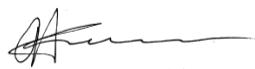



## OP427 ELECTRICAL LINE CLEARANCE PLAN

Approval and Review	Details	
<b>Authoriser</b> Chief Operating Officer	Joska Ferencz	
<b>Responsible Manager</b> Asset & Operations Manager	Raphael Ozsvath	
<b>Issue No:</b> 4.0	<b>Review Date:</b> 17/03/2020	<b>Next Review Date:</b> 01/03/2021

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## **1. PURPOSE**

This procedure outlines Basslink Pty Ltd.'s Electrical Line Clearance Plan.

## **2. SCOPE**

This plan applies to all Basslink Operational staff and comprises a report to Energy Safe Victoria on the Plans of Basslink Pty Ltd for the management of vegetation along its easements.

## **3. RESPONSIBILITIES**

### **3.1 COMPLIANCE, MONITORING AND REVIEW**

The Site Manager and site operational staff are responsible for the content, review and implementation of this Electrical Line Clearance plan.

The Asset & Operations Manager is responsible for authorising the use of this Electrical Line Clearance Plan.

### **3.2 RECORDS MANAGEMENT**

The Document Management Record is located at the end of this document.

## **4. REFERENCES**

- SHES1024 Operational Environmental Management Plan
- ES0027 Maintenance of Clearance Space between transmission Lines Towers and Vegetation
- ES1012 Key Performance Indicators

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## **5. INTRODUCTION**

This Electrical Line Clearance Plan relates to the electrical transmission assets owned and operated by:

Basslink Pty Ltd  
Suite 8 / 9 Compark Circuit  
Mulgrave, Victoria, 3170  
Tel: 03 9607 4700

This report is produced in compliance with the requirements of the Electrical Safety (Line Clearance) Regulations 2015.

This report supplements and is submitted with, "Appendix A" the Basslink Vegetation Management Plan, OEMP – VMP Version 3 (the 'VMP'). The VMP fulfils the requirements of the transmission licence issued to Basslink Pty Ltd (Basslink) under the Electricity Industry Act 2000 (Vic) and the requirements for a management plan under Regulation 9 of the Electricity Safety (Electric Line Clearance) Regulations 2015 (Vic). It incorporates the requirements of the Code of Practice for Electric Line Clearance as published in the Electricity Safety (Electric Line Clearance) Regulations.

180 days before the plan is due each year the due date is raised by the Risk and Compliance Manager.

## **6. CONTACTS**

### **6.1 RESPONSIBLE PERSON**

Basslink Pty Ltd  
Suite 8 / 9 Compark Circuit  
Mulgrave  
Victoria, 3170  
Tel: 03 9607 4700

### **6.2 EMERGENCY CONTACT**

Loy Yang Converter Station  
Tel: 1800 008 767 (24 hour)  
Tel: 03 5173 9751 (24 hour)

### **6.3 PRIMARY OFFICER RESPONSIBLE FOR THE IMPLEMENTATION OF THE BASSLINK ELECTRICAL LINE CLEARANCE PLAN**

Paul Pendlebury  
Easement Maintenance Officer  
Loy Yang Converter Station  
182 Hyland Hwy  
Loy Yang, VIC, 3844  
Tel: 03 5173 9752

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## **6.4 SECONDARY OFFICERS RESPONSIBLE FOR THE IMPLEMENTATION OF THE BASSLINK ELECTRICAL LINE CLEARANCE PLAN**

Mark Bostedt  
Site Manager  
Loy Yang Converter Station  
182 Hyland Hwy  
Loy Yang, VIC, 3844  
Ph: 03 5173 9752

## **6.5 VEGETATION MANAGEMENT PLAN PREPARATION**

Coffey Services Australia Pty Ltd  
Level1, 436 Johnston Street  
Abbotsford, VIC, 3067. Australia  
Tel: 03 9290 7000

## **7. COMMITMENT AND POLICY**

Basslink undertakes its business activities within its corporate Environmental Management Scheme (EMS) and the corporate Health, Safety, Security and Environment Policy. The environmental performance of Basslink is ultimately measured and reported against its corporate Environment Policy which can be found at [www.basslink.com.au](http://www.basslink.com.au).

Basslink complies with all relevant legislation and industry standards, which includes any conditions of approval relevant to the operations phase.

It is Basslinks Policy to take whatever actions are required to ensure it minimises the risk of fire ignition from its electrical lines by mitigating the Bushfire danger on the Basslink easements.

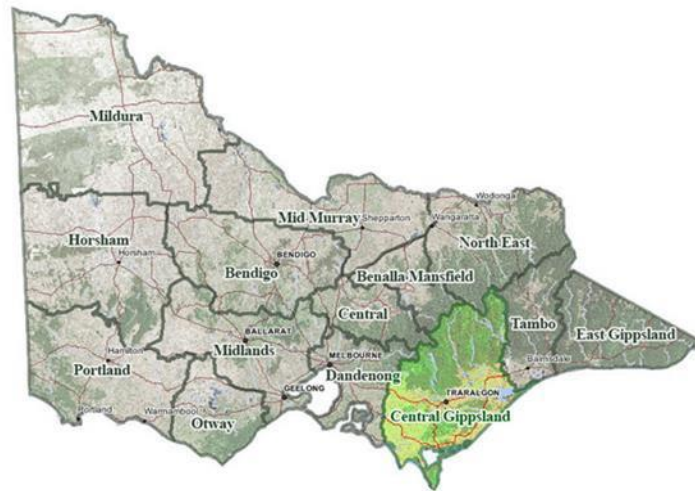
## **8. PLAN OBJECTIVES**

A set of relatable and measurable KPIs will be established to monitor achievement of the ELCP objectives.

The objectives of this ELCP are to:

- Provide a framework to ensure that safe clearances are maintained between vegetation and electric lines.
- Demonstrate Basslink Pty Ltd.'s compliance with the Electricity Safety (Electric line Clearance) Regulations 2015 (the Regulations) and the Schedule - Code of Practice for Electric Line Clearance (the Code) for the preparation of a management plan.
- Demonstrate compliance with Basslink Pty Ltd.'s Operations Environmental Management Plan.
- Ensure community safety and satisfaction.
- Provide workplace safety.
- Ensure contractual performance via reliability of electrical supply.

## 9. LAND TO WHICH THIS REPORT AND MANAGEMENT PLAN APPLIES



The specific land affected by the overhead line easement is described in Figure 1 of Appendix A “Vegetation Management Plan”. This figure also defines the location of the electric lines that must be kept clear of trees or parts of trees.

The predominant categories of trees and vegetation of significance along the easement are described in Figure 2 and Figure 3 of Appendix A.

The entire Basslink asset is within a HBRA. Basslink regularly has discussions with local CFA representatives regarding fire risk in the area of the assets.

## 10. LONG TERM STRATEGIES

Long-term strategies are in place to minimise: -

- The risk of electric lines starting fires and causing electrocution; and
- The adverse effects of surrounding trees or parts of trees on electric lines.

These strategies are described in Appendix A, ‘Vegetation Management Plan’ Section 9, and Appendix B, Basslink Procedure “ES0027 “Maintenance of Clearance Space between Transmission Lines Towers and Vegetation”.

The Vegetation Management Plan specifies the requirements for:

- Annual inspection and reporting
- Preparation and planning
- Vegetation management
- Disposal of clearing residue by burning



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Basslink Procedure “ES0027 “Maintenance of Clearance Space between Transmission Lines Towers and Vegetation” specifies the:

- Easement and Tower Inspections requirements
- Clearance Space Distances
- Vegetation Clearance Priorities
- Hazard Space Vegetation treatment

## **11. MANAGEMENT PROCEDURES FOR MAINTAINING CLEARANCE SPACE**

Basslink will manage vegetation within its easement in accordance with:

- The Code of Practice for Electrical Line Clearance (Vegetation) 2015.
- Basslink Pty Ltd.’s “Operations Environmental Management Plan” (OEMP).
- Basslink procedure ES0027 “Maintenance of Clearance Space between Transmission Lines Towers and Vegetation.

Basslink will maintain all re-growth vegetation identified as exceeding OEMP requirements on its easement to ground level as specified in the “Vegetation Management Plan”, height of vegetation that will be maintained is specified in Table 7.1 of the plan. This includes native shrubs that will not encroach on clearance space distance, this is cleared to keep fuel load levels as described in Clause 9.4.1 “Vegetation Management Plan” to less than 20 tonnes/ha.

The following will be taken into account:

- Performing visual inspection
- Consider local environmental conditions
- Consider local weather conditions
- Consider vegetation regrowth given the local conditions

## **12. PROCEDURES FOR PRUNING AND DETERMINING THE REQUIREMENT TO PRUNE**

The process for determining what pruning is required and how pruning is to be undertaken is described

in Appendix A, ‘Vegetation Management Plan’.

Any trees that are identified as ‘Hazard Trees’ on Basslinks easement will be assessed by a suitably qualified arborist as defined by Electrical Safety (electrical Line Clearance) Regs. 2015 or equivalent to confirm the likelihood of contact with the transmission line and will be appropriately managed in line with the conclusion or recommendations of the assessment and in line with the requirements of AS 4373-2007 as far as Practicable as defined in Electrical Safety Act 1998. The processes for identifying ‘Hazard Trees’ are detailed in Appendix B

---

“Basslink Procedure “ES0027 “Maintenance of Clearance Space between Transmission Lines Towers and Vegetation”.

The pruning work will be audited to ensure compliance against:

- Code of practice
- AS4373
- Work Health and Safety compliance
- Customer Satisfaction via Basslink complaints/incident register

As Basslink is a reasonably new infrastructure with a newly established easement there is no Hazard Trees currently within its easements.

### **13. URGENT CUTTING OR REMOVAL**

Urgent clearing may occur in situations where:

- The security of the supply is under immediate threat; or
- There is a likelihood of danger to the general public, property or Basslink personnel
- Safety clearances are compromised with regards to fire hazard; or
- Emergency situations.

In these situations, the landowners/affected public land managers would be notified in writing of clearing works as soon as practicable either before or after the clearing.

As Basslink maintains its easement in accordance with its ‘Vegetation Management Plan’, it is highly

unlikely that urgent cutting or removal will be required.

If an event of urgent cutting or removal did occur, Basslink responsible person would record the following in conjunction with a file note that will be stored electronically as “Landowner Communications”:

- Where the urgent cutting or removal took place
- The date it was identified, and date completed
- Why the urgent cutting was needed and what needs to be done to prevent further incidents from happening again
- The date of the last inspection

Note: The records of any urgent cutting will be kept for 5 years for future reference.

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## **14. IMPORTANT VEGETATION**

Basslink maintains a register of trees adjacent to its easement. This register looks at trees of cultural ecological, historical, aesthetic and cultural significance and includes detail of positioning of these trees.

This will be reviewed 5-yearly by an independent consultant under the coordination of the Primary Officer for the implementation of the Basslink Electrical Clearance Plan This will be coordinated with the approval process for the Basslink Operations Management Plan by both States and Federal entities. The management procedures for removing and managing significant vegetation are detailed in Appendix A 'Vegetation Management Plan'.

There are no trees of cultural ecological, historical, aesthetic and cultural significance within Basslinks easements, hence no trees currently require cutting or pruning.

Basslink maintain and periodically reviews a register of significant flora within and adjacent to its easement, this report indicates threatened and endangered species and the positions of significant flora. By managing flora as detailed in Appendix A "Vegetation Management Plan" Basslink ensures the wellbeing and protection of significant flora. Location of significant flora is highlighted in Figure 2 of Appendix A "Vegetation Management Plan".

The 'Vegetation Management Plan' also describes procedures for managing 'Habitat Trees'. Basslink will engage in a suitably qualified and licensed native wildlife handler if any vegetation identified for removal has or has signs of any fauna living in or amongst the tree/shrub. Basslink will seek advice by the appropriate authorities on the breeding season for the species and what would be the most appropriate translocation for the species, all appropriate measures would be taken to maintain the wellbeing of fauna within Basslink easements such as where particle works are carried out outside of the breeding season for identified threatened fauna. Basslink also maintains and periodically reviews a register of significant fauna within the area. This register was a requirement of the original Basslink project approvals and contained within the Basslink Strategic Environmental Management. This review was undertaken by an independent consultant.

## **15. PLANNING SCHEMES AND VEGETATION OF SIGNIFICANCE**

Basslink has undertaken a review of all current planning schemes and vegetation of significance as listed on DELWP's website that could have an impact on the transmission line's maintenance including line clearance. This is performed to cross reference Basslinks original documents to current act's that could change the procedures in which Basslink carry out their Electrical Line Clearance Plan.

It was found that all currently registered municipal planning schemes will have no impact on the way Basslink will carry out their Electrical Line Clearance Plan. This will be reviewed 5-yearly by an independent consultant under the coordination of the Primary Officer for the implementation of the Basslink Electrical Clearance Plan This will be coordinated with the approval process for the Basslink Operations Environmental Management Plan by both States and Federal entities.

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## 16. TRAINING, QUALIFICATIONS AND EXPERIENCE

Basslink will provide training to a primary person carrying out implementation of its Electrical Line Clearance Plan including cutting and removing vegetation which is described below as a minimum. Basslink will also provide key training required for its employees to carry out individual works such as easement and tower inspections, maintaining electrical clearance spaces, pruning and removal of vegetation, removal of noxious plants and bushfire mitigation reporting. Examples of training the primary person shall undertake and all employees may undertake but are not limited to:

- Be trained in and demonstrate competence of the Code of Practice on Electrical Safety for work on or near high voltage electrical apparatus “(Blue Book)”.
- Induction and demonstration of competence in the requirements of the Basslink Operations Environmental Management Plan.
- Understanding of the requirements of the Code of Practice for Electric Line Clearance.
- Chainsaw Operations.
- Noxious Weed identification.
- Chemical Users Course.
- Basic Wildfire Awareness.

Any contractor engaged by Basslink for vegetation clearance may be required to satisfy the following elements depending on the level of supervision provided by Basslink and the task to be undertaken:

- Sound occupational health and safety management plan.
- Previous experience of the type of works to be undertaken.
- Induction and demonstration of competence in those aspects of the Basslink safety management system appropriate to the works.
- Induction and demonstration of competence in the requirements of the Basslink Operations Environmental Management Plan.
- Understanding of the requirements of the Code of Practice for Electric Line Clearance.
- Trained in tree clearing for non-electrical personnel. Contractors have completed at a minimum UET20312 ‘Certificate II in ESI Powerline Vegetation Control’ and hold current ‘refresher training’ provided by a registered training organisation.

Contractors are also required to comply with the requirements of the Vegetation Management Plan and provide Basslink with a copy of any licenses or qualifications needed to carry out the work. If any of the above criteria are not able to be produced prior or during work being undertaken on any Basslink site, the contractor will stop work immediately and not be re-engaged until proof is provided to a Basslink representative.

Contractor training and accreditation records will be inspected and copied/verified prior to undertaking work and where appropriate kept on record.

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## **17. AVAILABILITY OF INFORMATION**

Basslink has produced a leaflet entitled 'Living with Electricity Easements'. This leaflet has been distributed to all landholders who are impacted by the Basslink infrastructure. Further information on what can and cannot be done on the transmission line easement is available the Basslink website at [www.basslink.com.au](http://www.basslink.com.au).

A copy of this Electrical Line Clearance Plan is available for inspection by the public at: Basslink Pty Ltd, Suite 8 / 9 Compark Circuit, Mulgrave. The Asset & Operations Manager is responsible for provision of the updated document. Office hours 9:00 – 17:00 Mon – Fri excluding Public Holidays. The Electrical Line Clearance Plan is also available on the Basslink web site.

## **18. DISPUTE RESOLUTION**

Basslink manage complaints by implementing the Complaints Management Procedure as described in Appendix D. Where complaints cannot be resolved at a company level, they will be referred to the Energy, Water Ombudsman where Basslink is a scheme participant.

## **19. PERFORMANCE MEASUREMENT AND AUDIT**

Performance measurement and audit of this Electrical Line Clearance Plan will be in accordance with Basslink procedure SHES1026 "Operations Environment Management Plan" section 2.2 Checking and Corrective Actions. The audits/inspections are carried out by auditors that are not directly involved in the activity that is being undertaken. Details of this process are described in Appendix E Audit and Inspection Procedure, additional inspections are described in Appendix A, 'Vegetation Management Plan' section 9.

Inspections are scheduled and recorded by BPL's CMMS system (computerised maintenance management system), When inspections are due, they will be generated by the system and all results are recorded. Any areas of concern are reported by exception. The total number of scheduled maintenance activities that are generated and completed are reported to the Senior Management Team on a monthly basis at the Basslink Monthly Management Meeting. A sample of these inspection results are checked monthly by trained auditors within BPL by conducting field audits with an aim of completing 2 per month unless conditions do not permit this.

Annual inspection as described in 9.1 of Appendix A "Vegetation Management Plan" will be used to assess regrowth for the upcoming fire season and to Audit Basslinks compliance with its OEMP and compliance against the Code of Practice for Electrical Line Clearance. A post fire season inspection will also be carried out in succession with the pre-fire season inspection to ensure the implementation of the Electrical Line Clearance Plan was carried out successfully and that any corrective actions can be identified.

As well as easement and vegetation inspections, Basslink also has a number of environmental compliance inspections which include storm water compliance, weed and pathogen compliance, land access compliance, fire suppression compliance, ground disturbance compliance as well as others. These inspection forms ensure Basslink is complying with regulatory authorities as well as environmental goals set out by Basslink.

In accordance with the Transmission Licence, Basslink reports on the compliance components of the Operational Environmental Management Plan, these are independently audited and reported to the regulator in accordance with the licence requirements which at present is every two years.

Any areas of the Electrical Line Clearance Plan or its implementation that are identified as requiring improvement will be reported to Basslink senior management. Any improvements would be identified and Basslink would provide, where reasonably practicable, the resources' required ensuring its implementation.

Any amendments instructed by Energy Safe Victoria will be actioned within the time specified in the Electrical Safety (Electrical Line Clearance) Regulations.

#### **14.1 KEY PERFORMANCE INDICATORS**

Basslink Pty Ltd has a range of Key Performance Indicators that are used to determine the level of compliance with the Electrical Safety (Line Clearance) Regulations 2015 ("the Code"), Basslinks Electrical Safety Management System (ESMS) & Basslinks Electrical Line Clearance Plan. These Indicators are utilised to analyse compliance and ensure that appropriate action is taken to improve compliance if required.

***Note 1: Details of the Key Performance Indicators requirements are provided in Basslink Procedure "ES1012 Key Performance Indicators".***

## **20. CONSULTATION AND NOTICE**


Basslink has a well-developed relationship with all of its land owners, before any work is to be done on private land the land holders are contacted in accordance with the code (at least 14 days but not more than 60 days before the intended cutting or removal), they are then informed about the work that is to be undertaken and if needed a Basslink representative will meet them on their property to further discuss the works. File notes are recorded and kept, detailing consultation with landowners. If the work is not completed within the notification period, the landowner will be consulted regarding the rescheduling of the work and if required a new notification will be issued.

Consultation and Notice requirements are specified in Appendix C "Land Access Management Plan' section 8.1.

## **APPENDIX A**

### **VEGETATION MANAGEMENT PLAN**

This procedure forms part of the Basslink Operations Environmental Management Plan (OEMP). This plan is approved by Victorian, Tasmanian and Federal Governments with a five-yearly review cycle. References to legislation and relevant agencies throughout this document are correct at the time of revision of the document and should be taken to refer to any successor legislation and agencies where these have changed following issue of this version of the Basslink OEMP.

<b>No:</b> OEMP-VM	<b>Issue:</b> Version 3	<b>Date:</b> April 2017
<b>Key Process:</b> Maintenance		
<b>Title:</b>  <h2 style="text-align: center;">Vegetation Management Plan</h2>		
<b>Authorised by:</b>	<b>BPL Operations Manager</b> Mark Shilliday	

## 1. PURPOSE

This document sets out the procedures to manage the clearance of vegetation and disposal of cleared residue on and adjacent to the Basslink easement.

Vegetation clearance is required to control hazardous trees and re-growth on and adjacent to the easement, to maintain safe and secure operation of the Basslink infrastructure and to ensure the infrastructure does not pose a fire hazard.

## 2. RESPONSIBILITIES

The Basslink Pty Ltd (BPL) manager responsible for operations is accountable for this document and its implementation. All BPL employees and contractors are responsible for compliance with this document and ensuring others do likewise.

## 3. RISK RATING

The likelihood of fire, or an impact on Basslink infrastructure as a result of uncontrolled re-growth and inattention to the hazards posed by ageing, diseased or damaged trees is unlikely with implementation of the procedures in this plan but the potential consequence of such an impact is severe, as fire could damage property and affect ecological values on the easement. Therefore, the residual risk rating for these issues is high.

		Consequence				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Rare	Low 1	Low 2	Low 3	Low 4	Low 5
	Unlikely	Low 2	Low 4	Low 6	High 8	High 10
	Possible	Low 3	Low 6	High 9	Extreme 12	Extreme 15
	Likely	Low 4	High 8	Extreme 12	Extreme 16	Extreme 20
	Almost certain	Low 5	High 10	Extreme 15	Extreme 20	Extreme 25



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## 4. OBJECTIVES

In native vegetation, the Basslink easement has been cleared such that all understorey vegetation up to 1.8 m in height or one-sixth the minimum ground clearance in riparian corridors is retained. This has been done to preserve ecological biodiversity on the easement and to fulfil the conditions of approval of the project. This allowance for understorey and mid-storey vegetation complies with legislated electrical safety clearances.

Vegetation management on the Basslink easement aims to preserve ecological biodiversity whilst maintaining safe and secure operation of the infrastructure. Figures 1 - 5 show the vegetation types, ecological vegetation communities and species of conservation significance on or adjacent to the Basslink easement. The management methods described in this plan are designed to minimise impact on retained vegetation and in some instances, promote species diversity.

The objectives of vegetation management are:

- To mitigate the potential for Basslink infrastructure to cause a fire.
- To protect the Basslink infrastructure.
- To provide a safe working environment.
- In native vegetation, to protect the ecological values of the vegetation to be retained on the easement.
- To ensure compliance with applicable legislation, guidelines and codes.

## 5. DEFINITIONS

**Access track** – an access route formed by use (e.g., wheel tracks) or a formed earthen track with or without a gravel surface. The nominal width of an access track, which may include a formation, table drains, batters and embankments, is 6 m. The width of the access track will vary with the terrain.

**Easement** – the land over which BPL has the right to construct, maintain and operate the Basslink infrastructure. The nominal width of the easement is 65 m for 500-kV HVAC overhead line, 55 m for 400-kV HVDC overhead line, 40 m for 220-kV HVAC overhead line and 11.5 m for underground cables, i.e., 400-kV HVDC, metallic return and fibre- optic cables. The nominal width of a carriageway easement is 6 m; however, this will vary with the terrain.

**Fine fuel** – grasses, twigs and brush typically with stems less than 6 mm in diameter. Sometimes referred to as light fuel or flash fuel due to its volatility.

**Fire authority** – the authority referred to by legislation responsible for fire management. For example, in Victoria the Country Fire Authority (CFA), in Tasmania Fire Service (TFS), and the relevant government department in each state.

**Fire danger period** – commonly known as a fire season this is the period declared by a fire authority in which it is an offence to light a fire without a permit and cause a fire to spread i.e., not attempt to suppress a fire. A fire danger period typically extends from 1 November to 30 April in southern Australia. However, it can be proclaimed earlier and continue after this period. Fire restrictions can also apply outside the fire danger period, as declared by the fire authority.

**Heavy fuel** – stumps, logs and large branches that substantially increase the amount of heat generated by a fire.

**Inspection** – the visual checking of components of the Basslink infrastructure, including but not limited to access tracks, easement and buildings and structures—converter station, transition station and overhead transmission line. Inspection may be carried out on foot, from a vehicle or from a helicopter or fixed wing aircraft.

**Mechanised clearance** – crushing, cutting or mulching of brush or thicket regrowth using a heavy chopper-roller (a large drum with cutting/crushing blades), a mulcher or other similar equipment towed by a tractor or equivalent.

**Sensitive native vegetation** – native vegetation in the Stradbroke Flora and Fauna Reserve (Figure 1 of this plan), riparian corridors, wetlands and significant flora (Figures 3 and 5 of this plan).

**Transmission line** – metallic conductors and an optic-fibre ground wire suspended above ground by insulators attached to galvanised steel-lattice towers and/or folded-plate steel poles at approximately 400 m intervals.

## 6. REFERENCES

The legislation, guidelines and codes listed in this section may be subject to revision during the life of Basslink. Where this occurs, the reference is relevant to the latest version of the document.

### 6.1 APPLICABLE LEGISLATION

#### Commonwealth

- Environment Protection and Biodiversity Conservation Act 1999.

#### Victoria

- Catchment and Land Protection Act 1994.
- Conservation, Forests and Lands Act 1987.
- Electricity Industry Act 2000.
- Electricity Safety Act 1998.
- Electricity Safety (Bushfire Mitigation) Regulations 2013.
- Electricity Safety (Electric Line Clearance) Regulations 2015.
- Environment Protection Act 1970.
- Flora and Fauna Guarantee Act 1988.
- Forests Act 1958.
- Victorian Plantations Corporation Act 1993.
- Wildlife Act 1975.

#### Tasmania

- Electricity Supply Industry Act 1995.
- Environmental Management and Pollution Control Act 1994.
- Forestry Act 1920.
- Land Use Planning and Approvals Act 1993.

- National Parks and Reserves Management Act 2002.
- Nature Conservation Act 2002.
- Threatened Species Protection Act 1995.
- Weed Management Act 1999.

## **6.2 APPLICABLE GUIDELINES AND CODES**

### **Commonwealth**

- Gippsland Regional Forest Agreement (March 2000).

### **Tasmania**

- Threatened Tasmanian Eagles Recovery Plan 2006-2010.
- Threatened Species Strategy for Tasmania (2000).
- Natural Heritage Strategy for Tasmania (2013-2030).
- Tasmania's Forest Practices Code (2015).

### **Victoria**

- Code of Practice for Electrical Line Clearance.
- Code of Practice for Bushfire Management on Public Land (DSE, 2012).
- Fire Operations Plan - Gippsland Region 2016/17-2018/19.
- Victoria's Biodiversity Strategy (1997).
- West Gippsland Native Vegetation Plan (2003).
- Regional fire plans.

## **6.3 ASSOCIATED PLANS AND PROCEDURES**

- Land Access Plan (OEMP-LA).
- Incident Reporting Procedure (OEMP-IR).
- Weed, Pathogen and Pest Management Plan (OEMP-WP).
- Victorian Design Report (Enesar, June 2003).
- Tasmanian Design Report (Enesar, July 2003).

## 7. STANDARDS

The Victorian Code of Practice for Electric Line Clearance sets out the minimum clearances surrounding a transmission line. Table 7.1 and Figure 6 illustrate the minimum clearances of Basslink infrastructure against those required by the code of practice. Figures 7 and 8 show the nominal minimum clearances of the 400 kV HVDC overhead transmission line supported on steel lattice towers.

**Table 7.1 Minimum clearances of Basslink transmission line infrastructure**

Nominal Voltage and Support Type	Minimum Ground Clearance at Maximum Sag	Maximum Height of Vegetation <sup>1</sup>	Minimum Vertical Clearance Space <sup>2</sup>	Applicable Vertical Distance <sup>3</sup>	Minimum Horizontal Clearance Space <sup>4</sup>	Applicable Horizontal Distance <sup>5</sup>
400 kV steel lattice tower						
Conductor (400 kV)	10.7 m	1.8 m	6.4 m	8.9 m	6.4 m	24.3-25.1m <sup>6</sup>
Metallic return (24kV)	10.7 m	1.8 m	3.0 m	8.9 m	3.0 m	18.5 m
400 kV folded-plate steel pole						
Conductor (400 kV)	10.7 m	1.8 m	6.4 m	8.9 m	6.4 m	27.3 m
Metallic return (24kV)	10.7 m	1.8 m	3.0 m	8.9 m	3.0 m	16.3 m
220 kV double-circuit steel lattice tower	9.9 m	1.7 m	3.7 m	8.2 m	4.6 m	14.5 m
500 kV single-circuit steel lattice tower	15.0 m	2.5 m	6.4 m	12.5 m	6.4 m	21.6 m

Notes:

- Maximum height of vegetation retained on Basslink easement is one-sixth of minimum ground clearance. Exceptions are riparian vegetation where higher vegetation was retained for biodiversity conservation purposes and permitted as the generally wet conditions pose a lower fire risk. The Victorian Design Report (Enesar, June 2005) and Tasmanian Design Report (Enesar, July 2003) detail where riparian vegetation has been retained and the maximum permissible height.
- Column 3 of table in Section 30 Schedule 1 - Code of Practice for Electric Line Clearance (Victoria, 2015).
- Applicable vertical distance from conductor bundle in still conditions to maximum height vegetation on easement. See Figure 8 of this plan for 400 kV HVDC transmission line.
- Column 2 of Table in Section 30 Schedule 1 - Code of Practice for Electric Line Clearance (Victoria, 2015).
- Applicable horizontal distance from conductor bundle in still conditions to edge of easement and vegetation. See Figure 7 of this plan for 400 kV HVDC transmission line.
- Clearance varies depending on type of insulator used. Higher pollution insulators require longer cross-arms.

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## 8. ATTACHMENTS

- Figure 1: Location of Basslink infrastructure in Victoria and vegetation types.
- Figure 2: Ecological vegetation communities along the Basslink easement in Victoria.
- Figure 3: Flora and fauna sites of conservation significance on and adjacent to Basslink easement in Victoria.
- Figure 4: Vegetation communities on and adjacent to Basslink easement in Tasmania.
- Figure 5: Flora and fauna sites of conservation significance on and adjacent to Basslink easement in Tasmania.
- Figure 6: Basslink transmission line towers and pole.
- Figure 7: Nominal clearances of 400 kV HVDC overhead line – steel lattice tower.
- Figure 8: Nominal clearances of 400 kV HVDC overhead line – typical span.

## 9. PROCEDURES

### 9.1 ANNUAL INSPECTION AND REPORTING

- a) Undertake an annual inspection of the easement (see Figures 1 and 4) in late August/early September or at least one month prior to the declaration of a fire danger period:
  - To assess regrowth on the easement and whether abutting trees are hazardous. Where there is doubt about the health or stability of a tree, an arborist will be engaged to independently assess the tree before removal or lopping. Where the height of regrowth is in doubt, a surveyor will be engaged to check the height of vegetation and clearance to transmission line conductors.
  - To evaluate the effectiveness of any vegetation management activities carried out since the last inspection and the adequacy of the most recent risk assessment of regrowth.
  - To ensure compliance with the Code of Practice for Electric Line Clearance.
- b) Prepare and submit an Electric Line Clearance Plan detailing the results of the assessment of regrowth and hazardous trees and vegetation management activities undertaken and planned to Energy Safe Victoria in accordance with submission dates in relevant legislation. This report is to take into account the requirements of the Bushfire Mitigation Plan prepared in accordance with the Electricity Safety (Bushfire Mitigation) Regulations 2013.
- c) The statement of vegetation management activities is to include:
  - Location and extent of vegetation clearance required and undertaken.
  - Method of vegetation clearance and residue disposal.
  - Contractor and brief statement of qualifications and experience in vegetation management on electricity transmission line easements.
  - Schedule of proposed work and residue disposal activities.

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## **9.2 TOWER MAINTENANCE**

- a) Vegetation may be cleared to ground level in the previously disturbed area of transmission towers (i.e., 10 m radius of the centreline of the tower) for safe access. Clearance must be in accordance with the procedures in this plan.
- b) Where an existing access track does not exist and if required, an access track may be cleared through the easement to the tower to allow for safe access for tower maintenance. Clearance must be in accordance with the procedures in this plan.

## **9.3 PREPARATION AND PLANNING**

### **9.3.1 TRAINING**

- a) Engage a suitably qualified person skilled in the assessment of native vegetation or arrange for a suitably qualified person to train personnel in the assessment of native vegetation, in particular -regrowth rates and tree health.
- b) Engage a suitably qualified and licensed native wildlife handler, to train personnel in how to inspect hazardous trees for fauna.

### **9.3.2 PRIOR TO ENTRY TO EASEMENT**

- a) Implement the procedures of the Land Access Plan (OEMP-LA) that includes notification requirements.
- b) Implement the procedures of the Weed, Pathogen and Pest Management Plan (OEMP-WP).

### **9.3.3 PRIOR TO CLEARING VEGETATION OR REMOVING TREES**

- a) Notify and consult with Parks Victoria prior to clearing vegetation or removing trees in the Stradbroke Flora and Fauna Reserve and Ninety Mile Beach Coastal Reserve.
- b) Clearly identify any regrowth to be cleared by reference to the adjacent towers.
- c) Clearly identify and mark hazardous trees to be removed or lopped with pink flagging tape and annotate the flagging tape with the words “authorised for removal” using a permanent ink marker.
- d) Clearly identify the location and extent of any threatened species and mark with blue flagging tape. If in doubt, engage a suitably qualified botanist to assist in the identification of the threatened species. The location of known threatened species is shown in Figures 3 and 5 of this plan and detailed in the reports Spring Pre-Clearance Survey (Brett Lane & Associates, 2003) for Tasmania and Victoria.
- e) Engage a suitably qualified and licensed native wildlife handler to remove and release—to the side of the easement—any fauna resident in hazardous trees before removal or lopping.
- f) Do not store or park vehicles and equipment on or over native vegetation.

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## 9.4 VEGETATION MANAGEMENT

Vegetation management methods for the different vegetation types are set out below. Procedures that apply to all vegetation types are:

- a) Do not traverse, clear or damage native vegetation in or along watercourses other than as prescribed in Clearing native riparian or wetland vegetation regrowth.
- b) Do not disturb threatened species or significant fauna habitat.
- c) Comply with the requirements for vegetation management as part of the Bushfire Mitigation Plan prepared in accordance with the Electricity Safety (Bushfire Mitigation) Regulations 2013.

### 9.4.1 CLEARING AND DISPOSAL OF NATIVE VEGETATION REGROWTH

Aim: To clear and dispose of vegetation in a way that minimises disturbance of soils and the understorey, promotes the recovery of disturbed vegetation, provides habitat for ground dwelling species, discourages access along the easement and provides a safe working environment. To achieve an average post-disposal heavy fuel load of 20 tonnes/ha or less for the area of easement in each property to minimise the intensity of wildfire.

- a) Clear all vegetation higher than 1.8 m above ground level. Clear all tree regrowth above 1.8 m to ground level. Clear all shrub regrowth to a height that preserves ground cover and maintains species composition, habitat features (i.e., logs) and protects significant flora in sensitive native vegetation.
- b) Use the most appropriate and safe method for management of the regrowth including by hand using chainsaws or clearing saws with appropriate cutting blade (e.g., chisel tooth blade) or mechanised clearance. Clearing shall be done in a manner that minimises soil disturbance and damage to retained vegetation and habitat features by limiting screwing of machinery and equipment.
- c) Clear native riparian or wetland vegetation in accordance with the requirements set out in Section 9.4.2.
- d) Where safe, fall hazardous trees into the easement to minimise potential impacts to vegetation outside the easement.
- e) Distribute residue evenly across the easement and at least 4 m from the edge of the easement.
- f) All felled material is to remain on the easement.
- g) Distribute residue to achieve an average post-disposal heavy fuel load of 20 tonnes/ha or less for the area of easement in each property.
- h) Cut all branches and foliage such that no felled vegetation is higher than 1.5 m above ground level. Where trunks are to be left in-situ and are off the ground, cut the trunk into sections, as required, to ensure that at least 80% of the trunk is in contact with the ground.
- i) Do not windrow the residue.

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## **9.4.2 CLEARING AND DISPOSAL OF NATIVE RIPARIAN OR WETLAND VEGETATION REGROWTH**

Aim: To clear vegetation in a way that preserves the structure and composition of the understorey and disposes of the residue in a way that minimises impacts on the ecological function of the retained vegetation by emulating, where possible, natural processes.

- a) Clear all overstorey vegetation (trees and large shrubs) exceeding the height restriction (one-sixth of minimum ground clearance as shown on the overhead line drawings held by BPL) for the watercourse/wetland within and adjacent (within 10 m of the edge of the riparian/wetland vegetation) to riparian vegetation by hand using chainsaws or clearing saws with appropriate cutting blade (e.g., chisel tooth blade).
- b) Clear all overstorey vegetation to ground level (< 0.30 m high) and treat stumps with a suitable basal poison to inhibit regrowth.
- c) Fall trees away from watercourse/wetland and leave felled trees in-situ. Do not snig or move felled trees.
- d) Cut all branches and foliage such that no felled vegetation is higher than 1.5 m above ground level.
- e) Clear all felled vegetation from watercourse channels so that water flow is not impeded.

## **9.4.3 CLEARING AND DISPOSAL OF REGROWTH IN PLANTATIONS**

Aim: To limit natural regeneration and maintain the easement by slashing.

- a) Clear all vegetation including natural and wind-blown regeneration, scrubs and grasses by slashing or mulching.

## **9.4.4 CLEARING AND DISPOSAL OF VEGETATION IN FARMLAND**

Aim: To remove any vegetation (trees and large shrubs) that has been planted on or has regenerated on the easement.

- a) Use appropriate equipment to clear vegetation in accordance with the requirements of the landowner. For example, use slashing or mulching to control immature regrowth on the underground cable easement.
- b) Minimise damage to crops, pasture and soils by using, where appropriate, tracked equipment or chainsaws. Limit screwing equipment around to minimise soil disturbance.
- c) Minimise damage to adjacent vegetation by falling trees into the easement, where possible.
- d) Minimise damage to fences and farm infrastructure by falling trees away from these assets. Where this is not possible, temporarily remove asset (e.g., fence) or progressively fall tree with the assistance of a 'cherry-picker' to avoid damage to property.
- e) Dispose of clearing residue in accordance with landowner requirements.



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## **9.5 DISPOSAL OF CLEARING RESIDUE BY BURNING**

Basslink traverses state forests in which forest fuel loads (fine fuel and heavy fuel) are managed by fuel-reduction burning programs. In Victoria, the Fire Operations Plan – Gippsland Region sets out the burning program for the Mullungdung State Forest. Forestry Tasmania plan and undertake fuel reduction burns in the State Forest to the east of Mt George.

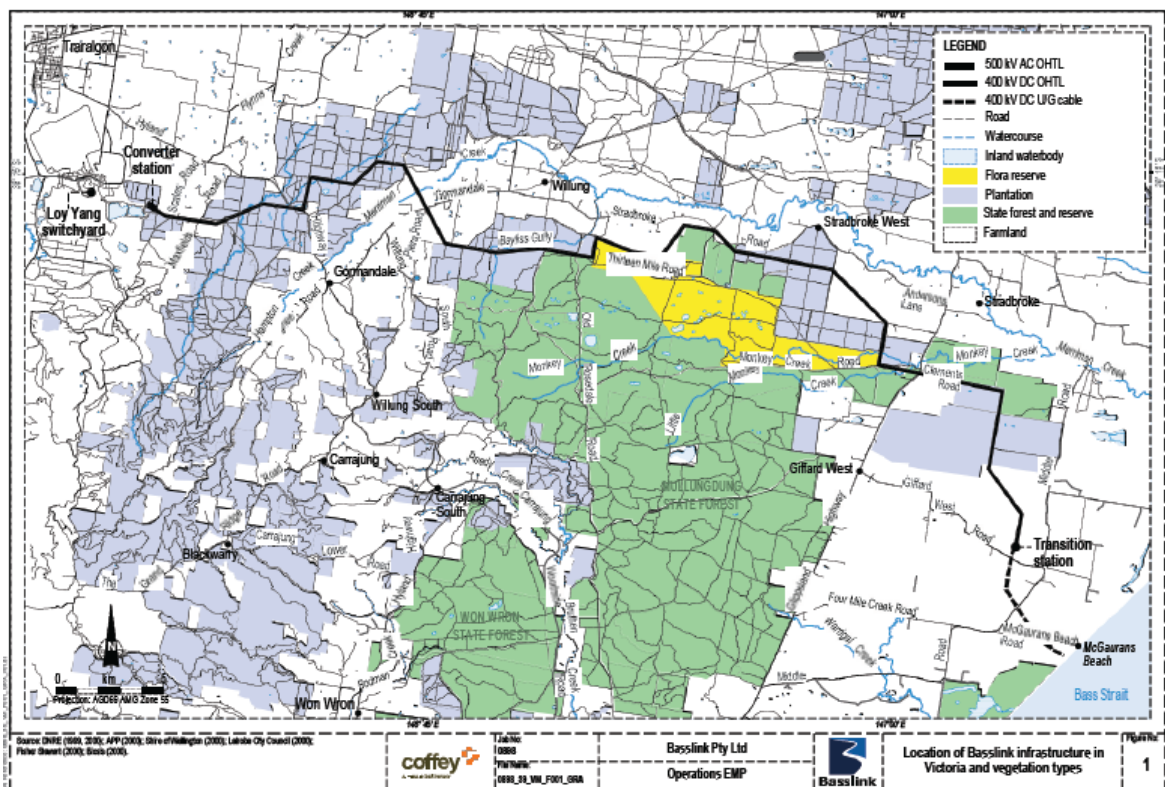
Fuel management zones in which prescribed burning is carried out, encompass those parts of the Basslink easement. The following procedures apply to the management of fuel reduction burns on or adjacent to this part of the Basslink easement and to any request by BPL for the responsible landowners to carry out fuel reduction burning on its behalf.

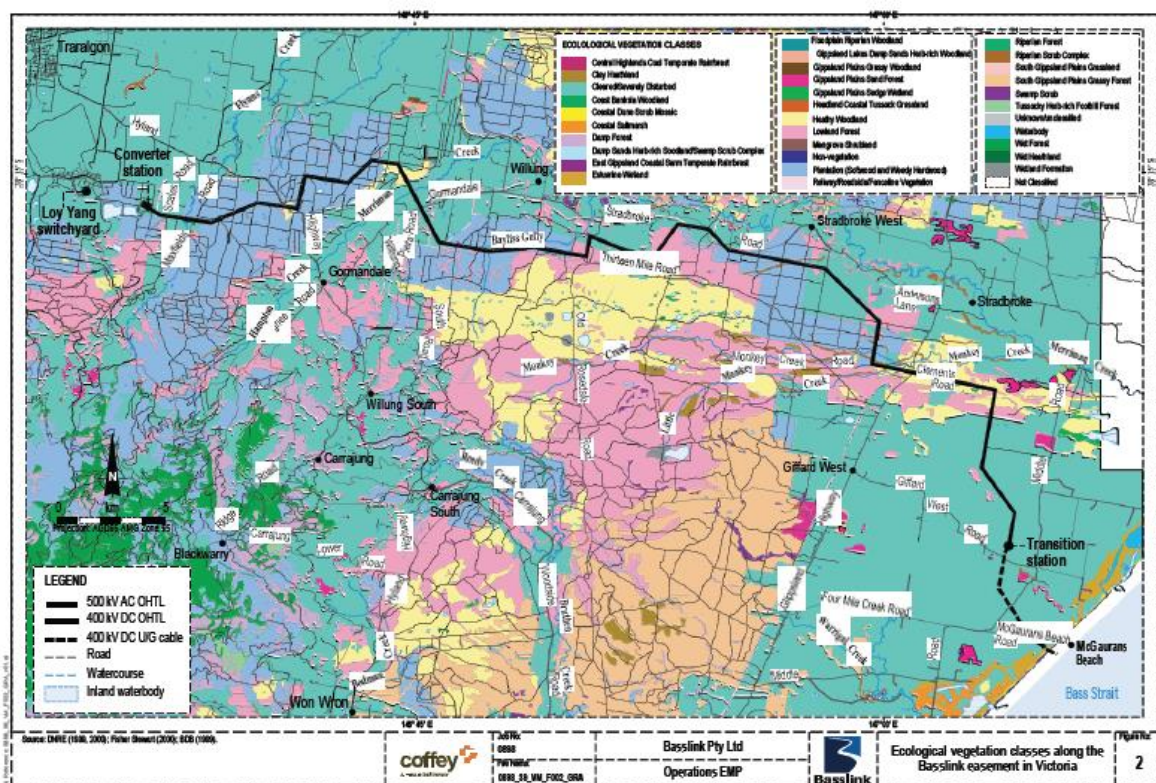
- a) BPL will consult with the responsible landowners and appropriate government agencies on the nature, extent and timing of prescribed burning as detailed in the relevant fire operations plan.
- b) BPL will co-operate with the responsible landowners and relevant fire authority in the management of prescribed burning on or adjacent to the easement including measures to ensure the safety of personnel working in close proximity to the transmission line.
- c) BPL will not undertake the disposal of clearing residue on public land without the prior written approval of the responsible landowners and relevant fire authority.

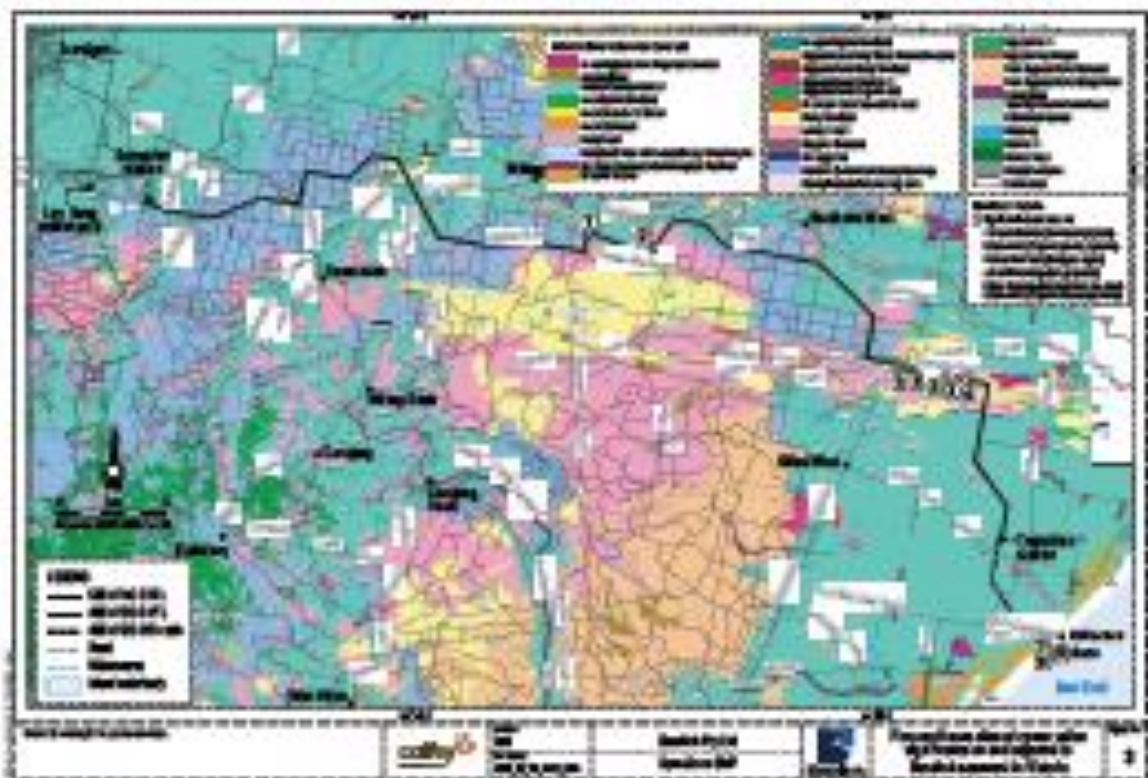
## **10. PERFORMANCE MEASURES**

- a) All vegetation management work carried out in accordance with relevant guidelines.

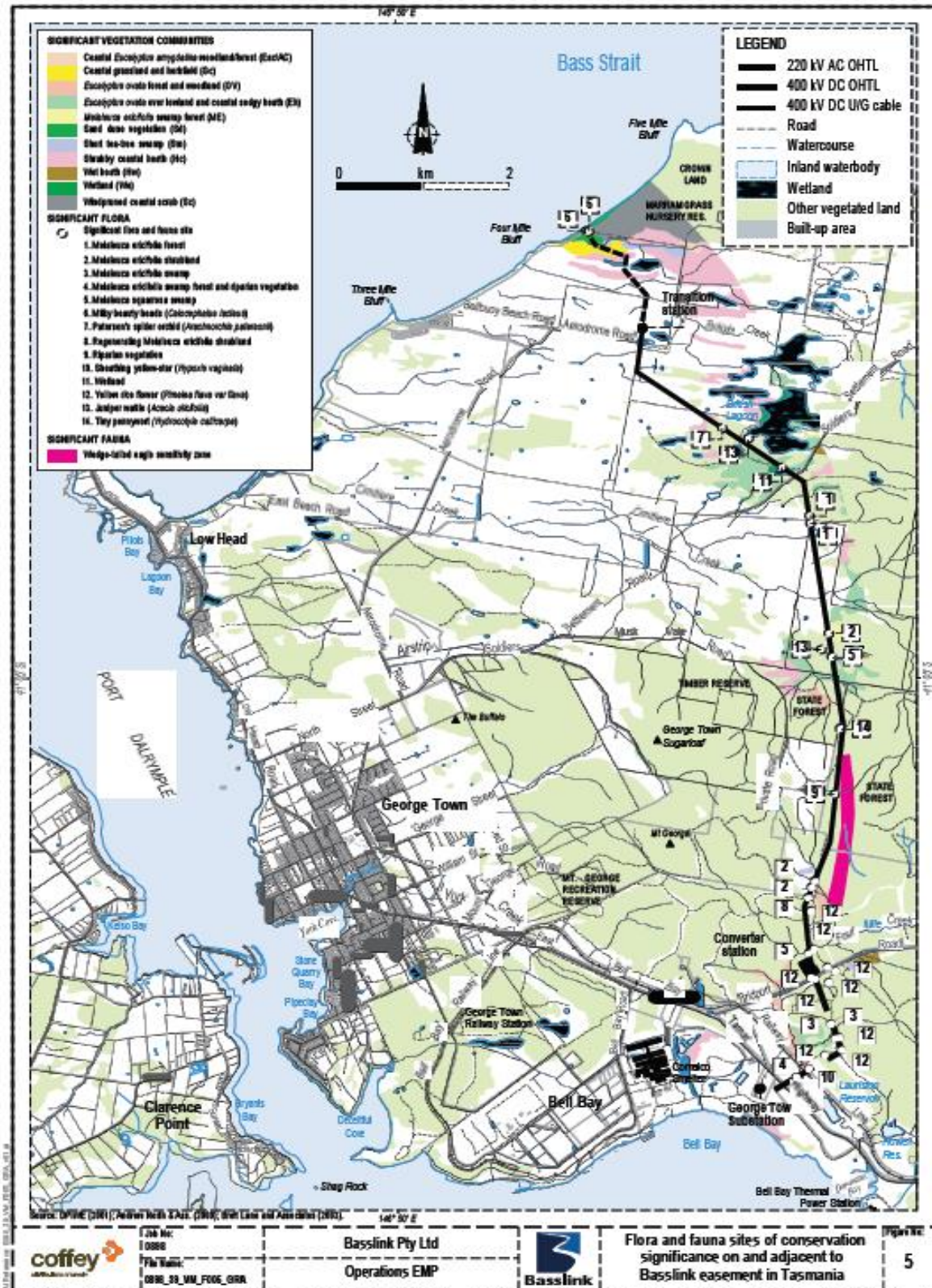
## FIGURES

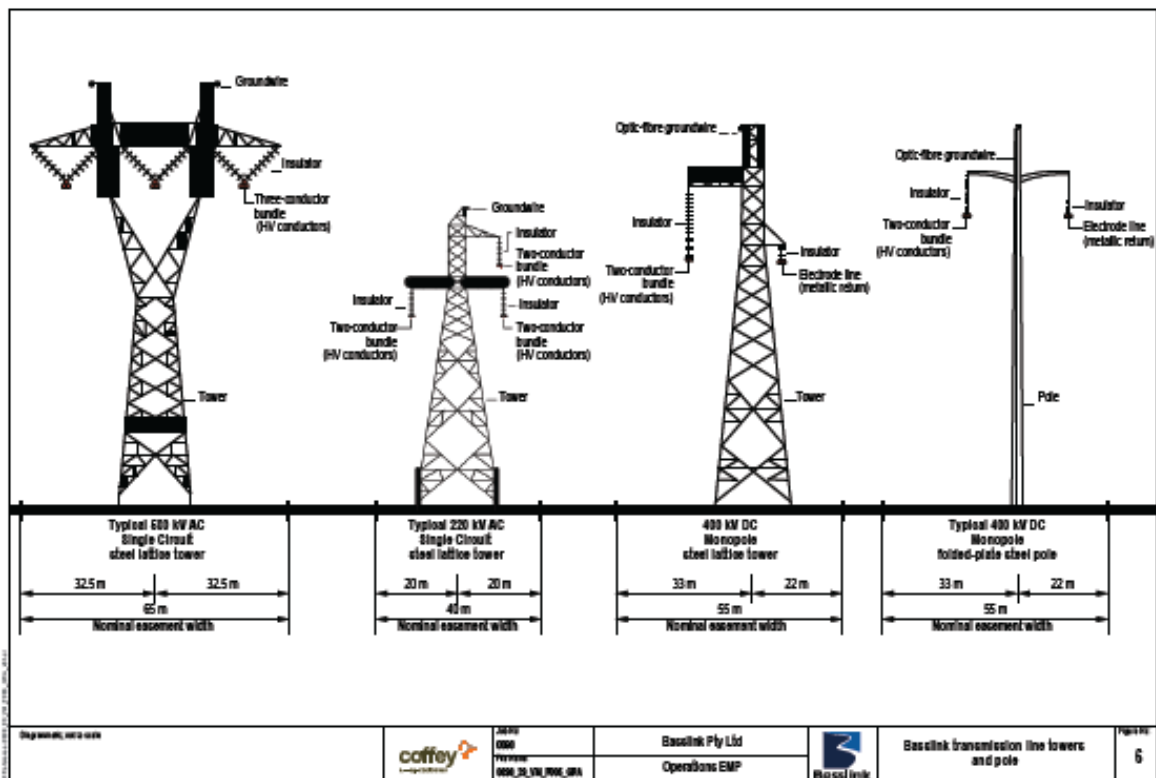


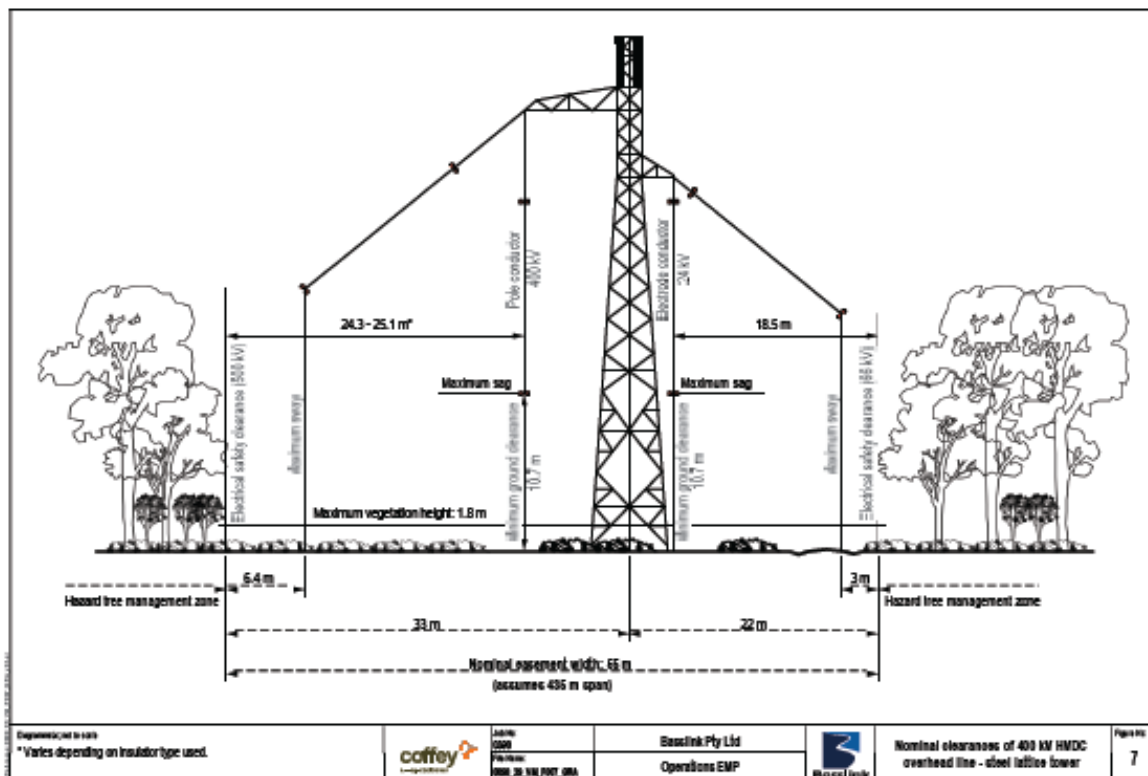




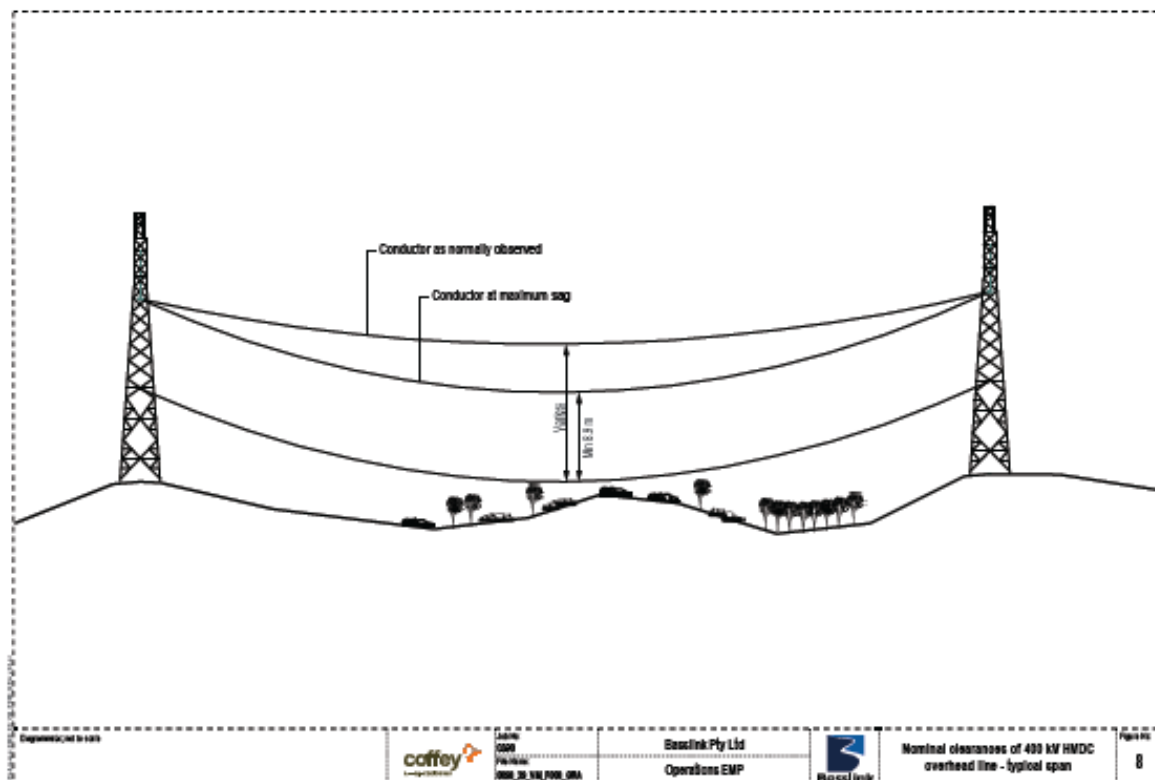














## **APPENDIX B**

### **BASSLINK PROCEDURE ES0027 MAINTENANCE OF CLEARANCE SPACE BETWEEN TRANSMISSION LINES TOWERS AND VEGETATION**

<b>No:</b> ES0027	<b>Issue:</b> 7.0	<b>Date:</b> March 2017
<b>KEY PROCESS:</b>	Electrical Safety	
<b>TITLE:</b>	Maintenance of Clearance Space between Transmission Lines, Towers and Vegetation	

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<b>Authorised for Issue by:</b>	<b>Chief Executive Officer</b>	Malcolm Eccles	
	<b>Operations Manager</b>	Mark Shilliday	

## 1 INTRODUCTION

This procedure specifies the process which shall be implemented to minimise the:

- Risk of electric lines starting fires:
- Possibility of causing electrocution:
- Adverse effects of electric lines on adjacent vegetation.

This document forms part of the Basslink Electrical Safety Management System.

## 2 RESPONSIBILITIES

The Operations Manager is responsible for ensuring the implementation of this procedure. Implementation of the requirements of this procedure is the responsibility of Operations and Maintenance personnel.

## 3 DEFINITIONS

<b>CMMS</b>	Computerised Maintenance Management System
<b>Hazard Space</b>	The space abutting the managed vegetation zone from which vegetation could fall into the space created by the safety clearances for transmission lines or tower
<b>Managed Vegetation Zone</b>	Land in the vicinity of transmission lines where vegetation growth must be controlled for safety reasons and normally coincides with easements and the clearance space distances shown in Table 1.

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<b>Responsible Person</b>	Means a person responsible under Section 84 of the <i>Electricity Safety Act 1998</i> for the keeping of the whole or any part of a tree clear of a transmission line.
<b>Vegetation</b>	Means the whole or any part of a tree or plant
<b>Hazard Tree</b>	Is Defined in Clause 8 – Code of Practice for Electrical Line Clearance 2015
<b>Danger Tree</b>	Means a tree that has been identified by BPL as a possible “Hazard Tree”

## 4 REFERENCES

- • Electricity Safety (Bushfire Mitigation) regulations 2013
- • Electricity Safety (Network Assets) Regulations 1999
- • Electricity Safety (Electric Line Clearance) Regulations 2015
- • Electricity Safety Act 1998
- • Code of Practice on Electrical Safety for work on or near high voltage electrical apparatus
- (The Blue Book)
- • Basslink Operations Environmental Management Plan

## 5 ATTACHMENTS

Not applicable

## 6 RECORDS

All BPL Operators and Maintenance Officers are to be trained in this procedure. A record of this training will be maintained by BPL.

## 7 THE PROCEDURE

### 7.1. VEGETATION MANAGEMENT GUIDANCE

Vegetation management on Basslink Pty Ltd easements will be conducted in accordance with the Operational Environment Management Plan. The specific details are contained within the Basslink Vegetation Management Plan.

### 7.2 EASEMENT / TOWER INSPECTIONS

Routine easement inspections shall be conducted to:

- Enable vegetation infringing or approaching the statutory clearance space to be identified and recorded,
- Identify danger trees,
- Ensure that the towers, fitting, insulators, conductors, anti-climb, signs & OPGW are intact and in operating condition as per design,
- ensure that the towers, fittings and conductors are maintained in a serviceable condition,
- Earth connections are intact,
- Foundation integrity,
- Ensure that the easement, tower & tracks are maintained in a passable condition by 4WD vehicle and free from vegetation blocking access, and
- Check for unauthorised works on the easements.

### **7.2.1. EASEMENT INSPECTIONS**

Easement inspections shall be carried out at six (6) monthly intervals. These inspections may be carried out on foot, from a vehicle or from the air.

### **7.2.2. DANGER/HAZARD TREE INSPECTIONS**

Danger tree inspections will be carried out annually by BPL, these inspections will identify tree health, distance from the easement and distances from the conductor if felled towards the line. If a tree is calculated to infringe on safety clearance distances if felled, a suitably qualified arborist will be engaged to assess the tree.

### **7.2.3. GENERAL TOWER INSPECTIONS**

A general tower inspection shall be carried out at six (6) monthly intervals. These inspections may be carried out on foot, from a vehicle or from the air and may coincide with the easement inspections.

### **7.2.4. DETAILED TOWER INSPECTIONS**

Each tower shall be inspected in detail every three (3) years. This inspection shall be carried out by climbing the tower and closely examining the tower members and the associated line fittings.

### **7.2.5. RECORDING OF ISSUES**

Issues identified shall be recorded in the CMMS.

## 7.2.6. RECTIFICATION OF VEGETATION ISSUES

The rectification of vegetation issues shall be carried out in accordance with the requirements of the Vegetation Management Plan.

## 7.3. CLEARANCE SPACE DISTANCES

The clearance space for a transmission line is as follows:

- There shall be no vegetation vertically above the transmission line; and
- The horizontal dimension of the clearance space is that marked 'h' in Figure 1 and is specified for the spans and nominal voltages given in Table 1. as measured when the conductor is at its still position; and
- The vertical dimension of the clearance space is that marked 'v' in Figure 1 and Figure 1a and specified for the spans and nominal voltages given in Table 1 as measured from the ground vertically below the transmission line at the lowest point that the conductor may assume because of sag of the conductor under the highest temperature for which the line was designed.

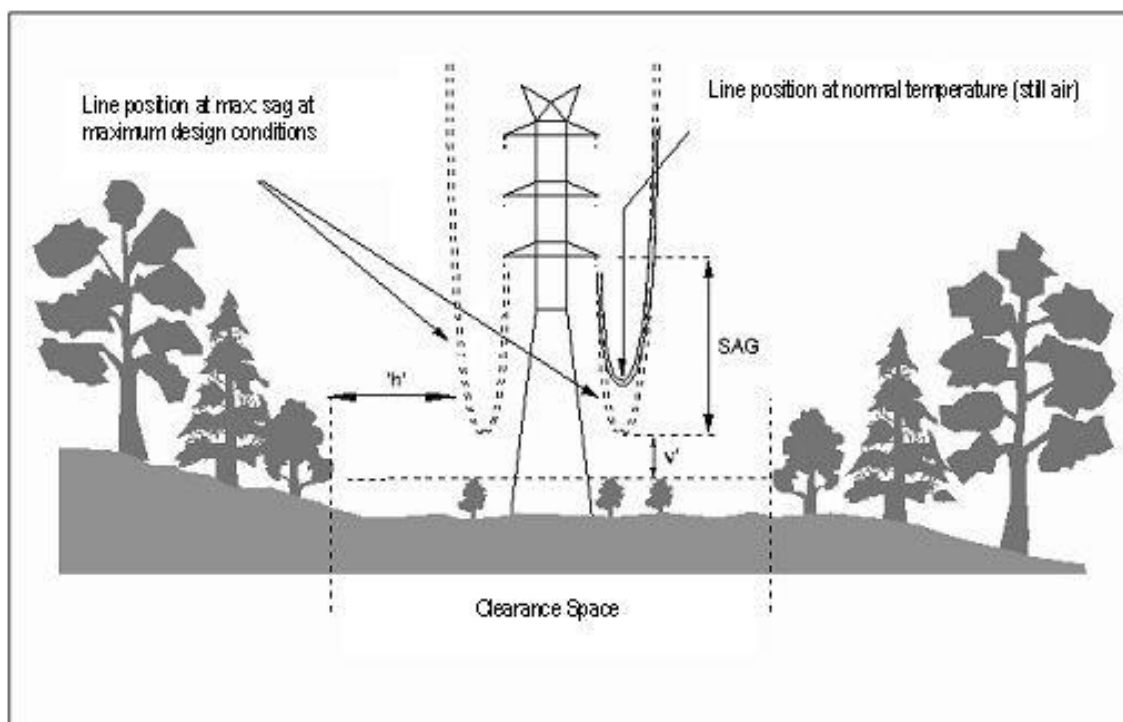


Figure 1

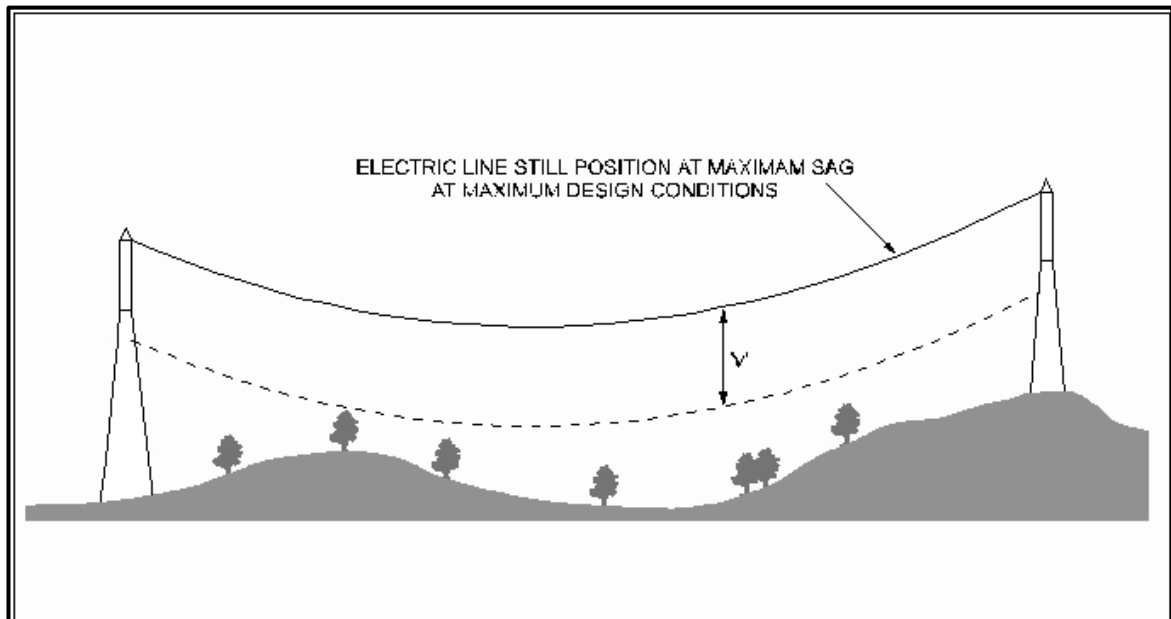


Figure 1a

Nominal Voltage	Clearance spaces after allowance for full sag		Clearance spaces	
	Spans up to and including 400	Spans exceeding 400 metre	Spans up to and including 400	Spans exceeding 400 metre
	1	2	3	4
	Dimension 'v' (mm)	Dimension (mm) 'v' (mm)	Dimension (mm) 'h' (mm)	Dimension (mm) 'h' (mm)
<b>Metallic Return</b>	3000	3000	3000	3000
<b>220kV AC</b>	3700	4500	1300 0	1500 0
<b>400kV DC</b>	6400	6750	1500 0	1700 0
<b>500kV AC</b>	6400	6750	1500 0	1700 0

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## **7.4. VEGETATION CLEARANCE – PRIORITIES**

The following priorities shall be allocated to vegetation clearance requirements:

Note: The maximum height of vegetation retained on the 400kV DC and 500kV easements is specified in the OEMP Vegetation Management Plan - Table 7.1 'Minimum Clearances of Basslink Transmission Line Infrastructure'

### **PT1 - to be cleared as soon as possible (Within 24 Hrs)**

- Vegetation which is measured to be inside the clearance space,
- Hazard trees where failure of the tree is likely to occur at any moment.

### **PT30 - to be cleared within a 30-day period**

- Vegetation which is within the managed vegetation zone and has a height greater than 3 metres, or
- Hazard trees identified as being potentially unsound. (An Arborist or suitably qualified person may be engaged to assess the trees health and make recommendations regarding its removal),
- Note: PT30 vegetation that is observed during the fire danger period shall be removed as soon as practicable.

### **PT 90 - to be cleared within a 90-day period**

- Vegetation growing within the managed vegetation zone that may exceed 3 metres during the fire danger period, or
- Vegetation that may grow into the managed vegetation zone during the fire danger period and has a height greater than 3 metres.

### **PT180 – to be cleared within a 180-day period**

- Vegetation within the managed vegetation zone that is higher than specified within the Vegetation Management Plan, or
- Vegetation adjacent to the easement which will require clearing / treating prior to the following fire danger period to ensure that the managed vegetation zone remains clear throughout that period, or
- Sound hazard trees are managed

### **PT365 - to be cleared / treated within a 365-day period**

- Areas of the Easement that require slashing or weed control at some time in the future, or. Any vegetation that will require treatment at some time to ensure that:
- Fuel loads are kept low to reduce the risk of line damage or operational incidents due to a fire on the easement,
- Inappropriate species (e.g. Pines, Wattles, Weeds) are progressively removed or treated.

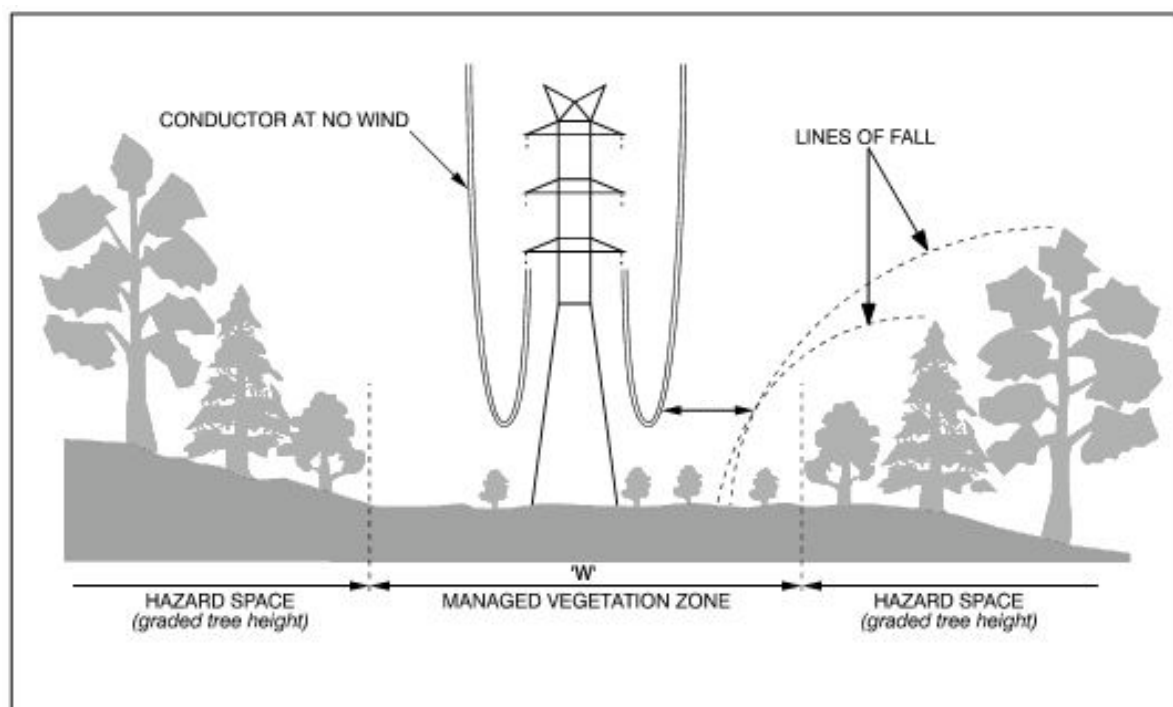


## PT900 - To be monitored through cyclic periods

Significant areas of the Easement that contain Native Vegetation or Riparian Zones that require specific methods of Management as outlined in the OEMP to ensure that:

- The clearance space remains clear,
- All vegetation that could threaten the security of the line other than by intruding into the clearance space, e.g. dense scrub or high fuel loads,
- Adequacy of clearances is readily observable in the course of a patrol, inspection or audit.

### 7.5. VEGETATION IN THE HAZARD SPACE



**Figure 2**

Vegetation in the hazard space shall be managed to reduce the risk of falling trees or parts of trees entering the clearance space. The hazard space adjacent to easements shall be assessed to identify hazard trees.

Figure 2 shows the grading of vegetation height in the hazard space where the trees are tall enough to infringe the safety clearance if these were to fall towards the line. Consideration of vegetation in the hazard space shall include the potential height of the tree, its distance from the line, and the height of the transmission line and the slope of the ground. Assessment is made with reference to the still air position of the conductor.

## 7.6. 400KV DC LINE CLEARANCE SPACE

The 400kV DC line has been constructed with clearance space in excess of the minimum clearance distances specified in Section 5.3. The nominal clearance distances for the HVDC line are shown in Figure 3.

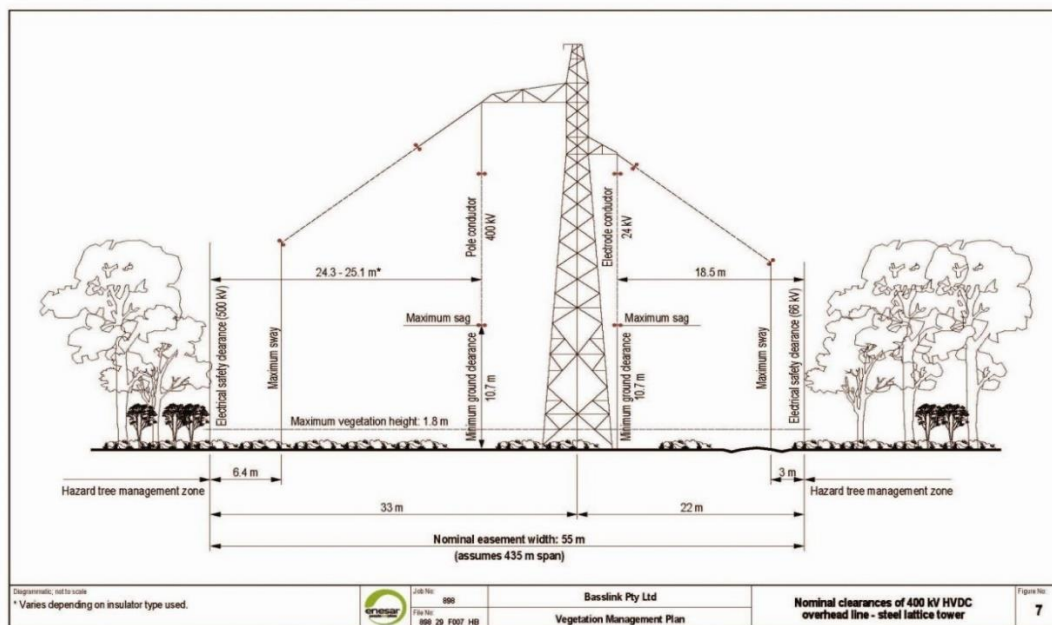
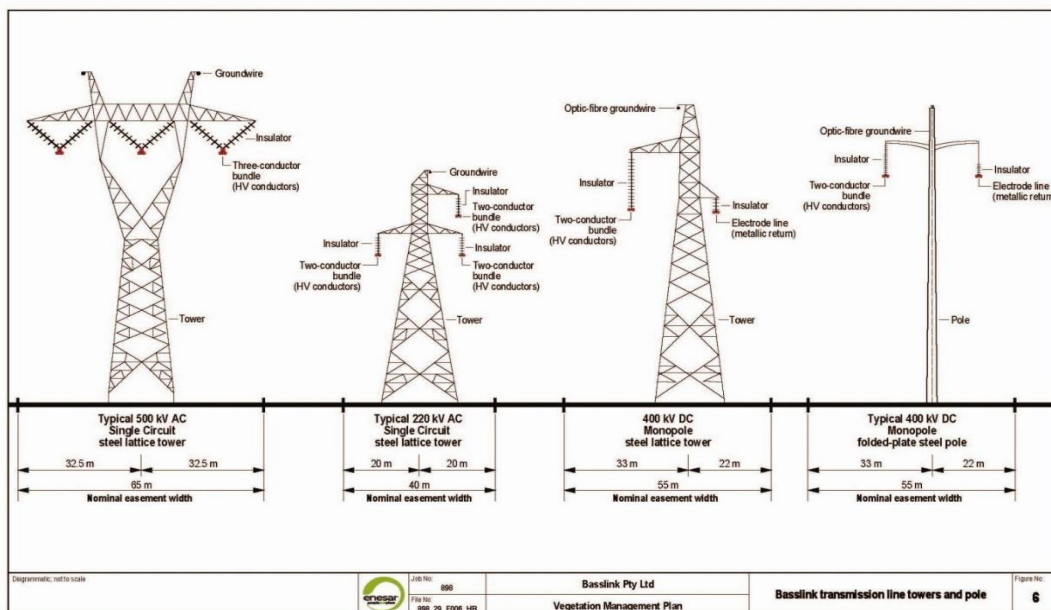


Figure 3

## 7.7. BASSLINK NOMINAL TRANSMISSION LINE EASEMENT WIDTHS

The nominal easement widths for the Basslink Pty Ltd transmission lines are shown in Figure 4.



**Figure 4**

## 8 DOCUMENT MANAGEMENT RECORD

Document Title	Maintenance of Clearance Space between Transmission Lines, Towers and Vegetation
Document No	ES0027
Previous Review Date	March 2017
Next Review Date	March 2020

Document Issue/Change Control				
Issue	Date	Notes of change	Originator	Approved for Use
1	Feb 2007	First Issue	K. Brogan	Malcolm Eccles
2	Feb 2008	Organisational Change and Document Review	K. Brogan	Malcolm Eccles
3	Sept 2009	Document review	M. Shilliday	M. Eccles
4	Aug 2010	Document review	M. Shilliday	M. Eccles
5	Aug 2011	Update to reference and definitions	M. Shilliday	M. Eccles
6	March 2014	Update to reference and definitions	M. Shilliday	M. Eccles
7	Feb 2017	Update to reference and definitions	M. Shilliday	M. Eccles

## **APPENDIX C**

### **LAND ACCESS MANAGEMENT PLAN**

This procedure forms part of the Basslink Operations Environmental Management Plan (OEMP). This plan is approved by Victorian, Tasmanian and Federal Governments with a five-yearly review cycle. References to legislation and relevant agencies throughout this document are correct at the time of revision of the document and should be taken to refer to any successor legislation and agencies where these have changed following issue of this version of the Basslink OEMP.

<b>No:</b> OEMP-LA	<b>Issue:</b> Version 3	<b>Date:</b> April 2017
<b>Key Process:</b> Maintenance		
<b>Title:</b>  <h2 style="text-align: center;">Land Access Plan</h2>		
<b>Authorised by:</b>	<b>BPL Operations Manager</b> Mark Shilliday	

## 1 PURPOSE

This document outlines the procedures that must be followed when accessing the easement on public or private land. Access is required to the easement by Basslink Pty Ltd.'s (BPL) employees and contractors for operation and maintenance purposes. Maintenance may include scheduled and unscheduled activities.

## 2 RESPONSIBILITIES

The BPL manager responsible for operations is accountable for this document and its implementation. All BPL employees and contractors are responsible for compliance with this document and ensuring others do likewise.

## 3 RISK RATING

When accessing easement, the likelihood of environmental disturbance is unlikely with implementation of the procedures in this plan. The potential consequence of this disturbance is moderate, as it could result in property damage. Therefore, the residual risk rating for this issue is low.

		Consequence				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Rare	Low 1	Low 2	Low 3	Low 4	Low 5
	Unlikely	Low 2	Low 4	Low 6	High 8	High 10
	Possible	Low 3	Low 6	High 9	Extreme 12	Extreme 15
	Likely	Low 4	High 8	Extreme 12	Extreme 16	Extreme 20
	Almost certain	Low 5	High 10	Extreme 15	Extreme 20	Extreme 25

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## 4 OBJECTIVES

The objectives of land access are:

- To ensure adequate notice of scheduled maintenance activities is provided to landowners and third-party asset owners (where their assets might be affected by the planned activities).
- To ensure landowners and third-party asset owners (where their assets might be affected by the planned activities) are notified of unscheduled maintenance activities prior to, or as soon as possible, after the fault is rectified.
- To minimise disturbance to vegetation including crops and pasture, stock, native flora and fauna and farm, forestry and public infrastructure including roads, access tracks, gates and fences.
- To minimise nuisance caused by dust, noise and traffic.

## 5 DEFINITIONS

**Access Track** – an access route formed by use (e.g., wheel tracks) or a formed earthen track with, or without, a gravel surface. The nominal width of an access track, which may include a formation, table drains, batters and embankments, is 6 m. The width of the access track will vary with the terrain.

**Affected Party** – a person or persons or organisation with an interest in the land owned or managed by a landowner (e.g., lessee or licensee or mortgagor).

**Easement** – the land over which BPL has the right to construct, maintain and operate the Basslink infrastructure. The nominal width of the easement is 65 m for 500-kV HVAC overhead line, 55 m for 400-kV HVDC overhead line, 40 m for 220-kV HVAC overhead line and 11.5 m for underground cables, i.e., 400-kV HVDC, metallic return and fibre-optic cables. The nominal width of a carriageway easement is 6 m; however, this will vary with the terrain.

**Incident** – means an environmental incident or set of circumstances during or as a consequence of which there is, has been or is likely to be harm to the environment, as a result of the activity that has occurred, is occurring, or is likely to occur.

**Inspection** – the visual checking of operation and maintenance activities and Basslink infrastructure, including, but not limited to, access tracks, the easement, and buildings and structures (converter station, transition station and overhead transmission line). Inspection may be carried out on foot, from a vehicle or from a helicopter or fixed wing aircraft.

**Landowner** – a person or persons holding freehold interest in land and in respect of Crown Land, the agency responsible for land management. In Victoria, Parks Victoria is responsible for the Stradbroke Flora and Fauna Reserve and Ninety Mile Beach Coastal Reserve, and the relevant department for the environment is responsible for all other Crown land.

**Scheduled Maintenance** – planned maintenance activities performed at regular intervals throughout the life of Basslink.

**Unscheduled Maintenance** – unplanned maintenance activities required because of an incident or emergency.

**Third-Party Asset Owner** – a person or persons, or organisation, who owns or has rights to assets on, or adjacent to Basslink infrastructure, and whose asset may, or may not be protected by an easement or lease or licence or another registered instrument.

## **6 REFERENCES**

The legislation, guidelines and codes listed in this section may be subject to revision during the life of Basslink. Where this occurs, the reference is relevant to the latest version of the document.

### **6.1 APPLICABLE LEGISLATION**

#### **Victoria**

- Conservation, Forests and Lands Act 1987.
- Crown Land (Reserves) Act 1978.
- Electricity Industry Act 2000.
- Electricity Safety Act 1998.
- Electricity Safety (Installations) Regulations 2009.
- Land Acquisition and Compensation Act 1986.

#### **Tasmania**

- Electricity Supply Industry Act 1995.
- Forest Practices Act 1985.
- Land Acquisition Act 1993.
- National Parks and Reserves Management Act 2002.

### **6.2 APPLICABLE GUIDELINES AND CODES**

- Victorian Code of Practice on Electrical Safety for Work on or Near High Voltage Electrical Apparatus 2012 (the 'Blue Book').

### **6.3 ASSOCIATED PLANS AND PROCEDURES**

- Complaints Management Procedure (OEMP-CM).
- Weed, Pathogen and Pest Management Plan (OEMP-WP).
- BPL's 'Living with Electricity Easements' brochure.

## **7 ATTACHMENTS**

None.



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## **8 PROCEDURES**

### **8.1 PLANNING AND PREPARATION**

- a) Ensure all landowners and third-party asset owners have a copy of the BPL brochure 'Living with Electricity Easements'.
- b) Ensure all personnel are trained and inducted in the procedures for land access prior to requiring or obtaining access.
- c) Prior to accessing the easement for scheduled inspection or maintenance activities, BPL will notify landowners in advance when access, or a period of access, to the property is required. Notice is to be provided in writing for scheduled inspection and maintenance activities, and verbally for all other access requirements. Reasonable notice periods adopted by BPL and its contractors are as follows, unless otherwise agreed with the landowner:
  - At least 30 days and not more than 60 days' notice in writing for scheduled inspection and maintenance activities including a description of the proposed works and duration of activities.
  - At least 24 hours' notice of intention to enter the land. Where the works will extend for more than one day, the period of notice applies to the first time of entry to the land and the period of subsequent (associated with that specific works programme) entry thereafter.
- d) Notify landowners and third-party asset owners prior to (or no later than one working day after the commencement of) unscheduled maintenance activities of the means of access to the easement and the works undertaken.
- e) Where access to the easement over private or public land is required or requested by the landowner, wherever possible, agree the access route to the easement prior to entering the land.
- f) Plan to conduct transmission line and underground cable easement inspections from access tracks and public roads rather than the easement, wherever circumstances permit this.
- g) Keep a written record of all verbal interactions with landowners, including:
  - The name of the landowner.
  - The BPL officer.
  - The date and time of the interaction.
  - Further actions and a timeframe for completion (if required).
  - The date any agreed actions were completed.
- h) Maintain an electronic and hardcopy register of all interactions with landowners.

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## **8.2 LAND ACCESS**

When accessing land, BPL and its contractors will:

- a) Act courteously and responsibly. If a landowner objects to BPL or its agents accessing the property, BPL and/or its agent will seek to resolve the landowner's objection. If the objection cannot be resolved, BPL will exercise its rights of entry and address any remaining issues through the Complaints Management Procedure (OEMP-CM).
- b) Undertake wash down procedures in accordance with the requirements of the Weed, Pathogen and Pest Management Plan (OEMP-WP).
- c) Travel along formed roads or access tracks to and from the easement or along an access route agreed with the landowner.
- d) Travel along the easement and, if constructed, on formed access tracks.
- e) Not drive or park vehicles, plant and equipment outside the easement unless prior arrangements have been made with the landowner.
- f) Not park vehicles or store plant and equipment so as to block or restrict access.
- g) Travel at a speed considerate of local environmental conditions. This includes reducing speed to minimise dust and noise generation where stock, farm buildings (e.g., dairy sheds, calf pens and holding yards) and nearby residences may be affected.
- h) Turn on headlights in dusty and foggy conditions.
- i) Leave any farm gate or other stock control measure (e.g., temporary electric fencing and 'hot-tape' gates) in the manner in which it was found, unless otherwise arranged with the landowner.
- j) Notify the landowner when inspection or maintenance activities are complete, and access is no longer required to the land.

## **9 PERFORMANCE MEASURES**

All access to land carried out in accordance with relevant guidelines and procedures.

## **APPENDIX D**

### **COMPLAINTS MANAGEMENT PROCEDURE**

This procedure forms part of the Basslink Operations Environmental Management Plan (OEMP). This plan is approved by Victorian, Tasmanian and Federal Governments with a five-yearly review cycle. References to legislation and relevant agencies throughout this document are correct at the time of revision of the document and should be taken to refer to any successor legislation and agencies where these have changed following issue of this version of the Basslink OEMP.

<b>No:</b> OEMP-CM	<b>Issue:</b> Version 3	<b>Date:</b> April 2017
<b>Key Process:</b> Maintenance		
<b>Title:</b>  <h1 style="text-align: center;">Complaints Management Procedure</h1>		
<b>Authorised by:</b>	<b>BPL Operations Manager</b> Mark Shilliday	

## 1 PURPOSE

This document sets the procedures to be followed in the event of a complaint regarding Basslink Pty Ltd (BPL) from a landowner, affected party, third-party asset owner or member of the public.

## 2 RESPONSIBILITIES

The BPL manager responsible for operations is accountable for this document and its implementation. All BPL employees and contractors are responsible for compliance with this document, and for ensuring others do likewise.

## 3 OBJECTIVES

The objectives of reporting and managing complaints are:

- To ensure a timely, effective and co-ordinated response to a complaint.
- To ensure the reasons for the complaint are understood and, if necessary, measures put in place to avoid a recurrence.

## 4 DEFINITIONS

**Affected Party** – a person or persons or organisation with an interest in the land owned or managed by a landowner, e.g., lessee or licensee or mortgagor.

**Incident** – any environmental incident that impacts on or may impact on the environment or any activity that causes the specific conditions or limitation of a licence or permit to be exceeded.

**Landowner** – a person or persons holding freehold interest in land and in respect of Crown land, the authority responsible for land management. In Victoria, Parks Victoria is responsible for the Stradbroke Flora and Fauna Reserve and Ninety Mile Beach Coastal Reserve and relevant department for the environment is responsible for all other Crown land.

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**Third-Party Asset Owner** – a person or persons or organisation who owns or has rights to assets on or adjacent to Basslink infrastructure and whose asset may or may not be protected by an easement or lease or licence or another registered instrument.

## **5 REFERENCES**

### **5.1 ASSOCIATED PLANS AND PROCEDURES**

- Incident Reporting Procedure (OEMP-IR).

## **6 ATTACHMENTS**

None.

## **7 PROCEDURES**

- a) All complaints are to be recorded in a Complaints Register, which is to be maintained by BPL.
- b) The Complaints Register will record:
  - Who made the complaint,
  - Who was affected, if the complainant is representing another person or body,
  - The date and time of the incident or alleged incident,
  - The nature and details of the complaint,
  - The BPL officer responsible for resolving the complaint,
  - The actions taken to resolve the complaint, and
  - The date on which the complaint was resolved.
- c) All complaints will be dealt with in timely and courteous manner.
- d) Indicative timeframes for response and containment of typical complaints are set out in Table 7.1.

**Table 7.1 Indicative timeframes for response and containment of typical complaints**

Type of Complaint	Initial Response Time	Containment Time
Gate left open and stock on road	Within 1 hour of notification	Within 5 hours of notification
Collapse or breach of temporary fencing around an excavation or trench	Within 1 hour of notification	Within 5 hours of notification
Chemical, petrol or oil spill of a minor nature	Within 1 hour of notification	Within 3 hours of notification
Unauthorised clearing of vegetation is occurring	Within 1 hour of notification	Within 2 hours of notification
Biosecurity hygiene is not being observed	Within 1 hour of notification	Within 2 hours of notification
Stock or wildlife is trapped in an excavation or trench <sup>1</sup>	Within 2 hours of notification	Within 3 hours of notification
Unacceptable behaviour or abuse	Within 24 hours of notification	Within 48 hours of notification
Damage to land or property <sup>2</sup>	Within 24 hours of notification	Not applicable
Insufficient notice of scheduled maintenance activities <sup>3</sup>	Within 24 hours of notification	Not applicable
Request for further information <sup>4</sup>	Within 5 working days of request being received	Not applicable

**Notes:**

1. The nominated timeframes include an allowance for contacting and arranging a qualified wildlife handler to attend the site with the responsible BPL representative.
  2. Repair to damaged land or property is dependent on the nature of the damage, prevailing weather and ground conditions and arrangements made with the landowner.
  3. In responding to a complaint about insufficient notification of scheduled maintenance activities, BPL will inform the complainant of the requested information.
  4. Five working days are required to contact the appropriate people, collate and arrange for mailing of the requested information. If the requested information is confidential in nature, the request would be refused.
- a) Should a complaint escalate into a dispute, external assistance will be sought as appropriate to resolve the issue. Where complaints cannot be resolved at a company level, they will be referred to the Energy and Water Ombudsman where Basslink is a scheme participant.
- b) Complaints made to contractors must be reported to the supervising or responsible BPL officer immediately following receipt of the complaint, including the name and contact details of the complainant, the date and time of the complaint and the nature of the complaint.

## **8 PERFORMANCE MEASURES**

- a) All complaints responded to within the initial response time.
- b) All complaints contained within the specified containment time.

## **APPENDIX E**

### **AUDIT AND INSPECTION PROCEDURE**

This procedure forms part of the Basslink Operations Environmental Management Plan (OEMP). This plan is approved by Victorian, Tasmanian and Federal Governments with a five-yearly review cycle. References to legislation and relevant agencies throughout this document are correct at the time of revision of the document and should be taken to refer to any successor legislation and agencies where these have changed following issue of this version of the Basslink OEMP.

<b>No:</b> OEMP-A	<b>Issue:</b> Version 1	<b>Date:</b> April 2017
<b>Key Process:</b> Maintenance		
<b>Title:</b>  <h1 style="text-align: center;">Audit and Inspection Procedure</h1>		
<b>Authorised by:</b>	<b>BPL Operations Manager</b> Mark Shilliday	

## 1 PURPOSE

This document sets out the procedures to be followed for inspections, audits and management reviews of operation and maintenance activities against the environmental management system (EMS) and OEMP. It covers internal and external audit requirements.

## 2 RESPONSIBILITIES

The Basslink Pty Ltd (BPL) manager responsible for operations is accountable for this document and its implementation. All BPL employees and contractors are responsible for compliance with this document and ensuring others do likewise.

## 3 OBJECTIVES

The objective of the audit procedure is to set out the criteria, scope, frequency and method of inspections, audits and management reviews to ensure compliance with and continual improvement of the EMS and OEMP.

## 4 DEFINITIONS

**Audit** – systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the criteria are fulfilled.

**Inspection** – the visual checking of operation and maintenance activities and Basslink infrastructure, including but not limited to access tracks, overhead transmission line and underground cable easements, and buildings and structures including converter station, transition station, overhead transmission line and land-sea joint. Inspection may be carried out on foot, from a vehicle or from a helicopter or fixed wing aircraft.

**Record** – documented information of observations of inspections and results of audits and management reviews. The documented information will include written observations, reports and photographs. The format of the documentation will be appropriate to the purpose.

**Review** – evidence-based assessment of management procedures and practices to identify good practices and make recommendations for system improvement.



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## **5 PROCEDURES**

These procedures are to be implemented for all operation and maintenance activities at Basslink work sites including work on the Basslink easement, at the converter and transition stations, and at designated work sites.

### **5.1 PLANNING AND PREPARATION**

- a) Train and induct relevant BPL personnel in the Basslink OEMP.
- b) Train and induct contractor personnel in the requirements of the relevant management plans before commencing maintenance activities along the easement.

### **5.2 REGULAR INSPECTION OF OPERATION AND MAINTENANCE ACTIVITIES**

- a) Conduct spot inspections, based on risk and operational experience, of the overhead line and underground cable easements every fortnight for weeds, unauthorised activities (e.g., rubbish dumping, excavation, erection of structures), erosion and sedimentation, and regrowth, ensuring the entire easement is fully inspected over a period of six months.
- b) Conduct a structural integrity and safety inspection of all overhead lines and towers over a period of 3 years.
- c) Conduct inspections of the entire overhead line and easement over a period of six months for obvious structural, safety and environmental issues
- d) Program inspections in environmental computerised maintenance and management system.
- e) Record observations from inspections in environmental computerised maintenance and management system.
- f) Contractor personnel inducted into the OEMP will conduct inspection of maintenance activities in accordance with the frequency of inspections in Table 5.1.

**Table 5.1 Frequency of Inspections of Maintenance Activities**

Activity	Frequency
Weed, pathogen and pest management (implementation of wash down procedures, vermin control)	Daily for duration of maintenance activities involving access to properties
Vegetation management (vegetation clearing requirements)	Daily for duration of vegetation clearing
Ground disturbance (soil management, erosion and sediment control, and cultural heritage clearance)	Daily for duration of ground disturbing activities
Roadside works (implementation of traffic management)	Daily for duration of roadside works
Maintenance activities involving hot work (worksites requirements, fire suppression equipment and readiness, awareness of fire danger rating)	Daily for duration of maintenance activities

**Table 5.1 Frequency of Inspections of Maintenance Activities (cont'd)**

Activity	Frequency
Standard procedures (site cleanliness, behaviours and practices, minimum equipment, parking arrangements, vehicle travel)	Weekly for duration of maintenance activities
Land access (approval to enter land, compliance with landowner requirements, complaints)	Weekly for duration of maintenance activities

- a) Contractor to maintain records and provide documentary evidence of compliance with OEMP.

### 5.3 COMPLIANCE AUDITS OF MAINTENANCE ACTIVITIES

- a) BPL supervisor to conduct audit of contractors conducting maintenance activities at the beginning and at least once during activities for work lasting up to one week or at commencement of activities and then at least once a week for activities of longer duration or as required based on the risk posed by the activity. If a BPL employee is conducting maintenance activities, another BPL employee shall conduct the audit.
- b) Audits will determine contractors' compliance with the OEMP including evidence of regular inspection in accordance with the frequency of inspection in Table 5.1.
- c) Record audit findings in the environmental computerised maintenance and management system. The audit report shall include:
- Date and time of audit.
  - Length of work being conducted.
  - Observations of relevant management activities.
  - Photographic records, where relevant.

- Identification of any non-compliances. Where non-compliances are observed an incident report form shall be completed in accordance with the Incident Report Procedure (OEMP-IR) and include any areas for improvement or corrective actions.
- d) Record and track the status of corrective actions identified in the Incident Report Procedure (OEMP-IR).
- e) Conduct inspection audits of all operation and maintenance activities not covered in Table 5.1 in accordance with the relevant plans of the OEMP. Frequency of inspection audits are listed in Table 5.2. The person conducting the audit should not be directly involved in the activity.

**Table 5.2 Frequency of Compliance Audits**

<b>Activity</b>	<b>Frequency</b>
Rehabilitation activities (including presence of weeds and erosion)	Three-monthly until successful rehabilitation is achieved
Waste management (including appropriate separation, storage and disposal of wastes)	Three-monthly
Hazardous materials management (including spill response kits, MSDS, storage areas)	Six-monthly
Fire suppression management (including fuel loads, fire safety preparations and fire suppression protocols)	Annually
Stormwater management (including oil separator pits, stormwater run-off retention ponds, cut-off drains)	Annually or as required
Incident reporting (including incident investigations, close-out of corrective actions)	Annually (as part of annual management review)
Complaints management (including nature of complaint and close-out of issue)	Annually (as part of annual management review)
Marine repair activities (including whale observations, waste management, compliance with AMSA requirements, refuelling and spill response)	Prior to and at conclusion of marine inspection and repair activities

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## **5.4 ANNUAL VEGETATION AUDIT**

- a) Conduct an annual vegetation audit in late August/early September or at least one month prior to the declaration of a fire danger period to inform bushfire mitigation plan and Electric Line Clearance Plan in accordance with the Vegetation Management Procedure (OEMP-VM).
- b) Conduct bi-annual inspection of vegetation in high regrowth areas. These areas are based on risk assessment of vegetative regrowth and the location of sensitive ecosystems. The results of the risk assessment will be documented in maps of the overhead transmission line and underground cable easements.
- c) Program and document the annual and bi-annual vegetation audits in the environmental computerised maintenance and management system.

## **5.5 ANNUAL MANAGEMENT REVIEW**

- a) Report by exception environmental issues and areas of concern at monthly management meetings.
- b) Prepare an annual report detailing inspections and audits conducted, key observations, any outstanding issues and issues identified in the implementation of the OEMP for management review.
- c) The Basslink Board shall conduct a review of the annual report to establish compliance with the OEMP and the adequacy of the OEMP in managing environmental aspects of Basslink operation and maintenance activities. The review will focus on:
  - Key observations recorded throughout the year.
  - Review of incidents and corrective actions.
  - The adequacy of the inspection and audit procedures.
- d) Record results of the annual management review in the minutes of the management board meeting.

## **5.6 BIENNIAL OEMP REVIEW**

- a) Conduct an external review of implementation of OEMP in accordance with the requirements of the EMS, particularly its implementation and relevance to current activities.
- b) Review records of inspections, compliance audits, records of management review, incident reports and corrective actions, and recommendations.
- c) Prepare a report presenting the findings of the review including relevant background, the inspections carried out as part of the review, BPL's action on recommendations from the previous review, and recommendations for improvement.

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## **5.7 TRIENNIAL EMS AUDIT**

- a) Conduct an external audit of implementation of the EMS in accordance with the requirements of ISO14001:2004.
- b) Triennial audit to include review of annual management review report and records of management review, incident reports and corrective actions, and recommendations.
- c) Prepare a report presenting the findings of the audit including relevant background, identification of conformance / non-conformances with the requirements of ISO14001:2004, BPL's action on recommendations from the previous audit and recommendations for improvement.

## **5.8 FIVE-YEARLY REVIEW**

- a) Conduct an external review every five years of the adequacy and relevance of the OEMP in managing environmental aspects of operation and maintenance activities. This includes:
  - Any trends observed in annual management reviews.
  - Any incidents and results of investigations.
  - Results of triennial EMS audit and biennial OEMP reviews including recommendations.
- b) Revise the EMS and OEMP, as required based on the findings of the review. Submit the revised EMS and OEMP for endorsement by authorised representatives of relevant government agencies or their successor organisations.

## **6 PERFORMANCE MEASURES**



- a) All audits, inspections and management reviews carried out in accordance with this plan.

## **APPENDIX F**

### **ES1012 KEY PERFORMANCE INDICATORS**

<b>No:</b> ES1012	<b>Issue:</b> 2.0	<b>Date:</b> June 2018
<b>KEY PROCESS:</b>	Electrical Safety	
<b>TITLE:</b>	ESMS – Key Performance Indicators	

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<b>Authorised for Issue by:</b>	<b>Chief Executive Officer</b>	Malcolm Eccles	
	<b>Operations Manager</b>	Mark Shilliday	

## 1 INTRODUCTION

This procedure specifies the Basslink Electrical Safety Management System Key Performance

Indicators.

## 2 RESPONSIBILITIES

Implementation and review of this procedure is the responsibility of the Operations Manager.

## 3 DEFINITIONS

Nil

## 4 REFERENCES

- Basslink Electrical Safety Management Scheme
- S 1001 Basslink Pty Ltd: Safety, Health, Environment and Security Management Plan
- S 1003 Statutory Incident Reporting
- Occupational Health and Safety (Incident Notification) Regulations 1997 (Victoria).
- Equipment Public Safety (Incident Notification) Regulations 1997 (Victoria).
- Dangerous Goods Act (Victoria) 1985.
- Medical Practice Act (Victoria) 1994.
- Workplace Health and Safety Act 1995 (Tasmania).
- Workplace Health and Safety Regulations 1998 (Tasmania).

- Australian Navigation Act 1912.
- Marine Orders 32 (Cargo Handling).
- Electrical Safety (Network Assets) Regulations 1999(Tasmania).
- Tasmanian Electricity Code.

## **5 ATTACHMENTS**

None applicable

## **6 RECORDS**

All Basslink Managers are to be trained in this procedure.

## **7 PROCEDURE**

The following specifies the Basslink Electrical Safety Management Scheme 'Key Performance Indicators'

### **7.1 INCIDENT REPORTING AND INVESTIGATION**

#### **7.1.1 WORKSAFE VICTORIA AND WORKPLACE STANDARDS (TASMANIA) REPORTING**

##### **a) Serious Injury I Serious Bodily Illness or Injury**

Key Performance Measures - **All Targets all 0 per year**

- Number of Serious Injuries occurring in Calendar year
- Number of Serious Injuries (Current Calendar Year) versus Previous Calendar Year
- Number of Serious Injuries versus Number of Serious Injuries Reported within 48 hours
- Number of Corrective Actions Identified (Current Calendar Year) versus Number of Corrective Actions Completed

##### **b) Dangerous Occurrences I Dangerous Incidents**

Key Performance Measures - **All Targets all 0 per year**

- Number of Dangerous Occurrences in Current Calendar year
- Number of Dangerous Occurrences (Current Calendar Year) versus Previous Calendar Year
- Number of Dangerous Occurrences versus Number of Dangerous Occurrences Reported within 48 hours



- Number of Corrective Actions Identified versus Number of Corrective Actions Completed

## **7.1.2 ENERGY SAFE VICTORIA REPORTING**

### **c) Serious Electrical Incident**

Key Performance Measures - **All Targets all 0 per year**

- Number of Serious Electrical Incidents occurring in Calendar year
- Number of Serious Electrical Incidents (Current Calendar Year) versus Previous Calendar Year
- Number of Serious Electrical Incidents versus Number of Serious Electrical Incidents
- Reported within specified time frames (Quarterly Statistical Summary required).
- Number of Electrical Serious Injuries versus Total Serious Injuries
- Number of Corrective Actions Identified (Current Calendar Year) versus Number of Corrective Actions Completed

### **d) Minor Electrical Incident**

Key Performance Measures - **All Targets 0 per year**

- Number of Minor Electrical Incidents occurring in Calendar year
- Number of Minor Electrical Incidents (Current Calendar Year) versus Previous Calendar Year
- Number of Minor Electrical Incidents versus Number of Serious Electrical Incident Reported within specified time frames
- Number of Minor Electrical Incidents versus Total Electrical Incidents
- Number of Corrective Actions Identified (Current Calendar Year) versus Number of Corrective Actions Completed

### **e) Other Electrical Incident**

Key Performance Measures - **All Targets 0 per year**

- Number of Other Electrical Incidents occurring in Calendar year
- Number of Other Electrical Incidents (Current Calendar Year) versus Previous Calendar Year
- Number of Other Electrical Incidents versus Number of Serious Electrical Incident Reported within specified time frames
- Number of Other Electrical Incidents versus Total Electrical Incidents
- Number of Corrective Actions Identified (Current Calendar Year) versus Number of Corrective Actions Completed

### **f) Vegetation Management**

Key Performance Measures - **All Targets 0 per year**

- Breaches of the code during fire season
- Fire starts caused by vegetation infringing clearance space
- Transmission outages caused by fires started by vegetation infringing into clearance space
- Basslink assets, plant or equipment starting fires on easements

### **7.1.3 OFFICE OF THE TASMANIAN ENERGY REGULATOR**

#### **g) Serious Electrical Accidents**

Key Performance Measures - **All Targets 0 per year**

- Number of Serious Electrical Accidents occurring in Calendar year
- Number of Serious Electrical Accidents (Current Calendar Year) versus Previous Calendar Year
- Number of Serious Electrical Accidents versus Number of Serious Electrical Accidents Reported within specified time frames
- Number of Serious Electrical Accidents versus Total Serious Injuries
- Number of Corrective Actions Identified (Current Calendar Year) versus Number of Corrective Actions Completed

### **7.2 SCHEME AUDITING AND REVIEW**

#### **h) Electrical Safety Management Scheme Monthly Monitoring Inspections**

Key Performance Measures - **All Targets 0 per year unless specified**

- Number of Monthly Inspections conducted- Target 100%
- Number of Non-Compliances recorded
- Number of Non-Compliances (Current Month) versus Previous Month
- Number of Non-Compliances versus Number of Corrective Actions Completed

#### **i) Electrical Safety Management Scheme Annual Audits**

Key Performance Measures - **All Targets 0 per year**

- Number of Non-Compliances recorded
- Number of Non-Compliances (Current Year) versus Previous Year
- Number of Non-Compliances versus Number of Corrective Actions Completed

#### **j) Electrical Safety Management Scheme Annual Review**

Key Performance Measures

- Number of Policies I Procedures reviewed - **Target 0 exceeding policy guidelines**
- Number of Policies I Procedures found to be deficient - **Target 0 per year**

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## **7.3 COMPETENCE TRAINING AND AUTHORISATION**

### **k) Authorisations under the Scheme**

Key Performance Measures

- Number of Authorisation Reviews conducted in the Calendar year - **Target 2 per year**
- Number of Skills Audits conducted during the calendar year - **Target 1 per year**

### **l) Training Conducted under the Scheme**

Key Performance Measures

- Review of Individual Training to be Conducted to enhance the knowledge and skill of the Individual in the Calendar year - **Target 1per year**
- Review of Individual Training against Training Matrix highlighted under the scheme - **Target 100%**
- List of Individual competency re-assessments conducted during the Calendar year, including any competency re-training requirements identified - **Target 100%**

## **7.4 ELECTRICAL WORK AND DESIGN, CONSTRUCTION, INSTALLATION, OPERATIONS, MAINTENANCE AND MODIFICATION**

Details of Planned Maintenance conducted during the Calendar year versus Planned Maintenance Scheduled for the Calendar year - **Target 100%**

## 8 DOCUMENT MANAGEMENT RECORD

Document Title	ESMS Key Performance Indicators
Document No	ES1012
Previous Review	June 2018
Date	June 2023
Next Review Date	

Document Issue/Change Control				
Issue	Date	Notes of change	Originator	Approved for Use
1	Dec 2011	First Issue	M. Shilliday	M. Eccles
2	June 2018	Review	M. Shilliday	M. Eccles

## 11. DOCUMENT MANAGEMENT RECORD

Document Issue / Change Control				
Document No: OP427 Electrical Line Clearance Plan				
Issue No	Issue Date	Notes of Change	Reviewer	Approved for Use By
1.0	28/03/18	Initial Issue	M. Shilliday	M. Eccles
2.0	21/06/18	Updated for ESV comments	M. Shilliday	M. Eccles
3.0	29/03/19	Reviewed and updated for ESV Comments	P. Pendlebury	R. Ozsvath
4.0	March 2020	Reviewed and updated for ESV Comments	P. Pendlebury	R. Ozsvath