



EnergyAustralia Yallourn

Electricity Safety (Electric Line Clearance) Plan 2022/2023

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Page: 1 of 13

VERSION HISTORY

Version	Date	Author	Reason
1.0	March 2011	Paul Metlikovec	Initial Issue
2.0	March 2011	Otto Stumpf / David Wykes	Annual Review
2.1	September 2012	Jacinta Beange	Corporate Re-brand / Organisational Changes
2.2	March 2014	Rachel Alexander	YMA Management System document number changes
3.0	June 2014	Otto Stumpf	Purpose & Scope added, Electrical Line Clearance Plan updated to reflect changes in the Bushfire Mitigation Plan, additional clauses added
4.0	May 2015	Otto Stumpf	Periodic Review and updated plan
5.0	March 2016	Otto Stumpf	Periodic Review and updated plan
6.0	May 2017	Otto Stumpf	Periodic Review; Updated several clauses to comply with the Electrical Line Clearance Regulation 2016; updated telephone numbers, added new photo. Minor changes made to clauses 5.2, 5.3 and 5.4 after the review
7.0	March 2019	Otto Stumpf	Periodic Review & internal audit;
7.1	Dec 2019	Brad Miller	Revision to address feedback comments from ESV
7.2	March 2020	Brad Miller	Revision to address feedback comments from ESV
7.3	July 2020	Brad Miller	Revision to address feedback comments from ESV
8.0	Sept 2020	Brad Miller	2020/2021 Plan preparation
9.0	March 2021	Brad Miller	Periodic review and updated plan
10.0	May 2022	Brad Miller	Periodic review and updated plan
11.0	March 2023	Mathew Howlett	Periodic Review and Updated Plan

AMENDMENTS IN THIS VERSION

No.	Amendment Summary	Amended By
Version 11.0		
1.	Update contact details and position titles.	M. Howlett
2.	Full review including content revision and procedure reference update.	M. Howlett
3.		
4.		

PURPOSE & SCOPE

WHAT	<p>The objective of the Electric Line Clearance Plan is to ensure that there are procedures and processes at the Yallourn site to comply with the Electricity Safety (Electric Line Clearance) Regulations 2020.</p> <p>The procedures define the practises for the management of cutting trees in the vicinity of electric lines and maintenance of the lines to reduce the potential of electric lines causing fire or electrocution.</p> <p>The Electric Line Clearance Plan is interlinked with the Bushfire Mitigation Plan and the documented activities must be monitored and audited each year to verify compliance with the plan. The plan must be updated before 31 March each year and upon request from Energy Safe Victoria.</p>
WHEN	This procedure is to be utilised when planning vegetation clearance activities in the vicinity of overhead lines on the Yallourn site.
WHO	This procedure shall be followed by all responsible personnel who implement the Electric Line Clearance Plan and the nominated responsible officer who reviews the plan.
WHY	This procedure has been developed to comply with the Electricity Safety (Electric Line Clearance) Regulations 2020.

TABLE OF CONTENTS

Contents

1	PREPARATION OF MANAGEMENT PLAN	4
2	OBJECTIVES OF THE PLAN	5
3	SITE LAYOUT AND VEGETATION CLEARANCE RESPONSIBILITIES	5
3.1	ENERGYAUSTRALIA OVERHEAD LINES	5
3.2	NON ENERGYAUSTRALIA OVERHEAD LINES	5
4	MANAGEMENT OF INDIGENOUS VEGETATION AND SIGNIFICANT TREES.....	6
5	VEGETATION MANAGEMENT AND MINIMUM CLEARANCE SPACE.....	6
6	PERFORMANCE MEASURES & AUDITING	7
7	REQUIREMENTS FOR CONDUCTING CLEARANCE WORKS.....	7
8	NOTIFICATION & CONSULTATION	8
9	SAG & SWAY CONSIDERATION	8
10	MANAGEMENT OF THE PLAN	8
11	REFERENCES	8
12	APPENDICES	10
	APPENDIX 1 - SITE PLAN – ENERGYAUSTRALIA CONTROLLED ASSETS	10
	APPENDIX 2 - SITE PLAN – AUSNET CONTROLLED ASSETS	11
	APPENDIX 3 - CROSS REFERENCE TO THE ELECTRICITY SAFETY (ELECTRIC LINE CLEARANCE) REGULATIONS 2020	12

1 Preparation of Management Plan

Specified Operator	EnergyAustralia Yallourn Pty. Ltd
Responsible Person	Lance Wallace
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Telephone	(03) 5128 2000

Person Responsible for Plan Preparation	Mathew Howlett
Position	Risk & Compliance Lead EnergyAustralia Yallourn
Office Address	Eastern Road, Yallourn, Victoria, 3825
Postal Address	PO Box 444, Moe, Victoria, 3825
Telephone	0400 054 489

Person Responsible for Plan Implementation	David Wykes
Position	Electrical Engineer
Office Address	Eastern Road, Yallourn, Victoria, 3825
Postal Address	PO Box 444 Moe Victoria, 3825
Telephone	03 5128 2357

Emergency Tree Clearance for Immediate Action	For after hours - Ventia Maintenance Contact Officer (Phone number updated weekly - refer to Mine Shift Supervisor 0418 583 008)
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2 Objectives of the Plan

The Energy Australia Yallourn Electricity Safety (Electric Line Clearance) Plan provides a set of instructions that are integrated with the Bushfire Mitigation Plan and other site procedures for the Mine, Power Station and Estate Services to manage the safe removal of vegetation in the vicinity of electric lines to reduce the potential for fire or electrocution.

The objectives of the Plan are to:

- fully comply with the Electricity Safety (electric line clearance) regulations
- maintain a program of asset inspections consistent with the assessed level of risk.
- manage vegetation fuel loads and electric line clearances in a timely manner to minimise fire risk.
- maintain protection of areas of important vegetation
- ensure reliability of power supply
- ensure public and workplace safety.
- maintain community satisfaction.
- assess the performance of programs supporting this plan and strive for continual improvement.

Electronic copies of the Yallourn Electric Line Clearance plan can be found on the EnergyAustralia website:

<https://www.energyaustralia.com.au/document/electric-line-clearance-plan>

3 Site Layout and Vegetation Clearance Responsibilities

3.1 *EnergyAustralia Overhead Lines*

The site plan (

Appendix 1 - Site Plan) shows the overall area of the Yallourn site. Country Fire Authority (CFA) and Fire Rescue Victoria (FRV) have classified the area surrounding the Yallourn site as a High Bushfire Risk Area (HBRA). The current CFA/FRV rating is confirmed annually during the plan preparation.

The overhead lines shown in the site plan are the general position of the overhead lines on the site however, the Mine is a dynamic operation, and the overhead lines are re-routed as required to meet mining requirements. Single line drawings and layout drawings are continually updated to record the overhead lines on site with current drawings available for provision to Energy Safe Victoria upon request.

As indigenous vegetation regrowth can occur anywhere on site, all areas where overhead lines are situated can be considered as areas where indigenous tree removal can occur.

3.2 *Non EnergyAustralia Overhead Lines*

On the Yallourn site, there are overhead lines owned and managed by others, typically Ausnet Services power lines. The Ausnet Services power lines are located on easements on the site and are clearly marked in the site drawings (Appendix 2). These lines are managed by Ausnet and are not included in the EnergyAustralia Yallourn Electricity Safety (Electric Line Clearance) Plan. Ausnet Services will coordinate the cutting of vegetation in the vicinity of their overhead lines with Estate Services.

4 Management of Indigenous Vegetation and Significant Trees

On the EnergyAustralia Yallourn Site, indigenous vegetation is protected under various state and commonwealth legislation. Dedicated conservation areas have been created to allow indigenous vegetation to prosper. Trees that have significance for a cultural, environmental, historical and ecological purpose have been identified and are managed in accordance with the site's Conservation Management Plan and Environmental Management Plan.

The Standard Operating Procedure for *Removal of Vegetation on the EnergyAustralia Yallourn Site (SHEMS10-SHE-P001)* documents exemptions that allow for indigenous vegetation removal in consultation with the Mine Environmental Engineer or their delegate.

All trees of cultural or environmental significance are identified and included in the GIS by the Mine Environmental Engineer.

5 Vegetation Management and Minimum Clearance Space

A vegetation clearance corridor extends five metres either side of all powerlines and any vegetation within the corridor is kept below 1 metre in height. These requirements along with instructions for maintenance of trees adjacent to the corridor are explained in further detail in the YMA procedure *Management of HV & LV Overhead Distribution System (YMA-OPS-PR-0374)*.

Management of Yallourn Overhead Electric Lines

The design, maintenance, inspection and operational requirements for management of the site's high and low voltage overhead reticulation system is described in the YMA procedure *Management of HV & LV Overhead Distribution System (YMA-OPS-PR-0374)*.

The Team Electrical Engineer (Mine) is responsible for the management of vegetation near power lines on the Yallourn site in accordance with procedural requirements. Responsibilities include;

- Preparation of the Electric Line Clearance Plan by 31st March each year
- Implementation of the Electric Line Clearance Plan
- Implementation of an inspection routine for Electric Lines
- Arranging for clearance of vegetation near power lines in accordance with regulatory requirements

Management of Overhead Lines

Clearance space is a space surrounding an electric line which must be clear of vegetation. It is also the space parallel to each conductor that must be clear. The clearance varies with the type of electric line installed and the risk of ignition of fire at that location.

Vegetation inspection must be completed, and vegetation reduction completed prior to the commencement of the fire season each year.

The clearance space provided in table 1, below, does not include the additional space required to allow for sag and sway of the conductor.

All low voltage overhead lines must comply with the clearance requirements set out in table 3.8 of the Australian/NZ wiring regulations AS/NZ 3000. Clearance Spaces					
	1	2	3	4	5
Type of Powerline	Spans up to and including 30 meters. Selection of spans near the pole	Spans exceeding 30 meters and up to and including 45 meters	Spans exceeding 45 meters and up to and including 70 meters	Spans exceeding 70 meters and up to and including 350 meters	Spans exceeding 350 meters
Nominal Voltage:	In all Directions (Vertically above the line)				

Bared and Covered Low Voltage	2m	2m	5m	5m	5m
6.6kV and 22kV	5m	5m	5m	5m	5m

Table 1 – Vegetation clearance spaces

NOTE: The space vertically above the powerline must be kept clear of vegetation.

An additional distance must be added to the clearance space to allow for the sag and away of the conductors and for vegetation regrowth during the period between pruning times.

6 Performance Measures & Auditing

The Electricity Safety (Electric Line Clearance) Plan will be reviewed annually in March and updated to reflect any changes in the regulations and any continuous improvement opportunities. A review will be carried out to assess the implementation of the plan against the defined objectives and the compliance of the plan with current regulation.

The review will be initiated by a preventative maintenance routine in Maximo (Ref. MELECP423E).

Whilst vegetation management works are in progress regular workplace audits will be conducted in the field to monitor performance in accordance with YMA procedure *Management of HV & LV Overhead Distribution System (YMA-OPS-PR-0374)*. The YMA Job Safety Interaction proforma will be used to for audits of safe work practices.

Annual post work inspections will be completed to verify that the line clearance requirements have been met. Where the vegetation clearance work is not satisfactory, or the required clearance has not been achieved, additional clearance works will subsequently be arranged.

The Team Engineer Electrical (Mine) will communicate with vegetation clearing personnel to specify the extent of pruning required and receive feedback to monitor progress of the program of works.

Vegetation control companies inspect overhead conductors on a twice-yearly basis and clear any vegetation approaching the minimum distances. Should any vegetation breach the minimum distances or contact the conductors then the line will be isolated, and work carried out under permit conditions.

7 Requirements for conducting clearance works

All personnel clearing vegetation near overhead lines will be engaged or under the control of representatives from EnergyAustralia. Within the mine area this is managed via the YMA Contractor Management Procedure ([YMA-H&S-PR-0505](#)) which describes the procedures for ensuring contractors have the required qualifications and competencies to safely work on site. Anybody found to be completing work without the appropriate training or qualification will be instructed to stop work immediately whilst the situation is investigated, and the appropriate corrective action is taken.

The Team Electrical Engineer (Mine) shall review the qualifications and experience of contractors / personnel and the proposed methodology for removal of vegetation before authorising works to remove tress/vegetation near overhead lines. works are required to be conducted in accordance with the requirements of Electricity Safety (Installations) Regulations, the Blue Book, and relevant site procedures. A safe work method statement and job safety assessment must be completed and reviewed prior to commencing vegetation clearing work on or near overhead power lines. Cutting of trees must be done, as far as practical, in accordance with AS 4373 (Pruning of amenity trees) and the Code of Practice for Electric Line Clearance.

All personnel working in the proximity of overhead lines shall understand the limits of approach and when required, apply the No Go Zones as defined in the Worksafe and ESV guidance note. Personnel shall also be appropriately trained and competent and where necessary engage a qualified electrical spotter when required.

No live work is permitted to be conducted on site. Should vegetation have grown into the safe approach distances and pruning is required, then the lines will be isolated to eliminate the potential for electrocution.

Any consultation, notifications or dispute resolutions will be managed by the Mine Team Electrical Engineer

Training requirements are managed in accordance with YMA procedure *Training Competency and Authorisations (YMA-OPS-PR-401)* which details the systems in place for Yallourn Mine to manage training requirements for designated roles, management of training records and refresher training.

8 Notification & Consultation

All overhead lines are located on private property and not subject to public or community access hence there is currently no requirement for public notification or consultation for vegetation clearance activities.

9 Sag & Sway Consideration

The majority of overhead lines are in non-vegetated areas. Where overhead lines do span above vegetation the sway and sag allowance are accounted for in the design of the overhead line and the minimum clearance space is nominated to ensure compliance with the Code of Practice for Electric Line Clearance. Further information including the calculation methods and systems and storage of design drawings and records is provided in YMA procedure *Management of HV & LV Overhead Distribution System (YMA-OPS-PR-0374)*.

10 Management of the Plan

This plan must be monitored and audited each year to identify any deficiencies in the plan and be updated before 31st March each year. It must be available upon request from Energy Safe Victoria.

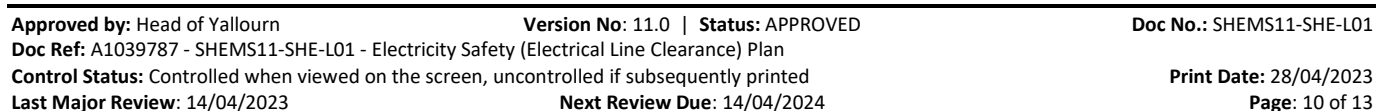
Annual review of the plan includes an audit of the effectiveness of the plan for the previous twelve months and identification and documentation of any improvements or updates. The revised plan will be circulated for approval and signature according to Yallourn's Document Approval procedure.

11 References

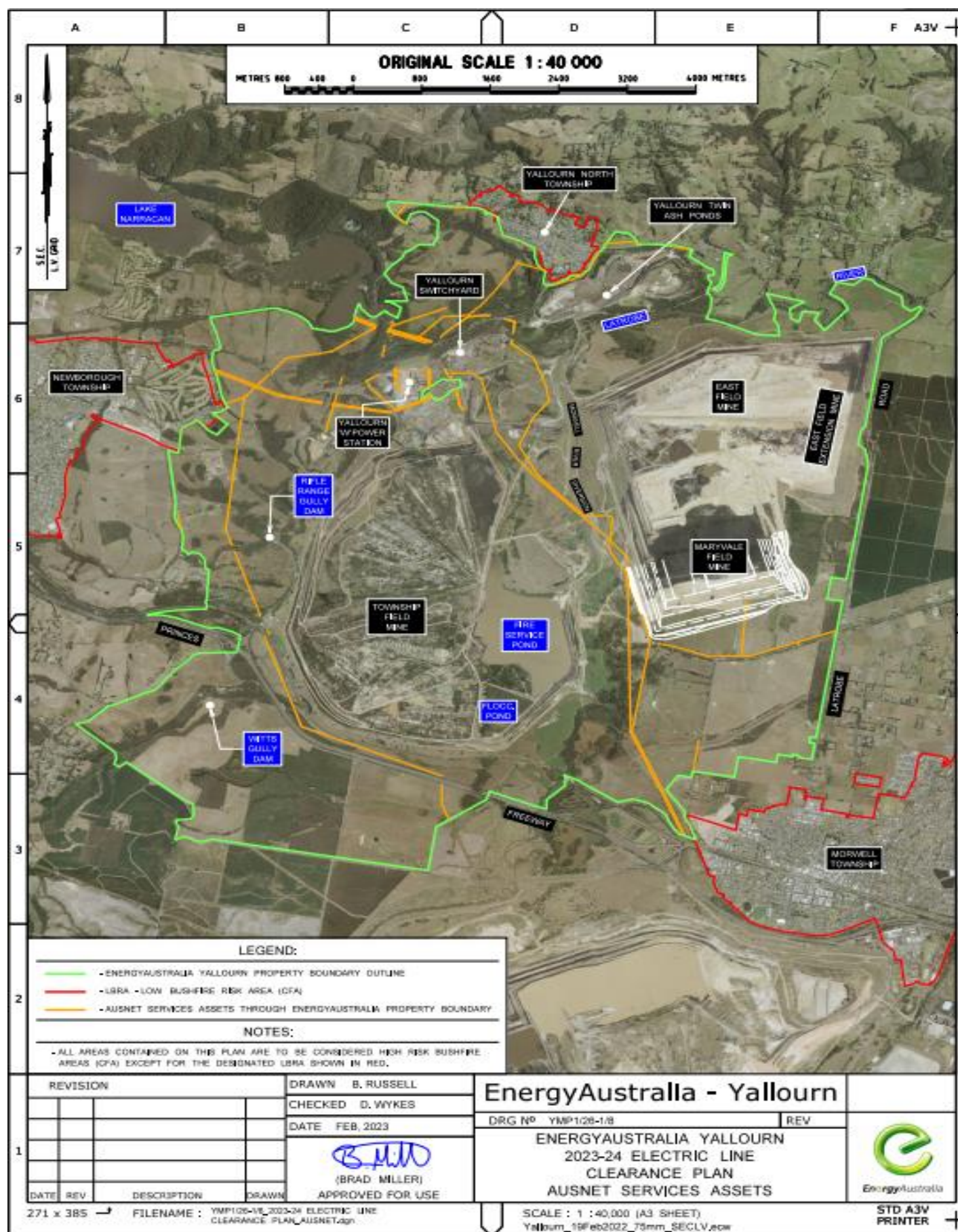
Document ID	Document Title
A1034223	SHEMS11-ESV-P001 - Wildfire Risk Mitigation
A1039749	SHEMS11-SHE-P015 - Management of the EnergyAustralia Yallourn Bushfire Mitigation Plan
A1065137	SHEMS13-SHE-L04 - Mine Fire Control Management Plan (FCMP)
A1037878	SHEMS10-SHE-P001 - Removal of Vegetation on the EnergyAustralia Yallourn Site
A1017664	SHEMS12-SHE-L01 - Emergency Response Plan
A1034637	YMA-OPS-PR-0374 - Management of LV & HV Overhead Distribution System
A1034736	SHEMS10-SHE-P001-F01 - Vegetation Removal Approval Form
A1072179	Conservation Management Plan (CMP) - Summary 2011 - May 2013
A1055081	Conservation Management Plan (CMP) Progress Report - Attachment 1 - Appendices - May 2013
A1052587	Conservation Management Plan (CMP) Progress Report - Attachment 2 - Maps - May 2013
A1030077	YMA-H&S-MP-003 - Environmental Management Plan
A1347444	YMA-OPS-FO-0311 – YMA Job Safety Interaction Form
A2098928	YMA-H&S-PR-0505 – Contractor Safety Management
A1036714	YMA-TRN-PR-0401 - Training, Competency and Authorisations
N/A	Electricity Safety Act 1998
N/A	Electricity Safety (Electric Line Clearance) Regulations 2020

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13 Appendix 1 - Site Plan – EnergyAustralia controlled assets



Appendix 2 - Site Plan – Ausnet controlled assets



Appendix 3 - Cross reference to the Electricity Safety (Electric Line Clearance) Regulations 2020

EA Yallourn Line Clearance Plan cross reference to the regulation		
Regulation reference number	Prescribed particulars for Electric Line Clearance plans—specified operators - Regulation	Yallourn ELCMP Section:
	9 Preparation and submission of management plans	
(1)	This regulation does not apply to a responsible person referred to in section 84A or 84B of the Act.	N/A
(2)	A responsible person that is not a major electricity company, before 31 March in each year, must prepare a management plan relating to compliance with the Code for the next financial year.	10
(4)	A responsible person must ensure that a management plan prepared under subregulation (2) or (3) specifies the following—	
(a)	the name, address and telephone number of the responsible person;	1
(b)	the name, position, address and telephone number of the individual who was responsible for the preparation of the management plan;	1
(c)	the name, position, address and telephone number of the persons who are responsible for carrying out the management plan;	1
(d)	the telephone number of a person who can be contacted in an emergency that requires clearance of a tree from an electric line that the responsible person is required to keep clear of trees;	1
(e)	the objectives of the management plan;	2
(f)	the land to which the management plan applies (as indicated on a map);	12
(g)	any hazardous bushfire risk areas and low bushfire risk areas in the land referred to in paragraph (f) (as indicated on the map)	Appendix 1
(h)	each area that the responsible person knows contains a tree that the responsible person may need to cut or remove to ensure compliance with the Code and that is—	
(i)	indigenous to Victoria; or	4
(ii)	listed in a planning scheme to be of ecological, historical or aesthetic significance; or	4
(iii)	a tree of cultural or environmental significance;	4
(i)	the means which the responsible person is required to use to identify a tree of a kind specified in paragraph (h)(i), (ii) or (iii);	4
(j)	the management procedures that the responsible person is required to adopt to ensure compliance with the Code, which—	
(i)	must include details of the methods to be adopted for managing trees and maintaining a minimum clearance space as required by the Code; and	4
(ii)	for the purposes of determining a minimum clearance space in accordance with Division 1 of Part 3 of the Code – (A) must specify the method for determining an additional distance that allows for conductor sag and sway; and (B) may provide for different additional distances to be determined for different parts of an electric line span;	4
(k)	the procedures to be adopted if it is not practicable to comply with the requirements of AS 4373 while cutting a tree in accordance with the Code;	4
(l)	a description of each alternative compliance mechanism in respect of which the responsible person has applied, or proposes to apply, for approval under clause 31 of the Code;	Error! Reference source not found.
(m)	the details of each approval for an alternative compliance mechanism that—	
(i)	the responsible person holds; and	Error! Reference

EA Yallourn Line Clearance Plan cross reference to the regulation		
Regulation reference number	Prescribed particulars for Electric Line Clearance plans—specified operators - Regulation	Yallourn ELCMP Section:
		source not found.
(ii)	is in effect;	Error! Reference source not found.
(n)	a description of the measures that must be used to assess the performance of the responsible person under the management plan;	6
(o)	details of the audit processes that must be used to determine the responsible person's compliance with the Code;	6
(p)	the qualifications and experience that the responsible person must require of the persons who are to carry out the inspection, cutting or removal of trees in accordance with the Code and the Electricity Safety (General) Regulations 2019;	Error! Reference source not found.
(q)	notification and consultation procedures, including the form of the notice to be given in accordance with Division 3 of Part 2 of the Code;	4.1
(r)	a procedure for the independent resolution of disputes relating to electric line clearance	Error! Reference source not found.
(s)	If Energy Safe Victoria has granted an exemption under regulation 11 relating to a requirement of the Code, details of the exemption or a copy of the exemption	6