
Hydro
Tasmania
Environmental
Handbook
A sustainable future through
responsible management

Revision control

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Acknowledgments

Thank you to those Hydro Group employees who supplied photographs and information for use within this Handbook.

Disclaimer

This Environmental Handbook (Handbook) is a general guide only. Particular site conditions, projects or locations may require special or different practices to those outlined in this Handbook or any other document or websites referred to in this Handbook. It is the responsibility of the relevant manager, supervisor, contractor or individual to ensure that the work practices of the Hydro Group are adequately managed in accordance with current environmental legislative requirements and where relevant, Hydro Group's Environmental Management System.

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Before using this Handbook, please ensure that it is still current.

Lake Pedder bushfire. Cover photo: Olga camp helipad.

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Introduction

What is this Environmental Handbook all about?

The purpose of this Handbook is to increase environmental awareness and encourage better environmental management for our employees and contractors.

Why is this important?

Our responsibilities and culture shape the behaviour and actions of our employees and contractors in the workplace.

It's not just what we say – it's what we do and how we do it, prioritising good environmental and social outcomes.

What are your responsibilities?

- Comply with legislative environmental requirements.
- Speak up if you think a document is missing, you are not sure what to do or something could be improved.
- Discuss environmental risks and hazards when performing any risk assessment.
- Immediately report environmental incidents, hazards and near misses.

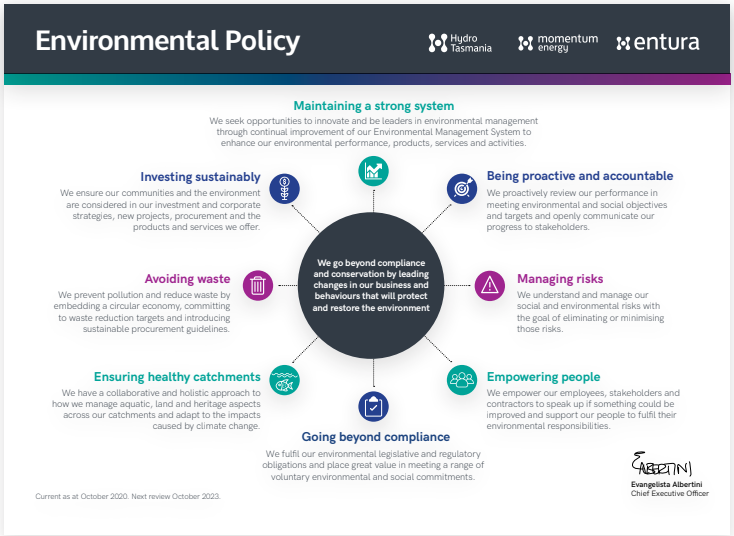
Further information

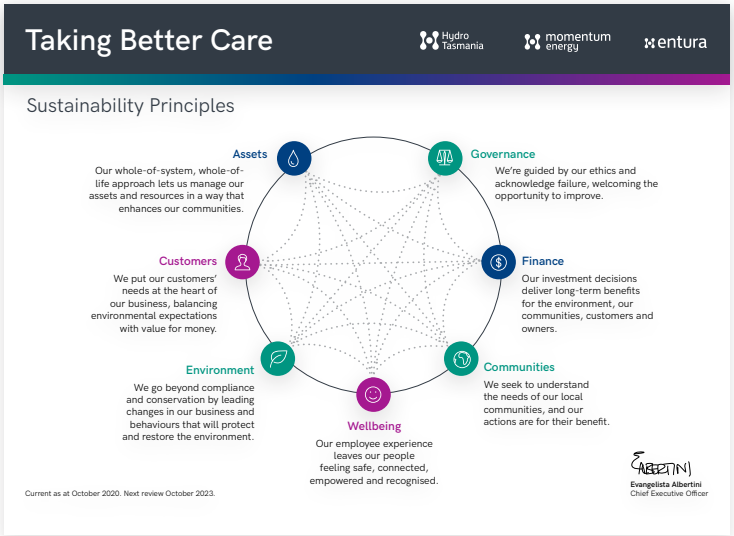
This Handbook should be used in addition to other environmental documents that may apply.

EMS Intranet

Fisher Power Station in the morning

Environmental policy and sustainability principles





Environmental leadership

Environmental leadership

All managers are accountable for ensuring the success of our Environmental Management System.

Why is this important?

To lead by example and drive continual environmental improvement opportunities.

What are your responsibilities?

- To set an example to others in environmental management.
- To take accountability for the Environmental Management System.
- To ensure the Environmental Policy and environmental objectives are established and actioned, and are compatible with the strategic direction of our organisation.
- To communicate and encourage employees and contractors to achieve the requirements of the Environmental Management System, while integrating it within other business processes.
- To report and manage environmental incidents in a timely manner.

Environmental incident management

What is an environmental incident?

An environmental incident can be described as “any unplanned event that has the potential to cause harm or impact to the surrounding environment”.

Examples of environmental incidents

- Leaks and spills of oil into water or onto land
- Disturbance of heritage or cultural artefacts
- Fauna strikes or fatalities
- Unauthorised removal or damage to plants and animals
- Incorrect storage or disposal of hazardous substances

What are your responsibilities?

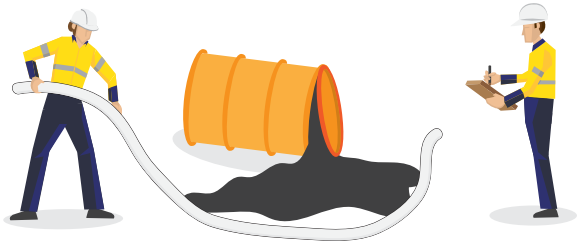
- Immediately raise the alarm as to the severity and type of incident.
- Check for signs of further danger or harm. Seek an appropriate level of assistance and emergency response.
- Secure the incident scene and restrict access to those involved in the incident investigation.
- Notify your immediate Supervisor/ Line Manager as soon as possible, but always within 1 hour of the incident occurring.

Further information

Incident Management and Investigation Procedure

Hazard

Near miss



Incident

Planning for environmental risk

View the MapViewer

Use the MapViewer to identify different environmental risks associated with a project or task.

You can access the MapViewer via the Hydro Intranet.

Be sure to select 'EIA Assessment' from the dropdown options. This option will display all relevant layers used for performing an Environmental Impact Assessment (EIA).

Why is this important?

The MapViewer has up-to-date data for environment and heritage considerations including:

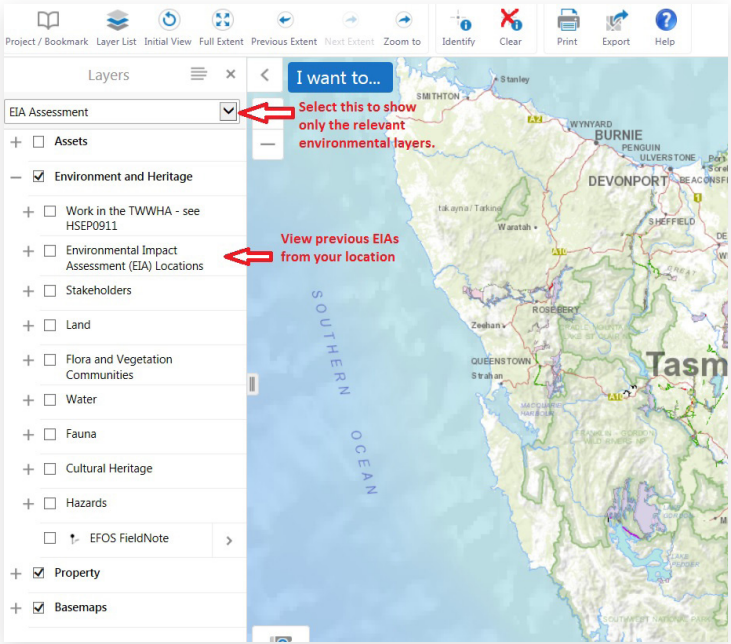
- The Tasmanian Wilderness World Heritage Area
- Stakeholders
- Land
- Flora and vegetation communities
- Water
- Fauna
- Cultural heritage

What are your responsibilities?

- Understanding the likely environmental impacts of a project or task prior to performing works.

Further information

HT MapViewer



Planning for environmental risk

Reviewing risk registers

Risk registers are assessments that identify all known risks and controls for each site and business unit.

Whether you are undertaking a project or task, developing, understanding and communicating your environmental and social risks and controls is critical.

Known risks should already be captured within one of our registers.

Why is this important?

Use these existing risk assessments as a guide, or a prompt, to begin your risk assessment process (whether that is a Take 5, Safe Work Method Statement or EIA).

What are your responsibilities?

- Become familiar with the Environmental Management System.
- Learn how to adequately assess environmental and social risks (both site and operational).
- Involve all employees and contractors working on the project or task and relevant Subject Matter Experts to ensure the full scope of environmental and social risks are assessed.

Further information

Operational Risks – Environmental and Social Risks

Site Hazard Registers

Planning for environmental risk

Conduct an environmental impact assessment (EIA)

An Environmental Impact Assessment (EIA) is a risk assessment tool used for assessing the likely environmental impacts of a project or task.

Why is this important?

We need to control environmental impacts for every project and task which may have potential to cause harm to the environment.

We use an EIA to document and outline how we will control that risk to minimise environmental damage.

What are your responsibilities?

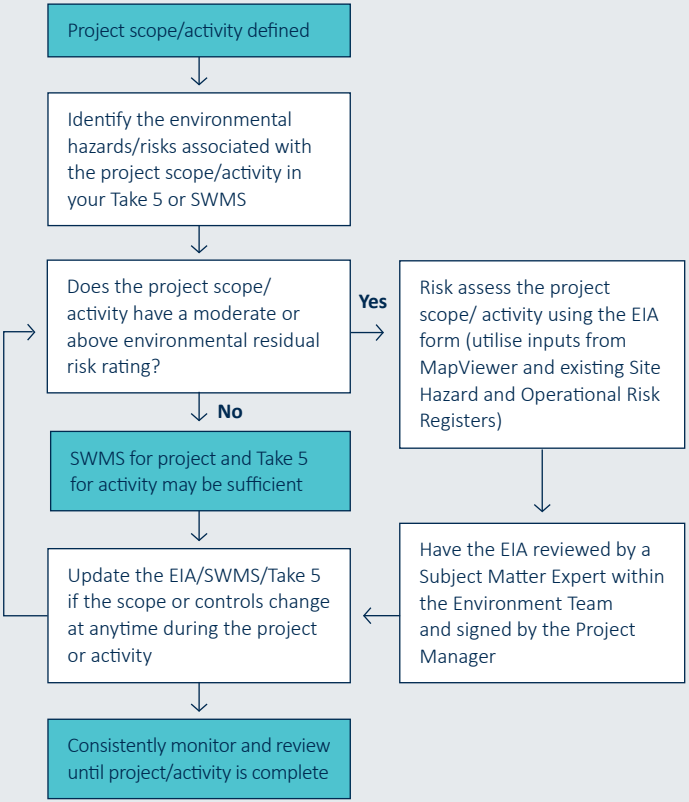
- Environmental risks must be considered for all projects and tasks even if not documented within an EIA. Remember, if the risk to the environment is moderate or greater, then an EIA will be required.
- Ensure project specific requirements are clearly outlined as well as any approvals, licences and permits.
- Check controls are working effectively, if not, correct them.
- If the scope of the works changes, the EIA will need to be revised.
- An Environmental Management Plan (EMP) is only required when legal obligations or contractor methods state so; or if the risk to the environment is higher or greater.

Further information

Hazards, Risks and Opportunities Procedure

Environmental Impact Assessment Form

Environmental impact assessment (EIA)



Engaging with customers

Engagement

We understand the importance of proactively engaging and communicating with our customers, which may include the public, employees and external organisations, about their environmental and social needs and expectations.

Why is this important?

Customers, or stakeholders, may be affected by, or interested in our activities, services and performance. The work we do and the way we manage our land, waterways and heritage have the potential to affect or interest a wide range of people.

What are your responsibilities?

- Build positive working relationships with customers while finding practical solutions to issues and concerns.
- For new projects, stakeholders should be identified and the way they will be engaged with should be documented (outlining their needs and expectations).
- Report and manage any customer complaints or compliments received in regards to environmental and social concerns.

Further information

Customer Relationship Management Tool

Aquatic management

Waterway health and pollution prevention

We are the largest water manager in Australia. We manage storages to ensure availability for hydropower generation while also ensuring the sustainability of our aquatic environments and the people, plants and animals they support.

Why is this important?

As a water manager, we have a great responsibility to maximise operational flexibility, minimise the environmental impact and enhance the environmental condition of our operations on the aquatic environments in which we operate.

Further information

Hydro Tasmania Storage Operating Rules

Water Level Management Procedure

HT MapViewer

Algal Bloom Response Procedure

What are your responsibilities?

- Ensure you have identified all waterway risks and controls prior to starting works.
- Follow any waterway management requirements and check control measures are working effectively.
- Use sediment barriers, filters and drain covers to prevent sediments, slurries and residues from entering waterways.
- Report any waterway health or pollution issues or concerns by:
  - First communicating your concern to the Site/Project Manager;
  - Contacting the Environment Team; and
  - Raising the incident in SAP.

If possible, take photos and collect water samples to help to determine the cause of the problem.

Land management

Land use

We have large amounts of land that either surround our assets or are used to access them. Our land is also used by the public for recreational purposes.

We must ensure our land resources are effectively managed in a manner consistent with our values.

We actively rehabilitate sites that have been previously polluted or impacted as a result of our, or others, activities.

Why is this important?

So much of the land we work on or near is legally protected. This includes:

- The Tasmanian Wilderness World Heritage Area
- National Parks
- State and Council Reserves
- Conservation Areas
- Historic sites and land of cultural heritage significance.

What are your responsibilities?

- Before conducting any land disturbance activities search for environmental values on the MapViewer and ensure an EIA is performed, if required.
- All unauthorised activities on our land must be reported. This includes wood-hooking or other environmental damage, unauthorised vehicle access, camping in areas that are not designated campgrounds, dumping of rubbish, and illegal structures such as shacks.

Further information

Operations in the TWWHA

HT MapViewer

An example of 'wood-hooking' (taking wood illegally for firewood) at Dee Lagoon.

A poorly maintained track at Scotts Peak Dam.

Land management

Vegetation management

Much of the vegetation on or near our assets is protected under Local, State or Federal legislation.

Ensure vegetation is only removed where it is necessary to maintain the safety and reliability of our assets.

We must also ensure we prevent the spread of pests and pathogens in Tasmania.

Why is this important?

There are two types of vegetation we manage – native (healthy) and weedy (unhealthy). Native vegetation is often habitat for protected species including Wedge Tailed Eagles and protected plants.

Remember vegetation clearing within the Tasmanian Wilderness World Heritage Area requires approval from Parks & Wildlife Services.

Pests and pathogens are spread to new areas when contaminated water, mud, gravel, soil and plant material are moved between sites. Once a pest or pathogen is present on site it is difficult to eradicate.

It is crucial that strict hygiene practices are implemented at all sites when working in or adjacent to waterways, wetlands, swamps and boggy areas.

What are your responsibilities?

- Before conducting any impact activities, search for environmental values on the MapViewer and ensure an EIA is written, if required. In some cases, special permits and approvals may be required from regulatory bodies.
- Check and disinfect your clothing, footwear, equipment and vehicles before you arrive and before you leave an area.
- Don't move water, soil, gravel or plants from one area to another.

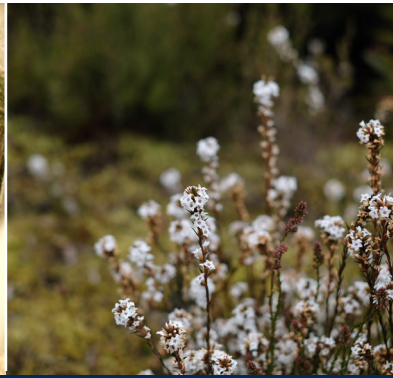
Further information

Keeping It Clean – A Tasmanian Field Hygiene Manual

HT MapViewer

An aquatic weed called 'Elodea' clogging the intake at Woods Lake.

An example of healthy heath vegetation near Scotts Peak Dam within the Tasmanian Wilderness World Heritage Area.



Land management

Tasmanian Wilderness World Heritage Area (TWWHA)

We have numerous assets within the Tasmanian Wilderness World Heritage Area (TWWHA).

How we manage our assets within the TWWHA is of vital importance for the protection of the old forests and fauna habitat.

Why is this important?

It is important we continue to access and maintain our assets within the TWWHA without causing any further environmental impact to the area.

Under our Memorandum of Understanding (MOU) with Parks & Wildlife Services, we must always provide notification prior to any maintenance or new works taking place within the TWWHA.

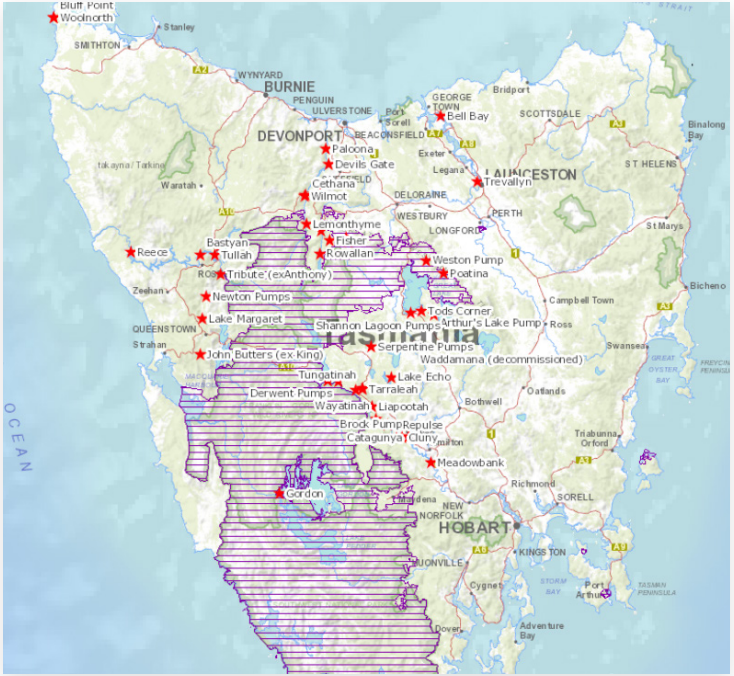
What are your responsibilities?

- Determine whether your project or activity is taking place within the TWWHA.
- Search for environmental values on the MapViewer and ensure an EIA is performed.
- In some cases, a Reserve Activity Assessment will also be required.

Further information

Operations in the TWWHA

HT MapViewer



Map of our assets located in or near the TWWHA.

Cultural heritage

Historic heritage

Since the construction of Australia's first large-scale hydropower scheme in the early 1900s, we've influenced the physical, social and economic landscape of Tasmania.

Why is this important?

We have more than 700 assets and places assessed for their heritage values. Some of these include:

- Buildings (power stations, houses and sheds)
- Infrastructure (canals, pipelines, roads and bridges)
- Movable cultural heritage (tools, machinery or signs)
- Cultural landscapes and precincts (villages, plantings, sites or views)
- Non-hydro heritage (farming and mining sites)

What are your responsibilities?

- Assess the risk of encountering historic heritage during your project or activity
- Check whether the work site is listed on the Tasmanian Heritage Register
- Determine whether the works are covered by an existing Conservation Management Plan or Certificate of Exemption
- Perform a Heritage Impact Assessment, if required
- Apply for relevant permits, if required

Further information

Cultural Heritage Management Procedure

HT MapViewer

Cultural heritage

Aboriginal heritage

We exercise due diligence and work with affected Aboriginal communities when carrying out new works or undertaking operations, including maintenance, to ensure Aboriginal heritage is protected.

Why is this important?

Aboriginal heritage in Tasmania reflects over 40,000 years of Aboriginal land use and may theoretically be encountered anywhere in the modern landscape, although some environments have a higher likelihood of containing relics than others.

What are your responsibilities?

- Undertake a desktop assessment including a search of the Aboriginal Heritage Register
- Assess the risk of encountering Aboriginal heritage during your project or task such as ground disturbance or lake drawdown below NMOL
- Apply for relevant permits, if required
- Report any unanticipated discoveries and ensure relics are adequately protected

Further information

Cultural Heritage Management Procedure

HT MapViewer

Hazardous substances

Storage, handling, transport and disposal of chemicals

A hazardous substance can be defined as “a chemical that has the potential to harm the environment or safety of persons in the workplace”.

What are your responsibilities?

- Ensure chemicals are clearly labelled and stored appropriately within a bunded area. Remember that storage bunds must be capable of storing at least 110% of the volume of the largest container.
- Use ChemAlert to print the latest Safety Data Sheet (SDS).
- Employees and contractors involved in the handling, transportation or storage of chemicals should be trained and familiar with the use of a spill kit.
- Chemicals should be disposed of at an appropriate licensed waste facility, and disposal records maintained.

Why is this important?

Hazardous substances have the potential to impact the environment if they are not stored, handled, transported, and disposed of in the correct manner.

Further information

Bunding and Spill Management Guidelines – EPA Tasmania

Hazardous Chemical Management Procedure

Waste Management Procedure

Hazardous substances

Storage, handling, transport and disposal of oil

Hazardous substances such as oil and diesel must be stored, handled, transported and disposed of appropriately to prevent any release to the environment.

We accurately measure how much oil, grease and diesel we add and take out of equipment so we can analyse how much is lost every month.

Why is this important?

There are numerous environmental risks to be considered when storing and transporting oil and diesel to prevent contamination of water and land.

We manage spill risks in a number of ways with a preference to 'engineer out' the risk through upgrades of assets. Decommissioned oil/ diesel filled assets must always be stored in a designated bunded area. Portable pallet bunds should be used if a permanent bunded area is not available.

Having good spill response equipment on site such as booms, pads and clean up equipment is essential for when working with oil and diesel.

Remember, used or waste oil is considered a controlled waste. There are additional requirements when handling a controlled waste.

What are your responsibilities?

- Position oil transfer equipment as far away as practical from drains, waterways and property boundaries.
- When headworks, generators, machines or transformers have oil added or removed, the volume used must be recorded by their measurement point in SAP.
- Regularly inspect and maintain all plant and equipment used in the handling and transportation of oil, including booms and pads.
- Promptly clean up all spills and leaks and ensure an incident is raised.
- Vehicles transporting oil and diesel must be roadworthy and appropriately equipped to securely transport oil and carry a spill kit with them at all times.

Further information

Bunding and Spill Management Guidelines – EPA Tasmania

Hazardous Chemical Management Procedure

Hazardous Substance Transport and Transfer Checklist

Checklist for Tansporting Controlled Waste & Oil (New/Used)

An example of spill boom in need of replacing.

Waste management

Waste management

We are committed to reducing the amount of waste generated and disposed from our sites while increasing the amount recovered for reuse & recycling.

Wastes produced may include general waste, recyclable materials, industrial waste, old equipment, oil and grease rags, and used, contaminated or out of date chemicals and empty chemical containers.

Why is this important?

Waste needs to be carefully managed to prevent environmental harm and to ensure compliance with relevant legislation.

Controlled waste is particularly harmful to the environment and must be handled carefully. In some instances approval may also be required by the Environment Protection Authority (EPA).

What are your responsibilities?

- When purchasing or using materials, consider the amount of waste that will result.
- Consider if there is an opportunity for you to refuse, reduce, reuse or recycle the waste you produce.
- Ensure waste materials are placed in the appropriate bins.

Further information

Waste Management Procedure

Checklist for Tansporting Controlled Waste & Oil (New/Used)

Implement the 10R's

Refuse
Rethink
Reduce
Reuse

Make and use products smarter

We don't need more recycling. We need less waste.

Repair
Refurbish
Remanufacture
Repurpose

Product and parts life extension

Waste is no longer rubbish you put in a bin, it's an opportunity.

Recycle
Recover

The last resort

While better than landfill, these outcomes still deplete our environment of valuable resources.

Source: Holland Circular Hotspot

Environmental policy and legal compliance

Environmental policy and legal compliance

We ensure our activities, products and services comply with environmental legislation as well as relevant environmental commitments, standards, obligations and agreements.

Why is this important?

Environmental legislative requirements are mandatory for us to comply with. Other environmental standards or requirements include opportunities where we have chosen to comply in order to enhance our environmental performance.

What are your responsibilities?

- Understand the relevant environmental legislative requirements when performing a risk assessment for each project or task you undertake, including any other obligations and permits associated with the works.
- Communicate and periodically review a project or task to ensure environmental legislative requirements are being implemented and adequately managed.
- If you think there has been a compliance breach, stop work immediately and report any issues or concerns by:
  - First communicating your concern to the Project or Site Manager;
  - Contacting the Environment Team; and
  - Raising the incident in SAP.

Further information

Environmental Compliance Plan

Hydro Tasmania