



WWF Electric Line Clearance Management Plan



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WWF ELECTRIC LINE CLEARANCE MANAGEMENT

CONTROL

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The signed original is kept by **ACCIONA**.

RECORD OF CHANGES

REV.	DATE	DESCRIPTION
0Final v1.0	07/03/2011	Final for release to ESV
Rev 2.0	20-10-13	Internal draft for comment
Rev 2.1	22-10-13	Reflects changes in Bushfire Mitigation Plan version 6.1
Rev 3.0	24-6-14	Reviewed document
Rev 3.1	14-5-15	Reviewed document after audit by ESV
Rev 3.2	22/6/15	2.1 Added link to ELCMP on website. 5.0 Included Reference to CoB & Pyrenees PS. 6.1.1 Remove reference to Aboriginal Heritage Register. 6.2.3 Added process to notify property owner of pruning works. 6.2.4 Added process to notify property owner after emergency pruning has occurred.
Rev 4.0	28/6/15	2.3 Update of Position Title. 6.3.3 Change to include Cert II in ESI for training competency. Appendix B Updated with Matrix
Rev 5.0	09/09/2016	2.0 Update of contact details & position titles. 6.2.2 Easement inspection changed to annual. 8.4 Update contact details Appendix B 9.0 Update to the most recent regulations. Appendix C Update clearance spaces based on the most recent regulations. Name change of SP AusNet to AusNet Services
Rev 5.1	15/05/2017	2017-2018 Submission ABN updated
Rev 5.2	01/07/2018	2018-2019 submission Updates: Minor formatting.
Rev 5.3	13/05/2019	13/05/2019 – Addition of the 'Allowance for SAG'
Rev 6.0	13/05/2019	Updated for the 2019 – 2020 ELCMP period.
Rev 7.0	12/02/2020	Updated for the 2020 – 2021 ELCMP period. <ul style="list-style-type: none"> New template format Minor reference updates
Rev 8.02	10/12/2020	Changes from 2020 internal audit. Reviewed against Electricity Safety (Electric Line Clearance) Regulations 2020 . Version No. 001. Document added to the document control system.

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Rev 8.02	21/11/2023	Changes from 2020 internal audit Contacts Updated Reviewed by independent consultant
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1. PURPOSE

ACCIONA Energy Australia Global Pty Ltd (Acciona Energy) operates the Waubra Wind Farm. This wind farm is located approximately 35 km northwest of Ballarat, near the town of Waubra, on open agricultural land that is used predominately for grazing and cropping.

The wind farm comprises 128 turbines with a combined power generation capacity of 192 MW. The electrical power generated by the wind turbines is reticulated through underground 12 kV power cables (approximately 95 km) to five collector substations located at various strategic points around the wind farm. From the collector substations overhead 66 kV power lines (approximately 19 km) are used to bring the electrical power to a single collector switching station where the wind farm's electrical power is aggregated and finally delivered to AusNet Services adjacent terminal station for connection into their 220 kV transmission line.

An overview plan of the wind farm infrastructure, including the extent of overhead cabling, is illustrated in Appendix A.

WHY PREPARE THIS PLAN?

Victoria is one of the most fire-prone areas in the world. As with any electrical installation the operation of the Waubra Wind Farm has the potential to ignite fires. Any ignition of fire within the wind farm has the potential to increase the risk of bushfire. Consequently, mitigation measures need to be developed and put into effect to reduce this risk as far as is reasonably practicable.

Acciona Energy has developed a Bushfire Mitigation Plan (BMP) as a part of its overall Operational Environmental Management Plan (OEMP) for the wind farm. The BMP has been prepared in accordance with the Electricity Safety Act 1998 (the Act) and the subordinate Electricity Safety (Bushfire Mitigation) Regulations 2013.

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The objective of this Electric Line Clearance Management Plan (ELCMP) is to complement the Waubra BMP and demonstrate a commitment to the compliance with the Electricity Safety (Electric Line Clearance) Regulations 2020 (the Regulations) and the Code of Practice for Electric Line Clearance (the Code) contained therein.

This ELCMP is an integral part of the overall BMP: it controls the ingress of trees and other tall growing vegetation into proximity of electric lines which could then create a fire ignition risk.

2. SCOPE

The primary objective of Acciona Energy’s BMP is to eliminate fire ignition risks in all our operations through the;

- Elimination of ignition sources, and
- Maintenance of the necessary separation between potential ignition sources and any flammable material.

In support of the BMP’s objectives this ELCMP aims to achieve and maintain the necessary vegetation safety clearances whilst taking into consideration, as far as is practicable, the natural habit of the vegetation in the interests of its long-term health.

Specifically, the objective of this ELCMP is to provide a management framework that will be implemented at the Waubra Wind Farm focused on:

- Reducing the risk of fires and power interruptions caused by vegetation coming into contact with overhead wires.
- Ensuring safe clearances are achieved and maintained around electric lines, and
- Minimizing the environmental impacts of our mitigation activities, and
- Ensuring that a safe workplace is maintained and that an appropriate level of community satisfaction in the maintenance of the asset is maintained.

3. DEFINITIONS

TERM	DEFINITION
ACCIONA Energy	Acciona Energy Australia Global Pty Ltd (ABN 54 600 910 647)
Act	Electricity Safety Act 1998 (version 081, 01-Jan-2021)
AER	Australian Energy Regulator
BMP	Bushfire Mitigation Plan – Bushfire a generic term for an unplanned fire which includes grass fires, forest fires and scrub fires. Used interchangeably with “wildfire”.
CFA	Country Fire Authority
Code	Code of Practice for Electric Line Clearance as set out in the Regulations
ELCMP	Electric Line Clearance Management Plan
ESV	Energy Safe Victoria
ESC	Essential Services Commission Victoria
HSEQ	Health Safety Environment Quality

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TERM	DEFINITION
OEMP	Operational Environmental Management Plan
Regulations	Electricity Safety (Electric Line Clearance) Regulations 2020 (version 001, 27-June-2020)

4. RESPONSIBILITIES

RESPONSIBLE PERSON	
Name	Dirk Vander Neut
Address	Wabra Wind Farm Maintenance Facility 275 Harrisons Road Ercildoune Vic 3352
Phone	0459 900 013
Website Address	https://www.accionacom.au/projects/wabra-wind-farm/

PERSON RESPONSIBLE FOR THE PREPARATION AND MANAGEMENT OF THE PLAN	
Name	Dirk Vander Neut
Position	Fleet Manager – Wabra Wind Farm
Address	Wabra Wind Farm Maintenance Facility 275 Harrisons Road Ercildoune Vic 3352
Phone	0459 900 013
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PERSON RESPONSIBLE FOR CARRYING OUT THE MANAGEMENT PLAN	
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Position	General Manager - Operations
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EMERGENCY CONTACT	
Name	Wabra Wind Farm General Manager - Operations

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EMERGENCY CONTACT	
Position	Emergency Line Level 38, 360 Elizabeth St
Address	275 Harrisons Road Ercildoune Victoria 3352
Phone	1300 515 345

SECONDARY EMERGENCY CONTACTS	
Name	Frank Cartledge
Position	Lead Technician – Waubra Wind Farm
Address	Waubra Wind Farm Maintenance Facility 275 Harrisons Road Ercildoune Victoria 3352
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Email	frances.cartledge@acciona.com

5. DESCRIPTION

5.1 GENERAL WIND FARM DESCRIPTION

The Waubra Wind Farm is located in western Victoria, near Waubra approximately 35 km northwest of Ballarat. The area comprises cultivated farmland, predominantly used for grazing and cropping (mostly cereal grains and potatoes). There is little to no forest within the Waubra Wind Farm itself apart from isolated trees and windbreaks.

5.2 FIRE HAZARD RATING

In accordance with Section 80 of the Act the Country Fire Authority (CFA) is responsible for making determinations of Fire Hazard Rating¹. The CFA has determined that the Fire Hazard Rating of the region is “High”². Consequently, the Waubra Wind Farm is in a “hazardous bushfire risk area” and all overhead power lines are deemed to be “at-risk electric lines”.

5.3 ELECTRICAL INFRASTRUCTURE OVERVIEW

The wind farm comprises 128 turbines with a combined power generation capacity of 192 MW. The electrical power generated by the wind turbines is reticulated through underground 12 kV power cables (approximately 95 km) to five collector substations located at various strategic points around the wind farm. From the collector substations overhead 66 kV power lines (approximately 19 km) are used to bring the electrical power to a single collector switching station where the wind farm’s electrical power is aggregated and finally delivered to Ausnet Services adjacent terminal station for connection into their 220 kV transmission line.

¹ Refer to the BMP for an explanation of Fire Hazard Ratings.

² Fire Hazard Ratings for the Electricity Safety Act 1998 – Edition 2013. Country Fire Authority 2013 (DVD)

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5.4 ELECTRIC LINES

Acciona Energy operates a total of approximately 19 km of overhead power lines (electric lines) as a part of the Waubra Wind Farm. All the electric lines operate at 66 kV either as single circuit or double circuit.

5.4.1 DESCRIPTION

All overhead power lines are mounted on CCA³ treated, timber poles. The poles are approximately 14 m high for single circuit lines and 18 m high for double circuit lines. The conductors are mounted on insulators which are in turn mounted on galvanized steel cross-arms that are attached to the top of the poles. A fibre optic cable is mounted on a catenary approximately 4 m below the conductors and an earth wire is mounted a further 0.6 m below this. The clearance to ground level underneath the earth wire is variable but generally 6 - 7½ m.

The overhead power lines all use bare Iodine⁴ as a conductor.

Acciona Energy does not operate any pole mounted switchgear or transformers as a part of the Waubra Wind Farm.

All Waubra Wind Farm overhead lines are managed by the ELCMP.

It should be noted that this ELCMP addresses only the 66 kV overhead power lines that are owned by and under the control of Acciona Energy. Acciona Energy is not responsible for the 220 kV transmission line and terminal station (part of Ausnet Services transmission network) and the numerous other overhead power lines that provide supplies to the various retail customers in the local area (part of Powercor Australia's distribution network). The overhead lines that are part of the transmission and distribution networks are the subject of separate Electric Line Clearance Management Plans controlled and implemented by others.

¹ Refer to the BMP for an explanation of Fire Hazard Ratings.

² Fire Hazard Ratings for the Electricity Safety Act 1998 – Edition 2013. Country Fire Authority 2013 (DVD)

³ CCA = Chromated Copper Arsenate (CCA) is a wood preservative routinely used to protect it against damage from bacteria, fungus and insects.

⁴ Iodine = 7 strands of 4.75mm AAAC 1120 (All Aluminium Alloy Conductor manufactured to AS1531).

5.5 LOCATION OF POTENTIALLY IMPACTED VEGETATION

This section provides information on the nature of the vegetation potentially impacted from the management activities required to protect our electric lines.

A series of initial desktop assessments and site visits were undertaken prior to construction of the electric lines to gather information on the nature and extent of vegetation that may be impacted by Waubra Wind Farm's electric lines.

These assessments and visits found that the land in which the electric lines are now located have a long history of agricultural activity which has resulted in the removal of the majority of the original

³ CCA = Chromated Copper Arsenate (CCA) is a wood preservative routinely used to protect it against damage from bacteria, fungus and insects.

⁴ Iodine = 7 strands of 4.75mm AAAC 1120 (All Aluminium Alloy Conductor manufactured to AS1531).

vegetation. As a result of these activities, the majority of this environment is now largely devoid of tall vegetation apart from occasional trees and shrubs.

There exists no trees listed within the City of Ballarat or Pyrenees Shire Council's Planning Scheme with ecological, historical, aesthetic, cultural or environmental significance within the boundaries of the Waubra Wind Farm.

5.5.1 CLASSIFICATION AND INITIAL ASSESSMENT VEGETATION POTENTIALLY IMPACTED

The Code (and the objectives of this ELCMP) requires a different approach for different types of vegetation to minimise the impact on the environment resulting from our management activities. This section provides the classes of vegetation and the initial assessment of potential impacts.

5.5.2 CULTURALLY IMPORTANT VEGETATION

A comprehensive cultural heritage assessment of the site was undertaken in June 2006. This assessment did not identify any vegetation that was culturally significant.

5.5.3 HISTORICALLY IMPORTANT VEGETATION

A comprehensive cultural heritage assessment of the site was undertaken in June 2006. This assessment did not identify any vegetation that was historically significant.

5.5.4 VEGETATION OF OUTSTANDING AESTHETIC VALUE

A search of the Department of Planning and Community Development (DPCD) online planning maps found that no "Significant Landscape Overlays" apply to the land in which the electric lines have been positioned.

5.5.5 VEGETATION OF BOTANICAL OR ECOLOGICAL SIGNIFICANCE

An ecological survey was undertaken throughout the entire wind farm site in October 2005 as part of the wind farm planning application. The survey found that the site has had a long history of agricultural activity that has resulted in intensive agricultural use of the landscape and the removal of the majority of the native flora. The survey concluded that botanical or ecological interest of the vegetation on site is limited to isolated areas of native grasslands and occasional scattered native trees. A search of the Department of Planning and Community Development online planning maps found that no "Vegetation Protection Overlays" apply to the land in which the electric lines have been positioned.

5.5.6 HABITAT OF RARE OR ENDANGERED SPECIES

An ecological survey was undertaken over the entire wind farm site in October 2005 as part of the wind farm planning application. This survey included the areas of the site that are now used for our electric lines. The survey concluded that the majority of the site did not have habitat that was considered suitable for supporting rare or endangered species. However, the survey identified occasional native trees, minor streams, dams and rocky gullies that occur across the landscape that have the potential to support threatened species.

However, these habitats would not need to be impacted from the ongoing maintenance requirements associated with the electric lines as these habitats do not comprise trees or other tall growing vegetation.

5.5.7 NATIVE TREE SPECIES

An ecologist has undertaken a survey of all trees in proximity to the electric lines to identify which trees are native.

5.5.8 EASEMENT CONDITION RATINGS

A preliminary survey of the overhead electric line route was undertaken in August 2008 to establish the nature of the vegetation within close proximity to the electric lines. The survey found that there

was no tall growing, remnant, native vegetation and no particularly fast or slow growing species within close proximity to the electric lines. The vegetation in our electric line easements is categorised according to condition ratings detailed in Table 1 below.

Table 1 - Condition Rating Classifications Used in Easement Inspections

CONDITION RATING	EASEMENT INSPECTION GUIDELINE	WORK ORDER PRIORITY
100%	Easement clear of all structures and devoid of vegetation	-
90%	Easement clear of all structures and vegetation except unmanaged/managed pasture	-
80%	Easement contains low lying structures and/or vegetation that may grow into clearance space after five years.	-
70%	Easement contains vegetation expected to grow into clearance space in next 5 years	-
60%	Easement contains structures within 1m of clearance space and/or vegetation expected to grow into clearance space in next 3 years	-
50%	Easement contains vegetation expected to grow into clearance space in next 2 years	3
40%	Vegetation expected to grow into clearance space in next 12 months	2
30%	Vegetation expected to grow into clearance space in next 6 months	2
20%	Vegetation or structure within the clearance space	1
10%	Vegetation or structure within the clearance space and possible contact under sag or sway conditions	1
0%	Vegetation or structure in contact with conductor	1

5.6 MANAGEMENT PROCEDURES

This section details the procedures that Acciona Energy will adopt to manage the vegetation in and around our electric line easements so as to maintain the clearance space between electric lines and trees. This section also details the procedures that Acciona Energy will adopt to identify and, as far as is reasonably practicable, protect those trees that are:

- native
- listed in a planning scheme to be significant: -
 - o ecologically
 - o historically
 - o aesthetically, or
 - o of cultural or environmental significance.

The responsible person will ensure that prior to the removal of vegetation, that any potentially protected trees are assessed for current protection status. This may involve consultation with specialists or relevant authority to ascertain if there are changes to initial studies outlined in section 5.6.1

5.6.1 MEASURES FOR THE MITIGATION OF IMPACTS ON SIGNIFICANT VEGETATION

During the route selection of the electric lines, tall growing native vegetation and important habitat has been avoided where practicable. This section deals the measures adopted by Acciona Energy to mitigate the impacts on 'significant' vegetation as a part of our ongoing efforts to achieve our environmental objectives.

5.6.2 CULTURALLY AND HISTORICALLY IMPORTANT VEGETATION

There are no recorded significant memorial or heritage trees within proximity to the electric lines, so no specific mitigation measures are required at this stage.

However, if at any stage during the operation of the wind farm, it is thought that the vegetation exposed to pruning or clearing practices may be of cultural or historical significance, a specialist will be engaged to determine the cultural or historical importance of the vegetation. The specialist, in consultation with other interested groups (e.g. Aboriginal Affairs Victoria), would develop an appropriate mitigation strategy to limit the impact on the important vegetation. Section 6.3 explains possible mitigation methods that may be considered.

5.6.3 VEGETATION OF OUTSTANDING AESTHETIC VALUE

There are no areas of the site that are considered outstanding aesthetic value and therefore, no specific mitigation measures are required.

However, a key objective of this ELCMP is to strike the appropriate balance between maintaining the necessary safety clearances and working with the natural habit of each tree in the interests of its long-term health where possible.

Acciona Energy will endeavour to minimise the visual impact on the local area while upholding this objective. Where possible, an experienced arborist will use their skills and judgement to ensure that the pruning operation considers the aesthetics of the tree whilst achieving the necessary safety clearances.

5.6.4 ECOLOGICALLY IMPORTANT VEGETATION AND THREATENED SPECIES

No tall growing, threatened or endangered vegetation and habitats are impacted as a result of the ongoing maintenance of the electric lines and therefore no specific strategies are required to mitigate the adverse impacts to vegetation or habitats of significant ecological importance.

If this situation were to change and ecologically important vegetation could not be practically avoided, Acciona Energy would act in accordance with all relevant legislation and policy including the Planning and Environment Act 1987, the Flora and Fauna Guarantee Act 1988, the Native Vegetation Management - A Framework for Action 2002 and the Environment Protection and Biodiversity Conservation Act 1999.

The responsible person will consult the following resources at least annually to ensure the accuracy of Council's knowledge on the location of such trees:

- Annual inspection and identification of Council trees by qualified arborist.
- Council planning scheme overlay for historical, cultural, environmental or aesthetic significance.
- Register of significant trees.
- Heritage Register (<http://vhd.heritagecouncil.vic.gov.au/>) within the meaning of the Heritage Act 2017

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- Council will be notified by Victorian Aboriginal Heritage Council of any changes to the Victorian Aboriginal Heritage Register. The Victorian Aboriginal Heritage Register is not a publicly accessible register because it contains culturally sensitive information. Applicants may apply online for access or advice using the Aboriginal Cultural Heritage Register and Information System (ACHRIS) <https://applications.vic.gov.au/apps/achris/public/request-for-access/enter> established under section 144 of the Aboriginal Heritage Act 2006

- Threatened Flora List in accordance with section 10 of the **Flora and Fauna Guarantee Act 1988**
- <https://www.environment.vic.gov.au/conserving-threatened-species/threatened-species-advisory-lists> Flora or fauna as listed as threatened with a status of 'vulnerable,' 'endangered' or 'critically endangered'

<http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=flora>

and <http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl>

- Threatened Invertebrate Fauna List
[https://www.environment.vic.gov.au/_data/assets/pdf_file/0016/50452/Advisory List of Threatened Invertebrate Fauna 2009 FINAL Sept 2009.pdf](https://www.environment.vic.gov.au/_data/assets/pdf_file/0016/50452/Advisory_List_of_Threatened_Invertebrate_Fauna_2009_FINAL_Sept_2009.pdf) and
- Threatened Vertebrate Fauna List
https://www.environment.vic.gov.au/_data/assets/pdf_file/0014/50450/Advisory-List-of-Threatened-Vertebrate-Fauna_FINAL-2013.pdf

Equally, if a tree were identified to be the habitat for fauna that is either:

- listed as threatened in accordance with section 10 of the Flora and Fauna Guarantee Act 1988
- listed with a conservation status in Victoria of "vulnerable", "endangered" or "critically endangered" in the: -
 - o Threatened Invertebrate Fauna List, or
 - o Threatened Vertebrate Fauna List.

The cutting or removal of that tree will be undertaken outside of the breeding season for that species, wherever practicable. If it is not practicable, for that species, translocation of the fauna will be undertaken wherever practicable.

5.6.5 NATIVE VEGETATION

In situations where native trees require management to prevent their encroachment on the clearance space, Acciona Energy will instruct the contracted arborist to use their skills and judgement to ensure that the pruning operation considers the health and longevity of the tree whilst achieving the necessary safety clearances.

5.6.6 ONGOING MANAGEMENT STRATEGIES

A number of strategies have been adopted to ensure that the objectives of this ELCMP are achieved. These strategies are discussed in the sections below.

5.6.6 ROUTE SELECTION

The electric lines have been strategically routed within the landscape to minimise the amount of vegetation that would be impacted by the construction and ongoing operation and management of the electric lines. This was achieved by selecting a route that, where practicable, avoids areas that support

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vegetation that are considered culturally, ecologically, and aesthetically important. Additionally, the route has been selected to avoid those areas of the landscape that support trees and other tall growing vegetation which have the potential to impact electric lines in both the short term and long term.

The route for the electric lines is now finalised and is not expected to change in the future, however, should the electric lines need re-routing for any reason, the re-routing process would be in accordance with these principles.

5.6.7 VEGETATION MONITORING (EASEMENT INSPECTIONS)

The entire route comprising overhead electric line is subject to an ongoing systematic vegetation monitoring program to ensure vegetation does not encroach on the minimum clearance space surrounding the electric lines thereby complying with the Code.

In essence, these easement inspections involve the inspection of the entire electric line route to ascertain which vegetation has or is likely to encroach upon the clearance space surrounding the overhead electric lines. In addition to this minimum clearance space for 66 kV power lines; Acciona Energy will also inspect the clearance space around the earth wire and fibre optic cables that hang underneath our 66 kV power lines.

These inspections involve viewing the vegetation from a number of different vantage points on the ground and conservatively estimating how far the vegetation is from encroaching upon the required minimum clearance space. Where the clearance cannot be confidently estimated using visual techniques, other non-contact techniques such as the use of a “hot stick” or a laser measuring device will be implemented. A work order for corrective action is triggered whenever the vegetation condition rating is determined to be less than 50% (refer to Table 1 above). The work order will be assigned a priority rating depending on the condition rating, with priority 1 work orders being the most urgent (again, refer to Table 1 above).

The easement inspection is completed annually. The pre-summer easement inspection will be undertaken prior to summer each year between August to September. The results of the inspection will be reported to the General Manager - Operations within one month of completing the inspection.

Acciona Energy will ensure all clearing is completed prior to the Declare Fire Season of each year.

5.6.8 VEGETATION CLEARANCE AND PRUNING

Those areas along the electric line route that support trees and tall growing vegetation and could not be practically avoided during the design process, are likely to be subject to an ongoing procedure of controlled clearing and/or pruning. This includes trees that have the potential to fall (as assessed by a suitably qualified arborist) onto or otherwise meet the electric lines.

Any such pruning will need to be undertaken to ensure the vegetation.

- remains in good health
- does not come in contact with the electric lines, and
- complies with the Code.

Vegetation management is achieved using one, or a combination, of the following maintenance methods, depending on the vegetation in question:

- Pruning
- Removal, and/or

- Slashing.

Acciona Energy will not remove any tree, or trim any tree in a way that substantially damages the tree, unless it considers:

- Safety is compromised.
- The electricity works and supplies are threatened.
- Other options are not feasible because of technical, economic or aesthetic considerations.
- The vegetation will not respond to directional trimming.
- The vegetation cannot be maintained for appropriate periods of time due to its growth characteristics.
- The health of the vegetation is such that to leave it would pose a threat to the safety of the community, property or the electric line.
- The aesthetics of the vegetation are such that continued trimming irreparably damages it, and/or
- Removal is considered preferable to ongoing trimming.

The pruning techniques used will generally be in accordance with AS 4373 - Pruning of Amenity Trees and are intended to remove the minimum amount of vegetation necessary to achieve safety clearances whilst preserving the health and safety of the tree. Generally speaking, once the minimum safety clearance plus an allowance for regrowth is determined for each branch, it is then trimmed at the nearest collar (or growth point) outside the limit of clearance. This is a requirement under AS 4373 - Pruning of Amenity Trees as it protects trees from infection or disease and reduces the development of weakly attached growth that can result from trimming trees mid-branch.

Typically, a one to three-year trimming cycle is reasonable industry practice, but this will vary depending upon various practical factors and the results of the annual easement inspection. A Hazard tree is a tree that is likely to fall onto, or otherwise contact an electric line due to the condition of the tree, or the foreseeable local conditions. Acciona Energy may cut or remove a Hazard tree which Acciona Energy has clearance responsibilities. The assessment and advice regarding hazard trees must be undertaken by a suitably qualified arborist. Hazard tree cutting or removal may be carried out regardless of whether the tree is within the clearance space or not, as trees may stand outside the clearance space but may contact electric lines if they fall.

If pruning works are required Acciona Energy will provide 14 days' notice to the owner and occupier of the land on which vegetation is to be pruned and/or cleared. The notice will include contact details of the responsible person, details of the cutting or removal and details on the dispute resolution process. Refer to section 10.4 dispute resolution.

Where vegetation management is to occur on public land, the responsible person shall ensure that any adjoining landowners are notified with at least 14 days' notice. Acciona note there is a total of 220 spans across the site, with only 57 spans or 25% of the poles and wire on public land.

5.6.9 EMERGENCY MAINTENANCE

The annual monitoring schedule of vegetation within close proximity to the electric lines should prevent the need for any urgent vegetation maintenance to be undertaken. However, if a situation arises whereby vegetation needs to be cleared urgently then an appropriately qualified arborist would be engaged to rectify the situation immediately.

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Urgent pruning or clearing shall only be undertaken under the following conditions:

- as a result of encroachment or growth of vegetation that was not anticipated (i.e. abnormally favorable growth conditions) in the management plan
- as a result of a tree falling or damage to a tree (i.e. from a vehicle accident or a storm bringing down part of a tree) requiring the tree to be cleared to maintain the clearance space required by the Code
- if an arborist's assessment confirms the imminent likelihood of contact with an electric line having regard to foreseeable local conditions, or
- During the Fire Danger Period declared under the Country Fire Authority Act 1958.

Any urgent pruning or clearance shall not clear vegetation by more than one metre beyond the designated clearance space (including the distance allowed for sag and sway of the conductors), unless in a situation when a tree is likely to fall and come in contact with the electric lines.

In the unlikely event that any emergency pruning is required due to the presence of a hazardous tree or other vegetation that may fall onto or otherwise come into contact with an electric line, Acciona Energy will notify the owner and occupier of the land on which vegetation was pruned and/or cleared as soon as practicable after completing the emergency works.

Only personnel authorised as per 10.1 will be permitted to remove hazard trees.

Acciona Energy will record specific information that relates to the emergency maintenance works that are undertaken. This includes:

- location of emergency works
- date of emergency works
- details as to why the pruning was required, and
- details of the last inspection of that section of the electric line where pruning and clearing was required.

This information will be retained at the Waubra Wind Farm Maintenance Facility for at least five years.

5.6.10 OTHER FUEL LOADS

If it becomes apparent that a significant fuel load is discovered below the electric line (e.g. a large pile of branches) these will be removed or minimised as far as practicable. Before these actions are undertaken the landowner will be contacted in order to obtain their approval.

5.7 ALTERNATIVES TO CONVENTIONAL MAINTENANCE METHODS

Tall-growing vegetation and habitats that are of particular importance or special significance may require alternative mitigation strategies to minimise adverse impacts. The present electric line route has been positioned to avoid such important vegetation, so these alternative methods are unlikely to be required at the Waubra Wind Farm. However, if a situation arises where vegetation of particular importance requires pruning and/or clearance, Acciona Energy will consider these alternative methods of vegetation management.

5.7.1 UNDERGROUND ELECTRIC LINES

Although underground electric lines are a desirable solution, it is often not financially viable given the large costs associated with underground cabling of high capacity, 66 kV circuits. However, undergrounding may be a cost effective at selected locations depending on the nature or importance of the vegetation that may be impacted by the existence of the any overhead electric lines.

The present overhead electric line route does not comprise vegetation considered to be of importance to warrant underground electric cabling, and therefore, underground cabling has not been implemented at the Waubra Wind Farm for the 66 kV circuits.

5.7.2 INSULATED OVERHEAD ELECTRIC LINES

The route in which the overhead electric line passes at the Waubra Wind Farm does not comprise vegetation of a nature that warrants insulated cabling, and therefore, insulated cabling has not been implemented at the Waubra Wind Farm.

5.7.3 RE-ROUTE OVERHEAD ELECTRIC LINES

The route for the electric lines has now been finalised and is not expected to change in the foreseeable future. However, should the importance of the vegetation that requires ongoing maintenance increase significantly (i.e. be found to be supporting a significant population of a threatened species), then re-routing would be considered as an alternative to conventional vegetation management. It is unlikely that this option would need to be utilised at the Waubra Wind Farm given there is minimal significant tall growing vegetation within close proximity to the overhead electric lines.

5.7.4 USE OF TALLER POLES

The use of taller poles would be an option where there are a number of highly significant trees between a span, whereby conventional vegetation management (i.e. pruning) is not considered appropriate. It is unlikely that this option would need to be utilised at the Waubra Wind Farm given there is lack of significant tall vegetation within close proximity to the overhead electric lines.

5.8 PROCESSES AND PROCEDURES TO ENSURE COMPETENCE

The implementation of this ELCMP relies in part on the competence of its inspectors and specialist contractors. This section describes the processes and procedure Acciona Energy uses to ensure the competence of specialist contractors. The BMP details the processes and procedure Acciona Energy uses to ensure the competence of inspectors.

5.8.1 CONTRACTORS

Where vegetation needs to be pruned or cleared, Acciona Energy will contract out these operations. The Contracting Company engaged by Acciona Energy must be able to meet a range of requirements to assure Acciona Energy that they are a suitably qualified, experienced and proficient arboriculture company capable of undertaking the required pruning and/or clearing works.

The Contracting Company must provide evidence of the following prior to undertaking pruning and/or clearing works:

- Safe work method statements/ risk assessments
- Plant and machinery documentation including maintenance and operating documents.

The appropriate refresher courses must be undertaken when due as per the National competency. The refresher courses will be verified through the induction process, to ensure they are current.

The Electrical Safety (Installations) Regulations 2009, refers to an authorised person as a person who holds a current certificate specifying satisfactory completion of a training course in tree clearing,

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approved by Energy Safe Victoria, along with the specific requirements outlined in the 'Blue Book'. Unless otherwise specified in the Code all contracted personnel need to provide evidence of the following training and qualifications to be authorised to conduct works:

- all Team Members must:
 - Complete a site-based Induction as part of contractor on boarding and induction processes!
 - Provide evidence of: -
 - An RTO recognised UET20319 Certificate II in ESI – Powerline Vegetation Control.
 - An RTO recognised workplace First Aid Level 2 qualification.

In addition to the above, The Team Leader must provide evidence of: -

- At least three years of experience in arboriculture practices.
- Arborist: -
 - National Certificate Level III in Arboriculture, including “Perform a ground -based tree defect evaluation” unit of competency or an equivalent qualification.
 - An RTO recognised AHCPM204 – Recognise Plants.
 - An RTO recognised UETDRVC24 – Assess vegetation and recommend control measures in an ESI environment, and
 - At least 3 years of field experience in assessing trees.

Only once having satisfied the conditions above will the person responsible authorise a contractor to cut or remove trees, including hazard trees.

Acciona Energy reserves the right to stop any work that is being carried out by any contractor or worker where an infringement of the safety rules, standard work practices legislation or procedures occurs or where Acciona Energy reasonably believe there is an immediate risk to health and safety of any person, or a non-compliance may occur.

5.8.2 INTERNAL AUDITORS

The electric line clearance operations that are required under this ELCMP will be audited to confirm the work has been undertaken in accordance with the principals outlined in this ELCMP. Acciona Energy will audit its contractors on an ongoing basis to ensure appropriate work practices are being maintained and that all contractual and environmental requirements are being met. Contractors will be provided with feedback from Acciona Energy audits and this information will also be used to enhance this ELCMP.

If a major discrepancy or deficiency is found in the audited works, then the deficient works shall be rectified as necessary. Additionally, the initial contractor may be required to undertake a refresher course before undertaking any further works for Acciona Energy.

Acciona Energy will perform a visual audit of the easement inspection and vegetation trims once all the works have been completed. The visual audit results/findings are captured on the Easement Inspection Report T01_PLNAU08108 r01.

5.8.3 EXTERNAL AUDITORS

In addition to the audits described above, an appropriately qualified horticulturist or arborist may be employed by Acciona Energy when significant maintenance practices are undertaken. They will audit the work undertaken by Acciona Energy's contractors and provide advice on improvements that could

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be made. This external audit would assist in determining whether the extent of pruning being undertaken is within the guidelines set out in this document.

5.9 Management of this Plan

This section describes the processes and procedures to be used by Acciona Energy to administer this plan.

5.9.1 DOCUMENT CONTROL & ACCESS

The custodian of this ELCMP shall be the 'Responsible Person' Acciona Energy's Site Manager – Waubra Wind Farm.

The Responsible Person must ensure that a copy of management plan is:

- Published on the Acciona Energy internet site.

Ensure that a copy of the management plan is available for inspection by the public at the responsible person's principal office in the state during normal business hours. The ELCMP is stored electronically, and hard copies are available at the Waubra Wind Farm Maintenance Facility.

A current and endorsed version of This ELCMP is also available on the Company's website:

<https://www.acciona.com.au/projects/waubra-wind-farm/>

5.10 MONITORING & AUDITING OF THE PLAN

5.10.1 MONITORING

The primary mechanism for monitoring this plans performance will be to record a number of relevant parameters (Key Performance Indicators) including:

- Lost power hours resulting from vegetation interference.
- Number of emergency maintenance procedures undertaken
- Summary of vegetation clearing and pruning programs including completed works, planned (short-term) works and forecast (long-term) works and estimated completion dates.
- Number of complaints, and
- Internal and external audit results.

These will be recorded in an appropriate data store by Acciona Energy's Site Manager – Waubra Wind Farm (e.g. Acciona Energy's Computerised Maintenance Management System, and/or Integrated Management System). A summary will be provided to the HSEQ Manager annually so that improvements to the plan, design and operations and maintenance procedures can be made if necessary.

A comparison of the above Key Performance Indicators with previously compiled reports will provide a mechanism to ensure that rectification works are completed.

Additionally, standard asset management processes will provide inputs into the ELCMP. In particular records will be used to ensure that trends and failures that form potential sources of ignition are tracked and controlled.

5.10.2 AUDITING

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Any part of this plan or its associated systems, procedures and reports will be inspected at any time by independent third-party inspectors as a part of Acciona Energy's HSEQ audit process. As a minimum the ELCMP will be audited annually as outlined by the HSEQ internal audit schedule. Specific compliance requirements outlined in the Plan will be validated as per the scope of the annual audit (i.e. inspection activities and subsequent actions are completed as scheduled)

5.11 IDENTIFYING DEFICIENCIES & REVISING THE PLAN

5.11.1 Deficiencies in this ELCMP may be identified by a variety of means such as:

- Annual review of this ELCMP by the Site Manager
- Review by Energy Safe Victoria
- External Audit
- Fire Investigations
- Comments and suggestions from: -
 - members of the public, or
 - an officer of a public authority.

5.11.2 DOCUMENT REVIEW & TIMING

It is acknowledged that Acciona Energy must prepare this ELCMP before 31st March in each year. It is required to be submitted within 14 days following a request by ESV, and consequently it is subject to annual review.

The ELCMP may be reviewed and revised more frequently in response to:

- significant changes to factors such as: -
 - legislation
 - policy
 - industry practice
 - standards, and
 - responsibilities.
- Deficiencies identified in the plan's implementation.
- Deficiencies identified in the inspection process.
- Deficiencies revealed by incident investigations, and/or
- An instruction from Energy Safe Victoria

5.12 DISPUTE RESOLUTION

Written or verbal submissions on this plan or the implementation of this plan can be made at any time during the life of the project. Written submissions and any other comments should be addressed to:

Name	Ross Tochez Anderson
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Position	HSEQ Manager
Address	Melbourne Central Tower Level 38, 360 Elizabeth Street MELBOURNE VIC 3000
Phone	03 9027 1000
email	ross.tochez.anderson@acciona.com

If the person listed above is not contactable, a written submission can be lodged to the Acciona Energy's Melbourne Office (using the address given above).

Acciona Energy shall contact the submitter and attempt to settle the dispute in a manner that is satisfactory to both Acciona Energy and the member of public and complies with the Act, Regulations and Code.

In the unlikely situation where a dispute cannot be resolved by this person, Acciona Energy will provide details of the dispute ESV in conjunction with the ELCMP itself to independently provide guidance on a suitable resolution. ESV will only resolve disputes that relate to their role as electrical safety regulator and not matters associated with other disputes, including amenity disputes.

5.13 CODE OF PRACTICE

The Schedule of the Line Clearance Regulations provides the official "Code of Practice" which Acciona must comply with.

6. RELATED DOCUMENTATION

CODE	TITLE
PLN11_PAU01_GAE07006_WWF	WWF Bushfire Mitigation Plan
PLN14_PAU01_GAE07006_WWF	WWF Emergency Response Plan
PLN01_GAE07016_WWF	WWF Operational Environmental Management Plan
T01_PLNAU08104	Easement Inspection Report
	Electricity Safety Act 1998 (version 077, 1-January-2020)
	Electricity Safety (Bushfire Mitigation) Regulations 2013 (version 005, 27-June-2020)
	Electricity Safety (Electric Line Clearance) Regulations 2020 (version 001, 27-June-2020)
	Electrical Safety (Installations) Regulation 2009
	Aboriginal Heritage Act 1988
	Country Fire Authority Act 1958
	Environment Protection and Biodiversity Conservation Act 1999

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Flora and Fauna Guarantee Act 1988

Heritage Act 2017

Planning and Environment Act 1987

AS 4373 – 2007: Pruning of Amenity Trees

<http://www.esv.vic.gov.au/Legislation-Regulations>

<http://www.esv.vic.gov.au/Electricity-Professionals>

<http://www.aer.gov.au/>

NOTE: Complete the table with the documentation, legislation, regulations, etc. that is relevant to the document.