# Appendix C Environmental Management Plan

[INSERT DATE]

# Environmental Management Plan

## Project Details

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|---|---|
| **Project Number and Name** | |
| **Powerlink Functional Location** | TBA |
| **Powerlink Environmental Representative** | TBA |

## Document Control

| Revision | Date | Author | Approver | Summary of Changes |
|---|---|---|---|---|
| 1.0 | 01/12/2021 | A Ponting | | Initial Development of EMP |
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### Contents

# Introduction

## Purpose

This document provides the required standard operational controls to be implemented to meet Powerlink's environmental objectives during the construction, maintenance and operation of the "INSERT PROJECT/INFRASTRUCTURE" (the Project).

## Scope

The Environmental Management Plan (EMP) applies to activities carried out by Powerlink, its Contractor/s or representatives during the construction, maintenance and operation of the Project*. Powerlink is not responsible for activities undertaken by other parties (such as landholders or other utility companies).

Powerlink and its nominated Contractors or representatives will be responsible for implementing the requirements of this EMP.

**The content of this EMP reflects Powerlink's approved procedures for the operation and maintenance of its assets and should not be altered to reflect the specific requirements of Project construction or associated approval conditions. Any requirements specific to a Project that are in addition to those listed in the EMP must be captured in the Environmental Annexure and/or included on the Environmental Work Plan (EWP).*

## Roles and Responsibilities

| Who | What |
|---|---|
| Approves the EMP and any revisions. | Approves the EMP and any revisions.<br>Responsible for ensuring Powerlink Project personnel receive environmental inductions and awareness training and inductions outlined in the EMP.<br>Ensures the EMP is received by the nominated Contractor/s and ensures that implementation of the controls in the EMP are adhered to through a verification and compliance plan.<br>Notifies Supervisor/ Manager of any environmental events relating to the Project, and that they are investigated at the appropriate level and corrective/ preventative actions implemented to prevent reoccurrence. |
| Powerlink Environmental / HSE Representative | Environmental specialist responsible for interpreting and promoting awareness and understanding the requirements of this EMP.<br>Provide the Project team with Project specific environmental advice and the required application of mitigation measures in this EMP.<br>Facilitate the development of the Project specific HSE verification and compliance plan to monitor the Contractor/s.<br>Assist in verification of Contractor compliance against the EMP. |

| Who | What |
|---|---|
| | Ensure any permits/approvals/licenses are obtained in accordance with the EMP.<br>Undertake investigations of environmental events when required.<br>Ensure that all environmental items are closed out prior to completion of the Project. |
| Powerlink Employees / Contractors | Undertake works in accordance with the documented EMP and Environmental Annexure requirements.<br>Attend and actively participate in inductions and Project training requirements.<br>Report environmental events to Supervisor as soon as possible.<br>Participate in investigations if requested, including the implementation of corrective/ preventative actions as required. |

## Monitoring and Compliance

Monitoring and compliance to this EMP will be undertaken by the Powerlink Project Manager, HSE Representative or other nominated Powerlink personnel associated with the Project. Sections of this EMP may also be included for review within the Powerlink Health, Safety and Environmental *Audit Program.*

## Legislative Compliance

Powerlink activities shall be undertaken in accordance with all relevant Federal, State, and local government legislation. An assessment of all environmental and planning approval requirements and other legislative requirements relevant to the activities is to be carried by Powerlink staff, Contractors and Maintenance Service Providers (MSPs) prior to the commencing the activity. There may also be existing approvals or exemptions which are subject to conditions. Some of the key potential requirements are identified in this EMP.

## Approval Commitments

Any commitments identified within a Ministerial Infrastructure Designation Assessment Report, referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), or any other approval process and resultant conditions, shall be followed and undertaken. Commitments shall be documented within Powerlink's Centralised Document Management System for Asset Specific (Functional Location) Environmental Information for referencing purposes, along with any relevant geospatial data recording.

## Cultural Heritage

Management of Powerlink's cultural heritage related risk is governed by the Cultural Heritage Management Framework. This includes Aboriginal and other cultural heritage.

Assessment of risk posed by activities conducted by Powerlink staff, Contractors and MSPs is to be made by Powerlink's cultural heritage practitioners prior to the activity. Cultural heritage constraints are documented within PQ Connect, Environmental Work Plans (EWP's) and Cultural Heritage Implementation Documents (CHIDs).

## Environmental Annexure

An 'Environmental Annexure' will be developed and issued as part of Contractor engagement. The Environmental Annexure will detail Project specific environmental management requirements relevant to the Project. The contractor would then be expected to develop a Construction Environmental Management Plan (CEMP) in compliance with both the EMP and Environmental Annexure.

## Environmental Work Plans (EWPs)

Environmental Work Plans (EWPs) provide a geospatial representation of key land and water based data sets which are of relevance to Powerlink's assets. EWPs shall be used by Powerlink staff, Contractors, relevant sub-contractors and relevant MSPs for the identification of key environmental features and/or constraints which have been highlighted to enable works to be undertaken on or in association with a Powerlink asset.

## Land Access Protocol (LAP)

This EMP shall be used in conjunction with Powerlink's Land Access Protocol (LAP). The LAP contains the guiding principles and commitments for land access which underpin Powerlink's relationship with landholders and our access to and use of land. A copy of the LAP is available from Powerlink's website.

## Stakeholder Management – PQ Connect

PQ Connect provides a corporate wide stakeholder management system or a single point of truth for all information captured through stakeholder engagement and complaints management processes. It provides a mechanism to track interactions with stakeholders and highlights constraints or commitments made by Powerlink.

## Training and Competency – Environmental

Powerlink staff or Contractors undertaking activities that have an environmental impact will have an appropriate competency matrix which includes specific environment related competencies.

# Native Fauna

***Objective*** *- No unauthorised impacts on protected animals. Minimise impacts on wildlife and breeding places from construction, operation, decommissioning and maintenance activities.*

## General Requirements

**Planning**

**NF1** Prior to any disturbance activity, impacts to protected native fauna must be assessed under the EPBC Act and *Nature Conservation Act 1992* (NC Act). Any additional assessments required must be undertaken by a suitably qualified person and any subsequently identified required approvals and/or offsets must be obtained prior to the works commencing.

**NF2** The EWP will nominate any Project specific areas that have specific management requirements (e.g. no-go zones, critical habitat, habitat features to be retained).

**NF3** Identify where water crossings may need to be constructed or upgraded and assess against the *Accepted Development Requirements for Operational Work that is Constructing or Raising Waterway Barrier Works* (ADR). Obtain any permits required for work that is not accepted development.

**NF4** Identify areas of the asset that are potentially at risk of bird strike to determine where installation of diverters is required.

**NF5** Identify towers where wildlife interactions have been identified or are likely (e.g. riparian zones) for consideration of fauna friendly anti-climbing barriers.

**Execution**

**NF6** Impacts to protected native fauna must be completed in accordance with any relevant Works Approvals.

**NF7** Tampering with an animal breeding place may only be carried out in accordance with a Damage Mitigation Permit or an approved Species Management Program.

**NF8** Construct and/or upgrade water crossings in accordance with the ADR and/or permit conditions.

**NF9** Suitably qualified fauna spotter catchers must be engaged to undertake pre-clearance habitat searches and be present during vegetation clearing activities to minimise fauna harm.

**NF10** A suitably qualified person (i.e. spotter catcher) must be present during any disturbance to habitat features (e.g. trees containing hollows, trees containing nests, hollow logs) and/or native fauna.

**NF11** Habitat features such as felled trees and logs will be relocated where possible to adjacent areas.

**NF12** An authorised carer (holding a valid Rehabilitation Permit) must be engaged to care for and rehabilitate injured or orphaned native animals.

**NF13** Domestic pets and animals are prohibited on site during works.

**NF14** Restrict vehicles to approved and mapped access tracks and only those vehicles required for the safe, efficient and essential construction activities will be allowed in the work area.

**NF15** Excavations must be secured to prevent access from native fauna.

**NF16** Diverters on spans will be installed where identified as required. Spans on which diverters are installed shall be recorded in SAP.

**NF17** Fauna friendly anti-climbing barriers shall be installed on towers where wildlife interactions have been identified or are likely. Records of fauna friendly anti-climbing barriers will be recorded in SAP.

## Protected Areas

***Objective*** *– No unauthorised disturbance within a Protected Area, World Heritage Area or State Forest.*

### General Requirements

**PA1** Activities in a Protected Area, World Heritage Area or State Forest must be authorised to be carried out by the relevant government agency.

**PA2** Maintenance activities within Protected Areas must be undertaken in accordance with the *Code of Practice for Maintenance of Electricity Corridors in Queensland's Parks and Forests*.

**PA3** Maintenance activities within the Wet Tropics World Heritage Area must comply with the applicable Wet Tropics Permit.

**PA4** Access to any Marine Park must be undertaken under an appropriate access authority and following notice to the Regulator.

# Vegetation Management

***Objective*** *- Minimise disturbance of vegetation, consistent with safe and reliable operation of the assets.*

## General Requirements

**Planning**

**VM1** Proposed vegetation clearing activities must be assessed against all relevant Federal, State and local government requirements. Any additional assessments required must be undertaken by a suitably qualified person and any subsequently identified required approvals and/or offsets must be obtained prior to undertaking vegetation clearing activities.

**VM2** The extent of vegetation clearing areas will be nominated on plans and made available for the vegetation clearing activity.

**Execution**

**VM3** Vegetation clearing activities must be undertaken in accordance with:

a. Any relevant permits and approvals
b. Accepted Development Requirements for operational work that is the removal, destruction or damage of marine plants
c. Approved Powerlink specifications.

**VM4** Any proposed vegetation clearing activities not in accordance with existing permits and approvals must be assessed against all relevant Federal, State and local approvals. Assessments must be undertaken by a suitably qualified person. Any additional required permits or approvals must be obtained prior to undertaking vegetation clearing activities.

**VM5** The EWP will nominate any Project specific areas that have specific management requirements (e.g. no-go zones, vegetation to be retained).

**VM6** Prior to commencing initial vegetation clearing, the extent of clearing (work area) shall be clearly marked on site using high visibility barriers or taping to ensure that clearing will not occur in areas to be preserved. The marked up limits of clearing shall be maintained for at least the duration of clearing and earthworks.

**VM7** Vegetation clearing is to be conducted in a staged approach (i.e. vegetation assessment; fauna assessment and/or removal or relocation; vegetation removal; soil surface stabilisation; revegetation) so that the minimum area of ground is exposed at any one time.

**VM8** Vegetation clearing is to be undertaken in a staged and sequential manner, moving away from environments, such as roads, which may potentially cause injury to fleeing fauna.

**VM9** Dispose of felled timber in consultation with the landowner and occupier. Vegetation residues should not impact on downstream water flow or quality or the easement land use. Vegetation is not to be placed where it may increase any fire hazard and impact on the Powerlink Assets in the event of a fire.

**VM10** Any required permits must be obtained for burning cleared vegetation from the local fire warden and/or local council, and Powerlink. Permits must be obtained and provided to Powerlink for review prior to any burning.

**VM11** The felling of large trees that may cause damage to protective bank vegetation may be stem injected and left standing providing there are no additional safety risks.

**VM12** Where located near watercourses, stockpiles will be made on the downstream side of the centre line of the transmission line. Stockpiles will have gaps between them of sufficient width to permit the safe passage of stock and vehicles. Such gaps will be spaced at no more than 50 m intervals.

**VM13** Stockpiled material will be located at least 50 m clear of all drains, watercourses or their flood banks so as to prevent any obstruction to water flow and 10 m clear of standing timber, scrub or undergrowth, or as directed.

# Biosecurity

**Objective** – *Manage the risk of spreading or introducing biosecurity matters as a result of Powerlink's activities*.

## General Requirements

**Planning**

**BIO1** Consultation with landholders must occur prior to entering their property in order to engage in proactive and open discussions regarding biosecurity requirements. This consultation will include, but is not limited to:

a. Property specific Biosecurity Management Plans
b. Any known biosecurity matters that should be considered prior to entry
c. Concerns in relation to biosecurity matters (currently on property, activity being managed, currently in region but not on property)
d. Biosecurity control practices currently implemented on the property.

**BIO2** Reasonable requirements that meet the principles of the General Biosecurity Obligation (GBO) may be required to be implemented in addition to Powerlink's mandated controls.

**BIO3** Property access information and biosecurity management controls from landholder consultation will be recorded within PQ Connect and made available to relevant Powerlink staff and Contractors.

**BIO4** Baseline biosecurity matter surveys will be completed at an appropriate time of year (e.g. spring or following significant rainfall) in order to capture representative and relevant biosecurity data (species and distribution). The survey areas will include relevant easement areas, immediate adjoining areas and associated access track routes.

**BIO5** Data collected during landholder consultation and biosecurity matter surveys will be used to determine appropriate Project specific biosecurity management requirements (in addition to the mandated controls outlined below) required for construction activities and ongoing maintenance and operation of the asset.

**Execution**

**BIO6** Powerlink staff and Contractors must comply with land access requirements.

**BIO7** Workers must receive a Project specific induction that includes relevant information relating to biosecurity management requirements.

**BIO8** Temporary or Permanent clean down facility selection and site location selection should consider:

a. Clean down sites to be located in the following preferential order (in consultation with relevant stakeholders):
    - Utilise existing commercial clean down facilities
    - On Powerlink owned land
    - On easement
    - On road reserve
    - On existing and agreed access (off easement on private property).

b. Clean down sites will not be located on a clean property, but rather on the way out of a property affected by a biosecurity matter
c. Clean down sites will not be located in environmentally sensitive areas, unless agreed to by the nominated Regulator (e.g. Temporary clean down facility in a National Park)
d. Clean down sites will be located as close as possible to the infested area to prevent further spread
e. Runoff from clean down sites will be managed to ensure that sediment, grease, oil and viable plant material does not pollute waterways
f. Clean down equipment will be maintained in a serviceable and usable condition
g. Clean down sites will be recorded for monitoring of biosecurity matters (for a minimum of two maintenance cycles from the last time the site was used)
h. Temporary clean down sites will be decommissioned at the end of the Project with geofabric, and contaminated materials disposal of at a licensed disposal facility and the site rehabilitated to meet 70% groundcover or equivalent to pre-disturbance ground cover.

**BIO9** Clean down facilities are to be constructed in accordance with Powerlink drawings (A1-H-154843-001 to 004).

**BIO10** An inspection must be completed, and if required, clean down in the following situations:

a. Moving between and outside Biosecurity Queensland Biosecurity Zones
b. Where vehicles, plant, equipment and machinery move between any nominated Project Biosecurity Areas
c. Where vehicles, plant, equipment and machinery have traversed a high risk biosecurity matter
d. Where personnel, vehicles, plant, equipment and machinery exit a known pathogen or disease risk area
e. Where assessed as reasonable to manage biosecurity risks.

**BIO11** Where an inspection or clean down is required, the worker must:

a. Inspect vehicle, plant, equipment and machinery for biosecurity matter (including soil that may contain biosecurity matter)
b. Where the vehicle, plant, equipment or machinery are identified to be free of biosecurity matter, a 'biosecurity matter free' declaration form must be completed
c. Where the vehicle, plant, equipment or machinery contains biosecurity matter, it must be cleaned to remove biosecurity matter, reinspected, and a 'biosecurity matter free' declaration form' must be completed.

**BIO12** Vehicle, plant, equipment, machinery and personnel must be disinfected when exiting a known pathogen risk area. Actions must be recorded on a 'biosecurity matter free' declaration form.

**BIO13** Where a logbook is nominated as a required control on the EWP, a vehicle movement log form must be completed from time of clean down to destination to demonstrate where the vehicle has travelled during this time.

**BIO14** Clean downs must be undertaken in accordance with the *Queensland Government's Vehicle and Machinery Clean down Procedures*. Clean downs should be undertaken at designated locations. Where clean downs are required to be completed at one-off locations, the site must:

a. Be selected at the edge, or nearby to any areas where weeds or pathogens need to be contained
b. Be selected in consultation with /agreement from the landholder
c. Ensure runoff will not enter any watercourse or waterbody
d. Avoid sensitive vegetation
e. Be selected in mud free locations which gently drain away from the clean down location.

**BIO15** Workers required to self-certify or certify other vehicles, plant, equipment and machinery (VPEM) must have the following qualification, AHCBIO201 Inspect and clean machinery for plant, animal and soil material (or an equivalent competency).

**BIO16** Vehicle journey planning shall be undertaken, as far as practicable, in order to visit biosecurity free areas first, before travelling to areas affected by biosecurity matters.

**BIO17** Avoid or minimise travel through areas heavily affected by biosecurity matters wherever possible.

**BIO18** Established roads and tracks will be utilised where practicable, with slashing and gravelling to be considered in areas of high volume traffic.

**BIO19** Ground disturbance and removal of native or pastoral ground cover should be kept to a minimum.

**BIO20** 'Biosecurity matter free' declaration forms must be provided for all high risk material (i.e. sand, soil, mulch etc.), from suppliers of these products (if available). Quantities of soil/gravel obtained from a landholders borrow pit shall have a self-certifying 'biosecurity matter free' declaration form (excluding movement of material within the same property).

**BIO21** Any loads of plant material or soil (that may contain biosecurity matter) shall be covered during transport.

**BIO22** Powerlink and its Contractors shall participate as required with any Queensland Government Biosecurity directives for managing emergency situations.

**BIO23** Regular monitoring of the easement and access tracks shall be undertaken to identify any new outbreaks.

**BIO24** Appropriate disposal of material potentially contaminated with biosecurity matter shall be undertaken in accordance with *Biosecurity Act 2014* requirements.

**BIO25** A biosecurity matter survey will be completed along the easement and established access tracks post construction and following the first wet season.

**BIO26** As a joint land manager on easements and access tracks, Powerlink may assist with the control of biosecurity matter where:

a. It has been categorically established that their introduction or spread has been caused by Powerlink's activities
b. Property owners are undertaking integrated pest management control measures
c. Consideration has been given to the success of control:
    - Size (smaller/isolated incursion have a higher chance of success)
    - Species and its capacity for dispersion
    - Biosecurity status of the surrounding area.
d. Consideration is given to surrounding landholders, and other regulatory bodies (local councils, Natural Resource Management groups)
e. Required by a regulatory body (e.g. Council eradication notice).

# Herbicide Distribution

***Objective*** *– responsible distribution of herbicides and no adverse impacts on adjacent land activities or protected fauna, flora or waterways.*

## General Requirements

**Planning**

**AC1** Assess the receiving environment including the following:

a. Hazardous Areas
b. Identification of and proximity to environmentally sensitive areas (e.g. Protected Areas, protected vegetation, waterways)
c. Land use (e.g. area is used for grazing and the landholder sells produce or livestock to market); and
d. Landholder chemical use restrictions.

**AC2** Only ground distribution of herbicide is permitted. No aerial distribution of herbicides is permitted.

**AC3** Organisations and individual contractors performing ground distribution or directing licensed commercial operators to use ground equipment must hold a Ground Distribution License.

**AC4** Individuals who operate ground equipment for herbicide distribution must operate under a commercial operator's license.

**AC5** Workers completing chemical distribution activities in a Protected Area or the Wet Tropics must be trained and authorised to work in a Protected Area.

**AC6** A Hazardous Area Distribution Permit is required to distribute restricted herbicides within a Hazardous Area unless an authorised technique is used.

**AC7** Distribution of herbicides within a Fish Habitat Area must be undertaken in accordance with the *Fish Habitat Area Code of Practice – The lawful use of physical, pesticide and biological controls in a declared Fish Habitat Area*.

**AC8** Any off-label use of a registered chemical must have an Australian Pesticides and Veterinary Medicines Authority (APVMA) off-label permit.

**Execution**

**AC9** Workers responsible for undertaking chemical distribution must complete checks to ensure equipment is in good condition and working correctly prior to use.

**AC10** Careful consideration must be given to weather conditions before commencing ground distribution. As a minimum, wind direction, wind speed, temperature, relative humidity and predicted forecast must be checked by the worker responsible for the distribution activity to determine if weather is suitable for ground distribution of chemicals.

**AC11** Weather conditions must be measured and recorded through the distribution activity.

**AC12** Herbicides must not be decanted, mixed or stored within 50 metres of a watercourse or waterbody.

**AC13** Records must be kept for each and every ground distribution of chemicals. The records must include the following:

a. Name of the licensed commercial operator carrying out or supervising the carrying out of the distribution

b. Name and address of the person for whom the distribution is being carried out for
c. Name and active constituent of the chemical used in the distribution
d. Description of any diluent used in the distribution
e. Exact location of the land being treated
f. Date and time (start and finish) of the distribution activity
g. Weather conditions (direct and velocity), and any changes during the distribution activity
h. Quantity and concentration of the total volume of the agricultural chemical applied
i. Total area covered by the distribution
j. Type of crop treated
k. Purpose for which the distribution was carried out.

**AC14** Any damage to stock or crops, or other environmental harm caused by herbicide spray drift or misuse must be reported to Powerlink without delay. Notification of the appropriate Regulator must be carried out if necessary, dependent on the nature of the harm and current legislative requirements.

# Soil and Water

***Objective*** *– No adverse impacts on water bodies as a result of soil disturbing activities. Disturbed sites rehabilitated to a stable condition.*

## General Requirements

**SW1** All soil disturbance activities are to be managed in accordance with IECA Best Practice Erosion and Sediment Control Guidelines 2008.

A Project Erosion and Sediment Control Plan (ESCP) shall be developed for use prior to construction.

Upslope storm water/runoff will be diverted, where possible.

Ground disturbance should be minimised and any ground cover retained, where possible, to reduce potential erosion surface area.

Where soil disturbance has taken place, visual assessments must be undertaken for the presence and effectiveness of erosion and sediment control structures and measures preceding significant rainfall events (within 24 hours of expected rainfall while the site is unstable, weekly inspections when rainfall is not expected or the site is stable). Records of this monitoring will be available on site for inspection.

Progressive rehabilitation of disturbed areas should be undertaken as soon as practicable to establish ground cover (minimum 70% or equivalent to pre-disturbance ground cover).

**SW2** Where practicable, existing access tracks will be used for the Project in preference to creating new tracks, with upgrades or extensions conducted where necessary. Access tracks will be installed in accordance with Powerlink specifications.

**SW3** Soil disturbance in erosion prone and steeply sloping areas must be minimised during clearing activities. Determine appropriate clearing methods for moderate to high erosion prone and steep areas so that the clearing methods minimise soil disturbance and potential for soil loss.

**SW4** A dewatering method is to be prepared and implemented, taking into consideration site conditions and the water quality objectives of any receiving waters. At a minimum - dewatering of foundations or pits shall be done through a filtration mechanism (i.e. sediment filtration device). Dewatering records are mandatory for sediment basin management. Records of dewatering of a sediment basin must contain the type and quantity of flocculating agent applied, pH of water immediately prior to release, turbidity (NTU) of water immediately prior to release, approximate volume of water released, location of release, date and time, and will be available on site for inspection.

**SW5** Concrete washout pits are to be established on site for the washing of concrete tools and agitator truck chutes. This washout pit will be installed such that runoff from areas outside the pit is not allowed to enter the pit and contaminated water will not discharge from the pit in a rainfall event. Washout pit locations will be placed on the ESCP, communicated to concrete truck drivers and also be fenced using temporary bunting or covered when not in use to prevent access by the public and or domestic/native animals. The concrete washout pit will be removed at the completion of works.

**SW6** Any excavation or placing fill in a waterway shall be carried out in accordance with the *Riverine Protection Permit Exemption Requirements (WSS/2013/726)* or as otherwise authorised under relevant legislation.

**SW7** Any taking of water for the purpose of constructing or maintaining infrastructure shall be carried out in accordance with the *Exemption requirements for constructing authorities for the take of water without a water entitlement (OSW/2020/5467)* or as otherwise authorised under a water entitlement.

**SW8** Records of sourced water shall be made available on site, for inspection.

**SW9** The taking of a State-owned resource (e.g. quarry material, forest product etc.) must be undertaken in accordance with a Resource Allocation Permit.

**SW10** Any areas required for stockpiling must have topsoil stripped (~100 mm depth) prior to placement of any stockpile material to ensure suitable material is available for rehabilitation.

## Acid Sulphate Soils

***Objective*** *- No release of contaminants from the oxidisation of acid sulphate soils (ASS) outside the work area or into any sensitive receiving environments.*

### General Requirements

**ASS1** Prior to any soil excavation work in high risk areas (below 5m AHD) investigations shall be undertaken in accordance with the *Queensland Acid Sulphate Soils Technical Manual* to determine the presence of ASS.

**ASS2** Where ASS has been identified and confirmed, an ASS Management Plan is to be developed in accordance with the *Queensland Acid Sulphate Soils Technical Manual*.

**ASS3** Where ASS is present, all soil disturbance work to occur in accordance with the ASS Management Plan.

**ASS4** All staff and Contractors undertaking soil disturbing work in high risk areas must complete a detailed ASS specific induction or awareness training on the identification and management of ASS.

# Contaminated Land

**Objective** - *Manage existing* land contamination*. No unauthorised transport or disposal of contaminated soil.*

## General Requirements

**CL1** Prior to acquisition of land parcels (including parcels where easements are proposed for acquisition) or completion of an environmental impact assessment, a search of the Environmental Management Register (EMR) and Contaminated Land Register (CLR) shall be undertaken.

**CL2** If sites are listed on the EMR or CLR and have an attached documented Site Management Plan issued under the *Environmental Protection Act 1994*, compliance with the conditions of the Site Management Plan is required.

**CL3** Where an assessment has determined that the notifiable activity (associated with a listing on the EMR) is likely to have taken place in proximity to soil disturbing work, soil testing will be completed in accordance CL4, CL5, and CL6.

**CL4** Soil sampling and analysis must be in accordance with *AS4482.1-2005 Guide to the investigation and sampling of sites with Potentially Contaminated Soil – Part 1: Non-volatile and semi-volatile compounds*.

**CL5** In situ soil samples are to be collected prior to excavation from the nominated excavation works area, at a frequency of either 1:10 metres for trenches or 1:100 $m^2$ for non-trench areas. Where in situ soil sampling is not possible, soil stockpile sampling is to be undertaken at a rate of 1:25 $m^3$ up to 500 $m^3$, and 1:50 $m^3$ for soil quantities greater than 500 $m^3$.

**CL6** All soil samples will be analysed for the following:

- pH
- Heavy metals (Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Zinc and Mercury) – total and TCLP
- Total recoverable hydrocarbons (TRH)
- Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene (BTEXN)
- Polycyclic aromatic hydrocarbons (PAHs)
- Asbestos presence

If the substation is > 25 years old, samples will also be analysed for:

- Polychlorinated biphenyls (PCBs)
- Organochlorine pesticides (OCPs)
- Organophosphorus pesticides (OPPs)

At least one soil sample will also be analysed for cation exchange capacity (CEC); clay content (% clay); and total organic carbon content (TOC). This sample should be at least 500g to enable clay content analysis to be completed.

Analysis for additional potential contaminants may be required based on the EMR/CLR listing specific details.

**CL7** If evidence of contaminated soil or a contamination source is identified during work (such as oil staining, buried asbestos sheeting, surrounding previous land use or previous land use of herbicides or pesticides), soil sampling, investigation, and/or notification will be required in accordance with CL4, CL5 and CL6.

**CL8** If soil analysis identifies a contaminant above the soil assessment criteria (SAC) for the relevant land use criteria, and the contaminant is causing or is likely to causing serious or material environmental harm, the Regulator must be notified.

**CL9** A soil disposal permit is required where soil is required to be removed from a parcel of land on the EMR/CLR where testing identifies that contaminants are present that exceed the sensitive land-use criteria (i.e. Health Investigation Level (HIL-A) and Health Screening Level (HSL-A/B)).

# Waste Management

***Objective*** *- No uncontrolled release of waste to the environment.*

## General Requirements

**WM1** A Waste Management Plan appropriate to the associated activity, nature and scale of the Project shall be developed and implemented.

**WM2** The Waste Management Plan must specify the following:

a. Preference of waste management in the following order – Avoid or reduce, reuse, recycle, recover, treat and dispose
b. How each waste stream is to be stored, transported and disposed of
c. Estimated quantities of waste from each waste stream
d. Details of waste transport companies to be utilised and copies of any relevant licenses
e. Details of waste disposal facilities to be utilised and copies of any relevant licenses and waste acceptance criteria.

**WM3** Waste awaiting collection is to be left in a tidy and secure manner such that it does not impact on stock, landholders, or adjacent landholder activities or have the potential to be windblown.

**WM4** The discarding of cigarette butts and other litter to ground or waterbodies is prohibited.

**WM5** All regulated and trackable waste shall be managed in accordance with legislative requirements.

**WM6** Concrete waste below oil filled equipment shall be:

a. Visually inspected for any evidence of hydrocarbon staining. Evidence of inspection (photos) must be recorded
b. If there is no evidence of hydrocarbon staining, concrete is to be disposed of through the general construction waste stream
c. If the concrete contains evidence of hydrocarbon staining, the affected areas must be tested for contaminants prior to disposal from site. Test results are to be submitted to the Powerlink Environmental Representative for review prior to removal from site
d. If testing is positive for hazardous contaminants, the concrete is to be disposed of as regulated/trackable waste.

**WM7** Uncontaminated excess spoil may be reused as fill around site or to construct ancillary infrastructure (e.g. access tracks, where material is suitable) or reinstatement of eroded areas. Surplus clean fill material will be removed from site and appropriately disposed, if unable to be reused.

**WM8** In accordance with the waste management hierarchy, waste materials will be segregated during handling and storage on–site.

**WM9** In accordance with the *Waste Reduction and Recycling Act 2011*, single use plastic bags will not be used during the Project.

**WM10** Where practical, Project components should be supplied to the sites with minimal excess packaging. This practice reduces on–site waste generation.

**WM11** Putrescible waste will be sorted in closed waste containers to prevent the attraction and breeding of pest and disease vectors such as flies and rodents.

**WM12** Records of waste disposal must be maintained.

# Hazardous Materials

***Objective*** *- No contamination of land or water as a result of a spill or release of hazardous material.*

## General Requirements

**HM1** Hazardous materials stored and handled in accordance with *AS1940:2004 The storage and handling of flammable and combustible liquids*.

**HM2** Safety Data Sheets (SDS) shall be available for each chemical present on site. SDS will be available in a central location that is easily accessible by all site personnel.

**HM3** An Emergency Response Plan shall be developed for the Project. The plan will include procedures to ensure the correct storage, handling and transport of hazardous materials, and proposed response to accidental spills and contamination incidences).

**HM4** Materials and equipment (spill kit) required to respond to a hazardous spill shall be available at all times when hazardous materials are being used, transported, loaded or unloaded.

**HM5** Temporary drive-in bunding may be used on site (when self bunded or double skinned tanks are not available) when large volumes of oil are being decanted or handled outside of a permanent bunded area. A suitably sized spill kit will be available for any spills associated with hose or pipe fittings.

**HM6** Spill kits shall be kept at the work area and monitored for restocking regularly. All machinery and vehicles carrying additional fuel/oil/diesel over 20 L should be equipped with a spill kit at all times.

**HM7** All spills to be managed as follows:

1. Full protective clothing and equipment shall be worn when managing a spill
2. Assess spill (extent and potential to migrate offsite, fire hazard potential, type and volume)
3. Isolate the spill (prevent further spillage, block drains, prevent access to the area)
4. Notification of the spill
5. Clean up and remediation
6. Restock spill kit.

**HM8** All wastes from the clean-up process shall be disposed of safely and in accordance with legislative requirements.

**HM9** No storage of superfluous material should occur within a bund wall enclosure.

**HM10** The refuelling of vehicles and machinery within 100m of a watercourse or open drain is prohibited. When possible all refuelling will be off-site at an approved refuelling station.

**HM11** Testing for the presence of asbestos, lead, chromium or PCB's on assets that may reasonably be expected to contain these hazardous substances, must be undertaken prior commencing disturbing works.

# Air Quality

***Objective -*** *To operate vehicles and machinery in a proper and efficient manner to minimise emissions, including dust, associated with construction and maintenance activities (i.e. both on-site and vehicles transporting materials to and from the site).*

## General Requirements

**AQ1** Vehicle travelling speed must be restricted (<40 km/hr unless specified) on unsealed and off road access tracks. Vehicle speeds should be further reduced on unsealed access tracks during dry, windy weather, to a speed whereby visible dust emanating from soil type interaction is minimised.

**AQ2** All vehicles and machinery should be fitted with appropriate exhaust systems and devices. Such devices will be maintained in good working order, in accordance with the manufacturer's recommendations and the *Commonwealth Department of Infrastructure and Regional Development, Australian Design Rules for Vehicle Emissions*.

**AQ3** Turn off vehicles and equipment when not in use.

**AQ4** Apply dust suppressants or watering to work areas, stockpiles and access tracks as required to prevent dust nuisance.

**AQ5** Restrict vehicles to approved and mapped access tracks and only those vehicles required for the safe, efficient and essential construction activities will be allowed in the work area.

**AQ6** Cover all loose loads for transport to and from the work site.

**AQ7** Schedule dust generating activities in proximity to dust sensitive locations (e.g. residences or schools etc.), when possible, to minimise dust nuisance at the sensitive receptors. Consideration shall be given to local site conditions, including soil type, rainfall, wind speed and direction, proximity to receptors and duration of the activity.

**AQ8** In dust sensitive locations consider constructing access tracks from materials which are more stable and less likely to turn to bull dust.

**AQ9** Orientate material stockpiles in a direction that reduces exposed surfaces to prevailing winds.

**AQ10** Ensure chipping/ mulching equipment has dust collection devices attached where possible.

**AQ11** Carry out regular visual surveillance of vehicles, plant and equipment working or moving within proximity to residences or other dust sensitive locations. The surveillance is to determine when actions are required to reduce potential dust nuisance.

**AQ12** Limit dust inducing activities on days with high levels of bushfire smoke in the air and if wind is blowing towards receptors.

**AQ13** Avoid or minimise queuing in roadways approaching the worksites or adjacent to other sensitive activities. Minimise queuing of construction vehicles and idling for excessive periods (e.g. more than 5 minutes).

**AQ14** Sulphur hexafluoride gas ($SF_6$) shall be handled to minimise the potential for loss to atmosphere. $SF_6$ shall not be intentionally vented to atmosphere. Report any losses of $SF_6$ gas to Powerlink's PQ Switch incident management system and against the SAP measuring point.

**AQ15** Manage $SF_6$ in accordance with Powerlink specifications.

**AQ16** Personnel handling $SF_6$ shall have appropriate experience and training in correct handling and loss prevention.

# Noise and Vibration

***Objective*** *- No complaints regarding noise nuisance.*

## General Requirements

**NV1** Limit work hours to between 6.30 am to 6.30 pm Monday to Saturday (excluding public holidays) for construction work. Work is not to occur outside these hours unless permitted by a Development Approval, or it is in an emergency, due to limited line outages, maintenance activity, or other exceptional circumstances.

**NV2** Appropriate plant and equipment to be selected for each task to minimise the noise contributions.

**NV3** Ensure machinery is fitted with appropriate noise attenuation devices and is maintained in accordance with the manufacturer's recommendations.

**NV4** Shut down any LPG/petrol/diesel powered equipment generating loud, extraneous (unusual) noise until the source of the noise can be identified and rectified.

**NV5** Schedule loud noise activities to occur at times to minimise noise nuisance to surrounding sensitive receptors. Physical noise barriers such as earth mounds, mobile screens, or noise attenuation devices should be used, where necessary.

**NV6** Deliver and/or remove materials and equipment to and from the site within the approved hours for construction. All transport vehicles will be in good working order and will avoid using exhaust brakes in built up areas adjacent to the work site.

**NV7** Ensure transport routes to and from the site are located, where possible, to limit the impact of traffic noise on potentially sensitive areas.

**NV8** Plant to be turned off when not in use.

**NV9** Plant is to be regularly maintained, and repaired or replaced if it becomes noisier.

**NV10** Project inductions will include information on the potential adverse impact of reversing alarms and exhaust brakes and the need to minimise their use.

**NV11** Wherever feasible, turning circles are to be created at the end points of vehicle work legs, which should allow trucks to turn and avoid the need for reversing.

**NV12** Non-tonal reversing alarms to be used where practicable.

## Visual Amenity

***Objective*** *- Minimise the visual impact of the asset and associated activities adjacent to or within sensitive locations.*

### General Requirements

**VA1** Position structures to minimise vegetation clearing near sensitive locations and retain existing vegetation along road reserves where safe.

**VA2** Worksites to be maintained in a neat and tidy manner.

**VA3** Minimise Powerlink asset light spill over to neighbouring sensitive receptors (without compromising asset security requirements e.g. security lighting).

# Bushfire

***Objective*** *- Eliminate the hazard of bushfires due to Project work.*

## General Requirements

**BF1** Fire hazard warnings associated with weather patterns and fire risk are issued by the Bureau of Meteorology and the Queensland Rural Fire Service. Daily checking of fire hazard warnings will be undertaken and construction crews made aware of the fire warnings (e.g. through pre-starts).

**BF2** Procedures guiding the response to emergency and fire situations, and requests from emergency management authorities, will be documented and communicated where applicable to Project location.

**BF3** Firefighting equipment must be kept on site when hot works are being undertaken. Personnel must be trained in the use of the equipment.

**BF4** All mobile plant must have a tested and tagged fire extinguisher available where practicable.

**BF5** Burning of vegetation is prohibited, unless a permit is obtained by a local fire authority and Powerlink prior to any burning.

**BF6** Designated smoking areas are to be identified with cigarette butt bins for safe disposal.

**BF7** All work should be consistent with the mitigation measures documented in the Powerlink documents 'On-Site Fire Prevention Procedure' and 'ASM-PLN-A3285085 - Bushfire Mitigation Procedure'.

## Transport and Traffic

***Objective*** *- To operate vehicles in a proper and efficient manner to minimise impacts on local residents, associated with construction and maintenance activities (i.e. both on-site and vehicles transporting materials to and from the site).*

### General Requirements

**TT1** Prior to construction a Traffic Management Plan will be prepared to minimise potential impacts.

**TT2** Provide advance notification of potential road closures or traffic delays to emergency services and the local community. Any temporary road closures will involve on site traffic management, so that in the event of emergency service vehicles needing to pass through the areas where stringing is occurring, passage will be provided.

**TT3** Apply for appropriate approvals and permits under the *Transport Infrastructure Act 1994* from the Department of Transport and Main Roads (TMR) for any permanent or temporary access to State-controlled roads, including associated roadworks for access, the transport of over dimensioned equipment and materials on State-controlled roads and for ancillary works and encroachments.

**TT4** Consideration where possible during Project planning, to undertake selected construction works likely to cause significant traffic disruption and delay at times of low traffic volumes or at night to minimise localised congestion and potential safety implications.

**TT5** Dedicate traffic management personnel for traffic management and safety purposes, particularly when construction works are being conducted close to roads or where lane closures are required.

# Contact us


| | |
|---|---|
| Registered office | 33 Harold St Virginia<br>Queensland 4014 |
| | ABN 82 078 849 233 |
| Postal address | PO Box 1193 Virginia<br>Queensland 4014 |
| Telephone | +61 7 3860 2111<br>(during business hours) |
| Email | pqenquiries@powerlink.com.au |
| Website | powerlink.com.au |
| Social | |