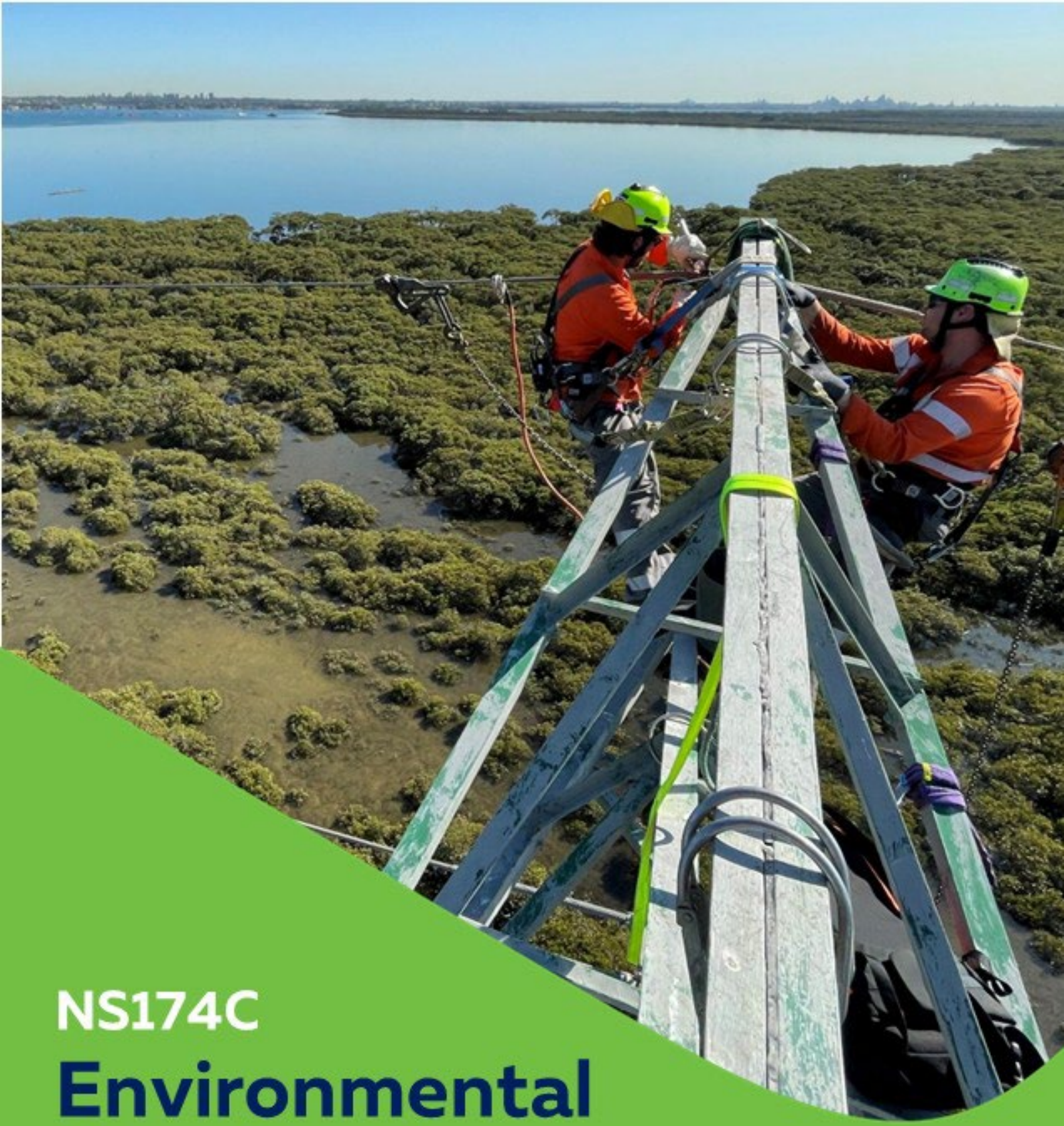


NS174C

# Environmental Handbook

## For Construction and Maintenance

July 2025

Ausgrid PLUS·ES

# Acknowledgement of Country

For generations, Ausgrid's customers, network infrastructure, and *works* have resided in ancestral lands, spanning the traditional country of many languages and tribal and national groups.

We acknowledge the Traditional Custodians of the lands where we operate and pay our respects to the elders past, present and emerging. We recognise the Traditional Custodians as the first protectors and carers of the land, water, sea, sky and energy industry.

As set out in our Reconciliation Action Plan, our goal includes building an accessible and sustainable energy industry by remaining learnable and committed to elevating the voices and participation of Aboriginal and Torres Strait Islander Peoples, the original Custodians of this land and the energy industry.

**Wired for Good artwork by Wodi Wodi & Walbunja Artist Lauren Henry.**

**This artwork reflects the story behind Ausgrid's reconciliation journey towards its refined vision and purpose.**

**Learn more about the artwork's distinct elements and layers in our Reconciliation Action Plan.**

# Preface

NS174C Environmental Handbook for Construction and Maintenance (this *Handbook*) details the minimum environmental controls for our operations.

All our *workers* and accredited service providers (*ASPs)* must comply with the requirements of this *Handbook* and have a copy readily accessible at the worksite.

The *Handbook* is designed to provide our people with the information and resources they need to comply with environmental laws.

*Protecting the environment is everyone's responsibility*.

For generations, Ausgrid has proudly kept the lights on for our communities. Our vision is for these communities to have the power in a resilient, affordable, and sustainable future. This *Handbook* serves as an essential resource that supports our commitment to making electricity accessible for everyone while ensuring that our impact on the community and the environment is positive and increasingly sustainable. In short, **wired for good.**

Being wired for good means recognising the important role each of us plays in listening to, responding to, and actively participating in our communities. It involves building an inclusive workforce that upholds our values, maintaining a resilient network to meet future energy needs, and reducing our environmental impact. It's how we are wired to operate.

Junayd Hollis
Group Executive Customer, Assets & Digital
Ausgrid

# How to read this Handbook

**Overview**

We acknowledge that this *Handbook* is a large document with many requirements. Its aim is to provide *workers* with the tools needed to meet our environmental obligations, goals and targets.

The figure below shows the core requirements that will help you meet your environmental responsibilities (refer to section 1.1). The following is a breakdown of the *Handbook* to guide you through the content based on your activities.

**Activity reference table**

The activity reference table (Table 1.1-1) identifies the applicable sections of this *Handbook* to familiarise yourself with the requirements for the *works*.

Table 1.1-1 also contains a checklist that can be used as a prompt to help evaluate compliance with the requirements of this *Handbook*.

**Planning**

Section 1 provides an overview of our *EMS*, defines responsibilities, summarises key legislative requirements and explains additional documents that could apply to the *works*.

**Operational control**

Sections 2 to 8 specify the environmental controls and guidance for all construction and maintenance *works* on Ausgrid's network.

The first heading 'When this section applies' refers to the types of activities that apply to each section.

**Emergency preparedness**

Sections 9 and 10 describe what to do in the event of an environmental incident, including our spill response procedure and a list of emergency contact numbers.

**Terms**

*Italicised items* are terms or acronyms defined within this *Handbook*. These are typically defined in the section where they appear and can also be found in the Glossary in Section 11.

**Key changes**

Section 12 lists the key changes since the last version and includes a document disclaimer.

# Contents

# 1 INTRODUCTION

**Purpose**

This *Handbook* forms part of our Environmental Management System (EMS) and provides guidance for complying with our environmental responsibilities.

This *Handbook* prescribes the minimum environmental controls for our construction and maintenance activities. Where *works* cannot meet these environmental controls, or if advice is required, contact Environmental Services on 02 9394 6659 or environmentalservices@ausgrid.com.au.

This *Handbook* aims to:

- identify and control environmental risks
- prevent incidents
- improve environmental performance and customer relationships
- reduce costs and increase efficiencies.

All our actions can impact the environment. We need to comply with our legal obligations, reduce our environmental impact and continually improve our performance. Put simply, we all need to use due care, follow procedures such as this *Handbook* and speak up if something is wrong or could be improved.

**Applies to**

All Ausgrid Group *workers* and *ASP*s.

**ASPs** means accredited service providers, authorised with Ausgrid in the appropriate level to undertake design or contestable work on Ausgrid's network.

**Employee** means an Ausgrid Group (such as Ausgrid, PLUS ES or Aurora Property) employee.

**External partners** means Partners, Subcontractors, 3rd Party Providers and *ASPs* (more information is available on the Ausgrid Partners Information site).

**Workers** includes Ausgrid Group *employees* and Ausgrid contractors.

**Works** means all activities related to the work, job or project.

**Additional controls**

Controls may also be required by project specific documentation such as *planning approvals*, *other approvals* (including licences and permits) and specific management plans (refer to section 1.4 for further detail and definitions).

Environmental laws, *planning approvals* and *other approvals* override other requirements (including this *Handbook*) in the event of an inconsistency.

**WebGIS EL**

Many sections in this *Handbook* refer to specific controls associated with *sensitive environmental areas/places*.

*WebGIS EL* is Ausgrid's environmental geographic information system which contains spatial data for *environmentally sensitive areas/places*.

An internal WebGIS EL is available to *employees* and an external WebGIS EL is available to authorised *workers*.


**WebGIS EL data can be found by clicking the leaf button in Ausgrid's WebGIS**

*Table 1.1-1: Activity reference table and checklist*

| Activity | Section | Checklist |
|---|---|---|
| All *works*. | **1.2 Legislation**<br>**1.3 Responsibilities** | ✓ *Workers* are aware of their environmental responsibilities and appropriately trained. |
| All *works*. | **1.4 Environmental planning** | ✓ All required *planning approvals*, *other approvals* and notifications / consultation have been obtained / undertaken.<br>✓ *Works* comply with all conditions of approval.<br>✓ Impacted community know what is happening, when it is happening, why it is required and who to contact. |
| Excavating, trenching, underboring, concrete cutting, stockpiling, access track *works*, or removing ground cover. | **2.1. Erosion and sediment control** | ✓ Controls adequate to prevent sediment, drilling fluid and saw-cutting slurry from entering a stormwater drain or *waterway*. |
| Managing accumulated water from excavations, pits, substations and bunds. | **2.2. Water discharge** | ✓ Water discharges from pits, trenches and substations meet the required discharge criteria. |
| Handling, storing or transporting of oils, fuels, chemicals. | **2.3 Oils, fuels and other chemicals** | ✓ Oils, fuels and other chemicals handled, transported and stored in a manner to prevent and, if necessary, contain and control a leak or spill. |
| Disturbing asbestos contaminated materials or dust. | **3.1 Asbestos** | ✓ Potential for asbestos assessed and, where identified, managed in accordance with training, *PPE*, licensing, record keeping, notification, bagging, transport, tracking, and disposal requirements. |
| Handling oil and oil filled equipment (manufactured before 1997). | **3.2 Polychlorinated biphenyls** | ✓ Polychlorinated biphenyls *(PCB)* appropriately classified, handled, transported, stored, labelled, disposed and managed in accordance with Ausgrid's PCB licence. |
| Using *pesticides* (including herbicides, insecticides, fungicides, etc). | **3.3 Pesticides** | ✓ *Pesticide* use restricted to target areas, approved for use, used in accordance with the label and with required training, record keeping, notification and signage. |
| Disturbing known/suspected lead products or dust. | **3.4 Lead** | ✓ Potential for lead exposure assessed and where identified, managed in accordance with training, *PPE*, hygiene, notification and disposal requirements. |
| Generating fumes from vehicles or machinery, using $SF_6$, or generating dust. | **4.1 Air** | ✓ Controls adequate to prevent dust, fumes and other gases from leaving the worksite or substation. |
| Noisy *works* from plant and equipment or *works* outside of *standard operating hours*. | **4.2 Construction noise** | ✓ Controls adequate to minimise construction noise impacts (such as scheduling, equipment, awareness, site layout).<br>✓ *Works* compliant with the notification and *out of hours work* requirements. |
| Working near high current carrying conductors / equipment or close to antennas. | **4.3 Electric and magnetic fields**<br>**4.4 Radiofrequency fields** | ✓ All public enquiries referred to Environmental Services.<br>✓ Workplace assessments have been undertaken where *workers* with medical implants or who are pregnant work in *high field work environments* or close to antennas. |

| Activity | Section | Checklist |
|---|---|---|
| Disturbing known or suspected contaminated land or decommissioning substations. | **5.1 Contamination** | ✓ Suspected contaminated land reported to Environmental Services and *workers* are aware of requirements for any known contaminated land. |
| Disturbing land in known or suspected *ASS*. | **5.2 Acid sulfate soils** | ✓ *ASS* is classified, managed, stored, treated and disposed in a manner to prevent environmental harm or corrosion of assets. |
| Generating, transporting, storing, reusing, recycling or disposing of waste. | **5.3 Waste management** | ✓ Wastes segregated, classified, handled, stored, transported and disposed in compliance with licence and waste tracking requirements. |
| Receiving or supplying recovered soil (such as *VENM*, *ENM)*, *recovered aggregates* (such as crushed concrete), stormwater, or mulch. | **5.4 Use of recovered materials** | ✓ Supply and reuse of *recovered materials* (such as aggregates, mulch, spoil etc) comply with sampling, documentation, record keeping and usage requirements of the relevant RRO/RRE. |
| Impacting vegetation (*trees*, shrubs, *tree* roots, seagrass, mangroves etc) or working within *ecologically sensitive areas*. | **6.1 Vegetation** | ✓ Controls in place to prevent the unauthorised harm to *ecologically sensitive areas,* vegetation impacts minimised, correct pruning methods used and the *SRZ* / *TPZ* controls implemented. |
| Removing or damaging vegetation near wildlife, *ecologically sensitive areas* or wildlife habitat (native vegetation, bushrock, *tree* hollows, nests etc). | **6.2 Wildlife** | ✓ Controls in place to prevent the unauthorised harm to wildlife. |
| Working in bushland, national park estate, *agricultural land* or areas with *weeds*, *pests* and *plant diseases* . | **6.3 Biosecurity** | ✓ Controls in place to prevent the spread of *weeds*, *pests* and *plant diseases* . |
| *Live works* on *bushfire prone land* or *hot works* during a *TOBAN.* | **6.4 Total fire bans** | ✓ Controls in place to prevent the spread of fire. *Live works* on *bushfire prone land* or *hot works* during a *TOBAN* are compliant with exemptions. |
| Disturbing the ground surface, clearing vegetation or building alterations near heritage or where heritage items might be found. | **7.1 Aboriginal cultural heritage**<br>**7.2 Environmental heritage** | ✓ Controls in place to prevent the unauthorised harm to *Aboriginal cultural heritage* and *environmental heritage*.<br>✓ Potential discoveries are reported to Environmental Services. |
| All *works*. | **8.1 Resource use** | ✓ Resource reduction initiatives have been considered (avoid, reduce, reuse, recycle). |
| Using potable (drinkable) water for construction or washbays. | **8.2 Water use** | ✓ Water use minimised and in accordance with the water restrictions, water use exemptions, water saving rules and washbays used in accordance with the relevant trade waste agreement. |
| All *works*. | **9 Environmental incidents**<br>**10 Emergency contact numbers** | ✓ Environmental incidents reported (including discovering contamination, unauthorised vegetation clearing, damage to *Aboriginal cultural and environmental heritage* and sediment, oils, fuels and other chemical spills). |

# 1.1 ENVIRONMENTAL MANAGEMENT SYSTEM

**Background**

An *EMS* provides a structured and integrated approach to managing our environmental impacts. Our *EMS* is certified to International Standard Organisation (ISO) 14001.

At a company level, our *EMS* is a repeating cycle of plan, do, check and act:

- setting objectives and targets to implement our environmental policy
- implementing programs and procedures identified during planning
- training our *workers*
- monitoring our performance
- responding to incidents
- taking action to continually improve
- periodically reviewing and challenging the entire system.


**EMS principles at a project level**

### Plan

a) Understand your environmental responsibilities, including training required (refer to section 1.3).

b) Identify and obtain the required *planning approval* and *other approvals* (refer to section 1.4).

c) If a *planning approval* is not required and the *works* involve ground disturbance, vegetation clearing or building alterations, then check the WebGIS EL for *environmentally sensitive areas*/*places*.

d) Think about the site, type of *works*, access, compounds, neighbours, weather, vegetation, habitat, drainage, *waterways*, project controls, waste, emergency controls and what could go wrong.

### Do

e) Have the *planning approval*, *other approvals* and this *Handbook* accessible on site.

f) Discuss the environmental risks and controls as part of the hazard assessment conversation (HAC) or site induction.

g) Implement the controls from the *planning approval*, *other approvals* and this *Handbook* (refer to section 1.4).

h) Prepare for emergencies (such as setting up spill kits) and promptly respond to incidents (refer to section 9).

### Check

i) Monitor the *works*, changes in conditions and controls and check compliance with the *Handbook* (refer to the checklist in Table 1.1-1).

### Act

j) Act if something is not right, there is a change in scope or controls could be improved (refer to section 1.3).

k) Contact Environmental Services on 02 9394 6659 if there is an environmental incident or if you cannot comply with the controls in this *Handbook*.

## 1.2 LEGISLATION

**Background**

There are over 60 environmental laws that relate to our activities. These laws are designed to protect the environment and can either prohibit, restrict, control or authorise certain activities.

**Definitions**

**EP&A Act** is the NSW *Environmental Planning and Assessment Act*.

**EPA** is the NSW Environment Protection Authority.

**POEO Act** is the NSW *Protection of the Environment Operations Act*.

**Key message**

This *Handbook* focuses on the legal requirements within our network area, however construction and maintenance *works* are also undertaken in other states or countries. Our *workers* shall comply with all relevant Federal, State and Territory legislation, local government, environmental regulator policies and relevant Australian and International standards.

### 1.2.1 What do environmental laws require?

Environmental laws require our *workers* to:

- consider the environmental impact of their activities
- follow the correct environmental *planning approval* process
- not cause unauthorised harm to the environment
- immediately report environmental incidents.

### 1.2.2 Planning laws

The EP&A Act provides the overall framework for *planning approvals* (refer to section 1.4).

A number of other Commonwealth and state laws also apply for issues such as heritage, threatened species, conservation areas and marine vegetation (refer to Table 1.2-1). These Acts may require *other approvals*.

### 1.2.3 Environmental protection laws

The POEO Act regulates air, water, noise and land pollution through a system of licensing, offences and penalties. We are required to:

- mitigate air, water, noise and land pollution
- report environmental incidents
- classify and appropriately manage waste
- hold an environmental licence for certain activities (such as waste and hazardous materials).

A number of other Commonwealth and state laws also apply for issues such as hazardous materials, contamination and *pesticides* (refer to Table 1.2-1).

### 1.2.4 Penalties

There are significant consequences for breaching environmental laws including:

- over $15 million in fines for a corporation
- $2 million in fines and/or 7 years jail for individuals.

The *EPA* advises that a *worker* who acts in good faith and follows environmental procedures (such as this *Handbook*) would not normally be prosecuted.

*Table 1.2-1: Key environmental Acts*

| NSW Legislation | Issues covered by the legislation |
|---|---|
| *Biodiversity Conservation Act* | Threatened species, endangered ecological communities, areas of outstanding biodiversity value, and conservation agreements |
| *Biosecurity Act* | *Weeds*, *pests* and *plant diseases* |
| *Contaminated Land Management Act* | Contaminated site assessments and reporting |
| *Dangerous Goods (Road And Rail Transport) Act* | Dangerous Goods such as *Scheduled PCB* |
| *Electricity Supply Act* | Placement of *works* and notifications |
| *Environment Protection and Biodiversity Conservation Act* (Commonwealth) | Matter of national significance (threatened species, migratory birds, heritage, wetlands) and Commonwealth land |
| *Environmental Planning and Assessment Act* | *Planning approvals* framework. |
| *Fisheries Management Act* | Marine vegetation (such as sea grasses, mangroves and marine algae) and dredging *waterways* |
| *Forestry Act* | Crown timber land and State forests |
| *Heritage Act* | State heritage items, archaeological areas, *relics*, movable heritage, Ausgrid's heritage register, and reporting |
| *Hunter Water Act*, *Sydney Water Act* and *Water NSW Act* | Special catchment areas, pollution, trade waste agreements, and water restrictions |
| *Local Government Act* | Local council approvals |
| *Local Land Services Act* | Vegetation clearing in rural areas |
| *Marine Estate Management Act* | Marine parks and aquatic reserves |
| *National Greenhouse and Energy Reporting Act* (Commonwealth) | Greenhouse gas emissions and reporting |
| *National Parks and Wildlife Act* | *Aboriginal cultural heritage*, national park estate, and conservation agreements |
| *Native Title Act* | Native Title |
| *Pesticides Act* | *Pesticides* |
| *Protection of the Environment Operations Act* | Air, noise, water and land pollution, management and disposal of waste, management of scheduled chemicals (such as PCB and organochlorine pesticides), *environment protection licences*, and notification of pollution incidents |
| *Rural Fires Act* | Total Fire Bans and preventing the spread of bushfires |
| *Water Management Act* | Extracting groundwater, penetrating an aquifer, or affecting the flow of a natural waterway or floodwater. |
| *Wilderness Act* | Wilderness areas |
| *Work Health and Safety Act* | Asbestos, lead and hazardous chemicals |

## 1.3 RESPONSIBILITIES AND TRAINING

**Background**

Our Code of Conduct outlines the standards and behaviours that are expected of all *workers*. The Code includes our Environmental Code of Conduct (Green Rules). Breaches of this Code could result in disciplinary action.

Ausgrid's External Partner Code of Conduct defines the expectations of our *external partners* and their supply chains in providing us goods and services.

**Our values**

This *Handbook* adopts all six of our values that describe what is important to us and define how we behave and work together, with a focus on 'work safe, live safe' to do our best to protect ourselves, other people and the environment.

**1.3.1 All workers**

It is all *workers'* responsibility to:

a) Comply with the requirements in any required *planning approvals*, *other approvals*, this *Handbook* and environmental training (refer to Table 1.3-1).

b) Use due care, skill and foresight to minimise environmental harm.

c) Act in good faith when performing your job.

d) Speak up when you think an environmental document is missing or cannot be followed, when something appears to be wrong, when you are not sure what to do, or when something could be improved.

e) Discuss environmental risks and hazards when preparing a *HAC*.

f) Immediately report environmental incidents to your supervisor.

**1.3.2 Supervisor and Manager**

In addition to the above, it is the Supervisor and Manager's responsibility to:

a) Understand environmental risks and legal requirements relevant to your area of influence.

b) Check there are specific procedures and instructions for your *workers* to effectively manage environmental risks.

c) Make environmental documents accessible to your *workers*.

d) Check your *workers* have adequate supervision and resources to comply with procedures and instructions.

e) Check your *workers* have current environmental training relevant to their work (refer to 1.3.3).

f) Have appropriate contingency plans for dealing with environmental emergencies.

g) Investigate all relevant environmental concerns.

h) Share information with other areas of the company.

i) Evaluate the operational performance of your *workers* and discuss results with your manager (refer to the checklist in Table 1.1-1).

**1.3.3 Training**

a) All *workers* must be competent and have current environmental training relevant to their work (refer to Table 1.3-1).

b) Other training may be required depending on the task and nature of the requirements.

*Table 1.3-1: Environmental training courses*

| Code | Course | Target audience | Registration |
|---|---|---|---|
| AG_COC | Ausgrid Code of Conduct | Annual training for all *employees,* which includes Ausgrid's Health, Safety & Environment (HSE) Policy and Environmental Code of Conduct. | Employees |
| I0102REF | Environmental Awareness Assessment (NS174 Environmental Procedures) | For all *workers* who work on or near Ausgrid's network to increase awareness of their environmental responsibilities (course is based on this *Handbook*) | Employees<br>External partners |
| HSESER | Summary Environmental Report (SER) | Electrical designers and others (including *ASPs*) who prepare and verify *SERs* (refer to section 1.4) | Employees<br>External partners |
| HSEWG_ PLAN / ASP / VEG / MAIN | WebGIS EL (reporting tool) | Electrical designers, *ASPs*, vegetation maintenance contractors and *workers* who need to use WebGIS EL reporting features | Employees<br>External partners |
| NA | Project specific inductions | This will be specified in the *planning approval* and/or *other approvals* (refer to section 1.4) | Environmental Services |
| ET001_EL | Erosion and Sediment Control | *Employees* who undertake activities that have the potential to generate sediment runoff (refer to section 2.1) | Employees |
| ET019_EL | Discharging Water | *Employees* who supervise discharges through filter bags (refer to section 2.2) | Employees |
| ET008_EL | Oil Handling & Spill response | *Employees* who regularly handle, transport or store oil (refer to section 2.3) | Employees |
| Various | Ausgrid Asbestos Awareness | All *Workers* | Employees<br>External partners |
| | Working with Asbestos Containing Materials (ACM) | *Workers* who work near *ACM* and where *ACM* might be disturbed by the work | |
| | Task specific asbestos | *Workers* who work with *ACM* and perform specific tasks | |
| NA | *EPA* approved pesticide use | *Workers* applying *pesticides* that meet the commercial use criteria (refer to section 3.3.3) | TAFE |
| ET047 | Organo-Chlorine Pesticides Awareness | *Employees* handling spoil from 132kV cable trenches (refer to section 5.3.6) | Employees |
| NP_PROTOCOL | National Parks Protocol Induction | *Workers* undertaking inspection or maintenance work in national park estate | Employees<br>External partners |
| NA | Ausgrid recognised tree trimming course | Vegetation maintenance contractors (refer to section 6.1) | TAFE |

## 1.4 ENVIRONMENTAL PLANNING

**Background**

The *planning approval* pathway and the need for *other approvals* or community engagement will depend on the nature and location of the work.

Routine repairs and maintenance are generally defined as *exempt development* and do not require a *planning approval* but may require *other approvals.*

**Environmental impacts must be assessed before starting *works***

Working closely with residents, businesses, local councils and other groups can minimise disruption to the community, provide valuable input into the project, and reduce the duration and cost of *works*.

Failure to obtain and comply with any *planning approval* or *other approvals,* where they are required, could result in substantial fines.

**Before *works* begin**

When planning work, consider the environmental footprint (entire area of the activities), the type of plant and equipment to be used, and other activities that make up the work (for example, ground disturbance, fencing, tree trimming, access tracks, stay wires/poles, lighting, site compounds, construction pads, ongoing maintenance).

a) **Planners** - Obtain all necessary *planning approval* and *other approvals* (refer to Figure 1.4-1).

b) **Schedulers** – Ensure all *planning approval* and *other approvals* are made available to *workers*.

c) **Field workers** - Check the requirements of any applicable *planning approval* or *other approvals* (refer to Figure 1.4-1).

d) If there are no required approvals, refer to the relevant sections in this *handbook* to determine the requirements.

**When to contact Environmental Services**
**02 9394 6659**

a) Help is required to determine the type of *planning approval* or *other approvals*.

b) When preparing *SERs*, a Level 3 risk is identified in Table 2 of the SER.

c) *Works* require an *REF*, *SIS*, *EIS* or *DA*.

d) Missing, inadequate or non-compliance with any *planning approval or other approvals*.

**Definitions**

**CEMP** means a construction environmental management plan that typically applies to projects requiring an *REF, DA, SIS* or *EIS*. *CEMPs* detail conditions of approval and procedures for compliance (such as auditing, training, incident response).

**DA** means a development application, prepared in accordance with Part 4 of the EP&A Act and submitted to local council for approval.

**Determination** means the decision to proceed based on the *EIA*.

**EIA** means an environmental impact assessment (*SER*, *REF*, *SIS* or *EIS*) required under Part 5 and 5.1 of the EP&A Act.

**EIS** means an environmental impact statement that is prepared for proposals that are likely to significantly affect the environment.

**Emergency works** means restoration activities required to protect public safety or the environment due to a sudden natural event or an accident.

**EPC** is Ausgrid's environmental planning calculator.

**Exempt development** means development that does not require a *planning approval*, providing the *works* meet certain conditions.

**Other approvals** are approvals, licences and permits that exist outside of the EP&A Act and may be required despite the *planning approval* or despite being *exempt development*.

**Planning approval** means the approval of the *EIA* or *DA* to undertake certain *works* under the EP&A Act.

**REF** means a review of environmental factors, prepared in accordance with Part 5 of the EP&A Act and determined by Ausgrid.

**SER** means a summary environmental report where impacts are "minor and neither extensive nor complex" and determined by Ausgrid.

**SIS** means a species impact statement, prepared for proposals that are likely to significantly affect threatened species or endangered ecological communities.

### 1.4.1 Determining the *planning approval* process

The *planning approval* framework is complex. Figure 1.4-1 and Table 1.4-2 summarise the *planning approvals*, consultation / notification requirements and conditions of approval for different types of development. More detail can be found in NS174B Environmental Assessment Guidelines.

a) Check the WebGIS EL for all *works* involving excavation, vegetation clearing or building alterations.

b) The WebGIS EL and EPC can be used to determine:

- the *planning approval* process (such as exempt development, *SER*, *DA*)
- the need for *other approvals* (including licences and permits), refer to the table below
- community engagement requirements (for example *works* in a National Park or *out of hours work*), refer to the table below.

c) If required, use the EPC as documented evidence of the decision.

| Examples of other approvals | Examples of community engagement |
|---|---|
| Impacting Aboriginal cultural heritage (section 7.1) | All *works* excluding routine repairs, maintenance or emergency *works* |
| Impacting seagrass or mangroves (section 6.1) | Impacting heritage (section 7.2) |
| New *works* in national park estate (section 6.1) | Noisy *works* (section 4.2) |
| Some new infrastructure within mine subsidence areas | Night *works* (section 4.2) |
| Working on/impacting environmental heritage (section 7.2) | Using pesticides (section 3.3) |
| Working in a conservation area (section 6.1) | Licensed asbestos removal (section 3.1) |
| Working on a classified road (check the WebGIS EL). | Maintenance/inspections in national park estate (section 6.1). |

*Figure 1.4-1:Environmental planning and construction process*

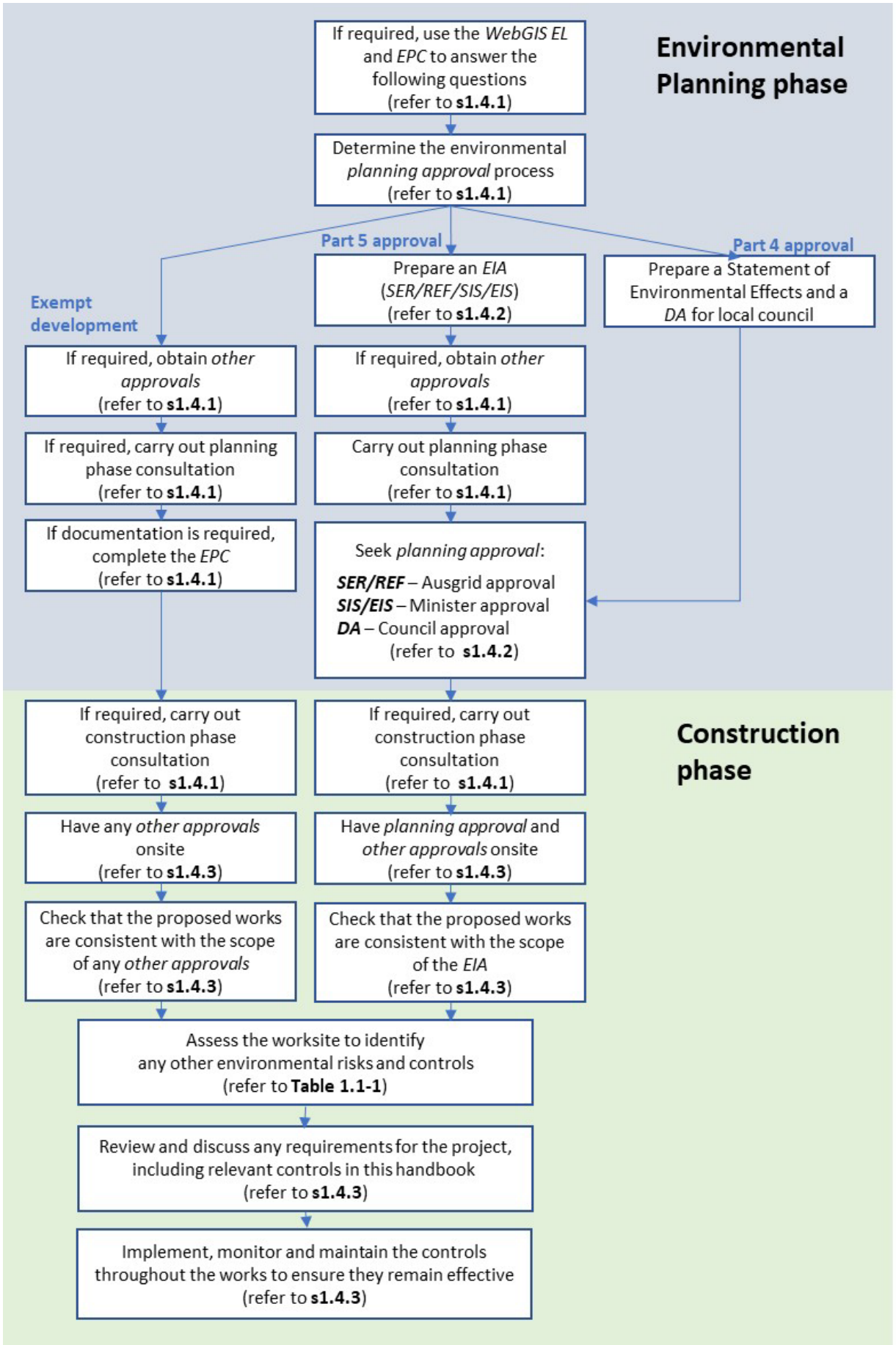


*Table 1.4-2: Planning approval processes*

| Planning approval process | Level of impact | Typical projects | Planning approval authority | Other approvals, notifications | Conditions of approval* |
|---|---|---|---|---|---|
| **Exempt development** | No more than minimal impact | Routine repairs and maintenance | NA | Potentially (refer to section 1.4.1) | *Other approvals* (if required) and this *Handbook* |
| **Part 5 SER** | Assessed as "Minor and neither extensive nor complex" | New distribution *works* | Ausgrid (or public authority) *determination* | Yes (refer to section 1.4.1) | *SER* and *other approvals*<br>*Works* must also comply with this *Handbook* |
| **Part 5 REF** | Assessed as more than *SER* but less than *EIS* | New zone substations / transmission lines<br>*Works* covered by a 3rd party *REF* | Ausgrid (or public authority) *determination* | Yes (refer to section 1.4.1) | *REF determination* and *other approvals*<br>*Works* must also comply with the *CEMP* and this *Handbook* |
| **Part 5.1 SIS/EIS** | Assessed as "Likely to significantly affect the environment" | Large transmission projects<br>*Works* covered by a 3rd party *SIS/EIS* | Generally Minister approval | Yes (refer to section 1.4.1) | *SIS/EIS determination* and *other approvals*<br>*Works* must also comply with the *CEMP* and this *Handbook* |
| **Part 4 DA** | Requires consent | New depots<br>*Works* covered by a 3rd party *DA* | Generally local council approval | Yes (refer to section 1.4.1) | *DA* approval and *other approvals*<br>*Works* must also comply with this *Handbook* |

* Where there is an inconsistency between the *planning approval / other approvals* and requirements in this *Handbook*, the *planning approval / other approvals* will prevail.

### 1.4.2 Preparing an EIA

a) Prepare *SERs* using NS174A SER in accordance with NS174B Environmental Assessment Guidelines. Detailed guidance on preparing *SERs* can be found in EGN 174B SER Guidance Notes and Ausgrid's Environmental Planning website.

b) To prepare *SERs*, current SER training and WebGIS EL training is required (refer to Table 1.3-1).

*c)* For other types of assessments (such as *REF*, *SIS*, *EIS* or *DA*), discuss the process with Environmental Services on 02 9394 6659.

*d)* Identify the environmental consultation and notification requirements applicable *planning approval* or *other approvals* by using the *EPC* in conjunction with the WebGIS EL.

### 1.4.3 Construction phase

*Works* can proceed when environmental planning requirements have been met and all *workers* understand any conditions of approval, environmental risks and associated controls that are applicable to their work.

a) Undertake community engagement required during the construction phase.

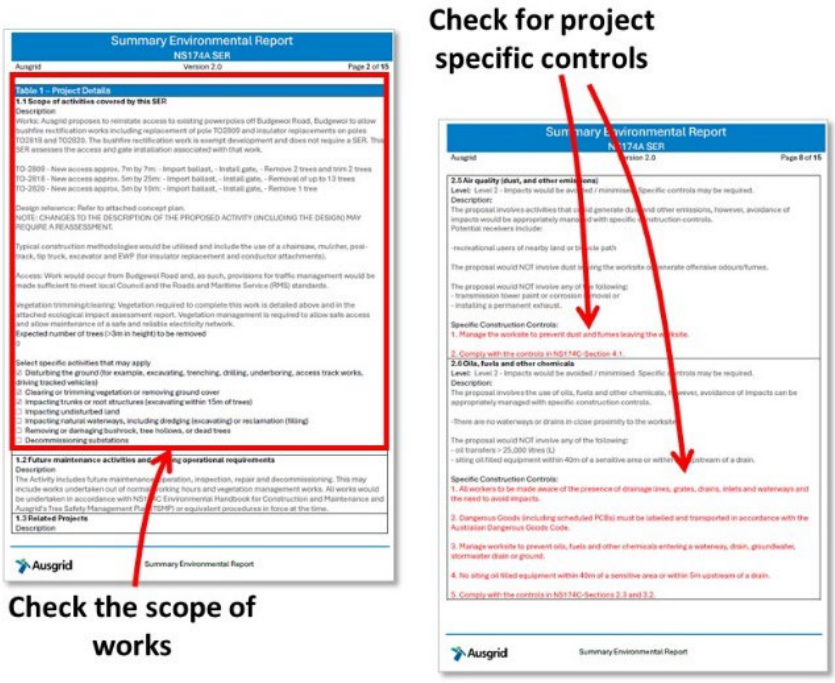
b) Have any *planning approval* and *other approvals* (including licences and permits) accessible at the worksite. .

c) Check the proposed *works* are consistent with the scope of *works* described in (and attached to) any *planning approval* and *other approvals*.

d) Assess the worksite to identify any additional environmental risks and controls that could apply to the *works* as part of the *HAC* process (refer to the checklist in Table 1.1-1).

e) Review and discuss the environmental requirements including relevant controls in this *Handbook*.

f) Implement monitor and maintain controls throughout the *works* to ensure they remain effective.




**Example SER – before starting construction or maintenance work, remember to check the scope of *works* (Table 1) and project specific controls (Table 2) in the SER**

# 2 POLLUTION CONTROL

## 2.1 EROSION AND SEDIMENT CONTROL

**When this section applies**

For activities that can cause erosion or sedimentation, such as:

- ☐ Disturbing the ground (for example, excavating, trenching, concrete cutting, jackhammering, drilling, underboring, access track *works*, demolition).
- ☐ Stockpiling or using material bays.
- ☐ Disturbing a natural *waterway,* including dredging (excavating) or reclamation (filling).
- ☐ Clearing vegetation or removing ground cover.
- ☐ Transporting spoil.

**Background**

Effective erosion and sediment control keeps sediment on the worksite and out of drains and *waterways*, where it can pollute *waterways* and harm aquatic ecosystems.

**Key message**

It is a legal requirement to prevent sediment from entering a *waterway* or drain.

Preventing erosion is the most efficient and effective way to ensure sediment stays on the worksite and out of drains and *waterways*. Once eroded, fine soil particles are difficult and costly to remove from site run-off.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If a *planning approval* is not required, check the requirements of any applicable *ESCP* or use section 2.1.1 to determine erosion and sediment control requirements.

c) Check for drainage lines, grates, inlets and *waterways*. *Employees* can access drainage diagrams for depots and substations on The Wire and Vault, respectively.

d) Check the weather forecast.

e) Have current erosion and sediment control training if undertaking activities that could cause erosion or sedimentation (refer to Table 1.3-1).

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving erosion or sedimentation.

b) A site specific *ESCP* does not exist and *works* involve:

- Ground disturbance > 250m$^2$ at any one time.
- Ground disturbance > 50m$^2$ of *vulnerable land* (check the WebGIS EL).
- Ground disturbance > 50m$^2$ within 40m of a natural *waterway*.
- Disturbing a natural *waterway*, including dredging (excavating) and reclamation (filling).

c) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or *ESCP* may be required.

**Definitions**

**Ecologically sensitive areas** refer to section 6.1.

**ESCP** means a site specific erosion and sediment control plan prepared in accordance with the *Blue Book* (Managing Urban Stormwater – Soils and Construction (Volume 1)).

**pH** (potential of hydrogen) is a measure of the acidity or alkalinity of a solution.

**Vulnerable land** means mapped areas of NSW that are especially vulnerable to soil erosion, sedimentation and landslip. It includes steep, highly erodible or protected riparian land (the interface between land and a natural *waterway*).

**Waterways** include a creek, river, canal, stormwater drain, ocean, lake, wetland or lagoon.

**Wet-vac** means a vacuum cleaner that can be used to clean up liquids.

**Zone of influence** means the area next to an excavation where applying a load to the ground can affect the stability of the excavation. It extends from the base of the excavation to the surface at an angle that is dependent on the soil type.

### 2.1.1 Six steps for effective erosion and sediment control

**STEP 1 - Assess the site and proposed *works* for risks of erosion and sedimentation**

a) Identify potential water flows and the receiving environment, such as:
- slopes, drainage lines, grates, drains and inlets
- areas subject to bogging
- *waterways* and *ecologically sensitive areas*.

b) Identify potential for erosion, such as:
- *vulnerable land* (check the WebGIS EL)
- existing exposed areas
- areas likely to be disturbed by the *works*
- the weather forecast.

c) Identify requirements for activities with high erosion and sedimentation risk, such as:
- depot material bays (refer to section 2.1.2)
- stockpiling (refer to section 2.1.3)
- access track *works* (refer to section 2.1.4)
- underboring (refer to section 2.1.5)
- saw-cutting (refer to section 2.1.6)

**Locating slopes, drainage lines and inlets helps determine the controls required**

**STEP 2 - Minimise erosion**

a) Minimise ground disturbance and the removal of groundcover.

b) Avoid disturbed areas and areas prone to bogging, especially during wet weather.

c) Where required, provide additional ground cover such as grass, mulch (refer to section 5.4) or temporary construction mats.

**Spoil temporarily placed on tarp to contain spoil and assist clean**

d) Phase *works* to minimise land exposed at any one time.

e) Minimise surface water flowing onto the worksite using barriers such as diversion drains, sandbags or sediment fences (refer to section 2.1.7).

f) Stabilise disturbed areas if a break in *works* of > 20 days will occur (such as turf, geotextile, mulch, soil binders or fast-growing seed).

g) Place spoil upslope of excavations, outside of the *zone of influence* (refer to Figure 2.1-1).

**Temporary construction mats help minimise ground disturbance**

**STEP 3 - Install sediment controls**

a) Correctly install sediment control devices to protect drainage lines, grates, drains, inlets, and *waterways*. Common examples include geotextile bags, coir logs, sediment fences, diversion drains, grass filter strips and stabilised entry/exit points (refer to section 2.1.7).

b) Sediment control devices should be installed:

- before work starts
- as close as practicable downslope of disturbed areas and stockpiles
- in a way that doesn't impede drainage or cause localised flooding
- so that disturbance to ground cover is minimised.

c) Install adequate controls at vehicle entry and exit points (such as an aggregate bed, rumble grid or wheel wash).

**Grass filter strips can be used as an effective natural barrier**

**STEP 4 – Practice good site management**

a) Separate topsoil, ground cover and contaminated spoil to aid reuse or disposal (refer to section 5.3).

b) Clean dirt from wheels and vehicle underbodies before leaving the worksite to prevent tracking sediment, and sweep streets as required.

c) Cover loads to prevent spilling material during transport.

d) Apply the appropriate controls for managing accumulated water (refer to section 2.2).

e) Implement controls to prevent dust leaving the worksite (refer to section 4.1.1)

**Cover loads to prevent dropping spoil or creating dust**

f) Clean the worksite and put adequate controls in place before finishing for the day.

**STEP 5 - Monitor and maintain controls**

a) Regularly monitor controls (especially before and during periods of rainfall) to check they are working effectively and no sediment leaves the worksite.

b) Regularly maintain controls:

- **clean**: remove sediment build up
- **repair**: fix defects
- **replace**: replace degraded products
- **improve**: incorporate additional controls as required.

**Regularly inspect and maintain erosion and sediment controls**

**STEP 6 - Rehabilitate disturbed areas**

a) Stabilise disturbed areas promptly (such as turf, mulch, jute mesh, grass seeding). Include progressive rehabilitation where required.

b) Restore all surfaces to their original condition or as specified by the relevant authority.

c) Maintain rehabilitated lands to establish sufficient groundcover to prevent erosion.

d) Remove temporary erosion and sediment controls once the worksite is stabilised or rehabilitation is complete.

**Rehabilitate disturbed areas to prevent erosion**

### 2.1.2 Depot material bays

a) Do not overfill the bays – keep material within the marked area of the bays to control sediment and dust.

b) Sweep any spilled material back into the bays before leaving site.

c) Supervise deliveries to confirm materials are unloaded within the bays.

d) Inspect and maintain the material bay facility after each use and after periods of rainfall.

e) Rectify or report any issues such as clogged weep holes and gravel drains (for Ausgrid properties, report via PropertyOneCall).


**Store material in correct bays to avoid cross contamination**

### 2.1.3 Stockpiling

a) Reduce the need for stockpiling. Controls could include:

- tip spoil directly into a truck or skip bin
- schedule deliveries so that materials are delivered as required
- have materials delivered in containers such as bulk storage bags
- reuse spoil elsewhere on-site.

b) When stockpiling is required:

- avoid placing stockpiles near roadways, gutters, *waterways*, drains, slopes and concentrated flow paths.
- avoid placing materials within the *zone of influence* (refer to Figure 2.1-1)

c) Protect stockpiles at risk of wind or water erosion. Controls could include:

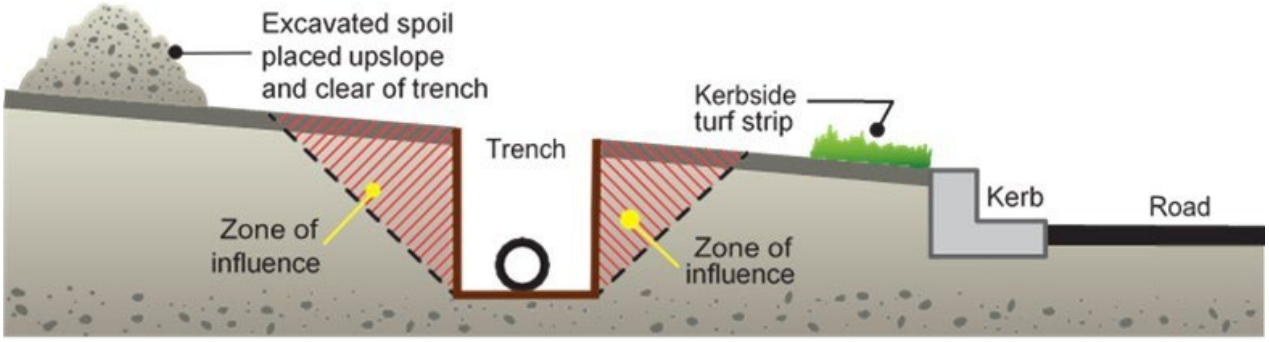
- place stockpiles on a tarpaulin, geofabric or builders' plastic
- cover or contain stockpiles if the worksite is left unattended or when rain is expected
- divert surface water flowing onto the stockpile using upslope barriers such as a sediment fence
- install sediment controls downstream of the stockpile.


**Tipping spoil directly into a truck or skip avoids stockpiling**

**Bulk storage bags help contain materials**

**Stockpile covered to prevent dust and a sediment fence used to filter run-off**

***Figure 2.1-1: Stockpile located upslope of the excavation to prevent sediment entering the gutter***



### 2.1.4 Access tracks

a) New access tracks, widenings and realignments require a *planning approval* (refer to section 1.4).

b) Maintenance of access tracks requiring vegetation removal may require a *planning approval* (refer to section 1.4).

c) Maintenance of access tracks in national park estate will require a conservation risk assessment (CRA) (refer to Table 6.1-2).

d) Undertake maintenance of tracks in accordance with the requirements of NSW Erosion and sediment control on unsealed roads and NS143

e) Avoid using access tracks where damage could result (such as wheel ruts, sedimentation, impacts on drainage) for example, during or immediately after wet weather.

### 2.1.5 Underboring

a) Utilise inert drilling fluids.

b) Use a recirculating drilling fluid system.

c) Track the location of the drill head and monitor for frac outs (inadvertent release of drilling lubricant).

d) Ensure the drill head exits the receive hole in a controlled worksite where drilling fluids are managed and recovered.

When in *ecologically sensitive areas*;

e) Utilise biodegradable drilling fluids.

f) Prepare a site specific contingency plan to manage a frac-out.

g) Ensure incident response materials and measures (refer to 9 and NS159) are on site so the contingency plan can be implemented immediately.

### 2.1.6 Saw-cutting

Slurry from saw-cutting must be contained as it has a high *pH* (alkaline). Controls include:

a) Use minimal water during cutting to create a slurry that can be readily contained.

b) Contain slurry using a *wet-vac* and sandbags, where possible.

c) If not using a *wet-vac*, contain slurry using sandbags or barriers and remove from the worksite.

d) Sweep slurry residue into a contained area before it dries.

e) Dispose of spadeable slurry as general solid waste and liquid slurry to a liquid waste treatment facility (refer to section 5.3).

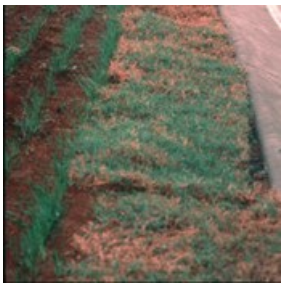
***Wet-vac* used to collect saw-cutting slurry**

**Saw-cutting slurry has not been contained effectively**

### 2.1.7 Erosion and sediment control devices

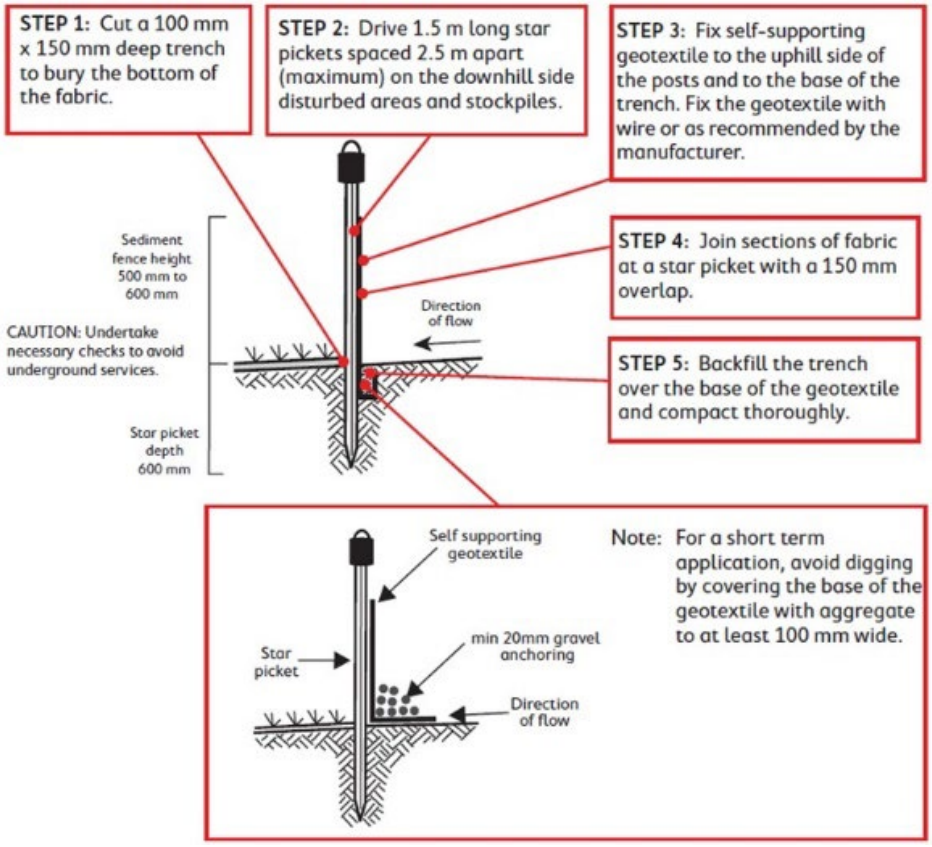
The system of erosion and sediment controls will depend on site specific circumstances and should consider advantages and limitations of each control (refer to Table 2.1-2).

*Table 2.1-2: Erosion and sediment control devices*

| Device | Example | Use |
|---|---|---|
| **Geotextile bags** |   | **When to use:** To limit sediment build up in stormwater drains by collecting coarse sediment.<br>**How to use:** Fill the filter bags to two-thirds capacity with minimum 20mm aggregate. Form a seal against the kerb to prevent sediment bypassing the filter.<br>**Advantages:** Simple to construct and can limit sediment build-up in stormwater drains.<br>**Limitations:** Designed to filter small flows. Will not filter fine particles <0.02mm, such as clay or silt. Can easily be damaged by traffic. |
| **Coir logs (densely packed coconut fibre)** |   | **When to use:** For unsealed surfaces or where filtering is required.<br>**How to use:** Level the area beneath the logs prior to placement. Stake logs at regular intervals on either side to prevent movement.<br>**Advantages:** Natural, biodegradable logs can be used in *ecologically sensitive areas*, steep slopes and gullies.<br>**Limitations:** Can become heavy when wet. Require suitable anchorage due to low buoyant weight. |
| **Grass filter strip** |  | **When to use:** To reduce the risk of rill erosion on steep slopes and filter sediment from run-off.<br>**How to use:** Place 300mm wide turf strips along the contour where possible. If not possible, place lateral strips every 5m to prevent rill erosion. Peg on steep slopes if necessary.<br>**Advantages:** Effective at preventing erosion. Well-suited to linear excavations adjacent to the road/footpath.<br>**Limitations:** Will allow fine particles to flow through as flow increases. |
| **Temporary construction mats** |  | **When to use:** To prevent vehicles bogging in soft or muddy ground and minimise damage to ground cover to prevent erosion.<br>**How to use:** Place end-to-end to create an all-weather track.<br>**Advantages:** Prevents damage to turf and groundcover, reducing restoration costs, and minimises mud tracking off-site.<br>**Limitations:** Can be difficult to manoeuvre in muddy conditions |

| Device | Example | Use |
|---|---|---|
| **Upslope diversion drain** |  | **When to use:** To divert stormwater around the work area.<br>**How to use:** Create small turf or geotextile lined catch drains or use diversion banks. Avoid diverting onto neighbouring properties.<br>**Advantages:** Prevents erosion, reduces the amount of run-off that must be managed and keeps the site drier.<br>**Limitations:** Depending on water flows, it may be necessary to line the drain or bank with turf or geotextile to avoid soil erosion. |
| **Stabilised site access** |  | **When to use:** To prevent vehicle access routes from becoming a source of sediment and reduce the likelihood of vehicles bogging on site.<br>**How to use:** Level, compact and cover the area with geotextile. Then cover with a 200mm deep layer of 30-75mm aggregate.<br>**Limitations:** Extra crushed rock or recycled concrete may need to be added to maintain its effectiveness. Street sweeping on adjacent roads may still be required. |
| **Sediment fence** |  | **When to use:** To settle coarse sediment from sheet flow or to contain stockpiles.<br>**How to use:** Place parallel to the site contours with ends turned up to create a settlement pond. Bury at least 150mm deep and stake every 2.5m (see Figure 2.1-3). Use geotextile, not shade cloth.<br>**Advantages:** Very effective if installed and maintained correctly.<br>**Limitations:** Not designed to filter concentrated flows. Will not filter fine particles <0.02mm, such as clay or silt which may create a dam |

*Figure 2.1-3: Sediment fence installation instructions*



## 2.2 WATER DISCHARGE

**When this section applies**

For activities that manage accumulated water or extract water, such as:

- ☐ Pumping water from excavations, pits, substations and bunds.
- ☐ Extracting groundwater or interfering with an aquifer.
- ☐ Discharging to sewer (for example, washbays).
- ☐ Installing, operating or altering a septic tank.

**Background**

Water discharge can harm the environment. Only clean rainwater should enter a *waterway* or drain. Any other liquid or solid is considered a pollutant.

**Key message**

Accumulated water requiring removal must be assessed to determine discharge/ disposal options. In some cases, sampling, tracking and licensing applies. Preventing water from accumulating reduces the need to assess and manage it, which minimises project costs and delays.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) Use Figure 2.2-1 to determine options for managing accumulated stormwater from excavations, pits, substations or bunds.

c) Check the requirements of any applicable water management plan.

d) Have current discharging water training if supervising discharges through filter bags (refer to Table 1.3-1 and section 2.2.2).

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving water discharges.

b) A site specific water management plan does not exist and *works* involve:

- Water discharge that is automatic (eg float switch activated pump), long-term or >100,000L.
- Water that has an unusual smell, colour, scum, foam or other evidence of contamination (refer to section 5.1).
- Extracting groundwater or interfering with an aquifer.

c) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or site specific water management plan may be required.

**Definitions**

**EWMS** is an environmental work method statement.

**NTU** (Nephelometric Turbidity Unit) is a unit of measure of a liquid's *turbidity*.

**pH** (potential of hydrogen) is a measure of the acidity or alkalinity of a solution.

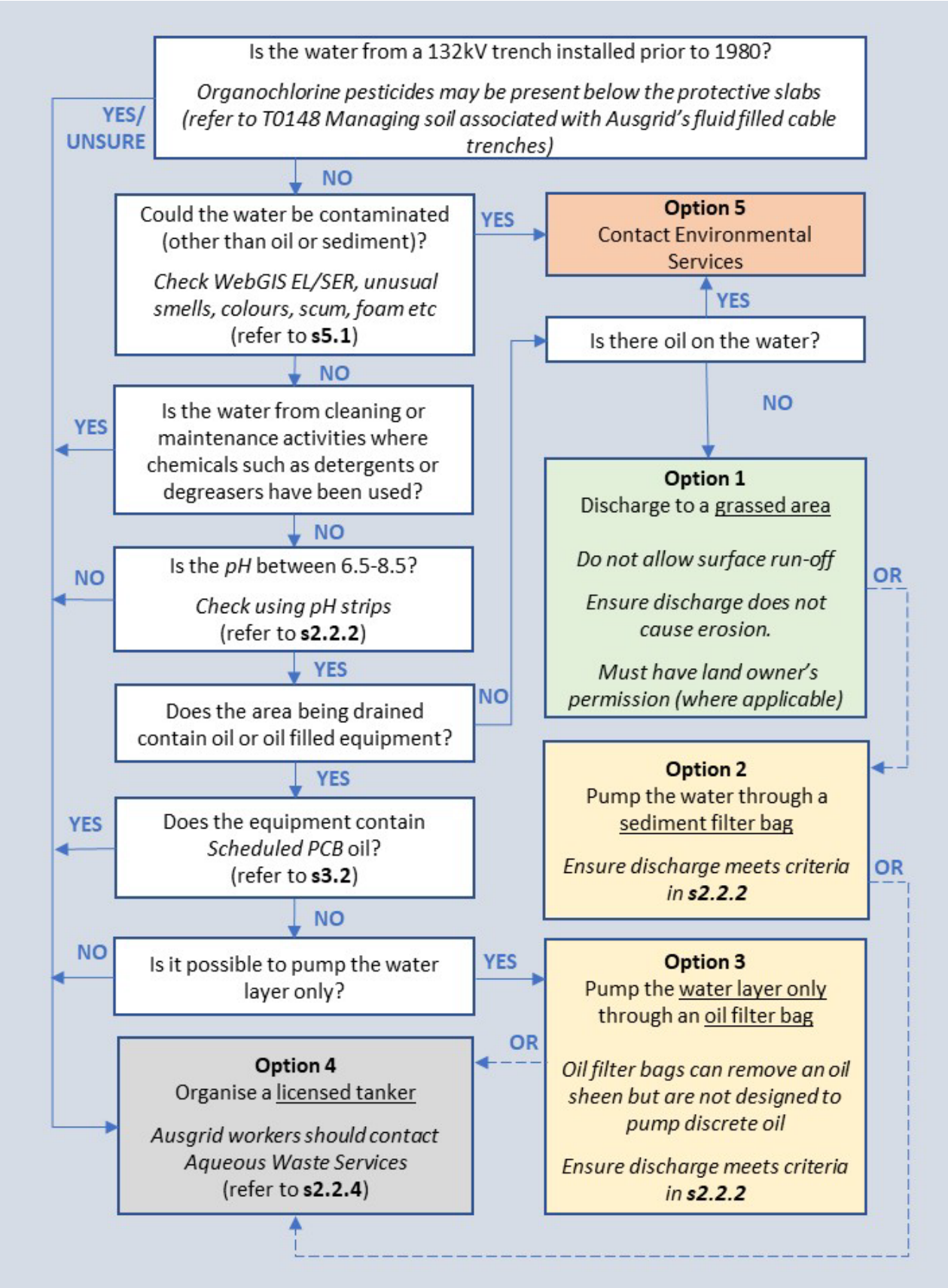
**Turbidity** is a measure of a liquid's cloudiness caused by suspended particles.

### 2.2.1 Discharges to sewer

a) Non-domestic discharge to sewer (such as washbays) must be in accordance with a permit from the relevant sewerage authority (refer to section 8.2.4). Domestic discharges include wastewater from amenities.

b) An approval from the relevant sewerage authority is required to install, operate or alter a septic tank.

*Figure 2.2-1: Process for managing accumulated water from excavations, pits, substations or bunds*



### 2.2.2 Discharging through filter bags

a) *Employees* can find the filter bag work instruction in EWMS 163 Discharging through a filter bag.

b) The *worker* supervising the discharge must have current discharging water training (refer to Table 1.3-1).

c) Monitor the discharge to ensure the:

- *pH* is 6.5 to 8.5 - follow the instructions on the *pH* test strip packet
- *turbidity* < 50 *NTU* (refer to section 2.2.3)
- discharge contains no unusual colours, oil or other contaminants
- discharge does not cause erosion (refer to section 2.1) or other hazards.

d) Oil filter bags can remove an oil sheen but will fail if filtering large amounts of oil.

e) Sediment filter bags can remove sediment but will fail if filtering large amounts of sediment or fine sediment from excavations.

pH test strips

Sediment filter bag

Oil filter bag

### 2.2.3 How to check turbidity

Use a turbidity tube to check the *turbidity* of the water is < 50 *NTU*.

a) Collect a sample of the discharge in a clean bucket/other container.

b) Fill the tube to the 50 *NTU* mark.

c) Hold the tube upright and out of direct sunlight.

d) Look vertically down the tube to check the indicator symbol on the base of the tube is distinguishable. If not, the turbidity is > 50 NTU.

**Note:** To measure the turbidity, keep adding water to the tube until the indicator symbol is only just distinguishable. Read the NTU from the scale on the side of the tube.

Indicator symbol at the base of the tube

Indicator symbol no longer visible in the tube

### 2.2.4 Organising a licensed tanker removal

*Employees* can contact Aqueous Waste Services:

a) 3 days' notice is required for planned *works*. Use the Liquid Waste and NDD booking form available on The Wire.

b) For emergency pump-out, call the Aqueous Waste Services' after-hours number (refer to section 10).

## 2.3 OILS, FUELS AND OTHER CHEMICALS

**When this section applies**

For activities that involve oils, fuels and other chemicals, such as:

- ☐ Handling, storing, transporting or disposing of oils or fuels.
- ☐ Handling, storing, transporting or disposing of chemicals (for example, paints, solvents, resins, glues, lacquers, thinners, detergents, cleaning agents, lubricants and PFAS (per- and poly-fluoroalkyl substances)).
- ☐ Operating plant and equipment.

**Background**

Oils, fuels and other chemicals are used at various locations across the network.

**Key message**

Oils, fuels and other chemicals must be prevented from entering the environment and handled, stored, transported and disposed according to legal requirements.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) Use Figure 2.3-1 to determine oil and chemical storage options.

c) Check the requirements of any applicable *EWMS* (oil transfers > 25,000L).

d) When using oil storage areas, check signage for requirements.

e) Check for drainage lines, grates, inlets and *waterways*. *Employees* can access drainage and oil containment diagrams for depots and substations on The Wire and Vault, respectively.

f) Have current oil handling and spill response training if regularly handling, transporting or storing oil (refer to Table 1.3-1).


**Check whether nearby drains go to stormwater, sewer or an oil containment tank**

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving oils, fuels and other chemicals (refer to section 9).

b) A site specific *EWMS* does not exist and *works* involve oil transfers > 25,000 litres (L).

c) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or *EWMS* may be required.

Additional *WHS* requirements may apply. Refer to the *SWMS*, *SDS* and product label. *Employees* can use ChemAlert.

**Definitions**

**HAZCHEM** is hazardous chemicals.

**PCB** is polychlorinated biphenyls (refer to section 3.2).

**PPE** is personal protective equipment.

**ppm** is parts per million (equivalent to milligram per kilogram (mg/kg)).

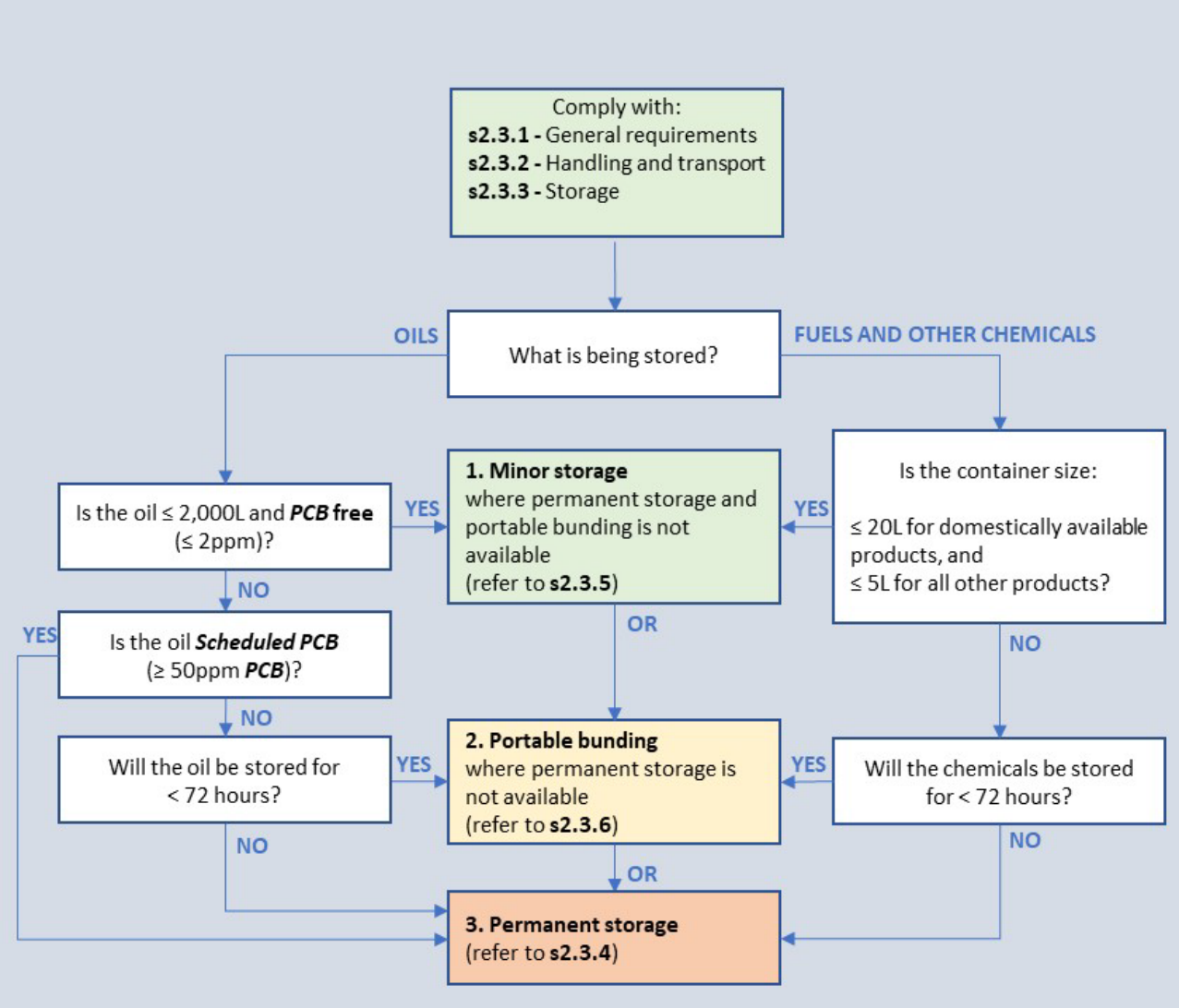
**Scheduled PCB** means material that has a *PCB* concentration ≥ 50ppm.

**SDS** is safety data sheet. Available to *employees* from ChemAlert.

**SWMS** is safe work method statement.

**WHS** is work health and safety.

*Figure 2.3-1: Environmental requirements for storing oils, fuels and other chemicals*




## 2.3.1 General requirements

a) Comply with *WHS* requirements including the *HSMS*, *SWMS*, *SDS* and product label. *Employees* can access *SDS* from ChemAlert.

b) Handle, store, transport and dispose of oils, fuels and other chemicals in an environmentally responsible manner.

**Spill kits should be readily available near oil storage areas**

c) Have an appropriate spill kit(s) on-site and response procedures accessible when handling, storing or transporting oils, fuels and other chemicals (refer to section 2.3.8).

d) Clearly label containers (refer to section 2.3.3).

e) Check equipment, drums and containers are in good condition and fit for purpose (no leaks or structural defects such as rust, corrosion, dents or damage on flanges).

f) Immediately respond to, clean up and report spills and leaks (refer to section 9).

g) Dispose of used oil spill response absorbent material as general solid waste if there are no free liquids and < 50ppm PCB (refer to section 5.3).

h) If used oil spill response material contains ≥ 50ppm *PCB,* contact Environmental Services on 02 9394 6659.

i) Record network asset oil top-ups in SAP.

**Sharp indents and damage to the rolling hoops or edges are potential leak points**

**Drums in poor condition, not bunded, unlabelled or uncovered can leak and contaminate land or waterways**

### 2.3.2 Handling and transport

a) Handle oils, fuels and other chemicals such that spills can be recovered before entering a drain or *waterway* (for example, on hard stand, within a bunded area, under cover).

b) Position transfer equipment as far as practicable away from drains and property boundaries.

c) Check hoses, connections, taps and pumps prior to *works* and monitor while in use.

d) Protect drains, *waterways* and property as necessary when handling oil filled plant, equipment and containers.

e) Regularly inspect and maintain plant, equipment and containers used in the handling and transport of oils, fuels or other chemicals.

f) Secure equipment and containers prior to transport.

g) Transport equipment and containers in a manner that prevents leaks.

h) Oil transport tankers should not be used for storage of oil unless in accordance with section 2.3.3.

### 2.3.3 Storage

a) Use Figure 2.3-1 to determine storage options.

b) Permanent storage facilities should be the first preference for storage of oils, fuels, other chemicals and oil filled equipment.

c) Where permanent storage facilities are not available, spare transformer bays that are bunded and drain to an oil containment system can be used for oil storage.

d) Store oils, fuels and other chemicals such that potential spills:

- can be recovered and not enter a drain or *waterway*
- would not contaminate land
- would not reach ignition sources, stores of other chemicals, combustible materials or incompatible chemicals.

e) Keep the area in and around the storage area free of combustible materials.

f) When storing equipment and containers, consider the suitability of the location (such as level ground, not susceptible to vehicular impact, hard stand, under cover, secure area).

g) When storing drums and containers, label them with a point of contact and the contents (refer also to section 3.2.2 for labelling *PCB* oil).

h) Separate incompatible chemicals (refer to the *SDS* and product label to check for any incompatibilities. *Employees* can use ChemAlert).

i) Promptly scrap network equipment that does not meet reuse requirements in MRPA 118 (for example, pole transformers > 20 years old and most other transformers manufactured before 1997).

**Equipment stored too close to the bund wall means leaks may not be contained**

**Permanent storage facilities should be the first preference for storage**

**Self-bunded (double-walled) transportable tanks can be used for permanent storage**


**Use bunded chemical storage cabinets to store fuels and chemicals**

### 2.3.4 Permanent storage

a) Comply with the general storage requirements (refer to section 2.3.1 and 2.3.3).

b) Confirm the bund is at least 110% of the volume of the largest container.

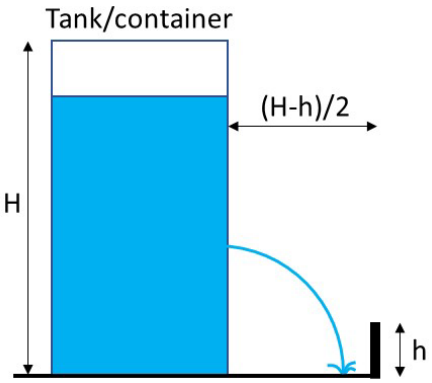
c) Check bunds are in good condition (for example, not leaking, free of debris, drain valve closed, emptied of accumulated rainwater – refer to section 2.2).

d) Rectify or report any issues via PropertyOneCall (for *employees*).

e) Maintain the required spray distance from the bund wall (half the height of the container above the bund wall) – refer to the spray distance diagram.

f) Comply with section 3.2.3 when storing *scheduled PCB*.

g) Permanent storage facilities are to be located and constructed in accordance with relevant standards specific to the liquid being stored (such as AS 1940 The storage and handling of flammable and combustible liquids).



**Spray distance diagram**

### 2.3.5 Minor storage

a) Comply with the general storage requirements (refer to sections 2.3.1 and 2.3.3).

b) Use permanent storage or portable bunding where available.

c) Minor storage is not suitable for storing any of the following:

- > 2,000L oil
- > 2ppm *PCB*
- > 20L of domestically available fuels and chemicals
- > 5L of all other fuels and chemicals.

d) Position minor storages in accordance with relevant standards. For example, AS 1940 requires minor oil storage areas to be:

- separated by 20m indoors or 15m outdoors, from other minor storages
- separated by 5m from other stores of flammable or combustible liquids, ignition sources or building openings, and by 1m from a property boundary
- near a readily accessible, appropriate, portable fire extinguisher where >100L of flammable liquids or >1,000L of combustible liquids are stored.

e) Do not use minor storage for substances that require bunding by relevant standards or to meet *WHS* requirements.

### 2.3.6 Portable bunding

a) Comply with the general storage requirements (refer to section 2.3.1 and 2.3.3).

b) Use permanent storage where available (refer to section 2.3.4).

c) Portable bunding is not suitable for *scheduled PCB*.

d) Portable bunding is not suitable for storing for > 72hrs if storing any of the following:

- > 2,000L oil
- > 2ppm *PCB*
- > 20L of domestically available fuels and chemicals
- > 5L of all other fuels and chemicals.

e) Confirm the bund is at least 110% of the volume of the largest container.

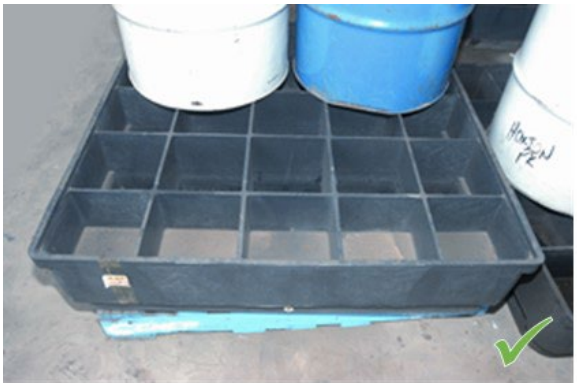
f) Check bunds are in good condition (for example, impervious, free of debris, emptied of accumulated rainwater – refer to section 2.2).

g) Cover portable bunding when it might be exposed to rain.

h) Keep portable bunds at least 5m from ignition sources, flammables, combustibles or building openings, and 1m from a property boundary.

i) Keep an appropriate portable fire extinguisher readily accessible where >100L of flammable liquids or >1,000L combustible liquids are stored.

j) Do not use portable bunding for substances that require permanent bunding by relevant standards or to meet *WHS* requirements.



**Bunded pallets can be used for temporary storage of drums**

**Bunded pallets should be covered when exposed to the weather**

### 2.3.7 Surplus chemicals

Storage of excess or redundant chemicals can present an unnecessary safety and environmental risk.

a) Dispose of surplus chemicals in a timely manner (refer to section 5.3).

b) Use appropriate *PPE* when handling chemicals – refer to the *SDS* and advice from your safety advisor if required. *Employees* can use ChemAlert.

c) Update *HAZCHEM* registers as required.

### 2.3.8 Spill kits Types and contents

a) Select the correct spill kit. The types of kits include:

- oil only – for oil-based liquids such as oils, fuels and lubricants (these products float on water)
- general purpose – for oil and water-based liquids, including weak acids and alkalis (these products will not float on water)
- *HAZCHEM* – for aggressive chemicals (toxic, corrosive, *pesticides* etc). For *pesticide* spills, powder absorbent and hydrated lime are often used. Do not use sawdust as it presents a fire hazard. Use sodium carbonate (soda ash) to clean reusable equipment if available, otherwise use water.

b) The contents of each spill kit should reflect the risk and will depend on where and how oils, fuels and other chemicals are stored, handled or transported. The three main oil spill response kits used at Ausgrid are:

- elevated work platform (EWP), lifter/borer & van kits – 22L capacity
- truck kit (transporting oil or oil filled equipment) – 70L capacity
- depot kit – 250L capacity.

**Contents of each spill kit depends on the activities undertaken**

c) Ensure the spill kit contains the correct contents, including:

- spill response procedure or QR code (refer to section 9)
- safety equipment and *PPE* (gloves, P2 mask, safety glasses etc)
- absorbent material and booms (socks, pads, loose absorbent etc)
- general equipment and tools (brush and pan, bags, tape etc).

**Note:** Advice on kit contents and their use is available in EFS 022 Oil Spill Kits (*employees*) or EGN 101 Spill Response Information (or scan this QR code).


**Kit set up**

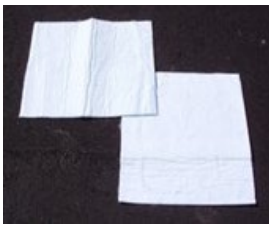
d) Check the spill kit can be deployed before the spill reaches the nearest drain.

**Use of spill products**

e) Refer to Table 2.3-2 for a summary of how and when to use different products for spills.

f) Check the *SDS* / label of the spilled product for any specific instructions.

*Table 2.3-2: Oil spill response material*

| Product | Example | Use |
|---|---|---|
| **Socks** |  | **When to use:** Spills and leaks requiring containment.<br>**How to use:** Surround leaking drums, place in the flow path, or as a floating boom.<br>**Capacity:** A 3m sock will hold approximately 6L of oil.<br>**Comments:** Netted socks are available for use with high water flows. Product is not designed to float for long periods and will sink when saturated. |
| **Booms** |  | **When to use:** Spills and leaks requiring containment in an aquatic environment (such as a creek, stormwater channel).<br>**How to use:** Booms are similar to socks but are larger and can be used to extend across a *waterway* to contain a spill. Booms are used to create a floating barrier.<br>**Capacity:** Booms may or may not be absorbent.<br>**Comments:** May require more than one person to install and maintain. |
| **Pillows** |  | **When to use:** Spills and leaks involving pits and drains.<br>**How to use:** Place in drain, pit or gutter.<br>**Capacity:** Approximately ½ the volume of the absorbent (for example, a 20L pillow will absorb 10L of oil).<br>**Comments:** Netted pillows are available for use with high water flows. |
| **Loose absorbent** |  | **When to use:** Spills, leaks, drips and clean up.<br>**How to use (land):** Place on spill and spread with a broom for maximum absorption.<br>**How to use (water):** Spread over the spill, usually in conjunction with a boom and then collect product with a pool scoop.<br>**Capacity:** Approximately ½ to 1 times the volume of the absorbent (for example, a 50L bag will absorb 25-50L of oil).<br>**Comments:** Product is not designed to float for long periods and will sink when saturated. |
| **Pads** |  | **When to use:** Spills, leaks, drips, and clean up.<br>**How to use:** Place under leaks/drips, as a floating pad, in trafficable areas, in drip trays, or use as a wipe.<br>**Capacity:** Approximately 1L of oil per pad.<br>**Comments:** Product is not designed to float for long periods and will sink when saturated. |
| **Putty** |  | **When to use:** Quick temporary seal for damaged equipment or containers.<br>**How to use:** It may be a putty or granular (requiring mixing with water). Wearing gloves, apply putty over the damaged area to create a seal and stop the leak.<br>**Comments:** Not to be used as a permanent repair. Damaged item should be drained immediately. |

# 3 HAZARDOUS MATERIALS

## 3.1 ASBESTOS

**When this section applies**

For activities that involve exposure to *ACM* or dust, such as:

- ☐ Sampling, working with, transporting and disposing of *ACM* or dust.
- ☐ Scrapping network equipment older than 2003.

**Background**

Asbestos is a known carcinogen that was used as insulating material in cable bandages, joints, pits and conduits, switchboards and LV Boards; and routinely installed in substation buildings in the form of cement sheeting and floor tiles.

When in good condition and managed correctly, *ACM* presents negligible risk to *workers* and others.

**Key message**

*ACM* must be assessed, classified, registered, stored, handled, transported and disposed in accordance with legal requirements. Labelling and licensing may be required for the removal, transport, storage and disposal of asbestos wastes.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If a *planning approval* is not required, check Ausgrid's Asbestos Register to identify work locations where asbestos may be present and details what could be found at a location. The register is accessible to *employees* via the Asbestos Gateway. *External Partners* can access records from the register via their Ausgrid point of contact.

c) Check for suspected ACM (refer to Asbestos Product Guide Power App (for *employees*) or NS211 Annexure F Asbestos Product Guide.

d) Use Figure 3.1-1 to determine requirements for working with asbestos.

e) All *workers* must have current Asbestos Awareness training. *Workers* who work near *ACM* and might disturb *ACM* require current working with *ACM* training and *workers* who work with *ACM* and perform specific tasks require task specific asbestos training (refer to Table 1.3-1).

**When to contact the Hazardous Materials Hotline 02 9394 6961**

a) Asbestos sampling is required.

b) Equipment/building is older than 2003 and has not been surveyed in the last five years.

c) A new asbestos hazard has been identified.

d) *Asbestos in soil* is identified (refer to section 5.1 for the additional requirements regarding *asbestos in soil*).

e) Asbestos has been illegally dumped on Ausgrid Group property (for asbestos dumped on public property, refer to the Asbestos Quick Guide).

f) Information in the Asbestos Register does not reflect current observed conditions.

g) *Works* cannot meet the requirements, or requirements are unclear in NS211 Working with asbestos products or relevant training (refer to Table 1.3-1).

h) *Works* cannot meet the requirements in this *Handbook*.

**Definitions**

**ACM** means asbestos containing material, which is any material or part of a thing that, as part of its design, contains asbestos.

**Asbestos in soil** means soil contaminated with asbestos or inappropriately buried asbestos. This does not include asbestos conduit, joint boxes and troughing installed in accordance with Ausgrid's Network Standards.

Asbestos Register is an Ausgrid register that identifies work locations where asbestos could be present and details what could be found at a location.

**Asbestos removal work** means *works* involving the removal of asbestos or *ACM*, including removal by an independent *LAR*.

**Friable asbestos** means any material that contains asbestos and is in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

**Hazardous materials** are chemicals or dangerous goods as listed in HS014-P0100 - Workplace hazardous materials procedure.

**IWTS** is the *EPA's* Integrated Waste Tracking Solution.

**LAA** is an external independent Licensed Asbestos Assessor.

**LAR** is an external independent Licensed Asbestos Removalist.

**Non-friable asbestos** means material containing asbestos (other than *friable asbestos*), including material containing asbestos fibres reinforced with a bonding compound. It can degrade and become *friable asbestos* over time or following an incident such as a fire, extensive weathering, flood or poor historic work practices.

**3.1.1 Working near asbestos**

a) All *workers* are made aware of the presence of known and suspected *ACM*.

b) All *works* with the potential to disturb *ACM* must be undertaken in accordance with NS211 and relevant training (refer to Table 1.3-1).

c) If suspected asbestos is discovered, contact Ausgrid's Hazardous Materials hotline.

**3.1.2 Working near or with asbestos**

a) Undertake all *works* with *ACM* in accordance with NS211, relevant training (refer to Table 1.3-1), required PPE and conditions of any applicable current exemption for *employees*

b) No removal >10m$^2$ or >100kg of *non-friable asbestos* without a *LAR* and *LAA*.

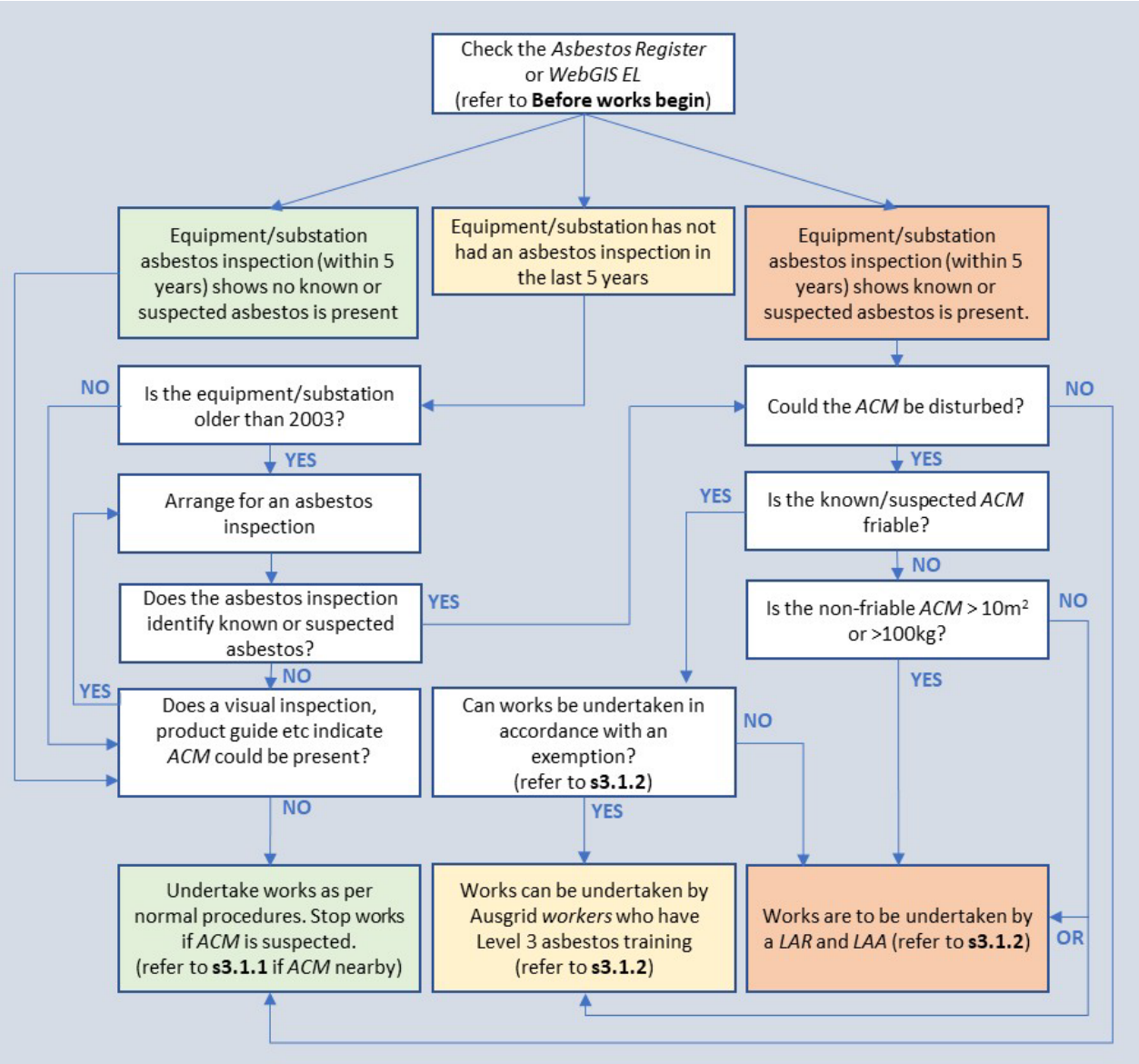
c) No removal of *friable asbestos* without a *LAR* and *LAA* (unless allowed by an exemption for *employees*.

d) Notify occupants of the site and neighbouring properties of the commencement date and expected duration of any *asbestos removal work*.

e) At the completion of *asbestos removal work*, the following documents must be submitted to hazmat@ausgrid.com.au:

- HRR - Hazmat Remediation & Removal Form for all remediation and removal work
- Air monitoring results and clearance certificates (for licensed work).
- Landfill tipping dockets (for any waste disposed).

*Figure 3.1-1: Process for working with asbestos*




### 3.1.3 Transport and disposal of asbestos

a) Correctly bag/wrap, label, protect, transport and dispose of asbestos waste. *Employees* can refer to Asbestos Quick Guide: Waste Wrapping.

b) When disposing of network equipment older than 2003, *employees* must comply with Asbestos Fact Sheet – Disposal of Assets.

c) Dispose of appropriately wrapped and labelled asbestos as soon as practicable in an approved asbestos waste bin or to a licensed waste facility:

- *Employees* can use secure asbestos bins located at certain depots (refer to the Asbestos Gateway).
- If disposing directly to an *EPA* licensed facility, contact the facility before transporting to confirm any delivery requirements. On arrival inform the landfill operator that the waste contains asbestos.

d) If transporting asbestos waste to a waste facility, use IWTS to monitor loads >100kg or >10m$^2$ of asbestos sheeting (refer to section 5.3).

## 3.2 POLYCHLORINATED BIPHENYLS

**When this section applies**

For activities that involve PCB, such as:

- ☐ Handling oil and oil filled equipment manufactured before 1997.
- ☐ Handling other *PCB material and waste* (for example, drums, tanks, rags, oil absorbent products and soils that are contaminated with > 2ppm *PCB.*

**Background**

*PCB* is a group of synthetic compounds once used for their insulating properties and durability. *PCB* could be present in transformers, current transformers (CTs), voltage transformers (VTs), oil circuit breakers (OCBs), fluid filled cables and lighting capacitors.

Incorrect handling of *PCB* can harm human health, aquatic life, animals and the environment, and can cause land contamination.

**Key message**

*PCB* must be prevented from entering the environment and must be classified, stored, handled, transported and disposed in accordance with legal requirements. Labelling and licensing are required for some activities.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If a *planning approval* is not required, use Figure 3.2-1 to determine *PCB* requirements.

c) When using oil storage areas, check signage for requirements.

*d)* Check for drainage lines, grates, drains, inlets and *waterways*. Drainage and oil containment diagrams are available for depots and substations (Ausgrid *employees* can check The Wire and Vault, respectively).

*e)* Have current oil handling and spill response training if regularly handling, transporting or storing oil (refer to Table 1.3-1).

**When to contact Environmental Services 02 9394 6659**

a) Incidents involving *PCB*.

b) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment, treatment or disposal may be required.

Additional *WHS* requirements may apply. Refer to the *SWMS*, *SDS* and advice from your safety advisor. *Employees* can use ChemAlert.

**Definitions**

**ADG Code** means the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**Articles** includes oil filled equipment (such as transformers and switchgear).

**DG** is dangerous goods, which are solids, liquids, or gases that can harm people, other living organisms, property or the environment, and include *scheduled PCB* in accordance with the ADG Code.

**GHS** means the Globally Harmonised System of Classification and Labelling of Chemicals.

**IBC** means intermediate bulk container.

**Non-scheduled PCB** means material that has a *PCB* concentration > 2ppm and < 50ppm.

**PCB free** means material that has a *PCB* concentration ≤ 2ppm.

**PCB licence** (link for *employees*) means a licence issued under the POEO Act.

**PCB material and waste** includes oil, equipment, *receptacles*, rags, oil absorbent products and soils that are contaminated with > 2ppm *PCB*.

**Receptacles** means a container holding material (such as oil in a drum, container, tank or *IBC*, or soil in a Hazibag), but not equipment.

**Scheduled PCB** means material that has a *PCB* concentration ≥ 50ppm.

### 3.2.1 Determine the PCB concentration

a) Determine the *PCB* concentration prior to disposing.

b) For equipment manufactured before 1997, *employees* should check the PCB Register or arrange testing. If not tested, assume the equipment contains *PCB*.

c) For sampling, refer to EWMS 107 PCB Sampling.

d) Treat equipment manufactured from 1997 onwards as *PCB free*.

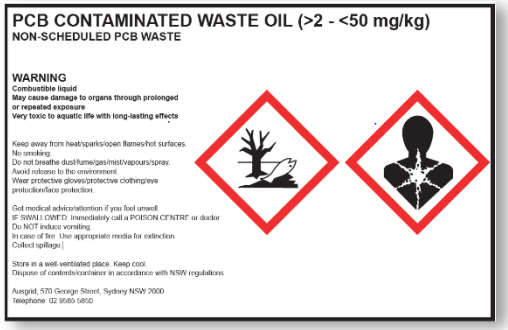
### 3.2.2 Labelling, transporting and storing PCB

a) Refer to section 3.2.3 for a summary of *scheduled PCB* requirements.

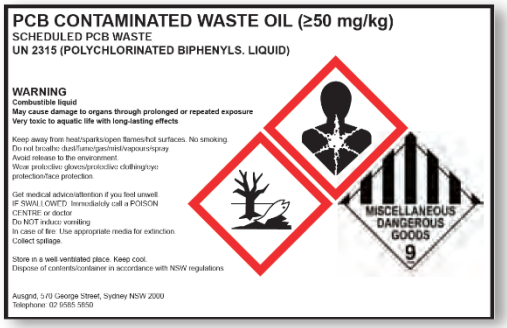
b) Clearly label *PCB waste* with *GHS* labels and have appropriate spill kits, response procedures and *PPE* accessible (refer to sections 2.3.8 and 9.1.2).

c) Store *PCB material and waste* in accordance with section 2.3.3.

d) Transport *PCB material and waste* in accordance with section 2.3.2.




Non-scheduled PCB waste GHS label




Scheduled PCB waste GHS label

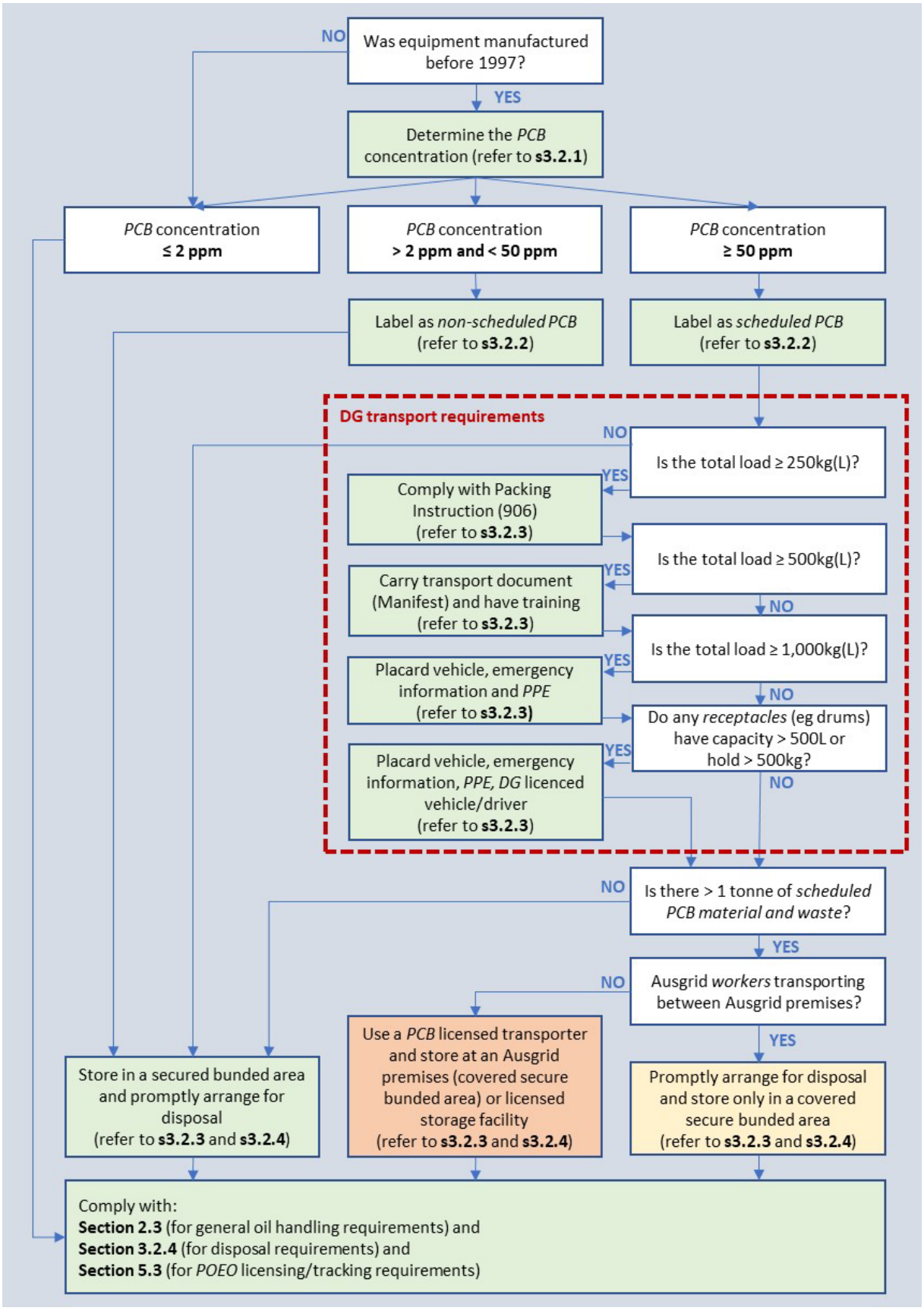
Dangerous Goods transport documentation

Ausgrid

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Consignors name:** Ausgrid<br>24 Campbell Street, Haymarket NSW 2000 | | | | **Consignors contact number:** (02) 9585 5850 | | | |
| **Consignees name:** Ausgrid<br>24 Campbell Street, Haymarket NSW 2000 | | | | **Consignees contact number:** (02) 9585 5850 | | | |
| Deliver to: | | | | Date: | | | |
| | | | | Transported by: | | | |
| **UN number*** | **Proper shipping name*** | **Class / division*** | **Subsidiary hazard** | **Packing group*** | **Container type* (eg Drum, Transformer)** | **Number of containers*** | **Aggregate quantity*** |
| 2315 | Polychlorinated Biphenyls, liquid | 9 | - | II | 205L drum | 2 | 410L |

Ausgrid Dangerous goods transport manifest (EF 106)

*Figure 3.2-1: Process for managing of PCB*



### 3.2.3 Transporting and storing scheduled PCB

a) When involved in the handling, transport or storage of oil, have current oil handling and spill response training (refer to Table 1.3-1).

b) Ensure loads are, secured, segregated and transported in a way that packaging remains fit for purpose, and risks to people/property/environment are minimised.

c) A *PCB licence* is required for the transport or storage of *scheduled PCB* > 1 tonne.

*Employees* and Ausgrid contractors can transport to an Ausgrid facility listed in Ausgrid's PCB licence. PCB licence and PCB CCO requirements include:

- promptly arranging for disposal
- ensuring the items are stored in a permanent bunded area which is covered, secure and separated > 12m from other storage areas containing flammable or combustible liquids, labelled, inspected etc. (refer also to section 2.3.4).

Alternatively, arrange for a *PCB* licensed transporter and storage facility.

d) When transporting ≥ 250 kg(L) of *scheduled PCB*, comply with the *ADG Code* requirements are summarised in Table 3.2-3.

*Figure 3.2-2: Summary of requirements for transporting scheduled PCB*

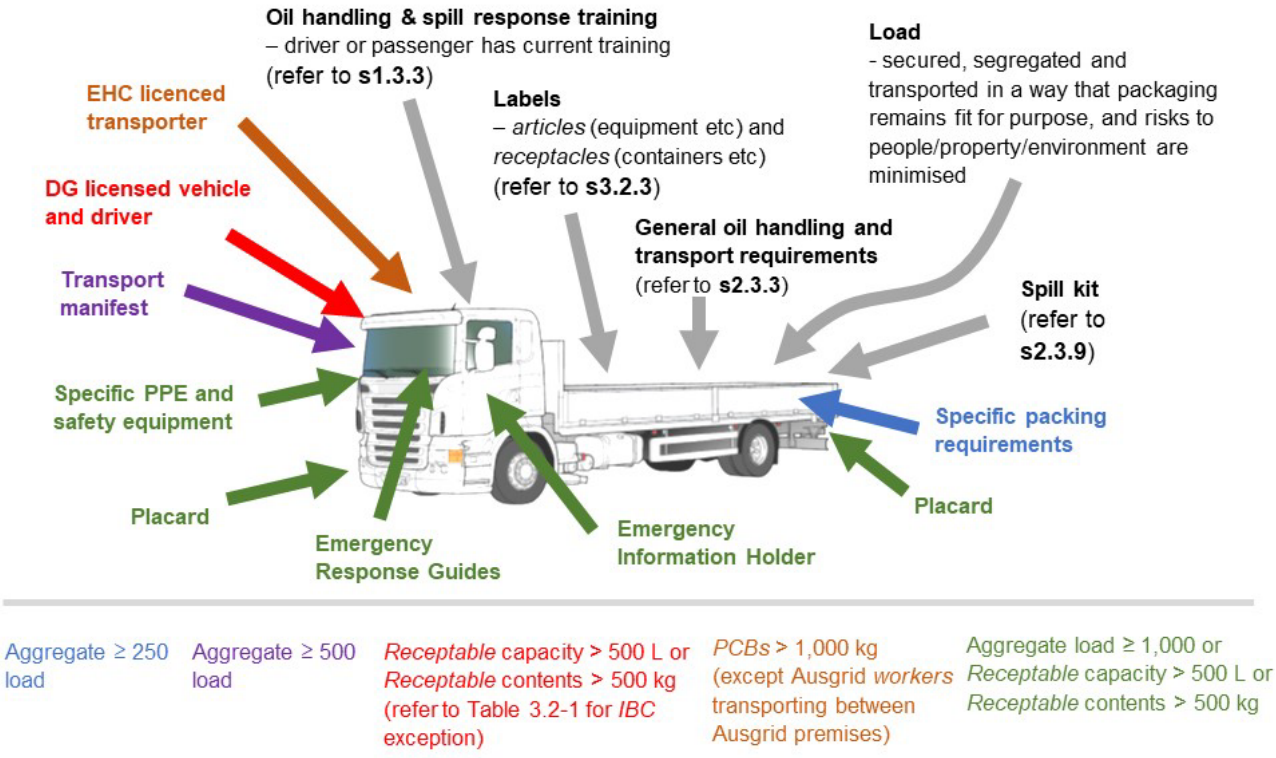


*Table 3.2-3: DG requirements when transporting ≥ 250kg(L) of Scheduled PCB*

| Thresholds | DG Requirements (check each threshold as multiple thresholds could apply) |
|---|---|
| Aggregate quantity^ ≥ 250 | Comply with Packing Instruction (P906 in ADG Code). For example, transformers need to be placed in leakproof metal tray with 800mm sides containing sufficient absorbent material to absorb at least 110% the volume of any free liquid. |
| Aggregate quantity^ ≥ 500 | • Carry transport documentation – Manifest (*employees* can use EF 106 Dangerous goods transport documentation)<br>• Have appropriate instruction and training |
| Aggregate quantity^ ≥ 1,000<br>**OR**<br>Individual *receptable* has:<br>- capacity >500L **OR**<br>- contains >500kg | • Placard vehicle (Class 9 diamond 250mm x 250mm front and rear)<br>• Carry emergency information – Emergency Response guides 00 & 171<br>• Carry Emergency Information Holder in the drivers' door (with 'emergency information' in red 10mm text on white background)<br>• Carry specific PPE and Safety equipment:<br>– Eye wash (250ml)<br>– PPE (chemical resistant gloves, eye protection)<br>– Torch<br>– 30B fire extinguisher fixed in the vehicle near driver's door<br>– 3 double-sided reflectors (break down triangles).<br>• No driving through tunnels |
| Individual *receptable* has:<br>- capacity >500L **OR**<br>- contains >500kg | • Vehicle to be *DG* licensed, tested and inspected*<br>• Driver to be *DG* licensed*<br>• Placard vehicle (Emergency Information Panel)<br>• Carry specific PPE and Safety equipment<br>• Have telephone advisory service available throughout transport |

^ Aggregate quantity = [Contents of all *receptacles* (L liquids, kg solids)] + [Mass of all *articles* (kg)]
* Except *DGs* transported in *IBCs* (<3,000L total capacity) not filled or emptied while on the vehicle

### 3.2.4 Disposal

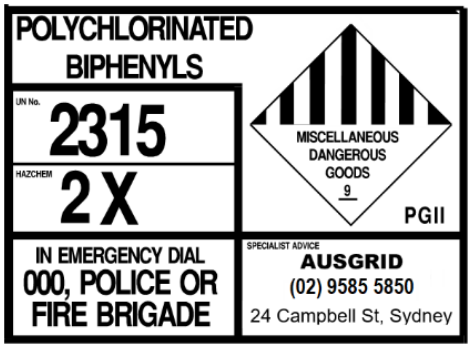
a) Dispose of *PCB waste* to a facility licensed to accept the waste.

b) Comply with waste tracking requirements (refer to section 5.3).

c) When scrapping *PCB* contaminated oil or equipment containing *PCB*, Ausgrid *employees* can contact Supply Chain Operations (request forms are available on The Wire).

d) For disposal of other *PCB* wastes, refer to section 5.3.

**PCB waste labelled ready for collection**




**Scheduled PCB placard**

## 3.3 PESTICIDES

**When this section applies**

For activities that involve *pesticides*, such as:

- ☐ Controlling *weeds*, *pests* and vegetation around assets (for example, substations, depots, offices, power lines and poles).

**Background**

Incorrect handling of *pesticides* can harm human health and the environment including animals, *waterways*, non-target species and groundwater.

**Key message**

Harm to non-target species by *pesticides* must be prevented.

*Pesticides* must be used, labelled, stored, transported and disposed in accordance with legal requirements. Notification, record keeping and specific training is required for certain applications.

**Before *works* begin**

a) Use Figure 3.3-1 to determine *pesticide* requirements.

b) Check the requirements of any applicable Pesticide Control Orders (for *restricted pesticides*).

c) Check the *pesticide* label requirements.

d) Check for drainage lines, grates, drains, inlets, *sensitive places*, *ecologically sensitive areas* (refer to the WebGIS EL) and *waterways*.

e) Check if a *pesticide* use licence is required (refer to section 3.3.3 for exemptions). For *agricultural land*, check with the landowner if the property has agriculture accreditation (such as organic, biodynamic). Use of *pesticides* on accredited properties could impact their accreditation and income.

f) Have current *pesticide* training if applying *pesticides* that meet the commercial use criteria (refer to Table 1.3-1 and section 3.3.3).

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving *pesticides*.

b) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment may be required.

Additional *WHS* requirements may apply. Refer to the *SWMS*, *SDS* and advice from your safety advisor. *Employees* can use ChemAlert.

**Definitions**

**APVMA** is the Australian Pesticides and Veterinary Medicines Authority**.**

**CCA** means copper chrome arsenic (a common wood preservative).

**Domestic use criteria** applies if ALL the following are met when using *pesticides*:

a) Applied by hand or hand-held applicator.

b) Available to the general public at retail outlets.

c) Ordinarily used for domestic purposes.

d) Not applied in a public place.

e) Outdoor use does not exceed:

- 20L or 20kg of ready-to-use product
- 5L or 5kg of concentrate.

f) Indoor use does not exceed:

- 5L or 5kg of ready-to-use product
- 1L or 1kg of concentrate.

**Ecologically sensitive areas** refer to section 6.1.

**HSMS** means Health & Safety Management System.

**Pest** means a plant or animal that can have an adverse effect on the environment, economy or the community because it can out-compete other organisms, transmit diseases, prey on or be toxic to other organisms, impact biodiversity, reduce agricultural productivity, damage infrastructure, or reduce the amenity or aesthetic value of an area.

**Pesticides** include herbicides, termiticides, insecticides, biocides, fungicides and baits.

**Restricted pesticides** are determined by *APVMA* to be inherently hazardous and are listed in Schedule 4 of the Agricultural and Veterinary Chemicals Code Regulations.

**Sensitive places** include:

- schools, pre-schools, kindergartens and child care centres
- hospitals, community health centres, and nursing homes.

**Weed** means a plant that is a *pest* which requires management to control or prevent its spread.

### 3.3.1 General use

a) Use only *pesticides* with an approved Ausgrid *HSMS* risk assessment.

b) Handle, store, mix, use and dispose of *pesticides* in accordance with the label or off-label permit issued by the *APVMA*.

c) Use the right equipment and *pesticide* for the job.

d) Use well maintained equipment that is in good working order.

e) Mix only the quantity needed for the job.

**Mix only the quantity of pesticides needed for the job**

f) Prevent spray from drifting outside the target area.

g) Do not spray during periods of rain or high wind.

h) No use of *pesticides* in *ecologically sensitive areas* unless in accordance with NS145 Pole inspection and treatment.

i) Provide an adequate buffer area between the application and dwellings, *waterways*, animals or *ecologically sensitive areas*.

j) Store *pesticides* only in a container with an Agricultural and Veterinary Chemicals Code approved label.

k) Additional controls apply for storage, handling and transport of liquid *pesticides* (refer to section 2.3).

l) Store in areas that are bunded, secure, cool and well ventilated.

m) Transport only enough *pesticide* as is reasonably required for the job.

n) Carry an appropriate spill kit and response procedures in all vehicles used to transport *pesticides*.

### 3.3.2 Notifications – public and private property

a) Display approved notification signage when using *pesticides* in public places in accordance with Ausgrid's Pesticide Notification Plan (refer to Figure 3.3-1).

b) Have the *SDS* available during use for *workers* or members of the public.

c) Notify owners and occupiers of private property at least 48 hours prior to using *pesticides* on their property. Ausgrid *employees* can use the Notice of pesticide application form (EF 212).


**Notification signage is required when pesticides are used in public places.**

d) Notify owners and occupiers of *sensitive places* at least 5 working days prior to using *pesticides* on or within 20m of their premises.

e) Allow additional notification time for *agricultural land*. Use of *pesticides* on agricultural properties could impact their accreditation and income.

f) Comply with all reasonable requests from owners and occupiers.

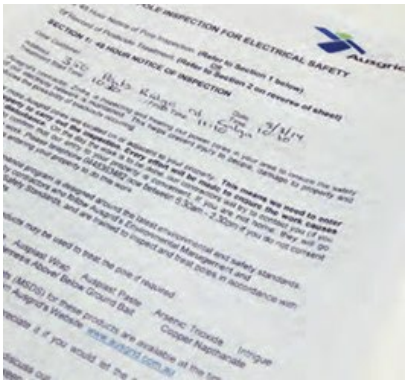
### 3.3.3 Commercial use – training and records

Commercial use includes all *pesticide* use which does not meet the *domestic use criteria*. To undertake commercial use of *pesticides*, the user must:

a) Have current *EPA* approved qualifications.

b) Where required, hold a pest management technician licence. Exemptions apply for:

- pesticide use which meets the *domestic use criteria*
- grounds maintenance, landscaping and arboriculture
- *workers* controlling *pests*/decay on electricity power poles (refer to NS145 Pole Inspection and Treatment and the Electricity Pole Inspection Licence Exemption Order).



**Retain records of commercial pesticide use for 3 years**

c) Keep records in accordance with *EPA* requirements, such as making records within 48 hours of application and keeping records for a period of 3 years. *Employees* can use the EF 213.

d) Provide a copy of the completed application record to the owner/occupier if requested.

*Figure 3.3-1: Process for managing pesticides*

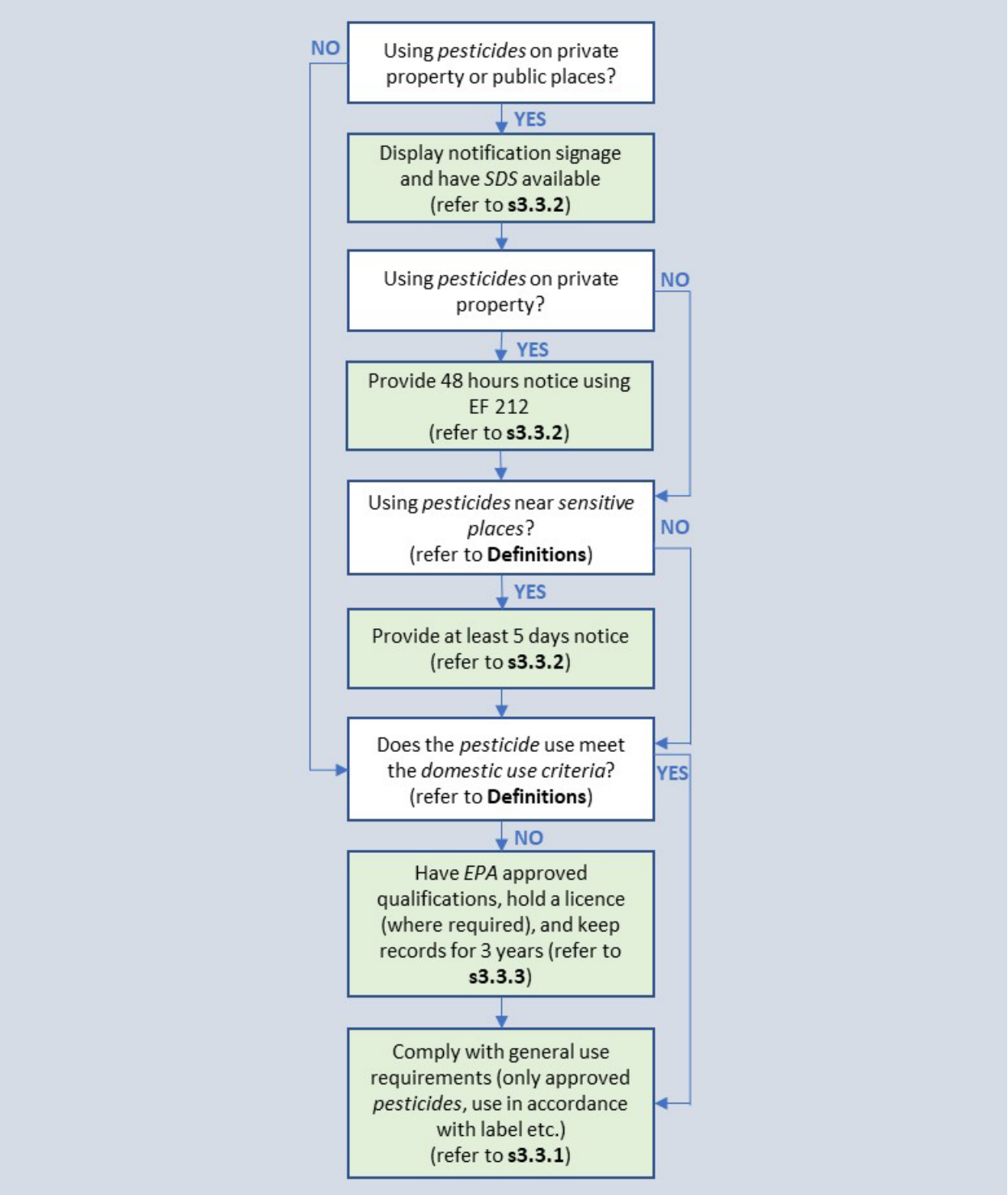


*Table 3.3-2: Notification arrangements for pesticide applications in public places*

| Prescribed public place | Type of pesticide use | | | | |
|---|---|---|---|---|---|
| | Timber pole treatment | | | | |
| | Hand application of solid or paste fungicide inside pole and around pole base, beneath the soil | Hand painted application of liquid fungicide to treat damaged areas of *CCA* treated poles | Hand application of liquid residual termiticide to soil immediately around pole base | Hand application of solid bait termiticide inside protective cover mounted on pole | Hand application of dust termiticide inside pole or inside termite gallery on the pole |
| Public parks and gardens | ⃠ | ⃠ | ■ | ⃠ | ■ |
| Playgrounds | ⃠ | ⃠ | ■ | ⃠ | ■ |
| Picnic areas | ⃠ | ⃠ | ■ | ⃠ | ■ |
| Sporting fields, ovals and golf courses | ⃠ | ⃠ | ■ | ⃠ | ■ |
| Road verges, reserves, footpaths, laneways and pathways | ⃠ | ⃠ | ⃠ | ⃠ | ⃠ |
| Easements accessible to the public (including National Parks etc, State forests or Crown lands) | ⃠ | ⃠ | ⃠ | ⃠ | ⃠ |
| Schools and TAFEs (excluding building interiors) | ⃠ | ⃠ | ■ | ⃠ | ■ |
| Interiors of certain Ausgrid buildings and within depot grounds | ⃠ | ⃠ | ⃠ | ⃠ | ⃠ |
| Within or adjacent to *sensitive places* | ⃠ | ⃠ | ■ and ★ | ⃠ | ■ |

| Prescribed public place | Vegetation control | Equipment | Insects | Rodents |
|---|---|---|---|---|
| | Spot or spray application by hand of liquid herbicide to vegetation, including painting stumps of cut vegetation | Hand application of aerosol insecticide spray to pole top equipment and substation cabinets | Hand application of aerosol insecticide spray to floors, walls, cupboards, etc | Hand application of solid rodenticide baits |
| Public parks and gardens | ■ | ⃠ | N/A | N/A |
| Playgrounds | ■ | ⃠ | N/A | N/A |
| Picnic areas | ■ | ⃠ | N/A | N/A |
| Sporting fields, ovals and golf courses | ■ | ⃠ | N/A | N/A |
| Road verges, reserves, footpaths, laneways and pathways | ■ | ⃠ | N/A | N/A |
| Easements accessible to the public (including National Parks etc, State forests or Crown lands) | ■ | ⃠ | N/A | N/A |
| Schools and TAFEs (excluding building interiors) | ■ | ⃠ | N/A | N/A |
| Interiors of certain Ausgrid buildings and within depot grounds | ⃠ | ⃠ | ⃠ | ⃠ |
| Within or adjacent to *sensitive places* | ■ and ★ | ⃠ | N/A | N/A |

## Legend

■ - Notice by display of signage during the pesticide application. ⃠ - No specific notice will be given N/A – Not applicable.
★ - When applying liquid pesticides outdoors, sensitive places must be notified 5 days prior to application as outlined in Section 3.1.

## 3.4 LEAD

**When this section applies**

For activities that involve the potential for lead exposure, such as:

- ☐ Disturbing known or suspected lead products or dust (for example, in substations, pits, depots).

**Background**

Lead has been widely used in the Ausgrid work environment including covering conductors (to protect them from corrosion) and in paint (to accelerate drying, increase durability, maintain a fresh appearance, and resist moisture that causes corrosion). It can also be found in solder, lead acid batteries, building flashing and accumulated dust.

Lead has the potential to cause detrimental health effects and have a negative impact on the environment if not managed appropriately.


**Lead paint on substation wall**

**Key message**

Lead must be assessed, classified, stored, handled, transported and disposed in accordance with legal requirements.

**Before *works* begin**

Before working on any Ausgrid network or property asset:

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If a *planning approval* is not required, check for the presence of known lead and suspected lead (refer to Ausgrid's Asbestos Register or SAP notification for the site).

c) Undertake a visual assessment of the worksite, buildings and equipment for suspected lead hazards (such as paint or *LCD*).

d) If lead sampling or cleaning is required, contact Contract Operations Manager (refer to section 10).

e) If there are known or suspected lead hazards, determine who can remove the material, the level of *PPE* required, and the appropriate procedures to use (*employees* can refer to HS014-P0100 - Workplace hazardous materials) and relevant *SWMS*).

**When to contact the Hazardous Materials Hotline 02 9394 6961**

a) A new lead hazard has been identified.

b) Information in Ausgrid's Asbestos Register (contains lead sample results) does not reflect current observed conditions.

c) *Works* cannot meet the requirements in HS014-P0100 (for *employees*) or relevant *SWMS*.

d) *Works* cannot meet the requirements in this *Handbook*.

**Definitions**

**LCD** is lead containing dust.

### 3.4.1 *Works* that might disturb lead

Requirements for working with lead are detailed in WHS Regulation and include:

a) Arrange cleaning of the proposed work area prior to *works* commencing, (where *works* might disturb surface dust or paint).

b) *Works* that disturb lead (including *LCD*) must be undertaken in accordance with HS014-P0100 (for *employees*) or relevant *SWMS*.

c) Wear appropriate *PPE*. Minimum requirements typically include:

- disposable half face respirator with a P2 particulate filter or other respirator as determined by a successful 'fit test'
- disposable or wipeable gloves
- Type 5, Category 3 coveralls
- safety gumboots or lace-less safety boots (non-suede).

d) Practice good personal hygiene:

- No eating, drinking, chewing gum, smoking or any practice that involves the potential for hand to mouth transfer.
- Wash hands and face and scrub nails before eating, drinking or smoking.
- Avoid biting nails.

### 3.4.2 Lead removal *works*

a) Prior to *works* commencing, notify occupants of the site and residents in the immediate vicinity that might be affected by the lead removal work.

b) Removal of lead (including *LCD*) must be undertaken in accordance with HS014-P0100 (for *employees*) or relevant *SWMS*.

c) Where *works* can be undertaken without a *LAR* and *LAA*:

- Use a Class H vacuum cleaner fitted with a HEPA (high-efficiency particulate absorbing) filter and/or wet wipes. Domestic vacuums are unsuitable.
- Do not use compressed air/gas or dry sweeping cleaning methods.

d) At the completion of *works*, the following documents must be submitted to hazmat@ausgrid.com.au.

- HRR - Hazmat Remediate & Removal Form for all remediation and removal work
- air monitoring results and clearance certificates (for licensed work)
- tipping dockets (for waste taken to landfill).

### 3.4.3 Transport and disposal

a) When scrapping equipment containing lead, Ausgrid *employees* can contact Supply Chain Operations (request forms are available on The Wire).

b) Seal bags of lead waste during transport.

c) Dispose of the waste to a facility licensed to accept the waste.

d) Comply with *EPA* waste tracking and licensing requirements (refer to section 5.3.2).

# 4 EMISSIONS

## 4.1 AIR POLLUTION

**When this section applies**

For activities that can release dust, fumes or other gases, such as:

- ☐ Disturbing the ground (for example, excavating, trenching, concrete cutting, jackhammering, drilling, underboring, access track *works*, demolition).
- ☐ Stockpiling or using material bays.
- ☐ Clearing vegetation or removing ground cover.
- ☐ Transporting spoil and waste.
- ☐ Operating vehicles, plant and equipment.
- ☐ Working on $SF_6$ equipment.
- ☐ Abrasive tower blasting.
- ☐ Handling chemicals (for example, paints, solvents, resins and adhesives).

**Background**

Air pollution sources can include particulates (such as dust and smoke) and odours, fumes and gases.

Air pollution can lead to complaints and harm human health, amenity and the environment, and contribute to global problems such as climate change.

**Key message**

Proper management and consultation minimises impacts on the community and can help avoid delays during construction. Controls must be implemented to prevent dust and other air pollutants leaving the worksite. SF6 gas must be managed to prevent leakage.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If a *planning approval* is not required, check the requirements of any applicable *ESCP* or abrasive tower blasting *EMP*.

c) Check the weather forecast, and identify exposed surfaces and any adjacent *sensitive receivers*.

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving air pollution or $SF_6$ leaks > 5kg.

b) A site specific *ESCP* does not exist and *works* involve disturbing areas > 250m$^2$ at any one time.

c) Abrasive tower blasting is within 100m of an *ecologically sensitive area* (check the WebGIS EL) or *sensitive receivers*.

d) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or an *ESCP* may be required.

**Definitions**

**EMP** is environmental management plan.

**ESCP** refer to section 2.1.

**Sensitive receivers** refer to section 4.2**.**

**$SF_6$** is sulfur hexafluoride.

### 4.1.1 Dust prevention

Implement controls to prevent dust leaving the worksite. Examples include:

a) Use water sprays to dampen disturbed areas and stockpiles (while preventing water run-off).

b) Stabilise disturbed areas with turf, geotextile, mulch, soil binders or fast-growing seed.

c) Minimise ground disturbance (refer to section 2.1).

d) Minimise excavation on windy days.

e) Install dust barriers on fences and gates.

f) Create temporary windbreaks.

g) Cover stockpiles and loads on vehicles.

h) Keep sealed roads clean and dampen unsealed roads.

i) Minimise traffic movements and vehicle speeds on disturbed areas and unsealed roads.

**Prevent dust from leaving the worksite**

**Cover loads to prevent pollution**

j) Use dust collection devices on construction equipment, where available.

k) Consult with potentially impacted receivers.

### 4.1.2 $SF_6$ gas

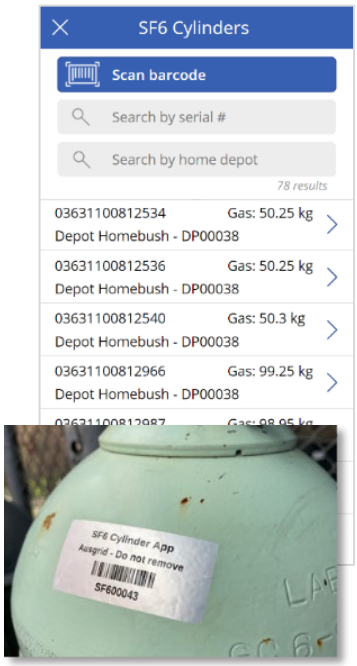
*$SF_6$* is a greenhouse gas with 23,500 times the global warming potential of carbon dioxide. Pure $SF_6$ is inert, colourless, odourless and non-toxic, but under arcing conditions could decompose to produce toxic compounds.

a) Schedule repair of equipment leaks as soon as practicable and in accordance with Ausgrid's job prioritisation framework.

b) Handle *$SF_6$* in accordance with approved work practices.

c) Weigh $SF_6$ cylinders before and after every use and record using the SF6 Cylinders App. Do not use a cylinder before it has been weighed and registered on the app (*employees* can refer to TSS02 – Corrective $SF_6$ equipment top-ups procedure).

d) Promptly arrange for recycling of surplus *$SF_6$* cylinders (via Homebush Workshop) and equipment (*employees* can refer to The Wire). If disposing via other processes such as returning faulty equipment to a supplier, contact Environmental Services on 02 9394 6659.




**$SF_6$ Cylinders App and cylinder barcode**

### 4.1.3 Abrasive tower blasting

a) For all abrasive tower blasting *works,* a site specific *EMP* is required. Key controls include:

- Notify occupants of the site and neighbouring properties of the commencement date and expected duration.
- Delineate and cover (with geotextile matting or similar) a construction zone to a minimum of 5m (subject to site constraints) around the tower base.
- Use only inert products for abrasive blasting.
- Adjust intensity and scope to the environment and weather conditions.
- Create a monitoring zone based on wind speed, direction and height of blasting, and inspect regularly.
- Place white discs within the monitoring zone to compare against the project criteria.
- Where the project criteria are exceeded, or materials are identified outside the construction zone that cannot be readily recovered, stop work and reassess.

b) For abrasive tower blasting within 100m of an *ecologically sensitive area* or *sensitive receivers*, contact Environmental Services. A specialist assessment may be required.

### 4.1.4 Other emissions

a) If a vehicle emits smoke continuously for > 10 seconds, arrange for it to be serviced (*employees* can use the Fleet Pre-start App to report defects).

b) Position vehicles and equipment such that emissions will least affect receivers, where practicable.

c) Avoid leaving vehicles or equipment idling unnecessarily.

d) Manage oils, fuels and other chemicals in accordance with section 2.3.

e) Manage wastes in accordance with section 5.3.

## 4.2 CONSTRUCTION NOISE

**When this section applies**

For noisy activities, such as:

- ☐ Operating noisy plant and equipment (for example, reversing alarms, saw-cutters, vibratory rollers, grinders, rock breakers, jack hammers, asphalt machinery, underboring/directional drills, impact pilers).
- ☐ Noisy activities/materials (for example, loading/unloading, using road plates).
- ☐ Undertaking *out of hours work.*

**Background**

Construction noise can consist of both airborne and ground-borne noise. The impacts depend on the type of plant and equipment, extent and nature of the *works*, and proximity to residents or other *sensitive receivers*. Construction noise can lead to complaints, harm human health and reduce amenity.

**Key message**

Proper management and consultation minimises impacts on the community and can help avoid delays during construction. Restrictions and notifications apply to certain work hours and specific activities.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If a *planning approval* is not required, use Figure 4.2-1 to determine construction noise requirements.

c) Check the requirements of any applicable *NMP*.

d) Check that the required notifications have been provided (refer to section 4.2.2).

e) Determine potential *noise impacted* receivers. EGN 421 construction noise calculator can be used to assist.

f) Identify *sensitive receivers*.

**When to contact Environmental Services 02 9394 6659**

a) Incidents involving the *EPA*, local council or other authorities.

b) A site specific *NMP* does not exist and *works* involve impacting a receiver for > 3 consecutive weeks.

c) Complaints about asset noise (transformer, CLC (consumer load control) etc).

d) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment, community engagement plan and/or a *NMP* may be required. *Employees* may be directed to use EF 553 Noise Management Plan, provided receivers are not impacted for > 3 weeks.

**Definitions**

**High impact activities** include using beeper style reversing alarms, saw-cutting, vibratory rolling, grinding, rock breaking, jack hammering, asphalt milling or profiling, underboring/directional drilling and impact piling.

**NMP** means a project specific noise management plan.

**Noise impacted** represents the level above which there could be some community reaction to noise. For *standard operating hours* this is Rated Background Level + 10 dB(A) with a strong community reaction to noise > 75 dB(A). For *out of hours work* this is Rating Background Level + 5 dB(A).

**Out of hours work** are activities undertaken outside of *standard operating hours*.

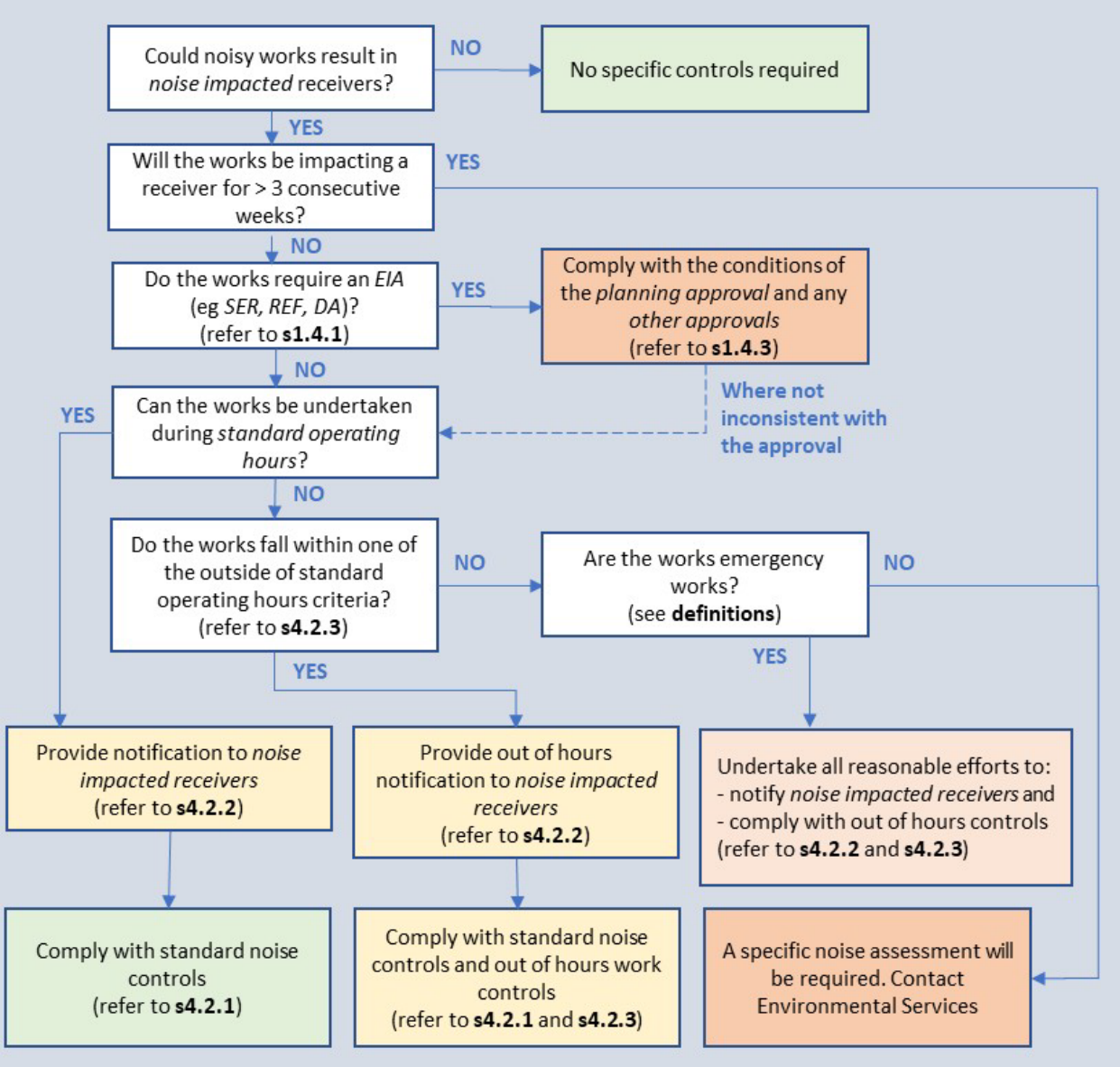
**Feasible and reasonable** involves assessing the overall noise benefit of the identified work practices and controls that can be implemented for an activity against the overall adverse social, economic and environmental effects, including the cost of mitigation.

**Sensitive receivers** include residences, education facilities, hospitals, places of worship, recreation areas or other receivers who could be highly impacted by the *works*. Commercial premises (such as accommodation or restaurants) may, at certain times, be considered *sensitive receivers*.

**Standard operating hours** (unless local council policy states otherwise) are:

- **Monday to Friday** - 7am to 6pm
- **Saturday** - 8am to 1pm
- **Sunday & public holidays** - no work.

***Figure 4.2-1: Process for managing construction noise***



### 4.2.1 General requirements

Where a receiver may be *noise impacted*:

a) Restrict noisy *works* to *standard operating hours* unless the *works* comply with section 4.2.4.

b) Operate and maintain plant and equipment in a proper and efficient manner (service and operate in accordance with the manufacturer's specifications, *employees* can use the Fleet Pre-start App).

c) Implement all *feasible and reasonable* measures to minimise construction noise. Considerations include:

**Scheduling**

- avoid noisy *works* during sensitive periods (such as school class/exam times, restaurant mealtimes, religious services, childcare rest periods)
- provide respite periods for *sensitive receivers* subject to *high impact activities*. Examples include:
  - 1-hour respite after 3 consecutive hours
  - 1-day respite after 3 consecutive days.

**Equipment**

- use low noise plant and equipment (such as excavators with rubber tyres, electric engines instead of internal combustion, vibratory piling instead of impact, broadband reversing alarm instead of tonal)
- choose lower noise construction techniques (such as poured concrete piles instead of sheet piles).

**Awareness**

- handling materials (avoid dropping or dragging)
- line metal trays, tipper bodies or bins
- undertake loading and unloading operations away from *sensitive receivers*
- shut down or throttle down machinery when not in operation
- be considerate on worksites (for example, avoid shouting, radios, inappropriate vehicle use, or idling).

**Site Layout**

- take advantage of natural barriers (like hills, *trees*) and structures (such as fences, work trucks, stockpiles) to break the line of sight between working equipment and receivers. Consider reflective noise of the barriers and structures
- position work compounds and access points away from *sensitive receivers*
- site the noisiest plant and equipment furthest away from the most *sensitive receivers*
- minimise simultaneous operation of noisy plant and equipment near *sensitive receivers*
- orientate plant and equipment so that noise is directed away from *sensitive receivers*

- install barriers for *high impact activities* so noise is absorbed or directed away from *sensitive receivers*. Barriers work best when close to the source or receiver (consider reflective properties of the screen)
- install road plates to the road authority specification (such as recessing, inspecting and assessing noise impact, plate thickness, bearing support, additional fixings to reduce noise)

**Portable noise screen used to mitigate noise**

- arrange the worksite layout to minimise movements that would activate audible reversing and movement alarms (such as drive through sites).

### 4.2.2 Consultation

a) Provide written notification to *noise impacted* receivers between 5 and 14 days prior to starting *works* unless it is *emergency works* or it is discussed with the impacted receivers face-to-face and records kept (refer to section 4.2.4).

b) Provide additional notification information for *works* outside *standard operating hours* (refer to section 4.2.3).

c) Give due consideration to any feedback received.

d) Provide signage at the worksite detailing who is undertaking the *works* and a contact number.

e) Provide updates to identified impacted receivers consistent with the level of engagement. Notify identified impacted receivers when the program changes.

### 4.2.3 Out of hours work

The requirements for *out of hours work* when *sensitive receivers* are potentially *noise impacted* include:

a) Noisy *works* outside of *standard operating hours* can only be undertaken if the *works* are justified as necessary and meet one of the following criteria:

1. *Emergency works* and *noise impacted* receivers have been notified as soon as reasonably practicable OR
2. Complies with the conditions of any applicable *EIA* that demonstrates the need for *out of hours work* OR
3. Delivery of oversized plant or structures that has special approval OR
4. Maintenance and repair of essential public infrastructure that is unable to occur during *standard operating hours,* OR
5. *Works* have majority support by the *noise impacted* community as demonstrated by community consultation.

b) Unless *emergency works*, provide *noise impacted* receivers with written notification between 5 and 14 days prior to the *works* using an *out of hours work* notification letter (refer to section 4.2.4).

c) Schedule the noisiest *works* to start at the most *sensitive receivers* and progressively move away, where practicable.

d) Provide signage at the worksite detailing who is undertaking the *works* and a 24-hour contact number.

e) Unless *emergency works* or justified by unavoidable and exceptional circumstances and undertaken with targeted consultation, do not impact a receiver:
   - for > 2 nights in any 7-day period
   - on Sunday after 6pm
   - on a Monday before 7am
   - on a public holiday
   - after 12am (midnight) if undertaking *high impact activities*.

f) Undertake all reasonable efforts to comply with the above controls for *emergency works*.

g) Provide reasonable respite following *out of hours work* for *sensitive receivers*.

h) Use broadband reversing alarms on vehicles and plant unless tonal alarms are justified by a safety risk assessment.

i) Advise (door knock or call) *noise impacted* receivers in advance if *works* are expected to continue past approved construction hours.

### 4.2.4 Contents of notification letters

Table 4.2-2 details the minimum information required in notification letters.

Template letters for *employees* are available on The Wire.

***Table 4.2-2: Minimum requirements for notification letters***

| Timing of work | Required information |
|---|---|
| **Standard operating hours** | a) Description of the *works* and why they are being undertaken.<br>b) Details of the *works* and the activities that will be noisy.<br>c) Work dates and expected duration and hours.<br>d) Contact number.<br>e) Contact details to facilitate understanding of the notification by community members with limited English proficiency (the Commonwealth's Translating and Interpreting Service, TIS National).<br>f) A marked-up map or diagram clearly showing the location of the *works* (where beneficial). |
| **Out of hours work** | a) Information contained in the *standard operating hours* notification letter (above).<br>b) The justification for undertaking *out of hours work*.<br>c) Work dates, expected duration and hours during which noisy activities will be undertaken and the type of plant and equipment involved.<br>d) Details of what is being done to minimise the impacts including any respite or curfew periods.<br>e) How and when complaints can be lodged including a 24-hour contact number for someone involved in the project. |

## 4.3 ELECTRIC AND MAGNETIC FIELDS

**When this section applies**

For activities that can be impacted by *EMF*, such as:

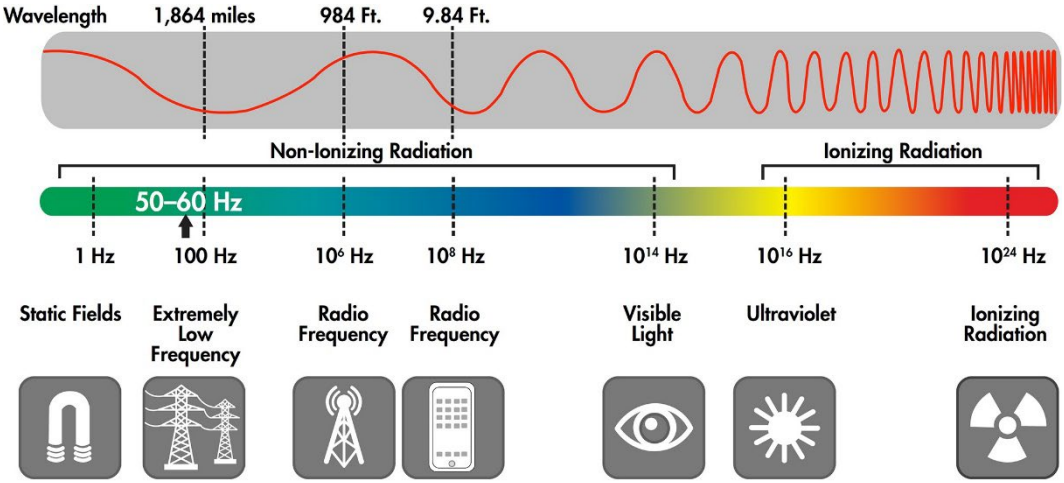
- ☐ Working while pregnant or with a medical implant in *high field work environments.*
- ☐ Receiving *EMF* enquiries.

**Background**

*EMF* are in the extremely low frequency part of the electromagnetic spectrum (refer to figure below). Electric fields are present in the atmosphere and static magnetic fields are created by the earth's core. In contrast with natural *EMF*, power-frequency fields oscillate at a frequency of 50 Hertz (Hz).

*EMF* is also produced wherever electricity is in use, such as powerlines, electrical wiring, household appliances and other electrical equipment. *EMF* drops off rapidly with distance and disappears when the source is removed.

50Hz magnetic fields can induce very weak voltages and currents in the body. If high enough, the first known effect is a faint flickering visual sensation. The levels that cause this are well above those found around Ausgrid's electricity network.




Electromagnetic spectrum (Electric Power Research Institute (2012))

**Key message**

Ausgrid's network complies with relevant guidelines developed to protect *workers* and the public from *EMF*. *Workers* with medical implants or who are pregnant may require a workplace risk assessment if working in *high field environments*.

**Before *works* begin**

a) Check the requirements of any required *planning approval* or *other approvals* (refer to section 1.4) or any applicable workplace risk assessment.

b) Check for signage indicating the presence of high *EMF*.

c) Check for *high field work environments* (refer to Figure 4.3-1) and note susceptibility of instruments to interference (such as defibrillators).


If you are fitted with an active medical implant (such as a pacemaker) and work in *high field work environments:*

d) Discuss your work and working environment with your doctor.

*e)* Provide Ausgrid with information describing the circumstances in which the proper functioning of the medical implant could be at risk.

If you are pregnant and work in *high field work environments:*

f) Discuss your working arrangements with Ausgrid.

**When to contact Environmental Services**
**02 9394 6659**

a) You are pregnant or have a medical implant and you work in *high field work environments* (near high current carrying conductors / equipment).

b) You or a member of the public have enquiries about possible health effects associated with *EMF*.

For (a), a workplace risk assessment may be required in consultation with Ausgrid, you and your doctor.

**Definitions**

**ARPANSA** is the Australian Radiation Protection and Nuclear Safety Agency.

**EMF** is electric and magnetic fields alternating at 50Hz. Electric fields are measured in volts/metre (V/m). Magnetic fields are expressed in microtesla (μT) or milligauss (mG, 1mG = 0.1μT).

**High field work environments** are areas where *EMF* could exceed the public reference levels (typically high current carrying equipment and conductors). Examples of *high field work environments* are shown in Figure 4.3-1.

**ICNIRP** is International Commission on Non-Ionising Radiation Protection.

**WHO** is World Health Organization.

### 4.3.1 How are you protected against EMF?

*ARPANSA* recommends compliance with the ICNIRP guidelines. These guidelines protect against known adverse health effects and include a significant safety margin. Ausgrid complies with these guidelines for both the public (200μT or 2,000mG and 5kV/m) and our *workers* (1,000μT or 10,000 mG and 10kV/m).

More information is available in this *ARPANSA* fact sheet and *WHO* fact sheet.

### 4.3.2 Are there health effects below the guideline limits?

There are no known adverse health effects at levels below the limits in the ICNIRP guidelines. *ARPANSA* advise: "*The scientific evidence does not establish that exposure to the electric and magnetic fields found around the home, the office or near powerlines causes health effects.*"

This is consistent with the advice of other health agencies such as the *WHO*.

***Figure 4.3-1: Examples of high field environments***

**Transformer tails**

**Cable terminations and pits**

**Live line work**

**Low voltage busbars**

**Cable tunnels**

**Air cored reactors**

## 4.4 RADIOFREQUENCY FIELDS

**When this section applies**

For activities that can be impacted by *RF* fields, such as:

- ☐ Working while pregnant or with a medical implant near energised mobile phone antennas/base stations.
- ☐ Receiving *RF* fields enquiries from the public.

**Background**

*RF* is the transfer of energy by radio waves.

Radio communications systems use the *RF* part of the electromagnetic spectrum between 100 kilohertz (kHz) and 300 gigahertz (GHz). These include television, AM and FM radio broadcasting, mobile phones and their base stations, paging services, cordless phones, baby monitors, and emergency and rural communication systems. These communications systems in the form of an *RF* antenna can be attached to Ausgrid assets.

**Example of an RF antenna**

Heating of body tissues is possible if exposed to *RF* above recommended exposure limits. Shocks are also possible if touching an energised *RF* transmitter.

**Key message**

Where work might come within an antenna's general public exclusion zone, specific controls will be required such as notification, de-energisation, testing, confirmation and isolation. *Workers* with medical implants or who are pregnant may require a workplace risk assessment if working in close proximity to energised mobile phone antennas.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4) or any applicable workplace risk assessment.

b) Check for known *RF* transmitters near the work area (refer to the WebGIS EL for the location of *RF* antennas on Ausgrid poles, or Radio Frequency National Site Archive (RFNSA) for all *RF* antennas).

c) Look for identifier plates located near the *RF* transmitter.


**Example of identifier plate located near an RF transmitter**

If you are pregnant or fitted with an active medical implant (such as a pacemaker or hearing aid) and work in close proximity to energised mobile phone antennas:

d) Discuss your work and working environment with your doctor.

*e)* Provide Ausgrid with information describing the circumstances in which the proper functioning of the medical implant could be at risk.

**When to contact Environmental**

a) There is suspected medical implant interference.

b) You are pregnant or have a medical implant and you work in close proximity to energised mobile phone antennas/base stations.

**Services**
**02 9394 6659**

c) You or a member of the public have enquiries about possible health effects of *RF* associated with Ausgrid assets.

In the case of *workers* with medical implants working in close proximity to energised mobile phone antennas, a workplace assessment may be required in consultation with you, Ausgrid and your doctor.

**Definitions**

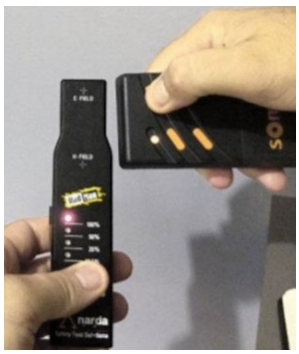
**RF** means radiofrequency electromagnetic energy that continues to travel away from the source even after the source is turned off. *RF* lies in the frequency range between 100 kilohertz (kHz) to 300 gigahertz (GHz).

**RFNSA** is Radio Frequency National Site Archive.

**4.4.1 General requirements**

a) Where work might come within an antenna's general public exclusion zone comply with NS102 Working on or near poles with telecommunication transmitters which requires notification, de-energisation, testing, confirmation and isolation of mobile phone transmitter antennas.

Testing the antenna



The RF meter is calibrated to the general public limit

**4.4.2 How are you protected from RF EME?**

*ARPANSA's* recommended maximum exposure limits for *RF* in the 100kHz to 300GHz range depend on whether the exposure is:

- occupational (for persons classified as 'RF workers')
- non-occupational (for the general public).

*Workers* complying with NS102 are not considered 'RF workers' and so the general public limits apply. The basic restrictions for the general public have included a safety margin of 50-times the level of the first known adverse health effect (nominally a 1°C rise in core body temperature).

More information is available in this *ARPANSA* fact sheet and Australian Communications and Media Authority (ACMA) fact sheet.

**4.4.3 Are there health effects below the guideline limits?**

There are no known adverse health effects at levels below the limits in *ARPANSA's* guidelines.

In relation to effects below the guidelines, *ARPANSA* advise:

*"Based on current research there are no established health effects that can be attributed to the low RF EME exposure from mobile phone base station antennas."*

This is consistent with the advice of other authoritative health agencies such as the *WHO*.

# 5 CONTAMINATION AND WASTE

## 5.1 CONTAMINATION

**When this section applies**

For activities that can expose contaminated soil or water, such as:

- ☐ Disturbing known or suspected contaminated land (for example, excavating, trenching, vegetation removal, drilling, underboring).
- ☐ Decommissioning substations.

**Background**

Contaminated land contains substances (typically from commercial or industrial activity) at concentrations that pose actual or potential harm to *workers,* the public or the environment. Contamination can also impact infrastructure such as cables, conduits and footings.

**Key message**

When encountered, contaminated soil must be assessed, stored, managed and/or disposed in accordance with legal requirements.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If *planning approval* is not required, and the *works* involve ground disturbance, check the WebGIS EL for known *contaminated land* and specific requirements.

c) Check the requirements of any applicable site management plan.

d) Check for *indicators of contaminated land*.

**Unusually coloured water is an indicator of contamination**

**When to contact Environmental Services**
**02 9394 6659**

a) A site specific *plan* does not exist and *works* involve:

- Disturbing known contaminated land and the *works* have not been assessed/approved.
- Disturbing land with *indicators of contaminated land* and the *works* have not been assessed/approved.
- Decommissioning substations with *indicators of contaminated land.*
- Decommissioning substations on private property (other than a pole top or kiosk substation) and the *works* have not been assessed/approved.

**Working in contaminated areas may require special PPE**

b) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment, remedial action plan and/or site management plan may be required.

Additional *WHS* requirements may apply. Refer to the *SDS*, if known, and advice from your safety advisor. *Employees* can use ChemAlert.

**Definitions**

**Indicators of contaminated land** include:

- unusual odour (such as fuel, solvent, rotten egg gas) or coloured material
- oil staining or oil sheen in groundwater
- underground storage tanks (UST)
- buried waste (such as *asbestos in soil*, construction waste, containers)
- imported fill (such as ash, coke, slag, coal tar, asbestos).

Areas more likely to be contaminated include substations, 132kV transmission cable trenches (installed before 1980, refer to T0148 Managing soil associated with Ausgrid's fluid filled cable), fuel or chemical storage areas (including fire-fighting foam), where oil filled equipment has been used/stored, petrol stations, dry cleaners, workshops, airports, or industrial areas.

### 5.1.1 Encountering suspected contamination

a) Stop work immediately and restrict access.

b) Notify the supervisor, Environmental Services on 02 9394 6659 and your safety advisor.

c) Once assessed, use appropriate *PPE* and good hygiene practices.

d) Separate and contain suspect excavated spoil (such as in a lined skip, Hazibag, or builders' plastic).

**Unknown material seeping into trench will need to be assessed**

e) Avoid mulching vegetative waste, and where practicable, leave any green waste on site.

f) Assess and classify spoil to determine handling, transport, tracking, licensing and disposal requirements (refer to section 5.3).

Environmental Services will advise if specialist assessments, approvals, restrictions, management plans or notifications are required.

### 5.1.2 Remediation for minor oil leaks and spills

a) For minor leaks and spills on soil or grassed areas (for example, *PT* or kiosk leaks), *employees* can follow EF 177 Remediation method). Typical requirements include:

- taking photos before, during and after remediation
- excavation of impacted material to a minimum depth of 300mm or 100mm below *indicators of contamination*, whichever is greater
- *PPE* and spoil management (refer to section 5.1.1)
- prior to scheduling the *works*, contact Environmental Services on 02 9394 6659, as validation sampling during remediation may be required.

**Contamination from a leaking pole transformer**

## 5.2 ACID SULFATE SOILS

**When this section applies**

For activities that can expose *ASS*, such as:

- ☐ Disturbing known or suspected ASS (for example, excavating, trenching, drilling, underboring).
- ☐ Extracting groundwater or interfering with an aquifer.

**Background**

*ASS* are naturally occurring soils and sediments that contain iron sulfides. They are generally found in low lying areas, such as near mangroves and *waterways* including rivers, estuaries and wetlands.

When these soils are exposed to air, the iron sulfides can oxidise to form sulfuric acid. The acidic runoff can impact water quality, harm aquatic life and corrode infrastructure.

**Key message**

*ASS* must be stored, handled, treated and disposed in accordance with legal requirements. Additional requirements apply for managing water from *ASS* areas. Specialist assessments, restrictions and management plans are required for certain activities or sites.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval or other approvals* (refer to section 1.4).

b) If *planning approval* is not required, and the *works* involve ground disturbance, check the WebGIS EL for the presence of *ASS* and use Figure 5.2-1 to determine requirements .

c) Check the requirements of any applicable *ASSMP* (when impacting *ASS* and associated groundwater).

d) Check for *indicators of ASS*.

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving *ASS*.

b) A site specific *ASSMP* does not exist and *works* involve:

- Excavating > 50m$^3$ of *ASS*.
- Extracting or discharging water from *ASS* areas.
- There are *indicators of ASS*.

c) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or ASSMP may be required.

**Definitions**

**ASS** is acid sulfate soils.

**ASSMP** is an acid sulfate soil management plan.

**Indicators of ASS** include:

- the presence of mangroves, reeds, rushes or swamp vegetation
- sulfurous (rotten egg) smell

**Indicator of ASS - milky blue/green water**

- unripe muds or sediments (soft, buttery, blue/grey or dark greenish grey)
- milky blue/green water
- shell fragments in the soil
- low lying or waterlogged areas
- jarosite (a pale-yellow mineral deposit) or iron oxide (rusty) mottling
- extensive iron stains on drain surfaces or iron stained runoff and ochre deposits
- corrosion of concrete and/or steel structures
- surface or groundwater has a *pH* < 5.5 or is unusually clear (where turbid or dirty water would otherwise be expected).

**Indicator of ASS - unripe muds or sediments**

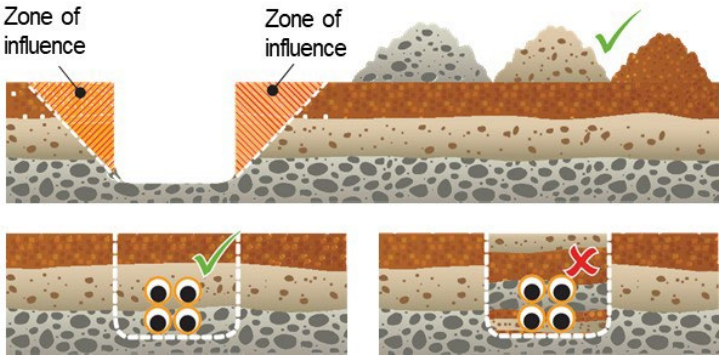
### 5.2.1 Managing ASS

a) If undertaking ground disturbance or water extraction *works* in areas of known or mapped ASS follow the process in Figure 5.2-1.

b) For medium risk projects (refer to Figure 5.2-1), *employees* can use the *ASSMP* in EWMS 167 Acid sulfate soils. Key controls include:

- minimise ground disturbance
- minimise the excavation depth
- minimise the time that soil is exposed to air by staging *works* and storing soil in a lined and covered skip bin or wrapped in plastic (outside of the *zone of influence*)
- re-bury soil to the same depth from which it was excavated, where practicable. In some cases, treatment will be required
- arrange required testing and treatment prior to disposal.

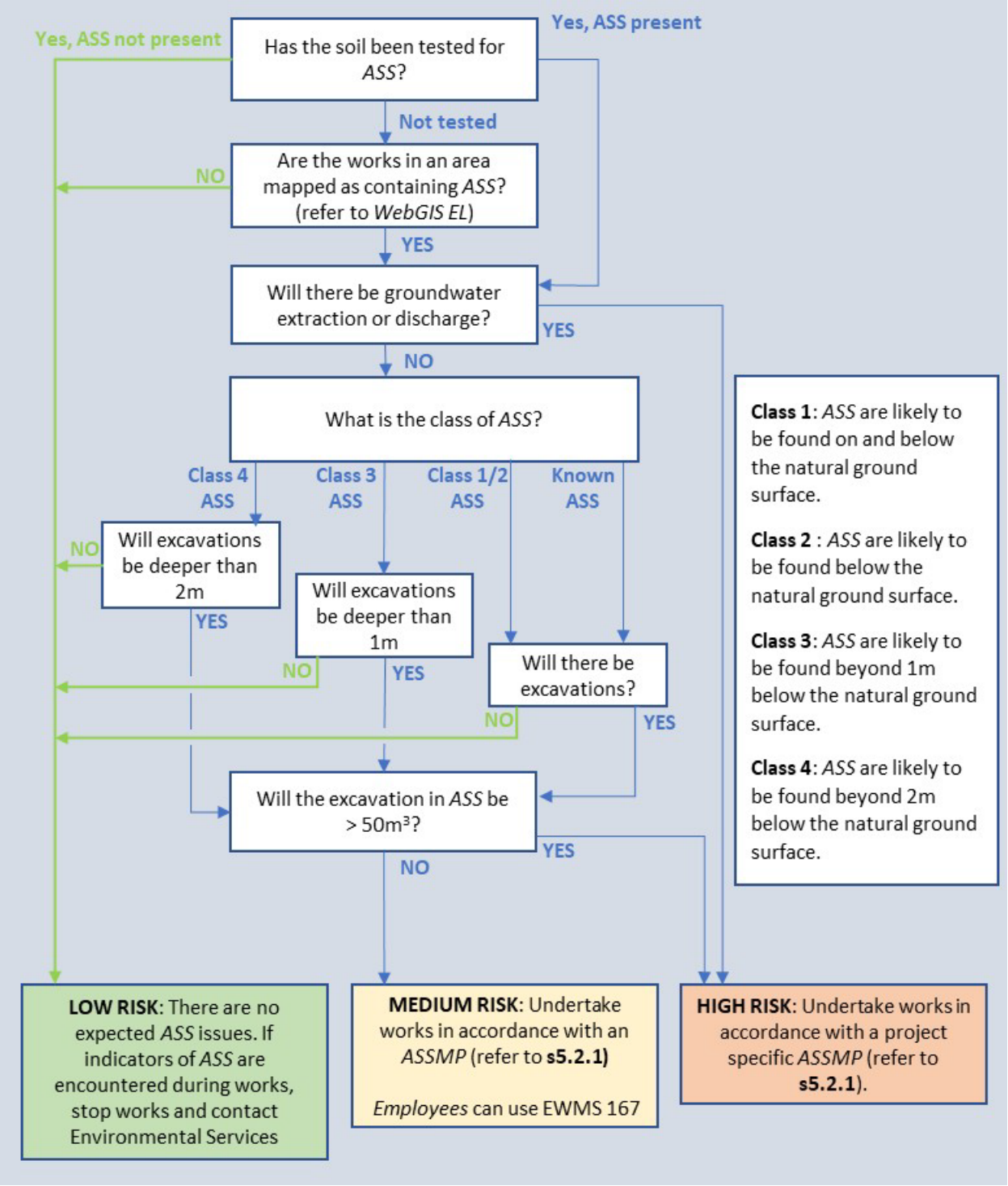
c) For high risk projects (refer to Figure 5.2-1), a site specific *ASSMP* will be required in accordance with the NSW ASS Manual and ASS Assessment Guidelines.




**When excavating in areas known to contain ASS, re-bury soil at the same depth from which it was excavated, where practicable**

**Correctly store ASS to minimise exposure to the air**

*Figure 5.2-1: Process for managing ASS*



## 5.3 WASTE MANAGEMENT

**When this section applies**

For activities that involve waste, such as:

- ☐ Generating, handling, storing, transporting, or disposing of waste.
- ☐ Reusing, recycling or repurposing waste.

**Background**

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

Improper handling or disposal of waste can harm human health and the environment.

**Key message**

Waste must be classified, handled, stored, transported and disposed in accordance with legal requirements. Licensing and tracking are required for certain wastes.

Good waste management minimises disposal to landfill, helps avoid environmental harm and can result in significant cost savings.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) Use Table 5.3-1 to determine the waste classification, licensing or waste tracking requirements, and recycling opportunities. *Employees* can refer to the Waste Database.

c) Understand the requirements of waste licences (for Ausgrid managers of waste facilities).

**When to contact Environmental Services 02 9394 6659**

a) Incidents involving waste.

b) Transporting waste greater than 150km from the place of generation.

c) Illegal dumping has caused contamination.

d) *Works* cannot meet the requirements in this *Handbook*.

Additional *WHS* requirements may apply. Refer to the *SWMS*, *SDS* and advice from your safety advisor. *Employees* can use ChemAlert.

**Definitions**

**ENM** means excavated natural material, which is naturally occurring rock and soil that has been excavated from the ground, contains at least 98% (by weight) natural materials, and meets chemical and other criteria detailed in section 5.4.

**SCW** means scheduled chemical waste, which is waste that contains > 2mg/kg of certain scheduled chemicals (examples include aldrin and dieldrin).

**VENM** means virgin excavated natural material, which is natural material that comes from undisturbed areas that are not contaminated and not *ASS* (refer to sections 5.1 and 5.2). More information is available on the EPA website.

*Table 5.3-1: Waste classification*

| Waste class | Examples of pre-classified waste | Need a licence to: | | Need to track waste? (Integrated Waste Tracking Solution) |
|---|---|---|---|---|
| | | store waste? | transport waste? | |
| **General solid waste** | – asphalt*<br>– building and demolition waste e.g. bricks*, concrete*, timber*<br>– oil filters*, rags and absorbents (no free liquids and <50ppm *PCB*)<br>– vegetation waste*<br>– untreated timber* | Yes, if generated off-site and storing >1,000t or 1,000m$^3$ at any one time, or >6,000t per year | No | No |
| **Restricted solid waste** | – Ausgrid has no pre-classified restricted solid waste | Yes, if storing >5t of waste generated off-site | Yes, in loads of >200kg | Yes |
| **Hazardous waste** | – aerosols* (empty spray cans)<br>– certain classes of *DG** including pressurised gases, corrosive or toxic substances<br>– lead-acid or nickel-cadmium batteries*<br>– dry lead paint waste<br>– street lamps* | Yes, if storing >5t of waste generated off-site (60t for lead-acid batteries) | Yes, in loads of >200kg | Yes. |
| **Liquid waste** | – liquid chemicals, solvents*, acids, paints, poisons, cleaning agents<br>– grease* and lubricants*<br>– grease trap waste*<br>– oil* (for *PCB* > 2ppm, refer to section 3.2)<br>– liquid *pesticides*<br>– septic tank waste<br>– accumulated water (refer to section 2.2)<br>– mercury (*employees* can refer to HS014-P0100) | Yes, if storing >5t of waste generated off-site (60t for *PCB free* oil, drilling mud or grease trap waste) | Yes, in loads of >200kg | Yes. |
| **Special waste** | – asbestos (refer to section 3.1)<br>– tyres*<br>– sharps | Yes, if storing >5t of waste generated off-site | Yes, in loads of >200kg (other than tyres or asbestos transported within NSW) | Yes. Exceptions include transport within NSW of:<br>– <20 waste tyres in loads <200kg<br>– asbestos in loads <100kg or <10m2 of sheeting. |

**Note:**

The requirements in this table are general and exceptions may apply.

Some wastes have additional requirements, including asbestos (section 3.1), *DG* (HS014-P0100), *PCB* (section 3.2), spoil (section 5.3.5), *SCW* (section 5.3.6) fire damaged *CCA* poles (NEG SE09) and radioactive waste.

The asterisk (*) indicates that recycling opportunities are available (refer to section 8.1).

### 5.3.1 General requirements

a) Consider principles of avoid, reduce, reuse and recycle (refer to section 8.1).

b) Identify the types and quantities of waste that will be generated.

c) Classify wastes (in accordance with the NSW EPA Waste Classification guidelines) to determine licensing, waste tracking and disposal requirements. Table 5.3-1 shows licensing and tracking requirements for common wastes. Details for additional wastes are available for *Employees* in the Waste Database.

d) Segregate and label waste to facilitate recycling, avoid cross-contamination and reduce disposal costs.

e) Keep waste facilities at depots, worksites, and offices clean and tidy.

**Segregate waste to avoid cross contamination**

**Example of poor waste segregation**

### 5.3.2 Transporting

a) Use a licensed transporter for quantities exceeding licensing thresholds (refer to Table 5.3-1).

b) Before trackable waste is removed from the worksite (refer to Table 5.3-1):

- obtain consignment approval from the receiving waste facility
- sign the completed waste transport certificate
- use online waste tracking where available, otherwise retain hard copy waste tracking records for 4 years.

c) Where waste tracking is not required, retain tipping dockets as proof of disposal.

d) Secure and cover loads to prevent spilling waste.

**Retain hard copy waste tracking records for 4 years**

**Note:** A transport licence and waste tracking are not required for transport by *employees* in Ausgrid vehicles between Ausgrid premises (for example, from a substation to a depot), or for transport of waste for *emergency works*.

### 5.3.3 Storing

a) Use a licensed storage facility for quantities exceeding licensing thresholds (refer to Table 5.3-1). *Employees* need to comply with Ausgrid's PCB licence when transporting or storing scheduled *PCB* > 1 tonne (refer to section 3.2.3) and Ausgrid's waste licence for Homebush depot when storing certain waste.

b) Keep waste bins and containers in good condition, do not overfill bins, and cover waste that could blow or wash away

c) Store waste away from drainage lines, grates, drains, inlets, and *waterways*, where practicable.

d) Store liquid waste in accordance with section 2.3.

e) Arrange disposal or recycling of wastes as soon as reasonably practicable.

**5.3.4 Disposing waste**

a) Dispose of waste only to a facility licensed to accept the waste.

b) Dispose of waste (which is not being recycled) only to a facility within 150km of the place of generation. If there are no appropriate facilities within 150km, contact Environmental Services on 02 9394 6659.

c) *Employees* should use bins at depots for common waste streams. Alternatively, *employees* can contact PropertyOneCall to arrange waste collection.

**Segregate waste for recycling**

d) Recycle mercury containing lamps (such as street lighting lamps, fluorescent tubes and compact fluorescent lamps). Ausgrid *workers* can use the lamp recycling bins at major depots. Take care not to break the lamps as they contain vapours that can be hazardous to human health and the environment.

**Note:** Ausgrid is a signatory to the FluoroCycle scheme, meaning we have committed to recycling all of our mercury containing lamps.

**5.3.5 Managing spoil**

a) Use Figure 5.3-2 to determine the requirements for managing spoil.

**5.3.6 Spoil and water from 132kV cable trenches**

Spoil and water from below the slab of Ausgrid's 132kV cable trenches installed prior to 1980 should be treated as *SCW* unless testing for organochlorine pesticides proves otherwise.

*SCW* is subject to controls including licences and approvals for storage, transport and disposal. *Employees* should follow specific controls in T0148 Managing soil associated with Ausgrid's fluid filled cable trenches. Key controls include:

a) *Workers* handling and transporting the spoil require awareness training in organochlorine pesticides and *PPE* (refer to Table 1.3-1).

b) Clearly label and maintain packages, containers and storage areas.

c) Keep spoil from below the slab separate to spoil from above the slab.

d) Store spoil in a plastic lined and covered bin.

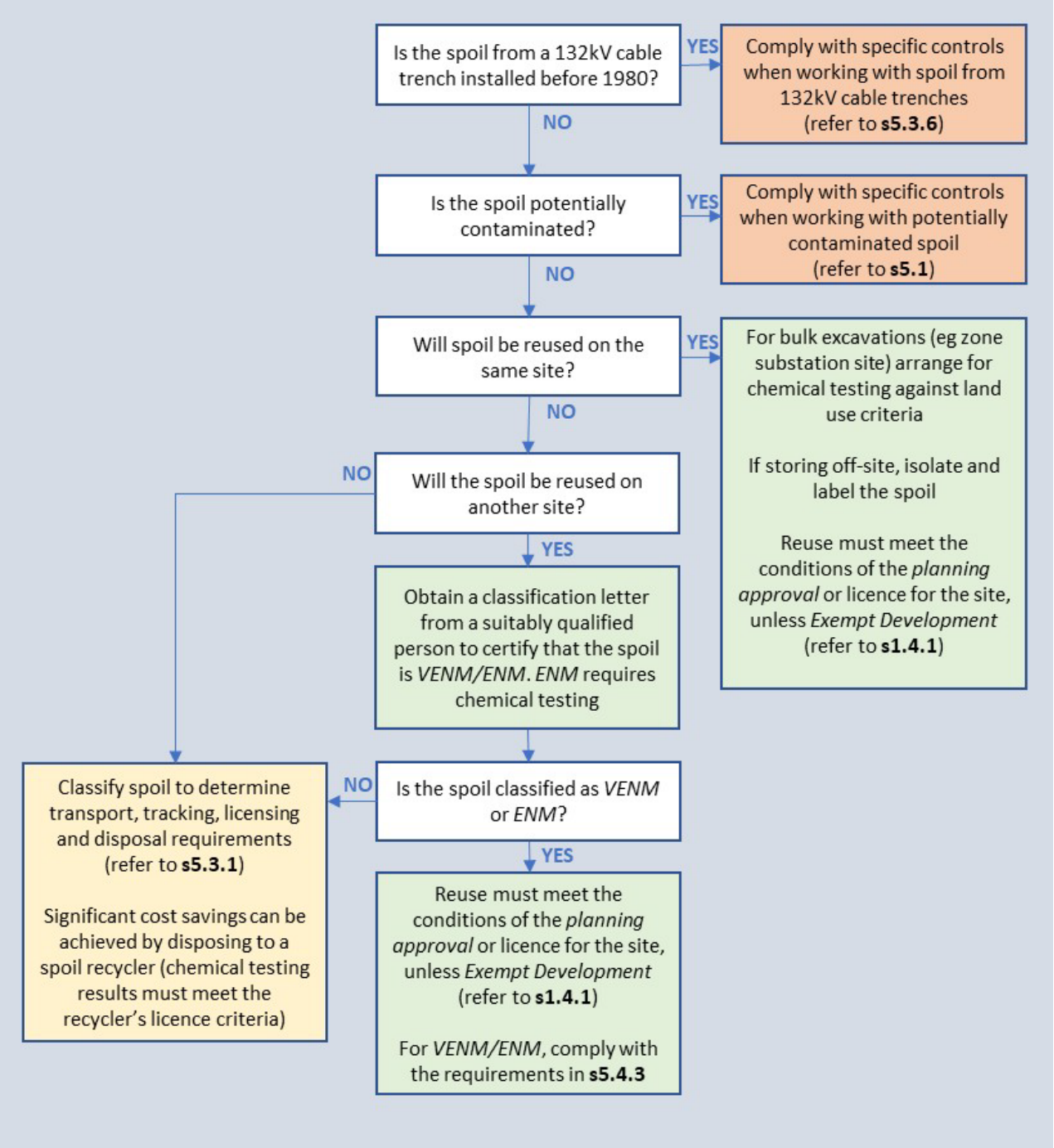
e) Reinstate soil (below the slab) on-site rather than disposing off-site, where practicable.


**Spoil and water from below the slab should be assumed *SCW* unless tested otherwise**

f) When storing > 1 tonne of *SCW* offsite use a licensed storage facility (refer to the scheduled chemical wastes chemical control order).

g) Refer to section 2.2 for requirements for managing water from Ausgrid's 132kV cable trenches.

*Figure 5.3-2: Process for managing spoil*




**5.3.7 Reporting illegal dumping**

a) For material dumped on Ausgrid property – *employees* must contact PropertyOneCall.

b) For suspected asbestos containing material dumped on public property – *employees* can refer to the Asbestos Quick Guide.

c) For any other illegally dumped waste – report online via RID (Report Illegal Dumping).

d) If dumped waste has caused a spill or contamination - refer to section 9.1.2 for spill response procedures and contact Environmental Services.

## 5.4 USE OF RECOVERED MATERIALS

**When this section applies**

For activities that use or supply recovered materials, such as:

- ☐ Receiving, applying or supplying *recovered aggregates* (for example, crushed concrete, brick, rock, asphalt, ceramics), soil (for example, *VENM*, *ENM*), fines (for example, soil or sand substitutes), compost, mulch, tyres or stormwater.

**Background**

Recovered materials can reduce a project's cost and environmental impact. However, providing or receiving contaminated materials (such as with asbestos or chemicals) can harm human health and the environment, and require costly remediation.

**Key message**

Before applying recovered materials to land, specific requirements must be met. These are contained in *EPA* Resource Recovery Orders (RRO) for suppliers, and Resource Recovery Exemptions (RRE) for end users, of recovered materials.

**Use of recovered materials must comply with an RRO and RRE**

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) Check the requirements of any applicable RRO or RRE (for supplying/accepting recovered materials).

c) Check for *environmentally sensitive areas* (refer to the WebGIS EL) or for *agricultural land*.

**When to contact Environmental Services 02 9394 6659**

a) Incidents involving recovered materials.

b) Receiving > 20m$^3$ of *VENM*, *ENM*, or *recovered aggregates*.

c) Applying recovered material (other than *VENM*, *ENM*, *recovered aggregates*, stormwater, compost or mulch) to land.

d) Applying recovered material to *environmentally sensitive areas*.

e) Planning to supply recovered material to third parties and an *RMP* does not exist.

f) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or *RMP* may be required.

**Definitions**

**Agricultural land** means land used for broad acre cropping, pasture, horticulture, growing fruit or keeping livestock.

**ENM** is excavated natural material (refer to section 5.3).

**Environmentally sensitive areas** are defined in the mulch RRO and include *ecologically sensitive areas* described in section 6.1.

**NPWS** is the NSW National Parks and Wildlife Service.

**Recovered aggregates** include crushed concrete, brick, rock, asphalt and ceramics, other than refractory bricks and materials that contain coal tar.

**RMP** means a site or project specific risk management protocol.

**RRE** means Resource Recovery Exemption which applies to end users of recovered material.

**RRO** means Resource Recovery Order which applies to suppliers and processors of recovered material.

**VENM** is virgin excavated natural material (refer to section 5.3).

### 5.4.1 General requirements

a) When receiving recovered materials for land application, comply with the RRE (for receivers or end users).

b) When supplying recovered material for land application, comply with the RRO (for processors or suppliers).

c) When receiving recovered materials, obtain written confirmation of the source/nature of all recovered materials before importation.

d) Apply material to land within a reasonable period of time after its receipt.

e) Always obtain land owner/manager consent when applying recovered material to land outside of the road reserve (for example *NPWS*, private property, Crown land).

### 5.4.2 Receiving VENM, ENM, or recovered aggregates

a) Obtain a statement from the supplier confirming the material meets all requirements of the RRO (does not apply to VENM).

b) Keep records of the quantity of material received and the supplier's name and address for 6 years.

c) For *VENM*/*ENM,* request a waste classification report from the supplier.

d) During the unloading of *ENM* or recovered aggregates, arrange visual inspection for *ACM* by an Ausgrid Level 3 asbestos-trained *worker* or otherwise suitably qualified person.

e) Only use *ENM* for engineering fill or earthworks.

f) Only use *recovered aggregates* for road making, building, landscaping and construction *works*.

g) Do not use *recovered aggregates* in the following situations:

- Construction of roads on private property, unless approved by a *DA or exempt development*
- Near *waterways* or for drainage applications, such as stormwater drainage or infiltration areas, or in or beneath groundwater
- Unsealed roads that would be subject to significant stormwater flows
- In *ecologically sensitive areas.*

h) Before receiving any *recovered aggregates*:

- check the supplier holds an environment protection licence for processing the relevant material
- obtain a statement from the supplier that they comply with the relevant *EPA* protocols for managing asbestos during resource recovery of construction and demolition waste

- obtain a copy of the supplier's material receiving inspection process.

**5.4.3 Supplying VENM or ENM**

a) Unless *exempt development* (refer to section 1.4) *ENM* and *VENM* must only be used for approved activities (*SER*, *REF*, *EIS* or *DA*).

b) *VENM* supplied for use on any worksite should be accompanied by a classification letter or VENM certificate prepared by a suitably qualified person.

c) When supplying *VENM* as fill material, provide your details, the origin of the material and quantity of material. Keep records of loads delivered.

d) Special requirements must be met when supplying *ENM*, these include:

- only use the *ENM* as engineering fill or in earthworks
- keep a written record of all sampling results, the quantity supplied, and the name and address of each person who received the *ENM*, for 6 years
- provide a written statement to the receiver, certifying that the *ENM* complies with the relevant conditions of the *ENM* RRE
- provide the receiver with the *ENM* RRO and RRE.

**Contaminated recovered material can result in costly remediation**

**5.4.4 Receiving mulch generated at another site**

a) Comply with any controls provided by the supplier (which may be specified as part of an *RMP* required by the mulch RRO).

b) Do not allow leachate (run-off) to migrate off-site.

c) Visually inspect mulch and reject loads with *weeds* or other contaminants.

**5.4.5 Supplying mulch for use on another site**

a) Only supply mulch in accordance with an *RMP* prepared under the mulch RRO.

b) Visually inspect plant material for *weeds*, *pests* and *plant diseases* before mulching:

- check for the presence of *weeds* (refer to a weed identification tool)
- check for the presence of *pests* and *plant diseases* (refer to the NSW Insect pests and plant diseases list).

c) Do not supply mulch for use in *environmentally sensitive areas* or on *agricultural land*.

d) Provide documentation to the receiver detailing their obligations and the specific environmental controls in the *RMP*.

e) Keep a written record of the *RMP* (including supporting documentation), and visual inspections, for 6 years.

**Do not supply mulch for use in *environmentally sensitive areas* or on agricultural land**

# 6 ECOLOGY

## 6.1 VEGETATION

**When this section applies**

For activities that can impact vegetation, such as:

- ☐ Clearing or trimming vegetation or removing ground cover.
- ☐ Trenching or excavating.
- ☐ Impacting trunks or root structures.
- ☐ Working in *ecologically sensitive areas.*

**Background**

Vegetation includes *trees*, plants, shrubs, ground cover, seagrass and mangroves. Some vegetation is considered more significant because it is threatened and/or plays an important role in the ecosystem.

**Key message**

Potential impacts to vegetation must be assessed and managed in accordance with legal requirements. Specialist assessments, approvals and restrictions apply to certain activities and/or *ecologically sensitive areas*.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If *planning approval* is not required, and the *works* involve ground or vegetation disturbance, check the WebGIS EL and use Figure 6.1-1 to determine the requirements.

c) Where within 15m of *trees*:

- calculate the *TPZ* and *SRZ* (refer to Figure 6.1-4 or use the TPZ/SRZ Calculator)
- check for recent incursions and their potential impacts to *tree* stability.

d) If undertaking inspection or maintenance work in national park estate, have current National Parks Protocol Induction training (refer to Table 1.3-1).

**Trees with compromised SRZs are at risk of structural failure**

e) Vegetation maintenance contractors require current training in an Ausgrid recognised tree trimming course (refer to Table 1.3-1 and section 6.1.3).

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving vegetation.

b) *Works* that cannot meet the *ecologically sensitive areas* controls (refer to section 6.1.2).

c) *Works* might impact *ecologically sensitive areas* and do not have a *planning approval* or *other approval* (refer to section 1.4).

d) *Works* that cannot meet the requirements in this *Handbook*.

A specialist assessment and/or an approval may be required.

**Definitions**

**CRA** means a conservation risk assessment which is required prior to undertaking maintenance *works* in national park estate.

**Ecologically sensitive areas** include:

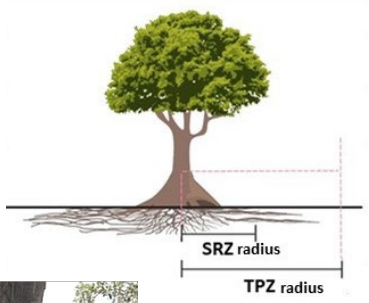
- national park estate, nature reserves, wildlife refuge areas
- threatened species and endangered ecological communities (EEC)
- areas of outstanding biodiversity value and critical habitat
- wilderness areas
- biobanking sites and biodiversity stewardship sites
- land subject to a conservation agreement (such as a biodiversity offset)
- marine parks, aquatic reserves
- RAMSAR wetlands
- coastal wetlands and littoral rainforests
- seagrass, saltmarsh and mangroves
- areas subject to bush regeneration or revegetation
- old growth forests
- key fauna habitat, key fish habitat, koala habitat
- other native vegetation, bushland, waterbodies and wetlands.

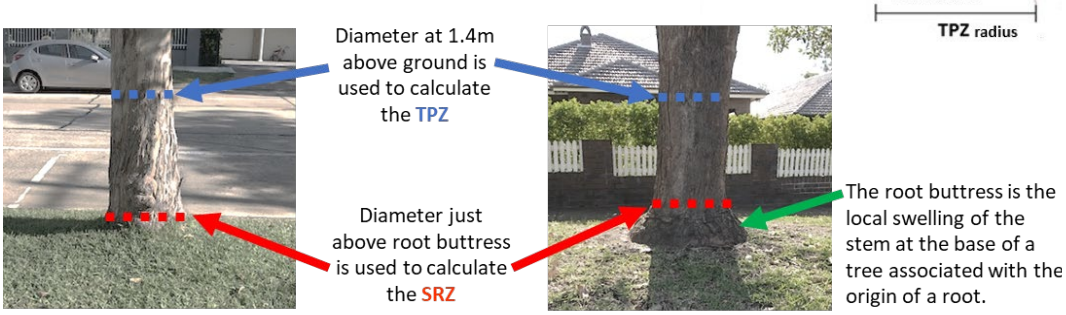
**DPIRD** means the NSW Department of Primary Industries and Regional Development.

**Non-destructive digging** includes hand digging or air or hydro vacuum excavation, retaining *tree* roots where possible.

**SRZ** means structural root zone, which is the area where the roots provide critical structural stability for the *tree*.

**TPZ** means *tree* protection zone, which is the area set aside for the protection of a *tree's* roots and crown to maintain the *tree's* long-term viability.

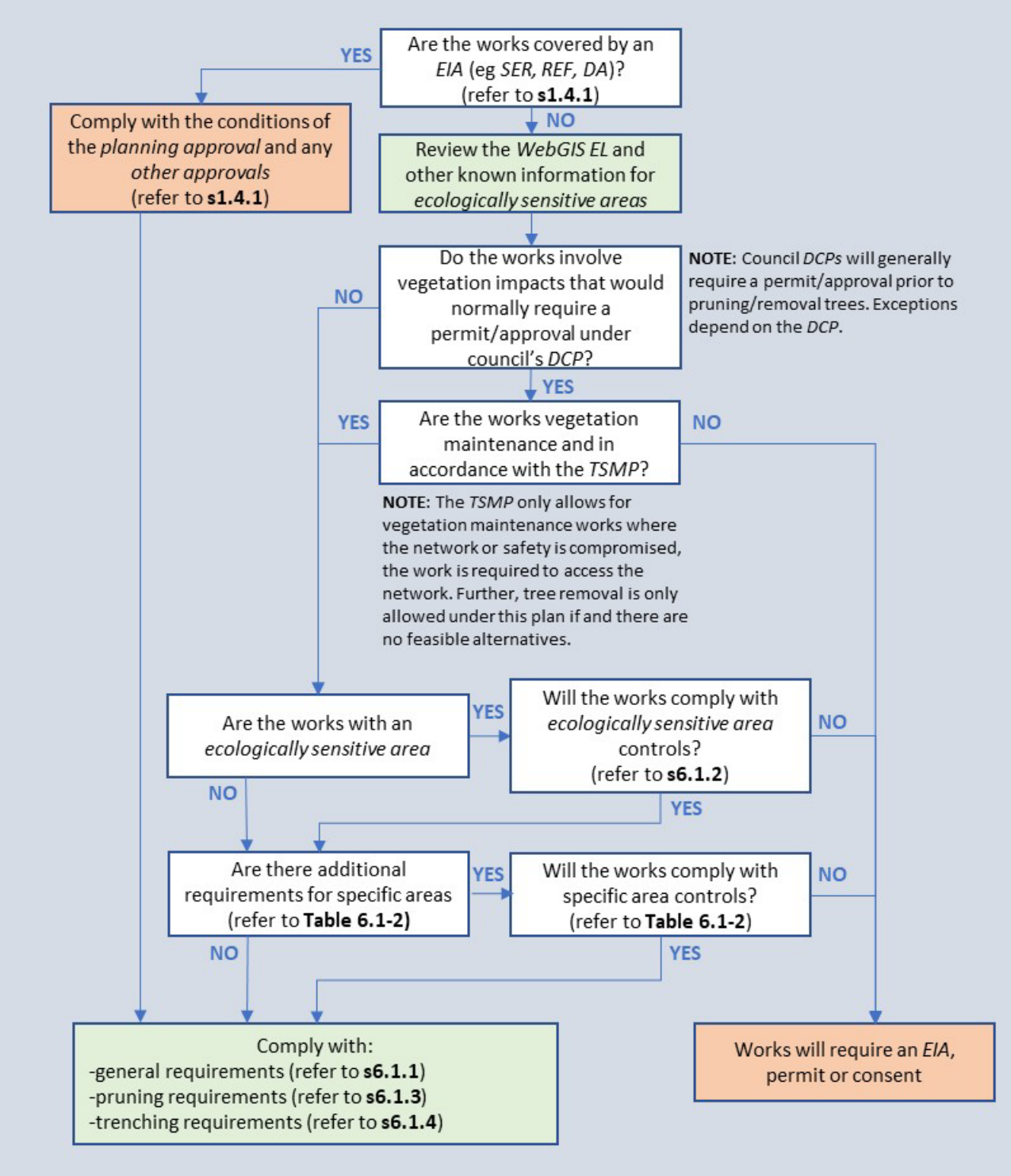



**Tree** means vegetation, usually taller than 3m when mature, with a distinct trunk of circumference >0.3m at a height of 1m above the ground.

**TSMP** is Ausgrid's Tree Safety Management Plan.

*Figure 6.1-1: Process for managing vegetation impacts*



### 6.1.1 General requirements

When working around vegetation:

a) Minimise clearing and disturbance of all vegetation, including ground cover.

b) Use existing roadways or access tracks.

c) Minimise activity (storage areas, stockpiles, vehicle parking, and access) within the *TPZ* (refer to Figure 6.1-4).

d) Comply with section 6.1.4 when trenching or excavating within 15m of *trees.*

e) Establish exclusion zones by restricting access to prevent damage to native vegetation and fauna habitats.

f) Protect *trees* from mechanical damage. Controls to consider include fencing or strap boards with padding.

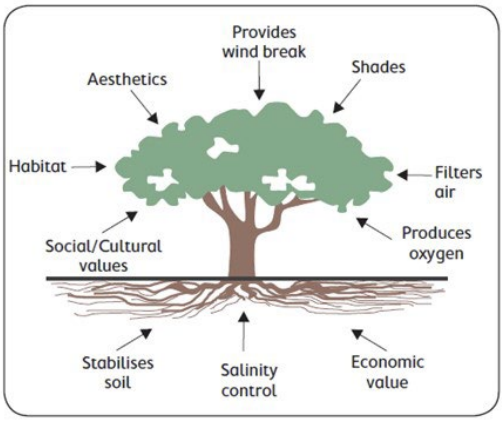
g) Consider the use of matting/mulch on the soil surface to reduce compaction and root damage from unavoidable traffic movements (if using mulch refer to section 5.4.4).

h) Water stress affected *trees* during the construction process.

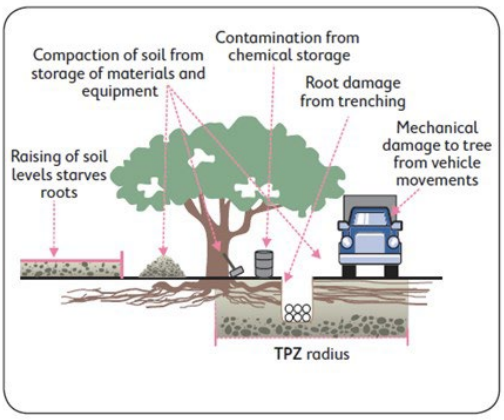
i) Designate areas for access and storage to avoid soil compaction in the *TPZ*.

j) Comply with biosecurity controls (refer to section 6.3).

**Strap boards and padding to the trunk to prevent damage**




**Vegetation provides a range of benefits**




**Activities undertaken within the TPZ can impact a *tree's* health and stability**

### 6.1.2 *Works* in *ecologically sensitive areas*

*Works* in *ecologically sensitive areas* will require a specialist assessment, and/or approval unless all the following controls are implemented:

a) All *workers* to be made aware of *ecologically sensitive areas* and the need to avoid impacts.

b) No *works* in undisturbed areas (including storing equipment in, parking vehicles on or accessing the worksite through an undisturbed area).

c) No disturbance of bushrock, *tree* hollows, wetlands, mangroves, nests, aquatic or other sensitive habitats.

d) No use of *pesticides* that could impact *ecologically sensitive areas*

e) No importing mulch from other sites.

f) Retain native ground cover vegetation (excluding access tracks) to 10-30cm high where possible (for example, set slasher height to at least 10cm).

g) No disturbance of a natural *waterway*, including dredging (excavating) and reclamation (filling).

h) No disturbance of native vegetation unless *works* are for the purpose of vegetation maintenance, undertaken in accordance with Ausgrid's TSMP and clearing is to the minimum extent necessary to maintain existing and regularly maintained clearances (no new clearance envelopes).

i) Comply with the requirements for *works* in specific areas (refer to Table 6.1-2).

**Endangered ecological community – Eastern Suburbs Banksia Scrub**

**Specific controls apply to *works* in ecologically sensitive areas**

*Table 6.1-2: Additional requirements for specific areas*

| Area | Requirements (*multiple areas may apply to the works*) |
|---|---|
| **National parks, nature reserves, declared wilderness areas, wild rivers** | Inspection, maintenance or *emergency works* must comply with the National Parks protocol and consent. Conditions include:<br>• Provide at least 4 days' notice for inspection *works* (unless undertaken by foot or passenger vehicle and do not require the use of equipment) using EGN 540 Ausgrid Notification to National Parks template.<br>• Provide at least 2 weeks' notice and a *CRA* for maintenance *works*. The *CRA* template can be generated from the WebGIS EL.<br>• Provide notice as soon as practicable after any *emergency works*.<br>Otherwise *works* require a NPWS REF and/or Minister approval. |
| **Marine vegetation** | Vegetation management *works* must comply with Ausgrid's Fisheries permit for vegetation management *works* around mangroves. Conditions of the permit include notifications to *DPIRD* and preparation of a *CEMP* (refer to EF 560 Managing Marine Vegetation). Controls in the *CEMP* include:<br>• restrictions on material storage and stockpiling<br>• requirements for site restoration and clean up<br>• machinery access requirements<br>• incident reporting<br>• no go areas and visual inspections<br>Otherwise *works* require a Fisheries permit. |
| **Littoral Rainforests, Coastal Wetlands** | Routine maintenance or *emergency works* must ensure that any adverse effect on the land concerned is restricted to the minimum possible to allow the *works* to be carried out.<br>Otherwise *works* must be assessed/approved by an *EIA* (refer to section 1.4). |
| **Conservation agreements** | Maintenance and *emergency works* must comply with Ausgrid's exemption.<br>Otherwise *works* may require Minister approval. |
| **Marine parks, aquatic reserves, State Forests / Crown Timber Land** | *Works* must comply with the conditions of a licence/easement. |
| **Areas of Outstanding Biodiversity Value** | *Works* must be assessed/approved by an *EIA* (refer to section 1.4) and may require Minister approval. |
| **Heritage trees** | Refer to section 7. |

### 6.1.3 Pruning branches

This section only applies where pruning of *tree* branches is allowed (refer to Figure 6.1-1).

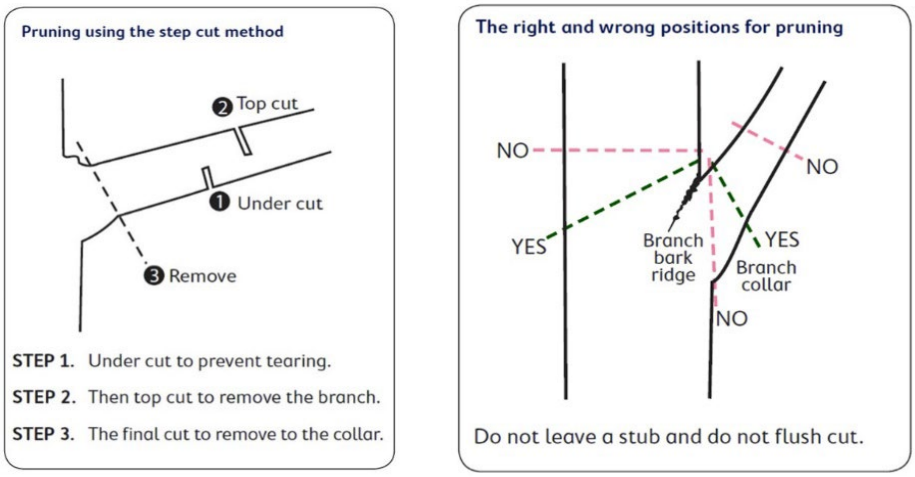
a) Pruning *tree* limbs > 100mm diameter should be under the direction of *workers* trained in an Ausgrid recognised *tree* trimming course and familiar with AS 4373 Pruning of amenity trees (unless for *emergency works*).

b) Protect and retain the branch collar and branch bark ridge during pruning. Damaging branch collars increases the risk of infection and decay.

c) Prune *trees* and other vegetation no more than the minimum required to meet network clearance and safety requirements.

d) Use the step cut method when pruning branches (refer to Figure 6.1-3).

***Figure 6.1-3: Correct pruning techniques***




### 6.1.4 Trenching and excavating

a) Use Figure 6.1-4 (or use the TPZ/SRZ Calculator) and Figure 6.1-5 to determine the radius of the *SRZ* and *TPZ*.

b) If trenching / excavating within the *TPZ* is unavoidable, use Figure 6.1-6 to determine the requirements.

c) Take into account any recent incursions into the *SRZ* and their potential impacts to *tree* stability. An example could be a new kerb and gutter.

d) Seek advice from an arborist or local council *tree* preservation officer prior to impacting roots of a *tree* that is leaning, has significant existing incursions into the *SRZ,* or is in poor health.

**Wherever possible leave roots intact**

**Where roots are exposed for extended periods of time (>24 hours), wrap larger roots (> 50mm diameter) in jute mesh or hessian and keep moist**

e) Comply with the following controls to minimise root damage:

- Wherever possible leave roots intact.
- If roots must be severed, cut the roots with a clean sharp implement at the trench edge. Do not apply any type of liquid or material to the severed root end.
- Where roots are exposed for extended periods of time (>24 hours), wrap larger roots (> 50mm diameter) in jute mesh or hessian and keep moist.
- Avoid discharging water on an ongoing basis in the *TPZ*.
- Wash down plant and equipment outside the *TPZ*.
- Minimise changes in soil levels in the *TPZ*.
- Avoid compaction in the *TPZ*.
- If surface sealing around *trees* is required, use a material which allows aeration (like gravel, unit pavers, coarse sand).

***Figure 6.1-4: Calculating the TPZ and SRZ***

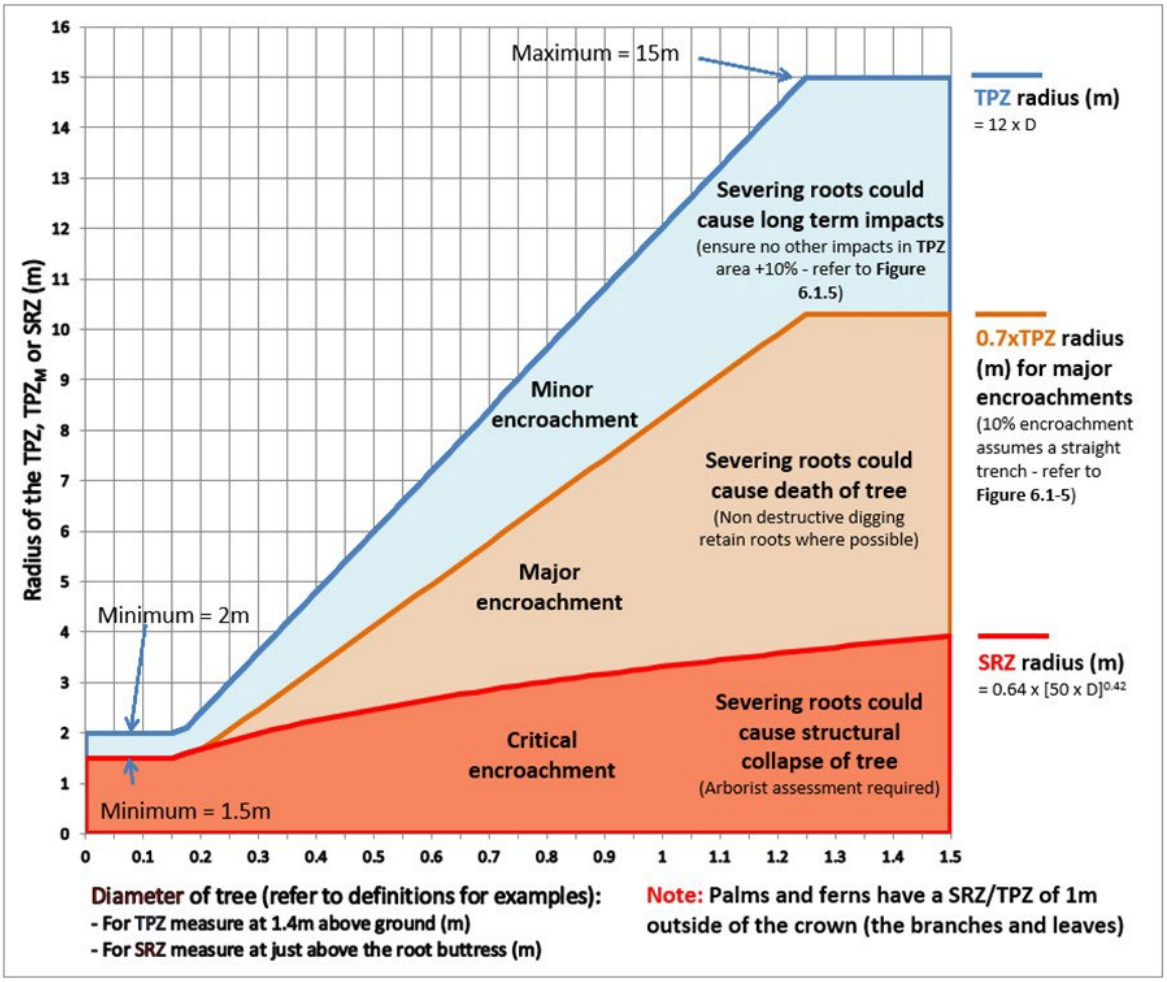


*Figure 6.1-5: TPZ and SRZ*

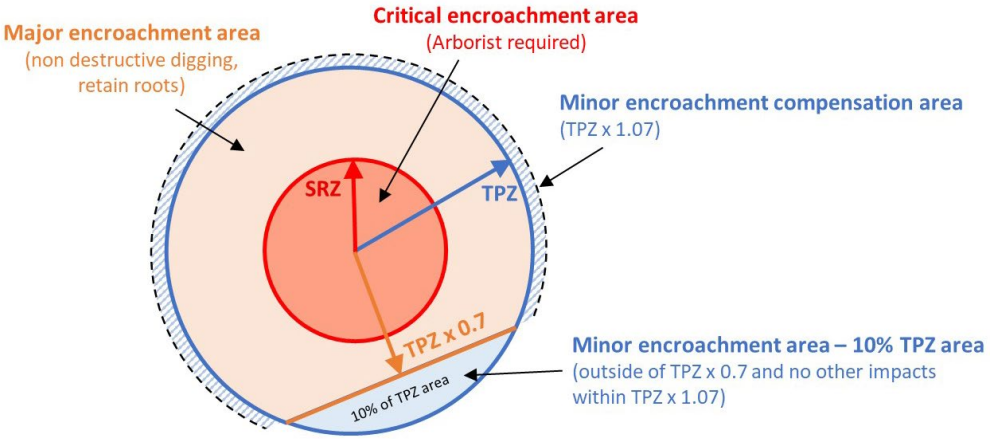
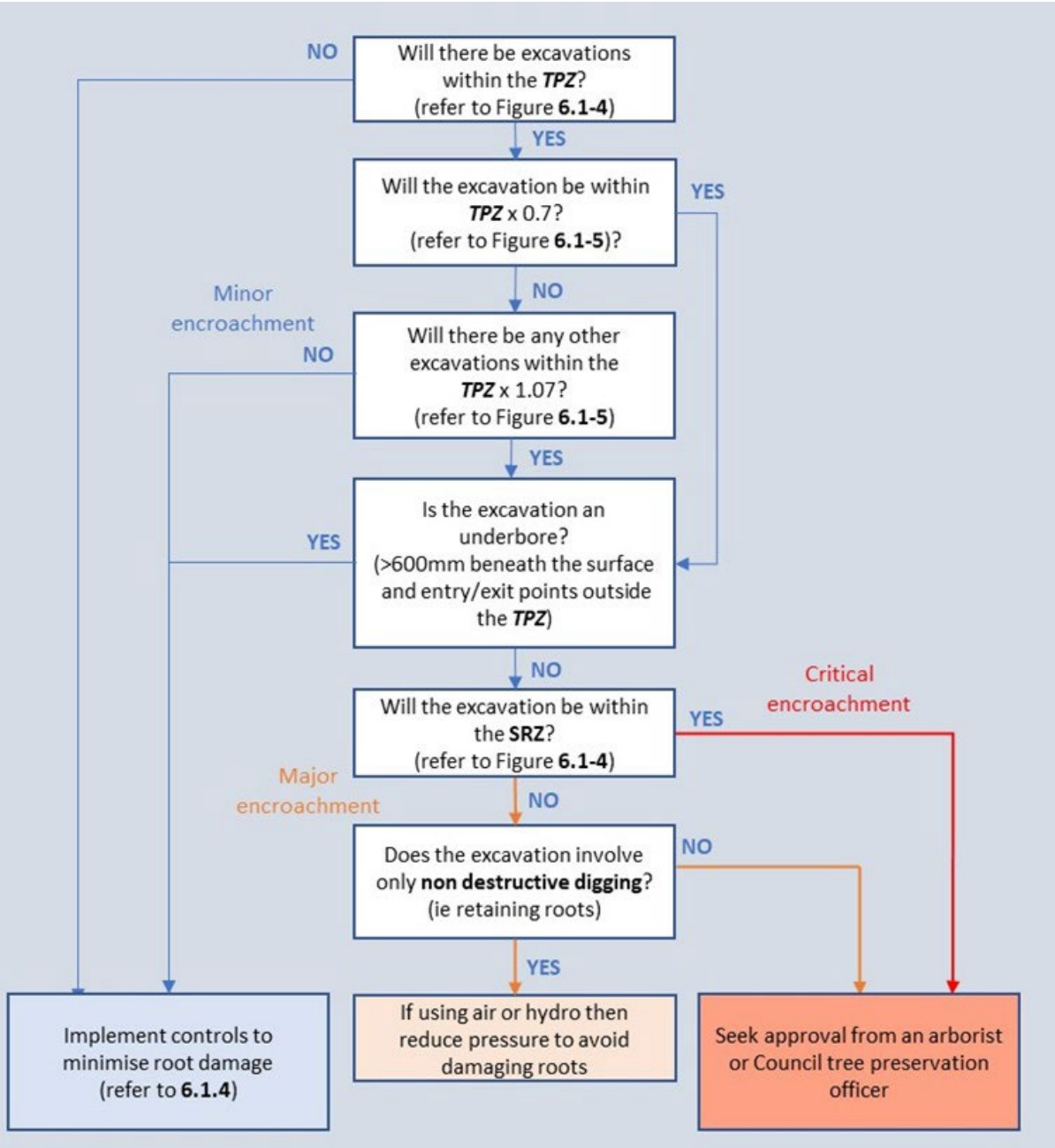



*Figure 6.1-6: Requirements when working within the TPZ*



## 6.2 WILDLIFE

**When this section applies**

For activities that can impact wildlife, such as:

- ☐ Removing or damaging wildlife habitat (for example, known breeding sites, native vegetation, bushrock, tree hollows, dead *trees*, nests, aquatic environments, bee hives or swarms etc).
- ☐ Working on equipment that has become habitat (for example, poles, substations, pits, depots and other buildings and structures).
- ☐ Encountering wildlife.

**Background**

Wildlife habitat includes areas that provide food, roosting, breeding, nesting and refuge. Some habitat is considered more significant because it supports threatened fauna and/or plays an important role in the ecosystem.

Wildlife impacts can result from removing or damaging vegetation, creating barriers to movement, light spill and from noisy *works*.

***Tree* hollows are an essential resource for many species**

**Key message**

Potential impacts to wildlife and their habitats must be assessed and minimised in accordance with legal requirements.

Specialist assessments, approvals and restrictions apply to certain activities and/or *works* within *ecologically sensitive areas*.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If *planning approval* is not required, and the *works* involve ground or vegetation disturbance, check the WebGIS EL for known *wildlife sensitive areas* and specific requirements.

c) Visually check for *tree* hollows, bushrock, nests or other evidence of faunal occupation (scats, feathers, white wash) and evidence of wildlife (including animals that could be using our network as habitat, such as possums in hollow-bearing poles, or birds or bats nesting in equipment).

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving wildlife.

b) *Works* might impact *ecologically sensitive areas* and do not have a *planning approval* or *other approval* (refer to section 1.4).

c) Wildlife is detected and is likely to be impacted by the *works*.

d) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or approval may be required.

For the rescue or care of wildlife, contact a local wildlife rescue organisation or licensed wildlife handler (refer to section 10).

**Definitions**

**Wildlife sensitive areas** include known breeding sites, flying fox camps, tree hollows or nests, bushland, bushrock, waterways, wetlands, or mangrove areas.

### 6.2.1 *Works* in *wildlife sensitive areas*

*Works* in *wildlife sensitive areas* will require a specialist assessment, and or approval, unless all the following controls are implemented:

a) All *workers* to be made aware of *wildlife sensitive areas* and the need to avoid impacts.

b) No *works* in undisturbed areas (including storing equipment in, parking vehicles on or accessing the worksite through an undisturbed area).

c) No disturbance of bushrock, tree hollows, wetlands, mangroves, nests, aquatic or other sensitive habitats.

d) No use of *pesticides* that could impact *wildlife sensitive areas*.

e) Retain native ground cover vegetation.

f) No disturbance of native vegetation unless *works* are for the purpose of vegetation maintenance, undertaken in accordance with Ausgrid's TSMP, and clearing is to the minimum extent necessary to maintain existing and regularly maintained clearances (that is, no new clearance envelopes).

### 6.2.2 Wildlife on and around the network

Wildlife can use poles, substations, pits, depots and other buildings and structures for roosting, nesting or seeking refuge from predators.

a) Inspect the worksite for wildlife occupation prior to starting *works*.

b) Where wildlife is present (such as birds, possums, snakes, bats) wait for the animal to relocate if practicable.

c) Cover trenches and pits if left overnight to prevent wildlife from getting trapped. Provide an escape route (such as a log or stick) for animals if trenches or pits will be open for long periods.

d) Where all other options are exhausted and wildlife (including eggs and nests) needs to be physically relocated, rescued, or requires care, contact a local wildlife rescue organisation, licensed wildlife handler or *NPWS* (refer to section 10).



**Contact wildlife rescue organisations to rescue or relocate wildlife (refer to section 10)**

### 6.2.3 Flying foxes on power lines

Flying foxes are protected by law. Their breeding season is typically mid-September to December. At this time, electrocuted female flying foxes are often carrying pups that can survive the death of their mother if rescued in time.

For *employees* rescuing a deceased flying fox possibly carrying a live pup:

a) Never attempt to rescue a live adult flying fox.

b) Contact a wildlife rescue organisation (refer to section 10) to arrange a rescuer to be present to collect the live pup.

c) For the safe removal of animals, *employees* must follow HS000-W0127 Flying-Fox (Bat) Live Pup & Lifeless Adult removal from overhead mains.

d) Any live animals should only be handled by a local wildlife rescuer.

e) Report deceased banded bats to Environmental Services for notification to the Australian Bird and Bat Banding Scheme (ABBS).

f) Place deceased animals in a plastic lined box or plastic bag and dispose as general solid waste.

### 6.2.4 Bee swarms and hives

If a native bee or honeybee swarm or hive is encountered on electrical infrastructure:

a) Do not attempt to kill or interfere with the bees. Honeybees are likely to sting if disturbed.

b) Contact Environmental Services on 02 9394 6659. Local beekeepers (refer to section 10) may be available to remove the honeybee swarm or hive. A small fee may be required to cover their expenses.

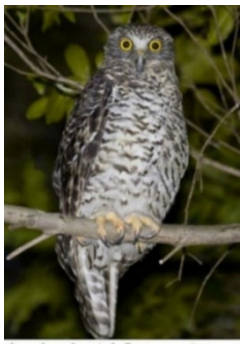
**Bee swarm on pole**

### 6.2.5 Powerful owls

Powerful owls are a NSW listed threatened species. Where possible planned *works* should be undertaken outside their breeding season of April to October.

Disturbing nesting owls can lead to owls abandoning the nest and their young. Powerful owls have also attacked people while defending their nests. Refer to BirdLife's On-Site Guide for more information.

When working near powerful owl breeding territories:



**A Powerful owl**

**General all year conditions include:**

a) All *workers* to be made aware of powerful owl breeding territories in the area.

b) No noisy *works* (such as chainsaws or mulching) one hour before sunset or one hour after sunrise (refer to this sunrise sunset calculator).

c) Retain large hollow-bearing *trees* (*tree* diameter > 80cm) and hollows > 30 cm diameter.

d) Retain all hollows and all horizontal perching branches of 4-10cm diameter in flyways (i.e. overhanging creeks and tracks).

e) Avoid trimming of horizontal branches within 1m of tree hollows where possible.

f) Avoid vegetation trimming that opens the canopy in riparian zones (up to 15m from a creek/riverbank) where possible.

g) Report powerful owl incidents to Environmental Services on 02 9394 6659.

**Breeding Season - April to October (in addition to the general conditions):**

h) Notify Birdlife Australia at least 2 weeks prior to *works* commencing (refer to section 10).

i) Undertake an inspection for nesting owls and delay *works* if owls are detected

j) No noisy *works* (chainsaw or mulching).

## 6.3 BIOSECURITY

**When this section applies**

For activities that can impact biosecurity, such as:

- ☐ Entering e*cologically sensitive areas* or *agricultural land.*
- ☐ Leaving an area infested with *weeds* or diseased plants.

**Background**

*Biosecurity* is important for protecting the economy, environment, and community from *weeds*, *pests* and *plant diseases*.

Clothing, footwear, tools, equipment, machinery and vehicles can spread *weeds*, *pests* and *plant diseases* into bushland.

**Key message**

Legal requirements include the principle of shared responsibility, which means doing what is reasonable and practicable to prevent, eliminate or minimise *biosecurity* risks.

Specialist assessments, restrictions and notifications apply to certain activities and/ or areas.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) Check the WebGIS EL for known *biosecurity* hazards and e*cologically sensitive areas* .

c) Visually check for the presence of , *biosecurity* hazards (refer to a weed identification tool, NSW Insect pests and plant diseases list, Figure 6.3-2 and look out for any *biosecurity* signage).

d) For *agricultural land*, check with the landowner if there are any *biosecurity* requirements.

**Plant and equipment need to be disinfected before entering native bushland or leaving infested areas**

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving *weeds*, *pests* or *plant diseases*.

b) *Works* cannot meet the requirements in this *Handbook*.

Further assessment may be required.

**Definitions**

**Biosecurity** means measures to prevent *weeds*, *pests* and *plant diseases* threatening the economy and environment.

**Plant disease** means an infection that can result in an abnormal or unhealthy condition in the plant.

### 6.3.1 *Works* in bushland, agricultural properties, and/or infested areas

**Planning**

a) Adopt a come clean, go clean approach to all activities.

b) Minimise vehicle and equipment movements .

c) Establish entry and exit points away from infested areas, where practicable.

d) Program *works* from least to most infested areas, where practicable.

e) Schedule *works* for a day when the soil is dry and doesn't stick to footwear, equipment and tools, where practicable.

f) When in national park estate, comply with the National Parks protocol and consent (refer to section 6.1).

g) Do not import mulch from other sites into *ecologically sensitive areas*. .

h) Look for signage that could indicate *biosecurity* hazards or practices that need to be followed. If in doubt, contact the landowner.

**Note:** Certain activities on *agricultural land* could impact the occupier's agriculture accreditation and income.

i) Comply with all reasonable requests from owners and occupiers.


**Certain activities on agricultural land may impact the occupier's agriculture accreditation**

**At site entry and exit**

j) Prior to entering native bushland or leaving an infested area:

- clean footwear, tools, equipment, machinery, and vehicles with a hard brush or stick to remove as much mud, soil and organic matter as practicable (refer to Figure 6.3-1)
- disinfect potentially contaminated materials (such as footwear and tyres) with a solution of 70% methylated spirits and 30% water applied with a spray bottle
- remove any residual seeds from clothing, footwear, tools and equipment by hand.

k) Choose clean down sites:

- where soil and seed matter would be contained
- away from *waterways* and drains
- close to infested areas, if practicable.

**Myrtle rust spores on clothing**

**Vehicles and machinery can spread *weeds* from infested areas**

### During and after *works*

l) Use existing roadways or access tracks.

m) When disposing of *weeds* or diseased plants:

- bag *weeds* and diseased plants, where practicable
- cover loads to prevent seeds and plant material from dispersing
- contact the receiving facility prior to delivery
- plants that are not in seed and have no evidence of disease, can be left where found
- if vegetation is being mulched for supply on another site, comply with the requirements of a *RMP* (refer to section 5.4.3).

n) Change and launder work clothes after working in infested areas.

***Figure 6.3-1: Parts of vehicles that should be checked and cleaned***

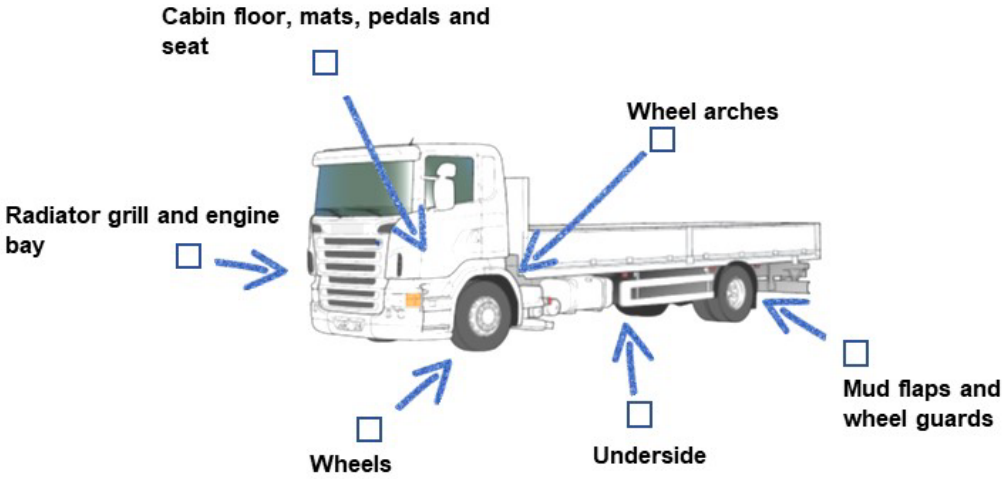


*Figure 6.3-2: Some common weeds and plant diseases in Ausgrid's network area.*

Green Cestrum *(Cestrum parqui)**

Broad leaf pepper *(Schinus terebinthifolius)**

Myrtle rust *(Puccinia psidii)**

Bitou Bush *(Chrysanthemoides monilifera subsp. rotundata)***

Grey Sallow *(Salix cinerea)**

Madeira Vine *(Anredera cordifolia)**

Groundsel Bush *(Baccharis halimifolia)**

Paper Mulbery *(Broussonetia papyrifera)**

Pampas Grass *(Cortaderia spp.)**

European Blackberry *(Rubus fruticosus agg.)**

Yellow bells *(Tecoma stans)**

Prickly Pear *(Opuntia spp.)**

Crofton Weed *(Ageratina adenophera)**

Lantana *(Lantana camara)**

*PHOTOS COURTESY OF NSW DEPARTMENT OF PRIMARY INDUSTRIES.

**PHOTO COURTESY OF H. CHERRY, NATIONAL WONS PROGRAM.

## 6.4 TOTAL FIRE BANS

**When this section applies**

For activities that can cause bushfires, such as:

- ☐ *Hot works* that are *out in the open.*
- ☐ *Live works* in *bushfire prone land.*

**Background**

A *TOBAN* is declared when a fire is likely to spread rapidly or if widespread fires are already burning and firefighting resources are stretched.

Ausgrid's System Control is notified of *TOBANs* by the *NSWRFS*. System Control sends SMS/email alerts to key *employees* and regional managers upon receiving the *NSWRFS* notice. *TOBAN* details are also posted on the *NSWRFS* website.

**Key message**

During a *TOBAN*, no fire or flame maybe deliberately lit in the open unless in accordance with a standard exemption.

*Hot works* and *live works* in the open on *TOBAN* days require additional risk assessment, higher levels of bushfire risk mitigation and control measures, permits and/or notification to the local *NSWRFS* or *FRNSW* command centre. Consideration should be given to alternatives or postponing.

***Hot works* during a *TOBAN* need to comply with an exemption**

**Before *works* begin**

a) Check whether a *TOBAN* has been declared on the day for the location of the *works* on the *NSWRFS* website.

**Note:** Ausgrid's System Control will send SMS/email alerts to key *employees*.

b) If undertaking *live works* in *bushfire prone land* or *hot works*, use Figure 6.4-1 to determine requirements that could apply.

c) Consider other activities that could start a fire and ensure controls are adequate to manage the risk (like driving through long grass or cigarette smoking).

If a *TOBAN* is declared:

d) Consider alternative work practices to avoid *hot works* or *live works out in the open*.

e) Check for *bushfire prone land* on the WebGIS EL.

f) Check whether the *TOBAN* order provides a *Clause 6 exemption*.

g) Check the requirements of any applicable *NSWRFS* or *FRNSW* approval.

**Definitions**

**Bushfire Danger Period** is typically from 1 October to 31 March but could vary (for example Greater Hunter Region commences 1 September)

**Bushfire prone land** means land identified by local council which can support a bushfire or is vulnerable to bushfire attack. *NSWRFS* and Local Councils are custodians and responsible for the *Bushfire prone land* maps and datasets.

**Clause 6 exemption** is a specific exemption relating to 'Services and utilities—construction, essential repairs or maintenance'. It must be gazetted within the

TOBAN order on the day and contains certain conditions such as having adequate firefighting equipment and notifying *NSWRFS* or *FRNSW*.

**FRNSW** is the NSW Fire and Rescue Service.

**Hot works** m any process involving grinding, welding, brazing, oxy cutting, heat treatment, heat shrinking, or other process that generates heat or sparks that can increase the risk of fire or explosion near flammable/combustible materials. For excluded activities, *employees* can refer to HS008-P0600 Hot Work.

**Live works** means *works* on exposed mains and apparatus that are energised, including manual operation of overhead air-break switches, drop out fuses and links.

**NSWRFS** is the NSW Rural Fire Service.

**Out in the open** excludes areas which are devoid of bushland and/or natural fuel loads, such as within pits and trenches, or are within the confines of built structures, such as inside buildings, workshops or basements.

**TOBAN** means a Total Fire Ban order declared by the Minister or Commissioner of *NSWRFS* when bushfires are more likely to spread and cause damage.

### 6.4.1 General requirements for all *hot works*

a) Undertake *works* in a manner that prevents the escape of fire, sparks, incandescent or burning material.

b) Clear the worksite of debris and combustible fuels, maintain a clear and safe work site.

c) Wash down work site, if needed.

d) Supervise *hot works* for the entire time (never leave a naked flame unattended).

e) Schedule *hot works* during lower Fire Danger Rating periods (as declared by *NSWRFS*), where practicable.

f) Keep *hot works* clear of combustible material by at least 3m.

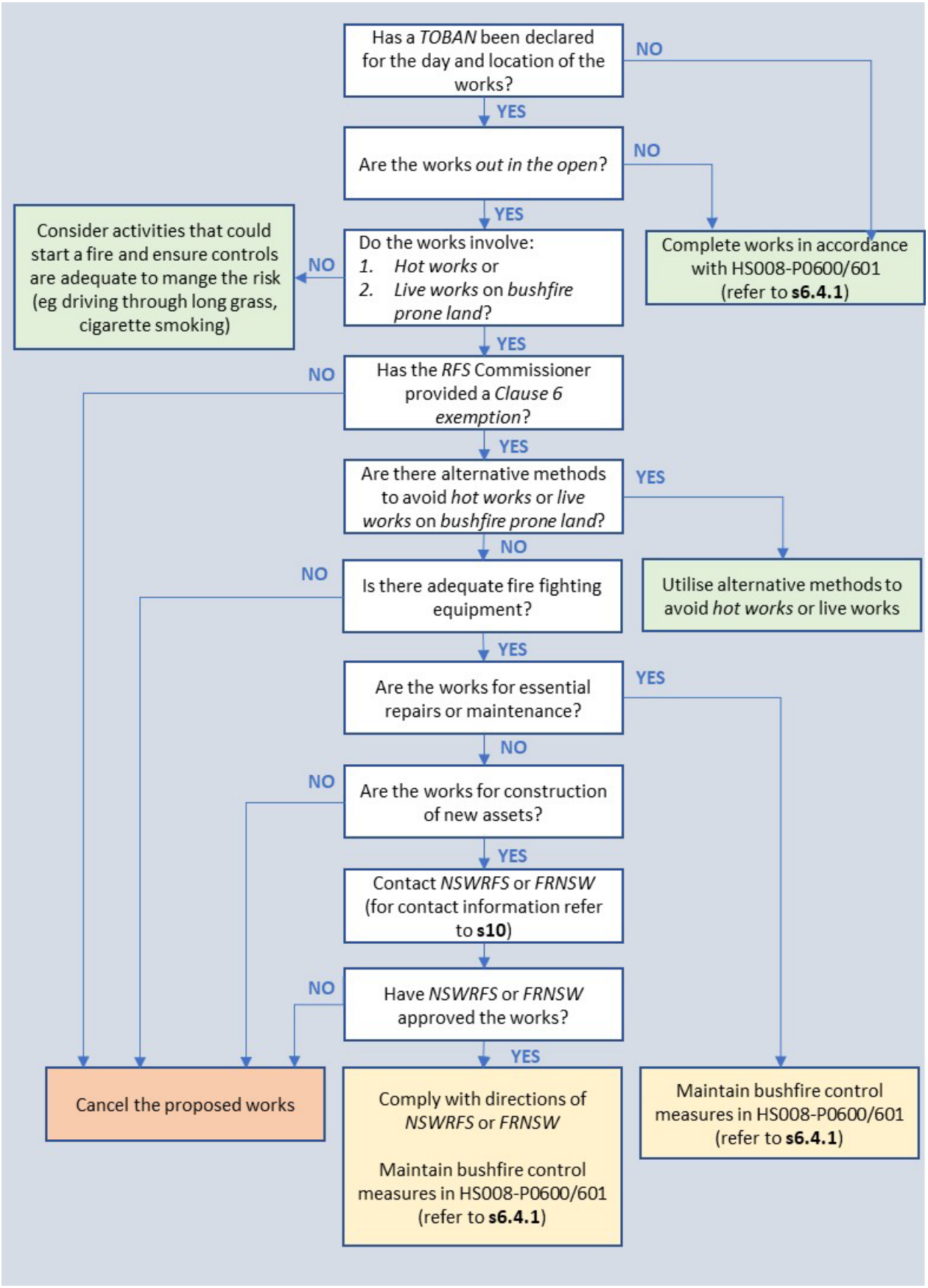
g) Isolate *hot works* using appropriate barriers and signage.

h) Keep adequate firefighting equipment immediately on hand. This could include small portable fire extinguishers for low-risk situations, or manned water tanker and pumps, for larger worksites and higher risk situations.

i) Comply with other requirements relating to *hot works*. Processes for *employees* can be found in:

- *hot work* (HS008-P0600)
- *hot work* permits (HS008-P0601)
- *hot work* near service stations (T0076)
- *hot work* near plastic gas pipes (DG 11)

*Figure 6.4-1: Process for managing hot works and live works*



# 7 HERITAGE

## 7.1 ABORIGINAL CULTURAL HERITAGE

**When this section applies**

For activities that could impact *Aboriginal cultural heritage* such as:

- ☐ Disturbing the ground (for example, excavating, trenching, drilling, underboring, access track *works*, driving tracked vehicles).
- ☐ Clearing or trimming native *trees*.

**Background**

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

**Key message**

Potential impacts to *Aboriginal cultural heritage* must be assessed and managed in accordance with legal requirements. Specialist assessments, consultation, permits, approvals and conditions apply.

**Before *works* begin**

*Works* within *Aboriginal cultural heritage sensitive areas* will require further assessment and possible *AHIP* unless all the controls in section 7.1.1 are implemented:

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If *planning approval* is not required, and the *works* involve ground or vegetation disturbance, check the WebGIS EL and use Figure 7.1-5 to determine the requirements.

*c)* Visually check the work area for possible *Aboriginal cultural heritage* (refer to examples in Figure 7.1-1).

***Figure 7.1-1: Examples of Aboriginal cultural heritage***

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving *Aboriginal cultural heritage*.

b) *Works* might impact *Aboriginal cultural heritage* or *Aboriginal cultural heritage sensitive areas* and do not have a *planning approval* or an *AHIP* (refer to section 1.4).

c) *Aboriginal cultural heritage* is potentially discovered.

d) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or an *AHIP* may be required.

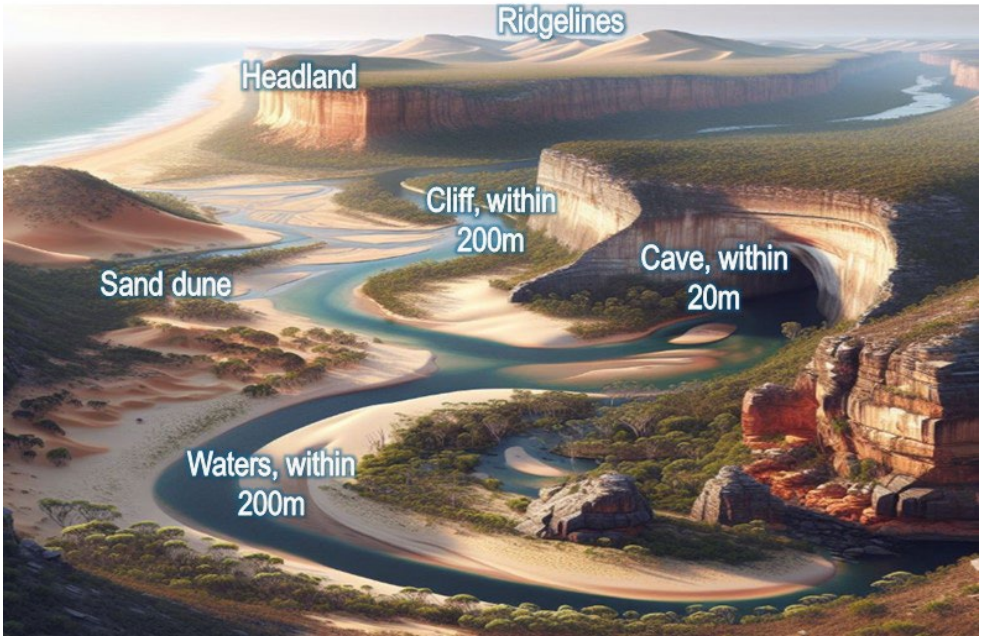
**Definitions**

**Aboriginal cultural heritage** includes objects and places. Objects provide physical evidence of the use of an area by Aboriginal people (for example, stone, wood and shell artefacts). Places are areas that have special significance to Aboriginal people (for example, spiritual, historical, social).

**Aboriginal cultural heritage sensitive areas** include:

- areas within the WebGIS EL buffer of known *Aboriginal cultural* heritage or within an *AHIP* area
- *undisturbed land* or natural rock outcrops with any of the following landscape features (Figure 7.1-2):
  - within 200m of waters
  - within a sand dune system
  - on a ridge top, ridge line or headland
  - within 200m below or above a cliff face
  - within 20m of or in a cave, rock shelter, or a cave mouth.

***Figure 7.1-2: Aboriginal cultural heritage sensitive areas include undisturbed land or natural rock outcrops with specific features***




**AHIP** is Aboriginal heritage impact permit.

**Disturbed land** means land that has been the subject of human activity that has clear and observable changes to the land's surface. Examples of activities that may have *disturbed land* include soil ploughing, construction of roads, trails and tracks or buildings, installation of utilities, clearing of vegetation and substantial grazing. Refer to Figure 7.1-3 and Figure 7.1-4 for examples.

*Figure 7.1-3: Examples of undisturbed land*


*Figure 7.1-4: Examples of disturbed land*

**7.1.1 Working within Aboriginal cultural heritage and sensitive areas**

a) All *workers* to be made aware of the extent of the *Aboriginal cultural heritage sensitive area* and the need to avoid impacts.

b) No disturbance of the ground surface, including natural rock outcrops (including from plant and machinery movements).

c) No native *tree* removals.

d) No disturbance of native trees unless *works* are for the purpose of vegetation maintenance, undertaken in accordance with Ausgrid's TSMP and clearing is to the minimum extent necessary to maintain existing and regularly maintained clearances (that is no new clearance envelopes).

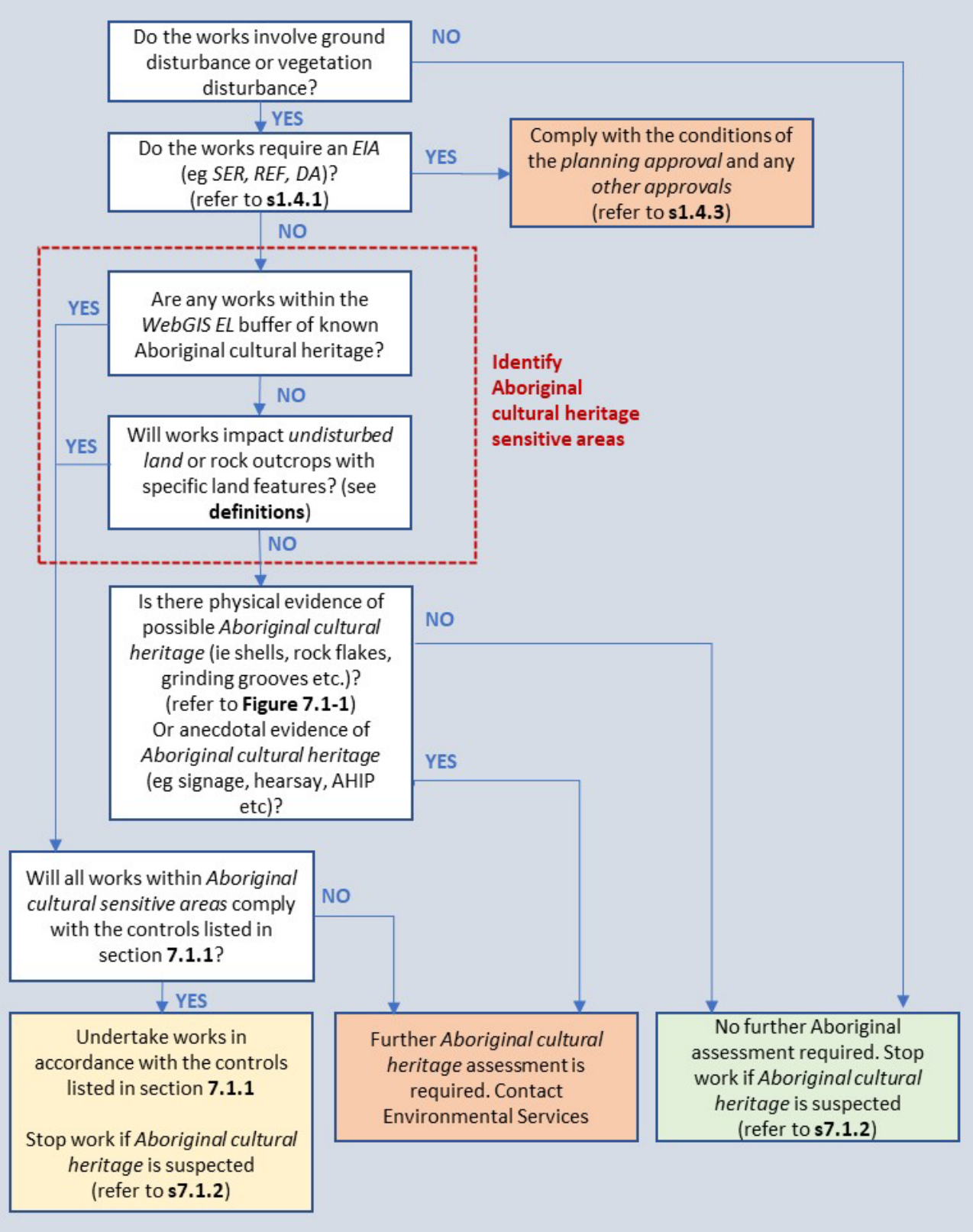
**7.1.2 Potentially discovering Aboriginal cultural heritage**

a) Stop work immediately and restrict access.

b) Notify the Supervisor and Environmental Services on 02 9394 6659. Environmental Services will contact the regulator if required.

c) If human remains (or suspected remains) are found during the *works*, all *works* in the vicinity must cease. The worksite must be secured and the NSW Police and *NPWS* must be notified immediately (refer to section 10).

*Figure 7.1-5: Process for assessing Aboriginal cultural heritage requirements*



## 7.2 ENVIRONMENTAL HERITAGE

**When this section applies**

For activities that could impact *environmental heritage*, such as:

- ☐ Disturbing the ground (for example, excavating, trenching, concrete cutting, jackhammering, drilling, underboring, access track *works*, demolition).
- ☐ Clearing or trimming *trees*.
- ☐ Making building alterations.
- ☐ Removing electrical equipment with historical value.

**Background**

*Environmental heritage* encompasses items and places valued for their historical, archaeological, cultural, or architectural significance. This includes themes like Aboriginal history, convict heritage, migration, regional development, industry, architecture, and creative arts. Physical items can be places, buildings, roads, *trees*, parks, electrical equipment, sewers, and archaeological sites. Heritage significance is classified as Local, State, National, or World.

Ausgrid owns heritage-listed substations and maintains a register that also includes potential movable heritage items.

**Key message**

Potential impacts to *environmental heritage* must be assessed and managed according to legal requirements, involving specialist assessments, notifications, permits, approvals, and restrictions.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) If *planning approval* is not required, and the *works* involve ground or vegetation disturbance or building alterations, check the WebGIS EL and use Table 7.2-1 to determine the requirements.

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving *environmental heritage*.

b) *Works* will impact *environmental heritage* and do not have a *planning approval* or environmental heritage approval (refer to section 1.4).

c) *Environmental heritage* is potentially discovered.

d) *Works* cannot meet the requirements in this *Handbook*.

A specialist assessment and/or an approval may be required.

**Definitions**

**Ausgrid S170** means assets under the ownership, management, or occupation of Ausgrid that are listed on our heritage and conservation register.

**Environmental heritage** means places, buildings, *works*, *relics*, moveable objects, and precincts, of heritage significance.

**Relic** means any deposit, artefact, object, or material that relates to the settlement of New South Wales. Relics could include sandstone guttering and walls, original roadways, and drains, or other items that may be uncovered when excavating that are not necessarily recorded.

*Table 7.2-1: Requirements for different classes of environmental heritage*

| Heritage class | Requirements (*multiple classes may apply*) |
|---|---|
| **World, Commonwealth, National** | Impacts to Commonwealth or World or National heritage could require a heritage assessment and/or approval, unless *works* involve only minor repairs and maintenance to electrical infrastructure or the sites management plan states that the area or item does not embody heritage values. |
| **State** | Impacts to State heritage require a heritage assessment and/or approval, unless in accordance with a S57 exemption or Ausgrid specific exemption. These exemptions generally relate to minor repairs and maintenance of Ausgrid buildings. Some exemptions may require professional advice to be sought.<br>**Note:** State heritage items typically encompass the land (curtilage) on which the building(s) are located. |
| **Local** | More than minor or inconsequential impacts to local heritage or heritage conservation areas listed by local council require a statement of heritage impact, written notification to council and due consideration of council's response. |
| **Relic** | Excavating land where it is likely to uncover, expose, move, damage, or destroy a *relic* requires a S140 excavation permit, unless in accordance with an S139 exception. This exemption relates to *works* or activities that have minimal impact on archaeological relics. |
| **Ausgrid's S170 register** | Demolition, removal or sale of heritage items on Ausgrid's S170 register (*employees*) requires 14 days written notice to NSW Heritage. |
| **Movable** | Impacts to Ausgrid's movable heritage (Tier 1) require approval by Environmental Services in accordance with EF 17440 Movable heritage form.<br>Impacts to Ausgrid's movable heritage (Tier 2) require a Photographic Archival Recording in accordance with EF 17440. |

### 7.2.1 Discovering potential environmental heritage

a) Stop work immediately and restrict access.

b) Notify the Supervisor and Environmental Services on 02 9394 6659. Environmental Services will contact Heritage NSW if required.

c) If human remains (or suspected remains) are found during the *works*, secure the worksite and immediately notify the NSW Police and Heritage NSW (refer to section 10).

*Figure 7.2-2: Examples of different classes of environmental heritage*

Discovery of a potential relic

Ausgrid movable heritage switchgear

Ausgrid S170 heritage substation. Also, State heritage listed


Callen Park State heritage curtilage

Towra Point reserve – National, State and Local heritage listed

# 8 RESOURCES

## 8.1 RESOURCE USE

**When this section applies**

For all activities, such as:

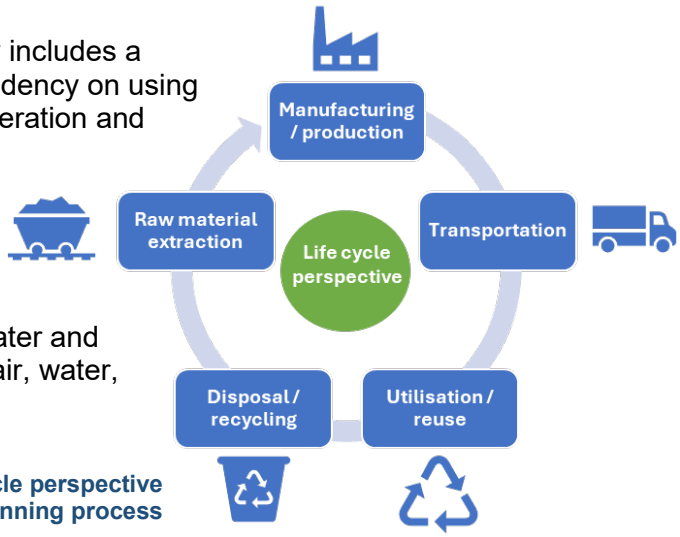
☐ Designing, planning, procuring and project delivery.

**Background**

Resource efficiency applies to all life cycle stages from acquisition of raw materials, design, production, transportation/delivery, use, end-of-life treatment to final disposal or re-use.

Ausgrid's sustainability policy includes a commitment to reduce dependency on using resources, reduce waste generation and to consider opportunities for reusing and recycling of wastes.

Benefits from resource efficiency include reducing waste, conserving energy, water and raw materials, and reducing air, water, land and noise pollution.




**Key message**

Resource efficiency makes good commercial sense by reducing costs, risk and enhancing our reputation.

**Before *works* begin**

a) Check the requirements of any applicable *planning approval* or *other approvals* (refer to section 1.4).

b) When procuring products or services, *employees* should check the requirements of our sustainable procurement process.

c) Consider all life cycle stages when procuring products and services.

d) Check if current recycling or reuse options are available. *Employees* can refer to the Waste Database.

**When to contact Environmental Services**
**02 9394 6659**

a) Suggestions for reducing resource use, minimising waste or using more sustainable products.
b) For assistance in identifying and assessing sustainability initiatives.

### 8.1.1 Resource efficiency

a) Consider avoiding, reducing, reusing and recycling for all aspects of the life cycle.

b) Consider the following options:

**Note:** Available methods will depend on cost, standards, contracts, internal procedures and might need specific engineering, safety or environmental advice.

**Avoid and reduce**

- Only source what's required for the job
- Establish a surplus material return agreement with the supplier where practicable
- Use recycled materials for construction
- Use timber from sustainable sources and avoid imported timber
- Use steel and concrete with recycled content
- Select concrete from manufacturers that use non-potable (non-drinkable) water during mixing
- Prioritise energy and water efficient appliances, fixtures, lighting, plant and equipment based on the MEPS (Minimum Energy Performance Standards) and WELS (Water Efficiency Labelling and Standards) Source material from suppliers that have a clear pathway for reuse or recycling, for example, a current product stewardship program
- Design to reduce ongoing maintenance requirements and end of life hazardous materials
- Design cut and fill to minimise spoil leaving the worksite
- Reduce the quantity of Portland cement used in concrete mixes by substituting with approved industrial waste products
- Select native plant species that promote biodiversity
- Design for permeable and porous surfaces to allow for stormwater infiltration
- Use locally made products

**Reuse**

- When using recovered materials (such as mulch, *ENM*, *VENM* and *aggregates*), comply with the applicable RRO and RRE (refer to section 5.4)
- Reuse, formwork, structural materials, fill, topsoil, plants, and turf
- Maximise the salvage of building elements and fittings on demolition projects for reuse
- Coordinate use of materials between jobs as excess materials might be suitable for other sites
- Return excess materials to the supplier
- Reuse rainwater for dust suppression, vehicle washing and irrigation

**Recycle**

- Keep materials segregated so they can be reused or recycled
- Recycle materials including scrap metal and cable, cable drums, paper and cardboard, street lamps and fittings, hard hats, batteries, bricks, concrete, plastics, timber, Bioguard bandages, expired first aid items and old uniforms.

## 8.2 WATER USE

**When this section applies**

For activities that require water, such as:

- ☐ Using potable (drinkable) water for construction and maintenance.
- ☐ Using washbays.
- ☐ Using recycled water or bore water.

**Background**

Water restrictions are sometimes imposed by water supply authorities. When a restriction is in place, water use must comply with the restrictions or be undertaken in accordance with an exemption.

**Key message**

Water saving rules apply when water restrictions are not in place. The use of recycled water and bore water are generally exempt from water saving rules.

The use of washbays must comply with a permit from the relevant sewerage authority and any water restrictions/exemptions that apply.

**Before *works* begin**

a) Check if water restrictions are in place (refer to section 8.2.1), and if so, whether a water use exemption applies to the *works* (refer to section 8.2.3).

b) Check the water saving rules relevant to the water supply authority.

c) When using washbays, check the signage for requirements. If required, check the conditions of the relevant trade waste permit.

**When to contact Environmental Services**
**02 9394 6659**

a) Incidents involving water use.

b) *Works* cannot meet the requirements in this *Handbook*.

An exemption or specific authorisation may be required.

**8.2.1 How to find water restrictions**

a) Check the relevant water supply authority's website for current information:

- Sydney Water
- Central Coast Council
- Hunter Water (includes areas of Cessnock, Lake Macquarie, Maitland, Newcastle, Port Stephens, and small parts of Singleton)
- Singleton Council
- Muswellbrook Shire Council
- Upper Hunter Shire Council.

**8.2.2 When no water restrictions are in place**

If there are no water restrictions, check whether there are any water saving rules, refer to websites in section 8.2.1. Generally, water saving rules for potable water include:

a) Use trigger nozzles for watering.

b) Water gardens only before 10am and after 4pm.

c) No hosing of hard surfaces such as paths, concrete or other paved surfaces except for health, safety, emergency or construction.

d) Use a bucket, watering can, or hose fitted with a trigger nozzle to wash vehicles.

**Note:** The use of recycled water and bore water are generally exempt from water saving rules.

### 8.2.3 When water restrictions are in place

For potable (drinkable) water use during water restrictions:

a) Comply with the water restriction unless working under an exemption. Restrictions will typically limit when, why and how water can be used.

If working under a water use exemption:

b) Undertake exempt activities in accordance with the conditions of the exemption.

c) Have the exemption and authorisation permits at the worksite.

d) Display the water exemption sticker at the worksite.

**Note:** The use of recycled water and bore water are generally exempt from water restrictions.


**Example of water exemption sticker**

### 8.2.4 Using washbays

Water restrictions (refer to section 8.2.1) could impact the use of washbays if they are connected to a drinking water supply.

Use of washbays must be in accordance with a permit from the relevant sewerage authority. Typical requirements include:

a) Only wash water is to enter the washbay drain (no oil, hydraulic fluid or degreaser).

b) Use only ‘quick break’ detergents to ensure any oil in the water can quickly separate, allowing the plate separator to work effectively.

c) Clean up oil and chemical spills and leaks immediately (refer to section 2.3.8).

d) Remove debris from the washbay slab and drain after each use and appropriately dispose (refer to section 5.3.4).

**Washbays using recycled water are generally exempt from water restrictions and water saving rules**

**Only use ‘quick break’ detergents in washbays**

# 9 ENVIRONMENTAL INCIDENTS

**Background**

Penalties apply if certain incidents are not immediately reported to the regulator.

Fines for individuals are up to $500,000 and a further $120,000 for each day the offence goes unreported.

**Definitions**

**Sensitive areas** are specific to the type of incident and include areas described in sections 3.3 Pesticides, 4.2 Noise, 6.1 Vegetation, 6.2 Wildlife, 7.1 Aboriginal heritage and 7.2 Environmental heritage.

Certain incidents need to be immediately reported to authorities

**Pollution incidents**

a) Any sediment runoff into a *sensitive area*, drain, *waterway* or private property.

b) An oil, fuel or other chemical spill of:

- Any volume in a *sensitive area*, drain or *waterway or*
- > 20L elsewhere (including in bunds, pits etc).

c) Any spill that contains hazardous materials such as *PCB, pesticides,* or mercury (refer to HS014-P0100).

d) Any leaks from underground infrastructure (such as tanks and cables).

**Other environmental incidents**

a) Encountering unexpected contamination.

b) Unauthorised damage to *Aboriginal cultural heritage* or *environmental heritage* items.

c) Unauthorised harm to vegetation or *ecologically sensitive areas*.

d) Illegal waste disposal.

e) *Works* without or not in accordance with the *EIA* or *other approvals*.

f) Complaints (including noise) that are likely to involve the environmental regulator.

g) Harm to wildlife or their habitat.

h) Supply or receipt of *recovered materials* not in accordance with an RRO or RRE.

i) *Pesticides* harming non-target species.

j) Medical implant interference due to exposure to *EMF* or *RF*.

k) Water use not in accordance with water restrictions.

l) $SF_6$ leaks > 5kg.

m) Any other incidents with environmental regulator involvement.

In the case of an incident, *employees* must immediately contact Environmental Services on 02 9394 6659 or 0412 070 574 (24 hours). Environmental Services will assist and report to the relevant authorities as required.

All *workers* must manage and report spills in accordance with the spill response procedure (refer to section 9.1.2).

### 9.1.1 Authority notifications

Several laws require certain types of incidents to be notified to the relevant authority as shown in Table 8.2-1. There are severe penalties for failing to notify.

*Employees* should immediately attempt to notify Environmental Services on 02 9394 6659 or 0412 070 574 (24 hours).

If Environmental Services can't be reached, then the relevant authority should be notified in accordance with required timeframes. Ensure that any information provided to the authority is factual and without speculation. It is alright to say, "I don't know".

***Table 8.2-1: Authority notifications***

| Type of incident | When notification is required |
|---|---|
| **Pollution** | Pollution incidents that have or will cause material harm to the environment must be notified immediately to the *EPA*, Ministry of Health, SafeWork NSW, local council and Fire and Rescue NSW. |
| **Scheduled PCB spill** | *Scheduled PCB* spills must be notified immediately to the *EPA*.<br>Other *PCB* spills at Ausgrid's Homebush depot must be notified as soon as practicable to the *EPA*. |
| **Land contamination** | Land or groundwater contamination that exceeds levels as set out in *EPA* guidelines (testing could be required) must be reported to the *EPA*. |
| **Breach of the National Parks protocol for *works* in national park estate** | Breaches of the National Parks protocol and consent must be reported to *NPWS*. |
| **Aboriginal heritage finds** | Suspected *Aboriginal cultural heritage* finds must be reported to *NPWS*. |
| **Environmental heritage finds** | Suspected *environmental heritage* finds must be reported to NSW Heritage. |
| **Threatened species** | Harm to Commonwealth threatened species must be reported to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW). |

### 9.1.2 Spill response procedure


a) Assess the worksite and use appropriate *PPE*. Additional *WHS* requirements may apply. Refer to the *SWMS*, *SDS* and advice from your safety advisor. *Employees* can use ChemAlert.

b) Prevent unauthorised access.

c) Eliminate all ignition sources (e.g. engines and live electrical equipment).

d) Assume oil from pre-1997 equipment is contaminated with *PCB* unless known otherwise.

e) Stop the flow from the source (e.g. closing valves, applying sealant to the leak, power down the hydraulic pressure).

f) Stop the spill from entering drains, *waterways*, or ducts as follows:

- place barriers around the source (e.g. particulate, socks, pads, sand bags)
- divert the spill into another container or an area where it can be contained
- place barriers (e.g. absorbent socks, pads or sand bags) around drains, *waterways*, ducts etc.
- prevent the spill spreading on water by placing floating booms or absorbent socks on the water.

g) Act in accordance with relevant emergency plans and procedures.

h) *Employees* can contact Environmental Services on 02 9394 6659 or 0412 070 574 (24 hours).

i) Get help if the spill cannot be contained, or if oil has escaped into drains, *waterways* or roadways by calling NSW Fire and Rescue on **000 or 112** (from mobiles).

j) For spills from pre-1997 oil filled equipment, check for *PCB*. *Employees* can check the PCB register or arrange tests with Ausgrid's Chemical Testing on 02 9410 5117.

k) For additional clean up material, *employees* can access the nearest Ausgrid spill response trailer or depot supply.

l) For pollution incidents, *employees* must immediately notify Environmental Services on 02 9394 6659 or 0412 070 574 (24 hours).

If Environmental Services cannot be reached, notify the EPA on 131 555 for spills caused harm or have the potential to cause harm to the environment.

m) Use a broom to work the powder absorbent into the spill for final clean up (refer to section 2.3.8).

n) Remove oil from behind floating booms or barriers.

o) Minimise the amount of waste created by preventing the spread of oil.

p) Ausgrid *employees* should contact Aqueous Waste Services for removal of liquid waste on 02 9269 7517 or after hours on 02 8569 6712.

q) Dispose of contaminated spoil, absorbent products and other materials in accordance with waste requirements (refer to section 5.3).

r) Maintain and replace on-site spill response controls until the environmental risk is removed.

s) Restock spill kits. *Employees* can refer to EFS 022 Oil spill kits for stockcodes.

# 10 EMERGENCY CONTACT NUMBERS

**Environmental Services** 0412 070 574 **(24 hours)**

| Issue | Contact | Contact details |
|---|---|---|
| **Incidents and emergencies** | | |
| **Emergency Services** | Police, Fire, Ambulance or *Hazmat* Response Unit | 000 \| 112 (from a mobile) |
| | *NSWRFS* (Bushfire Information Line) | 1800 679 737 |
| | State Emergency Services (SES) – Floods and storms | 13 25 00 |
| **Reportable pollution incidents**<br>*Employees* must contact Environmental Services in the first instance | EPA | 131 555 (24 hours) |
| | SafeWork NSW | 13 10 50 |
| | NSW Fire and Rescue | 1300 729 579 (not for emergencies) |
| | Public Health Unit | 1300 066 055 |
| | Local council | Local government directory |
| **Discovery of Aboriginal cultural heritage or environmental heritage items**<br>*Employees* must contact Environmental Services in the first instance | Heritage NSW | 02 9873 8500 |
| **Illegally dumped waste**<br>*Not an emergency or immediate threat to human health or the environment* | EPA | RID Online |
| **Ausgrid** | | |
| **Emergencies** | Contact Centre | 13 13 88 (24 hours) |
| **Enquiries** | Contact Centre | 13 13 65 |
| **Environmental issues** | Environmental Services | 0412 070 574 (24 hours)<br>02 9394 6659<br>environmentalservices@ausgrid.com.au |
| **Safety** | On call Health and Safety team | 02 9585 5850 (24 hours)<br>health&safety@ausgrid.com.au |
| **Building and grounds maintenance** | PropertyOneCall | 1300 306 541 (24 hrs)<br>propertyonecall@ausgrid.com.au |
| **Hazardous materials**<br>Asbestos Register, newly identified asbestos, NS211 or lead enquiries, sampling, *asbestos in soil*, illegal dumping on Ausgrid property | Hazardous Materials Hotline | 02 9394 6961<br>Hazmat@ausgrid.com.au |
| **Media enquiries** | Media | 02 9966 7985 (24 hours)<br>news@ausgrid.com.au |
| **Mercury waste**<br>For undamaged waste mercury vials or chambers | Supply Chain Operations | Reclamation (for request forms)<br>reclamation@ausgrid.com.au |
| **$SF_6$ cylinder purchasing/disposal** | Homebush Workshop | 02 9394 6801 |

| Issue | Contact | Contact details |
|---|---|---|
| **Pumping water** | Aqueous Waste Services | 02 8569 6712 (24 hours) |
| **PCB disposal** | Supply Chain Operations | Reclamation (for request forms)<br>reclamation@ausgrid.com.au |
| **Security** | Security Operations | 02 9269 2266<br>security.operations@ausgrid.com.au |
| **Waste disposal**<br>For general waste disposal | PropertyOneCall | 1300 306 541 (24 hrs)<br>propertyonecall@ausgrid.com.au |
| **Other external contacts** | | |
| **Agriculture, *biosecurity*, *pests*, *weeds* and *plant diseases*** | Local Land Services<br>Department of Primary Industries | 1300 795 299<br>02 6391 3100<br>Full DPIRD Contacts |
| **Bee (honeybee) swarms and hives** | Local amateur beekeepers (low risk situations)<br>Professional beekeepers (high risk working at heights) | www.beekeepers.asn.au/swarms<br><br>Sydney Bee Rescue (network wide)<br>0410 440 042<br>sydneybeerescue@gmail.com |
| **Hollow bearing trees** in national parks | *NPWS* Area Office | National Parks - Ausgrid area contacts |
| **Injured native wildlife**<br>All NSW | *WIRES* | 1300 094 737 (24 hours) |
| Greater Sydney Metropolitan Area | Sydney Metropolitan Wildlife Service | 02 9413 4300 (24 hours) |
| Central Coast | Wildlife Animal Rescue Care | 02 4325 0666 (24 hours) |
| Newcastle, Lake Macquarie, Cessnock and Maitland | Hunter Wildlife Rescue | 0418 628 483 (0418 NATIVE) (24 hours) |
| **Local council issues** | Relevant local council | Local government directory |
| **Local fire authority** | *NSWRFS* Information line<br>*FRNSW* (Fire and Rescue) | 1800 679 737 (1800 *NSWRFS*)<br>1800 422 281 \| 02 9265 2999<br>(000/112 for emergencies) |
| **PCB testing** | Ausgrid's Chemical Testing | 02 9410 5117<br>tim.yang@ausgrid.com.au |
| **Port Authority of NSW** | Sydney Harbour, Port Botany & Newcastle Port | 02 9296 4962 (24 hours)<br>enquiries@portauthoritynsw.com.au |
| **Powerful owls** | Birdlife Australia | 03 9347 0757<br>powerfulowl@birdlife.org.au |
| **Water & sewer mains, water restrictions** | Upper Hunter Shire Council<br>Muswellbrook Shire Council<br>Singleton Council<br>Hunter Water<br>Central Coast Council<br>Sydney Water | 02 6540 1199 (24 hours)<br>02 6549 3700 (24 hours)<br>02 6578 7290 (24 hours)<br>1300 657 000 (24 hours)<br>1300 463 954 (24 hours)<br>13 20 90 (24 hours) |

# 11 GLOSSARY

| Term | Definition |
|---|---|
| **Aboriginal cultural heritage** | Includes objects and places. Objects provide physical evidence of the use of an area by Aboriginal people (for example, stone, wood and shell artefacts). Places are areas that have special significance to Aboriginal people (for example, spiritual, historical, social). |
| **Aboriginal cultural heritage sensitive areas** | Areas listed in section 7.1. |
| **ACM** | Asbestos containing material, which is any material or part of a thing that, as part of its design, contains asbestos. |
| **ACMA** | Australia Communication and Media Authority |
| **ADG Code** | Australian Code for the Transport of Dangerous Goods by Road and Rail |
| **Agricultural land** | Land used for broad acre cropping, pasture, horticulture, growing fruit or keeping livestock. |
| **AGVET Code** | Australian Agricultural and Veterinary Chemicals Code |
| **AHIP** | Aboriginal heritage impact permit |
| **APVMA** | Australian Pesticides and Veterinary Medicines Authority |
| **ARPANSA** | Australian Radiation Protection and Nuclear Safety Agency |
| **Articles** | Includes equipment (such as transformers and switchgear). |
| **Asbestos in soil** | Soil contaminated with asbestos or inappropriately buried asbestos. This does not include asbestos conduit, joint boxes and troughing installed in accordance with Ausgrid's Network Standards. |
| **Asbestos Register** | An Ausgrid register that identifies work locations where asbestos could be present and details what could be found at a location. |
| **Asbestos removal work** | *Works* involving the removal of asbestos or *ACM*, including removal by an independent *LAR*. |
| **ASP** | Accredited service provider, authorised with Ausgrid in the appropriate level and class to undertake design or contestable work on Ausgrid's network. |
| **ASS** | Acid sulfate soils |
| **ASSMP** | An acid sulfate soil management plan. |
| **Ausgrid S170** | Assets under the ownership, management, or occupation of Ausgrid that are listed on our heritage and conservation register. |
| **Biosecurity** | Measures to measures to prevent *weeds*, *pests* and *plant diseases* threatening the economy and environment. |
| **Blue Book** | Managing Urban Stormwater – Soils and Construction (Volume 1) |
| **Bushfire Danger Period** | Typically from 1 October to 31 March but could vary (for example, Greater Hunter Region commencing 1 September). |
| **Bushfire prone land** | Land identified by local council which can support a bushfire or is vulnerable to bushfire attack. *NSWRFS* and Local Councils are custodians and responsible for the *Bushfire prone land* maps and datasets. |
| **CCA** | Copper chrome arsenic (a common wood preservative). |
| **CEMP** | Construction environmental management plan. These typically apply to projects requiring an *REF, DA, SIS* or *EIS*. It details conditions of approval and procedures for compliance (such as auditing, training, incident response). |

| Term | Definition |
|---|---|
| **Clause 6 exemption** | A specific exemption relating to 'Services and utilities—construction, essential repairs or maintenance'. It must be gazetted within the *TOBAN* order on the day and contains certain conditions such as having adequate firefighting equipment and notifying *NSWRFS* or *FRNSW*. |
| **cm** | Centimetre |
| **CRA** | Conservation risk assessment which is required prior to undertaking maintenance *works* in national park estate. |
| **DA** | Development application, prepared in accordance with Part 4 of the EP&A Act and submitted to local council for approval |
| **Determination** | The decision to proceed based on the *EIA*. |
| **DG** | Dangerous Goods - Solids, liquids, or gases that can harm people, other living organisms, property or the environment, and include *scheduled PCB* in accordance with the ADG Code. |
| **Disturbed land** | Land that has been the subject of human activity that has clear and observable changes to the land's surface. Examples of activities that could have *disturbed land* include soil ploughing, construction of roads, trails and tracks or buildings, installation of utilities, clearing of vegetation and substantial grazing. Refer to Figure 7.1-3 and Figure 7.1-4 for examples. |
| **Domestic use criteria** | For *pesticide* use to be considered domestic, it must meet the criteria in section 3.3. |
| **DPIRD** | NSW Department of Primary Industries and Regional Development |
| **Ecologically sensitive areas** | Refer to section 6.1. |
| **EHC Act** | NSW *Environmentally Hazardous Chemicals Act* |
| **EIA** | Environmental impact assessment (*SER*, *REF*, *SIS* or *EIS*) required under Part 5 and 5.1 of the EP&A Act. |
| **EIS** | Environmental impact statement that is prepared for proposals that are likely to significantly affect the environment. *EISs* are submitted to the NSW Minister for Planning for approval. |
| **Emergency works** | Restoration activities required to protect public safety or the environment due to a sudden natural event or an accident. |
| **EMF** | Electric and magnetic fields alternating at 50Hz. Electric fields are measured in volts/metre (V/m). Magnetic Fields are typically expressed in µT or mG, 1mG = 0.1 µT. |
| **Employee** | Ausgrid Group (such as Ausgrid, PLUS ES or Aurora Property) employee. |
| **EMS** | Environmental management system |
| **ENM** | Excavated natural material which is naturally occurring rock and soil that has been excavated from the ground, contains at least 98% (by weight) natural materials and meets the chemical and other criteria detailed in section 5.4. |
| **Environmental heritage** | Means those places, buildings, *works*, relics, moveable objects, and precincts, of heritage significance. |
| **Environmentally sensitive areas** | Defined in the mulch RRO and includes *ecologically sensitive areas* described in section 6.1. |
| **EP&A Act** | NSW *Environmental Planning & Assessment Act* |
| **EPA** | NSW Environment Protection Authority |
| **EMP** | Environmental management plan |

| Term | Definition |
|---|---|
| **EPC** | Environmental planning calculator |
| **ESCP** | A site specific erosion and sediment control plan prepared in accordance with the *Blue Book* (Managing Urban Stormwater – Soils and Construction (Volume 1). |
| **EWMS** | Environmental work method statement |
| **Exempt development** | Development that does not require an *EIA* or *planning approval*, providing the *works* meet certain conditions. |
| **External partners** | Partners, Subcontractors, 3rd Party Providers and ASPs (more information is available on the Ausgrid Partners Information site). |
| **Feasible and reasonable** | Involves assessing the overall noise benefit of the identified work practices and controls that can be implemented for an activity against the overall adverse social, economic and environmental effects, including the cost of mitigation. |
| **Friable asbestos** | Any material that contains asbestos and is in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry. |
| **FRNSW** | NSW Fire and Rescue Service |
| **GHS** | Globally Harmonised System of Classification and Labelling of Chemicals. |
| **HAC** | Hazard assessment conversation |
| **Handbook** | NS174C Environmental Handbook for Construction and Maintenance (this Handbook). |
| **HAZCHEM** | Hazardous chemicals |
| **Hazardous materials** | Chemicals or dangerous goods as listed in HS014-P0100 - Workplace hazardous materials procedure. |
| **High field work environments** | Areas where *EMF* could exceed the public reference levels (typically high current carrying equipment and conductors). Examples of *high field work environments* are shown in Figure 4.3-1. |
| **High impact activities** | Includes using beeper style reversing alarms, saw-cutting, vibratory rolling, grinding, rock breaking, jack hammering, asphalt milling or profiling, underboring/directional drilling and impact piling. |
| **Hot works** | Any process involving grinding, welding, brazing, oxy cutting, heat treatment, heat shrinking or other process that generates heat or sparks that can increase the risk of fire or explosion near flammable/combustible materials. For excluded activities, *employees* can refer to HS008-P0600 Hot Work. |
| **HSMS** | Health & Safety Management System |
| **Hz** | Hertz |
| **IBC** | Intermediate bulk container |
| **ICNIRP** | International Commission on Non-Ionising Radiation Protection |
| **Indicators of ASS** | Include indicators listed in section 5.2. |
| **Indicators of contaminated land** | Include indicators listed in section 5.1. |
| **IWTS** | *EPA's* Integrated Waste Tracking Solution |
| **kg** | Kilogram |
| **LAA** | An external independent Licensed Asbestos Assessor. |
| **LAR** | An external independent Licensed Asbestos Removalist. |
| **LCD** | Lead containing dust |

| Term | Definition |
|---|---|
| **Live works** | *Works* on exposed mains and apparatus that are energised, including manual operation of overhead air-break switches, drop out fuses and links.. |
| **m** | Metre |
| **MEPS** | Minimum Energy Performance Standards |
| **mG** | milligauss (1mG = 0.1μT) |
| **mm** | millimetre |
| **μT** | Microtesla, which is a unit of measurement of the strength of a magnetic field. |
| **NMP** | A project specific noise management plan. |
| **Noise impacted** | Represents the level above which there could be some community reaction to noise. For *standard operating hours* this is Rated Background Level + 10 dB(A) with a strong community reaction to noise > 75 dB(A). For *out of hours work* this is Rating Background Level + 5 dB(A). |
| **Non-destructive digging** | Includes hand digging or air or hydro vacuum excavation, retaining *tree* roots where possible. |
| **Non-friable asbestos** | Material containing asbestos (other than *friable asbestos*), including material containing asbestos fibres reinforced with a bonding compound. Its condition can degrade and become *friable asbestos* over time or following an incident such as a fire, extensive weathering, flood or poor historic work practices. |
| **Non-scheduled PCB** | Material that has a *PCB* concentration > 2ppm and < 50ppm. |
| **NPWS** | NSW National Parks and Wildlife Service |
| **NSW** | New South Wales |
| **NSWRFS** | NSW Rural Fire Service |
| **NTU** | Nephelometric turbidity unit is a unit of measurement of a liquid's *turbidity*. |
| **Other approvals** | Approvals, licences and permits that exist outside of the EP&A Act and may be required despite the *planning approval* or despite being *exempt development.* |
| **Out in the open** | Excludes areas which are devoid of bushland and/or natural fuel loads, such as within pits and trenches, or within the confines of built structures such as inside buildings, workshops or basements. |
| **Out of hours work** | Activities undertaken outside of *standard operating hours*. |
| **PCB** | Polychlorinated biphenyls |
| **PCB free** | Material that has a *PCB* concentration ≤ 2ppm. |
| **PCB licence** | The licence issued under the POEO Act. |
| **PCB material and waste** | Includes oil, equipment, rags, oil absorbent products and soils that are contaminated with > 2ppm *PCB*. |
| **Pest** | A plant or animal that can have an adverse effect on the environment, economy or the community because it can out-compete other organisms, transmit diseases, prey on or be toxic to other organisms, impact biodiversity, reduce agricultural productivity, damage infrastructure, or reduce the amenity or aesthetic value of an area. |
| **Pesticides** | Include herbicides, termiticides, insecticides, biocides, fungicides and baits. |
| **PFAS** | Per- and poly-fluoroalkyl substances |
| **pH** | Potential of hydrogen, is a measure of the acidity or alkalinity of a solution. |
| **Planning approval** | The approval of the *EIA* to undertake certain *works* under the EP&A Act. |
| **Plant disease** | An infection that can result in an abnormal or unhealthy condition in the plant. |

| Term | Definition |
|---|---|
| **POEO Act** | NSW *Protection of the Environment Operations Act* |
| **PPE** | Personal protective equipment |
| **ppm** | Parts per million (equivalent to mg/kg). |
| **Receptacles** | Include drums, containers and tanks but not equipment. |
| **Recovered aggregates** | Include crushed concrete, brick, rock, asphalt and ceramics other than refractory bricks and materials that contain coal tar. |
| **REF** | Review of environmental factors, prepared in accordance with Part 5 of the EP&A Act and determined by Ausgrid. |
| **Relic** | Any deposit, artefact, object or material evidence that relates to the settlement of New South Wales. Relics could include sandstone guttering and walls, original roadways, and drains, or other items that may be uncovered when excavating that are not necessarily recorded. |
| **Restricted pesticides** | Determined by the *APVMA* to be inherently hazardous and are listed in Schedule 4 of the Agricultural and Veterinary Chemicals Code Regulations. |
| **RF** | **RF** is radiofrequency electromagnetic energy that continues to travel away from the source even after the source is turned off. *RF* lies in the frequency range between 100 kilohertz (kHz) to 300 gigahertz (GHz). |
| **RFNSA** | Radio Frequency National Site Archive |
| **RID** | *EPA's* Report Illegal Dumping online reporting tool. |
| **RMP** | A site or project specific risk management protocol. |
| **RRE** | Resources Recovery Exemption which applies to end users of recovered material. |
| **RRO** | Resource Recovery Order which applies to suppliers and processors of recovered material. |
| **Scheduled PCB** | Material that has a *PCB* concentration ≥ 50ppm. |
| **SCW** | Scheduled chemical waste, which is waste that contains > 2mg/kg of certain scheduled chemicals (examples include aldrin and dieldrin). |
| **SDS** | Safety data sheet. Available to *employees* from ChemAlert. |
| **Sensitive areas** | Areas specific to the type of incident and include areas described in sections 3.3 Pesticides, 4.2 Noise, 6.1 Vegetation, 6.2 Wildlife, 7.1 Aboriginal heritage and 7.2 Environmental heritage. |
| **Sensitive places** | Include places defined as sensitive to pesticide use as listed in section 3.3. |
| **Sensitive receivers** | Include residences, education facilities, hospitals, places of worship, recreation areas or other receivers who could be highly impacted by the *works*. Commercial premises (such as accommodation or restaurants) may, at certain times, be considered *sensitive receivers*. |
| **SER** | Summary environmental report where impacts are "minor and neither extensive nor complex", prepared in accordance with Part 5 of the EP&A Act and determined by Ausgrid. |
| **$SF_6$** | Sulfur hexafluoride |
| **SIS** | A species impact statement that is prepared for proposals that are likely to significantly affect threatened species or endangered ecological communities. *SISs* are submitted to the NSW Minister for Planning for approval. |
| **SRZ** | Structural root zone, which is the area where the roots provide critical structural stability for the *tree*. |

| Term | Definition |
|---|---|
| **SWMS** | Safe work method statement |
| **Standard operating hours** | Unless local council policy states otherwise, are:<br>Monday to Friday – 7am to 6pm,<br>Saturday – 8am to 1pm, and<br>Sundays or public holidays – no work |
| **TOBAN** | A Total Fire Ban order declared by the Minister or Commissioner of *NSWRFS* when bushfires are more likely to spread and cause damage. |
| **TPZ** | *Tree* protection zone, which is the area set aside for the protection of a *tree's* roots and crown to maintain the *tree's* long-term viability. |
| **Tree** | Vegetation, usually taller than 3m when mature, with a distinct trunk of circumference >0.3m at a height of 1m above the ground. |
| **TSMP** | Ausgrid's Tree Safety Management Plan. |
| **Turbidity** | A measure of a liquid's cloudiness caused by suspended particles. |
| **UST** | Underground storage tank |
| **VENM** | Virgin excavated natural material, which is natural material that comes from undisturbed areas that are not contaminated and not *ASS* (refer to sections 5.1 and 5.2). More information is available on the EPA website. |
| **Vulnerable land** | Mapped areas of NSW that are especially vulnerable to soil erosion, sedimentation and landslip. It includes steep, highly erodible or protected riparian land (the interface between land and a natural *waterway*). |
| **Waterways** | Include a creek, river, canal, stormwater drain, ocean, lake, wetland or lagoon. |
| **WebGIS EL** | Ausgrid's environmental geographic information system which contains spatial data for *environmentally sensitive areas/places*. |
| **Weed** | A plant that is a *pest* which requires management to control or prevent its spread. |
| **WELS** | Water Efficiency Labelling and Standards |
| **Wet-vac** | A vacuum cleaner that can be used to clean up liquids. |
| **WHO** | World Health Organization |
| **WHS** | Work health and safety |
| **Wildlife sensitive areas** | Include known breeding sites, flying fox camps, tree hollows or nests, bushland, bushrock, waterways, wetlands, or mangrove areas. |
| **WIRES** | NSW Wildlife Information, Rescue & Education Service Inc. |
| **Works** | means all activities related to the work, job or project. When scoping the *works*, consider the full area of the activities (environmental footprint), the type of plant and equipment to be used, as well as the smaller activities that make up the *works* such as earth *works* including trenching, fencing, tree trimming, access tracks, stay wires/poles, pest treatment, lighting, site compounds, construction pads. |
| **Workers** | Ausgrid Group *employees* and Ausgrid contractors**.** |
| **Zone of influence** | The area next to an excavation where applying a load to the ground can affect the stability of the excavation. It extends from the base of the excavation to the surface at an angle that is dependent on the soil type. |

# 12 KEY CHANGES

| Section | Key changes |
|---|---|
| General | Broadened to Ausgrid Group. Better references to WebGIS EL throughout. Added 'When does this section apply' and 'Key message' to each section. Updated links, contacts, flowcharts & minor clarifications/improvements throughout. |
| Introduction | New Acknowledge of Country and Preface. New table of contents format. |
| 1.3 | Added reference to the Ausgrid Code of Conduct training which now covers more environmental details (the former separate Environmental Induction is now redundant). |
| 1.4 (former) | Removed section and added community engagement requirements throughout *handbook*. |
| 1.4 | Simplified section (formerly section 1.5) and added references to the new SER form. Clearer responsibilities for different planning roles. Removed reference to the *Planning Code* as this is being repealed/replaced. |
| 2.1 | Updated requirements for underboring. Refreshed Table 2.1-1 on erosion and sediment control devices. |
| 2.3 | Clarified minor storage requirements for oils, fuels and other chemicals. New requirement for permanent bunding if required to meet *WHS* requirements. |
| 3.1 | Updated contacts and references to the new Asbestos register. Added licensed assessor requirements for >100kg. Updated transport and disposal requirements. |
| 3.2 | *Scheduled PCBs* > 1 tonne can no longer be taken to any Ausgrid premises. They must be transported and stored at a licensed facility (Ausgrid's previous licence allowed any depot). |
| 3.3 | Added restriction for *pesticide* use in *ecologically sensitive areas*. Defined '*pest'* and '*weed'*. |
| 4.1 | Updated *SF6* section including a requirement to repair leaks as soon as practicable. Included a new section on abrasive tower blasting. |
| 5.1 | New requirement to avoid mulching vegetation waste in contaminated areas following advice received when working in PFAS contaminated areas. |
| 5.3 | Updated Table 5.3-1 Waste classification including removing the waste tracking exemption for batteries, PCB free oil and sharps, and replacing WasteLocate and online tracking with the new Integrated Waste Tracking Solution. Updated section 5.3.6 including reference to new T0148 Managing spoil associated with Ausgrid's fluid filled cable trenches. |
| 5.4 | Provided references for *weeds*, *pests* and *plant diseases*. |
| 6.1 | Updated definition of *ecologically sensitive areas*. Included a new table 6.1-1 for requirements in specific areas. Clarified scope of *TSMP*. Updated controls in *ecologically sensitive areas* to include retaining ground cover and no disturbance of waterways. |
| 6.2 | Updated controls for *works* near powerful owl breeding territories. |
| 6.3 | Added definition of '*plant disease'*. |
| 6.4 | Reviewed and updated requirements to align with TG107 Total Fire Bans. |
| 7.2 | Changed title to Environmental Heritage. Updated exemptions. |
| 9 | Clarified that any spills (unless <20L and contained in a bund or pit) require notification to Environmental Services. |

# Disclaimer

This document has been developed using information available from field and other sources and is suitable for most situations encountered in Ausgrid Group. Particular conditions, projects or localities may require special or different practices. It is the responsibility of the local manager, supervisor, assured quality contractor and the individuals involved to adequately manage work practices in accordance with environmental legislative requirements.

External partners must rely on their own systems to identify all environmental risks and sources of existing or potential environmental harm and introduce measures and procedures to address these risks or sources of harm. This *Handbook* may form part of those systems.

Ausgrid disclaims any and all liability to any person or persons for any procedure, process or any other thing done or not done, as a result of this *Handbook*.

The *Handbook* does not attempt to cover work health and safety (WHS) requirements. Refer to your safety advisor for WHS requirements. Ausgrid Group employees can refer to the Health and Safety Management System (HSMS) on The Wire.