

# ELECTRIC LINE CLEARANCE MANAGEMENT PLAN

2021 - 2022

CITY OF BALLARAT PO BOX 655 BALLARAT VICTORIA 3353

VERSION NO	DATE APPROVED	APROVED BY – REFERENCE D-21-13767	ISSUE DATE
1		STEVE VAN ORSOUW – EXECUTIVE MANAGER OPERATIONS	2021
		BRIDGET WETHERALL - DIRECTOR INFRASTRUCRE AND ENVIRONMENT.	The state of the s
AV.		The state of the s	

## Contents

Definitions	5
Regulation 9(2) Preparation of Management Plan	6
Regulation 9(3) Preparation of a Management Plan	6
(a) Name, address and telephone number of the responsible person	6
(b) Name, position, address and telephone number of the individual who was responsible for the preparation of the management plan.	
(c) Name, position, address and telephone number of persons who are responsible for carrying out management plan	7
(d) The telephone number of a person who can be contacted in an emergency that requires clearance of an electric line that the responsible person is required to keep clear of trees	7
(e) The objectives of the management plan	8
(f) The Land to which the management plan applies by the inclusion of a map	8
(g) The Location of areas containing trees which may need to be cut or removed to ensure compliance with the Code and that are:	8
I. NativeError! Bookmark not defined	ı.
II. Listed in a planning scheme to be of ecological, historical or aesthetic significance	9
III. Trees of cultural or environmental significance	9
(h) The means which the responsible person is required to use to identify a tree specified in paragraph (g)	9
(i) The management procedures that the responsible person is required to adopt to ensure compliance with the Code, which must:	0
I. Include details of the methods to be adopted for managing trees and maintaining a minimum clearance space as required by the Code:	0
II. Specify the method for determining an additional distance that allows for cable sag and sway	2
(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	2
(k) A description of each alternative compliance mechanism in respect of which the responsible person has applied, or proposed to apply, for approval under clause 31 of the Code	4
(I) The details of each approval for an alternative compliance mechanism that 1	4
I. The responsible person holds1	4
II. Is in effect1	4
(m) A description of the measures that must be used to assess the performance of the responsible person under the management plan	
(n) Details of the audit processes that must be used to determine the responsible person's compliance with the Code	5

	(o) The qualifications and experience that the responsible person must require of the persons ware to carry out the cutting or removal of trees	
	(p) Notification and consultation procedures	
	(q) Dispute resolution procedures	
Re <sub>{</sub>	gulation 9(4) A method for determining an additional distance that allows for cable sag and swa by provide for different additional distances to be determined for different parts of a span of an ctric line	ıy
Re	gulation 10 – Obligations relating to Management Plan	. 17
,	A responsible person must ensure that a copy of the management plan is:	. 18
	(a) published on the responsible person's Internet site	. 18
	(b) Available for inspection at the responsible person's principal office in the State during normal business hours	. 18
Re	gulation 11 – Exemptions	. 18
,	A responsible person who receives an exemption must ensure that a copy of the exemption is	. 18
	(a) published on the responsible person's Internet site	. 18
	HEDULE 1 – CODE OF PRACTICE FOR ELECTRIC LINE CLEARANCE, PART 2 – CLEARANCE SPONSIBILITIES, DIVISION 1 – ROLES OF RESPONSIBLE PERSONS	. 18
	4 Exception to minimum clearance space for structural branches around insulated low voltage electric lines	. 18
į	5 Exception to minimum clearance space for small branches around insulated low	. 19
١	voltage electric lines	. 19
	5 Exception to minimum clearance space for structural branches around uninsulated low voltag electric lines in low bushfire risk areas	
-	7 Owner or operator of transmission line must manage trees around minimum clearance space.	. 20
8	Responsible persons may cut or remove hazard tree	. 20
	9 A responsible person cutting a tree must, as far as practicable cut the tree in accordance with AS4373 as published or amended from time to time	
2	10 Cutting or removal of specified trees must be minimised	. 20
	(3)(a) Indigenous trees	. 21
	(3)(b) Trees listed in a planning scheme to be of ecological, historical or aesthetic significance	21
	(3)(c) Trees of cultural or environmental significance	. 21
:	11 Cutting or removal of habitat for threatened fauna	. 22
:	12 Restriction on timing of cutting or removal if notification is required	. 22
	13 Restriction on urgent cutting of trees	. 22
	14 Restriction on urgent cutting of trees	. 22
	15 Responsible persons must provide notification before cutting or removing certain trees	. 23
	16 Responsible person must publish notice before cutting or removing certain trees	. 23

	17 Responsible person must consult with occupier or owner of private property before cutting	
	removing certain trees	23
	18 Notification and record keeping requirements for urgent cutting or removal	23
	19 Dispute resolution	23
	20 Duty relating to the safety of cutting or removal of trees close to an electric line	23
	21 Duty relating to assisting to determine the allowance for cable sag and sway	24
	22 Duties relating to management procedures to minimise danger	24
	31 Application for approval of alternative compliance mechanism.	24
	32 Formal safety assessment of alternative compliance mechanism	24
٩	ppendices	25
	Appendix 1 – Declared Area Maps for City of Ballarat.	25
	Appendix 2 – Trees of Native, Heritage or Cultural Significance	27
	Appendix 2.1 – Native Trees	27
	Appendix 2.2 Heritage Trees	28
	Appendix 2.3 Trees of cultural or environmental significance.	32
	Appendix 3 – Applicable distance for middle two thirds of a span of an electric line	33
	Appendix 4 works Program	36
	Appendix 5- Examples of Audit	37
	Appendix 6 Work area safety inspection form	38
	Appendix 7- Examples of Preferred Street Tree Planting List	40
	Appendix 8 Contractor Training Matrix	41
	Appendix 8.1 Contractor JSA, SWMS	42
	Appendix 9 Notification of Works	47

#### **Definitions**

**CFA** – Country Fire Authority.

**Code** – Code of Practice for Electric Line Clearance as defined in the Schedule of the Electricity Safety (Electric Line Clearance) Regulations 2020.

**Declared Area** – The area of the municipality where vegetation management around powerlines is the responsibility of the City of Ballarat.

**DELWP** – Department of Environment, Land, Water and Planning.

**ESV** – Energy Safe Victoria.

**HV** – High Voltage (22,000 volts – 66,000 volts).

LV - Low Voltage. (240Volts).

**LBRA** – Low Bushfire Risk Area – An area that a fire control authority has assigned a fire hazard rating of "Low" under section 80 of the Act, or an urban area.

**HBRA** – High Bushfire Risk Area – An area that a fire control authority has assigned a fire hazard rating.

**Regulations** – Electricity Safety (Electric Line Clearance) Regulations 2020.

**Suitably Qualified Arborist** – An arborist who holds a minimum of certificate IV Arboriculture, Assess trees module and 3 years' experience.

The Act – Electricity Safety Act 1998.

#### Regulation 9(2) Preparation of Management Plan

The following sections are in response to Regulation 9(2) Preparation of a Management Plan, Part 2 of the Electricity Safety (Electric Line Clearance) Regulations 2020.

The City of Ballarat, Executive Manager Operations and Supervisor Arboriculture will review and amend the Plan annually. The amened document will be submitted to the Director of Infrastructure and Environment for review and authorization prior to the 31<sup>st</sup> March each year.

Preparation of the Electric Line Clearance Management Plan is scheduled in City of Ballarat's Parks and Gardens department calendar for the first week in March each year. The preparation of this document will include a full review of all processes and procedures and their effectiveness in meeting the plan objectives.

The new document will be submitted to the Director of Infrastructure and Environment for review and authorisation prior to the 31<sup>st</sup> March each year. The superseded document will be removed from circulation on June 30 each year and replaced with the new approved document.

City of Ballarat, Supervisor of Arboriculture will submit to Energy Safe Victoria the Plan within 14 Days of request.

#### Regulation 9(3) Preparation of a Management Plan

The following sections are as per Regulation 9(3) of the Electricity Safety (Electric Line Clearance) Regulations 2020.

(a) Name, address and telephone number of the responsible person

Name: City of Ballarat

Address: 25 Armstrong Street South, Ballarat, Victoria 3353

**Telephone No:** (03) 5320 5500

Facsimile: (03) 5333 4061

Email address: <a href="mailto:evanking@ballarat.vic.gov.au">evanking@ballarat.vic.gov.au</a>

Name of Chief Executive officer: Evan King.

(b) Name, position, address and telephone number of the individual who was responsible for the preparation of the management plan.

Name: Bridget Wetherall

**Position:** Director Infrastructure and Environment

Address: 25 Armstrong Street South, Ballarat, Victoria 3353

**Telephone No:** (03) 5320 5822

Email address: <u>bridgetwetherall@ballarat.vic.gov.au</u>

(c) Name, position, address and telephone number of persons who are responsible for carrying out management plan.

Name: Steve Van Orsouw

**Position:** Executive Manager Operations.

**Address:** Corner of Ring Road and Trewin Streets, Wendouree 3355.

**Telephone No:** (03) 5320 7406.

Email address: stevevanorsouw@ballarat.vic.gov.au

Name: Daryl Wallis

**Position:** Coordinator Parks and Gardens

**Address:** Corner of Ring Road and Trewin Streets, Wendouree 3355.

**Telephone No:** (03) 5320 7405

Email Address: <a href="mailto:darylwallis@ballarat.vic.gov.au">darylwallis@ballarat.vic.gov.au</a>

Name: Richard Nicholls

**Position:** Supervisor Parks and Gardens Contracts.

Address: Corner of Ring Road and Trewin Streets, Wendouree 3355

**Telephone No:** (03) 5320 7404

Email address: richardnicholls@ballarat.vic.gov.au

(d) The telephone number of a person who can be contacted in an emergency that requires clearance of an electric line that the responsible person is required to keep clear of trees. Business Hours

Name: City of Ballarat customer service

**Emergency Telephone No:** (03) 5320 5500

**After Hours:** (03) 5320 5500

Name: City of Ballarat after hours service

**Emergency Telephone No:** (03) 5320 5500

#### (e) The objectives of the management plan

The following are identified as the key objectives of Council in fulfilling its duties set out in the Electricity Safety (Electric Line Clearance) Regulations 2020:

- Compliance with the Code of Practice for Electric Line Clearance 2020.
- Electrical Safety.
- Minimise the risk of fire caused by conflicts between electrical apparatus and Council controlled vegetation.
- Minimise disruptions to continuity of supply from Council controlled vegetation
- Public safety.
- Provision of a safe workplace for employees and contractors.
- Management of vegetation to maximise the amenity, cultural and environmental qualities of the City's trees.
- Protection of areas of important vegetation.
- Community understanding and satisfaction with Council's electric line clearance works.
- To continually improve the plan and its implementation using measurable KPI's as defined in Clause 9(3)(m)

#### (f) The Land to which the management plan applies by the inclusion of a map

Declared Areas within City of Ballarat are shown in *Appendix 1* (includes Low Bushfire (LBRA) and Hazardous Bushfire Risk Areas (HBRA).

The City of Ballarat's Declared areas contain spans of both Low and High Voltage conductors.

The Bushfire Risk Area Boundary information is reviewed in consultation with the CFA, this occurs annually with the preparation of the ELCMP.

## (g) The Location of areas containing trees which may need to be cut or removed to ensure compliance with the Code and that are:

I. Indigenous to Victoria.

For the purpose of this plan the City of Ballarat considers trees indigenous to the area as native. A list of species is provided.

Appendix 2.1 – Indigenous Trees.

The City of Ballarat maintains a tree inventory that identifies the location and species of each tree. To ensure the trees are identified correctly, the City of Ballarat utilises suitably qualified and experienced arborists for inspections who can identify the relevant species.

The City of Ballarat has a Vegetation Protection Overlay areas VPO1 and VPO2 that require a permit to remove, destroy or lop native vegetation in declared and non-declared areas of the municipality

A permit exemption for VPO1 and VPO2 is listed for any action which is necessary to maintain the minimum extent necessary to maintain utility services for the transmission of

water, sewage, gas, electricity, electronic communications, provided that the removal, destruction, or lopping is with written consent of the responsible authority.

Information on VPO 42.02 can be found at:

https://www.planning.vic.gov.au/Vegetation-Protection-Overlay-42\_02

II. Listed in a planning scheme to be of ecological, historical or aesthetic significance

The Planning scheme within the City of Ballarat has numerous trees where controls apply and a permit is required to remove, destroy or lop a tree,

An example of tree locations is within the City of Ballarat GIS system within a Heritage Overlay area that can be viewed in *Appendix 2.2* Mapping of overlays for, **Heritage, Vegetation Protection Overlay 1, Vegetation Protection Overlay 2, Environmental Significance Overlay 1-5** within the Declared areas are contained in, *Appendix 2.3* 

A Heritage overlay permit exemption is listed for any action which is necessary to keep the whole or any part of the tree clear of an electric line provided the action is carried out in accordance with a code of practice prepared under Section 86 of the Act.

III. Trees of cultural or environmental significance

The City of Ballarat has listed in the Planning Scheme Overlay controls for Environmental Significant Overlay Schedule 5 for Koala Habitat protection see attached policy in (*Appendix 2.4*).

# (h) The means which the responsible person is required to use to identify a tree specified in paragraph (g)

The responsible person should consult:

Table 1 – Contacts for consultation

Location of:	Organisation	Method
Indigenous trees	City of Ballarat	Refer to
		Appendix 2.1 Native trees
Indigenous trees	DWELP	Refer to <i>Appendix 2.1.2</i> –
		Vegetation Protection Overlay
		Area
		www.environment.vic.gov.au/native-
		<u>vegetation</u>
Heritage Trees	City of Ballarat	Refer to Appendix 2.2 – Heritage
		trees and properties
Planning scheme	DWELP	www.planning.vic.gov.au/scheme
		s/planning-ballarat

Planning	Victorian	
scheme/Cultural	Heritage	heritagecouncil.vic.gov.au
	Database	
	Victorian	
Cultural	Aboriginal	www.vic.gov.au/aboriginalvictoria/heritag
	Heritage	<u>e</u>
	Register	
Threatened	DWELP	
Vertebrate and		www.environment.vic.gov.au/Threatened-
invertebrate		<u>List</u>

The City of Ballarat will also seek specialist advise (where necessary) to determine if any species (or habitat thereof) or communities on the threatened flora or fauna advisory lists or listed under the Flora or Fauna advisory lists or listed under the Flora and Fauna Guarantee Act 1998 are endangered by works to prune or remove trees.

The City of Ballarat will inform employees, contractors and other agencies involved in electrical line clearance works, of the location of trees within the municipality that are known to have ecological, historic, aesthetic, cultural, or environmental significance. A copy of the Plan and this information will be provided annually.

The City of Ballarat will also continue to work with relevant agencies to ensure the aesthetics and viability of significant trees are not compromised by line clearance works.

As part of the preparation of the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

# (i) The management procedures that the responsible person is required to adopt to ensure compliance with the Code, which must:

I. Include details of the methods to be adopted for managing trees and maintaining a minimum clearance space as required by the Code:

There are over 9,200 trees that the City of Ballarat is responsible for adjacent to powerlines within the Declared Area.

City of Ballarat preferred Contractor will inspect /audit all feeders within the Declared area (HBRA/LBRA) prior to commencement of electric line clearing.

The City of Ballarat declared areas contain HBRA areas that will be completed by 30<sup>th</sup> November or prior the declaration of Bushfire season of each year.

- All trees under or adjacent to power lines are to be inspected as part of the works program.
- All inspections are to be completed by a suitably qualified arborist.
- Works identified during inspection are completed within 30 days.
- Where pruning is required, the extent of pruning will maintain minimum clearances and
  provide additional clearance as necessary to prevent regrowth from entering the clearance
  space between pruning cycles and manage the sag and sway of electrical conductors for
  spans great than 45 meters in length.

Works are initially focussed on achieving High Voltage clearances and additional contractor resources will be engaged to undertake live line pruning where required.

- Each tree that is to be inspected and pruned at a frequency where regrowth can be easily maintained, therefore it is unnecessary to record regrowth data.
- All works and condition assessments are recorded in the City of Ballarat asset data base tree inventory.
- A quality audit of all trees is undertaken by a Council officer for each completed Feeder ensure compliance with the Electric Safety (Electric Line Clearance) Regulations 2020 and AS 4373-2007
- The completion audit includes assessing an allowance for regrowth for the length of the pruning cycle.
- Non-compliant trees in HBRA non-declared areas will be identified and forwarded to the Network Operator's vegetation management contractor.

**Reactive maintenance** where trees are identified as being non-compliant outside the normal maintenance regime, these trees can be reported to Council's customer service 03 5320 5500, and then referred to the Arborist Supervisor or delegated officer for assessment of work requirements and allocation to Councils current contractor.

- Non-urgent reactive works are to be completed within thirty (30) business days of the works being allocated, unless another timeframe is determined by the Arborist Supervisor at the time of allocation.
- In situations of high priority, the aim is to respond within one (1) hour and make the site safe within one hour or twenty-four (24) hours of notification depending on the situation. Additional works will be scheduled as required.
- All works are recorded in the City of Ballarat document management system.
- Trees will be pruned to the minimum clearances outlined in the Electric Safety (Electric Line Clearance) Regulations 2020. All pruning will conform to AS 4373-2007 Pruning of Amenity Trees. If this is not possible the tree shall be referred to the Arborist Supervisor for alternative management solutions as per Section 9(3)(j) of the Plan.

**Tree removals** of unsuitable tree species will occur when a suitably qualified and experienced Arborist has determined a tree cannot be managed to comply with the Code. If the tree is not eligible for an exemption and the appropriate tree removal protocols have been applied. The process involves:

- In-house staff or contractor identifies a tree that cannot be managed by pruning,
- The Arborist Supervisor or delegated officer inspects the tree to confirm
- The tree cannot be managed through pruning,
- Is not eligible for an exception, and
- Does not meet the criteria for engineering solutions.
- An assessment recommending removal is provided to the Senior Arborist for approval.
- Community consultation is undertaken regarding the removal of the tree.
- Works are programmed as per the reactive works process.
- Removal of tree and stump completed within thirty (30) business days or in accordance with timelines required by Network Operator if a shutdown is required for safety.
- Actions recorded in the document management system
- If the site location is suitable and public consultation completed, tree replacement is programmed for the following year.
- Formative pruning to assist with maintaining clearances conducted during establishment period.

- Inspect and prune in accordance with Plan
- **II.** Specify the method for determining an additional distance that allows for cable sag and sway.

Minimum clearances for sag and sway spans below 100 metres in length will be maintained in compliance with the distances in the clearance graphs in Schedule 2 of the Code. Graphs 1, 2, 3 and 4 of Schedule 2 of the Regulations will inform allowance for sag and sway in LBRA areas and graphs 5 and 6 will inform allowance for sag and sway in HBRA areas to confirm requirements.

Appendix 3 – Applicable distance for middle two thirds of a span of an electric line).

For spans greater than 100 metres in length within LBRA or greater than 45m length in HBRA, the City of Ballarat will contact the Network Operator and Powercor, to provide the required clearance distance to allow for sag and sway. This information will be recorded against the affected tree and be available to operators in the field via tablets, for a minimum of five years.

The City of Ballarat does not currently have information relating to the distance between poles, the location of any spans greater than 100m in length and the sag and sway clearances required for any spans greater than 100m in length. The City of Ballarat is currently liaising with Powercor, to access this data. As this information is obtained the clearance requirement will be recorded in the City of Ballarat document management system and used to inform management practices.

(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.

The City of Ballarat requires all staff and contractors pruning trees within the municipality to comply with AS4373 Pruning of Amenity Trees as far as is reasonably practicable.

Reasonably practicably in relation to AS4373 means that which is, or was at a particular time, reasonably able to be done in relation to ensuring continued tree health and future tree safety, taking into account and weighing up all relevant matters including:

- Will the action create a defect, hazard, loss of tree health or aesthetic value in the present or future?
- What will the impact be on the tree or future safety of the public;
- What the person concerned knows, or ought reasonably to know about;
- The hazard or the risk must have adequate knowledge to determine the hazards risks;
- Ways of eliminating or minimising the risk must have adequate knowledge in relation to alternative measures;
- Are other resources or techniques available to complete works to the standard, and
- does the cost required to complete works to the standard grossly outweigh the value of the tree?

Where pruning to AS4373 is not practicable, the site or trees are to be referred to the Arborist Supervisor or a delegated Council Officer who holds a Certificate Level V or above in Arboriculture to make an assessment on whether or not it is reasonably practicable to deviate from AS4373. The City of Ballarat ensures contractors are appropriately trained and aware of the principles of AS4373, and what is reasonably practicable, by:

Referencing the standard in its internal guidelines,

- Referencing the standard in tender documents for contractors,
- Including the City of Ballarat's definition of 'reasonably practicable' in contractor induction.
- Ensuring contractors undertaking electric line clearance work have, at a minimum: of Certificate Level III in Horticulture and Arboriculture,
- Certificate Level II in ESI Power line Vegetation Control, and
- 3 years industry experience that demonstrates understanding of AS 4373 (See *Appendix 8 Training Matrix*).

Where pruning to achieve clearance will not allow compliance with AS4373, the City of Ballarat may elect to:

- Increase the pruning frequency to minimise the required pruning,
- List the tree for an exception,
- Remove scaffold/ parent limbs,
- Investigate the potential for engineering solutions to facilitate compliance or an exemption,
   or
- Remove trees where the tree is of low retention value or the resulting pruning would leave trees unsuitable for retention.

The decision will be guided by costing of the options in terms of tree value, works cost and the surrounding environment of the tree.

Where street trees are to be removed, the resident adjacent the property will be notified in writing that the removal will occur within 30 days.

Where significant reserve trees are to be removed all residents with a view of the tree will be notified in writing that the removal will occur within 30 days, additional notice boards will be erected within the reserve.

The process for selection of appropriate plant and equipment involves the following considerations: Access to site,

- Voltage of overhead conductors equipment suitably insulated and tested,
- Proximity of vegetation to conductors,
- Configuration of equipment,
- Reach/ height of equipment, and
- Cutting tools proportional to material to be cut.

Once each of these points has been considered, the best fit for the task should be selected. Availability may also be a defining factor, where the best fit is not available other options may be considered, however must still be able to achieve acceptable pruning standards in a safe manner.

The City of Ballarat conducts audits of the ELC program to ensure compliance with AS4373 - 2007 and electric line clearance regulations (Appendix 5 - 6 Example Audit).

- Audits are conducted within fourteen (14) days of zone completion and assesses 100% of streets within each zone,
- Quality of cuts, appropriateness of pruning, clearance requirements and post site clean-up are reviewed,
- Feedback via the audit results is provided to contractors,
- Any non-compliance identified through the post work audit process is reported to the Senior Arborist within thirty (30) days of identification, and
- Remedial pruning will be required within thirty (30) days of identification to achieve conformance.

As part of the preparation for the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

## (k) A description of each alternative compliance mechanism in respect of which the responsible person has applied, or proposed to apply, for approval under clause 31 of the Code.

The City of Ballarat has not applied for and currently does not plan to apply for any alternative compliance mechanism under clause 31 of the Code.

#### (I) The details of each approval for an alternative compliance mechanism that:

- I. The responsible person holds.
  - Not applicable.
- II. Is in effect.
  - Not applicable

## (m) A description of the measures that must be used to assess the performance of the responsible person under the management plan.

The City of Ballarat and the Coordinator of Parks and Gardens have defined Key Performance Indicators (KPIs) to assist in measuring the implementation of the Plan:

- Preparation of the Electric Line Clearance Management Plan prior to the 31st March of each year
- Completion of Program for pruning as per schedule
- Completion of 20 audits of Electric Line Clearing contractor per annum
- A minimum 95% compliance
- 100% of non-compliance rectified within 30 business days of notification
- All hazards identified in contractor OHS inspections addressed within required timeline
- Respond to all pruning requests from the Network Operator within the required timeline,
- Reduction in the number of Customer Service Requests received for electric line Clearing and
- No emergency clearances.
- Key Performance Indicators are monitored via:
- mobile work site safety audits
- Post works auditing,
- Monitoring levels of customer requests relating to powerlines,
- Compliance results from the Network Operator's (when supplied), and
- Reporting through document management system and Position Description key performance indicators.

#### Results are reported via:

- Internal team meetings,
- Monthly contract meetings, and
- Monthly reports submitted to Management

Reporting of KPI's is used to aid in:

- Issuing of reworks where required
- Individual performance management for internal staff
- Development of procedures and processes
- Development of pruning programs and Contract Specification
- Selection of suitable tree species for planting near powerlines

## (n) Details of the audit processes that must be used to determine the responsible person's compliance with the Code

The Arborist Supervisor is responsible for a number of audits to verify compliance with the Code. These include:

- A quality audit is undertaken by the Supervisor Arboriculture or delegated Council Officer
  who is a suitably qualified arborist for each completed area to ensure compliance with: the
  Electric Safety (Electric Line Clearance) Regulations 2020
- quality of arboriculture works and compliance with AS 4373 Pruning of Amenity trees
- A minimum of 1 Safety Audit per week is undertaken randomly on site by the Supervisor Arboriculture, Inspecting Arborist and or delegated Council Officers to ensure correct OH&S and traffic/pedestrian control are undertaken as well as appropriate controls are in place for powerline tree trimming.
- Pre-works site checks are carried out and documented for record keeping by all Council staff and contractors.
- The competency and qualification of personnel of Electric Line Clearance workers is required by contract and reported on via monthly contract meetings.

Once identified, non-compliance is reported to the Arborist Supervisor and rectified within thirty (30) working days. Confirmation of rectification is to be provided in writing to the Arborist Supervisor and included in the monthly contract report. Contractors are required to provide a report in response to the non-compliance identifying the cause for non-compliance and that will mitigate the cause in future works.

Results of audits are reported via:

- internal team meetings, and
- monthly contract meetings.

Audit results and resulting communications are stored in The City of Ballarat's document management system.

# (o) The qualifications and experience that the responsible person must require of the persons who are to carry out the cutting or removal of trees

When qualified contractors are undertaking electric line clearance works for the City of Ballarat, they are working as authorised persons as outlined in the Electricity Safety (General) Regulations 2019 r. 614, 616, 617.

The City of Ballarat will ensure that all contractors working as authorised persons will conform to:

- Electricity General Regulation 2019 regulation 616.
- Australian Standard AS4373-2007 Pruning of Amenity Trees,
- The "Blue Book", and

• Any organisational procedures, safe work method statements and Job Safety Assessments to ensure the work can be completed safely.

The City of Ballarat will ensure that all staff and contractors:

- are trained both initially and when refresher courses are required by a Registered Training Organisation (RTO);
- performing tree pruning and removal works around electric lines are suitably qualified and trained personnel who hold the following qualifications;
- Arborist / Grounds Person, Certificate II ESI in Powerline Vegetation Control + selection of elective units as listed most aligned with Council objectives

#### **EWP Operator and EWP Safety Observer**

- UETTDRVC33 Apply pruning techniques to vegetation control near live electrical apparatus
- UETTDRVC25A Use elevated platform to cut vegetation above ground level near live electrical apparatus
- TLILIC0005 Licence to operate a boom-type elevating work platform (EWP licence)

#### Tree Climber and Climber Safety Observer

- UETTDRVC21 Use climbing techniques to cut vegetation above ground near live electrical apparatus
- UETTDRVC33 Apply pruning techniques to vegetation control near live electrical apparatus
- UETTDRVC34 Undertake release and rescue from a tree near live electrical apparatus
- AHCARB204 Undertake standard climbing techniques
- Minimum Certificate III Horticulture / Arboriculture.
- Arboriculture Inspector a Minimum Certificate IV Horticulture / Arboriculture, including the nationally accredited 'Assess' and 'Identify' modules, and 3 years industry experience.

The City of Ballarat will ensure staff and contractors are trained initially in ESI and when annual refresher course are due, will be delivered by a Registered Training Organization (RTO).

The Certificate III Horticulture/Arboriculture and Certificate II ESI cover many aspects of required training such as Chainsaw use, OH&S principles, First Aid, pruning techniques and High-Risk licences. Additional staff may be required to hold training in;

- Traffic management,
- Chipper operation/induction,
- Chemical application (A.C.U.P or similar), or
- Tree Climbing

All contractors are required to provide evidence of appropriate qualifications and training prior to the commencement of work and report on updates to training via monthly and annual reports. All records are stored in the City of Ballarat's document management system.

To ensure contractors are aware of site and requirements contractors are subject to both internal & external induction processes and specific task related site safety assessments.

Any contractor found on site without appropriate qualifications, training or experience to be excluded from the site immediately and an investigation to be followed up by Arborist Supervisor .

As part of the preparation for the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

#### (p) Notification and consultation procedures.

Covered in schedules 15, 16, 17 and 18 of the Code

#### (q) Dispute resolution procedures.

If a dispute arises during the process of consultation/negotiation between affected landowners and the Council, regarding proposed clearing/pruning/alternative construction activities, the complaint shall be resolved at the lowest management level possible. If resolution is not possible the complaint shall be escalated to the next level of management. The preferred process of escalation is: The person responsible for resolving official disputes between Council and members of the public relating to the issues discussed in the Plan is:

- Supervisor Arboriculture
- Coordinator of Parks and Gardens
- Executive Manager Operations
- Director Infrastructure and Environment
- Chief Executive Officer
- Energy and Water Ombudsman Victoria

The person responsible for resolving official disputes between Council and members of the public relating to the issues discussed in the Plan is:

Name: Mr. Richard Nicholls

Title: Supervisor Arboriculture

Telephone No: 0353 207 404

Email: richardnicholls@ballarat.vic.gov.au

If the dispute cannot be resolved directly with Council, the person making the complaint will be referred to the Dispute Settlement Centre of Victoria (03) 9603 8370

The procedure is specific to the Plan and will be available as part of the Plan and will be available for inspection as part of the Plan at the Council Offices and on Councils website as per Clause 10(7)

Regulation 9(4) A method for determining an additional distance that allows for cable sag and sway may provide for different additional distances to be determined for different parts of a span of an electric line.

Covered under regulation 9(3)(i)(ii)

#### A responsible person must ensure that a copy of the management plan is:

(a) published on the responsible person's Internet site

A copy of the City of Ballarat Electric Line Clearance Management Plan will be published on Councils website at <a href="https://www.ballarat.vic.gov.au/tree-management">https://www.ballarat.vic.gov.au/tree-management</a>.

The Supervisor Arboriculture will ensure the Plan will be updated on the website each year as per the following process:

- Draft of the new plan completed by 1st March,
- Draft sent to the Director Infrastructure and Environment for review by 10th March,
- Amendments made as required,
- Send amended plan to the Director Infrastructure and Environment for approval, and
- After plan is approved liaise with Communications Department to remove superseded Plan and publish new Plan to website and Council Offices by 30 June.
- (b) Available for inspection at the responsible person's principal office in the State during normal business hours

A copy of the City of Ballarat Electric Line Clearance Management Plan will be available for viewing by the public at the Council Offices, at both 25 Armstrong Street South Ballarat and Corner of Trewin Street and Ring Road Wendouree between the hours of 8:15am – 5pm.

To ensure that the most up to date copy is available, the following controls are put in place.

- 1. After Director Infrastructure and Environment approves publication of the Plan, all existing hard copies are destroyed, and
- 2. A hard copy of the new plan is then created and lodged with Customer Service by June 30.

#### Regulation 11 – Exemptions

#### A responsible person who receives an exemption must ensure that a copy of the exemption is

(a) published on the responsible person's Internet site

The City of Ballarat does not have an active exemption at this time.

# SCHEDULE 1 – CODE OF PRACTICE FOR ELECTRIC LINE CLEARANCE, PART 2 – CLEARANCE RESPONSIBILITIES, DIVISION 1 – ROLES OF RESPONSIBLE PERSONS

## 4 Exception to minimum clearance space for structural branches around insulated low voltage electric lines

The process for exception to minimum clearance space for structural branches around insulated low voltage electric lines is

- A tree is identified that has structural branches within the clearance zone (< 10mm)</li>
- A suitably qualified Arborist determines that: the branch is greater than 130mm in diameter when it enters the minimum clearance space,
- the branch is more than 300mm from the line,
- the line is an insulated, low voltage cable, and
- the branch does not have a visible structural defect that may cause the branch to fail and make contact with the electric line.

- A risk assessment of the tree and branch is undertaken in accordance with The City of Ballarat Risk Methodology.
- Any risks identified are mitigated.
- The Arborist: registers in the tree data base, and
- ensures the tree is noted in the annual proactive risk inspection program.

The process is managed by the Supervisor Arboriculture and all records are retained by the City of Ballarat for a minimum of five years.

# 5 Exception to minimum clearance space for small branches around insulated low voltage electric lines

The City of Ballarat is in the process of identifying trees that meet the requirements for an exception as outlined in Part 2, Division 1, Clause 5 of Schedule 1 of the Code.

The process for exception to minimum clearance space for small branches around insulated low voltage electric lines is

- An Arborist determines that;
  - > a branch is less than 10mm in diameter when it enters the minimum clearance space,
  - the line is an insulated, low voltage cable, and
  - Council's database confirms that the branch has been removed from the minimum clearance space within the last twelve months.

The process is managed by the Supervisor Arboriculture and all records are retained by the City of Ballarat for a minimum of five years.

## 6 Exception to minimum clearance space for structural branches around uninsulated low voltage electric lines in low bushfire risk areas

The City of Ballarat is in the process of identifying trees that meet the requirements for an exception as outlined in Part 2, Division 1, Clause 6 of Schedule 1 of the Code.

The process for exception to minimum clearance space for structural branches around uninsulated low voltage electric lines in LBRA is

- A tree is identified that has structural branches within the clearance zone
- A suitably qualified Arborist determines that;
  - > the branch is greater than 130mm in diameter when it enters the minimum clearance space,
  - > the branch enters the clearance space by no more than 150mm,
  - the branch does not have a visible structural defect that cause the branch to fail and make contact with the electric line.,
  - ➤ the line is an uninsulated, low voltage cable, and the branch is located in the first or last sixth of the span, or
  - > the span is 45m or less in length and is fitted with one spreader, or
  - > the span is greater than 45m in length and is fitted with two spreaders.

- A risk assessment of the tree and branch is undertaken in accordance with The City of Ballarat Risk Methodology.
- Any risks identified are mitigated.
- The Arborist: registers in the tree data base, and ensures the tree is noted in the annual proactive risk inspection program.

The process is managed by the Supervisor Arboriculture and all records are retained by the City of Ballarat for a minimum of five years.

**7** Owner or operator of transmission line must manage trees around minimum clearance space Does not apply to the City of Ballarat.

#### 8 Responsible persons may cut or remove hazard tree

If a Council employee or contractor identifies a tree as likely to fall onto or otherwise come into contact with an electric line or has regrowth that will enter the clearance space before the next scheduled visit the tree may be pruned or removed provided that:

The tree has been assessed by a suitably qualified arborist who must consider

- the likelihood of contact with electric line,
- tree health, defects, size of failure, target potential
- Whether the tree qualifies for an exception to the minimum clearance space as per Clause 4, 5 and 6 of the Code.
- local environmental and safety factors, as per current Job Safety Analysis requirements,
- history and significance of the tree, and
- the presence of habitat or fauna
- the assessment is recorded on the tree data base.
- works are undertaken with regard to Regulation 9(2)(i) and Regulation 9(2)(j) of Plan, and
- affected persons are notified as per the City of Ballarat's adopted practice.

As the asset owner of the trees covered under this plan, the City of Ballarat reserves the right to prune further than 1 metre from the minimum clearance space or remove hazard trees where they cannot be made safe or be retained as useful assets.

9 A responsible person cutting a tree must, as far as practicable cut the tree in accordance with AS4373 as published or amended from time to time.

Covered in regulation 9(3)(i)

#### 10 Cutting or removal of specified trees must be minimised

The City of Ballarat provides contractors with a list of trees designated as having native, cultural or environmental significance or that are listed within a planning scheme within the municipality.

#### (3)(a) Native trees

The City of Ballarat has a mix of exotic and native tree species. Native trees are spread throughout the municipality.

There are indigenous tree species that may need to be cut or removed to ensure compliance with the 2020 Regulations

Appendix 2.1 – Native Trees.

Pruning works to maintain compliance with the provisions of the Electrical Safety Act 1998 or future revisions in declared areas are exempt from permit requirements of overlays of the City of Ballarat Planning Scheme.

Pruning works governed by VPO 1, that are required to maintain compliance with the provisions of the Electrical Safety Act 1998 or future revisions, require written consent from Council under the City of Ballarat Planning Scheme.

All tree works conducted on Council owned and managed trees is required to be carried out by suitably qualified and experience arboriculture staff and to meet the minimum standard required to comply with the Plan, as detailed in Clause's 9(3)(h), (i), and (j) of the Code.

If the removal of any tree identified under Regulation 9(3)(g) is required, an inspection and advice from will be provided by a suitably qualified arborist prior to removal.

As part of the preparation for the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

(3)(b) Trees listed in a planning scheme to be of ecological, historical or aesthetic significance

Any works undertaken in relation to Council trees contained within any of the overlays of the City of Ballarat Planning Scheme to maintain compliance to the extent practicable with the provisions of the Electrical Safety Act 1998 or future revisions are exempt from permit requirements.

All tree works conducted on Council owned and managed trees is required to be carried out by suitably qualified and experience arboriculture staff and to meet the minimum standard required to comply with the Plan, as detailed in Clause's 9(3)(h), (i), and (j) of the Code.

If the removal of any tree identified under Regulation 9(3)(g) is required, an inspection and advice from will be provided by a suitably qualified arborist prior to removal.

As part of the preparation for the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

#### (3)(c) Trees of cultural or environmental significance

The City of Ballarat has one tree in the declared area known to have cultural significance to Aboriginal Heritage, this tree is known as the 'Cooroboree' tree located in Buninyong See *Appendix 2.3* 

Trees that are covered in the City of Ballarat Planning Scheme under (ESO5) Environmental significant Overlay – Schedule 5, are Habitat and a food source for the Koala see *Appendix 2.2 ESO5* Coverage & 2.4 Koala policy.

All tree works conducted on Council owned and managed trees are required to be carried out by suitably qualified and experience arboriculture staff and to meet the minimum standard required to comply with the Plan, as detailed in Clause's 9(3)(h), (i), and (j) of the Code.

If the removal of any tree identified under Regulation 9(3)(g) is required, an inspection and advice from will be provided by a suitably qualified arborist prior to removal.

As part of the preparation for the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

#### 11 Cutting or removal of habitat for threatened fauna

As per regulation 9(3)(iii) of the Plan the City of Ballarat is aware of threatened fauna which may be affected by the implementation of this plan, However the following process shall be followed:

- Tree assessment conducted by a suitably qualified arborist and results recorded in tree data base. The assessment: considers tree health, structure and potential risk,
- considers the history, location and foreseeable local conditions, and aims to identify if the fauna using the tree is a threatened species.
- Once identified, the breeding season for the fauna using the tree will be determined.
   Resources such as <a href="http://www.delwp.vic.gov.au/environment-and-wildlife/arthur-rylah-institute/threatened-species-and-communities">http://www.swifft.net.au/cb\_pages/bio-calendar.php</a> may be used in the first instance,
- Specialist advice may be sought to identify fauna, determine breeding season if required or to translocate fauna,
- Assessment results and information regarding management of the fauna will be referred to the Supervisor Arborist for approval prior to commencing works,
- Supervisor will promulgate information among ELC personnel in toolbox talks.
- Where practicable works will be undertaken outside the breeding season,
- The tree pruned to habitat until breeding season is complete, or
- Relocation of the fauna can be considered to make safe an unsafe situation as identified in Clause 8, or if it is not practical to undertake works outside of the breeding season.
- Record individual locations & comments against each tree in asset management software

As part of the preparation for the Plan, the City of Ballarat will consult with all relevant bodies and standards to ensure all organisational procedures are current.

#### 12 Restriction on timing of cutting or removal if notification is required

Covered in Clause 15 and 16 of the Code.

#### 13 Restriction on urgent cutting of trees

Covered in Clause 8 of the Code

#### 14 Restriction on urgent cutting of trees

Covered in Clause 8 of the Code

#### 15 Responsible persons must provide notification before cutting or removing certain trees

Clause15 is not applicable as the City of Ballarat does not undertake works on trees:

- within private property
- on land that is managed by a Council that is not the responsible person, or
- that affect an owner or occupiers use of private property

#### 16 Responsible person must publish notice before cutting or removing certain trees

The City of Ballarat will provide notification to persons affected by electrical line clearance works at least 14 days, and no more than 60 days, before the intended pruning or removal is to occur. If pruning does not commence within these timeframes, then affected residents will be re-notified.

Notification methods will include:

- A written notice in the Public Notices section (see Appendix 9 Example of public notice of pruning works) of a weekly local newspaper. This is to be inserted six (6) weeks prior to the program commencing.
- City of Ballarat website at <a href="https://www.ballarat.vic.gov.au">https://www.ballarat.vic.gov.au</a>

## 17 Responsible person must consult with occupier or owner of private property before cutting or removing certain trees.

Clause17 is not applicable as the City of Ballarat does not undertake works on trees within private property.

#### 18 Notification and record keeping requirements for urgent cutting or removal

Clause 18 is not applicable as the City of Ballarat does not undertake works on trees within private property or land belonging to adjacent Councils.

#### 19 Dispute resolution

Covered in regulation 9(3)(q)

#### 20 Duty relating to the safety of cutting or removal of trees close to an electric line.

The City of Ballarat requires contractors to hold the qualification of Cert II ESI – Powerline Vegetation Control and comply with the guidelines and limits set within either ESV - Electrical Safety Rules for Vegetation Work near Overhead Powerlines by Non-electrical workers (Electrical Safety Rules) or rules set by the asset owner, whichever is greater.

If contractors have concerns about the safety of cutting or removal of a tree for which the Council has clearance responsibilities, the Council will consult:

Business	Contact	Phone	Email
Powercor	Leo Hourigan	0408304984	LHourigan@powercor.com.au

ZI Duty iciating to assisting to actermine the anowance for capic sagaina swi	g to assisting to determine the allowance for cable sag and sv
---	--

Covered in regulation 9(3)(i)(ii)

#### 22 Duties relating to management procedures to minimise danger.

Not applicable to councils

#### 31 Application for approval of alternative compliance mechanism.

The City of Ballarat does not currently have in place or have planned any alternative compliance mechanisms for which it seeks application and approval.

#### 32 Formal safety assessment of alternative compliance mechanism.

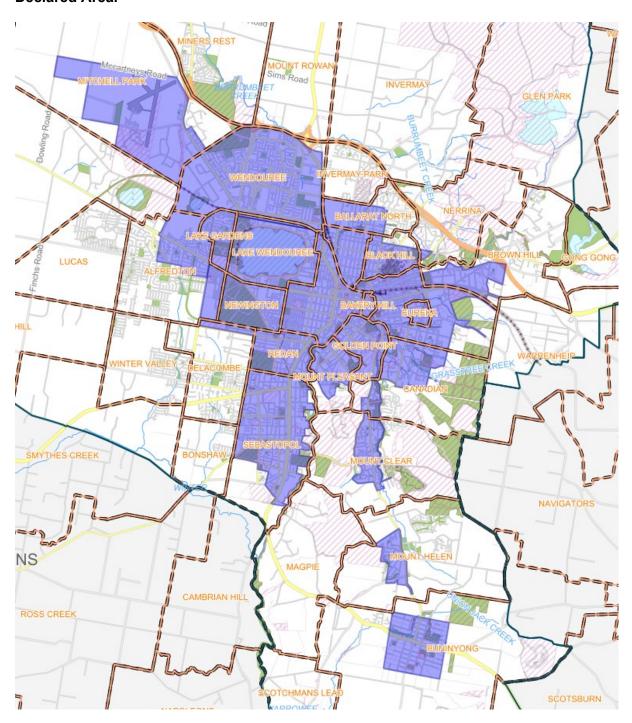
The City of Ballarat does not currently have in place or have planned any alternative compliance mechanisms for which it requires a formal safety assessment to be completed.

Signed	Steve Van Orsouw
Data	Forestina Managan Organitiana
<u>Date</u>	Executive Manager, Operations
Signed	Bridget Wetherall, Director Infrastructure & Environment
Date	

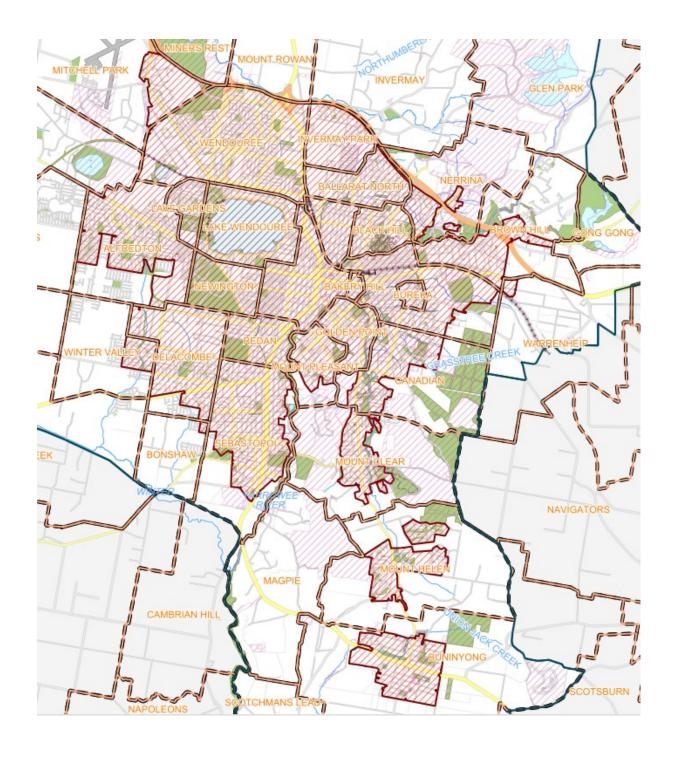
## Appendices

Appendix 1 – Declared Area Maps for City of Ballarat.

### Declared Area.



## Bush Fire Risk Area (Shaded area LBRA) - (Not shaded HBRA).



## Appendix 2 – Trees of Indigenous, Heritage or Cultural Significance

### Appendix 2.1 – Indigenous Trees

## Indigenous Species List Indigenous Trees

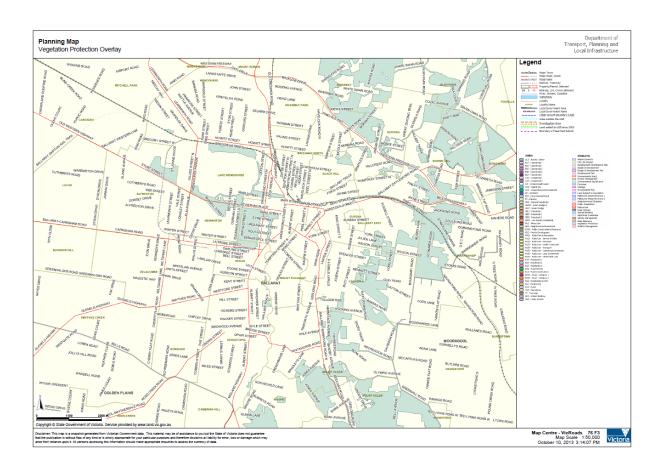
Botanical Name	Common Name
Acacia dealbata	Silver Wattle
Acacia implexa	Lightwood Wattle
Acacia leprosa	Cinnamon Wattle
Acacia mearnsii	Black Wattle
Acacia melanoxylon	Blackwood
Acacia oxycedrus	Spike Wattle
Acacia pycnantha	Golden Wattle
Acacia stricta	Hop Wattle
Acacia verticillata	Prickly Moses
Allocasuarina littoralis	Black Sheoke
Allocasuarina verticillata	Drooping Sheoke
Banksia integrifolia	Coastal Banksia
Banksia marginata	Silver Banksia
Bursaria spinosa	Sweet bursaria
Eucalyptus camaldulensis	River Red Gum
Eucalyptus obliqua	Stringy-Bark
Eucalyptus ovata	Swamp Gum
Eucalyptus pauciflora	Snow Gum
Eucalyptus dives	Broad leaf peppermint
Eucalyptus radiata	Narrow-leafed Peppermint
Eucalyptus viminalis	Manna Gum
Eucalyptus melliodora	Yellow Box
Eucalyptus rubida	Candle Bark
Eucalyptus aromaphloia	Scent Bark
Melalueca ericafolia	Swamp Paperbark

Appendix 2.1 Listed in a planning scheme to be of ecological, historical or aesthetic significance

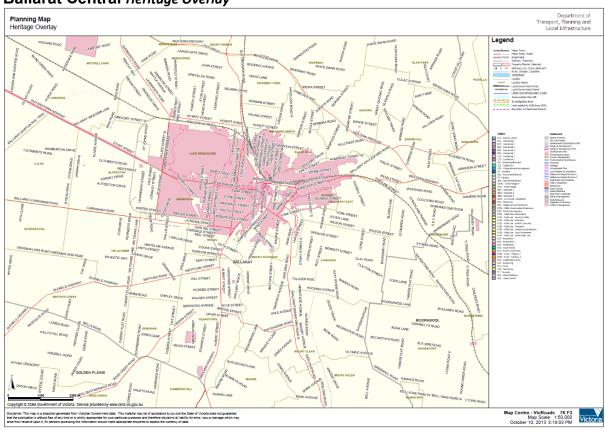
Appendix 2.2 Heritage Trees

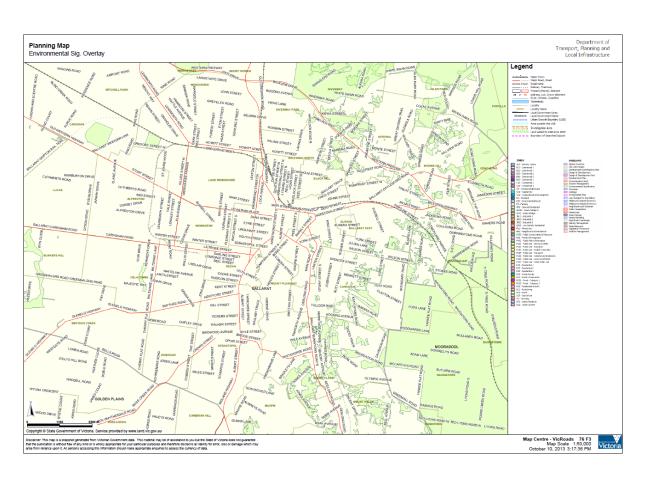


**Ballarat Central Appendix 2.2** (VPO)Vegetation Protection Overlay

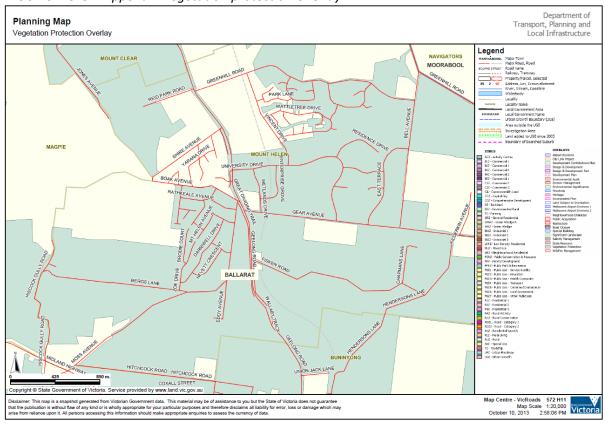




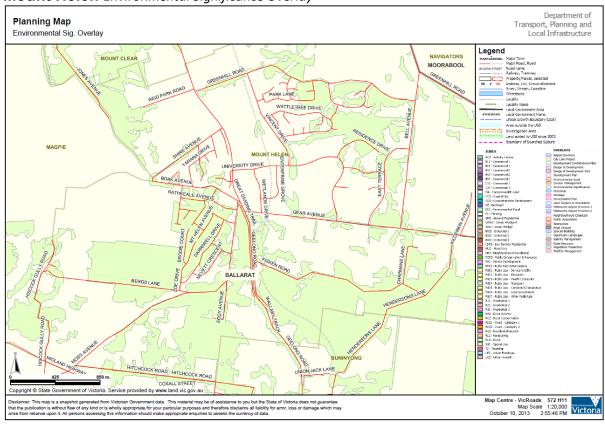


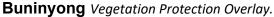


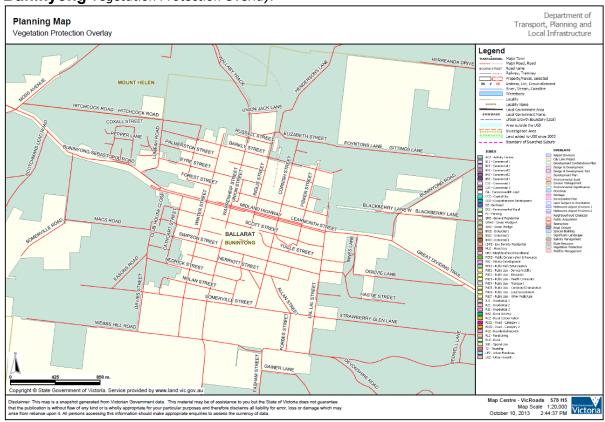


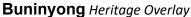


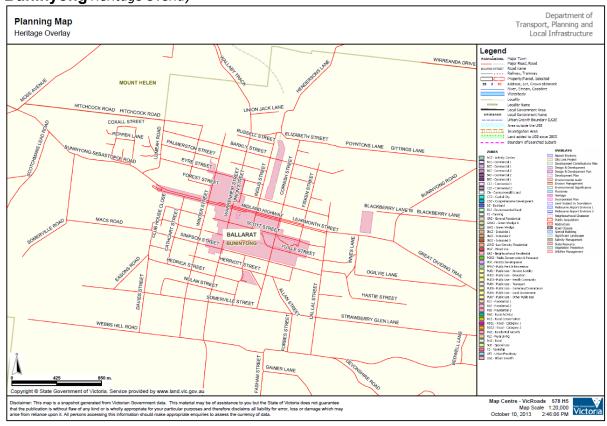
#### Mount Helen Environmental Significance Overlay

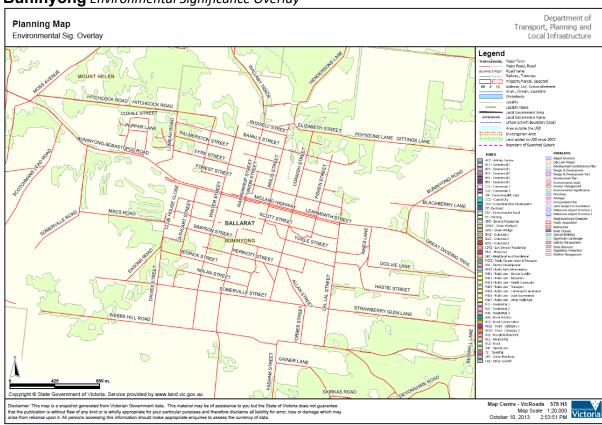












**Buninyong** Environmental Significance Overlay

Appendix 2.3 Trees of cultural or environmental significance.

Eucalyptus *viminalis* - **Cooroboree Tree** - Located at 207 Nolan street Buninyong.



Trees of cultural or environmental significance. Appendix 2.4

#### BALLARAT PLANNING SCHEME

#### 22.04 18/03/2010 0137

#### KOALA AND KOALA HABITAT PROTECTION

#### 18/03/2010 C137 **22.04-1** 18/03/2010 C137

#### **Policy Basis**

Numerous land management issues affect the long-term survival of the koala in Ballarat. The 2002 Ballarat Community-based Koala Survey highlighted overwhelming support for and the importance that the Ballarat community places on koala conservation. Residents perceive that koala numbers are lower now than in the past, and have indicated that the main concerns to koala survival are: logging of native forests, housing developments, the removal of vegetation on private land and along roadsides, roaming dogs and the danger created by roads and vehicular traffic. Residents perceived the need to manage these issues by placing restrictions on dog ownership, improved traffic management, more tree planting and habitat restoration, tree preservation orders and stronger planning controls over urban development.

pnaming controls over urban development.

The Comprehensive Koala Plan of Management recommends that to provide for the long-term survival of koala populations within the City of Ballarat, it is imperative to recognise the vital role that the City's native vegetation plays. The Plan states that native vegetation is a habitat and food source for koalas, particularly where Manna Gum and Messmate Stringybark tree species are present.

This policy is aligned with the Environmental Significance Overlay Schedule 5 and has been introduced to manage these koala conservation issues, insofar as they can be dealt with through the Ballarat Planning Scheme.

#### 22.04-2

#### Objectives

- To protect koala habitat areas from any development that would compromise the quality or integrity of existing koala habitat.
- To ensure that any development within or adjacent to koala habitat areas occurs in an
  environmentally sensitive manner.
- To incorporate the restoration of koala habitat as a component of developments where restoration
  is identified as required by the Ballarat Koala Habitat Planning Map.
- To ensure that any development maintains existing connectivity between areas of koala habitat
  and minimises threats to safe koala movement between such areas.

#### 22.04-3

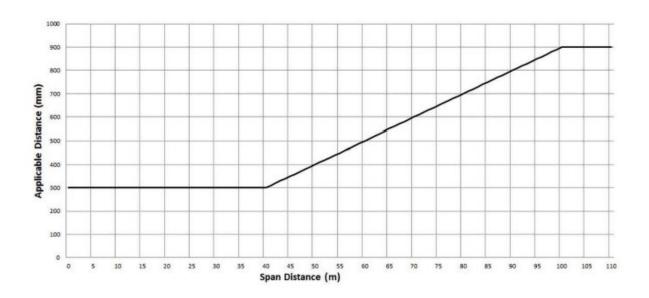
#### Policy

It is policy to:

- Ensure development will not result in the removal or degradation of native vegetation within Preferred Koala Habitat as identified on Map 1 of this policy and mapped by the Environmental Significance Overlay Schedule 5.
- Maximise retention and minimise degradation of native vegetation within Supplementary Koa Habitat, Habitat Buffers and Habitat Linking Areas as identified on Map 1 to Clause 22.04.
- Discourage the removal of Manna Gum (Eucalyptus vimindis) and Messmate Stringybark (Eucalyptus obliqua) which are preferred Koala Food Trees.
- Make provision, where appropriate, for the restoration of koala habitat areas, including Habitat Buffers and Habitat Linking Areas over mainly cleared land and other vegetation.
- Make provision for the long term management and protection of koala habitat, including both existing and restored habitat.
- Minimise barriers to koala movement by providing appropriate fencing.
- Ensure that developments either specify that they will be dog free, or set out the manner in
  which dogs will be managed on the subject land to minimise contact between koalas and dogs,
  including the consideration of proposed fencing and location of dog compounds.

#### Appendix 3 - Applicable distance for middle two thirds of a span of an electric line

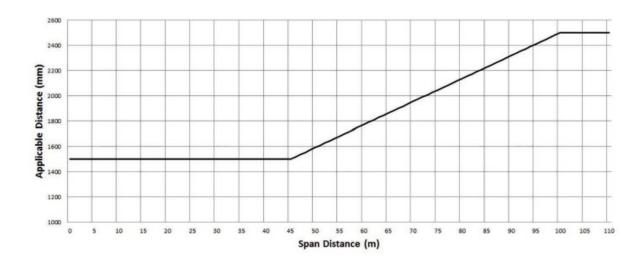
#### **GRAPH 1—INSULATED ELECTRIC LINES IN ALL AREAS**



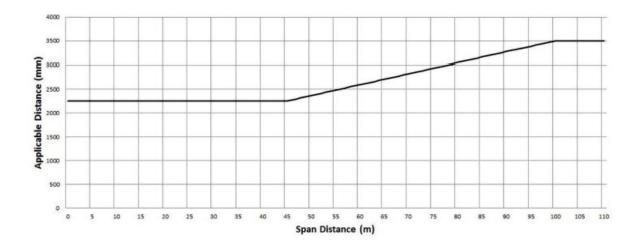
#### GRAPH 2—UNINSULATED LOW VOLTAGE ELECTRIC LINE IN LOW BUSHFIRE RISK AREA



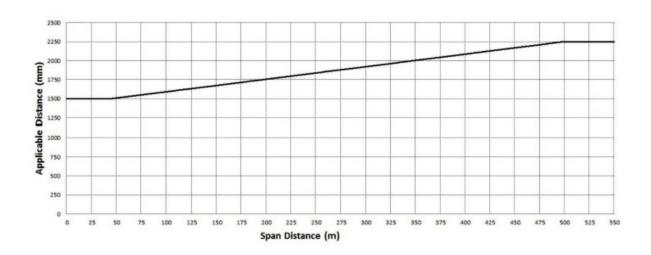
# GRAPH 3—UNINSULATED HIGH VOLTAGE ELECTRIC LINE (OTHER THAN A 66 000 VOLT ELECTRIC LINE) IN LOW BUSHFIRE RISK AREA



GRAPH 4—UNINSULATED 66 000 VOLT ELECTRIC LINE IN LOW BUSHFIRE RISK AREA



# GRAPH 5—UNINSULATED LOW VOLTAGE AND HIGH VOLTAGE ELECTRIC LINE (OTHER THAN A 66 000 VOLT ELECTRIC LINE) IN HAZARDOUS BUSHFIRE RISK AREA



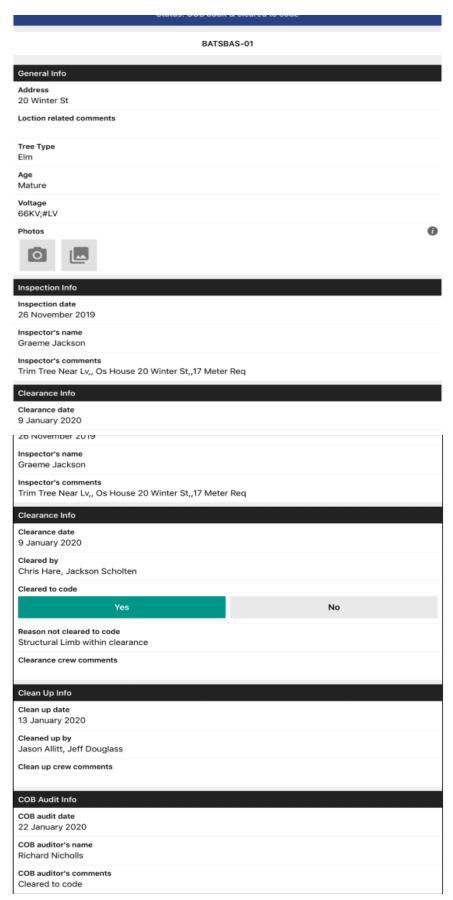
City of Ballarat ELCMP 2021-2022
Appendix 4 works Program
Contract Number Electric Line Clearing 2019/20 – 485, Works Program for 2020/2021



# CITY OF BALLARAT WORKS PROGRAMME POWERLINE CLEARANCE 2020-21

FEEDER	WORKS
HBRA all areas	Inspection & Cutting 3-5 days
LBRA BAS22 Buninyong, Buninyong LV, Sebastopol LV, Alfredton LV and Wendouree LV	Inspection & Cutting 15-20 days
All remaining feeders	60-70 days
	LBRA BAS22 Buninyong, Buninyong LV, Sebastopol LV, Alfredton LV and Wendouree LV

Note: All feeders will be inspected and sent to COB prior to commencement of cutting.



Appendix 6 Work area safety inspection form

Work Area Safety Inspection Report

Released by Administration Support

Local Document - 004

Approved

UNCONTROLLED WHEN PRINTED



			L			forstions are over nage as a suide	d for during a cite vicit to various	uld be checke	please Note: Evamples of what items should be checked for during a site visit to various locations are over page as a guide	
			1							_
							Sanitizer,			_
						as hand	Masks onste c			1
						ms.	per TTTH Swims			
						social distancency as	Observing 9		Could 19"	-
ė	Comp.							Environ	(Conforming or Non Conforming)	
ri .	Date	Corrective Action No.		ğ	By Whom	Corrective Action		Safety or	Observation	_
				_	7	Spill Kit on vehicle	First Aid kit on site	7	Worksite is neat and tidy	L
				-	5	Fire Extinguisher on vehicle	Respirator	5	Pedestrian Signage in place	_
				-	5	Pre-Op Checklist Completed	Safety Boots (i.e. Steel Caped)	7	Mobile Traffic Lights working	_
		Boat	Ц	H	1	Safe Operating Procedures on site	Dust Mask	1	Safety Barriers in place	-
	1	EWP		_	1	Operating In Safe Manner	Safety Glasses	\	Safety Cones / Hats	-
		Forklift	Ц		1	Guards in Place	Ear Muffs	1	Qualified Traffic Controller/s Used	-
	1	Drivers Licence v		-	1	Lights / Warning Devices Working	Safety Vest (Hi Vis)	<u> </u>	Signage to Standard (or Plan)	
NA	z	_	×	2	<u>۲</u>	Y N NA Machinery/Equipment	P.P.E.	Y N NA	Site	
-		Licence checks		_						_
		iersbeen	occupio	ers/o	ne own	Contractors have signed onto site or have the owners/occupiers been notified?		10.40 am.	Date: 17/4/2020 @ 10.4	_
		\				tr.	E.g. Sealed Roads, City Entrances etc.		Ballarat.	_
					:5	Has a risk assessment been done for this site?	Operations & Environment Team:	_	Location: 602 Armetong st not	_
		or card?	ıtracto	t Con	Ballara	Does contractor have their personal City of Ballarat Contractor card?				
					*	induction guidelines?		_	Task: €·C.C. L.V.	_
		incil	2 Cour	·S - 1	with		ticherd e Jackson		hind.	
NA	Z	Υ				Contractor Only:	Inspected By:	Ĺ	Team (or contractor): Tree top towar	_
										1

Work Area Safety Inspection Report

**Appendix 7- Examples of Preferred Street Tree Planting List** and Web address for Powercor recommended tree species selection for growing under powerlines.

City of Ballarat - Preferred Street Tree Species List	treet Tree Sp	ecies List			
ecles	▼ Family	▼ Common Name	Replacement for P/Lines	Landscape Policy Overlay	Existing Trees/Notes?
nelanoxylon + Brachychiton populneus		rajong			
achychiton acerifolius 'Jeniderie Red', Banksia marginate, Angophora hispida, Pyrus ulaefolia Southworth dancer, Parrotia persica, Pistacia chinensis, Lagerstroemia ica Tuscarora'		· ·			Choice of these trees are to be planted under powerline. No specific rules your/resident choice.
xinus pennsylvanica 'Cimmaron', Acer monspessulanum, Saphora japonica, Pyrus Jervana 'Chanticlear', Oliecrus engelmannii, Oliecrus contissima Furcilyntiis Jeronyloi	3				
galocarpa 'metro elite'.	-				Choice of these trees are to be planted on non powerline side. No specific rules your/resident choice.
schychiton 'Jerrilderie Red' + Eucalyptus cinerea 'Silver Shadow'					
ercus robur	Fagaceae	English Oak			As per Lucas Stage C4
calyptus leucoxylon 'Connata'	Myrtaceae	Connata Yellow Gum			As per PLP/2016/621.
ıxınus excelsior 'Aurea' + Fraxınus sp?	Oleaceae	Golden Ash and ??			Not definite theme but mostly Golden and Claret Ash planted alternately. LV on the s
rymbia ficifolia 'Summer Beauty"					Plant on North side of street.
evillea Honey gem					Plant on South side of street.
ınus cerasifera 'Oakville Crimson Spire'	Rosaceae	Crimson Spire Plum			HV on south side and N/S width varies a lot. Use the Plum as N/S is very narrow in t
rus betulaefolia 'Southworth' + Fraxinus pennsylvanica 'Urbdell'		Dancer Pear + Urbanite Ash			Use Pear on south side under powerlines.
llistemon salignus 'Rubra' + Eucalyptus scoparia	Myrtaceae	Red Bottlebrush + Wallangarra White Gum	rra White Gum		HV on south side. As per Birdwood Ave subdivision PLP 2009772 tree plan and PLP
ixinus omus	Oleaceae	Flowering Ash			No existing theme. Planted one at No 15 (P213119)
achychiton acerifolius "Jerilderie Red". Banksia marginate. Angonhora hispida. Pyrus	OtelCullacede	Gindaina			As pel FEF/20 lor300
ulaefolia Southworth dancer, Parrotia persica, Pistacia chinensis, Lagerstroemia ica Tuscarora'					Choice of these trees are to be planted under powerline. No specific rules your/resident choice.
xinus pennsylvanica 'Cimmaron', Acer monspessulanum, Saphora japonica, Pyrus					
leryana 'Chanticleer', Quercus engelmannii, Quercus acutissima, Eucalyptus leucoxylon					Choice of these trees are to be planted on non powerline side. No
garocarpa metro ente .					specific rules your/resident choice.
calyptus radiata, E. viminalis, E. obliqua, E. dives, E. rubida and Acacia melanoxylon Myrtaceae	on Myrtaceae				Use a mix of indigenous Koala species and other introduced natives and plant information
ercus robur	Fagaceae	English Oak			As per Lucas Street Tree Plan
calyptus sideroxylon + Eucalyptus rubida	Myrtaceae	Ironbark and Candlebark			Mostly Ironbarks there now but need more variety. Plant the 2 species in an informal
ıxinus americana 'Autumn Applause'	Oleaceae				
ercus robur	Fagaceae				
itanus x acerifolia + Ulmus x hollandica					Original plantiing theme was a mix of Plane and Elm - many remain but no discernible
er campestre 'Elsrijk' + Eucalyptus polyanthemos	Dutch Field Maple + Red Box	+ Red Box			Use Maple down the north side under LV and Red Box on the south side
of natives, Euc radiata, Euc viminalis, Acada melanoxylon, Allocasurina littoralis					
acia implexa + Acacia melanoxylon + Acacia pycnantha + Allocasuraina verticillata + Eucalyptus obliqua + E Indigenous vegetation	+ Eucalyptus obliqua	a + E Indigenous vegetation			Planted in clusters - as per Macarthur Park Landscape Plan
nus parvifolia		Chinese Elm			As per Insignia Street Tree Plan
schychiton acerifolius 'Jeniderie Red', Banksia marginate, Angophora hispida, Pyrus ulaefolia Southworth dancer, Parrotia persica, Pistacia chinensis, Lagerstroemia ica 'Tuscarora'					Choice of these trees are to be planted under powerline. No specific rules your/resident choice.
xinus pennsylvanica 'Cimmaron', Acer monspessulanum, Saphora japonica, Pyrus leryana 'Chanticleer', Quercus engelmannii, Quercus acutissima, Eucalyptus leucoxylon ealocaroa 'metro elite'.					Choice of these trees are to be planted on non powerline side. No specific rules vourtresident phoice

 $\underline{https://media.powercor.ccppal-planting-trees-near-powerlines}$ 

## **Appendix 8 Contractor Training Matrix.**

~	· ·	· ~		
٦٢	REE 1	LOP LLO	WER	HIRE
Full Name	Course Code	Course Name	Completed	Expiry Date
BOYD, lan	CPCCOHS1001A	Construction Induction Card	16-January-2015	01-January-2100
BOYD, lan	UET20312	Certificate II in ESI Powerline	07-July-2015	01-January-2100
BOYD, lan	x	EWP Licence	16-January-2015	11-January-2025
BURNS, Darren	CPCCOHS1001A	Construction Induction Card	08-December-2010	01-January-2100
BURNS, Darren	UET20312	Certificate II in ESI Powerline	11-September-2020	01-January-2100
BURNS, Darren	x	EWP Licence	07-September-2020	07-September-2025
DOUGLASS, Jeff	CPCCOHS1001A	Construction Induction Card	21-June-2013	01-January-2100
DOUGLASS, Jeff	UET20312	Certificate II in ESI Powerline	27-September-2017	01-January-2100
HOFMAN, Paul	CPCCOHS1001A	Construction Induction Card	12-June-2012	01-January-2100
HOFMAN, Paul	UET20312	Certificate II in ESI Powerline	28-January-2015	01-January-2100
HOFMAN, Paul	x	EWP Licence	08-February-2018	07-February-2023
KEW, Brendan	CPCCOHS1001A	Construction Induction Card	14-July-2011	01-January-2100
KEW, Brendan	UET20312	Certificate II in ESI Powerline	17-January-2014	01-January-2100

	REE S	POP STO	WER	HIRE
KEW, Brendan	x	EWP Licence	16-June-2016	16-June-2021
MARSHMAN, Jack	CPCCOHS1001A	Construction Induction Card	22-March-2012	01-January-2100
MARSHMAN, Jack	UET20312	Certificate II in ESI Powerline	13-February-2017	01-January-2100
MARSHMAN, Jack	X	EWP Licence	10-January-2017	10-January-2022
SCHOLTEN, Jackson	CPCCOHS1001A	Construction Induction Card	07-March-2018	01-January-2100
SCHOLTEN, Jackson	UET20312	Certificate II in ESI Powerline	03-May-18	01-January-2100
SCHOLTEN, Jackson	x	EWP Licence	20-June-2018	26-June-2023
TIER, David	CPCCOHS1001A	Construction Induction Card	10-March-2010	01-January-2100
TIER, David	UET20312	Certificate II in ESI Powerline	14-May-2019	01-January-2100
TIER, David	x	EWP Licence	29-May-2017	29-May-2022

Appendix 8.1 Contractor JSA, SWMS.

# TREE TOP TOWER HIRE

TO BE COMPLETED DAIL		ETY ANALYSIS	_	HPOLICHOLIT					
TO BE COMPLETED DAIL	LT BEFORE AINT W	THE DAY	AD KEVIEWED II	nkoodnooi					
Date	Project/Title	Site Leade	r						
		Person com	pleting JSA						
Work Location Address 1			Feeder						
Work Location Address 2			Feeder						
Work Location Address 3			Feeder						
Address of nearest Hospi	tal (actual address	Wind Direction	AM P	М					
		Wind Speed Km/h	AM P	M					
SAFE APPROACH D	<u>ISTANCES</u>								
Are there any Power lines	on site?	YES	0 🗆						
	LV	Up to 22□	Up to	66□					
Tree Clearance									
Above	Touching	No Work	No Wor						
Below	Touching	300mm	400mm						
Side	Touching	700mm	900mm	1					
Body Clearances	200 /	4000	2000						
Plant and Equipment	300mm/No Contac	t 1200mm	2000mm						
(BALLARAT CITY CONTRA	CT ONLY	1000mm	2000mm	)					
AUTO RECLOSE SI	JPPRESSION								
YES□ NO□ Time Received		Name of Contact:							
Time Cancelled: Name of Contact:									
SAFE WORK METHOD STATEMENTS									
Tick what SWMS apply to									
Trimming Vegetation from	m EWP 🗆	Traffic Management							
Operation of a Stump Gri	nder $\square$	Operation of a Chipper							
Operation of an Excavato	r 🗆	Use and apply Herbicid	e						
Operation of a Chainsaw		Operation of a Non -Ins	sulated Polesaw						
Felling Trees		Climbing Trees							
		Has a tree inspection been	completed <u>before</u>	climbing $\square$					
<b>HAZARDS ON SIT</b>	<u>E</u>								
Wind□ Rain □	Fog ☐ Othe	r□ Trips, Slips, Falls	☐ Manual Har	ndling 🗆					
Bees, Wasps, Snakes □	Other Contractor	rs□ Water Meters/Ta	aps□						
Pay TV/Telstra Lines□	other	other							

JSA December 20:20

DESCRIBE HA	ZARDS				
HAZARD		RISK RATING	CONTROL MEA (what can you do		RISK CONTROL TYPE
LUEDA GUN OF CONTROL					
USE THE HIERACHY OF CO	ONTROLS TO ASSES AND (	ONTROL RIS	SK ABOVE		
RISK RATING				NTROL TYPE	
1.Extreme Risk: F	otential for death or serio	us injury		ate – the hazard from the v	
2. High Risk: F	otential to cause lost time	injury	<ol><li>Subst</li></ol>	itute – the hazard for a less	harmful one
3: Medium Risk: F	otential to cause first aid	injury	3. Engin	eer – Redesign	
4. Low Risk F	otential to cause minimur	n injury		e – the hazard/worker	
				nistrative - e.g., SWMS/MSD	
			6. PPE –	wear protective equipment	:
Any identified hazar	ds with a risk rating	of extrem	e must be effe	ectively controlled to	medium or
below before work	can commence. You	must conf	tact your Supe	ervisor if unable to lov	ver the
rating to M.			, ,		
TRAFFIC MAN	ACEMENT				
			<b>-</b>	-:2 VEC	
	c Management inter	-		site? YES	
				•••••	
Signature of Compa	ny Representative/C				
(by signing Lagree h	azards and controls				
				s TMP been Modified	$\neg$ $ $
ii iio, vviiat irainit i	vianagement i ian ive			3 TWII DECITIVIOUNICU	_
<b>JSA SIGN OFF</b>					
Name of Person cor					
		th the ISA	process, print	and sign their own na	me)
				on, evaluation and control of	
	til you are satisfied that al				
NAME	SIGNATURE TIN			SIGNATURE	TIME
		1			
POLICE/ETPE/AMBULAN	CTS NCE 000/ POWEROR CO	NTROL BOO	M EMEDGENCY	8620 1800 1ACON	
	29/PAUL COX 0408 410 !				
3CHOLIEN 0419 3/452	27/FAUL COX 0400 410 :	330/ 24 NU	OK VOICEMAIL	3021 0030	

JSA May 2019



Tree Top Tower Hire

ABN: 38 099 644 112

Address: 302 Charlesworth Street Ballarat 3353

#### SAFE WORK METHOD STATEMENT ELEVATED WORK PLATFORM TSWMS.001 – (High Risk)

Last Review: May 2019

#### Prepared by R Spencer

**Authorised by J Scholten** 

ALL PERSONS INVOLVED IN TASKS MUST HAVE THIS SWMS COMMUNICATED TO THEM PRIOR TO WORK COMMENCING. ALL TREE TOP TOWER HIRE EMPLOYEES MUST BE INDUCTED AND SIGNED ONTO THIS SWMS INDICATING THEIR UNDERSTANDING AND ACCEPTANCE OF ITS CONTENTS.

#### THESE SWMS ARE USED IN CONJUCTION WITH PLANT RISK ASSESSMENTS FOR ALL PLANT AND EQUIPMENT

Regular inspections and observations will be carried out by TTTH Management and Supervisors to ensure SWMS are being followed Daily JSA's will be undertaken to identify, control and communicate additional site hazards
Work must cease immediately if incident or near miss occurs, SWMS will then be amended in consultation with relevant parties
SWMS must be made available for inspection or review as required by WHS legislation
Record of SWMS must be kept as required by WHS legislation (until job is complete or for 2 years if involved in notifiable incident)

Foot Protection	Hearing Protection	High Visibility Shirt	Head Protection	Eye Protection	Hand Protection	Protective Clothing
Steel capped Boots	Class 5		Australian Standard	Australian Standard		Chainsaw Pants
T.		<b>(X)</b>	E2Y	<b>(</b>		N

Elevated Work Platform

Rating: E: Extreme/H: High/M: Medium/L: Low
Risk Control Type:1. Eliminate/2. Substitute/ 3. Isoate/ 4. Engineer/5. Administrative/ 6. PPE

May 2019

Task	Hazard	Consequences	Likelihood	Risk Rating before Controls	Practical Risk Controls List control measures required to eliminate or minimise the risk of injury from the identified hazard.	Risk Control Type	Risk Rating after	Responsible Person
Setting up at Site	Personal injury/equipment, property damage due to unidentified hazards	3	С	Н	Everyone working on site must be involved with identifying, evaluating and controlling all hazards on site.  A JSA (site specific) must be completed and understood by everyone involved with work at the site and signed off acknowledging the identified hazards and risk control strategies to be applied and complied with.  Everyone involved must print and sign their name acknowledging their understanding of the JSA and its contents.  Random auditing will be undertaken to ensure compliance.	5	M	Crew Member
Completing EWP Log Book	Incomplete completion	3	С	Н	EWP must be inspected, and Log Book completed with any safety related faults corrected before use. All service or maintenance issues to be recorded and reported to the Voicemail number 9021 0650.	5	М	Crew Member/TTTH Management
Setting up EWP	Overreaching	2	С	М	Position EWP to avoid overstretching/overreaching and monitor throughout to ensure EWP is in best position	5	L	Crew Member
	Unstable ground Causing EWP to sink/tip	3	D	М	All stabiliser pads/outriggers and wheel chocks shall be properly engaged at all times prior to boom operation to reduce the likelihood of tipping/sinking.	5	L	Crew Member
	Boom Extension over road/footpath	4	D	М	The boom on the EWP must be positioned so that any vehicular traffic, or workers do not travel underneath extended boom.	3	L	Crew Member

Task	Hazard	Consequences	Likelihood	Risk Rating before Controls	Practical Risk Controls List control measures required to eliminate or minimise the risk of injury from the identified hazard.	Risk Control Type	Risk Rating after	Responsible Person
Operating/Trimmi ng tree from EWP	Sprains and Strains, Manual Handling	2	С	М	Position/Reposition EWP to cut branches instead of overstretching/over reaching  Manual Handling Training to reduce the likelihood of injury  Cut to manageable lengths/weights  Utilise team lifting when in 2 - man bucket  Only trained, authorised and approved Tree Top Tower Hire employees to operate EWP, unless under a trained operator	5	L	Crew Member
	Fall from Height (2 metres)	5	E	М	Operator must be properly attached using approved fall protection devices at all times  Ensure Fall protection devices fit for use and correctly utilised and certified/inspected  Ensure harness is attached to Lanyard	5,6	L	Crew Member
	Electrocution	5	Е	М	Training in Cert II in ESI Powerline Vegetation Control  Training in Safe Approach Distances  Maintain Safe Approach Distance  Safety Observer posted to monitor the work and warn against potential infringement of SAD.	5	L	Management/C rew Members

Elevated Work Platform

Rating: E: Extreme/H: High/M: Medium/L: Low
Risk Control Type: 1. Eliminate/2. Substitute/ 3. Isolate/ 4. Engineer/5. Administrative/ 6. PPE

May 2019

Task	Hazard	Consequences	Likelihood	Risk Rating before Controls	Practical Risk Controls List control measures required to eliminate or minimise the risk of injury from the identified hazard.	Risk Control Type	Risk Rating after	Responsible Person
					The Safety Observer must be obeyed at all times  The Safety Observer has the right to use the EMERGENCY STOP button on the EWP if he believes the cutter is not following his directions and is likely to encroach the Safe Approach Distance.  This method MUST NOT be used when working around HV.  Safety Observer MUST NOT be diverted away from Observing duties under any circumstances.  If Observer needs to attend urgently to attend other duties he must advise Operator to STOP work until Observer can resume Observing.  For communication use whilstle between Observer and Operator  No Mobile phone use while operating or observing			
	Cutting telecommunication / pay tv other cables	3	С	Н	Constantly evaluate and document hazards such as hidden cables and wires  Be aware that cables are not always visible in thick vegetation  Adjust cutting technique when visibility is limited	5	М	Crew Member

Elevated Work Platform

Rating: E: Extreme/H: High/M: Medium/L: Low
Risk Control Type:1. Eliminate/2. Substitute/ 3. Isolate/ 4. Engineer/5. Administrative/ 6. PPE

May 2019

Task	Hazard	Consequences	Likelihood	Risk Rating before Controls	Practical Risk Controls List control measures required to eliminate or minimise the risk of injury from the identified hazard.	Risk Control Type	Risk Rating after	Responsible Person
	Emergency Rescue at height	5	D	Н	EWP is fitted with duplicate controls at the elevated platform and ground level. The ground level controls are capable of over- riding the platform controls.  These safety features must be fully functional at all times whilst this item of plant is in operation. This will allow platform recovery during sickness or injury to the operator.  All employees to be trained in EWP rescue and escape	4,5	M	Crew Member
	Branches contacting Cutter	3	С	Н	Consideration given to position of cutter when there is potential for cut branches to make contact and injure any part of cutters body.  When there is weight above head height consider where tree limb will contact if cut doesn't go as planned. Once single cut may not b appropriate. Refer to Tree Top Tower Hire's Work Instruction 1.  Cutting and Blocking for more detailed information.	5	М	Crew Member
	Burst Hydraulic Hose	3	С	Н	Hydraulic hoses to be checked regularly throughout the day and removed if defective  First Aid kit to be adequately stocked and used to rinse eyes immediately	5	М	Crew Member

#### Training

Cert II in ESI Vegetation Control Safe Approach Distance Construction Induction Card (White Card) Operate and Maintain Chainsaws EVP High Risk Licence EVP Rescue and Escape Manual Handling

AS2726 Chainsaw safety requirements AS4373 Pruning of Amenity Trees AS/NZ4453 Protective clothing for users of hand held chainsaws AS2550 Cranes – Safe Use Part 10 Elevating Work Platforms

AS/NZ1891 Industrial Fall Arrest Systems and Devices
OHS Act 2004
Regulations 2017

Elevated Work Platform

Rating: E: Extreme/H: High/M: Medium/L: Low Risk Control Type:1. Eliminate/2. Substitute/ 3. Isolate/ 4. Engineer/5. Administrative/ 6. PPE

References:

May 2019

#### Appendix 9 Notification of Works.

