



## | Environmental handbook

Helping you look after the environment  
when you're working with Transgrid



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## 1. Introduction

The purpose of this Handbook is to assist Transgrid workers and contractors in meeting their environmental responsibilities.

This Handbook applies to Transgrid workers and contractors involved in the construction and maintenance of our network. This Handbook specifies the minimum environmental controls for all construction and maintenance work on Transgrid's network. Additional project specific controls may be required (refer to s1.3 Environmental Documents). This Handbook applies to all construction and maintenance work and must be made available on site.

Section	Description
Introduction	Provides an overview of Transgrid's environmental management system (EMS), defines responsibilities, summarises key legislative requirements and explains additional documents that might apply to your work.
Pollution	Describes minimum environmental control measures for all construction and maintenance work on Transgrid's network.
Environmental Incidents Emergency Contact Numbers	Describes what to do in the event of an environmental incident, contains Transgrid's spill response procedure and provides a list of emergency contact numbers.

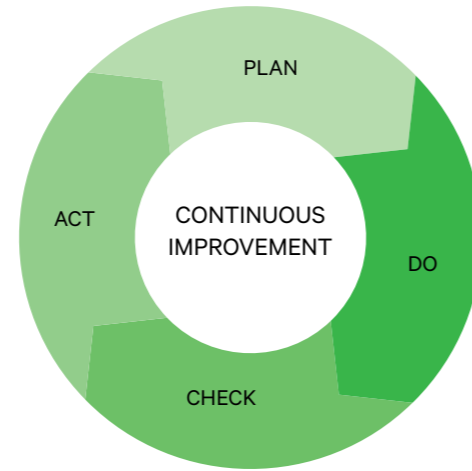
## 1.1 Environmental Management System

Transgrid's EMS provides a structured approach to our environmental management. Our EMS includes procedures, training, records, inspections, objectives and policies.

At an organisational level, our EMS involves:

- Planning to implement policy
- Implementing programs and procedures identified from the planning
- Monitoring performance
- Correcting problems
- Periodically reviewing the entire system

This is a repeating cycle of plan, do, check and act.



At a project level the principles are the same. The key steps include:

### Plan

- Environmental documentation relevant to the project must be available on-site (refer to s1.3 Environmental Documents).
- Understand your environmental responsibilities (s1.2 Responsibilities).
- Think about the site, type of works, project controls and what could go wrong before starting work.

### Do

- Implement the requirements of environmental documentation relevant to the project (s1.3 Environmental Documents).
- Respond to environmental incidents in accordance with section 8 Environmental Incidents.

### Check

- Monitor the works and controls regularly using site conformance inspections (SCIs) or Environmental Inspector Checklists.

### Act

- Act if you see something is not right or could be improved.

Contact Transgrid's HSE Group if you need assistance.

### Accreditation

Transgrid's EMS is certified to AS/NZS ISO 14001:2004 Environmental Management Systems. To maintain certification, Transgrid and its workers must demonstrate compliance with the requirements of this handbook.

## 1.2 Responsibilities

You can also find further information in Transgrid's Environmental Authorisations procedure.

### All workers must:

- Comply with the requirements in all relevant environmental documents related to the works (s1.3 Environmental Documents).
- Speak up if you think an environmental document is missing or cannot be followed, something appears to be wrong, you are not sure what to do or something could be improved.
- Discuss environmental risks and hazards when performing the pre-work risk assessment (PWRA).
- Immediately report environmental incidents to your Team Leader/Manager.

### Team leaders and managers must:

- Understand environmental risks and legal requirements relevant to your area of operations
- Check there are specific procedures and instructions for your workers to effectively manage environmental risks (s1.3 Environmental Documents)
- Ensure environmental documents are accessible to your workers
- Check your workers have adequate supervision, training and resources to comply with procedures and instructions (Refer to Environmental Authorisations)
- Follow appropriate contingency plans for environmental emergencies
- Consider, and if appropriate, investigate all reported environmental concerns

## 1.3 Environmental Documents

All workers must comply with Transgrid's Environmental Policy which provide the overarching values and behaviours expected of our workers.

Some sections of this Handbook refer to other Transgrid environmental guidelines, plans, registers, etc.

These documents provide more detail than this Handbook and will override the requirements of this Handbook in the case of any inconsistencies.

The HSE Documents tab under the Safety, Wellbeing and Environment page is the key document portal on The Wire to find environmental procedures and information.

In addition to this Handbook, a range of project specific documents could also apply to your work, depending on the type of activity. These documents include:

- Environmental assessments
- Other approvals, licences and permits
- Issue specific management plans
- Construction Environmental Management Plans (CEMP)

Compliance with these documents is required by law.

Check if environmental management plans and/or other project specific documentation are applicable to the work / activity.



### 1.3.1 Environmental Assessment

Where projects are proposed for the construction of new assets and/or substantial asset replacement or augmentation, an assessment may be required under Part 5 of the EPA Act 1979 and would either be a Summary Environmental Report (SER) or Review of Environmental Factors (REF).

Routine repairs, maintenance, asset replacement and emergency works will generally not be subject to the EP&A Act, provided that the work is of minimal environmental impact once the appropriate mitigation and control measures are in place.

#### Approvals, licences, permits and notifications

These may be required depending on the nature of the activity and the location of the activity (e.g. harming threatened species, aboriginal heritage, discharging to sewer, working in a National Park). Examples include Aboriginal Heritage Impact Permits (AHIPS), Species Impact Statements (SIS) for threatened species and Trade Waste Licences for sewage discharge.

Where the requirement for approvals or licenses has been identified, these will be clearly identified in either issue specific management plans or the Construction Environmental Management Plan (CEMP) for the project.

#### Issue specific management plans

In some cases the environmental assessment or type of activity will trigger the need for an issue specific management plan (eg waste management plan, noise and vibration management plan).

#### Construction environmental management plan (CEMP)

This document can be a condition of an environmental assessment. It usually applies to large construction projects or projects in sensitive areas. It details the project requirements and the measures to comply with those requirements (Auditing, training, incident response, Erosion and Sediment Control Plans (ESCP), hours of work, project organisational structure and relevant responsibilities, and complaint handling).

If you are unsure whether an appropriate approval, licence, permit or notification is required, please contact Transgrid's Asset Strategy/Environment or HSE Group.

Assistance with the interpretation and implementation and of environmental documentation can be requested from Transgrid's HSE Group.

#### Before you Proceed

- Check that the environmental assessment is on site and understood. Project specific requirements are clearly outlined in the environmental assessment as well as any approvals, licenses or permits.
- If the scope of works increases, the environmental assessment may need to be revised.
- Understand the environmental risks for the project. Check the environmental assessment and assess the site to identify any additional risks that may be relevant on the day (e.g. will it rain? Is there a risk of sediment runoff?)
- Check current controls are working effectively and if not, correct them.

#### Exempt development and environmental checklists

For activities not subject to the EP&A Act, internal due diligence applies and an environmental checklist will need to be completed (unless the potential impacts are negligible).

The following is a list of Environmental Checklists that are used within Transgrid for exempt development:

- Environmental Low Risk Checklist
- Environmental Moderate Risk Checklist (General)
- Environmental Moderate Risk Checklist (Vegetation Maintenance)
- Environmental Moderate Risk Checklist (Access Track Maintenance)
- Environmental Moderate Risk Checklist (Oil/PCB Handling and Transport)

Examples of types of activities that fall within each Checklist can be found in the Environmental Framework.

### 1.4 Legislation

You can find further information on specific environmental legislative requirements in the Environmental Legal and Other Requirements Register located on the Transgrid's intranet the Wire.

#### What do environmental laws require?

Put simply, the law requires Transgrid workers to:

- Adequately assess environmental risk and obtain the required planning approvals, licences and permits
- Undertake activities in a manner that minimises environmental harm
- Put in place control measures to minimise environmental harm
- Immediately report environmental incidents.

In addition to assisting with compliance, this handbook aims to:

- Prevent and reduce incidents
- Improve environmental performance
- Promote community and regulator relationships
- Reduce costs and increase efficiencies.

#### Planning laws

The EP&A Act provides the overall framework for development planning approvals in New South Wales (NSW).

All new construction projects and the majority of maintenance activities carried out by or on behalf of Transgrid will require either an environmental assessment or some form of environmental due diligence check before works begin. Additional approvals may be required under both Commonwealth and NSW law.

#### Pollution control laws

The Protection of the Environment Operations (POEO) Act 1997 regulates air, water, noise and land pollution through a system of licensing, offences and penalties in NSW.

Transgrid is required to:

- Mitigate air, water, noise and land pollution
- Report environmental incidents
- Classify and appropriately manage waste
- Hold an environmental protection licence (EPL) for certain activities and depots.

For further information regarding your requirements under the POEO Act, contact the HSE Group.

#### Penalties under the POEO Act

Severe penalties can be imposed for non-compliance with environmental regulations:

- Up to \$5.5 million for a corporation
- Up to \$1 million and/or seven years jail for individuals.

When investigating an incident, the NSW Environmental Protection Authority (EPA) advises that a worker who acts in good faith and follows environmental procedures (such as this Handbook) would not normally be prosecuted.



## 2. Pollution

### 2.1 Erosion and Sediment Control

Transgrid employees can find further information in Erosion and Sediment Control Field Guide.

Activities that disturb soil or remove vegetation can increase the risk of soil erosion, surface runoff and the possibility of sediment entering drainage or a waterway. This can harm aquatic plants and animals and our waterways.

Check environmental documentation for project specific requirements (section 1.3 Environmental documents).

Comply with a site specific erosion and sediment control plan (ESCP).

Work in accordance with the Working near water courses Fact Sheet (Appendix 1) and Excavation and Machine work Fact Sheet (Appendix 2).

Effective erosion and sediment control involves managing your worksite to minimise erosion and prevent sediment and dirty water leaving the site or entering drainage or a waterway.

Effective erosion and sediment control should aim to:

1. Assess the soil and water risks present or potential on the work site,
2. Minimise the areas disturbed,
3. Conserve topsoil/spoil where required for re-use,
4. Control water flows around and through work sites,
5. Stabilise/rehabilitate disturbed areas progressively,
6. Inspect and maintain all control measures,
7. Remove sediment controls when site is stable.

#### 2.1.1 Controlling Erosion

When disturbing soil during excavation or construction activities best practice is to minimise the amount/area disturbed.

Minimising and controlling erosion reduces the amount of sediment generated.

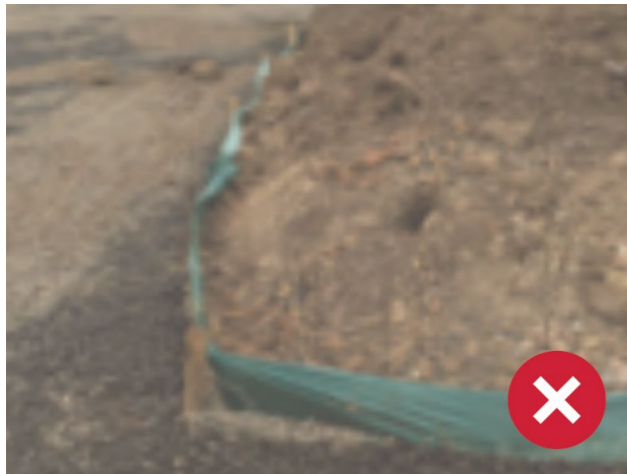
Mitigate erosion by:

- Minimising disturbance
- Stabilise high traffic areas
- Slow down or redirect water flow through the site
- Protect disturbed areas with gravel, mulches, erosion matting or blankets
- Stabilise disturbed areas ASAP once work is complete





## 2.1.2 Stockpiling



### Where possible avoid stockpiling by:

- Placing unwanted spoil directly into a truck or skip bin.
- Scheduling deliveries so that materials are delivered only as required.

### When stockpiling:

- Put excavated soil upslope of excavation.
- Make sure sediment fences are installed correctly and are maintained.
- Reuse spoil elsewhere on-site.
- Place stockpiles away from roadways, gutters, drains, slopes, concentrated flow paths and channels.

### If stockpiles are at risk of wind or water erosion:

- Cover stockpiles with a tarpaulin if the site is left unattended or when rain is expected.
- Minimise surface water flowing on to the stockpile using barriers such as sand bags.

## 2.1.3 Trenching

### Mitigate erosion by:

- Avoid trenching during periods of heavy rainfall.
- Divert surface water away from trenches using the trench spoil or barriers such as sandbags.
- Minimise the time trenches are open.
- When discharging water off site refer to section 2.3 Water discharge.



### 1.

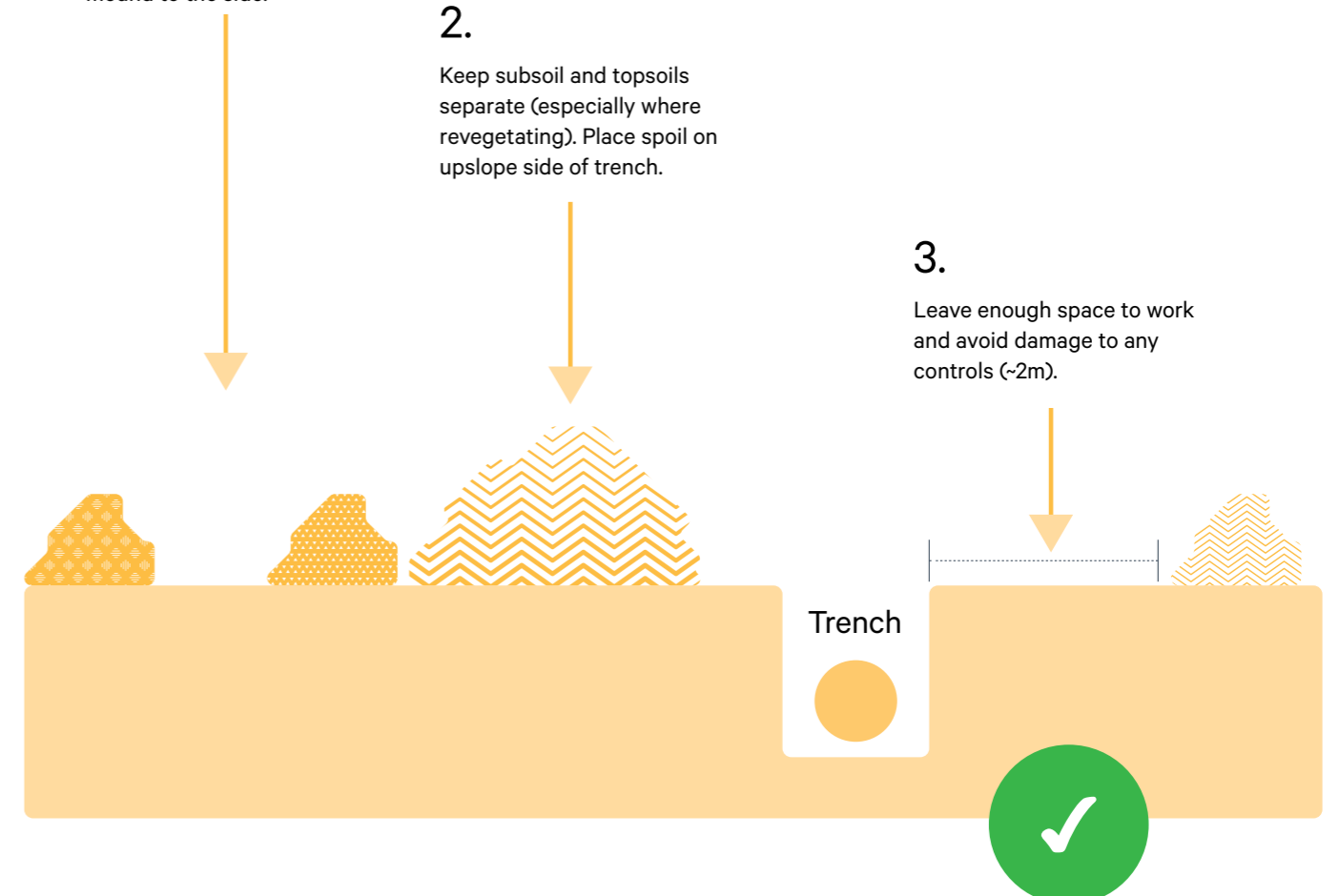
If in gravelled areas, clear gravel from the trench alignment and work area, and stockpile or mound to the side.

### 2.

Keep subsoil and topsoils separate (especially where revegetating). Place spoil on upslope side of trench.

### 3.

Leave enough space to work and avoid damage to any controls (~2m).





## 2.1.4 Sediment Control General

If erosion occurs sediment is generated. You should avoid allowing sediment to leave the worksite or enter drainage (it is an offense under the POEO for sediment to enter any 'waters' which includes creeks and storm water drainage).

Gravel bags (or similar off the shelf products) should be installed in/around site drainage where there is a risk of sediment entering 'waters'.

### Sediment fences

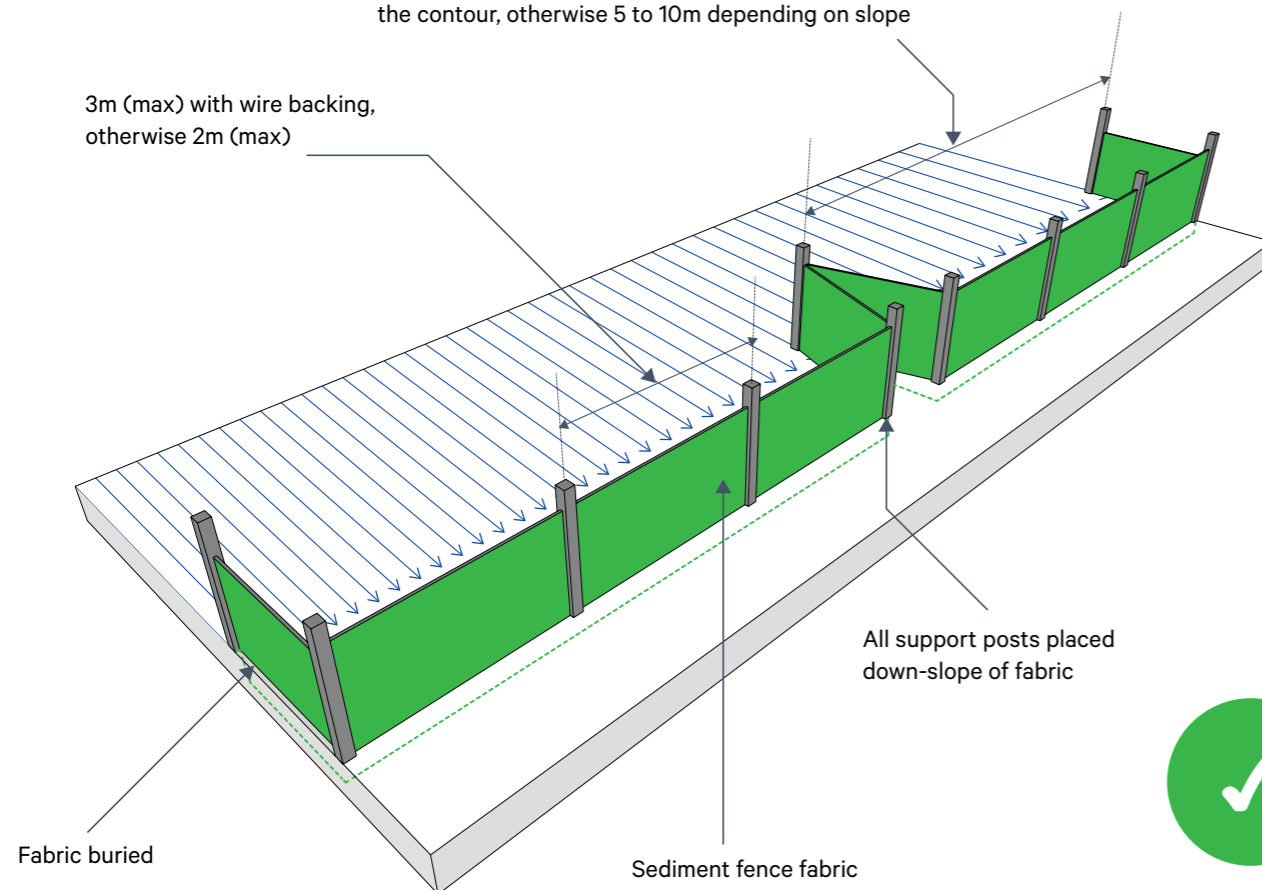
Sediment fences are the most commonly used sediment trapping/filtering device used on construction sites, but, their effectiveness in controlling sediment can be limited when poorly installed or located and/or there is inadequate maintenance.



#### Locate sediment fences:

- Parallel to the site contours
- As close as possible to disturbed areas.
- Trench fence in 150-200mm
- If the fence runs downslope create small returns every 20m along the fence to limit the catchment area of any one section.

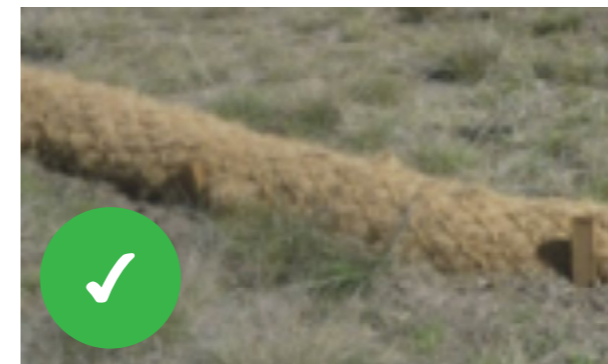
'Returns' placed at 20m spacing (max) if fence is located along the contour, otherwise 5 to 10m depending on slope



### Coir logs

Natural and biodegradable products such as coir logs are suited to natural areas as an alternative to sediment fence.

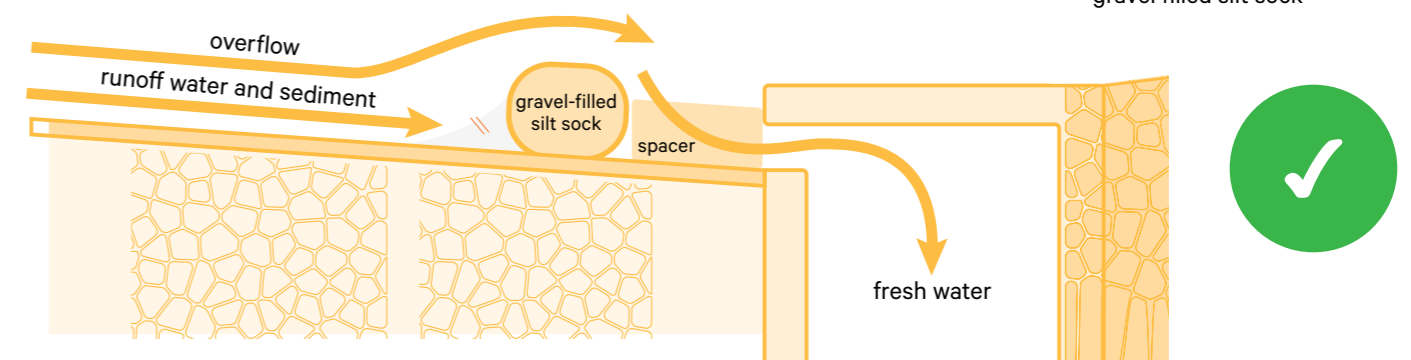
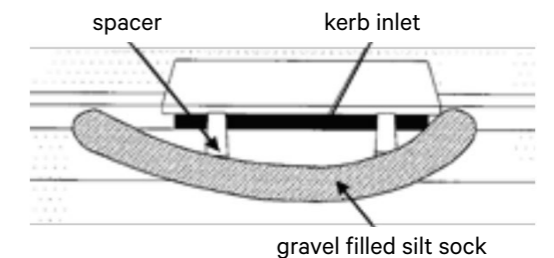
- Coir logs can be considered for filtering water from coarse/sandy soils.
- Bed the logs in at least 75mm to prevent undermining.
- Stake logs at regular intervals to prevent movement/uplift.



### Sediment control in drainage

- Fill geotextile filter bags to two-thirds capacity with 25 to 50mm aggregate.
- Form a seal with the kerb to prevent sediment bypassing the filter bag.
- When protecting a kerbside inlet:
  - Make the geotextile filter bag longer than the length of the kerbside inlet pit
  - Use spacer blocks between the filter bag and the kerbside inlet as shown.

**REMEMBER: Sand bags form a dam to slow water and gravel bags slow water and filter**



- Check environmental documentation for project specific requirements (section 1.3 Environmental documents).
- Comply with a site specific erosion and sediment control plan (ESCP).



## 2.2 Air Quality

Dust, smoke, fumes and odours can adversely impact the environment, human health and property.

When planning works, consider the likelihood of the activities impacting on the local air quality, with consideration given to the amount of excavation occurring, wind speed and neighbouring land occupiers.



### Dust prevention

Prevent dust from leaving the worksite by using appropriate controls. Examples include:

- Use water sprays to dampen (but not saturate) disturbed surfaces and stockpiles at material transfer points and during construction and demolition (make sure water is not saline).
- Minimise soil disturbance (section 2.1 Erosion and Sediment control).
- Minimise excavations on windy days.
- Stabilise long term stockpiles by covering, or with soil binders.
- Install dust barriers on fences and gates.
- Restrict traffic movement and vehicle speeds over disturbed areas and unsealed roads.
- Use dust collection devices on construction and rock breaking equipment where available.
- Always cover loads on trucks (eg use 'enviro- tarps'). This is a legal requirement.

### Other emissions:

Reduce emissions such as SF6, other gases and air pollutants:

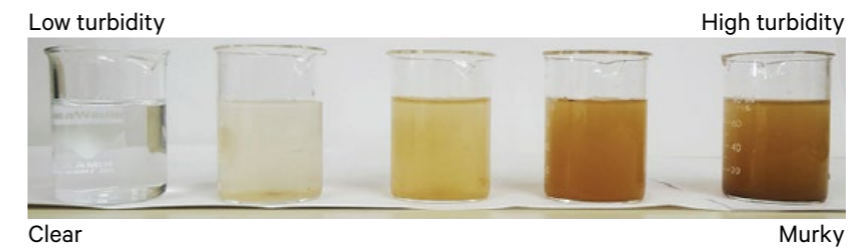
- Handle SF6 and other gases in accordance with Transgrid procedures : Management of SF6 Gas, Work Instructions – Disposal of SF6 Electrical Equipment and Cylinders – SF6 Powder and Material
- Check vehicles and equipment are serviced regularly and operate efficiently.
- Position vehicles and equipment where the fumes will least affect receivers.
- Do not leave vehicles or equipment idling when they are not needed.

## 2.3 Water Discharge

Water often collects on site in pits, trenches and excavations or may be stored in sediment tanks, traps or basins. When discharging collected water there may be site specific criteria for water quality.

In the absence of project or site specific targets the default water quality must be:

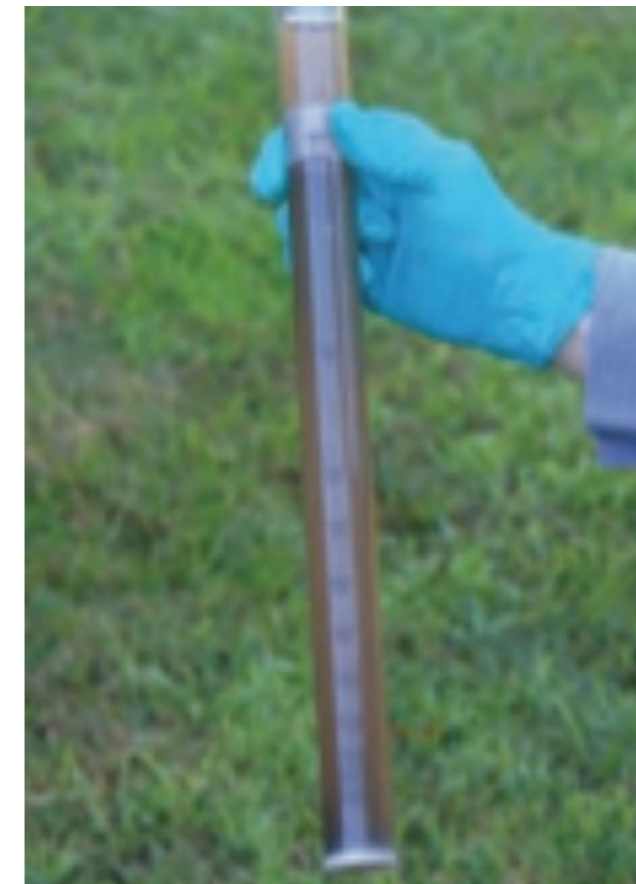
- pH between 6.5-8.5;
- TSS <50mg/L (generally correlates to field turbidity of less than 60 NTU);
- No visible oil and grease, and
- No vegetative matter or trash.



- Check environmental documentation for project specific requirements (section 1.3 Environmental documents).
- Comply with a site specific water management plan when one is required for large construction sites or long term water discharges.

### General control measures

- Use the dewatering work instruction for discharging water from a trench, pit or excavation.
- Organise a licensed tanker to remove the water if the relevant discharge criteria cannot be achieved.
- Non-domestic discharges to sewer must be in accordance with a permit from the relevant water supply authority.
- For storage of oils, fuels and chemicals refer to section 3.1 Oil, fuel and chemicals.
- For sediment runoff refer to section 2.1 Erosion and sediment control.





### General process for dewatering of pits, excavations and/or sediment tanks

Water must be monitored for each discharge by field measurements as follows (monitor water quality at the discharge point):

- An electronic waterproof pH meter and/or pH strips,
- A turbidity tube and/or NTU meter (calibrated for the site soils),
- Oil and grease will only be tested for if an oily sheen is visible on the surface of the water,
- Debris (such as trash, vegetative matter etc.).

#### Prior to discharge

Before the discharge of any water from an excavation or sediment tank, the location of the stored water and proposed release location must be recorded as well as the following information:

- Date
- Tested by
- Flocculant & rate (if any)
- Time
- pH 6.5-8.5
- Turbidity Field (generally less than 60 NTU)
- Turbidity Lab (for larger projects)
- TSS (lab result) <50ppm
- Oils (no visible film)
- Debris (none visible)
- Approved by/ Comments

Contact the Transgrid's HSE team for assistance if required



## 3. Chemical Management

Chemicals must be handled, stored, transported and disposed of in a way that minimises the risk of a spill or leak.

Check environmental documentation for project specific requirements (section 1.3 Environmental documents).

Comply with an approved checklist for:

- Oil transfers greater than 2,000 litres (L) or any amount of PCB materials within a Premise (Moderate Risk Checklist and Oil PCB Management Form).
- Oil transfers greater than 200 litres (L) or any amount of PCB materials outside a Premise (Moderate Risk Checklist and Oil PCB Management Form).
- Oil transfers greater than 200 litres (L) but less than 2,000 litres, outside a permanent bund and within a Premise (Low Risk Action checklist).
- Oil transfers less than 2,000 litres (L) inside a permanent bund or less than 200 litres (L) outside a permanent bund and within a Premise (negligible risk — no checklist required, however the requirements of this handbook still apply).
- Oil transfers less than 200 litres (L) outside a Premise (negligible risk - no checklist required, however the requirements of this handbook still apply).



### 3.1 Oil, Fuel and Chemicals

#### General control measures

- Clearly label all oil, fuel and chemical containers.
- Promptly clean spills and leaks (section 8 Environmental incidents)

#### Transport and handling

Vehicles transporting oil must be roadworthy and appropriately equipped to securely transport oil and contain the following as a bare minimum

- Spill kit
- Radio or mobile phone
- Protective clothing
- Dry-chemical fire extinguisher
- 2 x foam AFFF fire extinguishers



Spills kits should be readily available in storage areas



Equipment stored too close to bund wall.



Bunded chemical storage cabinet used to store chemicals and fuels.



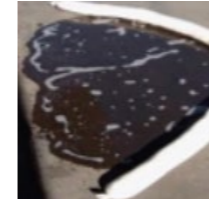
Spray distance is half the height of the container.

- Position oil transfer equipment as far away as practical from drains and property boundaries.
- Monitor oil hoses and pumps while in use.
- Regularly inspect and maintain all plant and equipment used in the handling and transport of oil, fuel or chemicals.
- Secure equipment, containers and drums during transport.
- Where practical, handle oil, fuel and chemicals where in the event of a spillage, they can be easily recovered and minimize the possibility of entering a drain or waterway (eg on hard stand, within a bunded area, under cover).

#### Storage

- Store oil in a bund unless it is temporary storage. Temporary storage must meet all of the following requirements:
  - Total volume is less than 1,000 L
  - Stored for less than 24 hours
  - Spills can be easily recovered and minimize the possibility of entering a drain or waterway
  - The oil less than 2 ppm polychlorinated biphenyls (PCB). If unsure or a NATA certificate is unavailable, treat as PCB oil
  - A stocked spill kit is nearby
- Chemicals, fuels and all other oil storage must be bunded.
- Bunds should be at least 133% of the volume of the largest container.
- Bunds must be in good condition (eg impervious, free of debris, drain valve closed, emptied after rain).
- Store incompatible chemicals separately.

### Spill Response and Clean-up Materials



Product	Uses	Notes
Socks and booms	<ul style="list-style-type: none"> <li>• Surround leaking drums.</li> <li>• Place in the flow path (eg drain).</li> <li>• Use as a floating boom.</li> </ul>	<ul style="list-style-type: none"> <li>• A 3m sock holds around 6L of oil.</li> <li>• Will eventually deteriorate and sink in water.</li> <li>• Can be disposed to general solid waste if no PCB or free liquids.</li> </ul>
Polymer agent	<ul style="list-style-type: none"> <li>• Can be used for spills on water.</li> <li>• Apply as a powder. Solidifies hydrocarbons into a rubber like mass and suppresses harmful odours.</li> <li>• Has been tested as non-harmful to aquatic plants and animals.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be disposed to general solid waste if no PCB or free liquids.</li> </ul>
Absorbent pads	<ul style="list-style-type: none"> <li>• Place under leaks and drips.</li> <li>• Use as a floating pad.</li> <li>• Place in trafficable areas.</li> <li>• Place in drip trays.</li> <li>• Use as a wipe.</li> </ul>	<ul style="list-style-type: none"> <li>• Holds around 1 L of oil.</li> <li>• Will eventually deteriorate and sink in water.</li> <li>• Can be disposed to general solid waste if no PCB or free liquids.</li> </ul>
Powder absorbent	<ul style="list-style-type: none"> <li>• Use for spills on hardstand such as concrete.</li> <li>• Apply powder, work in with a broom then remove.</li> <li>• Do not use on water.</li> </ul>	<ul style="list-style-type: none"> <li>• Can be disposed to general solid waste if no PCB or free liquids.</li> </ul>
Loose absorbent	<ul style="list-style-type: none"> <li>• Apply loose material over spill and spread with a broom for maximum absorption.</li> <li>• Do not use on water.</li> </ul>	<ul style="list-style-type: none"> <li>• Holds approximately half the volume of the absorbent (eg 50 L bag holds 25 L oil).</li> <li>• Can be disposed to general solid waste if no PCB or free liquids.</li> </ul>
Absorbent pillows	<ul style="list-style-type: none"> <li>• Absorb &gt; quantity than sheets</li> <li>• Can use in drains, pits or gutters.</li> </ul>	<ul style="list-style-type: none"> <li>• Holds around half the volume of the absorbent (eg 20 L pillow holds 10 L oil).</li> <li>• Will eventually deteriorate and sink in water.</li> <li>• Can be disposed to general solid waste if no PCB or free liquids.</li> </ul>



### 3.2 Polychlorinated Biphenyls

PCBs are considered hazardous material and have strict requirements for storage, handling, and disposal under the POEO Act.

PCBs are a group of synthetic compounds once used for their insulating properties and durability. However, they are now known to pose a risk to human health and the environment.

Transgrid is removing PCB contaminated oil and equipment from our network in accordance with our PCB management plan and licence.

The following requirements apply when managing PCB material and wastes, in addition to 3.1 Oil, fuel and Chemicals.

#### Testing

- The Substations Officer is responsible for arranging oil samples to determine the PCB level.
- Consider the item to be scheduled PCB where the PCB level is unknown or if the equipment was manufactured before 1997 or if the date is uncertain.

#### General transport and handling

- Wear required personal protection equipment (PPE) and use good hygiene practices. Clearly label PCB material, waste and storage areas and have spill kits and PPE readily available.
- Store PCB material in waste storage areas bunded in accordance with AS 1940 The storage and handling of flammable and combustible liquids and located in secure areas.
- Clearly label and secure.

Transgrid employees can find further information in the Transportation, Storage and Disposal of Polychlorinated Biphenyls (PCBs) procedure and the waste management work instructions located on the Wire.



Classification	PCB Range
PCB Free	• 2 parts per million (ppm) or less
Non-scheduled PCB	• Between 2 ppm and 50 ppm
Scheduled PCB	• 50 ppm or greater
PCB material and waste	• Oil, equipment, rags, oil absorbent products and soils which are contaminated with PCB

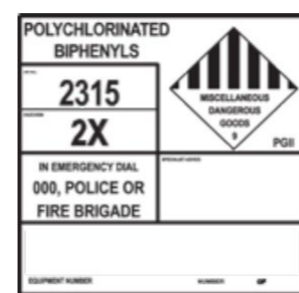
Scheduled PCB is a dangerous good in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).



Non-schedule PCB label



PCB drum label



PCB placard

#### Legislative requirements

A licence is required for the transport and storage of scheduled PCB oil or waste electrical scrap greater than one tonne. Where a PCB licence is required:

- Use PCB licensed transporters to take PCB material directly to a licenced waste disposal facility.

#### OR

Transport and store in accordance with Transgrid's Environmental Protection Licences (EPLs), including:

- Store for no more than 14 days at Transgrid premises (unless in the Scheduled PCB Store at Wallgrove).
- Store in an area which is covered, bunded with no drainage outlets and locked from unlawful entry.

Direct transport by Transgrid employees from Transgrid premises to a disposal facility or Transgrid's licensed storage facility at Wallgrove is permitted as long as the vehicle which is transporting the PCB material:

- Is fit for purpose.
- Copies of the EPL 7153 Licence and the PIRMP are on board.
- Suitable PPE, spill equipment and fire extinguishers are on board.
- Waste tracking certificates may also be required.

- Check environmental documentation for project specific requirements (section 1.3 Environmental documents).
- Refer to safety data sheet (SDS) and contact the HSE group for WHS requirements.

Receptacles include drums, containers and tanks, but do not include equipment containing oil.

#### Dangerous goods

Dangerous goods requirements apply when transporting scheduled PCB material:

- Label as dangerous goods in accordance with the ADG Code.
- Carry required PPE, safety equipment and documentation on transport vehicles.
- When carrying receptacles greater than 500 kg(L), use a dangerous goods licensed driver and vehicle.
- Placard receptacles greater than 500 kg (L) and aggregate loads greater than or equal to 1000 kg (L) with emergency information panels.

#### Disposal

- Dispose of all PCB waste to an EPA licensed facility.
- Comply with waste licensing and tracking requirements (section 4.3 Waste management).
- To arrange disposal Transgrid employees can contact the Substations Manager or Support Engineer.



### 3.3 Pesticides

The appropriate storage, handling and disposal of pesticides is a requirement under the Pesticides Act 1999.

Pesticides manage problems associated with unwanted pests and include herbicides, termiticides, insecticides, biocides and fungicides. If these chemicals are misused they can have harmful effects on human health and the surrounding environment.

#### Notification requirements

- Display approved notification signage when pesticides are used in public places in accordance with Transgrid's Pesticide Use Notification Plan.
- Notify owners and occupiers of private property at least 72 hours prior to use on their property.
- Have the SDS available during use for employees or members of the public.

Note: Pesticides may have a withholding period when applied on agricultural/pastoral land that may extend past 72 hours. This should be kept in mind when planning pesticide application works.

#### Planning and use

- Only use Transgrid approved pesticides (refer to the Schedule of Approved Pesticides).
- Use the correct equipment and pesticide for the job.
- Use well maintained equipment that is in good working order.
- Mix only what you need.
- Handle, store, mix, use and dispose of pesticides in accordance with the label or permit.
- Ensure spray does not drift outside the target area.
- Avoid spraying during periods of rain or wind.
- Provide an adequate buffer area between the application and dwellings, waterways, animals or environmentally sensitive areas.

#### Storage

- Store pesticides in a container with an Agricultural and Veterinary Chemicals (AGVET) Code approved label.
- Store in areas that are bunded, secure, cool and well ventilated.

#### Transport

- Transport only enough pesticide as is reasonably required for the job.
- Carry an appropriate spill kit in all vehicles used to transport pesticides.

You can find further information on pesticides in Transgrid's Use of Pesticides and Schedule of Approved Pesticides procedures on the Wire. Transgrid also has a Pesticide Use Notification Plan which is publicly available on Transgrid's external website.



## 4. Contamination and Waste





## 4.1 Asbestos

Asbestos Containing Material (ACM) are hazardous materials that have the potential to cause long term health effects including Mesothelioma (Cancer of the pleura) and Asbestosis (Lung disease) and can easily become inhaled into the respiratory system when disturbed.

Asbestos is typically classified as either bonded (concrete/cement) or friable (powder/'fluffy' form that is able to be crushed with hand when dry). Friable asbestos is considered more dangerous than bonded.

Asbestos materials were historically used in Transgrid as backing boards, arc shields, general insulating material, floor tiles, wall panels, waterproof mastic and textiles (such as rope seals).



ACM asbestos arc shields



ACM floor tiles



ACM rope seals of fuse box



ACM old water pipe

All currently known asbestos in Transgrid can be found on the Asbestos Registers which were completed in 2014 for the Northern, Central and Southern Regions.

Note: All sites are re-surveyed every five years and constantly updated as information becomes known.

- Transgrid employees can find further information in Transgrid's Asbestos Management Plan and Asbestos Removal Plan and Work Instruction – Disposal of Asbestos located on the Wire.
- Before working within a Substation, radio repeater site or on a transmission line structure, check the Asbestos Register.
- If unsure of requirements, contact the Transgrid HSE Group.

Asbestos is generally referred to as either brown, white or blue and includes mineral silicates such as: actinolite, grunerite (or amosite), anthophyllite, chrysotile asbestos (white), crocidolite asbestos (blue) and tremolite.

### If suspected ACM is uncovered:

- Cease work immediately and evacuate the area
- Contact the Transgrid Team Leader & HSE Team
- Erect barricades and provide appropriate PPE to all personnel required to be in the vicinity
- DO NOT disturb the suspected ACM until verification and removal strategies are completed.

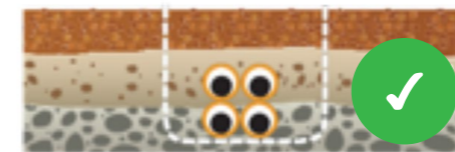
## 4.2 Acid Sulfate Soil

Acid sulfate soils (ASS) are naturally occurring sediments and soil containing iron sulfides. They are generally found in low lying areas and near waterways such as swamps, marshes or mangroves. Potential Acid Sulfate Soils (PASS) are mapped on TAMIS.

When ASS is exposed to air, such as by excavating or lowering the water table, sulfuric acid is formed. The acid can harm aquatic life, impact groundwater and corrode infrastructure. A site specific ASS management plan will need to be prepared by a specialist, assistance should be sought from the HSE Group.

Typical control measures in an ASS management plans can include:

- Minimise disturbance to the soil.
- Keep the excavation as shallow as possible.
- Minimise the time that soils are exposed to air by staging works and storing soils in a lined and covered skip bin or wrapped in plastic.
- Where possible, re-bury soil at the same depth from which it was excavated.
- Undertake necessary testing and treatment prior to disposal.



### Field indicators of the PASS include:

- The presence of mangroves, reeds, rushes or swamp vegetation
- Rotten egg smell after rain following a dry spell or when soils are disturbed
- Marine or estuarine sediments
- Soils that can be described as unripe muds or sediments (eg soft, buttery, blue/grey or dark greenish grey) which can include sands and gravels
- Milky blue/green water
- Shell fragments in the soil
- Waterlogged, scalded or backswamp areas
- Land below 10 m Australian height datum (AHD) elevation
- Any jarosite (a pale yellow mineral deposit) or iron oxide (rusty) mottling
- Extensive iron stains on any drain surfaces or iron stained drain water and ochre deposits
- Corrosion of concrete and/or steel structures
- Surface or ground water with either a pH below 5.5 or that is unusually clear.

Check environmental documentation for project specific requirements (section 1.3 Environmental documents):

- Comply with an ASS management plan when excavating in PASS areas.
- Site specific ASS management plan are required for:
  - Excavations in ASS which are greater than 50m<sup>3</sup> at any one time
  - Discharging water in ASS or affecting the water table.
- Comply with a waste management plan when one applies to your project.

Transgrid employees can contact the HSE Group for further assistance.



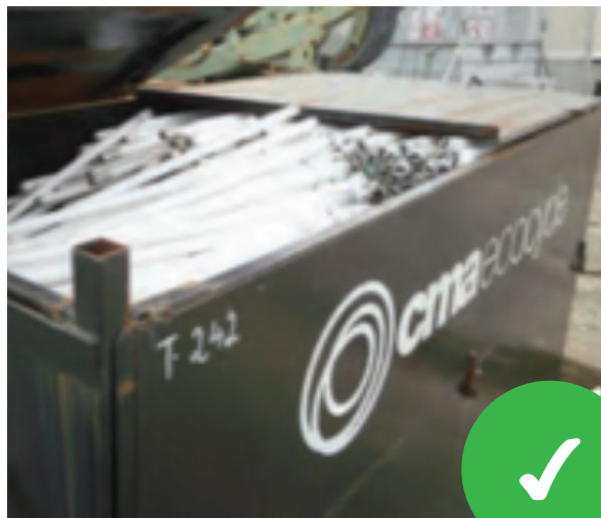
### 4.3 Waste Management

Waste is defined as any discarded, rejected, unwanted, surplus or abandoned substance or material – even if it can be processed, recycled, reused, recovered or is intended for sale.

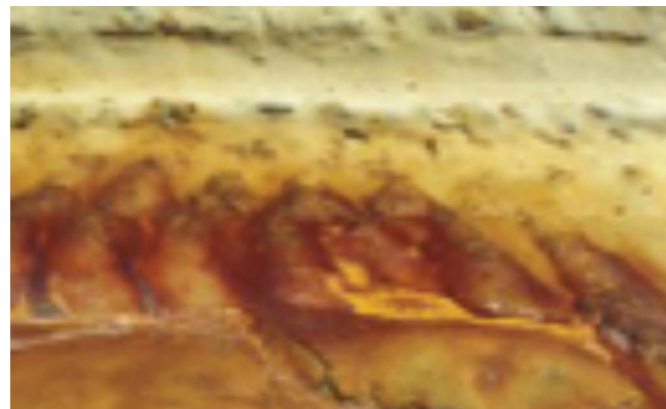
Good waste management reduces waste going to landfill, minimises disposal costs, conserves resources and avoids environmental damage.

Transgrid employees can find further information in the Waste Management procedure and work instructions on the Wire.

Segregate waste



Indicator of ASS – milky blue/green water



Indicator of ASS/PASS - rusty leaching in exposed soils



Stockpile ASS/PASS correctly to minimise exposure to air

#### Plan

- Classify wastes to determine licensing, waste tracking and disposal requirements.
- Where possible, avoid, reduce, reuse and recycle.

#### Store

- Segregate and label waste to improve recycling opportunities, avoid cross-contamination and reduce disposal costs.
- Check the bins capacity. Do not overfill.
- Keep containers in good condition.
- Cover wastes that can be blown or washed away.
- Avoid storing waste near drains, waterways and incompatible substances.
- Store liquid waste as per section 3.1 Oil, fuel and chemicals.
- Store waste quantities exceeding licensing thresholds at licensed premises. Refer to the waste classification table.
- Note: Sydney West has an Environmental Protection Licence to store hazardous waste including PCBs and Asbestos.

#### Transport

- Secure and cover loads to prevent spilling waste.
- Use a licensed transporter for certain wastes. Refer to the waste classification table.
- Before transporting any waste which requires waste tracking:
  - Obtain consignment approval from the receiving waste facility
  - Complete and sign the waste transport certificate
  - Follow record keeping requirements and retain hard copies of waste tracking records for four years.

#### Disposal

- Dispose of the waste to an appropriately licensed facility.
- Transgrid employees should use waste bins at depots or refer to work instructions on the Wire for specific disposal instructions for particular types of waste.

Note: You don't need a licence or waste tracking for transport by Transgrid employees in Transgrid vehicles between Transgrid premises (eg from a substation to a depot). Requirements may be required for dangerous goods or PCB and Asbestos, depending on concentration and volume.

Contact the HSE Group for further assistance if unsure.

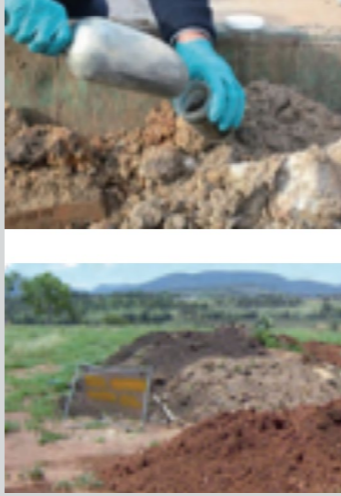


## 4.4 Waste Classification

The following table shows licensing and tracking requirements for common wastes. The requirements are general and exceptions may apply.

Some wastes may have special requirements, including scheduled chemical waste, dangerous goods, PCB, soil from transmission trenches and radioactive waste.

Waste Class	Examples	Legal requirements		
		Licence to store?	Licence to transport	Waste tracking?
General solid waste	<ul style="list-style-type: none"> <li>Asphalt</li> <li>Building and demolition waste</li> <li>Bricks, concrete and timber</li> <li>Oil filter and absorbent materials (no free liquids and PCB free)</li> <li>Vegetation waste</li> <li>Wood poles (including treated poles)</li> <li>Soil/spoil</li> </ul>	<ul style="list-style-type: none"> <li>Yes, if storing more than 2,500 tonnes of waste</li> <li>Generated off-site</li> <li>Refer to Waste Classification Guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>No</li> </ul>	<ul style="list-style-type: none"> <li>No</li> </ul>
Restricted solid waste	<ul style="list-style-type: none"> <li>Transgrid has no pre-classified restricted solid waste</li> </ul>	<ul style="list-style-type: none"> <li>Yes, if storing more than 5 tonnes of waste generated off-site</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Hazardous waste	<ul style="list-style-type: none"> <li>Aerosols (eg empty spray cans, LPG bottles, etc)</li> <li>Dangerous goods - compressed gas, flammable, corrosive, toxic</li> <li>Lead-acid or nickel-cadmium batteries</li> <li>Dry lead paint waste</li> <li>Street lamps</li> </ul>	<ul style="list-style-type: none"> <li>Yes, if storing &gt;5 tonnes of waste generated off-site</li> </ul>	<ul style="list-style-type: none"> <li>Yes, in loads of more than 200 kg</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Liquid waste	<ul style="list-style-type: none"> <li>Chemicals, solvents, acids, alkalis, poisons, cleaning agents</li> <li>Grease and lubricants</li> <li>Liquid grease trap wastes</li> <li>Oil (for PCB &gt;2 ppm refer to section 3.2 PCBs for additional requirements)</li> <li>Liquid paint</li> <li>Liquid pesticides</li> <li>Septic tank waste</li> </ul>	<ul style="list-style-type: none"> <li>Yes, if storing &gt;5 tonnes of waste generated off-site (60 tonnes for recyclable oil)</li> </ul>	<ul style="list-style-type: none"> <li>Yes, in loads of more than 200 kg</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Special waste	<ul style="list-style-type: none"> <li>Asbestos</li> <li>Sharps</li> <li>Tyres</li> </ul>	<ul style="list-style-type: none"> <li>Yes, if storing &gt;5 tonnes of waste generated off-site (50 tonnes for tyres)</li> </ul>	<ul style="list-style-type: none"> <li>Yes, in loads &gt;200 kg (2 tonnes for tyres)</li> </ul>	<ul style="list-style-type: none"> <li>Yes, except for asbestos and tyres within NSW</li> </ul>

Type of Spoil	Management Options
<p>Virgin excavated natural material (VENM) Natural material that comes from undisturbed areas that are not contaminated.</p> <p>Assistance is required from the HSE Group for VENM classification.</p>	<ul style="list-style-type: none"> <li>Reuse as fill on any site, provided it meets the conditions of the planning approval for that site OR</li> <li>Dispose to a landfill licensed to accept VENM.</li> </ul>
<p>Excavated natural material (ENM) Naturally occurring rock and soil that meets specific requirements.</p> <p>Chemical testing is required. Assistance is required from the HSE Group for ENM classification and arranging chemical testing.</p>	<ul style="list-style-type: none"> <li>Reuse as fill on any site, provided you comply with record keeping requirements and meet the conditions of the planning approval OR</li> <li>Dispose to a landfill licensed to accept ENM.</li> </ul>
<p>Suspected contaminated spoil Refer to section 4.5 Contamination and section 4.2 Acid sulfate soils.</p> 	<ul style="list-style-type: none"> <li>Segregate suspected contaminated spoil from clean spoil to reduce disposal costs.</li> <li>Temporarily store excavated spoil in a lined/ sealed skip or bulk storage bag on-site or at a licensed storage facility if required.</li> <li>Undertake chemical testing to determine the waste classification and subsequent storage, transport, tracking, licensing and disposal requirements.</li> </ul>
Other spoil	<ul style="list-style-type: none"> <li>Undertake an assessment to determine the waste classification and subsequent reuse options, storage, transport, tracking, licensing and disposal requirements. Transgrid employees can contact Transgrid's HSE Group to arrange these assessments.</li> </ul>



## 4.5 Contamination

Contaminated sites are a risk for workers, Transgrid's infrastructure, the public and the environment.

Contaminated sites require a specialist assessment to determine necessary health, safety and environmental controls.

Some examples of where you may find a contaminated site include fuel storage areas, areas where oil filled equipment is being used or has been used, petrol stations, drycleaners and industrial sites.

Contaminated soil or water requires testing to determine remediation and disposal options.

Transgrid employees can find further information on the process for the investigation, notifications and remediation of contaminated land or waters in Transgrid's Contaminated Land Management procedure located on the Wire. A register of all known contaminated sites is also kept by the HSE Group.

Indicators of the presence of contamination include:

- Odorous material (eg fuels, solvents, rotten egg gas)
- Oil staining
- Oil sheen on groundwater
- Underground storage tanks (UST)
- Buried waste (eg asbestos, construction waste, containers)
- Imported fill (eg ash, coke, asbestos)
- Unusually coloured material.

- Check environmental documentation for project specific requirements (section 1.3 Environmental documents).
- Comply with a remediation action plan (RAP) when one applies to your project.
- If you think that you have found contamination, you must stop work immediately, restrict access and notify:
  - Your supervisor
  - Transgrid's HSE Group for environmental and safety requirements.

Failure to notify the regulator could result in severe penalties. The Corporate Environment Manager will notify the regulator if required.

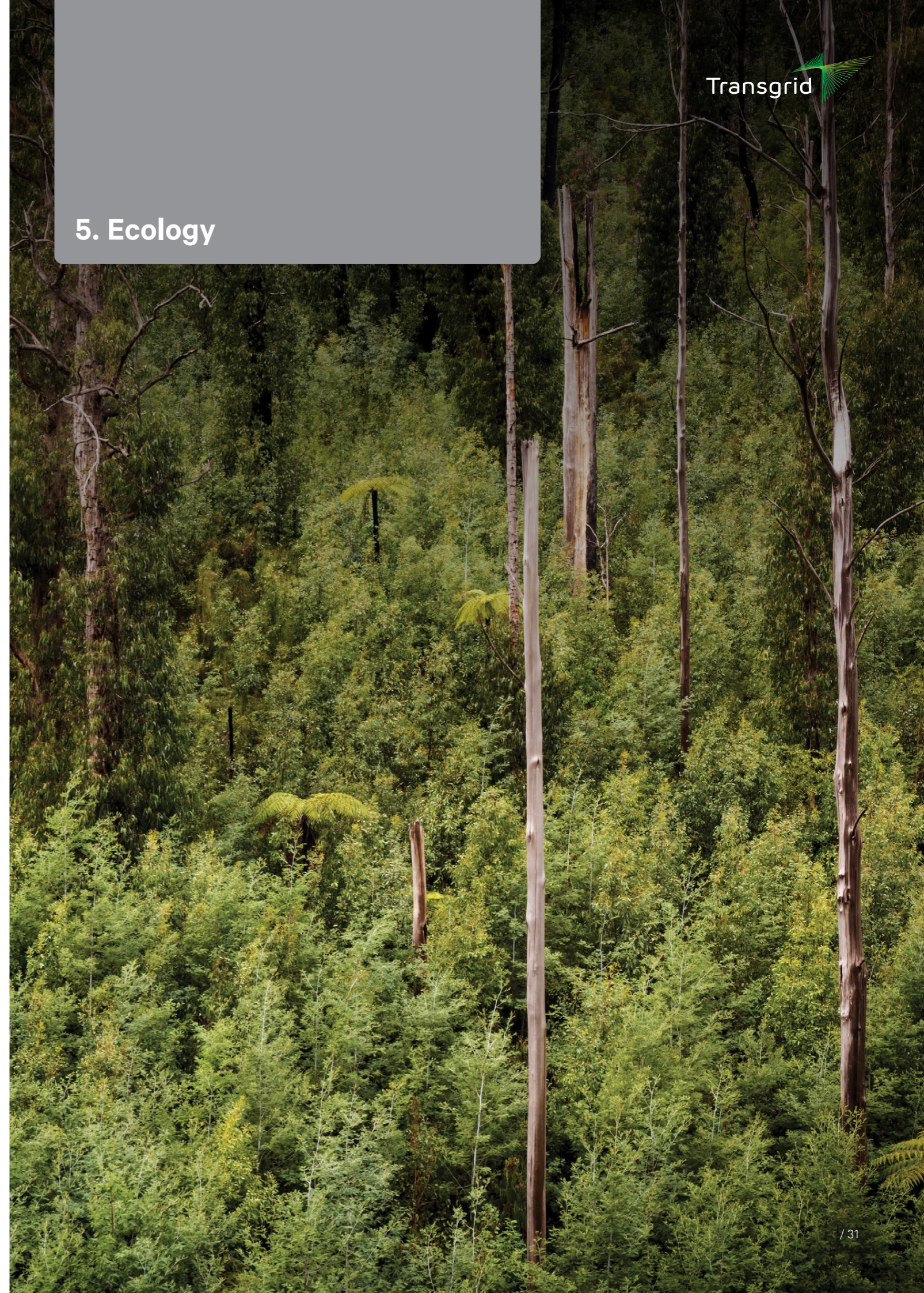


Contamination may require special PPE for the safety of workers



Excavation reveals oil contamination in an excavation next to a Transformer Bund

## 5. Ecology



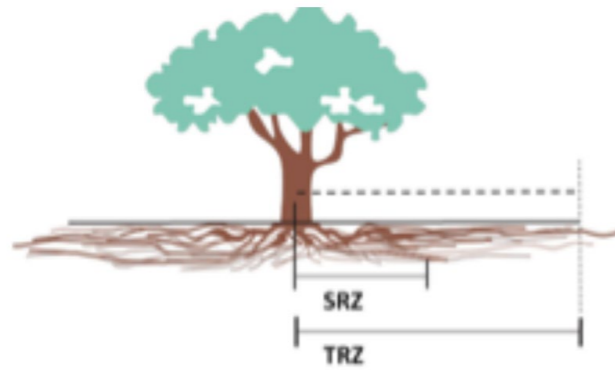


## 5.1 Vegetation

Healthy vegetation has a range of benefits for the environment and the community. Minimising impacts on vegetation, protecting the soil around trees and using correct trenching and pruning procedures can help to maintain healthy vegetation.

Works within the tree protection zone (TPZ) such as trenching, stockpiling soils or parking vehicles and plant can directly impact the health of a tree. The TPZ can extend a significant distance beyond the canopy, and should be protected to ensure the long-term viability of the tree.

The structural root zone (SRZ) is the area where the roots provide critical structural stability for the tree.



### General control measures

- Make sure the work plans for vegetation maintenance are correctly followed and contractors are aware of any trees that are to be protected.
- Minimise clearing and disturbance of all vegetation, particularly along watercourses.
- Where possible, establish and work outside the TPZ. Refer to the TPZ and SRZ radius graph.
- Avoid physical damage to trees.
- Where possible, avoid the removal of ground cover and understory vegetation.
- Where possible, use existing access tracks.
- Avoid the introduction of pathogens such as root rot (*Phytophthora cinnamomi*) by maintaining vehicle and equipment hygiene (section 5.4 Noxious weeds and pathogens).
- Consider watering affected trees during the construction process to reduce tree stress.
- Where works could inadvertently harm adjacent vegetation, fence off the vegetation that needs to be protected.

Where mulching and slashing are to be undertaken, work in accordance with the Mulching and Slashing Fact Sheet (Appendix 3)

## 5.2 Wildlife Habitat

Vegetation, particularly hollow bearing trees and native vegetation, provides important shelter, food and nest sites for our native wildlife. Maintaining wildlife habitat assists in minimising the loss of our unique biodiversity as a result of our expanding urban development.



### General control measures

- Avoid over clearing native vegetation and mature trees.
- Retain groundcover and understory vegetation.
- Employ measures to protect existing vegetation
- Avoid disturbing habitat such as hollow bearing trees or rocky areas.
- Use local provenance native stock for revegetation.
- Provide an escape route for fauna if trenches or pits will be open for extended periods (e.g. log or stick).

### Requirements

Check environmental documentation for project specific requirements (section 1.3 Environmental documents).

Comply with assessment and approval requirements for works affecting habitat (such as tree hollows or bush rock) and works on undisturbed land.

Contact local wildlife rescue organisations for the rescue or care of native wildlife (Emergency contact numbers).

Contact Transgrid's HSE team if wildlife is detected and is likely to be impacted by the works.



### 5.3 Hot Works

Transgrid employees can find further information in the Hot Works procedure located on the Wire.

#### 5.3.1 Hot Works

Hot Work is any action that involves high temperatures such as welding or gas (flame) cutting, metal grinding/ cutting, naked flames or any other high heat or spark producing operation.

Examples of Hot Work are:

- Welding, Oxy-Acetylene or Plasma cutting
- Grinding/cutting of metal including the use of flexible sanding disks
- Production of heat, flammable fumes / gases during work activities
- Dry concrete metal grinding/cutting

#### 5.3.2 Hazardous areas

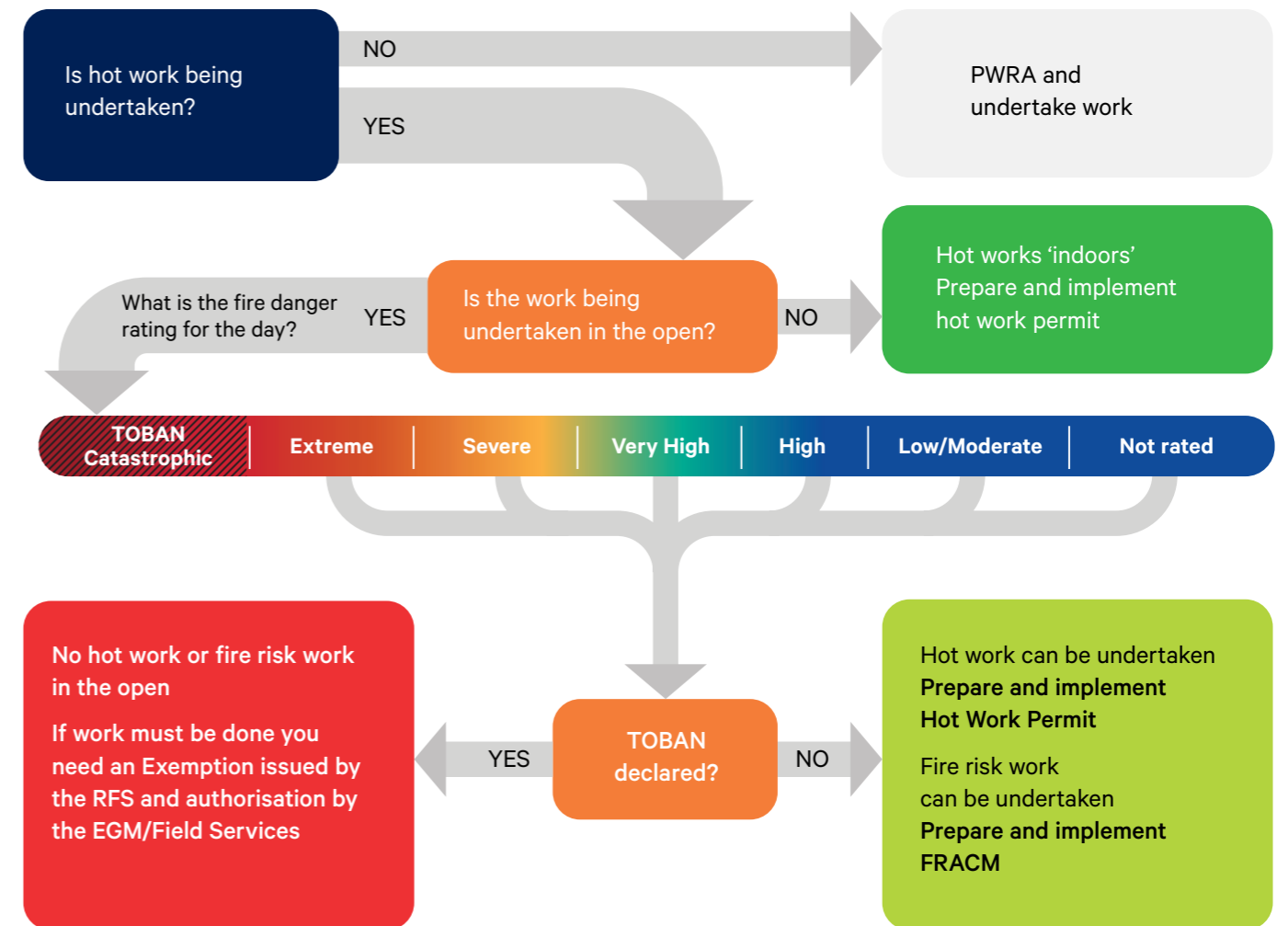
Hazardous Areas are any work areas where flammable/ combustible materials may come into contact with flames, sparks, molten materials or hot surfaces, hazardous areas may include (but not exclusively):

- Confined spaces
- Buildings where there are materials that are made of or contain combustible matter
- Dry / combustible vegetation
- Rubbish
- Oil and Fuel storage areas

- Keep firefighting equipment in good condition (including getting equipment regularly inspected).
- Check equipment is fit for purpose.
- Complete a Hot Work or FRACM form and have all mitigation measures in place prior to the commencement of work.
- Supervise Hot Work for the entire time (never leave a naked flame unattended).
- Schedule Hot Work activities during more favourable periods of the day / week.
- Clear Hot Work areas clear of combustible material or wet down.
- Isolate Hot Work activities using appropriate warning barriers and signage.
- Keeps adequate firefighting equipment immediately at hand.

- Determine if Hot Work is being undertaken or if a Fire Risk is being created
- Complete Hot Work Permit/FRACM if required
- Ensure all controls and observation is established before starting work.

#### Hot Work Flowchart



#### 5.3.3 Fire Risk Work

Fire Risk Work involves heat or potential spark producing activities that have the potential of creating a fire risk when undertaken in a hazardous area, and includes:

- Slashing/mulching
- Operation of steel tracked machines or steel attachments on heavy plant (e.g. grading, boring, excavation and the like)
- Chainsaw operation
- Chipping
- Mowing
- Brush cutting
- Operation of motor vehicles

If a Fire Risk is identified a Fire Risk Assessment and Control Measures Form must be completed prior to any work.

#### 5.3.3 Total fire bans

Total Fire Bans can be declared during the Bush Fire Danger period which typically runs from the 1st October through to the 31st March. They are generally declared at 5 pm and are effective for 24 hours beginning at midnight.

If a TOBAN is declared by the NSW RFS no Hot Work is to be undertaken unless authorised by the EGM/Field Services and an exemption applies to Transgrid (refer to Hot Work Procedure).



## 5.4 Pathogens and Noxious Weeds

Pathogens and noxious weeds are among the most serious threats to Australia's biosecurity as they have the potential to become more widespread and impact agriculture, human health and the environment. Pathogens, such as Myrtle Rust, can affect the viability of ecological communities and adversely impact on property owner activities. Areas which are particularly vulnerable to noxious weeds and pathogens include areas where threatened species are likely to be present (e.g. orchards, vineyards, undisturbed bushland, state forests and protected areas such as national parks and conservation areas).

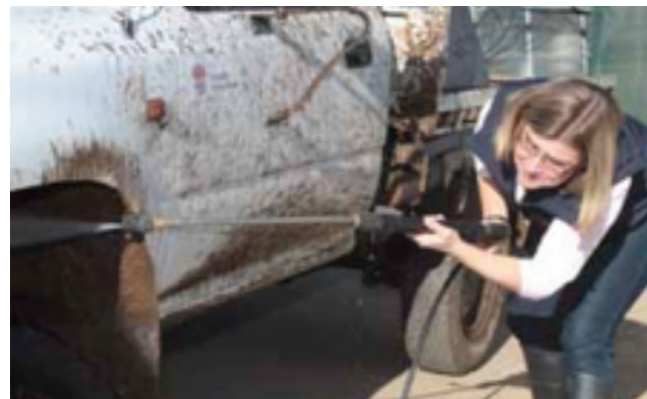
### 5.4.1 Pathogens

It is critical that Transgrid staff and Contractors comply with any quarantine restrictions and also ensure they do not spread pathogens.

Good work hygiene practices can be effective in controlling the spread of noxious weeds and pathogens.



Comply with quarantine restrictions during any access, inspection and/or maintenance activities



Make sure vehicles and plant are free of soil, mud and vegetative matter prior to entry

#### During works:

- Notify the HSE Team immediately if any issues arise.
- Keep to the tracks when driving or walking through vulnerable areas.
- When removing noxious weeds, select the most appropriate method, taking in to account weed species, environmental considerations and the extent of infestation.
- When removing and disposing of noxious weeds off-site, cover loads and contact the receiver prior to delivery.

#### At site entry and exit:

Choose clean down sites:

- Which are relatively flat and away from vulnerable areas
- Where contaminants would be contained
- Away from watercourses.
- Check boots, personal items and all components of vehicles and equipment are free of soil and vegetation and disinfected with solutions such as 'Pine-o-Cleen', 'Farmcleanse', 'Nu Clenz' or methylated spirits prior to undertaking works in vulnerable areas.

After works:

- Change and launder work clothes after working in areas containing known noxious weeds or pathogens.



### 5.4.2 Noxious weeds

There are various classes of Noxious Weeds which are declared by the Department of Primary Industry. Noxious weeds may be classed differently in different Local Government Areas.

To check Noxious Weeds listings for LGA/LCA go to <http://weeds.dpi.nsw.gov.au/>

#### Weed Class / Type / Example Controls

**Class 1** – Plants that pose a potentially serious threat to primary production or the environment and are not present in NSW or are present only to a limited extent.

The plant must be eradicated from the land and the land must be kept free of the plant.

The weeds are also “notifiable” and a range of restrictions on their sale and movement exist.

**Class 2** – Plants that pose a potentially serious threat to primary production or the environment of a region to which the order applies and are not present in the region or are present only to a limited extent.

The plant must be eradicated from the land and the land must be kept free of the plant.

The weeds are also “notifiable” and a range of restrictions on their sale and movement exist.

**Class 3** – Plants that pose a potentially serious threat to primary production or the environment of a region to which the order applies, are not widely distributed in the area and are likely to spread in the area or to another area. The plant must be fully and continuously suppressed and destroyed.

**Class 4** – Plants that pose a potentially serious threat to primary production, the environment or human health, are widely distributed in an area to which the order applies and are likely to spread in the area or to another area. The growth of the plant must be managed in a manner that continuously inhibits the ability of the plant to spread.

#### Examples



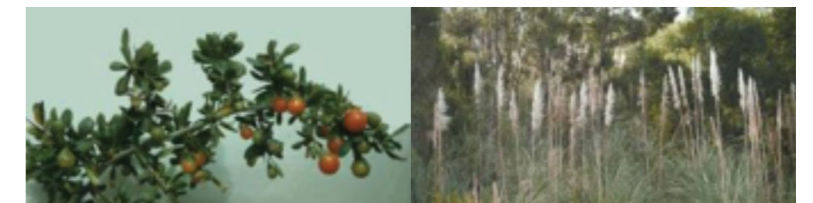
Rubber Vine

Mimosa



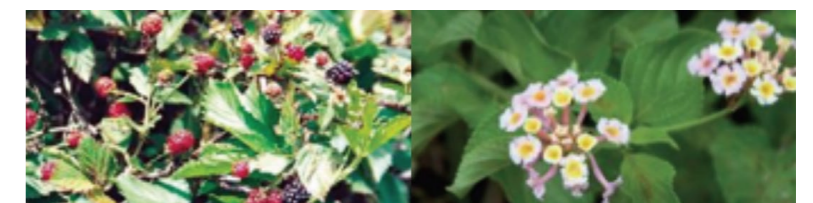
Chilean Needle Grass

Gorse



Boxthorn

Pamaps Grass



Blackberry

Lantana



## 6. Heritage

Heritage is classified as either Aboriginal or Non Aboriginal. There is a duty under NSW and federal legislation to protect heritage items.

### 6.1 Aboriginal Heritage

Aboriginal heritage includes objects and places with evidence of Aboriginal occupation or with special cultural significance. These can include artefacts, middens, axegrinding or tool sharpening grooves, scarred or carved trees, paintings, rock engravings and burial sites.

- Check environmental documentation for project specific requirements (see section 1.3 Environmental Documents).
- Comply with assessment and approval requirements for works near Aboriginal heritage and works on undisturbed land.
- If you think you have discovered an Aboriginal heritage object or evidence of Aboriginal occupation you must stop work immediately, restrict access and notify your Supervisor to ensure the regulator is contacted.

In these cases Transgrid's HSE Group will contact the regulator.

- Transgrid employees should contact Transgrid's HSE Group if unsure about controls to prevent harm.

#### Heritage on undisturbed land

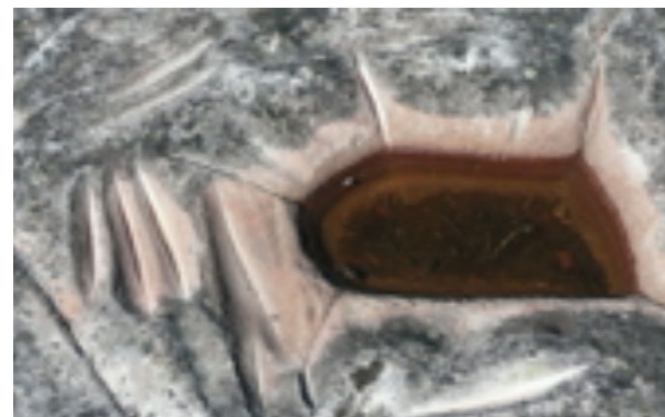
Transgrid has a duty to undertake activities in a manner that does not cause 'harm' to Aboriginal heritage.

Where an environmental assessment or permit is not required but the work site or access to the work site is on undisturbed land where there is Aboriginal heritage, the following controls apply:

- Be aware of the potential for Aboriginal heritage objects.
- Do not disturb the ground surface, vegetation (if scar trees are present) or rock outcrops.
- Retain ground cover vegetation.
- Restrict vehicle and plant movements to existing roadways or access tracks.
- Only use plant and equipment that have rubber tyres.
- Where relevant, install a temporary barrier near known Aboriginal heritage objects and places to restrict access.



Engravings



Grinding grooves and a well

### 6.1.1 Non Aboriginal Heritage

Heritage items and places are those aspects of the past that help to define our culture and which are preserved for future generations.

Transgrid owns one heritage listed substation of local heritage significance and maintains a register of heritage items.

Heritage items have various levels of protection including local (local council), state (NSW government), or national and world heritage (federal government).

Items protected can include:

- Buildings, places and trees that are of historical, cultural, social, architectural, natural or aesthetic value.
- Cobblestone roads and sandstone gutters.
- Movable objects such as early transformers, switchgear and street lights.
- Archaeological sites.

- Check environmental documentation for project specific requirements (section 1.3 Environmental Documents).
- Comply with assessment and approval requirements for works affecting heritage items or excavating in archaeological areas (some exemptions apply for maintenance or repair works).
- Comply with exemption requirements when relying on exemptions.
- If you think you have discovered a heritage item you must stop work immediately, restrict access and notify your Supervisor to ensure the regulator is contacted. Transgrid employees should contact Transgrid's HSE Group who will contact the regulator.



## 7. Resources

Water restrictions are sometimes imposed by water supply authorities across Transgrid's network.

Transgrid may be granted water use exemptions from these restrictions for some essential activities.

In addition, water saving rules apply in a number of areas. These rules should be applied across Transgrid's network to reduce the burden on town water supplies.

### 7.1 Water restrictions

If water restrictions are in place and you are working under a water use exemption:

- Undertake exempt activities in accordance with the conditions of the exemption.
- Display exemption and authorisation permits at the work site. Exemption signs can be obtained from Transgrid's HSE Group.
- Minimise water use.



Native plants are better adapted to low-nutrient and low moisture content soils.

### Water saving rules

Comply with water saving rules. These include:

- All hoses must have a trigger nozzle.
- Watering is allowed before 10 am and after 4 pm on any day.
- No hosing of hard surfaces such as paths and driveways, but washing vehicles is allowed.
- Fire hoses must be used for fire-fighting activities only.

Note: In some cases exemptions apply.

Check if water restrictions are in place, if Transgrid has a water use exemption

### 7.2 Washbays

If using a washbay, comply with its trade waste permit.

Typical requirements include:

- Only allow wash water to enter the wash bay drain (e.g. no oil, hydraulic fluid or degreaser).
- Radiator coolant is strictly prohibited from entering the drainage system.
- Fluids from all parts washers, irrelevant of chemicals used (ie. acid, caustic, solvent, kerosene), are required to be removed for approved disposal by a licensed contractor and not directed towards the pre-treatment system or direct discharge to the sewerage system or the stormwater system.
- Use only the 'quick break' detergents provided.
- Clean up spills and leaks immediately using spill absorbents.
- Remove sediment and debris from the wash bay slab and drain after each use.
- Trade waste permits are in place at Tamworth, Newcastle and Orange.
- The washing of vehicles at other depots is not allowed. If vehicles require washing, they will need to be washed off-site at a designated washing facility.

Assistance can be provided from Transgrid's HSE Group.



Transgrid's vehicle wash bays must be used in accordance with any relevant permits.



## 8. Environmental Incidents

Transgrid employees can find further information in the Environmental Incident Notification procedure and the Guidance on High Consequence Incidents guideline.

If pollution goes unreported, the people who know of the incident can be fined up to \$500,000 and a further \$120,000 each day the offence goes unreported.



Oil spill into a waterway

### Environmental Pollution Incidents:

- A spill of sediment in a sensitive area, drain or waterway
- Any volume of oil or chemical spilled on or off-site
- A spill that contains hazardous materials such as PCB or mercury

### Other Environmental Incidents:

- Discovering contamination
- Damage to heritage items
- Unauthorised vegetation clearing
- Illegal waste disposal (e.g. asbestos dumping)
- Works without the necessary approval, licence or permit

### High Consequence Incidents are those incidents that cause or threaten significant or serious environmental harm.

These include:

- Pollution incidents reportable under the POEO Act
- Significant planning and conservation breaches
- Significant unauthorised vegetation clearing
- Damage to a heritage item

In the case of an incident, Transgrid employees must report the incident to their supervisor/team leader and enter the incident details into the ARMS Incident Reporting Module at the earliest possible opportunity.

Contact Transgrid's HSE Group if you require any assistance.

For pollution incidents that fall into the High Consequence Incidents (HCIs) category and are potentially reportable to the regulator, please contact the Corporate Environment Manager and/or Transgrid Legal (depending on availability) for advice.

If neither can be contacted within a reasonable time period, notify the appropriate authorities immediately.

Refer to Guide to Environmental High Consequence Incidents on the Wire.

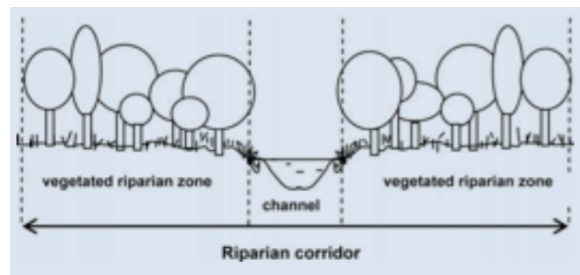


## Appendix 1: Working Near Watercourses

Working in/near watercourses (instream and within the Vegetated Riparian Zone, VRZ) may require site specific environmental controls to mitigate potential impacts and minimise the effects on the environment. The following controls are mandatory for all work near watercourses.

### Earthworks

- Prior to any actions where excavation / earthworks are being undertaken in proximity to watercourses, erosion control and sediment mitigation must be implemented in a manner consistent with currently accepted Best Management Practice (Blue Books) to prevent the entry of sediment into waterways.
- All controls must be maintained in good working order the duration of the works and maintained until the site has been stabilised and the risk of erosion and sediment movement from the site is minimal.
- Instream works are to be conducted during periods of nil creek flow where possible. If water levels rise, work should be suspended until levels fall again.
- Do not remove, realign, or relocate snags/large woody debris without first consulting the contact officer.
- Set the bed level of pipes / crossings 100mm above the downstream bed level or standing water level in the pool below (if this is not possible contact the Regional Environmental Officer for design information/guidance).
- All work must be done in accordance with OEH Guidelines (attach as required).



### Pesticide Use

- An onsite risk assessment must be done for spray applications within 20m of waterways.
- DO NOT store or mix pesticides in proximity to waterways/ stormwater.
- DO NOT saturate soil with herbicide over-spray.
- DO NOT spray across open bodies of water.
- Ensure wind direction (and spray application) is away waterways.
- Refer to product label rain-fast times if rainfall is predicted.
- Unless specified or permitted by the product label:
- Only RoundUp Biactive should be used within 5m of a waterway.
- Avoid applying herbicide directly to vegetation in drainage ditches and channels.
- Do not apply foliar sprays to vegetation growing in or over water.
- Do not add detergent based wetting agents or surfactants to herbicide mixes.

### Physical Vegetation Removal

- Minimise damage to riparian vegetation on the banks. Any damage caused is to be restored.
- Below top of bank: DO NOT mulch vegetation or poison / remove tree stumps / roots below top of bank and where safe leave stumps  $\geq 500\text{mm}$  high.
- Abide by maximum clearing restrictions on protected waterways.



## Appendix 2: Excavation and Machine Work

Excavation and earthworks that disturbs soil requires site specific environmental controls to mitigate erosion and prevent sediment off works sites and/or into waterways/ drainage. The following controls are mandatory for all excavation/ earthworks and Machine Work.

### Excavation / Earthworks

- All disturbed soils (i.e. stock piles, graded material, ripped road surfaces) to be consolidated or protected from erosion prior to daily shutdown or predicted rainfall.
- Install sediment controls where there is a risk of sediment entering waterways, stormwater or drainage (i.e. within 50m).
- Sediment controls should be considered for all drainage outlets where site water is not discharged as a sheet into stable vegetation.
- Locate stockpiles away from drainage lines and high hazard areas ( $>10\%$  slope) and protect from erosion and loss of sediment.
- All plant and equipment must be clean i.e. free of soil, mud and vegetative matter, prior to delivery to and removal from site.
- Erosion and Sediment Controls must be implemented in accordance with Managing Urban Stormwater, Soil and Construction Volume 1 and Volume 2C Unsealed Roads (Blue Books).
- Prior to site disestablishment all disturbed areas must be rehabilitated; i.e. gravel replaced or top soil replaced, compacted (where necessary) protected from erosion and rehabilitated using mulch, brush matting and/or seeding.





### Machine Work\*

- E5 review and approval required.
- Machine work must not be undertaken on slopes exceeding 18° where there is a risk of land slip or erosion.
- Avoid machine work on slopes > 12°, leave some vegetation to assist soil stability.
- Avoid sharp turns to minimise soil disturbance.
- Set mulching attachments above ground level to minimise soil disturbance.
- Mulched up material should be evenly spread over the treated area; a minimum of 70% mulch cover is required to mitigate soil erosion.
- Minimise damage to ground covers e.g. grasses and very low growing plants.
- An ESCP may be required where soil disturbance exceeds 250m<sup>2</sup>.

\*Machine Work is any action that involves the use of heavy plant such as forest harvesters, shin cutters, excavators, graders, bulldozers, backhoes and similar large equipment for the following activities:

1. Vegetation removal and/or maintenance that may disturb soil.
2. Access track maintenance or construction.
3. Installation/maintenance of safe work platforms or construction benches.

NOTE: Mulching and slashing of vegetation using tractors and skid steer loaders is NOT considered to be Machine Work as soil disturbance should be minimal.



### Appendix 3: Mulching and Slashing

Mulching and Slashing requires site specific environmental controls to mitigate potential environmental impacts and minimise the effects on the environment. The following controls are mandatory for all Mulching and Slashing.

- Mulching/Trittoring should not be undertaken on slopes exceeding 18° where there is a risk of land slip or erosion.
- Avoid mulching/trittoring long runs slopes > 12°, leave some vegetation to assist soil stability.
- Avoid sharp turns to minimise soil disturbance.
- Set mulcher and slasher decks above ground level to minimise soil disturbance.
- Mulched material should be evenly spread over the treated area; a minimum of 70% mulch cover is required to mitigate soil erosion.
- Minimise damage ground covers e.g. grasses and very low growing plants.
- Avoid disturbing soil with mulcher/trittor heads and slashers.

NOTE: If removal of low growing ground cover is likely consult the local Environmental Officer for advice prior to undertaking maintenance works.





## Emergency Contacts

Issue	Contact	Number
Emergency Services/HAZMAT	Emergency Services	000
Environmental Issues		
• Environmental Incidents	• Corporate Environment Manager	
• General assistance, noise complaints, heritage discoveries and contaminated sites	• HSE Environmental Advisor or HSE Environmental Officers	
• Environmental planning issues	• Property and Environment Asset Manager or Environmental Strategy Team Leader	
Safety Issues	Safety Manager	
Building maintenance	Manager/Property	
Corporate communications, public affairs and media	Manager/Stakeholder Engagement	
Pollution incidents	HSE Environment Manager or EPA	
Spill response	NSW Fire Brigade	000
Discovery of Aboriginal heritage items	Environment Line	131 555
Discovery of Non-Aboriginal heritage items	Environment Line	131 555
PCB transport and disposal	EPA	131 555
Water and sewer mains	Water NSW	1300 662 077
Waste disposal	EPA	131 555
Local council issues	Relevant Council	
Injured native wildlife	WIRES	1300 094 737
Traffic incidents and road conditions reporting	RMS	13 17 00





**Contact details**

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Sydney NSW 2000  
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Sydney South NSW 123

**Transgrid**

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