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Disclaimer

This environment handbook (Handbook) is a general guide only. It does not replace or supersede the Hydro Tasmania Group Health, Safety and Environmental (HSE) procedures and work practices or any information on the HSE Essentials web portal.

This Handbook applies to Hydro Tasmania Group employees and contractors when they are working under the direction of Hydro Tasmania or on Hydro Tasmania assets, and should not be relied upon by external users as the basis for any action or decision.

Users need to remember that particular projects, conditions or locations may require special or different practices to those outlined in this Handbook. It is the responsibility of the relevant manager, supervisor, contractor or individual to ensure that Hydro Tasmania Group work practices are managed in accordance with current environmental legislative requirements and conform to our HSE Management System.

The Hydro Tasmania Group accepts no liability, obligation or responsibility for:

- Any information in the Handbook being incorrect, incomplete or misleading;
- Any loss or damage (whether indirect, direct, special, consequential or otherwise) arising from the use of this Handbook;
- Any procedure, process or other activity done or not done in reliance upon the Handbook’s content.

Hydro Tasmania may change the information in this Handbook without notice, with all changes effective from the date of change. Users should check they are using the current version of this Handbook. The most recent version is available on the HSE Essentials web portal.
1.1 Purpose

The Environment Handbook is a field guide to the Hydro Tasmania Group’s environmental management systems and requirements within Australia. It is designed to support staff working in the field and other situations where access to our electronic systems may not be available.

This Handbook is intended to help you to identify environmental issues and risks you are likely to come across in field situations and to provide direction on how to manage them. It is not an exhaustive list of risks or a complete reference guide and should not be used as such.

This Handbook does not replace or supersede our Health, Safety and Environment (HSE) Management System documents. It is designed to support the environmental component of the HSE Management System, complementing the Safe Work Practices Handbook. Check the HSE Essentials web portal for all environmental management requirements and procedures.

1.2 Context

Hydro Tasmania’s HSE Management System applies to all Hydro Tasmania Group (including Entura, Momentum and Hydro Tasmania Wind Operations) employees and contractors and subsidiaries. Refer to the HSE Management System Manual for further information on the system.

This Handbook supports the environmental component of the HSE Management System, aligning with the Hydro Tasmania Group’s environmental policies, principles and documentation, such as:

**Environmental Policy:** Establishes the Hydro Tasmania Group’s commitment to environmental management.

**Legal Compliance:** Environmental legislation is complex and requires specialist knowledge to ensure compliance. The Environment Team and Legal Services can provide information and expert advice on legal compliance issues.

**HSE Elements:** Set out how we manage environmental (and occupational health and safety) aspects of the way we do business.

**HSE Procedures:** Explain how specific work activities are undertaken to manage the associated HSE risks and conform with our standards and business requirements.
Did you know?

Our business holds internationally-recognised environmental management system certification under ISO 14001. This certification helps us to manage our environmental risks and enables continual improvement in environmental management.

1.3 Document revision and control

This document is reviewed periodically and hard copies are not guaranteed to be up-to-date. When applying this document, staff and contractors shall check the revision information to ensure that they are following up-to-date processes. A revision history of this Handbook is included online via HSE Essentials to assist with keeping your hard copy up-to-date.

Further information:

- Hydro Tasmania Health, Safety and Environment Management System Manual
- HSE Essentials web portal on MyHydro

Lake Pedder and Lake Gordon, on the edge of the internationally-recognised Tasmanian Wilderness World Heritage Area (photo by Peter Bellingham).

Your conformance with the HSE Management System is essential to ensure we protect the wonderful environments we work in, ensuring their enjoyment for future generations.
Sustainability is one of the Hydro Tasmania Group’s core values and we are committed to creating a sustainable future. For the Hydro Tasmania Group, sustainability means just that—planning for the future using open and considered business decisions and activities.

To embed sustainable practices into our operations, we have developed our sustainability code. The seven principles in the code guide our decision-making, including risk management, strategic planning and key business activities such as generating power, engaging stakeholders, procuring and providing services.

Similarly, our Environmental Policy describes the way we work with the natural environment. We do this by working with experts in environmental management, complying with relevant legislation and identifying opportunities to improve our environmental management, like protecting threatened species, assessing environmental flows, assisting fish migration and managing the health of our waterways.

Our sustainability and environmental principles apply to all work undertaken by or for the Hydro Tasmania Group, including by our subsidiary companies. For more information refer to the Health, Safety and Environment Management System Manual.

2.1 How we manage the environment

2.1.1 Responsibilities

Good environmental performance depends on each and every individual knowing their environmental responsibilities and managing the effects of the work they do.

All Hydro Tasmania Group employees (including contractors) must comply with our Environmental Policy and the requirements of our HSE Management System.

All employees and contractors are required to complete the Hydro Tasmania HSE (Level 2) induction at commencement of employment or contract and at 2-year refresher intervals.

The environment is everyone’s responsibility!
2.1.2 Environment team

The Environment Team refers to Sustainability and Safety group staff working on Hydro Tasmania’s environmental programs and administering our environmental systems. The Environment Team can provide assistance, advice and specialist knowledge to help you to comply with the HSE system and to manage your environmental risks effectively.

Who are the Environment Team?

- Aquatic Environment Program
- Cultural Heritage Program
- Energy and Greenhouse Program
- Land Management Program
- Wind Environment Program
- Field Environmental Advisors

To contact Environment Team staff, call the Hydro Tasmania switch on 1300 360 441 and ask to be transferred to a representative of the relevant program.

For more information on Sustainability and Safety services and the Environment Team see 12 – Further information, contacts, advice and support.

“*We use our assets and resources prudently. We assess and manage our risks and aim for the efficient operation of our business. We recognise the intrinsic value of the environment and natural resources, and demonstrate this in the way we conduct our business.*”

Source: Hydro Tasmania Code of Ethics

Further information:

- HSE Essentials web portal in MyHydro
- Hydro Tasmania Code of Ethics
- Hydro Tasmania Sustainability Code
- Hydro Tasmania Environmental Policy
- HSEP0501 – Accountability and leadership
3.1 Aim
To manage the initial response to environmental incidents quickly and effectively, preventing or reducing harm to the environment.

3.2 Background
What is an environmental incident?
An environmental incident is an occurrence or activity that causes or may cause environmental nuisance, or harm, including contamination with dangerous substances.
Information on how to manage specific incident types is provided in each chapter of this handbook.
Some examples of environmental incidents relevant to the Hydro Tasmania Group include, but are not limited to:

<table>
<thead>
<tr>
<th>Environmental incident or issue type</th>
<th>Further information</th>
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</thead>
<tbody>
<tr>
<td>Failure to obtain approvals and permits or breaches of permit conditions or compliance requirements</td>
<td>4. Planning</td>
</tr>
<tr>
<td>Leaks and spills of oil or other chemicals to land, air or water</td>
<td>5. Chemicals &amp; other hazardous materials</td>
</tr>
<tr>
<td>Waste disposal</td>
<td>5.1 Working with chemicals</td>
</tr>
<tr>
<td>Complaints or compliments from the public or other stakeholders about environmental management issues</td>
<td>6. Stakeholders</td>
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<td>Discovery or disturbance of cultural heritage values and indigenous artefacts</td>
<td>7. Cultural heritage</td>
</tr>
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<td></td>
<td>7.1 Historic heritage</td>
</tr>
<tr>
<td></td>
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<td>Contamination of land or soils</td>
<td>8. Land and soils</td>
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<tr>
<td></td>
<td>8.2 Contaminated land</td>
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<tr>
<td>Erosion and sedimentation</td>
<td>8.3 Erosion &amp; sediment control</td>
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<tr>
<td>Changes in water quality, including slicks, scums, algal blooms and water pollution from run-off</td>
<td>9. Water and waterways</td>
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<td>9.1 Waterway health</td>
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<tr>
<td>Damaging or removing vegetation</td>
<td>10. Plants and animals</td>
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<tr>
<td></td>
<td>10.1 Vegetation management</td>
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<tr>
<td>Dead fish, birds or other animals (including car strikes)</td>
<td>10. Plants and animals</td>
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<td></td>
<td>10.2 Wildlife management</td>
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<tr>
<td>Discovery of threatened species</td>
<td>10. Plants and animals</td>
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<tr>
<td></td>
<td>10.3 Protected species</td>
</tr>
<tr>
<td>Discovery of weed, pest or disease outbreaks</td>
<td>10. Plants and animals</td>
</tr>
<tr>
<td></td>
<td>10.4 Weeds, pests and diseases</td>
</tr>
</tbody>
</table>

If you suspect an environmental incident has occurred, follow the Hydro Tasmania Incident Management Procedure and report the issue.

**Follow the Hydro Tasmania incident management process when responding to environmental issues and incidents.**
3.3 Your responsibilities

Check the Emergency Response Plan for your work site to make sure you are familiar with the types of major incidents that could occur and what to do if an incident happens.

If an incident occurs:

1. Assess the situation and, where possible, control or contain the issue.
2. Where there is a risk to others, raise the alarm.
3. Seek help if required:
   a. Major chemical spills – contact emergency services.
   b. Bushfire – contact emergency services.
   c. Hydro Tasmania environment team – any environmental issue
      i. Field Environment Advisors
         – Southern Tasmania: Beverley Armstrong
           Phone: (03) 6238 4927 or 0448 714 647
         – Northern Tasmania: Tim Polley
           Phone: (03) 6324 711 or 0488 303 514
      ii. Environment Team – call the Hydro Tasmania switch on 1300 360 441
4. Notify the Area Owner or Job Manager about the incident (once it is safe to do so).
5. Follow directions provided by your manager, emergency services and/or the Environment Team.

You must report any environmental incident or hazard. Follow the Hydro Tasmania Incident Management Procedure.

Did you know?

Reporting environmental incidents helps us to review and improve our environmental management.

Further information

- HSEP1401 – Incident management
- HSEP1402 – Incident management investigation methodology guide
- HSEP1403 – Incident management severity and notification guide
4.1 Aim
To better manage the environment through good awareness, understanding and management of environmental risks, including thoroughly identifying the risks and putting suitable control measures in place.

4.2 Background
We identify and manage environmental risks at the business, team and project level. Information on the environmental risks identified for our business activities is recorded in risk registers, and procedures and work instructions are developed to help manage those risks.

Environmental risks should be identified in the planning phase of a project and suitable control measures put in place before starting work.

Sometimes risks are missed or change, controls don’t work as planned or new information comes to light after work has started.

Environmental risk identification and management is an essential part of planning for all site works and field activities including maintenance of assets like this penstock at Poatina.
4.3 Your responsibilities

1. Comply with all permit conditions and other legal requirements that apply to your work.
2. Comply with all relevant HSE management system procedures and requirements, including Environmental Management Plans.
3. Report potential environmental risks or problems with control measures to your line manager.

If you are working and come across a risk that is not effectively managed:

1. Stop work immediately.
2. Notify the Project Manager and/or your line manager. The manager will:
   a. Review the risk and potential ways to manage it (this may be as simple as a Take 5 assessment or JHA, or as complex as arranging an Environmental Impact Assessment, depending on the situation).
   b. Seek advice from the Environment Team if not sure how to assess or manage the risk.
   c. Review the project environmental/risk management plan and put effective control measures in place.
3. Make sure you understand any new or changed control measures before re-starting work.

Did you know?

- An environmental risk assessment should be completed for each project before work starts; larger projects and site works may require a full Environmental Impact Assessment.
- An Environmental Management Plan may be required to manage the environmental risks and impacts of the project.
- Work in the Tasmanian Wilderness World Heritage Area needs a permit, which may require an approved Environmental Management Plan.

Further information:

- Procedures under Element 3 – Hazard Identification & Risk Management and Element 4 – Planning & Objectives of the HSE Management System
- Job Hazard Analysis (JHA) process on MyHydro
- Entura Project Delivery System
- Hydro Tasmania Project Management System
5.1 Working with chemicals

5.1.1 Aim
To ensure the safe and legal storage and handling of chemicals, and to minimise the risks to people and the environment.

Note: This handbook focuses on managing risks to the environment. Information in the HSE Essentials web portal covers both safety and environmental aspects of chemical management.

5.1.2 Background
Chemicals and other hazardous materials are used every day as part of the Hydro Tasmania Group’s activities. These substances may harm both people and the environment and there are legal requirements around the way they are stored, handled, transported and disposed of.

Always be alert when working with chemicals, remembering that some harmful substances have no smell, colour or taste.

Material Safety Data Sheets
The Material Safety Data Sheet (MSDS) for a chemical contains all the essential information on working with that chemical, including:

- What information needs to be on the label.
- How the chemical needs to be stored.
- How to deal with spills and emergencies.

MSDS are required for all chemicals kept on site and are available on MyHydro via the Chemwatch Backpack service.

Did you know?
By law you must have access to the correct up-to-date MSDS for every chemical you are using.

No MSDS? Contact the chemical supplier to get the right MSDS and keep it on site while the chemical is in use or storage.
Storage and labelling

Chemicals used on Hydro Tasmania Group sites must be clearly labelled with:

- The full chemical name of the contents.
- The **dangerous goods** class of the contents (if applicable).
- The hazards of the contents.

Chemicals must be stored in an appropriate area based on the chemical type and volume. Liquids must be stored in over a **bund** or in bunded areas able to contain the volume of stored liquid in case of a spill or leak.

Store liquid chemicals and fuel in bunded areas, checking that bunds are clean and dry and all chemical containers are clearly labelled.

Spill kits are kept in chemical storage areas, power stations and other high spill-risk areas. Different sites and stores may have different styles of kits, to be used for specific types of chemicals (e.g. oil spills or acid spills). Check to make sure you know which spill kit to use.

Towing a floating boom into place to contain an oil spill to a waterway.
Chemical and oil spills

Below are the immediate steps that should be taken in a typical oil or chemical spill incident. For more information on managing chemical spills check your Field Emergency Response flip chart or contact a Field Environment Advisor.

**Spill occurs**

1. **Assess the risk to people and the environment**
   - Identify any immediate risks to people and the environment from the spill. Take any necessary precautions and, if safe to do so, manage the spill.
   - Check for safety issues; activate the evacuation alarm if necessary.
   - Check the MSDS.
   - Call a Field Environmental Advisor for advice (if needed).
   
   *Call for assistance if needed (internal, external and/or emergency services – 000)*

2. **Stop the spill at the source**
   - Take steps to stop the spill at the source (e.g. closing valves, shutting off equipment, covering or blocking drains). Once the spill source is stopped, get help if needed and clean up the spill if it is safe to do so. Make sure you are wearing any required Personal Protective Equipment (PPE).

3. **Contain the spill**
   - Take steps to stop the spill substance from spreading.
   - Prioritise preventing spills from entering waterways.
   - Use spill kits (e.g. booms, pillows) to contain the spill.
   - Set up bunds to contain liquid spills.
   - Shut off any drains or equipment that could spread the spill.

4. **Determine a response plan**
   - Identify and put in place any further requirements to manage the spill and clean-up.
   - Is specialised equipment required?
   - Will work or energy production be disrupted?
   - Are there any external notification or reporting requirements?
   - What are the waste disposal requirements?
   - Do any control measures need to be maintained?

5. **Collect and dispose of the spilt and contaminated materials**
   - Recover as much of the spilt material as possible. Manage and dispose of any waste and contaminated materials as controlled wastes (see 5.2 – Chemical and hazardous wastes).
   - Use absorbents to soak up liquid spills.
   - Remove any contaminated soil, gravel or other solid materials.
   - Place used absorbents and other contaminated materials in suitable, labelled containers for safe storage until disposal can be arranged.

6. **Report the incident**
   - Complete an Incident Report Form, providing as much information as possible about the spill incident and your response. Think about why the incident happened and how a repeat or similar incident could be prevented.
   - Download the Incident Report Form from MyHydro or get a hard copy.
   - Call x5999 to report an incident by phone.
   
   *Reports must be signed by your line manager before you submit them.*
5.1.3 Your responsibilities

1. Ensure that chemical management measures are built into the project safety or environmental management plans and that you understand the hazards and control measures for the substances you’re working with.

2. Check that all containers holding chemicals are in good condition and clearly labelled before using them; report damaged chemical containers, unclear labels or unsafe storage to the store or site manager.

3. Collect and clean up any chemical or oil leaks and drips and report them to the Site Manager or contact Facilities and Property or Asset Maintenance to arrange repairs if required.

4. Take care when transporting chemicals between locations or transferring chemicals from one container to another; following the chemical transport or transfer checklists.

5. Know where to find the relevant spill kits and how to use them.

6. Respond to any chemical spills following the Incident Management Procedure (see 3 – Incident management).

Before starting a task involving chemical use:

1. Check that the up-to-date MSDS is available and use it to help you to complete your risk assessment (JHA) - make sure you attach a copy.

2. Make sure you understand and follow the necessary precautions given in the MSDS (e.g. potential hazards, PPE required and spill response) before working with that chemical.

3. Make sure any bunding or spill control is in place and working, and that you know what to do in the case of a spill or chemical emergency.

4. Know how to collect, store and dispose of any chemical wastes (see 5.2 – Chemical and hazardous wastes).
Did you know?
Hydro Tasmania maintains a fleet of spill response trailers for major oil or chemical spills.

- Two trailer types: initial response trailer and clean-up trailer.
- Sets of trailers are held at Liapootah, Gordon, Gowrie Park, Poatina, Trevallyn and Macintosh (West Coast).
- Trailers can be collected when a spill occurs, or brought on site for major works or projects with a high risk of spills.

Further information
- HSEP0921 – Chemical management
- ChemWatch Backpack MSDS service on MyHydro

5.2 Chemical and hazardous wastes

5.2.1 Aim
To ensure that chemical and other hazardous waste substances are properly stored and disposed of, in accord with legal requirements and to minimise potential harm to people or the environment.

5.2.2 Background
Our activities can generate waste materials that are potentially harmful to people and / or the environment. These wastes need to be carefully managed to prevent environmental harm and to ensure compliance with relevant legislation. The safe, compliant storage and disposal of chemical and other hazardous wastes needs to be carefully planned and implemented.

Chemical wastes can include:
- Used, contaminated or out-of-date chemicals and empty chemical containers.
- Industrial residues, old equipment and materials (e.g. rubbish containing asbestos, mercury, SF₆, PCBs or other hazardous substances).
- Biological samples and plant or animal materials in chemical preservatives.
- Oil and grease rags and any other oil-containing materials.
- Spilt chemicals, used spill absorbents and contaminated soil.

Wastes containing chemicals can cause environmental problems if not properly managed. Further, most chemical wastes have specific disposal requirements under the law that must be followed. Substances with set legal disposal requirements are called controlled wastes. Since anything other than food or general office waste may be controlled waste, we manage all chemicals and hazardous substances as controlled waste. Testing may be required to check the
make-up of waste substances and equipment to identify any specific disposal requirements.

Chemical and hazardous wastes must be transported and disposed of by a licensed contractor who has all the necessary permit(s). Approval for disposal from the Environmental Regulator may also be needed: check with an Environmental Field Advisor.

Send all waste disposal certificates to an Environmental Field Advisor for record keeping.

Controlled wastes must be disposed of by licensed contractors and a Waste Disposal Certificate provided.

5.2.3 Your responsibilities

1. Treat all chemical and industrial waste as controlled waste unless informed otherwise by a Field Environment Advisor.

2. Check how to store and dispose of any chemical or other hazardous wastes from your work. This information should be in the site or project waste management plan.

3. If you don’t know the waste disposal requirements or think you may have a controlled waste substance, contact an Environmental Field Advisor for advice.

4. Where waste bins are provided, dispose of wastes in the appropriate bins (e.g. oil waste bins, scrap metal bins), as shown by signs or instructed by a manager or an Environmental Field Advisor.

5. Where waste is stored on site, check that it is kept in a suitable storage area (e.g. secure, dry and covered, labelled as dangerous goods if required) until it can be collected:
   a. Ensure waste bags and containers are clearly labelled and do not leak.
   b. Store liquid waste, including any oily material, in bunded areas.

6. Keep records of all waste transport and disposal (e.g. disposal certificates provided by licensed contractors), and send copies to the Environmental Field Advisors.

Further information

- HSEP0914 – Resource use and waste management
- HSEP0921 – Chemical management
Did you know?
More than 70 substances are listed as controlled wastes under Tasmanian legislation. Controlled wastes:

- Must be disposed of by licensed contractors.
- May require testing to determine the contents and disposal requirements.
- Need their disposal records kept by the Hydro Tasmania Group for 20 years.

Check the controlled waste list (in HSEP0914 – Resource use and waste management) and contact the Field Environmental Advisors for advice and assistance to arrange safe disposal.

5.3 Sulphur Hexafluoride (SF₆)

5.3.1 Aim
To prevent the release of Sulphur Hexafluoride (SF₆) gas or its arc products to the environment during the installation, maintenance or decommissioning of SF₆-containing equipment.

5.3.2 Background
SF₆ is normally a very stable, colourless, tasteless, odourless, non-flammable gas. High temperatures (above 800°C) and electrical arcing can cause SF₆ to break down into toxic compounds. This decomposing SF₆ is unstable, has a very strong rotten egg smell and leaves a white powder residue that is a carcinogen. Decomposed SF₆ must be cleaned up very carefully.

SF₆ is also a potent greenhouse gas, with nearly 24 000 times the climate change potential of carbon dioxide (CO₂). Leaks and spills of SF₆ to the atmosphere must be minimised.

Because of these toxic and environmentally hazardous effects, Hydro Tasmania has developed special procedures for working with SF₆. All SF₆ gas must be managed in a closed cycle, avoiding any release to the environment or work area.

SF₆ is also listed as a controlled waste substance and employees and supervisors that may be working with SF₆ (including procurement, use, transport, transfer, and disposal) need to be trained in SF₆ safety, handling and spill response.

5.3.3 Your responsibilities
1. Follow Hydro Tasmania’s SF₆ procedures when working with SF₆ (see Further Information).
2. Notify the site manager if you are bringing SF₆ cylinders or switch-gear containing SF₆ on site:
   a. The business SF₆ inventory must be updated.
   b. An SF₆ spill kit must be on site.
3. Check that any SF₆ cylinders you are using or transporting are clearly and correctly labelled and show no signs of damage.
4. Dispose of any material or equipment containing or contaminated with SF₆ as controlled waste.
5. Do not enter any building or enclosure where SF₆ may have been released into the environment.
6. Immediately evacuate any building where a fault, potential flash-over or suspected damage to an SF₆ switch unit has occurred, and notify your line manager.
7. Respond to SF₆ spills as per the instructions in your Field Emergency Response flip chart.
**SF₆ spills**

The steps below should be taken immediately following an SF₆ leak or arc event. For more information on managing SF₆ spills check your Field Emergency Response flip chart or contact a Field Environment Advisor.

**Call the Emergency Number for your site**
- Refer to your site *Emergency Response folder or flip chart.*

**Check for safety issues**
- Determine need for rescue, evacuation or external assistance.
- Call for assistance if required.

**Contain the spill**
- **Gas leaks**
  - Plug the hole and contain leak if possible.
- **Arc decomposition**
  - Block off any drains, cable tunnels or other possible escape routes.
  - Use the emergency SF₆ kits kept on site.

**Determine a response plan**
- Follow the information in your site *Emergency Response folder or flip chart.*

**Clean up the spill**
- All persons involved in clean-up must:
  - Be trained in SF₆ spill clean up.
  - Wear protective clothing and respiratory protection.
- Follow the SF₆ clean up instructions in the site *Emergency Response folder or flip charts.*

**Report the incident**
- Complete and submit an *Incident Management Preliminary Report Form* (HSEF1401).
- Follow the standard *Incident Management Process.*

**Did you know?**

Escaped SF₆ can remain in the atmosphere for 3200 years, acting as a greenhouse gas!
*(Ravishankara et al, 1993)*

SF₆ spill kits are kept on all sites that store or use SF₆ — make sure you know where they are.
Further information

- GS-AM-018 Filling SF₆ Switchgear from a cylinder of SF₆ Gas
- GS-AM-019 Handling of Contaminated Sulphur Hexafluoride (SF₆) and its ARC Products
- GS-AM-020 SF₆ Gas Insulated Switchgear Measurement, Control and Removal of Moisture
- GS-AM-021 SF₆ Gas Testing Limits
- GP-AM-511 Circuit Breaker SF₆ Gas Sampling and Testing Procedure
- HSEP0915 – SF₆ Management

SF₆ is used in electrical equipment like these circuit breakers.
5.4 Polychlorinated Biphenyls (PCBs)

5.4.1 Aim
To manage PCBs to prevent exposure to people and the environment.

5.4.2 Background
PCBs are a class of chemical that is used as a coolant and electrical insulator, often added to oils but also found in other products. PCBs are toxic to people, animals and the environment, bio-accumulating in animals and spreading through the food chain. They can be absorbed through the skin, so wearing the correct personal protective equipment (PPE) is essential when handling known or suspected PCB-contaminated materials.

PCBs may be used in transformers and capacitors, flexible PVC coatings and insulation for electrical wiring and components, cutting and lubricating oils, hydraulic fluids, sealants and adhesives, paints, cements, flame retardants or water-proofing compounds.

Although PCBs are no longer produced they are still present in some older plant and equipment. Most PCBs at Hydro Tasmania come from oils and cable casings. Work is underway to remove all PCB-contaminated materials and equipment.

An inventory of PCB-containing equipment and testing results is maintained for all Hydro Tasmania sites and equipment:
- Large equipment (e.g. transformers), including objects in or used for storage, is appropriately labelled or colour-coded with its PCB status.
- Smaller, more portable equipment is labelled when the level of PCB is known; unlabelled small equipment is assumed to contain scheduled PCBs.
- Land containing PCBs is reported and managed as contaminated land (see 8.2 – Contaminated land for more information).

Until removal is complete, all transformers and cable casings should be treated as PCB-containing until tests prove otherwise.

Laboratory testing is required to determine the PCB content of potentially contaminated oils, soils and other materials before disposal. Contact a Field Environmental Advisor to organise testing and appropriate disposal as controlled waste.

5.4.3 Your responsibilities
1. Check the PCB inventory before disposing of oil-containing equipment or waste. If the PCB content is not known, treat it as PCB contaminated until testing proves otherwise.
2. Wear appropriate PPE when handling known or suspected PCB sources – refer to the MSDS.
3. Thoroughly bag and store known or suspected PCB-contaminated equipment or waste in bunded areas, labelled as PCB waste, for testing and/or disposal.
4. Wrap any leaking transformers or other oil-filled equipment in plastic garbage bags and ensure they are stored and transported on suitable bunding.
5. Treat spilt oil, oil-contaminated soil and used spill absorbents as PCB waste unless testing proves otherwise.
Did you know?

PCBs have a half-life of 8 to 10 years. This means that for each litre of PCBs spilt there will still be about 200 ml of PCB in the environment after 20 years!

(D’Itri & Kamrin, 1983)

PCBs may be present in transformer oil (left) and other older equipment; look for PCB testing stickers (right) on oil-containing equipment.

Further information

- HSEP0920 – Oil management
- HSER0914.3 – Inventory of PCB containing equipment
6.1 Aim
To engage and communicate with relevant people, including employees, external organisations and members of the public, about environmental issues and concerns and to respond to their concerns in a controlled manner.

6.2 Background

Stakeholders are people or organisations that may be affected by, or interested in, the Hydro Tasmania Group’s activities, services and performance. The work we do and the ways we manage our land, waterways and heritage have the potential to affect or interest a wide range of stakeholders including:

- Recreational users and visitors (e.g. fishing, boating, camping, sight-seeking).
- Commercial operators, including tourism ventures and fisheries.
- Owners of neighbouring properties or land leased to, or accessed by, the Hydro Tasmania Group.
- Water utilities, irrigators and other water supply licence holders.
- Government services, regulators and authorities.
- Councils, local government associations and community groups.
- Indigenous organisations and communities.
- Cultural heritage bodies and preservation societies.
- Environmental groups, concerned individuals and activists.
- Members of the media (radio, television, newspaper and online press).

It is important that we consider and work with our stakeholders, building positive working relationships and finding practical solutions to environmental management issues and concerns.

Relevant stakeholders should be identified and their needs and concerns assessed when planning projects and making decisions about how we manage our assets, land and waterways. For new projects, the appropriate stakeholders should be identified and the way they will be engaged should be documented in a Stakeholder Management Plan.

Stakeholders may approach Hydro Tasmania Group employees or contractors to raise issues or
seek information on environmental management. Any stakeholder complaints or compliments about environmental issues are recorded and reported as environmental incidents following the process described in 3 – Incident management.

Be aware that journalists may approach you without declaring that they are media representatives.

6.3 Your responsibilities

1. For new sites or projects, check with the Site or Project Manager if there are any known stakeholder concerns or communication requirements you need to be aware of, and what to do if you are approached by a stakeholder.

2. Follow the project stakeholder management plan, if developed, or seek advice from management when approached by stakeholders.

If you are approached by a stakeholder, the media or member of the public:

1. Be polite and professional, remembering that you represent the business.

2. Direct the person to the appropriate contact for their concern or enquiry type:
   a. Project-specific enquiries – the project Stakeholder Manager (major projects) or Project Manager.
   b. Site-related enquiries – the Site Manager.
   c. Media enquiries – Hydro Tasmania Communications Coordinator (ph: 03 6230 5746).
   d. General and other enquiries – Hydro Tasmania switchboard (ph: 1300360441, email: contactus@hydro.com.au).

3. Inform the Project Manager (if necessary the stakeholder management plan will be revised).

4. Follow any advice provided by your managers or the Communications Team.

5. Report any environmental management-related complaints or compliments made by stakeholders by completing an Incident Management Preliminary Report Form (HSEF1401) as per the Incident Management process.
Did you know?

Hydro Tasmania has a Stakeholder and Community Coordinator in Corporate Services who can provide advice on identifying stakeholders and developing stakeholder management plans.

See the Stakeholder Engagement page on MyHydro for more information.

Further information

- HSEP0701 – Communication and consultation
- Hydro Tasmania Stakeholder Engagement Guide
- Stakeholder Engagement page on MyHydro
7.1 Historic heritage

7.1.1 Aim
To ensure our work activities respect cultural significance and take any known or suspected historic cultural heritage values into consideration, in accordance with the Hydro Tasmania Group’s values, and to comply with all heritage-related legislation.

7.1.2 Background
Hydro Tasmania’s long history of operation has created a wealth of industrial and other historic cultural heritage features, with more than 700 assets having been assessed for their heritage values. We work to ensure that these historic values and any items of historic heritage significance are protected and preserved. As well as being important to our corporate identity, some of Hydro Tasmania’s assets also have formal heritage listings.

Work on sites or assets with recognised cultural heritage values may require a Heritage Impact Assessment before approval, and may need to follow the requirements of a Conservation Management Plan. Where formal heritage listings apply, permits or approvals may be required for any work activities.

Our activities may also affect non-Hydro items protected under heritage legislation, particularly when working on client sites or in wilderness areas. Types of protected heritage items may include:

- Buildings (e.g. power stations, huts, sheds or cottages)
- Infrastructure (e.g. bridges, fences, pipelines or mining)
- Natural items (e.g. trees and plantings, see 10.1 – Vegetation management)
- Movable cultural heritage (e.g. tools, machinery or signs)
- Cultural landscapes and precincts (e.g. villages, sites or views)
- World Heritage Areas (see 8.1 – Protected areas)
Some cultural heritage items, like the Lake Margaret woodstave pipeline (top) and Liapootah Power Station control panel (above) are maintained in place as their context adds to their heritage values.

Waddamana Power Station Museum (left) houses an extensive collection of fixed and moveable items (like this newspaper advertisement, right) with historic cultural heritage values.
7.1.3 Your responsibilities

Work to avoid damage to, destruction or removal of artefacts or structures with historic heritage values.

For work on or near known cultural heritage items:

1. Check with the Project or Site Manager if there are any cultural heritage management requirements:
   a. Follow the cultural heritage protection measures in the project Environmental Management Plan or site Conservation Management Plan.
   b. Follow any heritage management requirements in project permits or approvals – these are legal requirements.
   c. Note that if the scope of works changes then a revised or new heritage impact assessment will be required.
2. Comply with any site exclusion areas, ensuring they are clearly marked before starting work.
3. Comply with any stop work orders issued by the Tasmanian Heritage Council.

If you come across suspected heritage values while working:

1. Stop any work that may impact the heritage values of the item (e.g. removal, re-painting, changing the surroundings, moving or other changes to the object or its context)
2. Notify the Project / Site Manager; they will notify a Field Environment Advisor or contact the Cultural Heritage Program:
   a. If required, the find is reported and a new Heritage Impact Assessment is performed and the Environmental Management Plan or Conservation Management Plan may be updated.
3. Wait for advice from the Project / Site Manager before resuming that work.

Did you know?

Heritage values help to tell the story of a place and can inform future generations about important historical, scientific, technical, architectural or social events. Recognising them helps us to connect with the people who lived and worked in these areas as well as providing valuable information.

Further information

- HSEP0912 – Cultural heritage management
- Cultural Heritage Program on MyHydro
- Hydro Tasmania Web Map (GIS database) on MyHydro
7.2 Aboriginal heritage

7.2.1 Aim
To ensure that we manage Aboriginal heritage items or values in compliance with all indigenous heritage legislation and in accordance with company values.

7.2.2 Background
Aboriginal heritage includes both artefacts and culturally significant sites that relate to the history of Aboriginal people. Sites and artefacts may have scientific, historical, educational or heritage values or social significance and are protected under law.

Land managed by the Hydro Tasmania Group may have Aboriginal heritage values that must be carefully managed during any new developments or activities that could damage or disturb these values. The Cultural Heritage Program advises on Aboriginal heritage issues on Hydro Tasmania Group land and work sites.

To comply with legislation, an Aboriginal heritage assessment must be carried out before starting new site works. Permits are required for any work that may impact an Aboriginal relic or other protected object or site.

What is Aboriginal heritage?
Aboriginal heritage includes all places and items of importance to the Aboriginal community. A wide range of natural and man-made objects may be considered Aboriginal heritage, including:

- Artefacts like stone, timber and bone tools and weapons, paintings, carvings and engravings, stone arrangements or midden sites.
- Culturally-significant landscapes and sites.
- Natural resources (plants and animals).
- Traditional practices.
- Spiritual values.
All Aboriginal sites and objects in Tasmania are protected under the *Aboriginal Relics Act 1975*. Similar legislation applies in other Australian states and territories.

### 7.2.3 Your responsibilities

Work to avoid damage to, destruction or removal of Aboriginal artefacts or sites.

**For work on or near known Aboriginal heritage values:**

1. Check the Aboriginal heritage management requirements with the Project or Site Manager and follow the Aboriginal heritage protection measures in the project Environmental Management Plan or project permits or approvals:
   a. Note that a revised or new Aboriginal heritage impact assessment may be required if the scope of works changes.
2. Comply with any site exclusion areas, ensuring they are clearly marked before starting work.
3. Report any discoveries of possible artefacts immediately to the Project or Site Manager.

**If you come across suspected Aboriginal sites or relics while working:**

1. Stop any work immediately and do not disturb the item or surrounding area in any way:
   a. **Do not** move, collect or otherwise disturb the object.
   b. Clearly mark the site as a 'no go area' until the object has been investigated and a decision made.
2. Notify the Project / Site Manager; the manager will report the find to a Field Environment Advisor or the Cultural Heritage Program:
   a. Aboriginal heritage authorities will be notified and may advise on specific management procedures for the discovery; specialist advice may be required.
   b. New permits and revisions of the project Environmental Management Plan may be needed.
3. Report the suspected find as an environmental incident; complete an Incident Management Preliminary Report Form (HSEF1401).
4. Wait for advice from the Project / Site Manager before resuming work in that area.

---

**Did you know?**

Legislation requires that Aboriginal heritage values are considered during any work activities. Disturbing any Aboriginal site or artefact without a permit, whether or not they are registered, is an offence under the *Aboriginal Relics Act 1975*.

**Further information**

- HSEP0912 – Cultural heritage management
- Cultural Heritage Program on *MyHydro*
8.1 Protected areas

8.1.1 Aim

To ensure that our work activities in protected areas comply with legal management requirements and do not alter the protected values.

8.1.2 Background

Land that is designated as a protected area has been recognised for having high environmental and/or cultural values. The Hydro Tasmania Group owns, manages or works in a variety of land types, including areas that are protected under local, state or national legislation. Types of protected areas we work in include:

- World Heritage Areas (e.g. Tasmanian Wilderness World Heritage Area)
- National Parks
- State and Council reserves
- Conservation areas and lands subject to conservation agreements (e.g. RAMSAR wetlands)
- Regional reserves and nature recreational areas
- Historic sites

Protected areas will have specific legal management requirements, including permits, notifications and restrictions for working there. These requirements will be documented in the project Environmental Management Plan.
Hydro Tasmania manages land in and adjoining protected areas including the Tasmanian Wilderness World Heritage Area. Any work activities that may affect the natural values of this heritage-listed wilderness are subject to strict permitting and licence requirements.

8.1.3 Your responsibilities

When working in or adjacent to protected areas:
1. Check with the Project Manager for any protected land requirements in the project Environmental Management Plan.
2. Follow any permit conditions or special work instructions communicated to you by management or Field Environmental Advisors.
3. Follow field hygiene procedures (see 10.4– Weeds, pests and diseases) to prevent the spread of weeds and diseases.
4. Report any suspected outbreaks of weeds or diseases (see 10.4– Weeds, pests and diseases) in or adjacent to protected areas to a Field Environmental Advisor.

Did you know?
All work in or adjacent to the Tasmanian Wilderness World Heritage Area (TWWHA) must comply with the TWWHA Management Plan (1999) and associated forms, notifications and procedures.
(Parks & Wildlife Service, 1999)

Further information
- HSEP0911 – Operations in the Tasmanian Wilderness World Heritage Area
- HSEP0913 – Land management
- Hydro Tasmania Web Map (GIS database) on MyHydro
- Land Management Program on MyHydro
8.2 Contaminated land

8.2.1 Aim
To ensure contaminated land areas are identified and managed to minimise environmental hazards.

8.2.2 Background
Contaminated sites are areas where the land has been polluted with substances that may be harmful to the environment or to human health. Contamination sources may be historic or current and can include:

- Waste storage and disposal areas
- Fuel storage areas and depots
- Chemical storage areas
- Oil, fuel or chemical spills

Contaminated lands have specific management requirements to contain the pollution and restore the contaminated area to safe levels.

If you notice any of the following items you may have discovered a contaminated site:

- Discoloured sediments, slicks or oily sheens
- Unusual smells (e.g. petroleum smells, rotten egg gas)
- Buried man-made materials (e.g. asbestos debris)
- Dumped rubbish

Environmental approval must be obtained for any work done on known contaminated land sites; a management plan must be developed before starting work.
8.2.3 Your responsibilities

1. Work in a way that prevents land contamination
   a. Store chemicals, oil, fuels and waste in bunded areas (see 5.1 – Working with chemicals).
   b. Clean up chemical and oil spills immediately, removing any contaminated soils or sediments (see 5.1 – Working with chemicals).
   c. Report any leaks or drips that could reach soils or water.

Working on known contaminated sites:

1. Follow any contamination management measures in the project Environmental Management Plan or communicated to you by your managers.

If you think land has been contaminated:

1. Stop work immediately if you think you have exposed contaminated land or groundwater
2. Notify the Site or Project Manager and a Field Environmental Advisor.

Did you know?

In 2003 there were 67 known contaminated sites in Tasmania. The number of yet undiscovered contaminated sites is thought to be in the hundreds.

(Resource Planning and Development Commission, 2003)

Further information

- HSEP0913 – Land management
- Land Management Program on MyHydro
- Hydro Tasmania Web Map (GIS database) on MyHydro
8.3 Erosion and sediment control

8.3.1 Aim
To prevent erosion, soil loss and sediment pollution of waterways by managing site works and activities to retain soils within the work site.

8.3.2 Background
Soils can be damaged or lost through the impacts of our work activities. Wind and water can remove sediments, creating dust problems, eroding the land and polluting waterways. Sediments in the waterways can damage our infrastructure, such as turbines and intake valves, as well as harming the environment.

Work sites, roads and sediment stockpiles need to be managed to protect soils and to prevent erosion. Erosion control measures are required by law and must be in place before starting work and remain in place, working effectively, until all disturbed areas have been stabilised.

To protect soils and prevent erosion we work to:

- Minimise the amount of vegetation cleared, and re-plant where possible.
- Ensure stockpiled sediments are covered and are surrounded by sediment fences.
- Install sediment traps, sediment fences and other erosion control measures.
- Stabilise fragile areas by covering or re-enforcing sediments.
- Manage site drainage to slow water flows and retain water-borne sediments.
8.3.3 Your responsibilities

1. Know what sediment control measures (e.g. sediment netting and fencing, sediment traps and site drainage) are required for the work you are doing.

2. Check that sediment control measures are correctly installed and working properly, especially during and after wet weather.

3. Work to minimise soil disturbance:
   a. Clear as little vegetation as possible.
   b. Cover fragile or unstable areas.
   c. Avoid disturbing soils during wet weather.
   d. Keep stockpiles covered when not in use.

4. Raise any concerns about erosion and sediment loss with the Site or Project Manager or contact a Field Environmental Advisor.

Did you know?

About 2 000 tonnes of sediments are washed into the Derwent estuary each year, largely from stormwater run-off from construction sites and other site works.

(Hogue, 2009)

Further information

- HSEP0913 – Land management
- Land Management Program on MyHydro
8.4 Acid sulfate soils

8.4.1 Aim
To minimise the disturbance of acid sulfate soils and the environmental impacts of acid sulfate soil disturbance.

8.4.2 Background
Acid sulfate soils are naturally occurring sediments containing sulfides that form sulphuric acid when exposed to air. This acid can damage infrastructure and the environment, including killing plants and animals. Run-off from acid sulfate soils can cause fish kills and other significant environmental incidents if it reaches waterways or groundwater.

Acid sulfate soils can be exposed to air through excavation works, drainage or lowering ground water levels. Signs of acid sulphate soils include:

- Iron staining (rust colour) in soils, water bodies or drains
- Sulphurous (rotten egg) smell when soils are disturbed
- Milky blue/green water
- Yellow mineral deposits in the soil
- Dead or dying fringing vegetation or bare soil scalds

8.4.3 Your responsibilities
Work to prevent the exposure of acid sulfate soils. Check with the Site or Project Manager if there are any known acid sulfate soils in your work area and any established management actions.

**When excavating in known acid sulfate soil areas:**
1. Excavate as little as possible and minimise heavy machinery use.
2. Avoid mixing soils from different excavation areas and depths.
3. Where possible, re-bury soils in the order and depths they were excavated in.
4. Cover any stockpiled soils with a tarpaulin or other water-proof cover.
5. Make sure there is no run-off from the work area.

**If you think you’ve found acid sulfate soils:**
1. Stop work immediately in that area.
2. Report the suspected acid sulfate soil to the Site or Project Manager:
   a. The manager will report the find to a Field Environment Advisor for confirmation.
   b. If acid sulfate soil is present, management actions will be developed.
3. Await instructions from management or a Field Environment Advisor before continuing work in that area.
Further information

- Land Management Program on MyHydro

Did you know?

Although acid sulfate soils are most common in coastal areas, approximately 370,000 hectares of inland Tasmania are thought to contain acid sulfate soils.

(DPIPWE, 2009)
9.1 Waterway health

9.1.1 Aim
To identify and respond to potential changes in waterway condition and health.

9.1.2 Background
As a water manager, Hydro Tasmania has a responsibility to care for the health of the waterways – lakes, rivers, wetlands, creeks and man-made water-courses – we manage and work in and around.

Our waterways are valued by the community and stakeholders for their ecological and recreational values. It is important that we maintain healthy waterways and quickly respond to any potential environmental issues or concerns.

Some waterway health issues that may be encountered include:
- Erosion of river and creek channels.
- Poor water quality, discoloured water and unpleasant smells.
- Algal blooms, scums, foams and slicks.
- Dead fish, frogs or other aquatic animals.
- Major changes to the look and structure of a waterway.

Waterway health monitoring activities are carried out by the Aquatic Environment Program, with some waterway condition information reported on under the terms of Hydro Tasmania’s [Water Licence](#). Not managing our waterways well may have serious legal consequences.
Signs of possible waterway health problems include (clockwise from top left): dirty or discoloured water, foams and scums, slicks and films, excessive algae and bank erosion.
9.1.3 Your responsibilities

1. Check with the Site / Project Manager for any waterway protection measures or monitoring requirements relevant to your work.

2. Follow any waterway management requirements and check any control measures are working properly.

3. Report any waterway health issues or concerns:
   a. Complete and submit an Incident Management Preliminary Report Form (HSEF1401) or contact a Field Environmental Advisor.
   b. If possible, take photos and collect water samples to help to determine the cause of the problem.

If you think your work is negatively affecting a waterway:

1. Stop the work activity immediately.

2. Report your concern to the Project or Site Manager; they will investigate your concern and contact the Environment Team for advice:
   a. Changed work practices or waterway protection measures may be required.

3. Await instructions from management or a Field Environment Advisor before continuing work in that area.

Further information

- Hydro Tasmania Storage Operating Rules
- Aquatic Environment Program on MyHydro
9.2 Water pollution

9.2.1 Aim
To prevent water pollution from site works, drainage, power station operation and other work activities.

9.2.2 Background
Pollutants are anything other than clean rainwater entering, or with the potential to enter, a waterway. This includes anything entering a stormwater system, since stormwater discharges into waterways. Pollutants can include sediments, industrial chemicals, fertilisers and residues. The transfer of water from one waterway to another can even constitute pollution if it causes a decrease in water quality or spreads pests or diseases (see 10.4 – Weeds, pests and diseases for more information).

Potential sources of water pollution from work activities include:
- Run-off from sites (e.g. construction, car parks, stores or loading bays).
- Drainage from power stations.
- Releases of water with low oxygen levels or very different temperatures.
- Stormwater contamination.
- Overflow of bunded areas and traps.
- Spraying herbicides or pesticides near waterways.
- Leaks from sewerage storage and treatment systems.

Causing water pollution may be a legal offence. It is a significant concern for Hydro Tasmania due to the nature of our activities and the area of waterways we manage. Consequently there are several programs in place to prevent and detect pollution from operational plant and assets.

Managing site drainage, particularly stormwater run-off, is essential for preventing waterway pollution.

For information on managing oil or chemical spills to water see 5.1 – Working with chemicals.

9.2.3 Your responsibilities
1. Check with the Site or Project Manager for site run-off containment plans and control measures and follow any requirements.
2. Design and dig earthworks to prevent run-off entering site drainage.
3. Keep stormwater drainage systems separate from site containment and bunding systems.
4. Use physical barriers like sediment barriers, filters and drain covers to prevent sediments, slurries and residues from entering waterways or stormwater systems.
5. Keep any bunding free of rainwater and debris and regularly check bund and trap condition to prevent failure or over-flows.
6. Ensure on-site water containment areas are working as intended and any accumulated water or sludge is pumped out to prevent over-flowing.
7. Avoid spraying pesticides, herbicides and other chemicals around waterways where possible, particularly if rain is forecast.
8. Take care when handling, transporting and storing potential pollutants (e.g. chemicals, oil) to prevent them from entering waterways, drains or the stormwater system.
If you notice a possible water pollution event:

1. Try to contain the pollutant (if safe to do so) using spill kits, earthworks or other containment methods
2. Identify the pollution source and, if possible, stop it.
3. Notify the Site, Project or line manager and/or a Field Environmental Advisor.
4. If possible and safe to do so, clean up and recover the contained pollutant.
5. Report the incident using the Incident Management Preliminary Report Form (HSEF1401)

Did you know?

Even small amounts of some pollutants can have big impacts on waterways and human health. The common herbicide Atrazine is harmful to life at concentration as low as 13 μg per litre – that’s 0.000013 of a gram!

(ANZECC & ARMCANZ, 2000)

Further information:

- Aquatic Environment Program on MyHydro
- Land Management Program on MyHydro
10.1 Vegetation management

10.1.1 Aim

To ensure vegetation management work, including clearing, complies with legal requirements and that environmental disturbance is minimised, in line with our corporate values.

10.1.2 Background

As part of our work activities we manage vegetation, clearing land, controlling weeds and trimming plants. Native vegetation provides habitat for animals, protects rare and threatened species and supports healthy, stable soils. Vegetation management activities aim to protect these values while enabling us to do our work.

Legal restrictions apply to some of our vegetation management activities, with permits and approvals required to clear or prune some types of plants or work in protected areas (see 8.1 – Protected areas). Some vegetation is also protected due to its social or cultural values, including trees listed on the National Trust Significant Tree Register. Note that legislation varies significantly between states, so care must be taken to identify and comply with the right legal requirements.

Assessments are required before carrying out new vegetation management work, and permits or approvals must be granted before work starts. Vegetation management activities should also be carried out to minimise the risk of spreading weeds and plant diseases (like phytophthora).

For specific information on:

- Managing threatened or other protected vegetation refer to 10.3– Protected species
- Managing weeds and plant diseases refer to 10.4– Weeds, pests and diseases
Did you know?

All vegetation management activities in the Tasmanian Wilderness World Heritage Area require approval from the Parks and Wildlife Service!

Vegetation needs to be cleared around our assets and infrastructure (left: Bluff Point wind farm, right: Tarraleah penstocks) to provide safe access, prevent damage and reduce the risk from bushfires.

10.1.3 Your responsibilities

1. Check with the Project or Site Manager about any vegetation management permits or requirements under the works Environmental Management Plan and follow any instructions provided.

2. Work to clear the minimum vegetation necessary, especially along waterways and drainage lines or in protected areas.

3. Where possible, re-vegetate cleared areas quickly with suitable native species (ask the Environment Team for re-planting advice).

If you suspect protected vegetation has been damaged or permit requirements have been breached:

1. Stop the vegetation work immediately.

2. Inform a Field Environmental Advisor, the Site or Project Manager and/or your line manager; the manager will investigate the work and determine if any legal breaches have occurred.


Further information

- HSEP0911 – Working in or adjacent to the World Heritage Area
- HSEP0913 – Land management
- HSEP0917 – Vegetation management (wind operations)
- Land Management Program on MyHydro
10.2 Wildlife management

10.2.1 Aim
To minimise and manage the effects of our work activities on native animals.

10.2.2 Background
The Hydro Tasmania Group manages land and waterways that provide habitat to a range of native animals. We work in environments shared with wildlife, including when travelling and working on non-hydro sites.

Some work activities with the potential to disturb wildlife include:
- Vegetation clearing and other land management activities that potentially affect animal habitats.
- Water management activities that alter aquatic habitats.
- Generating noises, vibrations or artificial lighting.
- Installing structures that restrict animal movements, like dams, fences, pipelines and canals.
- Collisions with vehicles or infrastructure such as wind turbines and power lines.
- Scientific survey work and specimen collection.
- Transferring weeds, pests or diseases (see 10.4 – Weeds, pests and diseases).

All Australian animals are protected by law and we are legally required to manage the effects of our activities on local wildlife. Permits are required for some activities, including any work impacting on threatened species (see 10.3 – Protected species) or requiring collection of animals. Where possible, mitigation measures should be put in place to reduce risks to wildlife.
Animal research and scientific surveys

Permits may be required for work involving animal research or wildlife surveys (including fish surveys), particularly for work involving animal collection. The types of permits required depend on the work being done. The correct permits must be granted before work starts and work done following the permit requirements.

Permit types may include:
- Animal ethics permits.
- Threatened species permits (see 10.3 – Protected species).
- Scientific research permits.
- Access (e.g. National Parks) and collection permits.

10.2.3 Your responsibilities

All work activities

1. Check with the Project or Site Manager if there are any fauna management requirements you must comply with.

2. Drive carefully to avoid hitting wildlife: watch for animals on or near the roads, pay attention to wildlife warning signs and slow down at dusk and dawn.

3. If you encounter sick or injured wildlife, aim to contact the nearest wildlife rescue service and follow their instructions.


In case of collision with wildlife:

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stop if safe to do so</td>
</tr>
<tr>
<td>2</td>
<td>Check if the animal is alive</td>
</tr>
<tr>
<td>3</td>
<td>Check for pouch young and young-at-foot</td>
</tr>
<tr>
<td>4</td>
<td>If the animal is alive or young are found, contact your nearest wildlife rescue service and follow their instructions</td>
</tr>
<tr>
<td>5</td>
<td>If the animal is dead, move the carcass off the road where possible and safe to do so</td>
</tr>
</tbody>
</table>

Wildlife rescue services provide advice on helping sick or injured wildlife including taking in orphaned young. Put the contacts for your area into your phone for quick reference on the road.
Wind farm operations

Wind power developments may have specific requirements around managing and reporting bird and bat collisions with wind infrastructure. If you are working on a wind site:

1. Check what wildlife management processes and procedures apply to your work and follow the instructions given to you by Wind Operations staff.
2. Report any evidence of bird or bat strikes, including feather spots, to the site Environmental Officer:
   a. A wind team Bird/Bat Strike Report Form will need to be completed as well as an Incident Management Preliminary Report Form (HSEF1401).

Animal research and scientific surveys

1. Check with the Project Manager that you have the right permits and that they are in date before starting wildlife survey or specimen collection work.
2. Carry a copy of any relevant permits with you when working in the field.
3. Make sure you comply with the conditions of your permits.

Did you know?

About 293 000 animals are killed on Tasmanian roads each year – that’s 32 animals killed every hour!
• 50% of road kill happens where vehicles travel over 80 km/hr.
• Hitting wildlife causes more than $1 000 000 worth of damage to vehicles each year.

(Hobday & Minstrell, 2008)

Sick, injured, distressed or dead animals (e.g. fish kills)

1. Note the exact location and any unusual conditions (strange smells, discoloured water, recent vegetation clearing, recent earthworks, etc), take a photo (if possible) and contact a Field Environment Advisor.
2. Follow the instructions and advice provided by the Environment Team.

Further information

• HSEP0202 Animal ethics permit guidelines
• Aquatic Environment Program on MyHydro
• DPIPWE Biodiversity Conservation Branch (scientific permits) – (03) 6233 6556
10.3 Protected species

10.3.1 Aim

To ensure we prevent harm to threatened and other protected plants and animals, and comply with all legal obligations about threatened species.

10.3.2 Background

Within our work environments there are plants and animals that are protected under State and Commonwealth legislation. We work to avoid impacts to any threatened plants, animals, communities or critical habitats and comply with relevant legislation, including permit and approval requirements. Failure to comply with legislation or permit conditions can result in significant fines.

Protected species can occur in any environment, not just in less disturbed areas, and their presence must be considered for all projects. Surveys are conducted for sites where threatened species are likely to occur and management plans are developed for sites with confirmed threatened species, populations or ecological communities where there are regulatory requirements to do so.

Some protected species have additional specific regulatory requirements, including:

- Tasmanian wedge-tailed eagles (*Aquila audax fleayi*)
- White-bellied sea eagles (*Haliaeetus leucogaster*)
- Tasmanian devils (*Sarcophilus harrisii*)

Animal research and scientific surveys

Permits are usually required for any survey work that involves the disturbance of threatened plants or animals or the collection of any protected species.

The Environment Team can provide information and advice on identifying and managing protected species.

The death, damaging, removal of or other negative impacts to any threatened species on Hydro Tasmania Group land or due to Hydro Tasmania Group activities must be reported as an environmental incident.

Threatened species, like this grass tree (left), and communities, like these alpine peatlands (right, photo: Dr. Anita Wild), may be found in our work areas.
Your responsibilities

1. Check with the Site or Project Manager if there are any threatened species permit conditions or management requirements relevant to your work and follow any conditions or instructions provided.

2. Check that assessments have been completed and all necessary permits and approvals have been granted before clearing vegetation; contact a Field Environmental Advisor if you are unsure.

3. Work to minimise disturbance to animals, plants and soils, including from noise, vibration or lighting.

4. Report the death, injury, damage, disturbance or removal of any threatened plant or animal as an environmental incident.

If suspected threatened species are found once on-site work has started:

1. Stop the work activity immediately.

2. Inform a Field Environmental Advisor, the Site or Project Manager and / or your line manager. They will investigate the work and determine if threatened species are at risk.

3. Await instructions from management or a Field Environment Advisor before continuing that work activity.

Animal research and scientific surveys

1. Ensure you have the necessary threatened species permits (as well as any other relevant permits or approvals, such as animal ethics permits) before starting field work.

2. Carry copies of your permits with you and always comply with the permit conditions and requirements.

Eagles

White-bellied sea eagles and the Tasmanian wedge-tailed eagle are protected under State and Commonwealth threatened species legislation. If you suspect you have found a wedge-tailed (Tasmania only) or white-bellied eagle nest in or within 1 km of a work area:

1. Stop work in the area, note the nest location and report it to the Environment Team (they will check the nest and determine if further action is required):
   a. **August – January (eagle breeding season):** cease all work (including vehicle movements and walking under the nest) within 500 m of an active nest or within 1 km if in line-of-site of an active nest.
   b. **February – July:** do not clear land within 180 m of the nest; note the location and report it to the Environment Team.

2. Notify the Project or Site Manager; the manager will seek advice from the Environment Team on any required management actions.

3. If work has begun, report any nest sightings as incidents and complete an Incident Management Preliminary Report Form (HSEF1401).
Tasmanian devils

Tasmanian devils are endangered and are protected under State and Commonwealth threatened species legislation. Tasmanian devils are under threat from the fatal facial tumour disease.

1. Do not relocate Tasmanian devils: relocation can spread the lethal facial tumour disease.
2. Devil habitats are protected under Tasmanian law:
   a. Avoid any activities that might damage devil dens or disturb the devils.
   b. Report den locations to a Field Environmental Advisor.
   c. Permits are required for any work that may disturb devils.
3. Report sightings of devils with facial tumour disease to a Field Environmental Advisor for reporting to DPIWPE.

Did you know?

More than 77 threatened plants and 55 threatened animals have been recorded in and around Hydro Tasmania’s waterways!

Further information

- Aquatic Environment Program on MyHydro
- Land Management Program on MyHydro
- Hydro Tasmania Web Map (GIS database) on MyHydro
10.4 Weeds, pests and diseases

10.4.1 Aim
To prevent the introduction and spread of weeds, environmental pests or plant and animal diseases through our work activities.

10.4.2 Background
Weeds, pests and diseases have significant impacts on the land and waterways we own and manage, and potentially large impacts on our business.

Weeds
Weeds can reduce biodiversity and agricultural productivity, replacing native plants and destroying habitats and food sources for native animals. We are legally required to manage weeds on Hydro Tasmania Group land. Controlling established weeds can be very expensive: it is far better to prevent their spread through following good hygiene practices.

<table>
<thead>
<tr>
<th>Gorse</th>
<th>Orange hawkweed</th>
<th>Canary broom</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Ulex europeaus</em></td>
<td><em>Hieracium auranticum</em></td>
<td><em>Genista monspessulana</em></td>
</tr>
</tbody>
</table>

*Weeds can out-compete native plants like this fern.*
<table>
<thead>
<tr>
<th>Patterson’s curse</th>
<th>Elisha’s tears</th>
<th>Spanish heath</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Echium plantagineum</em></td>
<td><em>Leycesteria formosa</em></td>
<td><em>Erica lusitanica</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blackberry</th>
<th>Chilean needle grass</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Rubus fruticosus</em></td>
<td><em>Nasella neesiana</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>African feather grass</th>
<th>Cumbungi</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pennisetum macrourum</em></td>
<td><em>Typha latifolia</em></td>
</tr>
</tbody>
</table>

(Above and left): High priority weeds: These 10 weed species are of particular significance to Hydro Tasmania’s operations. If you think you see one, report it to a Field Environment Advisor.
Pests and diseases

In Tasmania there are three water-based diseases and one pest of high concern to Hydro Tasmania: phytophthora root rot, chytrid frog disease, platypus mucor disease and the freshwater alga didymo. All four can be spread through Hydro Tasmania work activities.

- **Phytophthora**: a soil-borne water mould that infects plants, causing root rot or dieback. Phytophthora is widespread in Tasmania, with efforts focused on avoiding spreading infections into new areas, especially National Parks and the Tasmanian Wilderness World Heritage Area.

- **Chytrid frog fungus**: a fungal disease infecting and killing frogs and other amphibians in Tasmania and mainland Australia. Particular concern is held for Tasmania’s threatened and endemic frog species.

- **Platypus mucor disease**: a fungal disease causing ulceration and eventual death of platypus. Mucor disease is present in Tasmania and cases must be reported to DPIPWE.

- **Didymo**: not yet present in Australia, didymo is a freshwater alga that has invaded New Zealand and Chile and is considered a high risk in Tasmania. Didymo forms large mats of thick, cottony growth, clogging waterways and blocking drains, pipelines and intakes.

The introduction of Didymo is a significant threat to the hydropower industry in Tasmania. **If you think you see didymo report it to the Environment Team immediately.**
10.4.3 Your responsibilities

1. Check with your Site or Project Manager if there are any weed, pest or disease management requirements that apply to your work and ensure you comply with them.

2. Assess the risk of spreading weeds, pests or diseases as part of your JHA before doing field work: think about where you’ve been and where you’re going.

3. Plan field trips to work from the least-disturbed to the most-disturbed site to reduce the risk of spreading weeds, pests or diseases.

4. Avoid moving water, soil, gravel or plants from one area to another.

5. Follow the check-clean-(disinfect)-dry hygiene protocols, washing down vehicles, shoes and equipment:
   a. After visiting sites with weed infestations or signs of diseases.
   b. Before working in any protected areas, including the Tasmanian Wilderness World Heritage area.

6. Be aware of the signs of infections/infestations; contact the Environment Team for further information, advice or to organise field hygiene training.

**If you think you see a priority weed, disease outbreak or signs of didymo:**

1. Note the exact location, take a photo (if possible) and notify a Field Environment Advisor. Do not collect a sample:
   a. For weeds, photograph the leaves, flowers and fruits/seeds if possible.
   b. For diseased animals, photograph the location as well as the animal, where possible.

2. If a new weed or disease record is confirmed, report it by completing an Incident Management Preliminary Report Form (HSEF1401).
### 1. Thoroughly CHECK all vehicles, equipment, footwear and clothing for mud, soil, seeds, algae and other plant material at the field site.

### 2. CLEAN by removing all mud, soil and debris at the field site.

Scrub equipment in local water or water from a treated town supply (without disinfectant) as close as possible to the site of origin. Thorough cleaning is essential whether or not a disinfectant is then used. Leave all debris at the original site, dispose in sewerage system or treat with disinfectant, dry and dispose of in rubbish.

### 3. Spray and scrub or soak and scrub equipment in DISINFECTANT solution (Phytoclean or F10) for at least one minute. When cleaning absorbent material (e.g. neoprene waders, nets) soak for 5 to 30 minutes. **Disinfection is necessary when working in high risk areas (e.g. National Parks and other high conservation value areas).**

### 4. Drain and DRY all equipment before using it in another wet area until it is completely dry to touch. Ideally, wait an extra 48 hours before using equipment in another waterway. This longer waiting time is critical if a disinfectant has not been used or when using absorbent materials (e.g. leather, neoprene).

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**Did you know?**

- The economic cost of weeds in Tasmania is about $58 million per year. *(Ireson et al, 2006)*
- The cost of weed control activities in Australia is over $1 500 million each year. *(Sinden et al, 2004)*
- The economic impact of Didymo in New Zealand between 2006 and 2011 was almost $128 million! *(Deloitte, 2011)*

**Further information**

- Keeping it clean, a Tasmanian field hygiene manual *(Allan & Gartenstein, 2010)*
- Land Management Program on *MyHydro*
- Aquatic Ecosystems Program on *MyHydro*
11.1 Procurement and resource use

11.1.1 Aim
To minimise the environmental effects of resources purchased and used, and to reduce the amount of waste generated by our activities. This includes working with our customers, contractors and suppliers to better manage our resources.

11.1.2 Background
We procure and use a range of resources in our work activities. Reducing the impacts of the resources we use and the ways we use them brings a range of benefits, including greater efficiency, increased resource conservation, lower energy use, less greenhouse gas generation and preventing environmental contamination.

Wastes generated by our work require disposal, with both financial and environmental costs. There are also waste disposal laws and regulations that we must comply with. Using resources more efficiently can bring significant cost savings.

Consider the big picture where possible when choosing and purchasing resources: the life cycle of the product, transport and storage requirements, wastes created, site management needs, energy use, greenhouse gas emissions, permit requirements and associated costs and benefits.

Use a resource use and waste management plan to support good resource management.
Did you know?
Office paper makes up about 20% of our waste stream. Our Australian offices print about 300,000 pages a month, or a whopping 3.5 million pages a year. That’s using 280 trees and 35,000 kL of water, just to print!

11.1.3 Your responsibilities
1. Use resources as efficiently as possible. Consider things like:
   a. Shrinking documents before printing and printing double-sided.
   b. Ordering consumables in bulk or combining orders to reduce transport impacts and packaging.
   c. Planning materials use to reduce the amount of offcuts or other waste created.
2. Recycle as much as possible, making sure you use the appropriate bins for different waste types:
   a. Flatten cardboard boxes before placing in recycling bins.
   b. Compost food scraps where possible.
   c. Recover and re-use chemicals where cost-effective to do so.

Further information
- HSEP0914 – Resource use and waste management
- GreenBiz page on MyHydro
11.2 Energy efficiency and greenhouse gas emissions

11.2.1 Aim
To ensure all employees take practical steps to save energy and reduce greenhouse gas emissions, helping us to be a low-carbon business

11.2.2 Background
The Hydro Tasmania Group strives to be a low carbon business. We take active steps to reduce our carbon emissions as well as measuring and reporting our energy use and greenhouse emissions to the Federal Government under the National Greenhouse and Energy Reporting Act.

Our main sources of energy use and emissions include:

- Travel, including aircraft and our vehicle fleet
- Electricity use in our buildings and facilities outside Tasmania
- Waste generation and disposal

Reducing our energy use and greenhouse gas emissions can help to reduce costs as well as benefiting the environment.
Did you know?

WebEx virtual meeting software allows you to hold multi-party video conferences using your work computer. You can show presentations, see each other’s screens and hold discussions face-to-face without leaving your desk.

A flight from Hobart to Melbourne produces about 250 kg of CO₂; that’s as much as your computer produces in a year (www.carbonneutral.com.au). Reduce your carbon emissions and try WebEx instead!

Contact Office Services on x5999 or search MyHydro for more information.

11.2.3 Your responsibilities

1. Take steps to reduce your energy use:
   a. Turn off lights, computers and appliances when not in use.
   b. Switch off building lights if you are the last to leave.
   c. Where possible, use video or phone conferencing instead of travelling for meetings.
   d. Car-pool to meetings and choose energy efficient vehicles.

2. Share ideas for doing things better: contact or join GreenBiz!

Further information

• Energy and Greenhouse Program page on MyHydro
• GreenBiz page on MyHydro
12.1 Health, Safety and Environment Management System

The Hydro Tasmania Group’s Health, Safety and Environment (HSE) Management System belongs to the whole business and is adapted and updated to meet user needs. All Hydro Tasmania Group employees can access the HSE standards, procedures, guidelines and other documents, report issues and request changes. The system exists to help you to manage your environmental risks and legal obligations.

The HSE system is maintained by staff within the Sustainability and Safety group, Corporate Services. The Sustainability and Safety group can help you with enquiries about the HSE system, information and advice about managing safety, health and environmental issues and provide advice on how to apply HSE elements, procedures and work practices.

For more information advice or assistance, refer to the HSE Essentials web-portal (via MyHydro), email HSE@hydro.com.au or call the Hydro Tasmania switch (1300 360 441) and ask for the Safety or Systems and Quality teams.

12.2 Environmental and sustainability programs

Hydro Tasmania’s environmental and sustainability programs provide advice on and assistance with managing environmental compliance, risks and incidents for the whole of business. These programs also provide awareness and environmental management training.

Located in Sustainability and Safety, Corporate Services, the programs are:
- Cultural Heritage Program - Cultural.Heritage@hydro.com.au
- Land Management Program - LandManagement@hydro.com.au
- Aquatic Environment Program – Alison.Howman@hydro.com.au
- Energy and Greenhouse Program - egp@hydro.com.au
- Wind Environment Program – Chris.Sims@hydro.com.au

To learn more about each program, visit the program page on MyHydro, email the program or call the Hydro Tasmania switch (1300 360 441) and ask to be transferred.
12.3 Field Environmental Advisors

The Field Environmental Advisors provide field-based advice and support to help you comply with your environmental obligations. Contact the Field Environmental Advisors for advice and assistance, including on-site support.

- Southern Tasmania: Beverley Armstrong  
  Office: (03) 6238 4927  
  Mobile: 0448 714 647  
  Email: Beverley.Armstrong@hydro.com.au
- Northern Tasmania: Tim Polley  
  Office: (03) 6324 7110  
  Mobile: 0488 303 514  
  Email: Tim.Polley@hydro.com.au

12.4 Legal and compliance advice

For information, advice and support for working with environmental legislation, including compliance, permits, approvals and environmental management plans, and compliance with the HSE Management System, contact the following groups:

- **Health, Safety and Environment team** – see 12.1 – Health, Safety and Environment system
- **Environmental programs** – see 12.2 – Environmental and sustainability programs
- **Field Environmental Advisors** – see 12.3 – Field Environmental Advisors

**Legal information online**

Information on relevant environmental legislation and legal obligations for each Australian State can be accessed via the Environment Essentials EnviroLaw legal obligations directory. There is a link to this directory on the HSE Essentials web-portal.

**Legal Services**

Hydro Tasmania’s Legal Services team provides advice and assistance in identifying and complying with legal requirements relating to our business, including environmental obligations. Legal Services should be consulted in certain circumstances such as non-standard form contracts, any ambiguity or uncertainty concerning the scope of regulatory obligations, regulatory compliance and queries in relation to breaches or investigations.

Contact Legal Services using the People Search function on MyHydro or call the Hydro Tasmania switch (1300 360 441).
Allan K & Gartenstein S (2010) *Keeping It Clean: A Tasmanian field hygiene manual to prevent the spread of freshwater pests and pathogens*; NRM South; Hobart, Tasmania


D’Itri FM & Kamrin MA (1983) *PCBs: Human and Environmental Hazards*; Butterworth Publishers; Boston, Massachusetts

Deloitte (2011) *MAF – Didymo and other freshwater pests – Economic Impact Assessment*; prepared for Biosecurity New Zealand; Deloitte, New Zealand

DPIPWE (2009) *Tasmanian Acid Sulfate Soil Management Guidelines*; Department of Primary Industries, Parks, Water and the Environment; Hobart, Tasmania


Sinden J, Jones R, Hester S, Odom D, Kalisch C, James R & Cacho O (2004) *The economic impact of weeds in Australia*; CRC for Australian Weed Management (Technical Series no.8); Canberra


<table>
<thead>
<tr>
<th><strong>Aboriginal relic:</strong></th>
<th>Any object made or created by any of the original inhabitants of Australia or their descendants.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Animal research:</strong></td>
<td>Any procedure, test, experiment, inquiry or study on an animal in an area of teaching and research.</td>
</tr>
<tr>
<td><strong>Bund:</strong></td>
<td>An embankment, wall, or temporary structure that may form part or the entire perimeter of a compound, where oil is present in a plant/equipment or stored in a container, for the purpose of containing any oil spillage so it is not released to the environment.</td>
</tr>
<tr>
<td><strong>ChemWatch Backpack:</strong></td>
<td>A Hydro Tasmania computer-based system on <em>MyHydro</em> that provides information about chemicals and their management.</td>
</tr>
<tr>
<td><strong>Chemicals:</strong></td>
<td>Substances that are used for designated tasks because of their chemical properties, e.g. adhesives, paints, acids, detergents, solvents, pesticides. Chemicals include dangerous goods and hazardous substances, oils and fuels.</td>
</tr>
<tr>
<td><strong>Communication:</strong></td>
<td>The flow of information between people.</td>
</tr>
<tr>
<td><strong>Compliance:</strong></td>
<td>Ensuring that the requirements of laws, regulations, industry codes and organisational standards are met.</td>
</tr>
<tr>
<td><strong>Conformance:</strong></td>
<td>Ensuring the requirements of the Hydro Tasmania Group’s HSE Management System are met, including responsibilities to ensure environmentally-acceptable outcomes and meet legal compliance requirements.</td>
</tr>
<tr>
<td><strong>Conservation Management Plan:</strong></td>
<td>A document written to guide the care of a place of cultural significance based on an understanding of its significance and prepared as part of the Burra Charter process, recording investigations and making recommendations.</td>
</tr>
<tr>
<td><strong>Containment:</strong></td>
<td>The act of preventing the loss of material from a container or plant/equipment to the environment.</td>
</tr>
<tr>
<td><strong>Contractor:</strong></td>
<td>Any individual or organisation, including suppliers, contract staff and technical specialists, or any organisation or person providing materials or services to the Hydro Tasmania Group who are not employees, and contribute to our service. Contractor also include Entura staff in their capacity as service providers as well as alliances and joint venture partners.</td>
</tr>
</tbody>
</table>
**Controlled waste:** Waste that has regulatory requirements regarding its disposal.

**Cultural significance:** Aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places or related objects. Places may have a range of values for different groups or individuals.

**Dangerous goods:** Substances as described in the Australian Dangerous Goods Code or defined by the Chief Inspector, Dangerous Goods. Dangerous goods are classified on the basis of the immediate physical or chemical effects that may impact on people, property or the environment and include classes of substances or articles that are explosive, flammable, corrosive, chemically reactive, highly combustible, acutely toxic, radioactive or have infectious properties. The majority of dangerous goods also meet the hazardous substances criteria.

**Emergency response plan:** Describes how a specific emergency at a particular site will be combated. It includes specific information and detailed procedures or guidelines for responding to damaging events.

**Employee:** A person employed directly by the organisation, and on the Hydro Tasmania Group’s staff payroll, on a full-time permanent, full-time temporary, part-time or casual basis.

**Engage:** To use dialogue to create mutually understanding, trusting and cooperative relationships.

**Environmental harm:** Any adverse effect on the environment (of whatever degree or duration), including an environmental nuisance.

**Environmental impact:** Any change to the environment, whether adverse or beneficial, wholly or partially resulting from the activities, products, or services of an organisation.

**Environmental Impact Assessment:** The process of identifying, predicting and evaluating the effects of activities on the environment. This is done to ensure that environmental considerations are explicitly addressed and incorporated into the decision-making process. These assessments provide input to management plans for the mitigation of the adverse impacts.

**Environmental incident:** An event, situation or activity arising, including from an emergency, accident or malfunction, that has the potential to cause or has caused environmental harm or environmental nuisance (e.g. oil spill).

**Environmental Management Plan:** A plan detailing the management actions, including objectives and targets, that address the environmental issues raised by an environmental impact assessment.

**Heritage Impact Assessment:** An assessment, together with supporting information, addressing:
- Why the item is of historic heritage significance.
- What impact the proposed works will have on that significance.
- What measures are proposed to mitigate negative impacts.
- Why more sympathetic solutions are not viable.

A Heritage Impact Assessment is required for sites of high or very high heritage value, or where a Conservation Management Plan applies, and may be undertaken as part of an Environmental Impact Assessment.

**Hydro Tasmania Group:** The Hydro Tasmania corporation, including Hydro Tasmania, Entura, Momentum and Hydro Tasmania Wind Operations.
**Historic heritage significance:** Significance to any group or community in relation to the archaeological, architectural, cultural, historical, scientific, social or technical value of the place.

**Job Hazard Analysis (JHA):** The process used to record hazards, job steps and appropriate control measures to manage risks. This includes safety, environmental, financial and production hazards.

**Movable Cultural Heritage:** Any non-living natural or manufactured object with heritage values, ranging from everyday items to technical or mechanical items. Such items may or may not be portable and may range from a single item to a group or part of a collection and are defined in the Hydro Tasmania Movable Cultural Heritage Guidelines.

**Material Safety Data Sheet (MSDS):** Documents that provide the information necessary for the safe handling of chemicals including dangerous goods and hazardous substances.

**Oil:** Hydrocarbon-based lubricants and insulating fluids. Oils include, but are not limited to:
- Oil used because of its insulation or heat transfer properties for the immersion or filling of high voltage electrical equipment
- Hydraulic oil
- Cable oil
- Lubricating oil

**Personal Protective Equipment (PPE):** Any equipment, device or clothing worn by a person to protect against hazards which may be found in worksites, such as water, noise, chemicals, falls, lack of oxygen, presence of harmful gases/chemicals, etc.

**Place (cultural heritage):** A location with associated cultural heritage significance, which includes, but is not limited to:
- A site, precinct or parcel of land.
- Any building or part of a building.
- Any wreck.
- Any item in or on, or historically or physically associated or connected with, a site, precinct or parcel of land where the primary importance of the item derives in part from its association with that site, precinct or parcel of land.
- Any equipment, furniture, fittings and articles in or on, or historically or physically associated or connected with, any building or item.

**Protected object:** An object that has been declared as protected under the *Aboriginal Relics Act 1975*.

**Protected site:** An area of land declared as such by the relevant Minister, under the *Aboriginal Relics Act 1975*, to ensure that where there is a relic on or in any land steps are taken to protect or preserve the relic.

**Protected species:** Any plant or animal species that is protected under State or Commonwealth legislation including threatened species legislation. Plants and animals may be protected that are not at risk of extinction; for example all native Australian marsupials and birds are protected species. There are different categories of protected species that provide different levels of protection.

**Regulatory requirements:** The requirements of all binding laws, regulations, policies and plans established by federal, state or local government authorities, as interpreted through case law and as amended from time to time.
**Resources:** Any materials or items used in conducting business activities within the Hydro Tasmania Group.

**Risk assessment:** The overall process of risk identification, risk analysis and risk evaluation.

**Risk register:** A site-specific register containing a list of location-based hazards, risk levels, control measures and remedial actions to eliminate or minimise the overall level of safety, health, and environmental risk.

**Risk:** The chance of something happening that will have an impact on objectives. Risk may have a positive or negative impact and is often specified in terms of an event or circumstances and the consequences that may flow from it.

**Spill control:** See ‘containment’.

**Stakeholder:** An employee or external person or group of persons who affect and/or could be affected by an organisation’s activities, products or services and associated performance. Stakeholders do not include all those who may have knowledge of or views about the organisation.

**Threatened species:** Species of plants and animals whose survival is threatened that are protected under State or Commonwealth threatened species legislation (e.g. Threatened Species Protection Act 1995, Environmental Protection & Biodiversity Conservation Act 1999). This includes specific plant and/or animal populations or ecological communities (species assemblages) considered at risk of extinction.

**Transfer & transport (chemicals):** Transfer is the deliberate moving of oil, fuel, or another chemical from one containing vessel to another. Transport is the movement of oil, fuel, or another chemical from one site to another (including non Hydro sites).

**Waste:** Primarily any material, whether solid, liquid or gas, that is unwanted by and is of no further use to the owner; however, some waste may have further use to the Hydro Tasmania Group or to another party, and may have disposal value. Wastes include, but are not limited to:
- Used oils and chemical residues.
- Discharges to air, both point source and diffuse, licensed and unlicensed, controlled or escaped.
- Liquid effluent to waterways, sewer, or stormwater.
- Contaminated stormwater or firewater runoff.
- Spills and used spill absorbents.
- Used drums, containers and other packaging.
- Contaminated protective clothing, redundant equipment and materials.
- Solid workshop wastes.
- Kitchen and other food wastes.
- Office wastes.

**Waste management:** The management of wastes and all associated issues, such as waste reduction, storage, recycling, reuse, treatment, disposal, transport, costs, responsibilities, accountabilities and administration.

**Water Licence:** The Special Licence granted to Hydro Tasmania under s.307 and Schedule 4 Clause 7 of the Water Management Act 1999 and the associated Agreement made pursuant to that Clause.
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