	Contractor

Element	Primary Aspects/Activities	Potential Impact	Initial risk rating			Primary Administrative Management	Other Controls	Residual risk rating			Responsibility
			Consequence	Likelihood	Risk Score			Consequence	Likelihood	Risk Score	
Heritage	Vegetation clearing Earthworks/Roadworks Blasting Rock emplacement Transport of materials and equipment	Damage to heritage items Loss of heritage items through theft Reduction in heritage value inadvertent destruction of culturally significant sites and artefacts Impacts to relationships with traditional owners	C	5	**H**	Historic Heritage Management Plan Aboriginal Heritage Management Plan Noise and Vibration Management Plan Tunnel Blasting Management Plan Sensitive Area Plans	Archival recording and salvage Exclusion zones and defined clearing limits Preconstruction condition surveys Unexpected finds procedure Induction to include heritage content and chance finds procedures Vibration monitoring when working within safe working limits of heritage items Regular inspection of controls	D	2	**L**	Contractor
Noise and Vibration	Earthworks/Roadworks Tunnelling and blasting Rock emplacement Subaqueous rock placement Dredging Operation of the barge facility Transport of materials and equipment Operation of the accommodation camp	Increased noise and vibration levels at sensitive receivers Damage to heritage items, geodiversity features and structures Disruption to the community and impacts on public amenity Distrubance to wildlife	D	4	**M**	Noise and Vibration Management Plan Tunnel Blasting Management Plan Traffic, Transport and Access Management Plan Community Strategy Sensitive Area Plans	Work undertaken during approved working hours Defined out of hours work protocol Noise and vibration monitoring during initial stages of work to confirm impacts Regular inspection and maintenance of vessels, plant and equipment Preconstruction condition surveys of heritage items and structures Construction phase monitoring and response criteria Regular inspection of controls	D	3	**M**	Contractor
Air Quality	Earthworks/Roadworks Existing contamination Natural occurring asbestos Tunnelling and blasting Transport of materials and equipment	Visible airborne dust plumes and deposition of dust on surfaces Impacts to amenity Release of air borne fibres from disturbed NOA Fauna and flora impacts from dust inhalation and surface coating leaves Reduction in visual amenity Reduction in air quality - dust/exhaust emissions	D	4	**M**	Air Quality Management Plan Waste Management Plan Soil Management Plan Traffic, Transport and Access Management Plan Community Strategy	Limit disturbance Dust suppression Use of soil binders Control stockpile location, size and stabilise when in place for long periods Monitor weather forecasts Manage work during windy conditions Minimise plant and equipment use Regular inspection and maintenance of vessels, plant and equipment Construction phase monitoring and response criteria Regular inspection of controls	D	3	**M**	Contractor
Waste	Earthworks/Roadworks Existing contamination Tunnelling and blasting Storage of hazardous substances Operation of the accommodation camp Transport of materials and equipment Rock emplacement Subaqueous rock placement	Unlawful disposal of waste Excess waste sent to landfill Excess waste generation, contamination of waste streams Contamination of soil and water Odour impacts Excess use of natural resources and energy Production of green house gases	B	3	**H**	Waste Management Plan Air Quality Management Plan Contaminated Land Management Plan Naturally Occurring Asbestos Management Plan Excavated Rock Management Plan Traffic, Transport and Access Management Plan	Employee training on waste management and separation of waste streams Classification of materials for offsite disposal Use of reputable and licenced waste disposal contractors Efficient plant and equipment use Use of local products where possible Energy efficient design of site facilities Waste tracking and register of waste disposal Suitable procurement and material ordering processes Regular inspection of controls	D	2	**L**	Contractor
Emergency	Earthworks/Roadworks Transport of materials and equipment Tunnelling and blasting Operation of the accommodation camp Hot works Storage of hazardous substances Workforce size	Injury or death of members of the public Injury or death of member of the workforce Increase in emergency response time Increase in bushfire frequency Increase in bushfire spread Damage to property Flood waters adversely effect environment due to changed flow Contamination during flooding	A	4	**E**	Emergency Response Management Plan Bushfire Management Plan	Established evacuation process and employee training Establish emergency response triggers Implement bushfire protection measures - building design, APZ's, water supply Establish regular liaison with emergency services Install emergency bushfire refuge Implement a permit system for hot works Locate of combustible materials away from bushfire zones Locate stockpiles and structures above flood zones where possible Monitor weather forecasts	D	3	**M**	Snowy Hydro/Contractor
Socio economic and KNP	Earthworks/Roadworks Transport of materials and equipment Tunnelling and blasting Operation of the accommodation camp Operation of the barge facility Subaqueous rock placement Dredging Workforce size	Distrubance of local residents Increased traffic volumes and congestion Increased road noise Degradation of roadways Reduction in road user safety standard Traffic delays Business impacts Loss of public facilities and KNP recreational facilities Increased frequency of use to areas of the KNP Increased demand for housing	C	4	**H**	Community Strategy Traffic, Transport and Access Management Plan Maritime Traffic Management Plan Noise and Vibration Management Plan Air Quality Management Plan Waste Management Plan Landscape Management Plan	Provide community advice regarding changes to roads, access and public facilities Implement a community complaints process Plan works to occur during standard working hours where possible Undertake preconstruction condition surveys of roadways Use reputable transport companies Implement training for heavy vehicle drivers including a code of driver conduct Minimise heavy vehicle transport on local roads and through school zones during peak times where possible Over mass and over dimension deliveries are made under permit where required Minimise night time delivery to the barge facility where possible Construction of alternative boat ramps and recreational facilities Use local produce where possible and encourage worker use of local businesses Construction phase monitoring and response criteria Regular inspection of controls	C	3	**M**	Snowy Hydro/Contractor

Appendix A4

Leed Engineering Incident Procedure and typical Classification Matrix

leed

Incident / Injury Report form

Incident Number

Incident Details						*Input data into Skytrust data base as soon as possible*
Reported by		Department		Report date		

What are you reporting?

☐ Injury	☐ Near Miss	☐ Property	☐ Community Impact	☐ Environmental	☐ Report only

Incident date		***Where did it happen? (Project /Worksite)***	
Incident time	AM / PM :	**Exact location of the incident**	

Were there any vehicle or other property involved?			N/A ☐
Vehicle or property details		*Operator / Driver licence No*	
Other property details		**Third party owner name & contact (if relevant)**	

Were there any personnel involved?				N/A ☐
Name/s	**Leed / GMA**	**Sub-contractor company**	**Other**	**Contact No**
	YES NO			
	YES NO			
Witnesses				N/A ☐
	YES NO			
	YES NO			

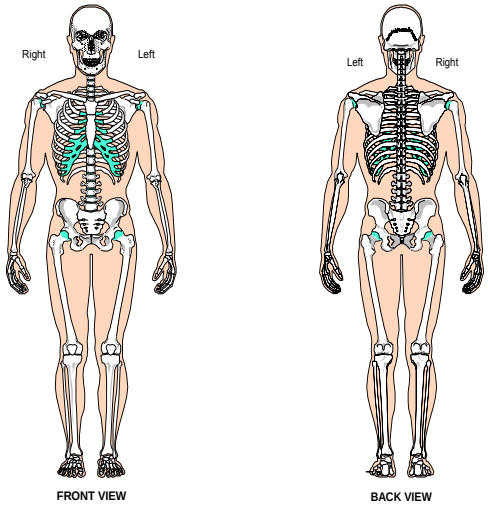
Incident Description	***Brief facts only***	***Number of extra pages attached***	
What happened? ***Include:*** • *Injury detail* • *Hazardous condition* • *Property damage* • *Environment impact* • *Community issue*			

How did it happen?	***Photos / documents attached?***	YES ☐

What were the immediate actions taken?	***What still needs to be done?***

Injury and First Aid Treatment Section

Who was injured?		***Who was the first aider?***	

Indicate Exact body part on diagram below:	***Injury Description:***
 FRONT VIEW BACK VIEW	
	Describe first aid treatment provided on-site:
	Other treatment provided:

leed

Incident / Injury Report form

Incident Number

Referred to doctor / hospital Contact details and date	……../……../……..	**N/A** ☐
What was the task?		
Experience in task	years months	% shift completed at time of injury
Duty status at time of injury	☐ Usual workplace ☐ Not usual workplace	☐ On break ☐ Occurred over period of time

Risk Matrix Score — ***Refer to Risk Matrix table below***

Outcomes	*Injury*	*Environmental*	*Property*	*Community*	*Near miss*	*Hazard*
Actual						
Potential						

Investigation and notification — ***Refer to Incident Investigation Report Form F036***

Notification required		Investigation type	
		Skytrust	ICAM
CAT 1A, 1P, 2A, 2P	Senior Manager - **Immediately** by phone / in person	Yes	Yes
CAT 3A, 3P	Senior Manager - **On the same day** by phone / in person	Yes	As required
CAT 4A, 4P	Senior Manager - **Within 24 hours** by phone / in person	Yes	As required
CAT 5	Report form only submitted **within 24 hours**	As required	*Not applicable*

Who did you report this to?		**N/A** ☐

Additional information

Comments

Risk Matrix Score — ***Refer also to HSE-01 Incident Reporting Procedure***

	Consequence					
	Negligible - CAT 5 *Report only - Negligible or no injury*	***Minor - CAT 4*** *First Aid Treatment*	***Moderate - CAT 3*** *Return to Work Injury, or medical treatment (no hospital admission)*	***Major - CAT 2*** *LTI - Extensive injuries (Hospital admission), permanent disability)*	***Catastrophic - CAT 1*** *Fatality(s), permanent serious disability(s)*	WHS
	Negligible or no quality damage / impact	*Minor quality damage / impact*	*Moderate quality damage / impact*	*Major quality damage / impact*	*Catastrophic - quality damage & loss*	Quality
	Negligible or no environmental damage / impact	*Minor environment damage / impact*	*Moderate environmental damage / impact*	*Major environmental damage & biodiversity degradation*	*Catastrophic environmental damage / impact*	Environment
	Negligible financial loss =<$5k	*Minor financial loss = $10k - $20k*	*Moderate financial loss = $20k - $50k*	*Major financial loss = $50k to $100k*	*Catastrophic financial loss = $100k*	Business
Likelihood	*Negligible or no external impact*	*Minor impact - client notification*	*Moderate impact - local media attention*	*Major impact - Regional / national media or regular attention*	*Catastrophic Court proceedings*	Reputation
Almost certain	11 **Medium**	16 **High**	20 **High**	23 **Extreme**	25 **Extreme**	
Likely	7 **Low**	12 **Medium**	17 **High**	21 **Extreme**	24 **Extreme**	
Possible	4 **Low**	8 **Medium**	13 **Medium**	18 **High**	22 **High**	
Unlikely	2 **Low**	5 **Low**	9 **Medium**	14 **Medium**	19 **High**	
Rare	1 **Low**	3 **Low**	6 **Low**	10 **Low**	15 **Medium**	

Appendix A5

Sensitive Area Plans

Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

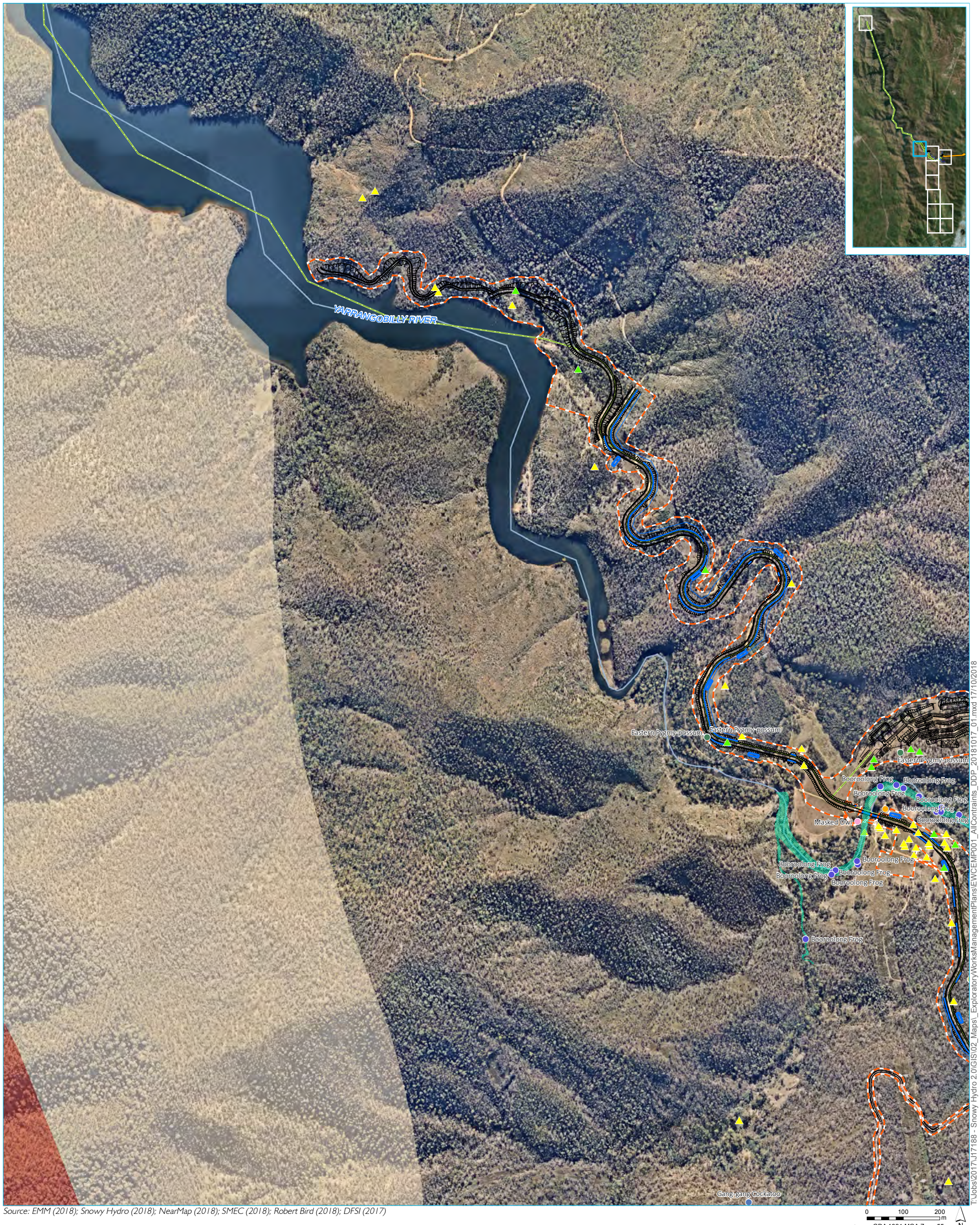
0 100 200 m
1:7000 @ A3 GDA 1994 MGA Zone 55
N

KEY
- Drainage design
- Road design
- Residential
- Passive recreation
- Historic heritage item
- Limit of disturbance
- Communications cable
- Watercourse

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1a

T:\Jobs\2017\J117188 - Snowy Hydro 2.0\GIS\02_Maps_ExploratoryWorksManagementPlans\EWCEMP001_AllContraints_DDP_20181017_01.mxd 17/10/2018



Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

KEY

- Drainage design
- Road design
- Naturally occurring asbestos - Low
- Naturally occurring asbestos - High

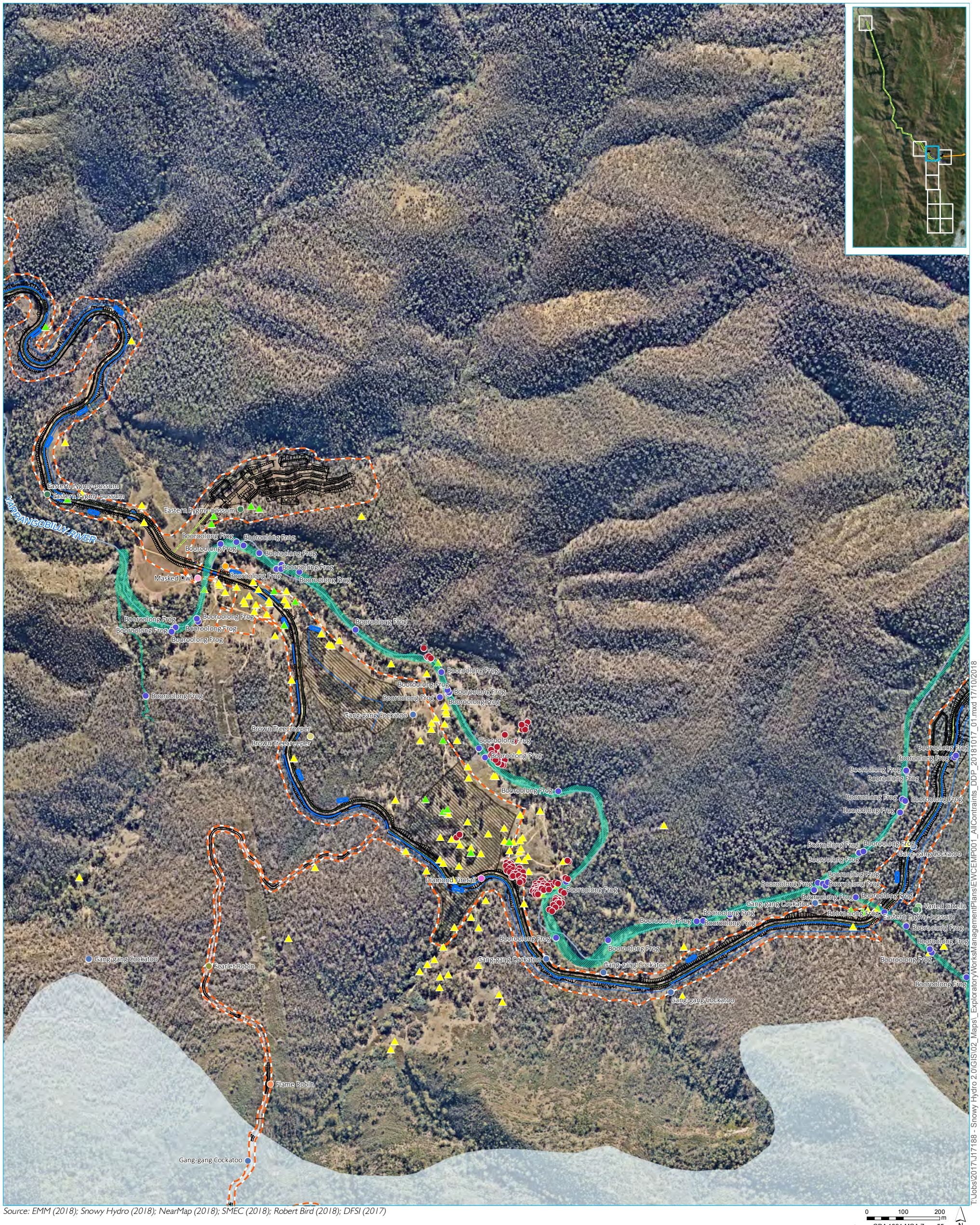
Threatened species

- Booroolong Frog
- Brown Treecreeper
- Eastern Pygmy-possum
- Gang-gang Cockatoo
- Masked Owl
- Scarlet Robin
- Booroolong Frog - breeding habitat
- Passive recreation
- Aboriginal heritage item
- Historic heritage item
- Limit of disturbance
- Permanent bridge
- Accommodation camp conceptual layout
- Communications cable
- On land rock management
- Watercourse

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1b

T:\Jobs\2017\J17188 - Snowy Hydro 2.0\GIS\02_Maps_ExploratoryWorksManagementPlans\EWCEMP001_AllContraints_DDP_20181017_01.mxd 17/10/2018



Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m

1:7000 @ A3 GDA 1994 MGA Zone 55 N

KEY

- Drainage design
- Road design
- No labels_ContamReportFigures_01pt...
- Karst

Threatened species

- Booroolong Frog
- Brown Treecreeper
- Diamond Firetail
- Eastern Pygmy-possum
- Flame Robin
- Gang-gang Cockatoo
- Masked Owl
- Scarlet Robin
- Varied Sittella
- Booroolong Frog - breeding habitat
- Passive recreation
- Aboriginal heritage item
- Historic heritage item
- Limit of disturbance
- Permanent bridge
- Portal construction pad conceptual layout
- Accommodation camp conceptual layout
- Communications cable
- On land rock management
- Watercourse

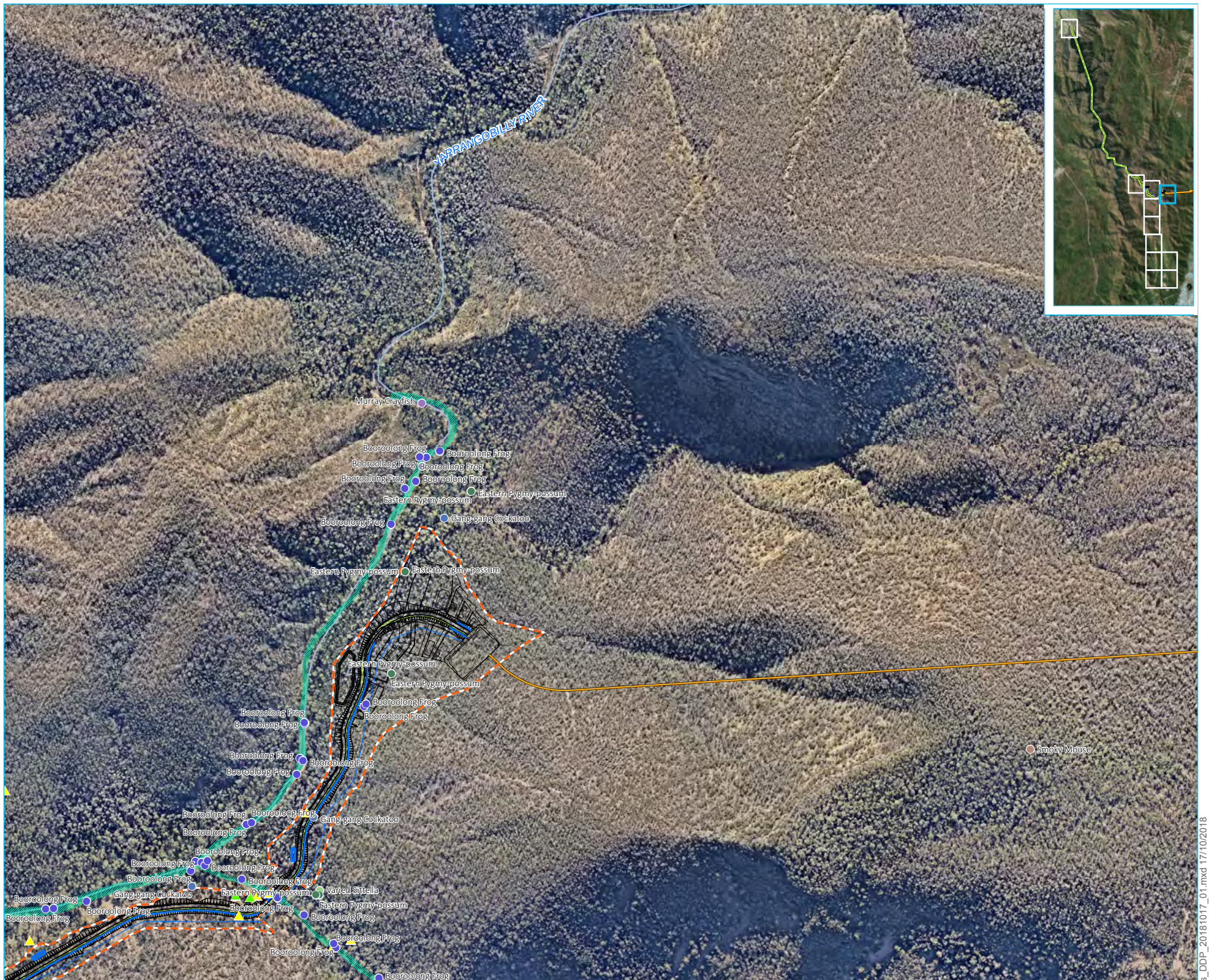
Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1c

snowy2.0

EMM creating opportunities

T:\Jobs\2017\J17188 - Snowy Hydro 2.0\GIS\02_Maps_ExploratoryWorksManagementPlans\EWCEMP001_AllContraints_DDP_20181017_01.mxd 17/10/2018



Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m

1:7000 @ A3 GDA 1994 MGA Zone 55

N

KEY

- Drainage design
- Road design
- Karst

Threatened species

- Booroolong Frog
- Eastern Pygmy-possum
- Gang-gang Cockatoo
- Murray Crayfish
- Smoky Mouse
- Varied Sittella
- Booroolong Frog - breeding habitat
- Aboriginal heritage item
- Historic heritage item
- Limit of disturbance
- Permanent bridge
- Portal construction pad conceptual layout
- Communications cable
- Watercourse

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1d

snowy2.0

EMM creating opportunities

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Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m
1:7000 @ A3 GDA 1994 MGA Zone 55
N

KEY

- Drainage design
- Road design
- No labels_ContamReportFigures_01pt...
- Fossil area
- Karst
- Naturally occurring asbestos - Low

Threatened species

- Booroolong Frog
- Diamond Firetail
- Eastern Pygmy-possum
- Flame Robin
- Gang-gang Cockatoo
- Scarlet Robin
- Varied Sittella
- Booroolong Frog - breeding habitat
- Aboriginal heritage item
- Historic heritage item
- Limit of disturbance
- Permanent bridge
- Portal construction pad conceptual layout
- Communications cable
- On land rock management
- Watercourse

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1e

Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m
1:7000 @ A3 GDA 1994 MGA Zone 55
N

KEY

- Road design
- Boulder scree
- Karst
- Naturally occurring asbestos - Low
- Naturally occurring asbestos - Medium
- Naturally occurring asbestos - High

Threatened species

- Gang-gang Cockatoo
- Smoky Mouse
- Smoky Mouse potential habitat
- Limit of disturbance

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1f

T:\Jobs\2017\J17188 - Snowy Hydro 2.0\GIS\02_Maps_ExploratoryWorksManagementPlans\EWCEMP001_AllContraints_DDP_20181017_01.mxd 17/10/2018

Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m
1:7000 @ A3 GDA 1994 MGA Zone 55 N

KEY

- Road design
- Boulder scree
- Karst
- Naturally occurring asbestos - Low
- Naturally occurring asbestos - Medium
- Naturally occurring asbestos - High

Threatened species

- Eastern Pygmy-possum
- Flame Robin
- Gang-gang Cockatoo
- Smoky Mouse

- Smoky Mouse potential habitat
- Limit of disturbance

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1g

Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m

1:7000 @ A3 GDA 1994 MGA Zone 55

N

KEY

- Karst
- Naturally occurring asbestos - Low
- Naturally occurring asbestos - Medium
- Naturally occurring asbestos - High

Threatened species

- Eastern Pygmy-possum
- Flame Robin
- Gang-gang Cockatoo
- Smoky Mouse
- Smoky Mouse potential habitat
- Limit of disturbance

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1h

T:\Jobs\2017\J17188 - Snowy Hydro 2.0\GIS\02_Maps_ExploratoryWorksManagementPlans\EWCEMP001_AllContraints_DDP_20181017_01.mxd 17/10/2018

Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

KEY

- Karst
- Naturally occurring asbestos - Low

Threatened species

- Eastern Pygmy-possum
- Flame Robin
- Gang-gang Cockatoo
- Smoky Mouse
- Smoky Mouse potential habitat

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1i

Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m
1:7000 @ A3 GDA 1994 MGA Zone 55 N

KEY

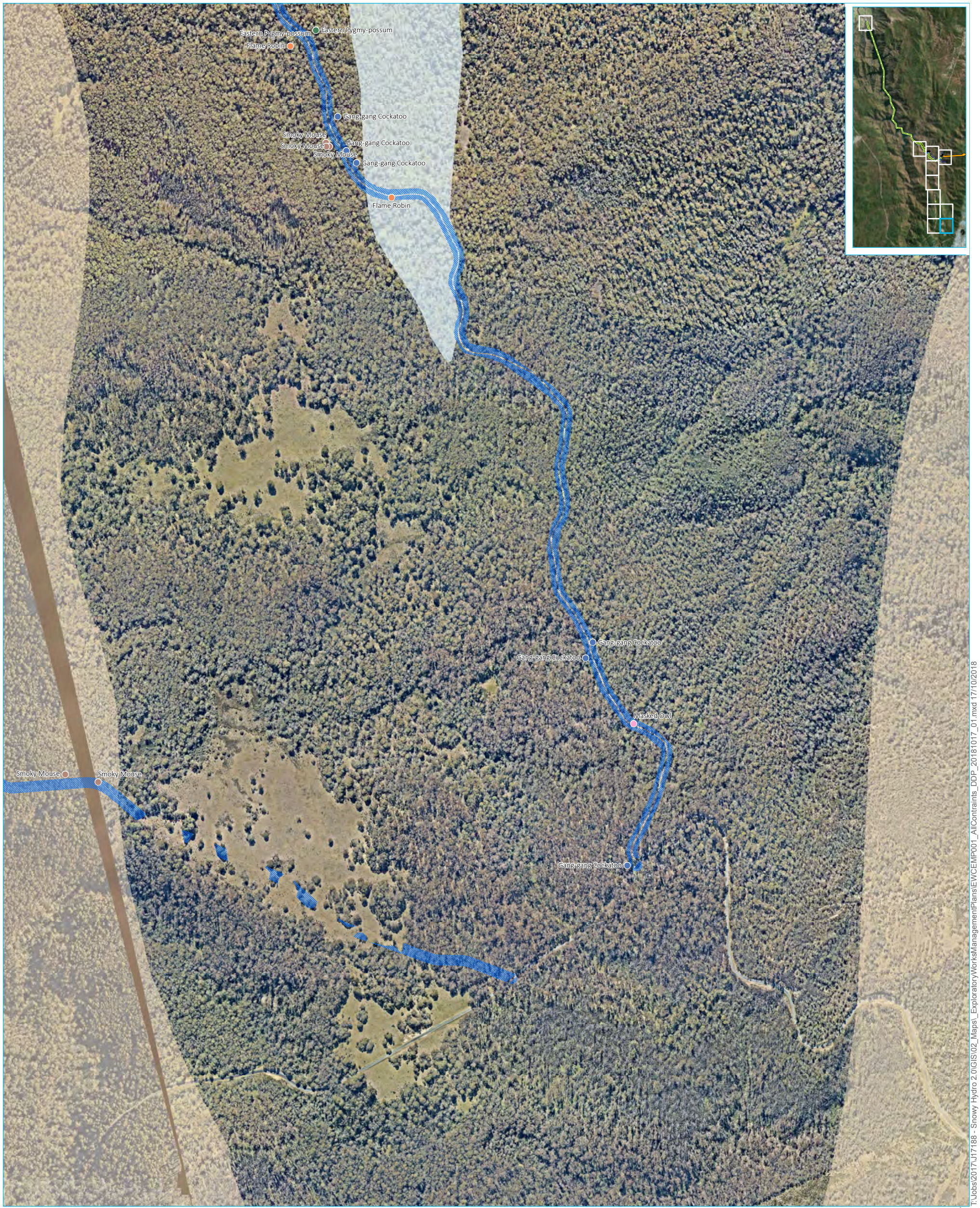
- Naturally occurring asbestos - Low
- Naturally occurring asbestos - Medium
- Naturally occurring asbestos - High

Threatened species

- Eastern Pygmy-possum
- Flame Robin
- Smoky Mouse
- Smoky Mouse potential habitat

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1j



Source: EMM (2018); Snowy Hydro (2018); NearMap (2018); SMEC (2018); Robert Bird (2018); DFSI (2017)

0 100 200 m
1:7000 @ A3 GDA 1994 MGA Zone 55
N

KEY

Karst
Naturally occurring asbestos - Low

Threatened species

- Eastern Pygmy-possum
- Flame Robin
- Gang-gang Cockatoo
- Masked Owl
- Smoky Mouse

Smoky Mouse potential habitat

Exploratory Works environmental constraints

Snowy 2.0
CEMP
Exploratory Works
Figure 1k

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Appendix A6

Community complaints and communication procedures

Snowy 2.0 Exploratory Works - Stage 1
Complaint Management and Dispute Resolution Policy

April 2019

1. Overview

Snowy Hydro is committed to providing a clear, effective and open Complaint Management Process for the Snowy 2.0 project. Ideally, most stakeholder concerns will be resolved at first contact. However, should it become necessary to escalate a complaint, there is a clear process to support the management and escalation of complaints.

This document outlines the Complaint Management and Dispute Resolution Policy for Snowy 2.0 with an overview of the process and procedures established to manage complaints and disputes.

2. What are Enquiries and Complaints?

Interactions with community members or stakeholders will be classed as enquiries or complaints.

- Enquiries - an enquiry is a request for general information. Enquiries can be handled and resolved through normal processes. An enquiry can become a complaint if the customer is not happy with the resolution offered, or the response.

- Complaints - complaint means 'an expression of dissatisfaction made to an organisation, related to its product/services, or the complaints handling process itself, where a response or resolution is explicitly or implicitly expected.' Complaints could relate to the project, project impacts, policies, contractor's services, staff members, actions or proposed actions during the project and can be made in-person, by telephone or in writing (for example letter, email, or phone call)

3. Principles for complaints management

Recording stakeholder contacts and logging complaints are critical, both to maintain communications with stakeholders, and to provide transparent and detailed reporting. Snowy 2.0 has a process in place for addressing complaints in a quick and effective manner.
The stakeholder database (Darzin) will be used to manage the complaints process and will be maintained by the Community Relations Team across the life of the project. Staff will ensure that all complaints are acknowledged courteously and stakeholders are provided with the correct information when they are lodging a complaint. All staff must respond to customer concerns quickly, efficiently and courteously.

4. Source of Complaints

- PHONE - 1800 SNOWY2 (766 992) community information line or via other contacts
- ONLINE - Email, messaging or website feedback
- DIRECT - Face-to-face complaints to project or Snowy Hydro staff
- LETTER - mail received via Snowy Hydro or contractors

5. Time frames and response type for complaints

Source of enquiry or complaint	Response time frame
Phone call	Acknowledge within 2 hours
Email	Acknowledge within 24 hours
Letter	Acknowledge within 5 business days of receipt (where a phone number or email address is supplied, response within 24 hours)
Direct (face to face)	Acknowledge within 24 hours
During complaint handling	Keep complainant informed of the process until the complaint is resolved.
Resolution	Complainants should be advised when they lodge a complaint the approximate time frame for a response.
Escalation	Complaints will be escalated to achieve resolution as required.

6. Service Standards

If the case is complex, complainants should be given a contact name and number as a reference for the customer.

All complaints will be investigated and dealt with impartially. All correspondence, agreements, resolutions and other relevant information must be recorded in Darzin. If a complainant is not satisfied with the resolution provided, the complaint can be escalated and alternative offers of resolution can be discussed.

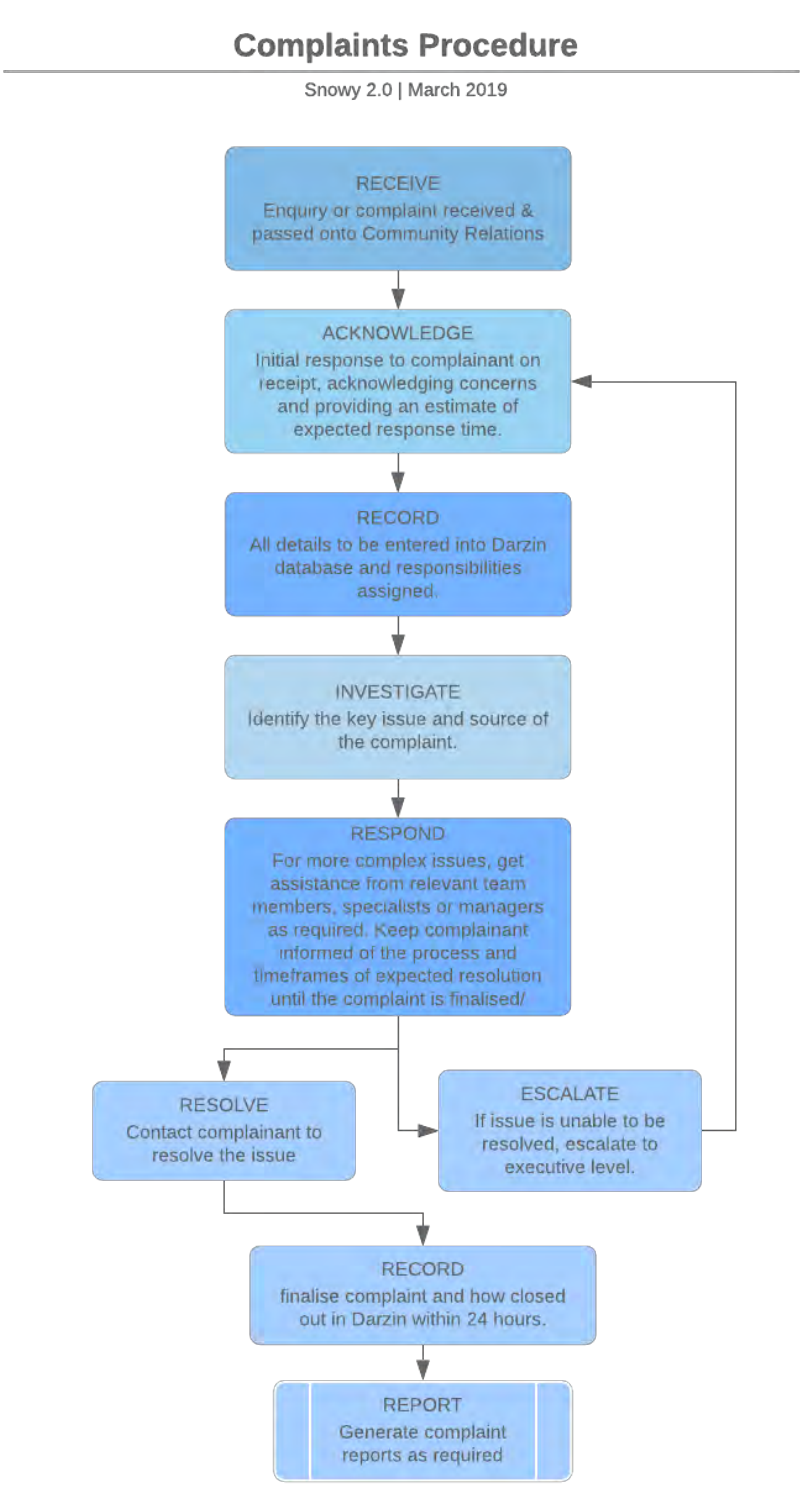
7. Reporting

Snowy Hydro's management supports this Complaint Management and Dispute Resolution Policy and receives regular reporting from the project team as to complaints raised, outcomes and recommended process changes arising from such complaints.

The Snowy Hydro website will contain a monthly summary of complaints received and reports will be provided to both the DPE and NPWS as part of the Project Compliance Report. The report will include details of the number of complaints received and a summary of the main areas of complaint.

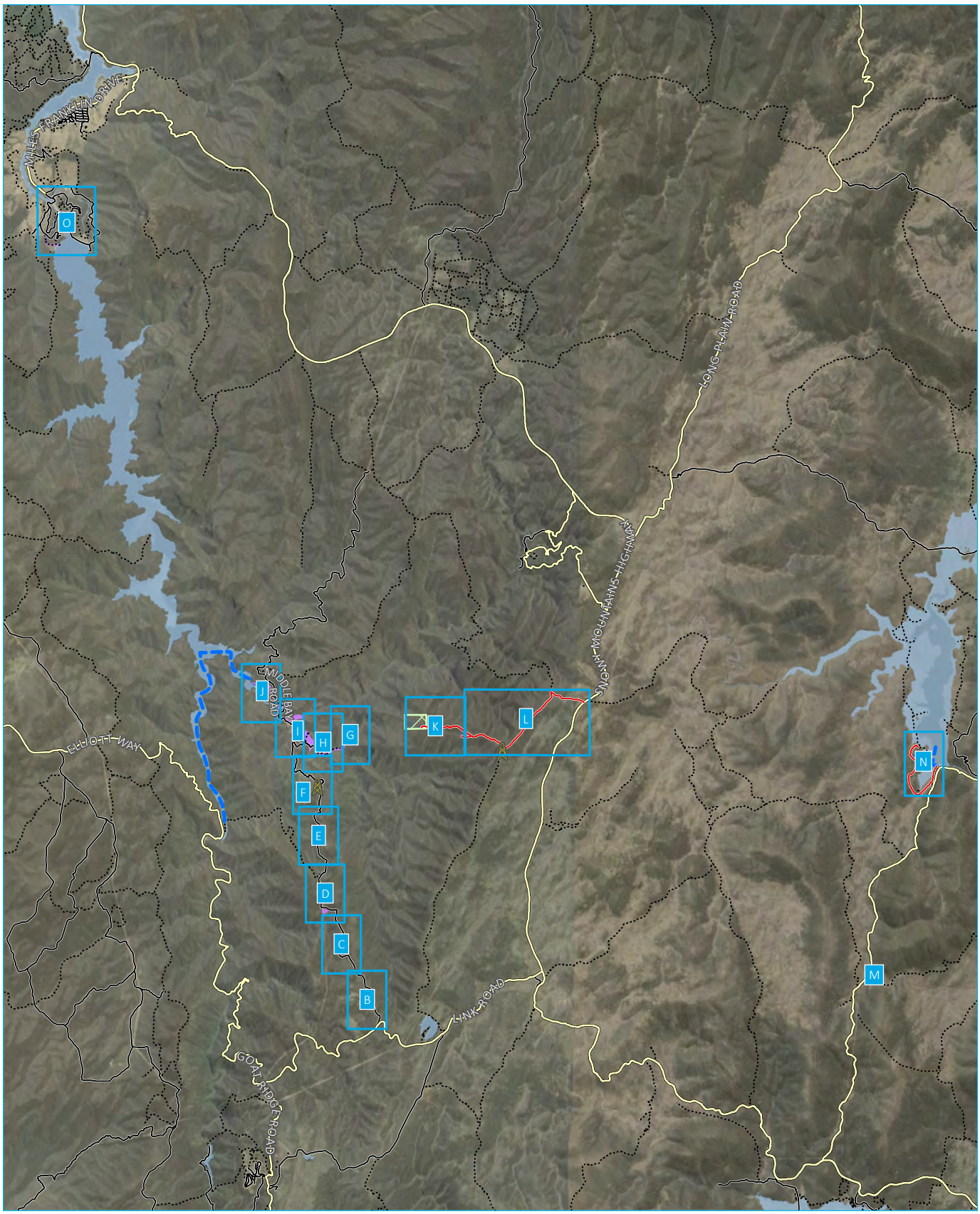
All internal reporting will be generated using the projects Darzin stakeholder management software.

8 Complaints Procedure



Appendix A7

Project Boundary



Source: EMM (2019); Snowy Hydro (2019); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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KEY

- Proposed temporary communications upgrade location
- Existing access track
- Boat access
- Main road
- Local road
- Vehicular track
- Map index
- EW approved construction footprint
- EW modification construction footprint (additional)
- Boreholes requiring on-site adjustment
- Waterbody

Exploratory Works project boundary - overview

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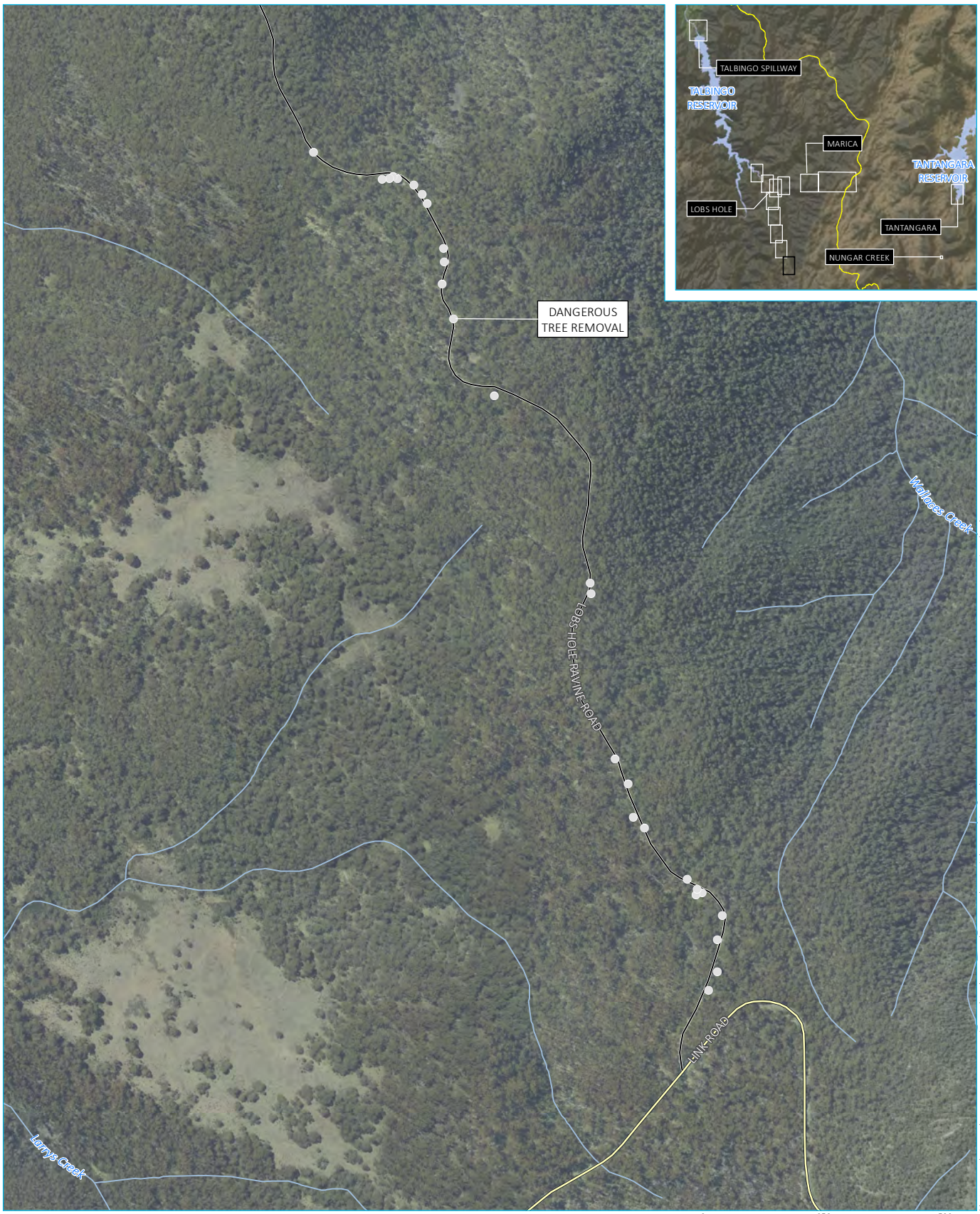

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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GDA 1994 MGA Zone 55

N

KEY

- Dangerous tree
- Main road
- Local road
- Watercourse/drainage line

Exploratory Works project boundary
- Lobs Hole Ravine Road (Upper) 1

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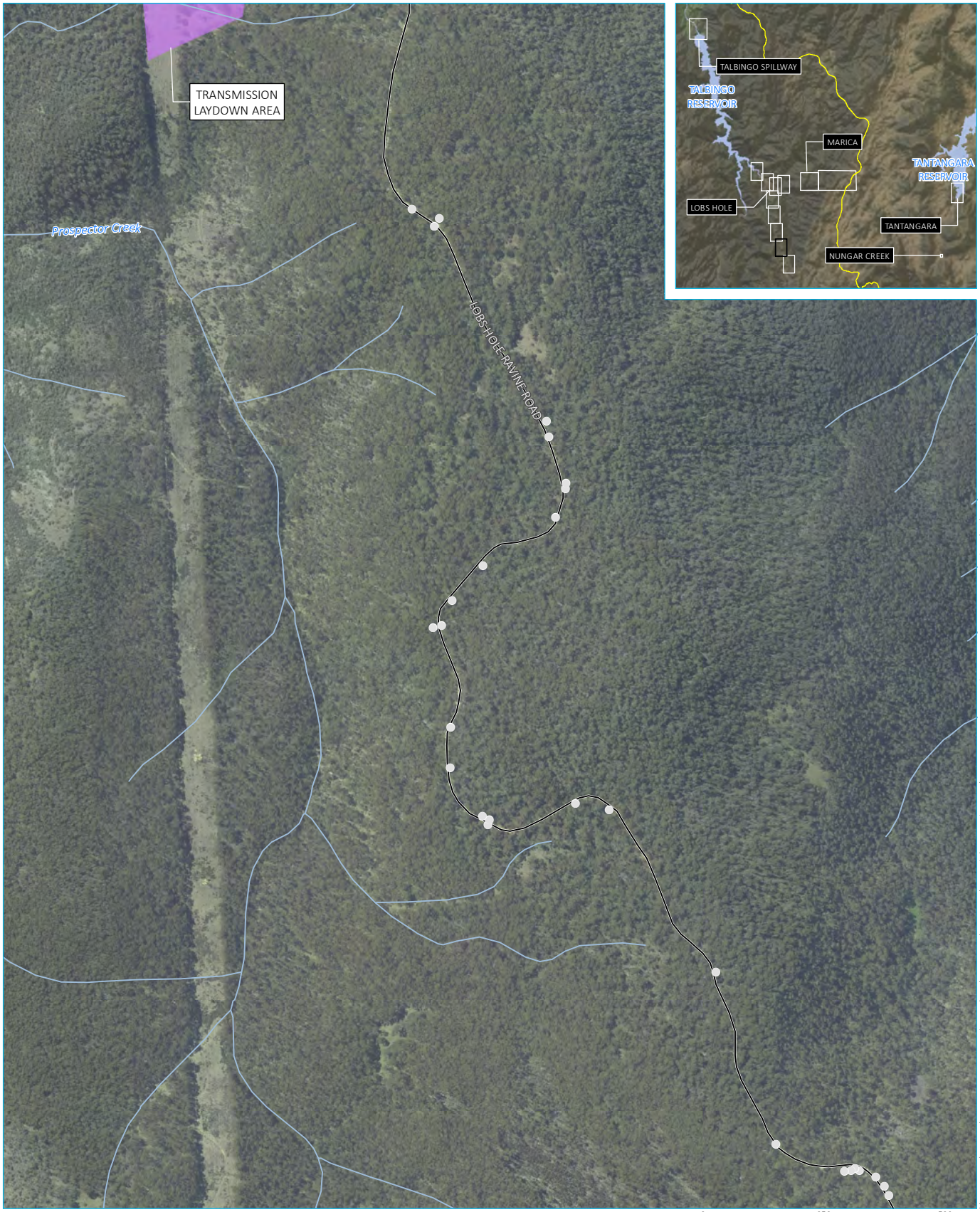

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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GDA 1994 MGA Zone 55

N

KEY

- Dangerous tree
- Local road
- Watercourse/drainage line
- EW approved construction footprint

Exploratory Works project boundary
- Lobs Hole Ravine Road (Upper) 2

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Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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GDA 1994 MGA Zone 55

N

KEY

- Dangerous tree
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)

Exploratory Works project boundary - Lobs Hole Ravine Road (Upper) 3

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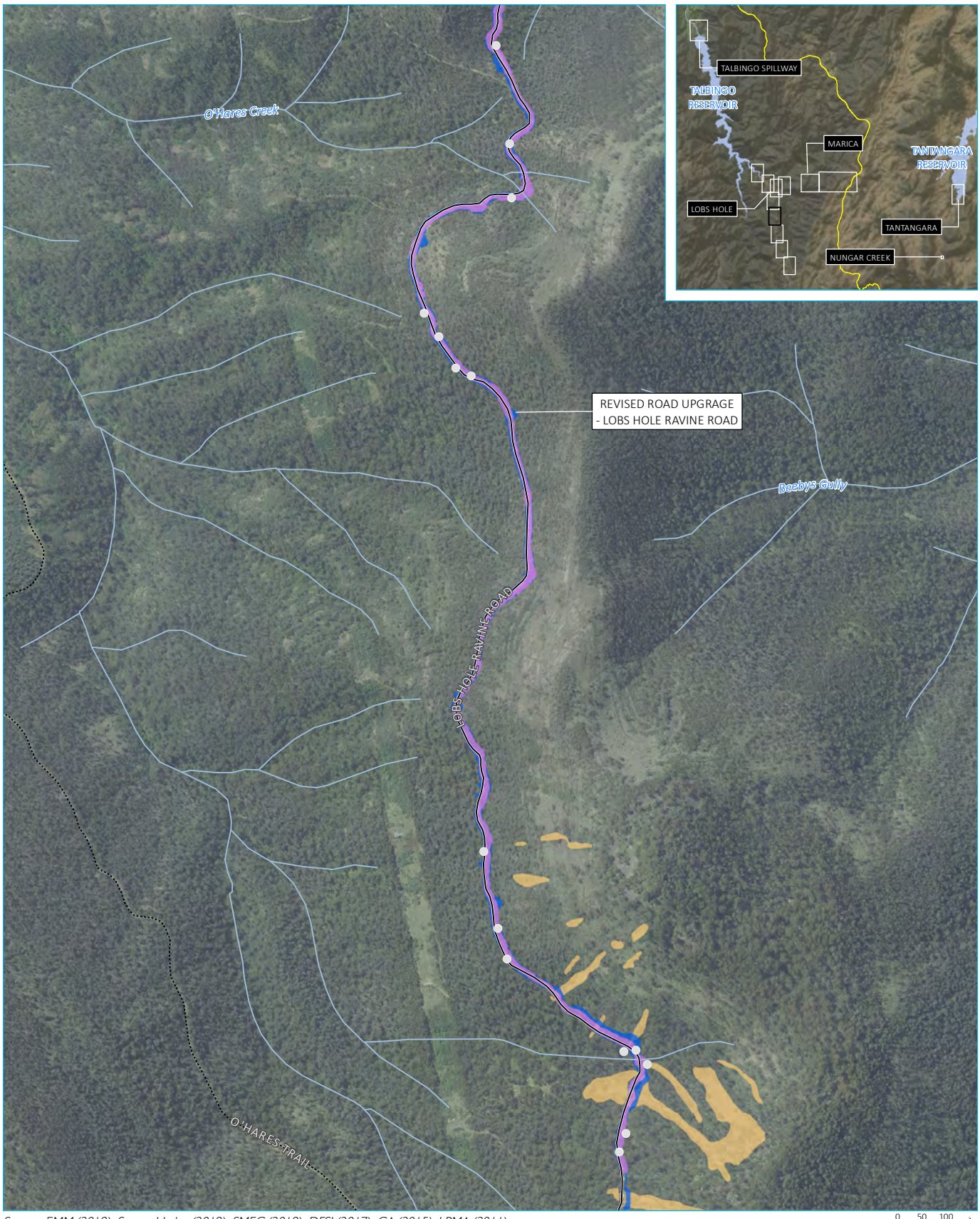

Source: EMM (2019); Snowy Hydro (2019); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

KEY

- Dangerous tree
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)
- Boulder stream

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Exploratory Works project boundary
- Lobs Hole Ravine Road (Lower) 1

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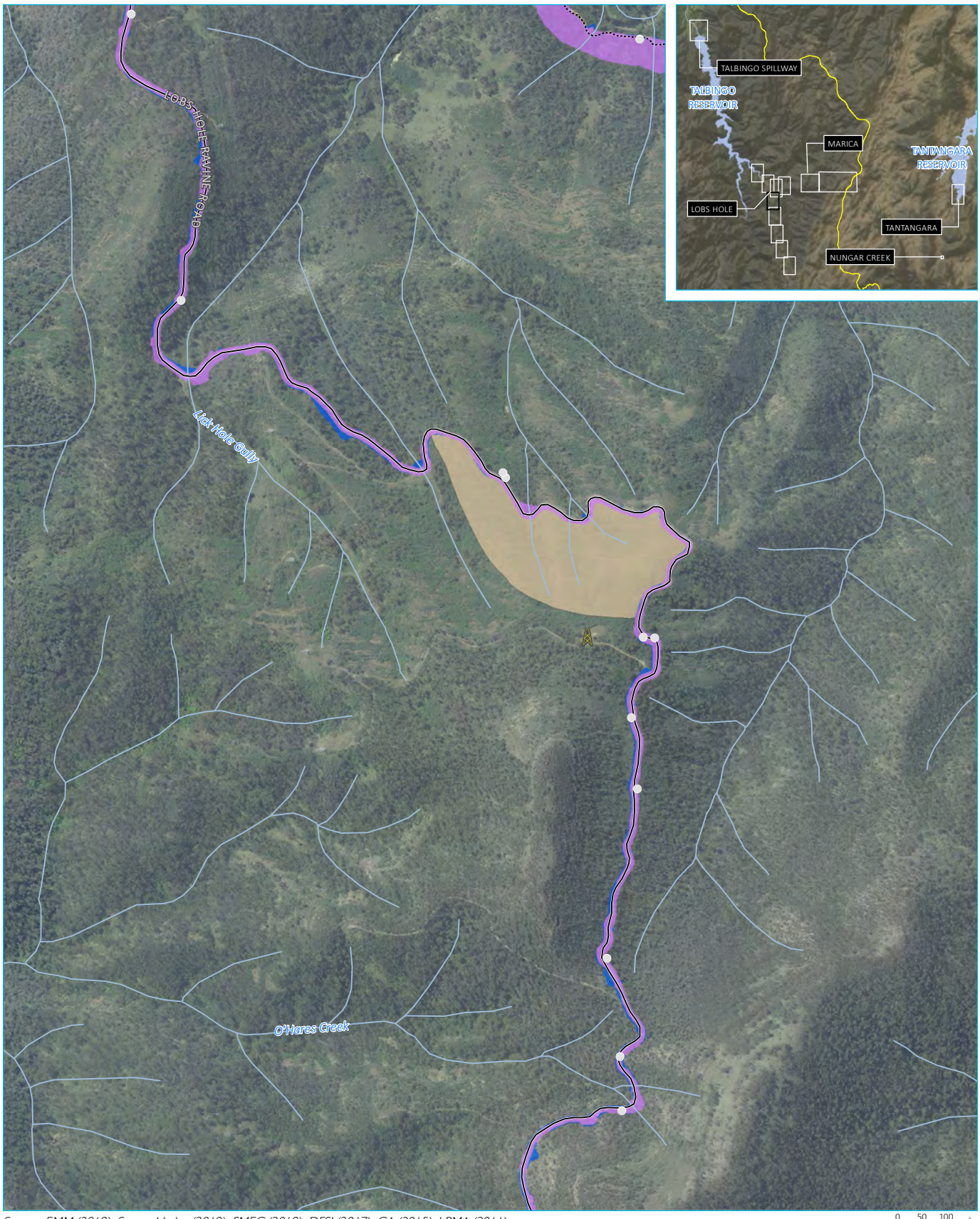

Source: EMM (2019); Snowy Hydro (2019); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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N

KEY

- Dangerous tree
- Existing temporary communications
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)
- Fossil area

Exploratory Works project boundary
- Lobs Hole Ravine Road (Lower) 2

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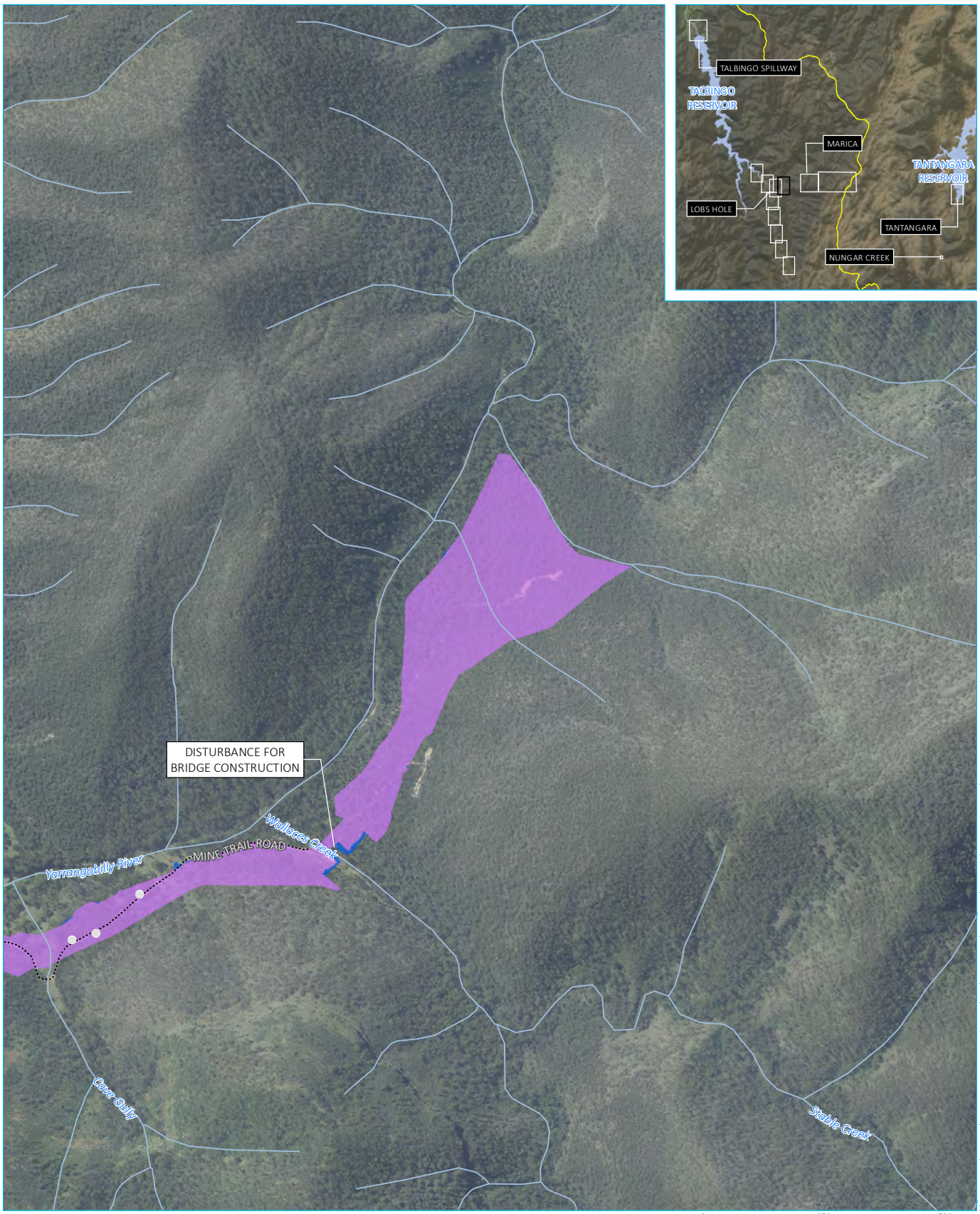

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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GDA 1994 MGA Zone 55

N

KEY

- Dangerous tree
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)

Exploratory Works project boundary
- Mine Trail Road 1

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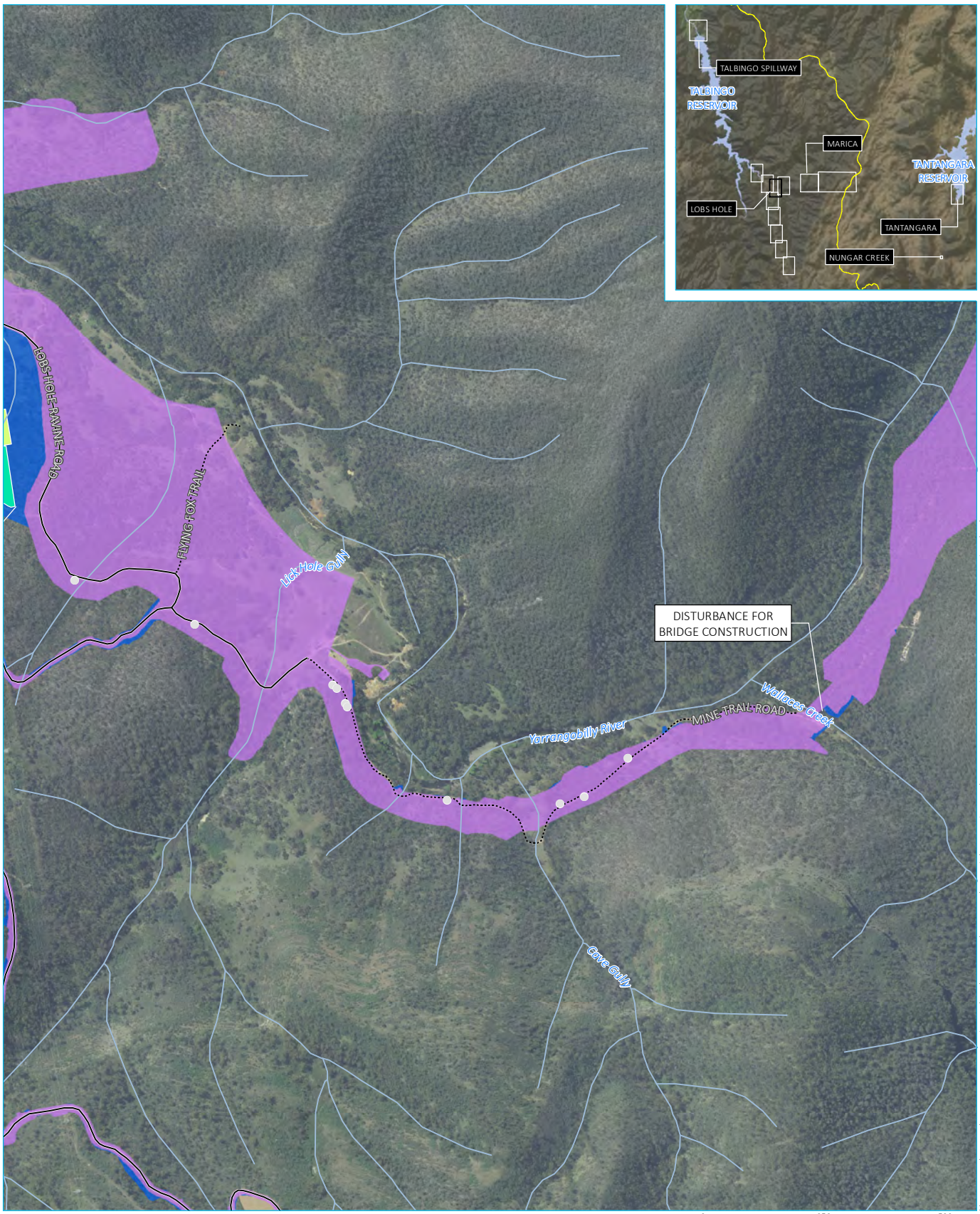

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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KEY

- Dangerous tree
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)
- Indicative laydown area
- Proposed substation
- Fossil area

Exploratory Works project boundary
- Mine Trail Road 2

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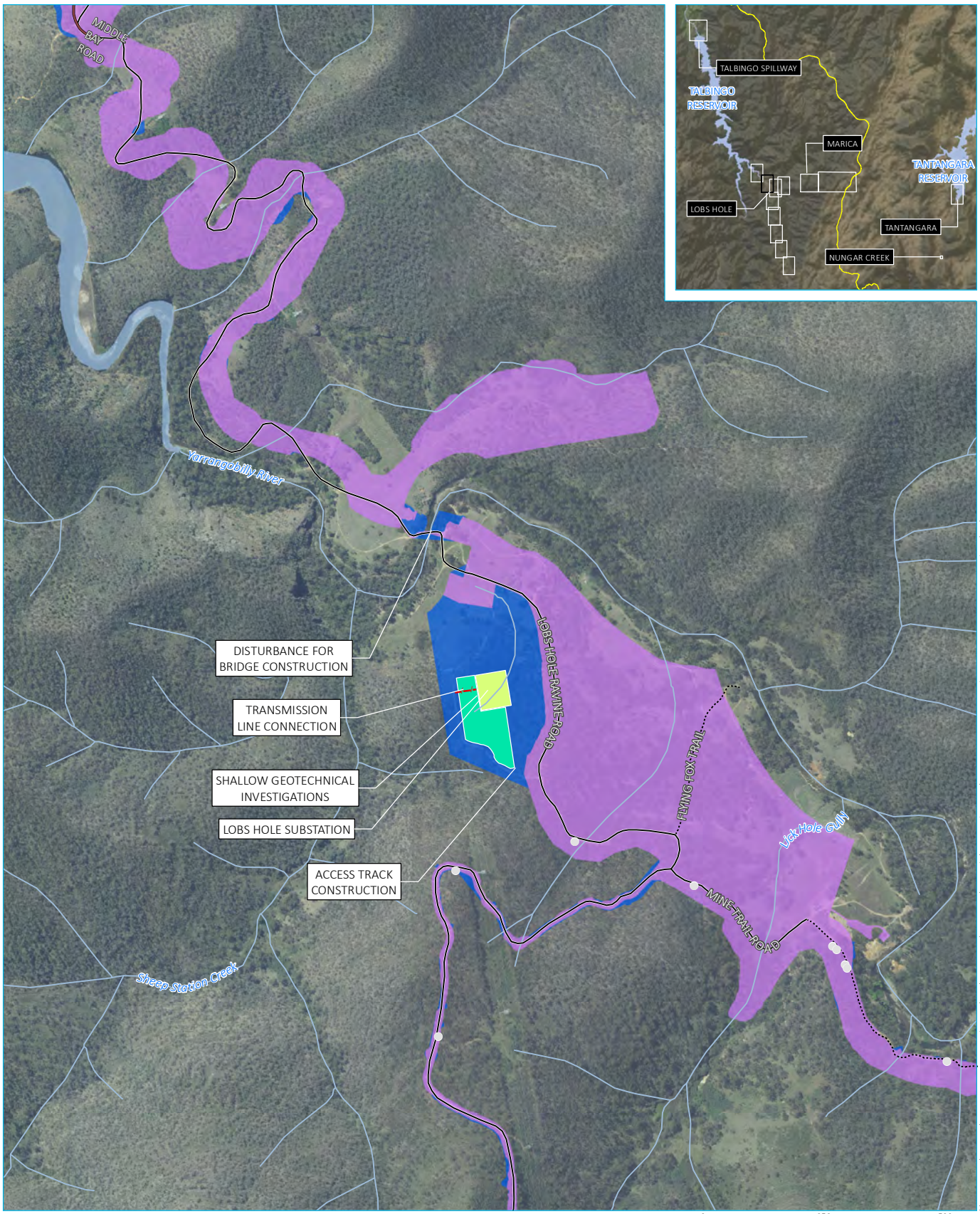

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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N

KEY

- Dangerous tree
- Approved EW access
- Transmission line connection
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)
- Indicative laydown area
- Proposed substation
- Waterbody

Exploratory Works project boundary - Lobs Hole

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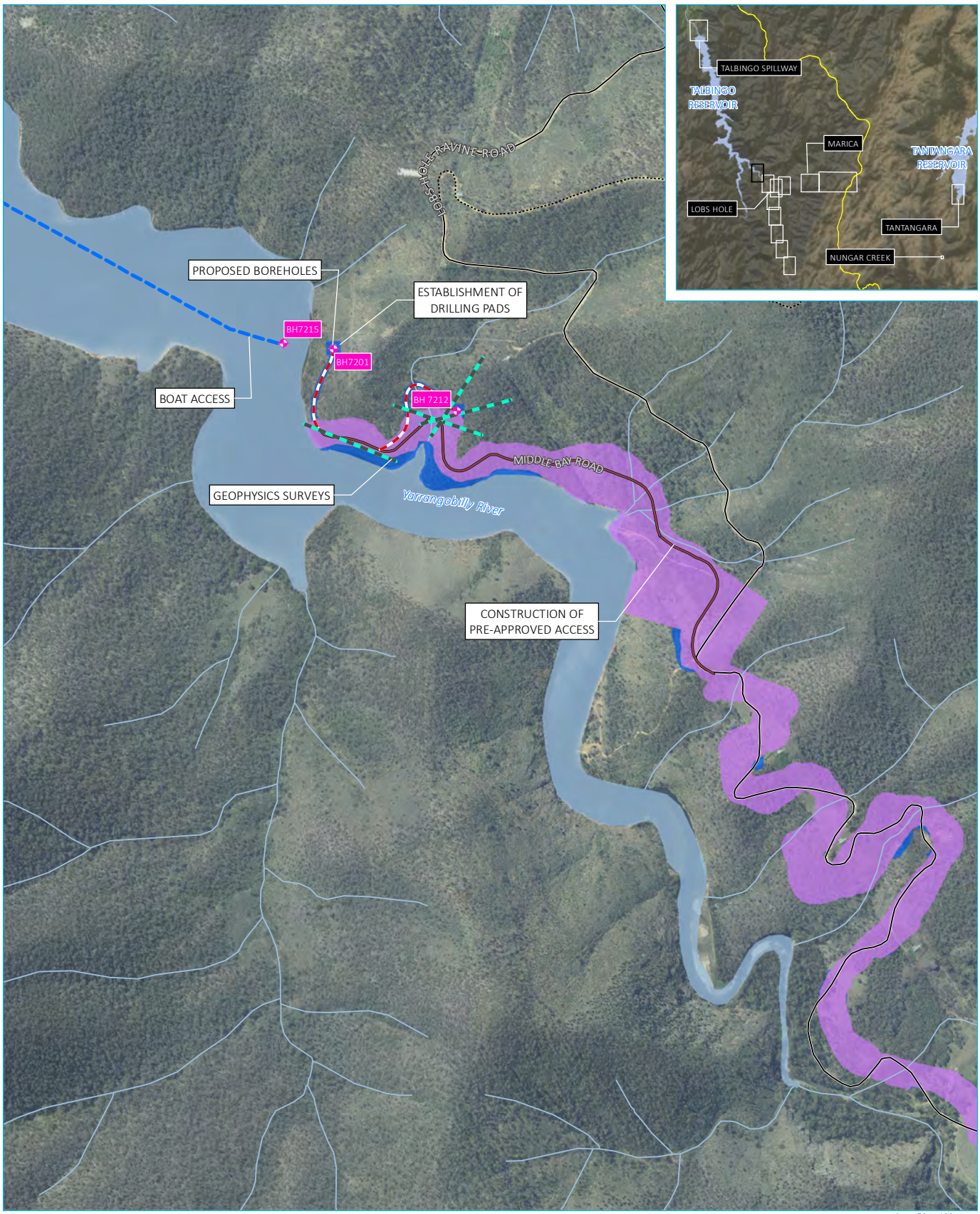

Source: EMM (2019); Snowy Hydro (2019); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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N

KEY

- Proposed borehole
- Proposed geophysics
- Proposed access track
- Approved EW access
- Boat access
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)
- Waterbody

Exploratory Works project boundary - Lobs Hole Ravine Road

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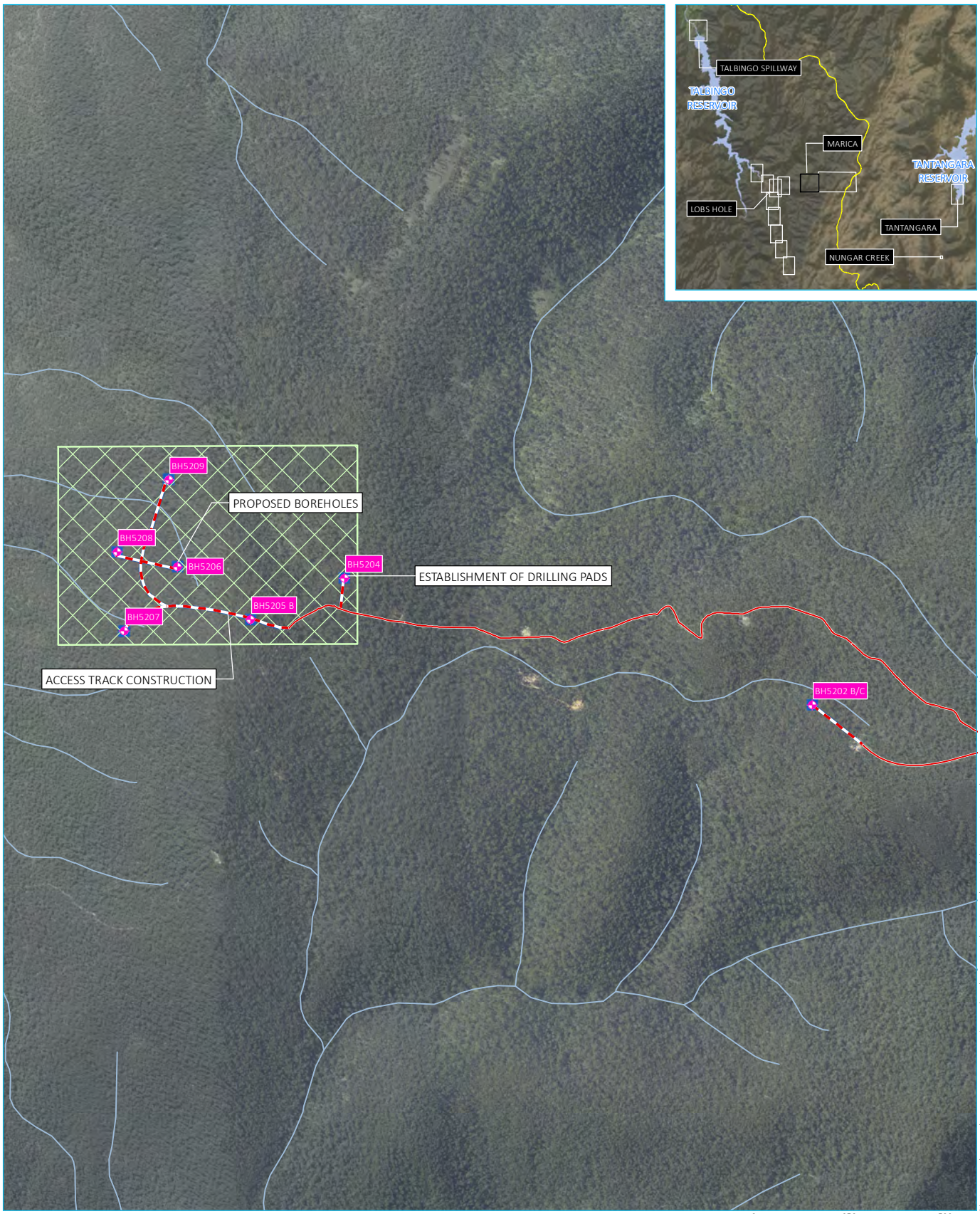

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Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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GDA 1994 MGA Zone 55

N

KEY

- Proposed borehole
- Existing access track
- Proposed access track
- Watercourse/drainage line
- EW modification construction footprint (additional)
- Boreholes requiring on-site adjustment

Exploratory Works project boundary - Marica 1

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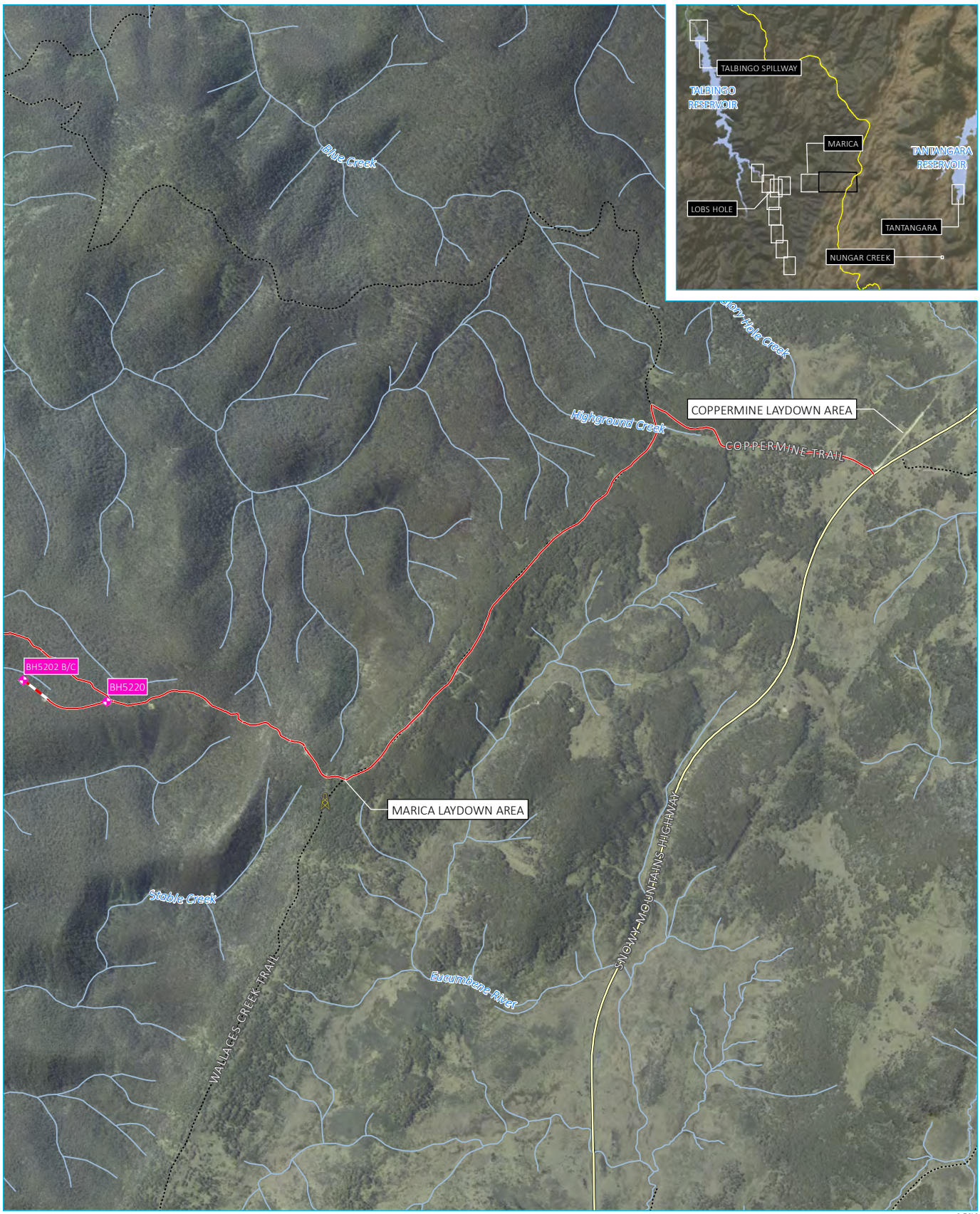

Source: EMM (2019); Snowy Hydro (2019); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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N

KEY

- Proposed borehole
- Existing temporary communications
- Existing access track
- Proposed access track
- Main road
- Vehicular track
- Watercourse/drainage line
- EW modification construction footprint (additional)

Exploratory Works project boundary - Marica 2

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Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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GDA 1994 MGA Zone 55

N

KEY

- Proposed borehole
- Main road
- Watercourse/drainage line
- Proposed work area

Exploratory Works project boundary - Nungar Creek

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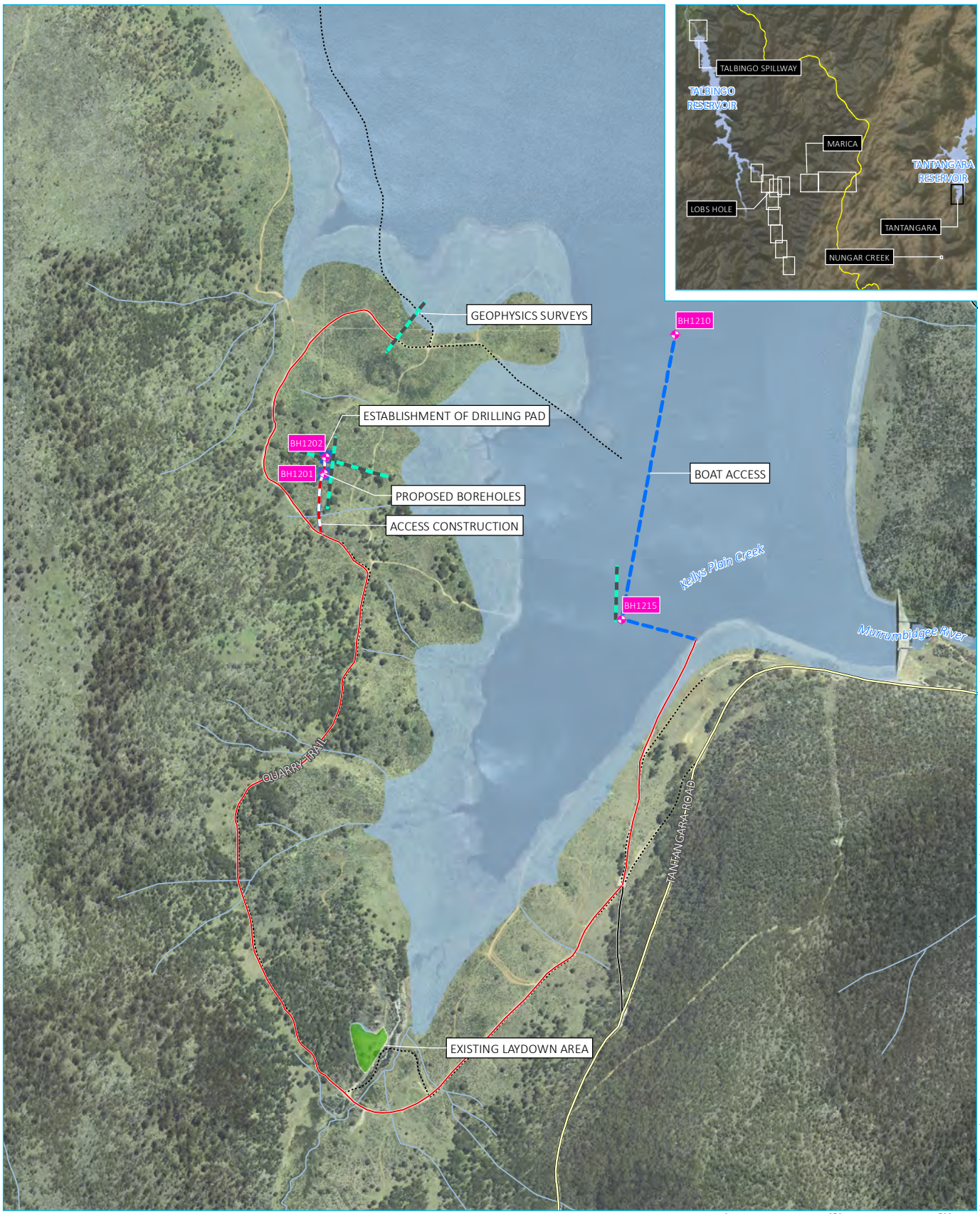

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

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N

KEY

- Proposed borehole
- Proposed geophysics
- Existing access track
- Proposed access track
- Boat access
- Main road
- Local road
- Vehicular track
- Watercourse/drainage line
- EW modification construction footprint (additional)
- Existing laydown area
- Waterbody

Exploratory Works project boundary - Tantangara Reservoir

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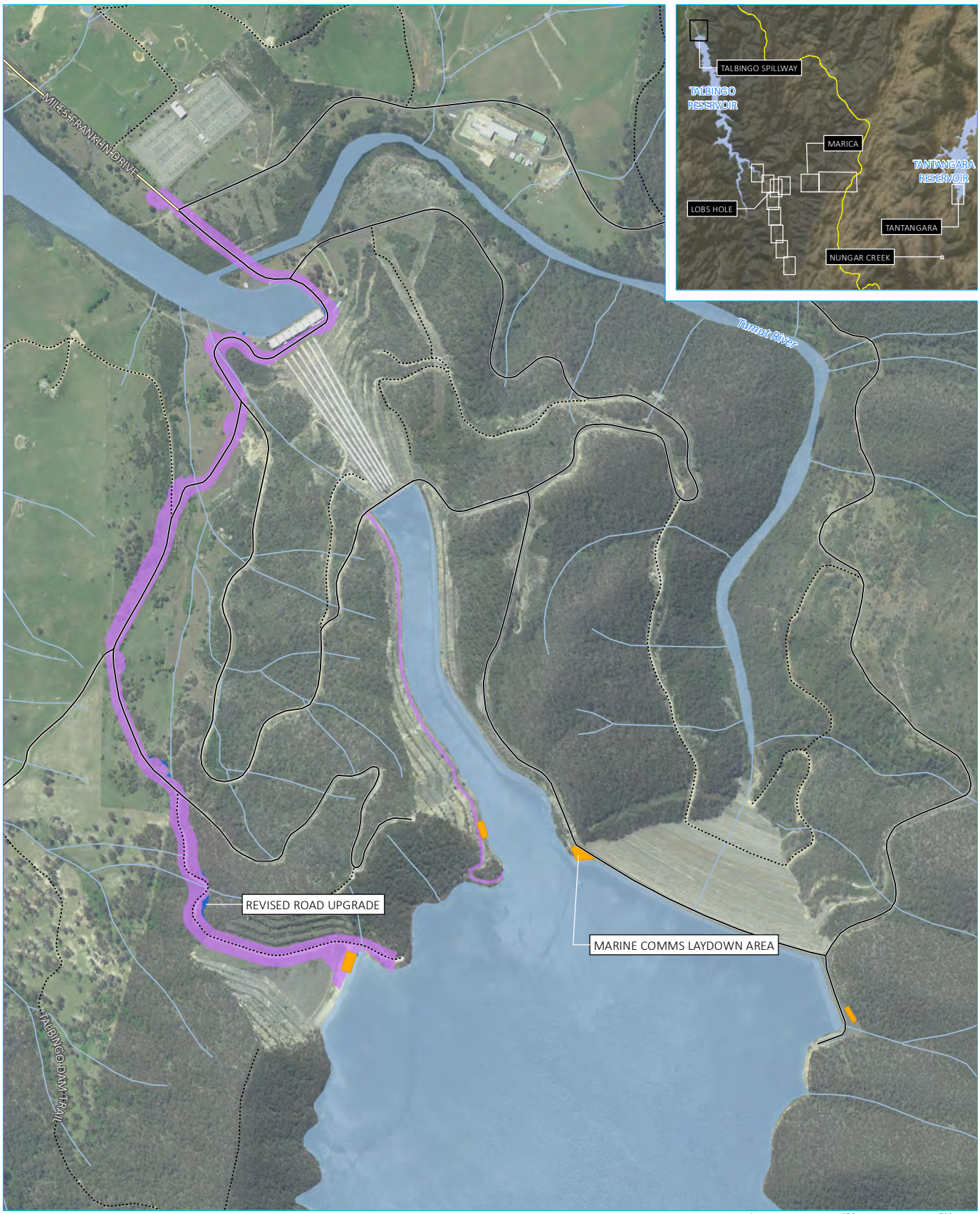

Source: EMM (2019); Snowy Hydro (2019); PhotoMapping (2018); SMEC (2019); DFSI (2017); GA (2015); LPMA (2011)

0 250 500 m

GDA 1994 MGA Zone 55

N

KEY

- Main road
- Local road
- Vehicular track
- Watercourse/drainage line
- EW approved construction footprint
- EW modification construction footprint (additional)
- Marine comms laydown (proposed)
- Waterbody

Exploratory Works project boundary
- Talbingo spillway

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Exploratory Works EIS
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