Hydro Tasmania

Tarraleah Redevelopment

Project Overview and Environmental Impact Summary

March 2026

Acknowledgement of Country

Hydro Tasmania pays respect to the rich, long and ongoing history of Palawa, Tasmanian Aboriginal people, the Traditional Owners and Custodians and their connections to land, sea and community.

The mountains, natural lakes and rivers that capture and channel water for hydropower are rich in Aboriginal history, culture and tradition. We acknowledge ongoing connection to culture and custodianship of the lands and waters of places we share. We pay our respect to Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

Contents

Introduction

About the Tarraleah Project

The Tarraleah hydropower scheme in lutruwita's (Tasmania's) Central Highlands sits within the traditional lands of clans of the Big River Nation of lutruwita. This scheme has been generating clean energy for more than 85 years. It plays an important role in Tasmania's energy system.

The scheme is approaching the end of its operational life. Because it is ageing, there are three main issues to address:

Environmental

The canals and pipelines that carry water many kilometres from Lake King William to the power station are approaching the end of their operational life. A failure could impact the adjacent World Heritage Area.

Value

It takes a long time to ramp energy generation up or down because of the scheme's aged conveyance technology. In the fast-paced energy market, we miss opportunities to generate revenue and value for Tasmania.

Reliability

Due to its age, there are frequent outages and high maintenance costs.

Hydro Tasmania has carefully reviewed several options for Tarraleah's future and determined that fully redeveloping the scheme would provide the most value to Tasmania.

The proposal to redevelop Tarraleah (the Project) would involve:

- building a new, higher capacity power station to replace the existing station
- replacing the existing canals and penstocks with a new pipeline and tunnels to carry water
- new transmission infrastructure
- retaining the historic power station in its original location.

> Investing in the scheme's future will mean it can address the risks posed by the ageing assets, increase revenue and value that can be returned to Tasmania and deliver more energy and flexible capacity to meet growing demand in the state.

Hydro Tasmania, the Project proponent, is a Tasmanian Government Business Enterprise (GBE) that has operated the state's hydropower system for over 100 years.

Purpose of this document

An Environmental Impact Statement (EIS) has been prepared for the Project. The EIS considers the potential environmental, social and economic impacts of the Project, and identifies measures to avoid, minimise and mitigate these impacts.

The EIS is a comprehensive document with analysis and input from technical and scientific experts. It demonstrates that the Project is based on sound environmental principles and practices that have met Tasmanian Environment Protection Authority (EPA) assessment requirements.

This EIS summary provides an overview of key parts of the EIS and is designed to help you understand the Project, the assessment process and the main findings of the EIS.

The summary document includes:

- How you can make a submission to the EPA about the EIS
- The environmental approvals and assessment process
- Why the Project is needed
- A description of the Project and proposed construction activities
- How we interacted with the community and what we heard
- Key findings of the EIS and mitigation measures
- Next steps.

As this document is a summary of key parts of the EIS, each section will show you where you can find more information in the full EIS.

How to have your say on the EIS

The EIS and supporting technical studies will be published for public comment. The EIS will be on public exhibition for a minimum of 42 days, during which submissions can be made.

How to access the documents

Online

Head to hydro.com.au/projects/tarraleah to access all EIS PDF documents online.

Or on EPA's webpage - epa.tas.gov.au/working-together/public-consultations

In person

Community drop-ins

Our team will support the public exhibition period with community drop-in sessions. We will also have all EIS documents available on USB at these sessions. These will be free to take. Keep an eye on our Project page for when and where these sessions will be.

Central Highlands Council

You can visit the Council Chambers to review all EIS documents.

Central Highlands Council
19 Alexander Street
Bothwell TAS 7030

6 Tarleton Street
Hamilton TAS 7140

Other ways to find out more

Phone or email

Is there something you'd like to share with us? We'd love to hear from you! You can contact us via email or call us.

projectengagement@hydro.com.au
0457 237 453

Alternative formats

The EIS is a large document and we encourage the use of online versions. If you require access to the EIS in an alternative format, please email or call us.

majorprojectsprogram@hydro.com.au
0457 237 453

How to make a submission

The EPA has prepared information to support public submissions which you can access here:

epa.tas.gov.au/business-industry/assessment/guide-for-preparing-a-public-submission

Where to send your submission

Submissions are welcomed from anyone in the community. They must be made in writing and submitted to Central Highlands Council. Ensure you include the Project name, your name and your contact information.

Your submission can be sent via email or the post.

- **By mail:** Send a letter to the General Manager at the Central Highlands Council office: PO Box 20, Hamilton 7140.
- **By email:** Send your submission to development@centralhighlands.tas.gov.au

Approvals and assessment process

There are a number of approvals needed for the Project at different levels of Government – local, state and Commonwealth.

Hydro Tasmania is seeking approvals from EPA Tasmania, the local planning authority (Central Highlands Council) and the Commonwealth.

Alongside this, Hydro Tasmania is engaging with government departments, submitting the Project for endorsement from our shareholder ministers, and seeking parliamentary approval for the Project.

Local and state approvals

Our Project needs formal approval before it can go ahead. To do this, we have submitted a Development Application (DA) to the Central Highlands Council, as required under the *Land Use Planning and Approvals Act 1993*.

Once lodged, the Council refers the DA to the EPA for assessment under the *Environmental Management and Pollution Control Act 1994*. The EPA is responsible for assessing the environmental impacts of the Project. In August 2024, the EPA gave us guidelines that set out what must be addressed in our EIS.

Although some Project activities are not subject to assessment by the EPA (refer to section 1.4.3 in EIS Chapter 1), Hydro Tasmania has chosen to address the entire Project in the EIS to provide a clear and holistic document for the community and stakeholders.

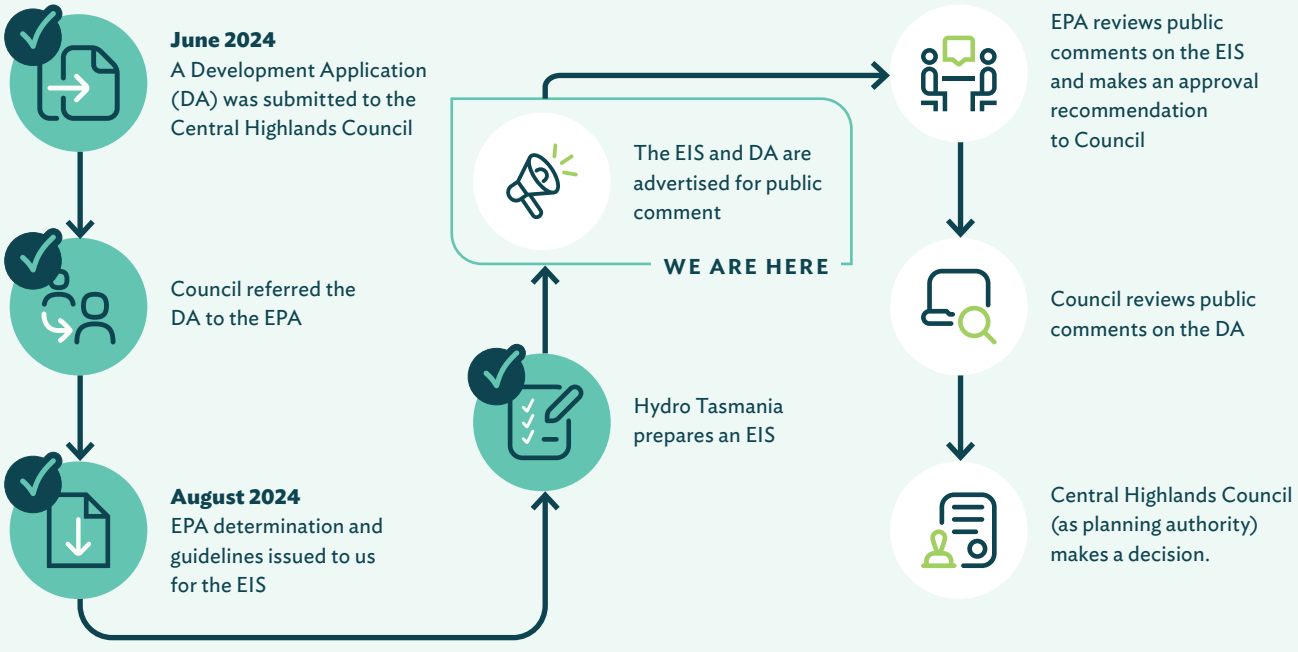
The Council will assess the DA as the planning authority, while the EPA will assess the EIS. The Tasmanian Parks and Wildlife Service (PWS) will also need to assess the EIS. Together, their assessments will determine whether the Project can be approved.

Commonwealth approval

The Commonwealth environmental approval process focuses on the protection of Matters of National Environmental Significance (MNES). The Project was referred to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

It has been designated as a controlled action under the Act and is currently being assessed.

The local and state approvals process



Overview

Our changing energy future

The national electricity market is moving away from fossil fuel and relying more on clean sources of energy like wind and solar. That's great news for the environment and future generations, but it creates challenges. Wind and solar don't generate all the time. You need something to 'fill the gaps' to make sure supply stays reliable for consumers.

Hydropower can play that vital role, providing reliable clean energy when wind and solar aren't generating or generation is reduced. This is often called 'firming'.

Tasmania's energy demand is also expected to increase over the next 30 years. This will be largely driven by the electrification of transport and industries, increased energy consumption and electricity-intensive industries.

With increasing reliance on wind and solar, the demand for reliable, dispatchable generation (like hydropower) is set to grow - making Tasmania's hydropower assets more valuable.

Reimagining Tarraleah

As one of the oldest large-scale hydropower schemes, Tarraleah has served Tasmania well, but its ageing condition now presents growing risks to reliability, operational performance and long-term resilience. It requires significant investment to ensure continued safe and reliable operation.

As we plan for the scheme's future, we have the opportunity to transform Tarraleah - ready to deliver clean, reliable energy for future generations and return even more value to Tasmania through greater revenue. Greater Hydro Tasmania profits mean greater returns as dividends to Government, used to support vital infrastructure and services.

Further information in the EIS

- Chapter 1 – Project introduction

Project benefits

Hundreds of jobs created during construction

Boost regional economic activity and support local business

Most fully mitigates the risk of asset failure

Deliver increased energy and capacity to Tasmania through a full reset of operational life

Strengthen energy security while supporting economic growth and development of new industries

Enhance energy reliability by improving asset performance and reducing risk of planned and unplanned disruptions

Improve revenue potential and maximise value through greater flexibility and capacity

Building long-lasting infrastructure that supports the economy and community

Community fund for projects and initiatives that are created by, and for, the community

Project description

The existing scheme

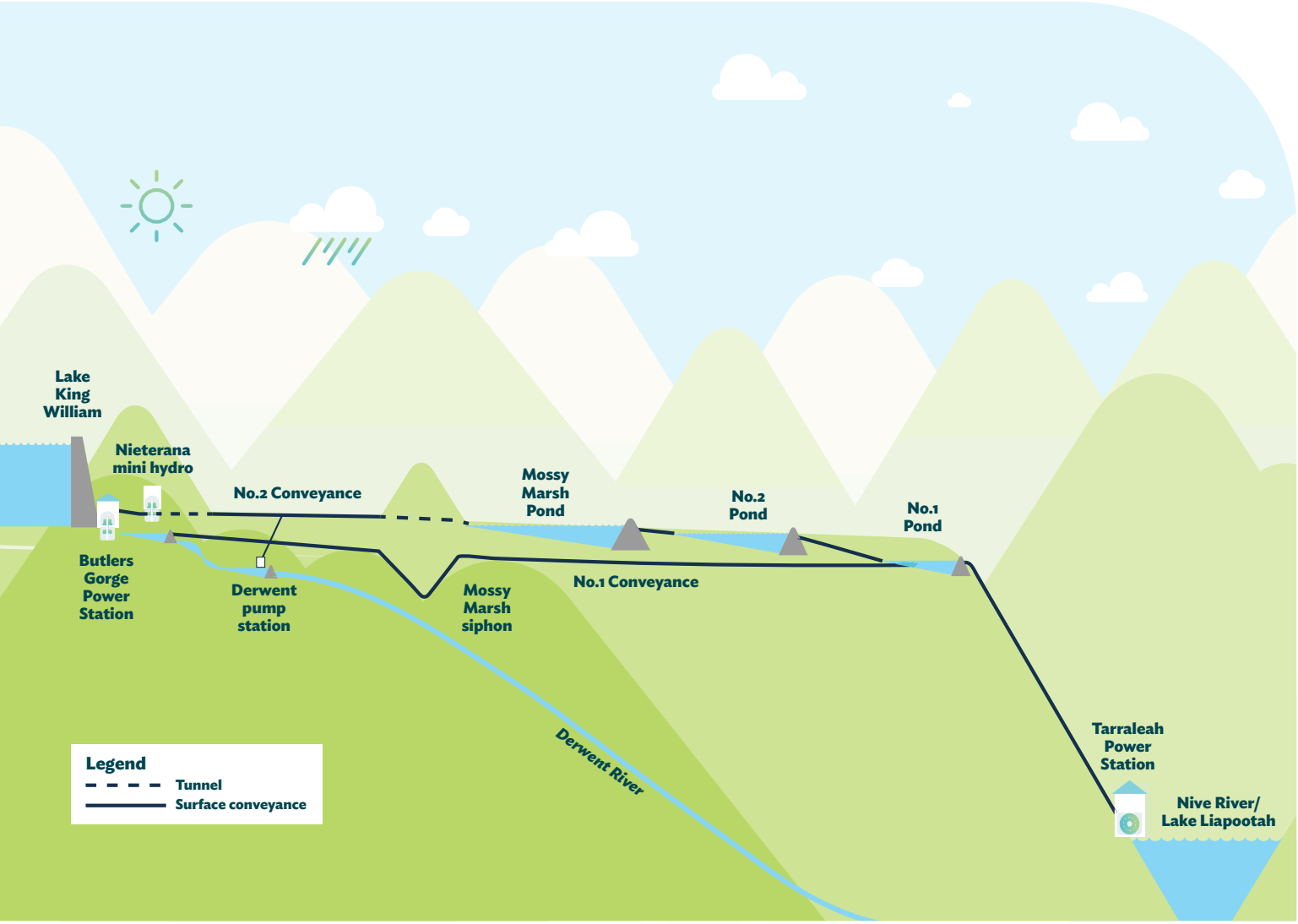
The Tarraleah scheme is in the Central Highlands local government area, approximately 125 km northwest of Hobart, Tasmania. The scheme consists of three power stations, as illustrated in the figure below, with the Tarraleah Power Station being the largest and most significant in terms of output.

Water from Lake King William is released through the Butlers Gorge Power Station and the Nieterana Mini-hydro Power Station, then transferred to the Tarraleah Power Station via an intricate 20–km long network of tunnels, canals, siphons, flumes, penstocks and pipes.

The main water conveyances are No. 1 Canal and No. 2 Canal. No. 1 Canal delivers water directly to No. 1 Pond; No. 2 Canal transfers water via Mossy Marsh Pond and No. 2 Pond before reaching No. 1 Pond.

From No. 1 Pond, water is conveyed to the Tarraleah Power Station through a hilltop pipeline and penstocks.

Tarraleah hydropower scheme – existing configuration



The existing Tarraleah hydropower scheme

85+ year old assets – nearing end of operational life

Revenue potential impacted by being constrained to 70–80 MW capacity
(of 90 MW peak capacity)

Risk of asset failure impacting World Heritage Area

Inflexibility limits revenue – scheme not responsive to energy market needs

Unreliable – frequent outages, high maintenance costs, lost generation

Inefficient water management

Hydro Tasmania is proposing to fully redevelop the Tarraleah hydropower scheme. This would involve:

- Building a new, higher capacity power station to replace the existing station
- Replacing the existing canals and penstocks with a new pressurised pipeline and tunnels to carry water
- Connecting the new water conveyances to a new water intake under construction at Lake King William
- New transmission infrastructure
- Retaining the historic power station in its original location.

Part of the existing No. 2 Canal will be retained and water captured by Derwent Pumps, Horne's Pond and smaller water pick-ups will be transferred to the new pressurised conveyance.

All other elements of the existing Tarraleah hydropower scheme will be decommissioned including:

- Nieterana Mini-hydro Power Station
- Butlers Gorge Power Station
- the existing Tarraleah Power Station
- the switchyard
- several water conveyances (No. 1 Canal, No. 1 Pond, part of No.2 Canal, hillside penstocks and hilltop valves).

A Decommissioning and Rehabilitation Plan will be finalised 12 months prior to decommissioning. Many of these assets have historic heritage value and are in areas containing Aboriginal cultural landscape values, so decommissioning will be planned in consultation with Heritage Tasmania and form part of Hydro Tasmania's Historic Heritage Conservation Management Plan. Decommissioning is separate to the Project's construction and does not form part of the EIS.

Project location

The Project area extends from Lake King William via Tarraleah to either Dee Lagoon or Liapootah (depending on the transmission line option chosen).

The Project is located close to the Tasmanian Wilderness World Heritage Area (TWWHA) and the Franklin – Gordon Wild Rivers National Park. At its closest point, the proposed western portal is approximately 25 m from the TWWHA boundary. The surge shaft and tower (including an associated rising main), access track and distribution line and temporary explosive magazine storage for the Project are proposed within the Tarraleah Conservation Area.

Access to the Project area is via the Lyell Highway and Butlers Gorge Road.

Proposed construction activities

The Project will consist of permanent infrastructure for the generation of energy, and temporary infrastructure associated with construction.

Construction of underground works will be completed using drill and blast techniques and may be supported by a tunnel boring machine.

Above-ground works will be completed by conventional earth moving and mechanical excavation.

Construction is expected to take about six years, with a peak workforce of between 250 – 330 people. The proposed standard construction hours are:

- **Above-ground works:** 7 am to 6 pm Monday to Friday; 8 am to 1 pm Saturdays
- **Underground works** and essential support operations (e.g. ventilation fans, water treatment facilities): 24 hours a day, 7 days a week.

Non-standard construction hours may be required due to workforce availability. Activities may extend into Saturday afternoons, Sundays and public holidays to align with fly-in fly-out interstate workforce rosters and transport and delivery of large loads.

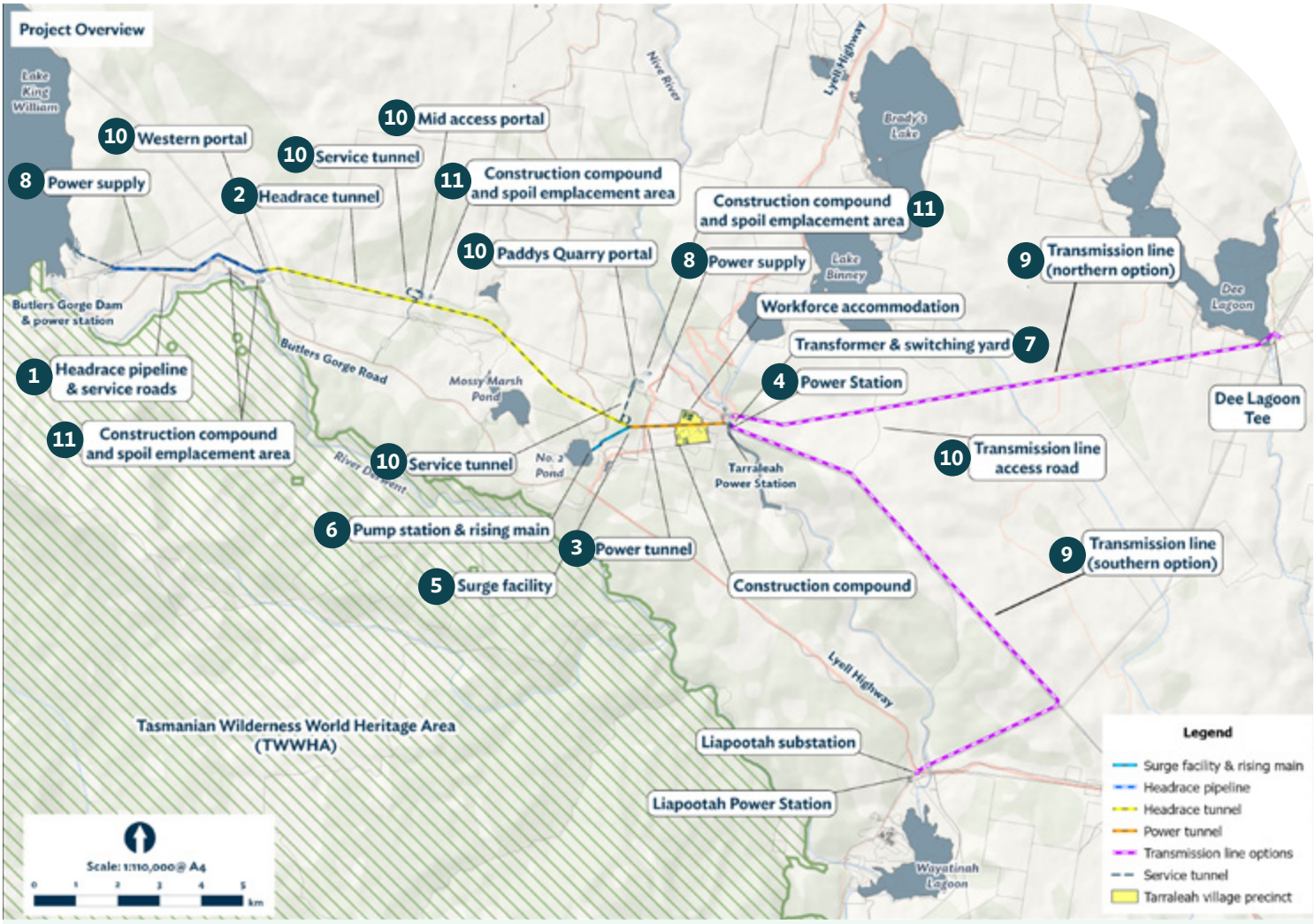
Construction activities key facts

Construction timeframe
~ 6 years

Peak workforce
250 –330

5 ½ days
Above-ground works per week

Underground works
24/7



Permanent Project components

Generation infrastructure

1. **Headrace pipeline:** Approximately 4.2 km pipeline and associated service roads connecting the Lake King William tunnel (under construction) to the headrace tunnel.
2. **Low-pressure headrace tunnel:** Approximately 9.8 km in length.
3. **High-pressure power tunnel:** Approximately 2.3 km in length, splitting into two short penstocks before entering the power station.
4. **Power station:** A partially underground facility located adjacent to the existing Tarraleah Power Station, with a peak capacity of approximately 190 MW and a rated flow of 60 m^3/s.
5. **Surge facility:** Comprising a 70 m above-ground surge tower and an associated underground surge shaft approximately 265 m high, to manage water pressure within the headrace and power tunnels.
6. **Pumping station:** Capable of transferring approximately 6 m^3/s of water from the existing No. 2 Pond via a 0.8 km rising main to the headrace and power tunnels via the surge tower.

Transmission infrastructure

7. **Transformer yard and switchyard:** Located near the power station to connect it to the proposed transmission line.
8. **22 kV power supply:** A new power supply line from the existing 22 kV network will power the western, mid-access, and Paddy's Quarry portals, as well as the pump station, surge tower, and power station during both construction and operation.
9. **220 kV transmission line:** Two route options are currently under consideration:
   - A 14 km double-circuit line from the existing Tungatinah Switchyard to the existing Dee Lagoon tee (northern option), or
   - A 15 km double-circuit line from the proposed Tarraleah Switchyard to the existing Liapootah Substation (southern option).

Access infrastructure

10. **Tunnels, portals, and roads:** To access the headrace and power tunnels.
11. **Excess spoil from excavations:** This will be placed in one of three permanent spoil emplacement areas located at the western portal, mid-tunnel access portal, and Paddy's Quarry portal.

Temporary construction components

To support construction, the following key temporary infrastructure is proposed:

- **Construction compounds:** A compound at Tarraleah Village will be supported by construction compounds located at each tunnel portal and the power station. Construction compounds may include site administration facilities and workshops, material and equipment handling and storage, and concrete batching and crushing and screening plant.
- **Workforce accommodation facility (WAF):** A temporary WAF will be built on land adjacent to Tarraleah Village. It will include up to 300 beds in prefabricated units, plus recreation spaces, a dining hall, canteen, laundry facilities, and essential utilities (power, water, and sewer). The WAF is not part of the EIS and will be subject to a separate development consent and approval process.
- **Explosives storage:** Dedicated explosive storages are proposed to be securely located off Butlers Gorge Road.
- **Temporary bridge:** To facilitate construction of the new power station, a temporary bridge is proposed over the Nive River located adjacent to the existing bridge.

Upon completion of construction, all temporary infrastructure will be removed and areas no longer needed for operation will be rehabilitated.

Operation and maintenance

Once commissioned and operational, the scheme will be run remotely from our Hobart operations centre. Site attendance will be limited to routine maintenance. Permanent flood lighting will be installed for security at the power station and at the pump station near No.2 Pond.

Decommissioning

The operational lifespan of the Project is expected to be 80 – 85 years. At the end of this period, an options assessment will be undertaken to determine if the Project will be decommissioned or upgraded to extend its operational life. This assessment will include consideration of stakeholder and community interests.

If decommissioning proceeds, a Decommissioning and Rehabilitation Plan will be prepared prior to the planned end of operation. The scope of decommissioning activities and potential impacts will be guided by the requirements in place at that time.

Further information in the EIS

- Chapter 2 – Project description
- Chapter 7 – Decommissioning and rehabilitation

Project alternatives

Hydro Tasmania has conducted a comprehensive appraisal of options for the future of the Tarraleah scheme, considering the social, environmental, commercial, and economic risks and benefits of each.

Overview of Project alternatives

	Addresses environment risk (problem 1)	Addresses scheme inflexibility (problem 2)	Addresses reliability risk (problem 3)	Revenue potential	Peak capacity	Storage duration
Status Quo	Does not address	Does not address	Partially addresses	Limited	~90 MW	N/A
1. Decommissioning	Fully addresses	Does not address	Does not address	None	~12 MW	N/A
2. Minimum refurbishment	Fully addresses	Partially addresses	Fully addresses	Limited	~100 MW	2 hours
3. Refurbish with BESS	Fully addresses	Partially addresses	Fully addresses	Limited	~200 MW	2 hours
4. Redevelopment with headponds	Fully addresses	Partially addresses	Fully addresses	Limited	~160 MW	20 hours
5. Redevelopment with pressurised conveyance	Fully addresses	Fully addresses	Fully addresses	Highest	~190 MW	Months

Status Quo: represents the current Tarraleah Scheme and is the scenario against which all options are compared.

1. **Decommissioning** – decommissioning the existing scheme once asset condition is assessed as untenable.
2. **Minimum refurbishment** – refurbishing the existing station and replacing the canals.
3. **Refurbishment with Battery Energy Storage System (BESS)** - equivalent to Option 2 but with additional capacity from a two-hour BESS in the portfolio.
4. **Redevelopment with headponds** – replacing the power station and providing additional generation capacity with increased headpond storage.
5. **Redevelopment with pressurised conveyance** – replacing the power station and constructing a new pressurised conveyance to bypass the existing canals. This is the preferred option that has been taken forward.

The analysis identified a full redevelopment with a pressurised conveyance as the preferred option. You can find more information here: hydro.com.au/clean-energy/our-major-projects

Redevelopment is the only option that delivers:

Mitigated risk of an environmental incident

Increased peak capacity

Greatest value to Tasmania with enhanced operational flexibility and dispatchable generation

Further information in the EIS

- Chapter 3 – Project alternatives

Engagement and public consultation

Engagement approach

Hydro Tasmania has focused on fostering meaningful relationships, based on open and responsive conversations. A phased approach is used to ensure each stage builds on the outcomes of the previous one.

PHASE 01

Project Socialisation and Issue Scoping

Raise awareness, understand interests and gather insights to assess potential social impacts and opportunities.

PHASE 02

Issue Response

What we heard informs our technical studies and the Social Impact Assessment (SIA).

This includes ongoing engagement with the Aboriginal community.

PHASE 03

EIS/Development Application Exhibition and Feedback

Raise awareness, explain how stakeholder issues are being addressed, support community to make informed submissions.

Feedback from the community has played a key role in identifying and assessing potential environmental, cultural, and socio-economic impacts and opportunities, as well as validating proposed management measures.

A variety of communication and engagement activities continue to be developed to ensure the community has access to up-to-date information and feel involved throughout the Project.

Who we've spoken to

- Local landholders
- Tasmanian Aboriginal peoples, Aboriginal and Torres Strait Islander people living in Tasmania
- Local council
- Local businesses
- Community, environmental and industry groups
- Service and health organisations
- Tourism organisations
- Government agencies.

What we heard

Concerns

- Community connection to place and heritage values
- Management of Aboriginal cultural including heritage and landscape values
- Rehabilitation of landscapes/fresh water systems
- Recreational and fishing access changes
- Environmental impacts
- Increased traffic and possible road closures
- Economic, with perceptions the Project would provide little benefit to Tasmania

Opportunities

- Economic and employment
- Increased renewable energy generation
- Tourism
- Supporting marginalised groups.

The table below summarises the key issues raised and how those issues will be addressed in the EIS.

Issue	Raised by	EIS reference
Traffic on Lyell Highway	• Town residents (Hamilton, Ouse) • Commuters • Emergency Services • Health and community services sector	Section 2.4.1.10 Section 5.15
Access to Tarraleah Village	• General community	Section 2.4.1.10 Section 5.15.2
Access to Lake King William and surrounding walking tracks	• Recreational fishers (individuals) • Recreational fishing organisations • Bushwalking groups	Section 2.4.1.10 Section 5.15.2
Management of Aboriginal cultural heritage	• Aboriginal community members • Aboriginal organisations • Aboriginal Heritage Officers (AHOs)	Section 5.13
Local jobs and local content	• General community • Local businesses	Section 5.9 Section 5.16
Access to health and community services	• General community • Service providers	Section 5.9
Public amenities at Hydro Park (Nive River)	• General community • Tourism industry stakeholders	Section 2.3 Section 5.9
Environmental management	• General community	Chapter 2 Chapter 5
Community engagement during construction phase	• General community • Service providers • Emergency Services	Chapter 4 Section 5.9
Youth work exposure and employment	• Education sector • Service providers	Section 5.9 Section 5.16
Social procurement	• Service providers • Department of State Growth	Section 5.9 Section 5.16

Further information in the EIS

- Chapter 4 – Engagement and public consultation
- Appendix D – Engagement Report

Approach to assessing and managing impacts

Impact assessment and mitigation

The EIS describes and assesses the potential impacts of Project construction and operation, taking into account risks, sensitivities and environmental compliance requirements.

Specialist technical studies were undertaken to address the environmental and social aspects identified in the EIS guidelines. These studies, provided in the EIS Appendices, involved:

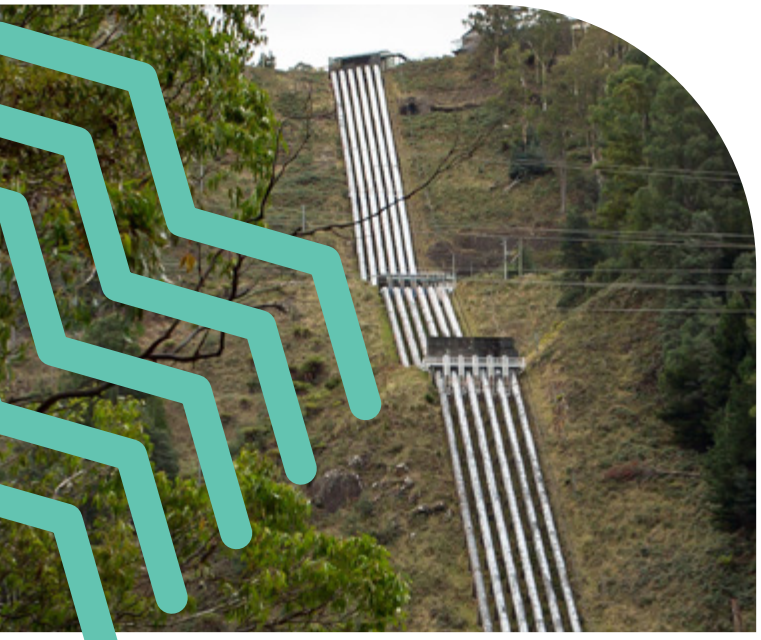
1. Assessing existing conditions and identifying relevant values
2. Identifying potential impact pathways
3. Assessing their magnitude and duration
4. Recommending management measures to avoid, minimise and mitigate impacts, as well as monitoring programs to test their effectiveness and enable adaptive management
5. Assessing residual impacts on values
6. Recommending suitable offsets where impacts cannot be avoided or sufficiently mitigated.

Where relevant, technical studies also considered potential cumulative impacts in conjunction with other developments in the region.

The management measures outlined in the EIS have been designed to minimise impacts as far as practicable and ensure residual effects remain within acceptable limits. A Construction Environmental Management Plan (CEMP) will be prepared by the selected construction contractor prior to construction starting. It will detail how commitments in the EIS and conditions of approvals will be implemented.

The following sections summarise the key potential impacts of the Project, and where you can find more information in the EIS on:

- Water quality
- Groundwater
- Terrestrial ecology
- Aquatic ecology
- Air quality, noise and vibration
- Visual amenity
- Other matters
- Social, economic and heritage.



Further information in the EIS

- Chapter 6 – Monitoring and review
- Chapter 8 – Management measures
- Appendix N – Construction Environmental Management Framework

Water quality

There are several surface waters, including six permanent and ephemeral streams with a total of 11 crossings or tributaries, and several downstream rivers and storages that may be impacted by Project activities.

A baseline water quality monitoring program has been undertaken for the Project. Water bodies upstream and downstream of the Project area are characteristically low in nutrients, low in suspended sediment (turbidity) and have pH that is slightly acidic to neutral. There is some minor seasonal variability in these parameters that shows slightly higher nitrate and turbidity in winter and spring.

Potential impacts

Five water quality parameters we monitor to assess water quality are:

- Erosion and turbidity
- Hydrocarbons
- pH
- Metals
- Nitrates.

Many are common across all construction sites (e.g. erosion, hydrocarbons, pH), while others are site-specific (e.g. blasting-related nitrates).

Clearing and construction activities can cause erosion and sedimentation, leading to elevated turbidity. Construction methods using concrete, shotcrete and grouting may raise pH levels in water. Hydrocarbons could also contaminate water. Some construction activities may release metals into the environment although the potential is low. Drill and blast works using ammonium nitrate explosives could release nitrates and ammonium, potentially affecting aquatic organisms.

Further information in the EIS

- Chapter 5, Section 5.1 – Water quality
- Appendix F – Water Quality Assessment

Sediment from construction could affect aquatic ecosystems including macroinvertebrates, native crayfish and platypus.

Mitigation measures

Key water management measures include:

- A Water Management Plan (WMP) prepared prior to the commencement of construction and implemented throughout construction. The plan will include treatment for pH and turbidity.
- A Nitrate Management Plan (NMP) developed and implemented to manage nitrate generated from the use of explosives, in line with best practice blasting procedures. The plan will include measures to manage wastewater with elevated nitrate concentrations.
- An Erosion and Sediment Control Plan (ESCP) prepared prior to commencing construction at each site to manage and reduce soil erosion and sediment runoff.
- Monitoring programs will be implemented to confirm the effectiveness of management measures, with some activities extending into the post-construction phase.

With these measures in place, any potential residual water quality impacts are not expected to result in environmental harm.

There may be an increase in dissolved nitrogen loads—mostly as nitrate—into the Derwent catchment during construction and for a period after. However, these loads are considered unlikely to cause environmental harm due to their relatively small size in the context of the greater catchment, their temporary nature, and the significant dilution available to reduce concentrations.

Groundwater

A comprehensive hydrogeological assessment has been completed for the Project. The hydrogeological assessment included the development of a conceptual hydrogeological model that was informed by geological investigations and the results of baseline ground and surface water quality monitoring.

Conceptually, the Project is underlain by two principal catchment scale aquifers, both of which are recharged by rainfall. A net positive water balance over the Project site results in aquifer discharge to streams and wetlands on the Tarraleah plateau as well as deeper drainage toward the River Derwent.

Potential impacts

The potential impacts were assessed through numerical groundwater modelling, focused on the tunnels during construction and operation. The objectives of the modelling were to evaluate:

- Groundwater inflows into the works during excavation
- Tunnel water loss during operation
- Temporary drawdown caused by seepage into the works.

Groundwater table

Groundwater inflows into the headrace and power tunnels during construction will cause a temporary, localised drawdown of the groundwater table. The potential impacts of this drawdown on the *Sphagnum* peatland at Mossy Marsh, as well as other potentially groundwater-dependent vegetation communities, are presented in the Terrestrial Ecology section.

Groundwater quality

Groundwater quality may be impacted during construction through infiltration of surface water containing elevated levels of contaminants such as nitrate, ammonium, hydrocarbons, and metals.

No impacts to groundwater quality are anticipated during operation.

Mitigation measures

A Groundwater Management Plan (GMP) will be developed prior to construction and implemented throughout construction to manage potential impacts to groundwater.

Prior to implementation of the GMP, the existing baseline monitoring program will continue.

With implementation of the GMP, no residual water quality impacts are expected to result in environmental harm.

Further information in the EIS

- Chapter 5, Section 5.2 - Groundwater
- Appendix H - Hydrogeological Interpretive Report

Terrestrial ecology

A comprehensive terrestrial ecology assessment was conducted to identify and map vegetation communities, flora, fauna, habitat values, and weed species within and around the Project area. Field surveys identified 12 native vegetation communities and 5 modified communities.

Vegetation communities

Vegetation communities in the Project area are shaped by underlying geology and past disturbances, including historic hydropower development and forestry operations. The area contains wet and dry eucalypt forests, non-eucalypt forests, and buttongrass moorlands.

Potential impacts

The Project will result in the clearance of up to 161.1 ha of native vegetation, of which up to 61.2 ha are mature eucalypt forest (i.e. not harvested in recent decades) and less than one hectare is subalpine *Diplarrena latifolia* rushland community, which is listed under the Tasmanian *Nature Conservation Act 2002* (NC Act). Up to 10.4 ha of native vegetation (primarily wet eucalypt forest) within the Tarraleah Conservation Area will be cleared for the surge tower, rising main and access road.

Mitigation measures

The vegetation clearing exclusion zones will be clearly marked on Project plans and on site to ensure clearing is limited to the minimum required for construction.

All temporary construction sites and areas not required for operation will be progressively rehabilitated upon completion of works.

Material from the threatened rushland will be stockpiled close to its original location and spread back over the area once construction of the relevant pipeline section is complete. Revegetation and rehabilitation will be monitored to ensure re-establishment of the community with *Diplarrena latifolia* as the dominant species.

After mitigation, residual impacts on vegetation communities are not considered substantial, given the broader landscape context of large-scale production forestry and hydropower infrastructure.

Sphagnum peatland

Sphagnum peatland is listed as threatened under the NC Act and forms part of the Alpine *Sphagnum* Bogs and Associated Fens ecological community, which is listed as endangered under the EPBC Act.

A *Sphagnum* peatland community in good condition is located approximately 400 m upstream of Mossy Marsh Pond; no Project infrastructure is planned here.

Potential impacts

Hydrogeological modelling predicts temporary groundwater drawdown below the peatland during tunnel construction, with recovery expected once operational. Additionally, the partial decommissioning of No. 2 Canal is predicted to reduce the surface water flowing past the peatland. Although these hydrological changes from the Project are considered unlikely to significantly impact the *Sphagnum* peatland near Mossy Marsh Pond, a precautionary approach has been taken. Loss of the peatland is assumed as a worst-case outcome.

Mitigation measures

Hydrological changes during construction of the tunnel cannot be avoided. Because mitigation is not possible, Hydro Tasmania will offset the potential loss by securing and protecting an area of *Sphagnum* peatland larger than the 3 ha Mossy Marsh patch and in similar condition. The offset area will be protected under covenant and managed under an approved conservation management plan in accordance with the NC Act.

A monitoring program will assess impacts to the *Sphagnum* peatland near Mossy Marsh Pond throughout tunnel construction, and monitoring will continue for five years after construction is completed. The program has three components: groundwater monitoring, aerial imagery, and vegetation condition assessments.

Sphagnum peatland northwest of Mossy Marsh Pond

Flora

Field surveys recorded 325 flora species within the Project area, comprising 271 native and 54 introduced species. Two threatened flora species were recorded:

- The native riparian plant species native wintercress (*Barbarea australis*) is protected under both the EPBC Act and the Tasmanian *Threatened Species Protection Act 1995* (TSP Act). Potential impacts and mitigation measures for this species are addressed in the Aquatic Ecology section.
- Small-leaf dogwood (*Pomaderris elachophylla*), protected under the TSP Act. Plants occur along the Lake King William to Derwent Pumps distribution line and on the edge of the western portal and pipeline footprint.

Ten declared weeds are known to occur within the Project area.

Potential impacts

Construction activities may be unable to avoid the patch of about 30 small-leaf dogwood plants; a permit to take may be required. Construction activities may spread or introduce weeds.

Mitigation measures

Exclusion zones to avoid listed threatened plants will be shown on Project plans, communicated to all construction personnel, and physically marked on site.

A Biosecurity Management Plan will be implemented to minimise spreading of weeds, including monitoring and treatment during and after construction.

Fauna

The Project area contains three main habitat types for animals: dry eucalypt forest, wet eucalypt forest, and buttongrass moorlands. Seven terrestrial fauna species listed as threatened under the TSP Act are known to, or have potential to, forage over the area – Tasmanian devil, spotted-tail quoll, Tasmanian wedge-tailed eagle, white-bellied sea eagle, Tasmanian masked owl, swift parrot and grey goshawk.

Tasmanian devils and spotted-tailed quolls

Tasmanian devils (*Sarcophilus harrisii*) and spotted-tailed quolls (*Dasyurus maculatus maculatus*) are protected under both the TSP Act and EPBC Act. No dens were identified during surveys, although both species are likely to hunt over the area.

Potential impacts

Vegetation clearance and construction noise may disturb Tasmanian devil and spotted-tailed quoll dens, if any dens are established within 50 m of activities. Increased traffic volumes during construction may increase roadkill incidence. Our significant impact assessment under the EPBC Act determined that the Project is unlikely to have a significant impact on these species.

Mitigation measures

Targeted den surveys will be conducted prior to works and if dens are found, work will stop until permits are obtained. A Roadkill Management Plan will be implemented to minimise risk of roadkill.

Eagles

Four eagle nests were recorded within 1 km of the northern transmission line option and one nest was recorded within 500 m of the southern transmission line option. These nests may be used by either the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*), protected under both TSP Act and EPBC Act, or the white-bellied sea eagle (*Haliaeetus leucogaster*), protected under the TSP Act.

Potential impacts

Construction activities may disturb breeding eagles. Anticoagulant rodenticides pose a risk of secondary poisoning to raptors, including both eagle species.

Mitigation measures

Surface construction works within 1 km and line-of-sight or within 500 m (regardless of visibility) of an active eagle nest will cease during the eagle breeding season. Aerial searches for new raptor nests will continue to be undertaken outside of the eagle breeding season each year leading up to, and throughout, construction.

Anticoagulant rodenticides will be avoided during all phases of the Project.

Tasmanian masked owl

The Tasmanian masked owl (*Tyto novaehollandiae castanops*) is listed as vulnerable under the EPBC Act and endangered under the TSP Act. Tasmanian masked owls are likely to fly and forage over the Project area, as indicated by occasional screech detections through the passive acoustic monitoring. There is no evidence of resident (roosting or nesting) masked owls within or near proposed construction activities and infrastructure.

Potential impacts

Anticoagulant rodenticides pose a risk of secondary poisoning to raptors including owls.

Mitigation measures

Anticoagulant rodenticides will be avoided during all phases of the Project.

Swift parrot

The swift parrot (*Lathamus discolor*) is listed as endangered under the EPBC Act and the TSP Act. The migratory bird is an occasional visitor to the Central Highlands, including the Tarraleah area, following breeding in the coastal forests of eastern and south-eastern Tasmania before dispersing to western and north-western Tasmania. The main threat to the swift parrot is loss of breeding habitat through forestry operations and land clearing. The Project is not located within a Swift Parrot Important Breeding Area. They may opportunistically forage on the flowers of eucalypt trees in the Project area. The forests in the Project area are not considered priority foraging habitat, as they do not contain *Eucalyptus globulus* or *E. ovata* and are outside the recognised breeding range of the swift parrot.

Potential impacts

Clearance of eucalypt trees will not materially impact swift parrot foraging behaviour or success as they move across this region each year. Collision with construction vehicles is unlikely given the canopy height of the forests.

Mitigation measures

General fauna protection measures will be implemented, including the implementation of a roadkill management plan.

Grey goshawk

The grey goshawk (*Tachyspiza novaehollandiae*) is listed as endangered under the TSP Act and is not listed under the EPBC Act. No grey goshawk nests were detected during aerial raptor nest searches, and there are no known nests within 1 km of proposed construction activities or infrastructure. There is no suitable nesting habitat.

Potential impacts

Given the lack of suitable nesting habitat and known nest sites, the Project is considered unlikely to impact the grey goshawk.

Mitigation measures

Annual searches for new raptor nests will be undertaken leading up to and throughout construction.

Roadkill management

Native animals and birds can be struck and killed by vehicles, particularly when scavenging carcasses of other road-killed animals.

Potential impacts

Increased traffic volumes on Project transport routes during construction have the potential to increase roadkill incidence.

Mitigation measures

A Roadkill Management Plan will be prepared and implemented to minimise vehicle strike risk, including reduced night-time traffic, speed controls, carcass removal, incident recording for adaptive management, advisory signage and worker training.

Further information in the EIS

- Chapter 5, Section 5.3 – Terrestrial biodiversity and natural values
- Appendix B – Terrestrial Ecology Assessment

Aquatic ecology

A detailed freshwater aquatic ecology assessment was undertaken to survey and verify aquatic habitat and aquatic and riparian communities within and surrounding the Project area.

Aquatic flora

Native wintercress (*Barbarea australis*) is a riparian, flow-dependent plant species protected under the TSP Act and EPBC Act. Surveys recorded the plant on the upstream face of the dam wall above the existing outflow pipe at the Tarraleah Pump Pond No. 2; in the Nive River upstream of Liapootah Dam (the reaches upstream of Tungatinah Power Station); downstream of Liapootah Dam to Wayatinah Lagoon; and in the River Derwent downstream of Wayatinah Lagoon to Lake Catagunya. Suitable habitat was also recorded in the River Derwent between Clark Dam and Wayatinah Lagoon.

Three other flora species protected under the TSP Act were recorded within the riparian area of the River Derwent during surveys: narrowleaf westringia (*Westringia angustifolia*), matted lignum (*Muehlenbeckia axillaris*) and Mount Mawson pine (*Pherosphaera hookeriana*).

Aquatic fauna

No listed fauna species have been recorded in the Project area, and based on known distributions, none are expected to occur. Macroinvertebrate river health scores for the River Derwent indicated healthy communities downstream of the Counsel River inflow, but poor condition upstream. The Nive River downstream of Liapootah Lagoon was assessed as being in poor overall condition as was the River Derwent downstream of Wayatinah Lagoon.

Self-sustaining populations of native fish are either absent or occur in very low numbers. Introduced brown trout (*Salmo trutta*) and rainbow trout (*Oncorhynchus mykiss*) were the only fish species commonly recorded in all study reaches and are known to outcompete and predate on native species.

Fauna species that are not listed as threatened but that are of special conservation significance include the platypus (*Ornithorhynchus anatinus*), the native freshwater crayfish (*Astacopsis tricornis*) and 26 species of freshwater macroinvertebrate species. These species are classified as species of conservation significance due to being endemic to Tasmania, or to Tasmania and restricted areas of the mainland. However, none of the species listed as of conservation significance have restricted distributions in Tasmania.

Protected areas

The River Derwent is within the TWWHA starting immediately downstream of Derwent Pumps Weir (which is located 6 km downstream of Clark Dam) and continues for approximately 23 km, with the downstream boundary approximately 2.8 km upstream from where the river enters Wayatinah Lagoon. The TWWHA is inscribed on the World Heritage List under four natural and three cultural criteria, and it is also listed as a National Heritage Place.

Potential impacts

Construction

Construction impacts are limited to potential changes in water quality which may impact aquatic species.

Operation

The main operational impact predicted is a reduced magnitude of spill from Clark Dam and Derwent Pumps Weir. Hydrological modelling indicates that the frequency and magnitude of annual spills would be significantly reduced compared to current operation. If not mitigated, this would likely degrade the quality of instream and riparian habitats in the 31 km reach of the River Derwent downstream of Clark Dam to Wayatinah Lagoon.

Mitigation measures

Construction

Mitigation of potential impacts to aquatic communities will be achieved by protecting water quality. Implementation of the Water Management Plan, Nitrate Management Plan and Erosion and Sediment Control Plan is expected to mitigate impact to waterways, the TWWHA and downstream receiving waterways.

Threatened flora exclusion zones will be established for the *Barbarea australis* plants where the southern transmission line will traverse the Nive River, and at the Pump Pond wall location.

Operation

To mitigate the impact of a reduced spill/high flow regime in the River Derwent downstream of Clark Dam, planned spill events of sufficient magnitude and frequency are proposed to maintain geomorphic processes, habitat, and TWWHA values, including habitat suitability for *Barbarea australis*. The proposed mitigation measures are one annual high flow release and three annual smaller fresh releases. No residual impacts on aquatic values are predicted in this reach.

Further information in the EIS

- Chapter 5, Section 5.4 – Aquatic biodiversity and natural values
- Appendix G – Aquatic Ecology Assessment

Air quality, noise and vibration

Air quality and noise and vibration assessments were conducted. The studies found that indicative particulate concentrations for the Project area are low and there are no other major sources of noise in the vicinity of the Project area.

Key sensitive receptors are locations that may be adversely affected by air, noise and vibration. For the Project, these include Tarraleah Village (owned by Hydro Tasmania), Bradys Lake (6 km northeast), Bronte Lagoon (12 km north), and Wayatinah (10 km southeast).

Air quality

There are no air quality monitoring stations in the Project area, with the nearest station located approximately 50 km to the south-east. Data from this station together with data from Butlers Gorge weather station was used to provide indicative particulate concentrations and showed that they were low in the Project area.

Weather data from the Butlers Gorge station indicates the highest risk of particulate emissions occurs in summer, when temperatures are higher, rainfall is lower, and afternoon winds are stronger (though rainfall remains high compared to lowland areas further east).

Potential impacts

Construction

The Project will generate atmospheric emissions, primarily from:

- dust from surface works such as excavation and hauling spoil
- exhaust emissions from machinery and vehicles.

Due to the Project's isolated location, the risk of construction air emissions affecting the environment or sensitive receptors is considered very low.

Operation

Air emissions are expected to be negligible during operation.

Mitigation measures

Construction

An Air Quality Management Plan (AQMP) will be prepared prior to construction. The AQMP will identify potential and existing dust sources and outline best-practice design controls, air quality management measures, responsibilities, key personnel, adaptive management, and community engagement.

Operation

With implementation of the Air Quality Management Plan, no residual impacts are anticipated.

Noise and vibration

Potential impacts

Construction

The Project will generate noise and vibration, primarily from:

- operation of equipment including rock breakers, excavators, dozers, compactors, and trucks
- increased light and heavy vehicle traffic.

With the exception of helicopter use for transmission line stringing, no noise impacts from construction are predicted at sensitive receptors not owned by Hydro Tasmania. Some noise impacts are anticipated at Tarraleah Village, however, the village is owned by Hydro Tasmania and only Project staff will be accommodated in the village during construction.

Operation

Noise and vibration impacts are expected to be negligible during operation.

Mitigation measures

Construction

There are no noise or vibration impacts that require mitigation.

Operation

Noise and vibration impacts are expected to be negligible during operation.

Further information in the EIS

- Chapter 5, Section 5.5 – Air quality
- Chapter 5, Section 5.6 – Noise and vibration
- Appendix I – Air Quality Assessment
- Appendix J – Noise and Vibration Assessment

Visual amenity

Landscape types have common visual characteristics defined by landform, water, vegetation and cultural influences.

Tarraleah is located on the northern edge of the High Mountains Landscape type, adjacent to the Central Plateau type. Hydro-electric development is a characteristic feature of both landscape types, given its history and heritage.

Production forestry is another key feature of the regional landscape around Tarraleah. Further west, the landscape is dominated by extensive buttongrass plains and the mountains of the southern Cradle Mountain–Lake St Clair National Park.

The visual assessment used viewpoint mapping and photomontages to illustrate the extent and character of landscape change associated with one of the Project's largest permanent infrastructure elements—the surge tower—as viewed from several locations. The photomontages are presented below and on the next page.

Tarraleah surge tower visual simulation - view from Mount King William (surge tower is within red circle)

Visual simulation - surge tower – view from Oldina Drive

Potential impacts

Overall, visual impacts are minimal. The proposed 70 metre high surge tower is the most visible feature but is consistent with the existing hydropower landscape. Views from the TWWHA will be limited due to inaccessibility and low visitation.

Mitigation measures

Based on preliminary visual assessments undertaken early in the design phase, Hydro Tasmania made several refinements to the siting and design of Project elements. The preliminary design phase investigated options for locating infrastructure away from ridgelines and reducing infrastructure height to limit visibility against the skyline. The final Project design reflects this process, while also considering the technical and operational constraints of the Tarraleah hydropower scheme.

The low significance of visual impact suggests the principal opportunities to further mitigate residual impacts from the Project are to:

- refine design of key elements so they blend into the surrounding landscape or are designed as features
- reduce visibility of Project elements (during construction and operation) by maintaining and managing vegetative screening as much as possible
- minimise short-term impacts of sediment, dust and other contaminants during construction activities around the Project footprint.

Further information in the EIS

- Chapter 5, Section 5.14 – Visual amenity
- Appendix M – Visual Impact Assessment

Other matters

Bushfire risk

The Project is located in a landscape highly susceptible to bushfire due to the presence of dry and wet eucalypt forests, extensive vegetation cover, and a documented history of significant bushfire events.

Potential impacts

The risk of bushfire will increase during construction due to greater site activity and occupancy.

Mitigation measures

A Bushfire Mitigation Plan, a Bushfire Emergency Plan and a Bushfire Response Plan will be implemented.

Construction waste and spoil management

Construction will generate a range of solid and liquid waste streams, including vegetation debris, tunnel water, washdown water, waste oils and lubricants, scrap metal, cardboard, plastics, shotcrete and concrete washings, and wastewater from ablution facilities.

Potential impacts

These waste streams could lead to water and soil contamination, chemical leaching, odour, litter, vermin attraction, or visual impacts.

Spoil generated from underground excavation has the potential to affect surface and groundwater quality and visual amenity.

Mitigation measures

A Waste Management Plan (WaMP) will incorporate circular economy principles, ensure legislative compliance, provide staff training, and be subject to periodic review.

A Spoil Management Plan (SMP) will ensure spoil is placed in permanent emplacement areas designed for long-term stability, rehabilitation and reduced visual impact.

Further information in the EIS

- Chapter 5, Section 5.11 – Fire risk

Further information in the EIS

- Chapter 5, Section 5.10 – Waste management

Hazardous materials

During construction and operation, dangerous goods and environmentally hazardous materials are anticipated to be used, stored and transported within, and to and from, construction and operation sites.

The Project will involve the use and storage of explosives, fuels, lubricants, hydraulic oils, flocculants, coagulants for water treatment, cement, weed control chemicals, and potentially contaminated spoil.

Potential impacts

Construction

Construction sites and compounds will be located in areas containing native flora and fauna, with some compounds close to waterways. Accidental spills of environmentally hazardous materials could reach nearby waterways or infiltrate groundwater. Spills that enter waterways pose significant risks to aquatic flora and fauna, ranging from direct toxicity to smothering effects.

Operation

During operation, dangerous goods and environmentally hazardous materials are expected to be stored and used including transformer oil, lubricants and hydraulic oil and paint, solvents and adhesives.

Mitigation measures

Construction

A Hazardous Materials Management Plan (HMMP) will be prepared prior to construction and implemented throughout. The HMMP will cover the storage, handling, containment and disposal of environmentally hazardous materials.

An Emergency Response Plan (ERP) will be prepared prior to construction and implemented throughout.

Operation

Hydro Tasmania will manage hazardous materials in accordance with standard quality measures and procedures.

Further information in the EIS

- Chapter 5, Section 5.7 – Dangerous goods and environmentally hazardous materials

Climate change and greenhouse gas emissions

The design considers the changing climate over the 80+ year operational life, particularly weather extremes that may affect safe operation of infrastructure (including conveyances and the power station) and access to the site.

The increased output, reliability and flexibility delivered by the Project will contribute to Tasmania's renewable electricity generation, and support both state and national emissions reductions goals.

Potential impacts

Construction

Construction will generate both direct and indirect greenhouse gas emissions.

Operation

Operational emissions will primarily result from the use of fossil fuels for maintenance activities (e.g. vehicle travel to and from site).

Mitigation measures

Construction

During detailed design and construction, emissions reductions measures will be considered where practicable and consistent with Technical Specification requirements.

Operation

Avoided emissions from hydropower generation compared to fossil fuels over the Project's lifetime are expected to exceed Project emissions by at least 15 times.

Further information in the EIS

- Chapter 5, Section 5.8 – Greenhouse gas emissions, ozone depleting substances and climate change

Traffic

A range of vehicles will be used during construction of the Project: light vehicles, general access heavy vehicles and Class 1, 2 and 3 heavy vehicles (used for transportation of materials to and from site).

Potential impacts

Construction

This phase will increase light and heavy vehicle movements on the Lyell Highway and surrounding roads. While modelling indicates traffic flow at key intersections will not be significantly impacted, increases in the Nive Valley may result in longer travel times and some displacement of traffic to alternative routes (e.g. Fourteen Mile Road, Victoria Valley Road).

Operation

The Project is not expected to increase staffing requirements during operation and will therefore not result in additional light or heavy vehicle movements or overall traffic volumes.

Mitigation measures

A Construction Traffic Management Plan (CTMP) will be developed and implemented prior to the commencement of construction. The CTMP will set out measures, processes and responsibilities to minimise potential impacts on the community and the operation of the surrounding road network during construction.

Further information in the EIS

- Chapter 5, Section 5.15 - Traffic

Social

The social impacts and benefits associated with the Project were identified through the development of a Social Impact Assessment (SIA). The purpose of an SIA is to identify, analyse, monitor and manage the social, cultural and economic effects of a Project on communities and stakeholders. It was informed by the community engagement activities highlighted earlier in this document.

Potential impacts and benefits

The potential impacts identified include:

- Visual amenity on a key tourist route.
- Increased traffic and possible delays during construction.
- Demands on social infrastructure and services, housing, and accommodation.
- Restricting access to Aboriginal community members to Aboriginal cultural landscapes and resources.
- Reduced access to Lake King William and Mossy Marsh from the Lyell Highway impacting recreational activities such as fishing, camping and boating.

The most significant positive social benefits of the Project relate to:

- Employment, skills, and training opportunities.
- Local and regional business and industry opportunities.
- Meaningful opportunities for First Nations peoples, communities, and businesses.
- Supporting Tasmania's energy security and contributing to a cleaner energy future for Australia.

Mitigation measures

Adverse impacts will be mitigated through measures that aim to reduce potential social impacts, including:

- Construct and manage a workforce accommodation facility in the Tarraleah Village precinct that can house all workers.
- Develop and implement a Local Benefit Sharing Action Plan.
- Where possible, provide public access to existing regional visitor experiences located within proximity of the Tarraleah Village.
- Develop and implement a First Nations Participation Plan that will identify economic opportunities, access to country and other cultural resources specific to the Project.
- Promote other regional opportunities for recreational fishing, camping and boating opportunities during construction.
- Engage with tourism and industry sector stakeholders to identify strategies to minimise adverse effects during construction.
- Develop and implement an emergency response plan in consultation with emergency service providers.
- Provide appropriately resourced health services to all Project construction workers during the construction phase of the Project.
- Develop and implement a traffic management plan and monitor traffic impacts on alternative routes.
- Collaborate with stakeholders and industry leaders to facilitate labour force planning and skills and development opportunities.
- Develop and implement actions that support the realisation of Hydro Tasmania's social procurement objectives.
- Prior to commencement of operations, develop and implement a stakeholder engagement plan to inform downstream users of any changes in flow regimes.

Further information in the EIS

- Chapter 5.9 – Social impact
- Appendix E – Social Impact Assessment

Economic

The economic impacts and benefits from the Project's construction and operation were identified through an Economic Impact Assessment (EIA).

The assessment considers local and state-wide impacts and benefits, based on the estimated capital cost and operational expenditure. It does not consider estimated revenue from future operations which is a separate analysis to the EIS, to support the Project's business case.

The Project will provide significant economic value through construction and operation in the form of employment, skills and training opportunities and community benefit sharing, delivered through a Local Benefit Sharing Strategy and a Local Content Framework.

Potential impacts

The Project's economic and employment benefits on regional and state economies are anticipated to be significant. The Project is expected to make a strong contribution to the regional and state economy through increased activity during construction and operation. This will create demand for materials, services and jobs.

However, in the short term, some challenges may arise, including increased competition for workers. As a result, industries such as agriculture, forestry, fishing and mining may experience labour shortages.

Construction

During construction, the Project is expected to increase Gross Regional Product by approximately $213 million and generate around 451 full-time equivalent (FTE) job-years.

Most of the jobs created during construction will be in the construction industry, with additional jobs flowing into areas like retail and professional services.

At a state level, it is estimated to increase Gross State Product by approximately $1.12 billion, contribute $0.96 billion in Gross Value Added, and generate around 1,949 FTE job-years.

Operation

Over a 30–year modelled operational period, the Project, including its direct and indirect effects, is expected to increase Gross Regional Product by approximately $85 million and generate around 2 FTE job-years.

Mitigation measures

The following measures will minimise potential adverse economic impacts and enhance opportunities:

- Develop and implement a Social Impact Management Plan (SIMP).
- Develop and implement a Workforce Training and Development Plan (WTDP) for the construction phase. The plan will outline training, apprenticeship, traineeship and workforce development opportunities, including local and regional programs.
- Apply Hydro Tasmania's Major Projects Local Content Framework during construction.
- Utilise the Tasmanian Industry Capability Network (ICN), vendor registration systems, local Jobs Hubs and Department of Employment and Workplace Relations representatives to connect with local businesses.

Further information in the EIS

- Chapter 5, Section 5.16 and Appendix K – Economic Impact Assessment

Heritage

Aboriginal heritage and cultural values

An Aboriginal heritage assessment has been completed for the Project. It contains culturally sensitive information, so the full report is not publicly available with the EIS. It has been provided to Aboriginal Heritage Tasmania in accordance with the Tasmanian *Aboriginal Heritage Act 1975* (AH Act).

The assessment addresses eight confirmed heritage sites and two legacy sites (all small surficial stone artefact scatters), mostly associated with the transmission line options, along with four Potential Areas of Sensitivity (PAS) for small scatters and single artefacts. PAS are considered prospective for statutory relics or cultural deposits based on landscape and other predictive factors, despite no surface relics being observed. Aboriginal cultural values associated with cultural landscapes and cultural story are considered important aspects of management and conservation by the Aboriginal community. Hydro Tasmania is working through these aspects through ongoing community engagement.

Potential impacts

Potential impacts on Aboriginal heritage have been assessed under the AH Act.

The Tasmanian Aboriginal community generally considers that heritage legislation and planning provisions do not adequately reflect their perspectives. Their interests and expectations regarding land and heritage on Hydro Tasmania-managed land are currently being addressed through an organisation-wide Commitment and Action Plan (CAP).

Mitigation measures

As part of our commitment, Aboriginal community views will be sought in identifying and managing heritage and cultural values within the Project area. This will include sharing the findings of the heritage assessment and providing opportunities for on-country visits to assess cultural landscape and intangible values.

Aboriginal cultural landscape values, and other intangible Aboriginal cultural values, are currently being explored through a process of Aboriginal community engagement involving on-country visits.

All staff engaged in ground-disturbing works will receive cultural heritage awareness training, and an Unanticipated Discovery Plan will guide management of unexpected finds.

In the management of Aboriginal heritage where avoidance is not possible, permits will be sought to relocate any affected artefacts.

A First Nations Participation Plan will establish desired outcomes and key actions to be implemented to support First Nations participation during the construction phase. The plan will reflect the core pillars of the CAP.

Historic heritage

Historic heritage is not a component of the EIS. However, a desktop historic heritage assessment found no statutory historic heritage values in the Project area. Hydro Tasmania will complete Heritage Impact Assessments for any affected assets and update the Historic Heritage Conservation Management Plan for the Tarraleah hydropower scheme 12 months before decommissioning.

Further information in the EIS

- Chapter 5, Section 5.13 – Aboriginal heritage

Conclusion and next steps

The Tarraleah hydropower scheme has been generating clean energy for more than 85 years. The scheme is now nearing the end of its operational life and there is no 'do nothing' option.

As the NEM continues to transition to renewable generation, greater flexibility and firming capacity will be essential. The Project supports this transition by proposing to redevelop the scheme to increase peak capacity and improve operational flexibility and efficiency, while continuing to deliver reliable, clean energy for Tasmanians.

The Project is located on already modified land due to existing hydropower infrastructure and a history of large-scale forestry operations. The Project has been designed to minimise impacts on environmental and community values. Potential environmental and social impacts have been identified in the EIS and through our engagement with the community. These impacts will be avoided where possible and managed, monitored or offset where avoidance is not feasible.

Through the implementation of the comprehensive management measures proposed, the EIS demonstrates that the Project could be undertaken with minimal impacts on the environment and community, and with positive social and community outcomes.

Hydro Tasmania was unable to avoid potential impact to the *Sphagnum* peatland and is proposing to mitigate impacts through an offset. A larger area of at-risk *Sphagnum* peatland in comparably good condition will be protected in perpetuity under covenant and managed under an approved conservation management plan in accordance with the NC Act.

Overall, the Project is expected to deliver a net environmental benefit to Tasmania by expanding long-term renewable energy capacity and contributing to national efforts to reduce energy-related carbon emissions.

The EIS has been prepared by technical and scientific specialists, and the construction of the Project will be based on sound environmental principles and practices that have met EPA assessment requirements.

Following the exhibition period, the EPA will assess the EIS documentation and any submissions from the public. The EPA may require Hydro Tasmania to provide further information or undertake additional work in response to matters raised in submissions.

Get in touch

Project updates

You can keep track of the Project's progress at: hydro.com.au/projects/tarraleah

Phone or email

Is there something you'd like to share with us? We'd love to hear from you.

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