

HV Line Clearance Management Plan

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1. INTRODUCTION

1.1 Background

The Electricity Safety (Electric Line Clearance) Regulations 2015 (Version 001) require Australian Paper Maryvale to prepare a Line Clearance Management Plan for the onsite high voltage overhead lines by 31st March each year.

1.2 Purpose

To ensure that high voltage overhead power lines at the Maryvale Mill are managed in compliance with the Electricity Safety (Electric Line Clearance) Regulations 2015 (Version 001).

2. SCOPE

This procedure applies to the high voltage overhead power lines that run from Maryvale Substation to No. 4 Paper Machine and from Maryvale Substation to the Effluent Plant and No. 5 Paper Machine.

3. ACCOUNTABILITIES

Maryvale Mill personnel and Contracting personnel with responsibilities and authorities for activities covered within this Work Procedure are shown in Section 7 of this document.

This Line Clearance Management plan is authorised by:

Shaun Appelgren

Date: _____
General Manager Engineering Maryvale Mill

4. OBJECTIVE

The objectives of this Management Plan is:

- maintain electrical safety for onsite personnel;
- provide electrical safety for the workplace;
- prevent the ignition of bushfires.
- protect areas of important vegetation;
- manage vegetation with minimum effect on the environment;
- ensure continuity of power supply to production equipment; and
- comply with the requirements of the Electricity Safety (Electrical Line Clearance) Regulations 2015 (Version 001).

5. LEGAL AND OTHER REQUIREMENTS

The Electricity Safety (Electric Line Clearance) Regulations 2015 (Version 001) details the requirements of managing clearance of vegetation near overhead power lines. Australian Paper Maryvale operates 22kV overhead power lines from Maryvale Sub-station to No.4 Paper Machine and from Maryvale Sub-station to the Effluent Plant and No.5 Paper Machine.

Sub-regulation 9.2 of the Line Clearance Regulations states that:

“Before 31 March in each year, a responsible person must ensure that a management plan relating to compliance with the Code for the next financial year is prepared”.

Sub-regulation 10.3 of the Line Clearance Regulations states that:

“The responsible person must provide a copy of the management plan to Energy Safe Victoria on request within 14 days or such longer period as specified by Energy Safe Victoria”.

This Work Procedure is to provide a Management Plan. The information presented below is included as required by sub-regulation 9.3 of the Line Clearance Regulation.

To ensure up-to-date information is available, this document is kept in a centralised electronic document control system. In order to meet the legislative requirements, a copy of this plan can be made available by request to the main entrance gate-house to the Maryvale Mill (manned 24 hours a day). Security/First Aid personnel can access the document in the document control system by searching for “HV Line Clearance Management Plan”, or by searching for the document number “MA-MP-3116.028”. As per the requirements of Sub-regulation 10.7 of the Electricity Safety (Electric Line Clearance) Regulations 2015, the HV Line Clearance Management Plan will also be published on the Australian Paper internet site once accepted by Energy Safe Victoria. When a new version of the management plan is published on the internet site, the superseded version will be removed.

This management plan can be reached using the following link:

<https://opalanz.com/sustainability/certifications/>

To provide an audit process, this document will be kept in the Mill document control system, with the document requiring annual review by the responsible person (Electrical & Automation Manager). This review will trigger the responsible person to ensure that compliance with the Line Clearance Regulations is being maintained. The authorisation date for this document is the Version Date given by the document control system, which is shown in the document header.

6. OPERATIONS MANAGEMENT SYSTEM

Australian Paper's Maryvale Mill has extensive policies and procedures in place to ensure that responsibilities for meeting regulatory requirements are properly defined. These policies and procedures are kept within an electronic document control system to maintain version control, and provide easy access via the mill's internal computer network.

Procedures of particular relevance include:

- MG-RD-0216.003 [Operations Management System \(Maryvale\)](#).
- MG-SEP-2316.001 [Regulatory Compliance](#).
- MG-SEP-0116.002 [Organisation and Accountability](#).
- [Organisation Chart](#).
- Quality Management System [ISO9001:2008 Certification](#)
- Major Hazard Facility [Licence to Operate](#)

7. REGULATION 9: PREPARATION OF A MANAGEMENT PLAN

(Version 001 of the Electricity Safety (Electric Line Clearance) Regulations 2015, 28 June 2015)

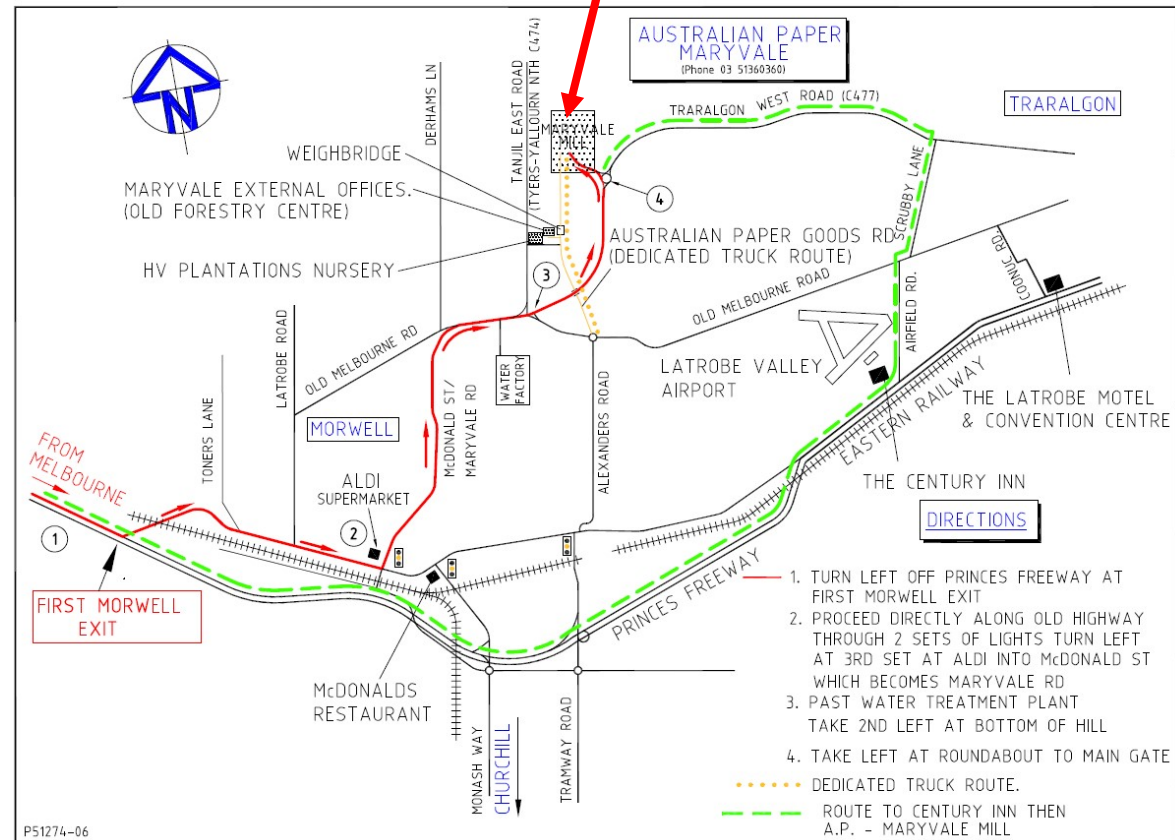
Regulation 9 Sub-regulation 3	Australian Paper Maryvale Mill Electrical Line Clearance Management Plan
A responsible person must ensure that a management plan prepared under sub-regulation (2) specifies the following—	
(a) the name, address and telephone number of the responsible person;	Responsible Person: Shaun Appelgren – General Manager Engineering Australian Paper Maryvale Mill Traralgon West Road (PO Box 37) MORWELL VIC 3840 Telephone: 03 5136 0120
(b) the name, position, address and telephone number of the individual who was responsible for the preparation of the management plan;	Prepares the Management Plan: Bahram Ghafari - Automation Engineer Australian Paper Maryvale Mill Traralgon West Road (PO Box 37) MORWELL VIC 3840 Telephone: 03 5136 0543 0478 489 959 Reviews and approves the Management Plan: Dewald Pelser - Electrical & Automation Manager Australian Paper Maryvale Mill Traralgon West Road (PO Box 37) MORWELL VIC 3840 Telephone: 03 5136 0392 0418 165 950

<p>(c) the name, position, address and telephone number of the persons who are responsible for carrying out the management plan;</p>	<p>Responsible for carrying out the management plan:</p> <p>Mick Diamante - Fibrelines & Central Workshop E/I Superintendent Australian Paper Maryvale Mill Traralgon West Road (PO Box 37) MORWELL VIC 3840 Telephone: 03 5136 0835</p> <p>Ben Bowen – Central E/I Workshop Leading Hand Australian Paper Maryvale Mill Traralgon West Road (PO Box 37) MORWELL VIC 3840 Telephone: 03 5136 0885</p>
<p>(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;</p>	<p>Emergency Contact:</p> <p>The Maryvale Mill site is manned 24 hours a day, every day of the year. Emergency contact numbers are listed below in order of priority:</p> <p>Shift Manager: 03 51360459 Security/Gate: 03 51360360 Power Plant Senior Operator: 03 51360467</p>
<p>(e) the objectives of the management plan;</p>	<p>The objectives of this Management Plan are to:</p> <ul style="list-style-type: none"> - maintain electrical safety for the public; - provide electrical safety for the workplace; - prevent the ignition of bushfires; - protect areas of important vegetation; - manage vegetation with minimum effect on the environment; - ensure continuity of power supply to production equipment; and - comply with the requirements of the Electricity Safety (Electrical Line Clearance) Regulations 2015 (Version 001).

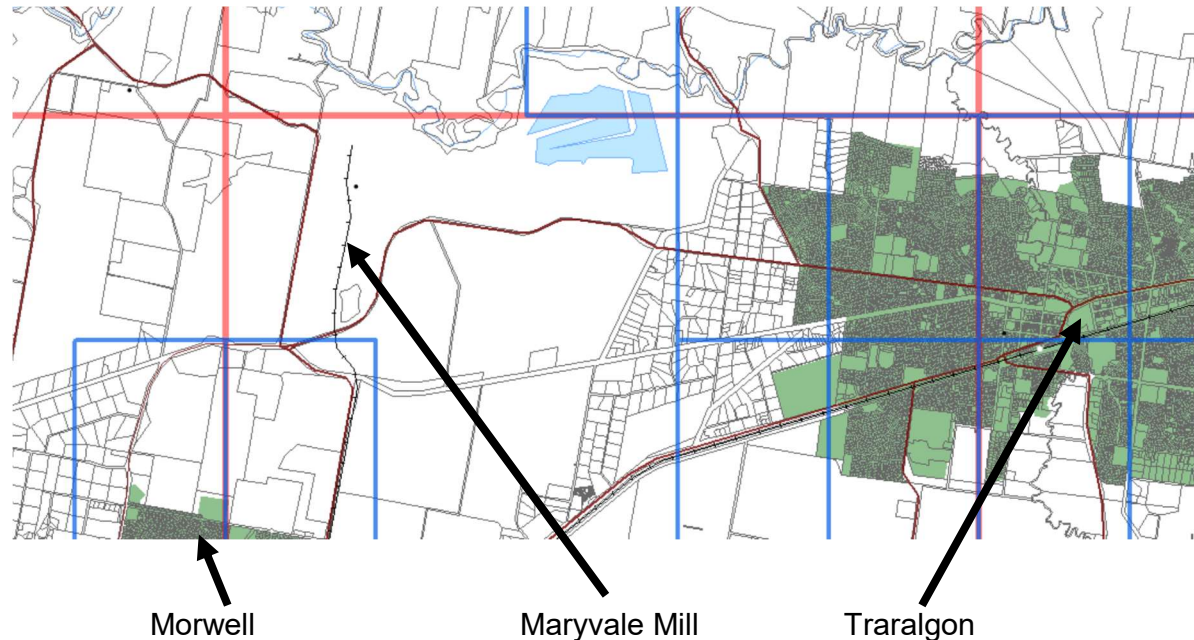
- (f) the land to which the management plan applies (as indicated on a map);

The Maryvale Mill is located between Morwell and Traralgon, approximately 160km east of Melbourne.

Location of overhead power lines at Maryvale Mill



The Maryvale Mill is in an area that has not been classified by the Country Fire Authority (CFA) as having a low fire hazard rating. As such, it has been defined as a Hazardous Bushfire Risk Area, as shown on this map from the 2011 edition of 'fire hazard ratings for the Electricity Safety Act 1998'. (Low fire risk rating areas are shaded green)



During the annual review of this document the CFA web site will be consulted to determine if the Bushfire Risk of the Maryvale Mil site has changed.

(g) **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) native; or

(ii) listed in a planning scheme to be of ecological, historical or aesthetic significance; or

(iii) a tree of cultural or environmental significance;

There are no trees that can encroach within the clearances specified in the Line Clearance Regulations that are:

(i) native;

(ii) listed in a planning scheme to be of ecological, historical or aesthetic significance; or

(iii) are of cultural or environmental significance.



Pole 1: looking North

Pole 8: looking East

<p>(h) the means which the responsible person is required to use to identify a tree of a kind specified in paragraph (g)(i), (ii) or (iii);</p>	<p>Identification of a tree of a kind specified in paragraph (g)(i), (ii), or (iii) is not required as there are no trees near the 22kV overhead power lines that run through cleared private property on the Maryvale Mill site.</p>
<p>(i) the management procedures that the responsible person is required to adopt to ensure compliance with the Code, which must—</p> <p>(i) include details of the methods to be adopted for managing trees and maintaining a minimum clearance space as required by the Code; and</p> <p>(ii) specify the method for determining an additional distance that allows for cable sag and sway for the purposes of determining a minimum clearance space in accordance with Division 1 of Part 3 of the Code;</p> <p>Notes</p> <p>1 Subregulation (4) provides that the method may provide for different additional distances to be determined for different parts of a span of an electric line.</p> <p>2 Clause 21(2) of the Code requires a distribution company or an owner or operator of a railway or tramway supply network that is consulted by a Council to assist the Council by determining an additional distance.</p>	<p>Maryvale Mill manages the maintenance of equipment using a Computerised Maintenance Management System (CMMS). This includes 'Programmed Maintenance' (PM) tasks for:</p> <ul style="list-style-type: none"> – M04896: Overhead lines, annual inspection; – M04897: Overhead switches, annual inspection; – M04898: Overhead switches, 5-yearly maintenance; and – M01225: Inspection of Overhead Lines & Poles by an ESV approved Asset Inspector every 36 months. <p>An annual inspection of the overhead lines shall be undertaken to ensure compliance prior to, and for the duration of, the declared fire danger period, and will include:</p> <ul style="list-style-type: none"> – visual checking of line condition from the ground; – thermal imaging of the line at poles to detect hot spots; – visual checking to verify that regular mowing is being undertaken, so that vegetation cannot encroach on the clearances given in Schedule 2 of the Line Clearance Regulations; and – visual checking that no "hazard trees" exist that are likely to fall onto or otherwise come in contact with the overhead power line. <p>The 22kV overhead lines covered under this Management Plan are supported by 16 concrete poles. The 22kV overhead power lines run through cleared private property. The Maryvale Mill site has been used for industrial production since the 1930's. There are no trees that can encroach within the clearances specified in the Line Clearance Regulations. Any small bushes or trees that regrow from the ground are detected during routine inspections and removed before they can encroach within the clearances specified in the table provided below.</p> <p>Regulation 28 of the Line Clearance Regulations provides a formula that can be used to calculate additional distance that allows for cable sag and sway in the middle two thirds of a span of an uninsulated HV line in a hazardous bushfire risk area. Using this formula the</p>

permitted clearance distances for each of the spans of 22kV line on the Maryvale Mill site are shown calculated in the table below.

Start		Finish	Span (metre)	Applicable Distance (mm) as per $1500 + ((\text{Span} - 45) * (500/303))$ Minimum 1500mm
Pole 1	to	Pole 2	19.0	1500
Pole 2	to	Pole 3	101.6	1593
Pole 3	to	Pole 4	105.5	1600
Pole 4	to	Pole 5	39.9	1500
Pole 5	to	Pole 6	104.3	1598
Pole 6	to	Pole 7	123.5	1630
Pole 7	to	Pole 8	99.0	1589
Pole 8	to	Pole 9	103.8	1597
Pole 9	to	Pole 10	103.8	1597
Pole 10	to	Pole 11	103.8	1597
Pole 11	to	Pole 12	107.7	1603
Pole 12	to	Pole 13	115.3	1616
Pole 13	to	Pole 14	48.1	1505
Pole 14	to	Pole 15	66.1	1535
Pole 13	to	Pole 13E	120.6	1625

It is noted that the regulations allow a clearance of 1500mm for the first and last sixths of a span. However as any tree clearing is unlikely, Maryvale Mill will comply with the larger distances given in the table for the entire span.

The distances shown in the table shall be applied as indicated in Figure 5 of the Regulations.

**FIGURE 5—UNINSULATED 66 000 VOLT ELECTRIC LINE
 IN A LOW BUSHFIRE RISK AREA AND UNINSULATED
 ELECTRIC LINE IN A HAZARDOUS BUSHFIRE RISK AREA**

Clauses 27, 28 and 29, Graphs 4, 5 and 6



NOT TO SCALE

<p>(j) 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;</p> <p>Note Clause 9 of the Code requires a responsible person to cut trees, as far as practicable, in accordance with AS 4373.</p>	<p>As there are no trees near the 22kV overhead power lines that run through cleared private property on the Maryvale Mill site, it is not anticipated that any cutting will be required. If in the future any tree cutting is required it will be done in accordance with AS4373:2007 Pruning of Amenity Trees.</p>
<p>(k) 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;</p>	<p>No alternative compliance mechanism is applied or proposed.</p>
<p>(l) the details of each approval for an alternative compliance mechanism that—</p> <p style="padding-left: 40px;">(i) the responsible person holds; and</p> <p style="padding-left: 40px;">(ii) is in effect;</p>	<p>No alternative compliance mechanism is held or in effect.</p>

<p>(m) a description of the measures that must be used to assess the performance of the responsible person under the management plan;</p>	<p>It is not anticipated that any tree clearing will be required to maintain line clearances, thus no targets are set regarding tree clearing operations.</p> <p>This document will be stored in a document control system, which will include a requirement for annual review. This review will trigger an audit to ensure that the annual 'PM' task for line inspection has been carried out.</p> <p>Performance of the Maintenance Manager is monitored annually via a performance review with the Mill Manager. This review includes measures relating to safety and reliability of equipment.</p>
<p>(n) details of the audit processes that must be used to determine the responsible person's compliance with the Code;</p>	<p>Section 8 of this document includes and annual review of this plan and audit of compliance. This will be updated each year with a statement of compliance and any other relevant information.</p>
<p>(o) 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;</p>	<p>As trees are not allowed to grow near the overhead power line, it is not anticipated that any cutting or removal of trees will be required within the specified 'No Go Zone' or 'Clearance Space'.</p> <p>If close approach to the lines is required for any reason, the lines will be isolated and earthed, and permits issued, as detailed by organisational High Voltage operating procedures, which follow the principles outlined in the Code of Practice of Electrical Safety for Work on or Near High Voltage Electrical Apparatus (the 'Blue Book').</p> <p>If, in the future, any 'hazard trees' or 'significant trees' are identified, Australian Paper will engage a suitably qualified arborist to assess the tree and recommend appropriate action (National Certificate IV in Horticulture and Arboriculture including 'Assess Trees' module, and at least 3 years' field experience in assessing trees).</p> <p>If, in the future, vegetation clearance is required within the Clearance Space, Australian Paper will engage a competent and experienced tree removal contractor employing people with appropriate and current training in Certificate II in ESI Power line Vegetation Control (UET20312 or UET20319).</p>

	<p>Access to the Maryvale Mill site is tightly controlled to comply with Major hazard Facility requirements. Any person coming on site to perform tree removal will be required to complete a site induction and be in possession of an access pass issued by Maryvale Mill. Currency of training and qualifications of personnel engaged in vegetation maintenance work near the overhead power line will be checked will be checked before issuing a site pass.</p>
(p) notification and consultation procedures, including the form of the notice to be given in accordance with Division 3 of Part 2 of the Code;	<p>The overhead power line runs entirely over cleared private property, owned by Australian Paper. It is not anticipated that any tree-clearing will be required. If, in the future, vegetation clearance is required, there are no identified affected parties.</p>
(q) dispute resolution procedures.	<p>The 22kV overhead power lines run entirely through cleared private property owned by Australian Paper. Due to current management practices there are no foreseeable disputes that could arise from clearing of vegetation near the power lines. Thus this plan does not include any dispute resolution process.</p> <p>For more general consultation on community issues the Maryvale Mill hosts a Community Consultative Committee, which includes members from management, local government, the Environment Protection Agency, and community members.</p>

8. ANNUAL MANAGEMENT PLAN REVIEW AND AUDIT OF COMPLIANCE

8.1 2020

Version 2.5 of this document was submitted to Energy Safe Victoria (ESV) as an attachment to the HV Line Bushfire Mitigation Management Plan on 3/7/2020. Following the evaluation, ESV requested further changes. This document was updated to become Version 2.6.

During the document update, section 8 was updated to capture the completion of the 2020 annual review of the management plan, as well as the results of the 2020 annual audit of the planned PM tasks. For three-yearly Inspection of overhead lines & poles by an ESV approved asset inspector, PM M01225 has been created.

PM Number	PM Title	WO Number Date Completed
M04896	Overhead lines, annual inspection	55015513 12/6/2020
M04897	Overhead switches, annual inspection	53026629 2/8/2019
M04898	Overhead switches, 5-yearly maintenance	The last inspection was on 23/11/2016 through WO 2208160. Planning to re-inspect before end of 2021.
M01225	Inspection of Overhead Lines & Poles by an ESV approved Asset Inspector every 36 months.	The last inspection was on 23/11/2016 through WO 2828151. Planning to re-inspect before end of September 2020 through WO 55020151.

Based on the completion of these preventative maintenance tasks and a visual inspection of the overhead lines that I have undertaken, I am satisfied that we are complying with the requirements of this Management Plan.

Bahram Ghafari, Automation Engineer