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Electric Line Clearance (ELC) Plan

Oaklands Junction Quarry 2024-2025

Document No. 5384-A-3.1

Australia

1. Plan Authorisation

This Electric Line Clearance Management Plan (ELCMP) outlines how Holcim (Australia) manages vegetation clearance along our electrical assets to mitigate bushfire risk and ensure our assets
are safe and reliable.

As the owner and operator of electrical assets Holcim (Australia) has prepared this plan in accordance with Section 84D of the Electricity Safety Act 1998 and the Electricity Safety (Electric Line Clearance) Regulations 2020.Note: The Electric Line Clearance (ELC) Regulations also state, in r.10, that a responsible person must submit and/or amend their ELCMP as instructed by Energy Save Victoria (ESV). While Holcim is required to prepare an ELCMP, ESV has not called for it at this time
This plan is subject to annual review to ensure it describes current management regimes and processes, and to allow for continuous improvement.

Prepared By:	Reviewed By:	Approved by:
M Konstantinidis	D Sheldon	P Maaten
National CAPEX Project Manager	Chief Electrical Engineer	Quarry Manager
14th November 2023	14th November 2023	14th November 2023

2. Document Control and Version History

Doc. No.	Date	Description Of Change
1.0	19th Jan 2022	Document created
2.0	6th October 2022	Updated based on ESV comments 21/3/22 re: ELCMP not being called at this time., training requirement update etc
3.0	14th Nov 2023	Updated for 2023_2024
5384-A-3.1	5th March 2024	Updated based on ESV review and for 2024/2025

3. Definitions

Term	Definition
Code	Code of Practice for Electric Line Clearance, which exists as a Guideline to the Electricity Safety (Electric Line Clearance) Regulations 2020.
CMMS	Holcim Computerised Maintenance Management System
Damstra	Holcim – system used for contractor management
Holcim (Australia) Pty Ltd	Holcim Australia Pty Ltd. manufactures building products. The Company provides aggregates, sand, concrete readymix, concrete pipes, and other building products. Holcim offers its products and services to the construction industries throughout Australia.
ELC	Electric Line Clearance
HBRA	Hazardous Bushfire Risk Area – An area that a fire control authority has assigned a fire hazard rating of “high” under section 80 of the Act; or an area that is not an urban area and has not been assigned a fire hazard rating of “low” under section 80 of the Act.

High Voltage Power line	An overhead powerline which carries a voltage greater than 1000V (22kV for Holcim assets).
iCare	Holcim – Health, Safety & Environment system for hazard reporting and incident management.
Holcim	Holcim (Australia) Pty Ltd Owner and Operator of the Oaklands Junction Quarry, Victoria
Important Vegetation	Includes native vegetation, vegetation listed in a planning scheme to be of ecological, historical or aesthetic significance, a tree of cultural or environmental significance or provides habitat for threatened fauna.
Maintenance	Works required to be undertaken on vegetation to maintain the minimum required clearance space to overhead power lines. Includes pruning, clearing, cutting or removing.
Minimum Clearance Space	Refers to the minimum clearance space (air gap) between electric lines and vegetation as per the requirements of the code.
Native Vegetation	Species indigenous to Victoria and naturally occurring. Excludes trees deliberately planted (e.g. street trees or screening trees).
PCC	Point of Common Coupling (ie. Site Supply connection point)
SHEMS	Holcim (Australia) Pty Ltd Safety, Health & Environment Management System

Tree of Cultural or Environmental Significance	Means a Tree that is included in the:
	• Heritage Register;
	• The Victorian Aboriginal Heritage Register;
	• Trees listed in a Planning Scheme to be of ecological, historical or aesthetic significance;
	• Flora or a habitat of fauna listed as threatened in accordance with section 10 of the Flora and Fauna Guarantee Act 1988;
	• Environment Protection and Biodiversity Conservation Act 1999 Part 13, Division 1;
	• Flora listed in the Threatened Flora List with a conservation status in Victoria of ‘endangered’ or ‘vulnerable’; or
	• A habitat of fauna which is—
	  • Listed in the Threatened Invertebrate Fauna List with a conservation status in Victoria of ‘vulnerable’, ‘endangered’ or ‘critically endangered’; or
	  • Listed in the Threatened Vertebrate Fauna List with a conservation status in Victoria of ‘vulnerable’, ‘endangered’ or ‘critically endangered’.

Vegetation	Any living or non-living flora or any part of that flora.
Vegetation Clearance	Means the minimum separation in air that shall be maintained between vegetation and live electrical apparatus when performing vegetation management work.
Vegetation Management Work	Pruning, cutting, trimming or felling of, or application of herbicides to, vegetation and assisting to prune, cut, trim or fell, or apply herbicides to, vegetation, where: • any part of the vegetation being pruned or cleared may come within 2 metres of live overhead power lines, or • the work requires any person, tool, equipment or vehicle to come closer to live overhead power lines than the following relevant minimum distances: • 100 mm for insulated low voltage conductors

	• 1500 mm for bare or covered low voltage conductors • 2000 mm for high voltage conductor with a nominal voltage not exceeding 66 kV.
Vegetation Management Contractor (VMC)	A specialised external company responsible for carrying out vegetation inspection and clearing activities associated with this plan. The VMC is the "authorised person" engaged by Holcim to undertake electrical line clearance works on behalf of Holcim. Vegetation Workers are "authorised persons" as referred to in the Electricity Safety (Installation) Regulations 2009 r.318 & r.319.
Vegetation Management Worker (VMW)	Is a person working for a VMC: • whose qualifications, experience and training and assessment ensure competency in the performance of vegetation management work; and • who has completed a training course approved by ESV; and • who has technical knowledge or sufficient experience to perform the duty concerned; and • who has been endorsed in writing by an organisation (e.g. the employer) to perform the work.

4. Regulatory Compliance Summary

This table is aligned with the structure of Regulation 9 to 11 of the Electricity Safety (Electric Line Clearance) Regulations 2020 and the Code of Practice for Electric Line Clearance indicating which section(s) of the plan describes how compliance will be achieved.

Regulation / Code	Requirement	Section reference in this plan	Page
9(2)	Before 31 March in each year, a responsible person must ensure that a management plan relating to compliance with the Code for the next financial year is prepared.	Section 6	7
9(4)(a)	Name, address and telephone number of the responsible person.	Section 6	7
9(4)(b)	Name, position, address and telephone number of the individual who was responsible for the preparation of the management plan.	Section 6	7
9(4)(c)	Name, position, address and telephone number of the persons who are responsible for carrying out the management plan.	Section 6	7
9(4)(d)	The telephone number of a person who can be contacted in an emergency that requires clearance of a tree from an electric line that the responsible person is required to keep clear of trees.	Section 6	7
9(4)(e)	The objectives of the management plan.	Section 7	8
9(4)(f) 9(4)(g)	The land to which the management plan applies (as indicated on a map).	Section 8	8

9(4)(h) – (i)(ii)(iii)	The location of each area that the responsible person knows contains a tree that the responsible person may need to cut or remove to ensure compliance with the Code and that is considered a native and (or) significant tree.	Section 8	8
9(4)(i)	The means which the responsible person is required to use to identify a tree specified in paragraph (g).	Section 9	11
9(4)(j)(i)	Procedures for establishing and maintaining the minimum clearance space.	Section 10	12
9(4)(j)(ii) Sch. 21	Process to describe how an allowance for sag and sway is to be calculated.	Section 10	12
9(4)(k) Sch. 9	Ensure compliance with AS4373 – Pruning of Amenity Trees	Section 10	12
9(4)(n)	A description of the measures that must be used to assess the performance of the responsible person under the management plan.	Section 11	15
9(4)(o)	Details of the audit processes that must be used to determine the responsible person's compliance with the Code.	Section 11	15
9(4)(p)	The qualifications and experience that the responsible person must require of the persons who are to carry out the inspection, cutting or removal of trees in accordance with the Code.	Section 12	16
9(4)(q)	Notification and consultation procedures.	Section 13	19
9(4)(r)	Dispute resolution procedures.	Section 13	19
10(6)	Publishing and availability of information.	Section 14	19
11(1) and 11(2) Sch. 4,5,6	Exemptions and exceptions.	Section 15	19

Electrical Line Clearance (ELC) Plan

5. Preparation of ELC Plan

In accordance with the Electricity Safety Act 1998, Holcim (Australia) Pty Ltd is responsible for avoiding and minimising the impact of vegetation on powerlines in the areas identified in this plan. The following management plan identifies key roles and incumbents with the responsibility for establishing procedures and administering various electric line vegetation clearance works.

This plan will be reviewed annually in accordance with the Electricity Safety (Electric Line Clearance) Regulations 2020. The person responsible for the preparation of the plan will audit the site, audit the existing plan and submit this plan annually to the Holcim (Australia) Pty Ltd management team for review and revision.

The review will be administered before March 31 of each year and will be updated within two weeks (14 days) of this review to ensure a copy is made available to ESV (should it be requested) and to ensure that the most up to date version of the plan is correctly uploaded and available to the public on the Holcim (Australia) Pty Ltd website.

A copy of this Electric Line Clearance Management Plan for Holcim (Australia) Pty Ltd will be available in both the Responsible person and person responsible for preparation of the plans offices respectively and will be available during normal business operating hours.

6. Particulars of the ELC Plan

6.1 Responsible Person

Name:	Peter Maaten
Position:	Quarry Manager
Address:	290 Oaklands Rd, Oaklands Junction 3063
Telephone:	(03) 9303 3203 / 0402 227 105
Email:	Peter.maaten@holcim.com

6.2 Person Responsible for Preparation of the Plan

Name:	Gary Osborne
Position:	Maintenance Manager
Address:	290 Oaklands Rd, Oaklands Junction 3063
Telephone:	(03) 9303 3208
Email:	Gary.osborne@holcim.com

6.3 Responsible for managing and implementing ELC Plan associated processes and procedures

Name:	Gary Osborne
Position:	Maintenance Manager
Address:	290 Oaklands Rd, Oaklands Junction 3063
Telephone:	(03) 9303 3208
Email:	Gary.osborne@holcim.com

6.4 Emergency Contact for Clearing a Line

Name:	Peter Maaten
Telephone:	(03) 9303 3203 / 0402 227 105
Email:	

7. Plan Objectives

This plan provides Holcim a basis to improve upon vegetation clearance practices and fulfil their obligations to:

- Public Safety.
- Compliance with the Electricity Safety (Electric Line Clearance) Regulations 2020.
- Minimization of fire risks associated with vegetation contact with electric lines.
- Assistance in maintaining a safe and reliable energy supply.
- Protection of important vegetation that may be deemed as such on a basis of those areas containing botanically, historically or culturally important vegetation or vegetation of outstanding aesthetic or ecological significance, and/or the habitat of rare or endangered species.
- Management of vegetation to maximise the amenity value of the trees affected by this plan.
- Provision of a safe working place for employees and contractors.
- Community satisfaction with the way that necessary works are carried out.
- Commitment to these objectives is provided through the following performance indicators.
- Annual inspection of all vegetation in the vicinity of electric lines located in the boundaries of the Holcim (Australia) Pty Ltd Oaklands Junction quarry.
- Training of staff required to perform vegetation clearance, see section 12.
- Annual review of Holcim (Australia) Pty Ltd Safe Operating Procedures (SOPs) and the use of Safe Work Method Statements (SWMS).
- Contractor induction through the Holcim (Australia) Pty Ltd SHEMS.
- Ensuring contractors have appropriate qualifications, training, experience, insurances and procedures in place.
- Pruning is undertaken in accordance with AS4373 (Pruning of amenity trees) as a minimum.
- Clear identification of important vegetation through Holcim (Australia) Pty Ltd internal processes
- Development of the Tree Management Plan, in identifying inspection frequency and maintenance schedules.
- Compliance to these commitments will be determined through regular audits conducted by Holcim (Australia) Pty Ltd personnel with the required qualifications as specified in section 12.
- Comply with Code of Practice

8. Land to Which This Plan Applies

The land to which this management plan applies is the land owned by Holcim (Australia) Pty Ltd at 270 and 290 Oaklands Rd, Oaklands Junction Victoria 3063.

The Holcim Oaklands Junction Quarry is a hard rock quarry located 25km north of the Melbourne CBD.

The quarry operation is bound by Oaklands Road to the west and surrounded by rural land to the north, east and south, with a horse auction complex on the western side of Oaklands Road, directly opposite the operations. The site lies very close to Melbourne's Tullamarine Airport.

Quarry operations are licensed under Extractive Licence 714 (obtained in 1978) and permitted under Planning Permits also obtained in 1978. Work Authority 176 was issued in 1998, and revised 2004 and 2007, with the last Work Plan Variation, dated 2018.

Figure 1 below, shows an aerial view of the subject land, while figure 2 indicates the position of overhead wires and poles.

Figure 1: Subject Land – 270 and 290 Oaklands Junction, Oaklands Junction, VIC 3063.

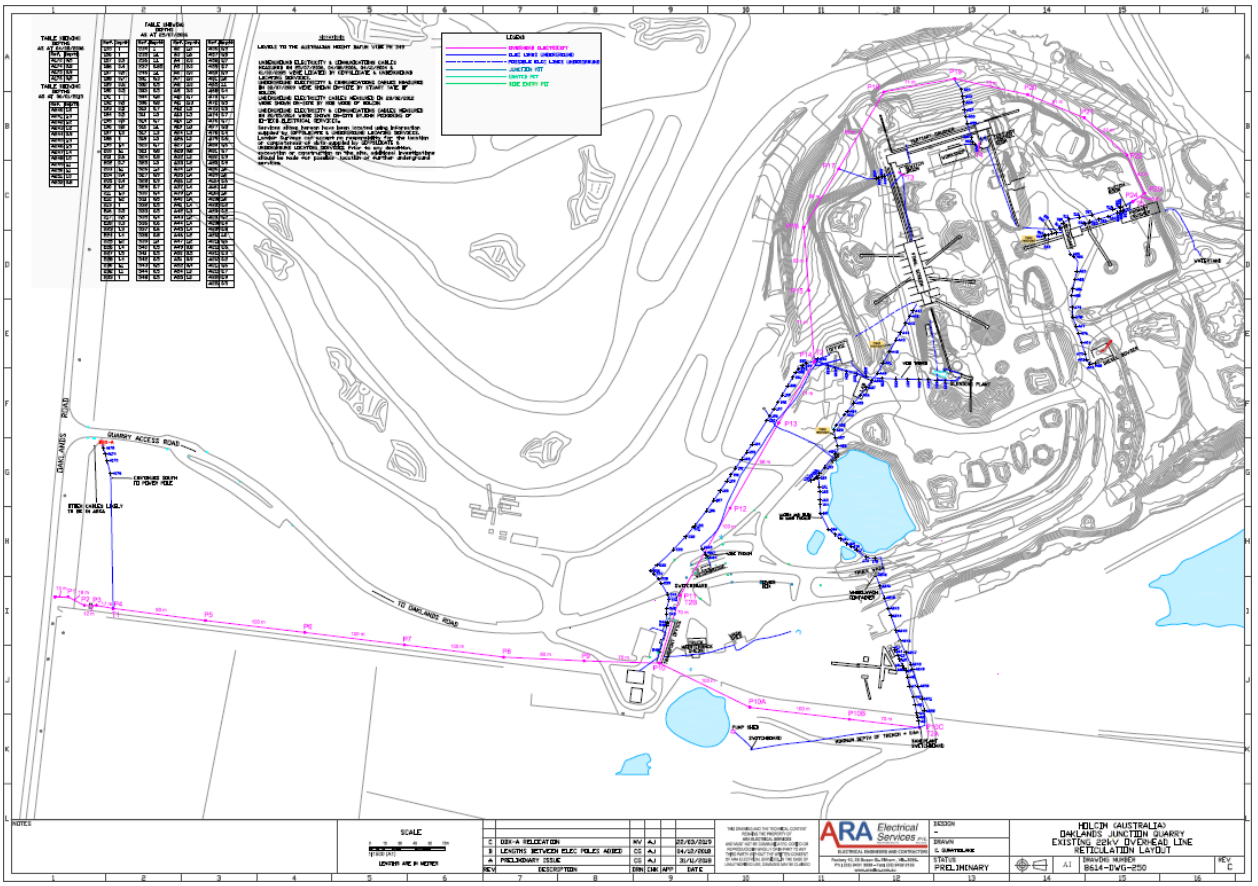


Figure 2: Overhead line & pole plan. Note: A larger figure 2 copy is provided in Appendix 2.

This site consists of approximately 1,780 metres of overhead 22kV lines (ASCR/GZ Apple) fed from Jemena feeder COO11 originating at Coolaroo zone substation.

The PCC consists of an air break pole mounted switch owned and maintained by Jemena with the following equipment located at each pole on the Holcim overhead line:

- Pole 1 – PCC air break switch
- Pole 2 – Metering Transformer
- Pole 3 – Nu-lec Automatic Circuit Recloser
- Pole 4 – 25kVA pole transformer, surge diverters, air break switch and fuses
- Pole10C – 200kVA pole transformer, surge diverters, air break switch and fuses
- Pole 11 – 200kVA pole transformer, surge diverters, air break switch and fuses
- Pole 14 – 200kVA pole transformer, surge diverters, air break switch and fuses
- Pole 17 – Underground supply to 1000kVA transformer, surge diverters, air break switch and fuses
- Pole 19 – Underground supply to 1000kVA transformer, surge diverters, air break switch and fuses
- Pole 22 – Air break switch and fuses
- Pole 24 - Underground supply to 1000kVA transformer with surge diverters

The three 1,000kVA ground mount transformers are located within fenced bunded compounds

Holcim (Australia) Pty Ltd has also installed an isolation transformer in 2022 to ensure the site is REFCL compliant as required by Tranche 3 of the Bushfire Safety Program.

8.1 Hazardous Bushfire Risk Areas

The site is in a high bushfire rated area (HBRA) under the Electricity Safety Act

Re: 290 Oaklands Rd, Oaklands Junction

The site is in a high bushfire rated area (HBRA) under the Electricity Safety Act.

All the best David

David Griffin Spatial Data Officer DipNRM *Swinburne* BEnvScMgt(Hons) *Deakin* GCertBfPlMgt *Melbourne*

Fire Risk, Research & Community Preparedness

Community Infrastructure

CFA Headquarters – 8 Lakeside Drive Burwood East, VIC, 3151

T: 9262 8336 E: david.griffin@cfa.vic.gov.au

9. Tree Register

Holcim is committed to not cutting nor removing trees and shrubs unless deemed necessary under the code. Holcim has trees in proximity to the overhead lines which are planted trees onsite.

9.1 Native Trees

At the time of this plan Holcim is unaware of any vegetation within the vicinity of its overhead powerline that meets this criteria.

Vegetation on the site has been planted as part of the overall site development and aesthetics.

Note: The only native trees identified on site are River Red Gums (Eucalyptus camaldulensis), which are well outside the vicinity of the overhead power lines.

9.2 Trees of ecological, historical or aesthetic significance

At the time of this plan Holcim is unaware of any vegetation within the vicinity of its overhead powerline that meets this criteria.

Vegetation on the site has been planted as part of the overall site development and aesthetics.

9.3 Trees of cultural or environmental significance

At the time of this plan Holcim is unaware of any vegetation within the vicinity of its overhead powerline that meets this criteria.

Vegetation on the site has been planted as part of the overall site development and aesthetics.

9.4 Tree Identification

Annually Holcim shall identify any significant trees within the vicinity of its overhead powerline via referencing various sources including:

- 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 1995.
- 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 established under section 144 of the Aboriginal Heritage Act 2006 https://www.legislation.vic.gov.au/in-force/acts/aboriginal-heritage-act-2006/024
- Flora or fauna as listed as threatened with a status of 'vulnerable,' 'endangered' or 'critically endangered' http://www.environment.vic.gov.au
- Threatened Invertebrate Fauna List https://www.environment.vic.gov.au
- Threatened Vertebrate Fauna List https://www.environment.vic.gov.au

At the time of this plan Holcim is unaware of any vegetation within the vicinity of its overhead powerline that meets this criteria.

Should Holcim seek to alter the status of the current overhead powerlines (e.g. relocate), or add additional overhead powerlines to the site covered by this plan, a review of the abovementioned registers would be included within the project assessment and planning phase.

If vegetation of significance was identified, clearing, pruning, removal or other works which may impact the vegetation would not commence until appropriate referral to, and where appropriate, approval has been granted by the relevant authorities.

10. Management Procedure According to the Code

10.1 Inspection Program

Annually (pre summer each August-September) and during a declared fire danger period or total fire ban day(s) a risk assessment is conducted visually assessing the condition of the assets, assessing the potential for a tree or branch to fall onto the overhead power line or any other condition that could lead to a fire. From these assessments actions are determined such as removal of branches, trees or assessment by power authority if required.

All overhead high voltage power lines are inspected annually (By Zinfra). Note: The scheduling for this has been moved from May (in 2020) to September/October (annually from 2021). This is to minimise the risk of any growth from May and during the bush fire period encroaching on overhead high voltage power lines.

This is managed by a time based routine within the Computerised Maintenance Management System.

Where any risk of infringement of vegetation into the minimum clearance space is identified, a line clearance scope of work document will be produced and a suitably qualified contractor (VMC) will be engaged to prune trees and vegetation, in line with that scope of work document and according to the requirements of AS4373.

10.2 Managing Regrowth between Cycles

To reduce, and where practical eliminate, the need for urgent pruning or clearance works regular maintenance and annual VMC inspections will also evaluate potential hazards to the clearance space, including:

- Dead and dangerous limbs
- Physical defects in trees (e.g. deterioration through disease or natural stresses)
- Other trees or limbs that may be unstable and could fail under the range of weather conditions that can be reasonably expected

In the event non-compliant vegetation is identified outside the vegetation management program timeframe Holcim shall engage a suitably trained and qualified VMC to undertake the works required to restore the minimum clearance space as soon as practical.

10.3 Identifying and Managing Hazard Trees

Where trees of a hazardous nature are identified such trees are then subject to further assessment by a suitably qualified arborist to determine further actions required including providing a report to Holcim.

For the purpose of this plan a hazard tree is defined as having the potential to damage electric lines. Vegetation outside the clearance space is monitored to mitigate the risk of falling trees or branches. The vegetation outside the clearance space is assessed by a suitably qualified arborist to identify obvious hazard trees. This assessment is limited to visual assessment only by an arborist. Typically an obvious hazard tree would be exhibiting one or more of the following:

- Poor anchorage (e.g. Root uplift)
- Major stage of decline (i.e. dead and dangerous limbs)
- Excessive imbalance towards electrical assets
- Obvious cracks / splits in trees

10.4 Cutting & Pruning Practices

Holcim will ensure that the VMC has appropriate training and certification in compliance with the Code to prevent excess pruning and/or inappropriate clearing of vegetation.

All cutting and pruning activities associated with this plan are, as far as practicable, to be completed in compliance with AS4373 Pruning of Amenity Trees.

Where it is not practicable to cut or prune vegetation in accordance with the practices outlined in AS4373 Holcim will engage a suitably qualified Arborist to determine the most practical solution to ensure the minimum clearance between the vegetation and overhead powerline is maintained.

Inspections of all pruning works during and post-cut are audited for compliance and to AS4373 standard. Where pruning is identified to not be in accordance with AS4373, the issue will be discussed with the VMC at toolbox meetings.

10.5 Procedures for Determining Additional Distance for Sag and Sway

Holcim manages uninsulated overhead powerlines operating at 22,000V within HBRA which are subject to the conditions and management procedures described in this plan. The spans under management are described in Appendix 2 of this plan.

Holcim acknowledges that the characteristics of overhead powerlines are affected by a number of factors including:

- Ambient temperature
- Electricity current loading

- Wind
- Line construction
- Length of span

Holcim is responsible for managing vegetation growth as part of general grounds management activities.

In order to determine the minimum clearance requirements for each of its overhead powerline spans, and provide suitable guidance for vegetation management workers, Holcim has undertaken the following process:

1. Engaged a suitably qualified contractor to conduct an Overhead Powerline Survey
2. Calculated “sag and sway” measurements for each of span and determined the “applicable distance” for each span as per Clause 28 of the Code.

Appendix 2 provides an overview of the minimum clearance space for each span and Appendix 3 provides the relevant vegetation clearance information from the Code relevant to Holcim overhead powerlines managed under this plan.

10.6 Procedure to Adopt if Non AS4373 Compliant

All tree pruning works must comply with AS 4373 as far as reasonably practicable. In this instance “as far as reasonably practicable” in reference to AS 4373 means, reasonably able to be done to ensure that the tree health, safety, and amenity are not compromised.

This assessment of “reasonably practicable” will consider:

- Hazard reduction works,

The likelihood of the hazard occurring,

- The degree of harm that might result from the hazard occurring,
- Habitat,
- Tree species,
- Age, condition and location of the tree,
- Timing of works

Holcim ensures that it has the most recent version of AS 4373 through its subscription for Australian Standard updates with SAI Global. Where changes to the Standard are noted, information will be provided to the site maintenance crew and contractors through tool-box meetings and email communication. This includes all changes relevant to AS 4373 where standards would result in:

- A safety risk to the workers performing vegetation clearance,
- A breach in the safe approach distances,
- Potential safety risk to the public,
- Minimal mitigation of fire risk, or
- Unacceptable damage to the amenity and structural integrity of a tree.

Where AS 4373 cannot be met in its entirety, maintenance staff will refer these cases to the responsible persons (see Section 6). Some cases may require the implementation of alternative methods to assist in complying with AS4373. Both short- and long-term solutions are to be investigated when an alternative is required. Currently no exemptions are in place.

11. Monitoring and Auditing

11.1 Measures to assess performance of the ELC Plan

11.1.1 Monitor the implementation of the ELC plan

As per Holcim's 3.11 SHE Guideline – Electrical Safety, no access or works to HV assets can be completed until a Hazardous Work Permit (HWP) has been completed along with a risk assessment and access permit.

As the PTW system requires formal supervision and inspection, monitoring of works as they progress and at completion will be completed.

Further specific actions identified in this ELC complete with close out dates are uploaded into the site Computerised Maintenance Management System (CMMS).

Any item entered into the CMMS enables Holcim to plan and track close out of all identified issues. Further it should be noted that the inspection process of assets is managed via the CMMS in that a schedule for inspections is developed and the system automatically generates work orders when due for completion.

Any hazard identified is entered into iCare is risk assessed complete with close out date and owner. Reports from iCare on open and closed hazards are developed for review by site, local and senior management.

11.1.2 Audit the implementation of the ELC plan

All elements of regulatory compliance are audited by Oaklands Junction internal auditors and regulators. These regulators have adopted a process of regular audits.

Site inspections specifically related to this ELC Plan will be conducted both prior to and during the declared fire season.

As noted previously the implementation of the ELC Plan is audited by Holcim via the SHE Guideline 6.01: Permits, Licences and Approvals, meaning a;

1. A hard copy of the plan will be added to the site's permit compliance folder and an electronic copy will be added to the approvals database.
2. Recurring action items within the plan will be scheduled and added to the site's obligation register. The obligation register is a Google Drive scheduling tool that allows the Quarry Manager to plan for upcoming actions and for Management to follow up any outstanding or overdue actions if they are not signed off as complete by the Quarry Manager by the due date.
3. Contents of the obligation register flows into the Permit Compliance Assessment requirements. This system requires all sites to carry out a full self-audit of their approvals on a 2 yearly basis.
4. Contents of the obligation register also flows into the Holcim Environmental Audit Plan that requires all operational sites to be audited by a 2nd or 3rd party auditor against both the relevant SHEMS and Approval requirements on a 5 yearly cycle.

11.1.3 Identify any deficiencies in the plan or the plans effectiveness

All fire policies and procedures are reviewed annually prior to the commencement of the Annual Fire Season declared for the Quarry.

In addition business processes ensure the update of policies and procedures based on input from any incident investigations, internal audits, external audits, regulator reviews, etc., by logging and monitoring of action items using the Holcim incident management data system (iCare).

The regulatory audits relating to fire preparedness conducted by regulators can also identify deficiencies in the plans or systems in use on site. Recommendations from the regulators are enforceable and have to be complied with.

11.1.4 Change the plan and the plans implementation to rectify any deficiencies identified

As noted in point 11.1.3, the business has a process to capture and implement improvements for policies and procedures based on findings, recommendations and / or employee suggestions.

11.1.5 Monitor the effectiveness of inspections carried out under the plan

Contractors employed to perform inspections are annually checked and audited.

Holcim procedures require a Responsible Officer to check the contractor on site and confirm that all health and safety requirements are being met, that the contractors' personnel are qualified and licensed for the work they are performing, and documented work procedures are being followed to the required standard.

To assist, Holcim utilises an online system (Damstra) to record, track and audit currency of contractor qualifications. Contractors upon arrival to site are required to sign into a Damstra terminal and be inducted to the site prior to commencement, at which point the currency of all required training, licensing, qualification etc. is checked. Note: Should any Contractor identified at sign in as not current, will not be allowed to work on site until any outstanding matters are resolved.

Post completion of any HV asset inspection, a report is generated and reviewed with either the site quarry manager or maintenance manager to ensure a thorough inspection of all assets was completed and that a full understanding of the outcomes and actions is understood.

11.1.6 Audit the effectiveness of inspections carried out under the plan

All elements of regulatory compliance are audited by Oaklands Junction internal auditors and various regulators. This would include both the processes used and documentation created under point 11.1.5.

All faults identified by the inspectors would be planned for rectification by Oaklands Junction employees and as a result physically inspected by Oaklands Junction employees. This allows HOLCIM Oaklands Junction Quarry to audit the findings of the contracted inspectors.

12. Training and Qualifications

HOLCIM Oaklands Junction Quarry does not directly employ linesmen. When the line inspections are due each year, an order is placed on an external service provider, for the inspection of the plant and equipment due that year.

As part of Holcim's 3.11 SHE Guideline – Electrical Safety;

All electrical work performed on site, shall be performed by appropriately authorised persons - where authorisations are provided site/business representatives based on qualifications/competencies and experience. Where work is to be performed by an apprentice, this work shall be suitably supervised by a fully qualified person.

Competency or Licence Code		
Authorisation	**Pre-requisites**	**Theory and Assessment Progression**
Non-Electrical Worker working in "Production type areas"	Nil	Holcim Electrical Awareness Training **Refer:** Attachment 3.11B - Electrical Awareness Training
Authorised Electrical Worker	Electrical Licence (or equivalent) Current LV Rescue & CPR Area Familiarisations	
Safety Observer (Electrical) / Electrical Support Worker	Current LV Rescue & CPR Area Familiarisations	
Switch Room Entry	Area Familiarisations	Holcim Electrical Awareness Training **Refer:** Attachment 3.11B - Electrical Awareness Training
High Voltage Switching		See below table
HV Switching Assistant	Authorised Electrical Worker 2 yearly in-house refresher 5 yearly full HV training	Successful completion of HV Switching Course – Nationally Accredited Area Familiarisations
HV Switching Operator	HV Switching Assistant 2 yearly in-house refresher 5 yearly full HV training	Successful completion of HV Switching Course – Nationally Accredited Area Familiarisations Justification of experience and competency
HV Switching Recipient	Authorised Electrical Worker	Successful completion of HV Switching Course – Nationally Accredited Area Familiarisations
HV Switching Coordinator	HV Switching Operator 2 yearly in-house refresher 5 yearly full HV training	Successful completion of HV Switching Course – Nationally Accredited Area Familiarisations Justification of experience and competency

The following provides a summary of the minimum qualifications for Holcim workers and VMCs employed to undertake works as part of this plan. Only a qualified person as defined by the ELECTRICITY SAFETY (GENERAL) REGULATIONS 2019 - REG 616 can carry out vegetation management work in the vicinity of a protected aerial line.

Role	Qualifications (minimum)	Monitored By
Arborist	As a minimum, National Certificate III in Arboriculture including the "Perform a ground-based tree defect evaluation" unit of competency, or an equivalent qualification; and at least 3 years of field experience in assessing trees	Damstra in line with; 1.05 SHE Guideline – Contractor Safety Management
Vegetation Inspector	Certificate 2 - ESI in Powerline Vegetation Control UETTDRVC24A - Assess vegetation and recommend control measures in an ESI environment or equivalent if not included in the above.	Damstra in line with; 1.05 SHE Guideline – Contractor Safety Management
Tree Cutter / Pruner	Certificate 2 - ESI in Powerline Vegetation Control	Damstra in line with; 1.05 SHE Guideline – Contractor Safety Management
Ground Worker	Certificate 2 - ESI in Powerline Vegetation Control	Damstra in line with; 1.05 SHE Guideline – Contractor Safety Management

Refer to Appendix 5 for Training Details

To confirm operators / inspectors have the appropriate up to date licensing and training, Holcim uses "Damstra".

Specifically to vegetation management work in the vicinity of a protected aerial line the Regulations require qualified persons to complete annual refresher training to maintain currency.

Damstra provides real-time, web-based workforce management solutions (TWMS) to ensure a safe and compliant workforce. Damstra terminals are installed at all Holcim sites across Australia and New Zealand. All visitors to the site (including visiting Holcim employees) and contractors must sign in/out at the Damstra terminals and must only perform the tasks that they are licensed or qualified to complete. This will be monitored by the Holcim person responsible.

Contracting companies are required to register with Damstra or supply / complete the following once on site:

- Applicable insurances
- Identify employees that will be attending a Holcim site
- Qualifications in line with their job role for verification (qualifications include trade certificates and licences)
- Holcim SHE inductions and training prior to attending site

12.1 Accreditation of other persons who will carry out works under this plan

All Contractor or employee qualifications are checked via the Damstra system and by the person responsible for the contract works under this plan, as part of the Contract Management Process and Holcim SHE Management process.

The Responsible Officer on site for the contractor controls access to the site, monitors progress and checks on site activities

13. Notification, Consultation and Dispute Resolution

13.1 Notification and Consultation Procedures

At the time of this plan Holcim has no records of trees on private or public land (other than Holcim owned land) that may require consultation.

If, during inspections, vegetation works are identified which may impact other parties the VMC will notify Holcim. If appropriate/required, the VMC may then provide written notification to all the affected parties (i.e. Local Government, residents) within a minimum of 14 days and a maximum 60 days before the intended cutting or removal is to occur.

In the case of urgent or emergency works Holcim will ensure that notice is given to the affected persons as soon as practicable after the work has been completed (as required). Holcim keeps records of urgent pruning works within the CMMS and captures information such as the location, timing of works (cut/inspection), and the reasons for the cut/removal was required (as specified by an arborist).

If required, notification of the VMC program of works will be undertaken in accordance with the Electricity Safety (Electric Line Clearance) Regulations 2020.

13.2 Dispute Resolution Procedures

Holcim has established and documented policies and procedures for handling complaints. Contact can be made in writing, by email to peter.maaten@holcim.com or by telephone on 0402 227 105. All complaints and disputes are recorded in iCare.

Where disputes relevant to this plan cannot be resolved, the matter will be directed to Energy Safe Victoria or the Energy and Water Ombudsman of Victoria. Holcim will comply with the subsequent outcome.

The Quarry is responsible for managing disputes relating to this plan.

14. Accessibility of Document

- The current approved version of this document is kept on the site
- A copy of the version approved by ESV is placed on site at the Oaklands Junction's Quarry.
- Holcim will publish a copy of its most current, approved ELC Plan on its website at the following website address: https://www.holcim.com.au/oaklands-junction-quarry

15. Exemptions and Exceptions

At the time of this plan Holcim has not requested any exemptions or exceptions.

16. Appendix 1: References

Holcim SHE Guidelines

- 1.05 SHE Guideline – Contractor Safety Management
- 1.07 SHE Guideline – Emergency Response, First Aid & Injury Management
- 2.01 SHE Guideline - Risk Management Process
- 3.11 SHE Guideline - Electrical Safety
- 5.01 SHE Guideline – Incident Reporting & Investigation
- 6.01 SHE Guideline – Permits, Licences & Approvals

17. Appendix 2: Site Overhead Line Plan & Span Details

Under this plan Holcim is responsible for maintaining the clearance between vegetation and overhead powerlines on its Oaklands Junction quarry site.

TABLE SHOWING DEPTHS AS AT 04/08/2006

Ref.	Depth
A172	0.5
A174	0.8
A175	0.9
A176	0.8

TABLE SHOWING DEPTHS AS AT 06/01/2015

Ref.	Depth
A240	1.2
A241	1.3
A242	1.2
A243	1.2
A244	0.9
A245	1.5
A246	1.5
A247	1.4
A248	1.0
A249	1.1
A250	1.1
A251	1.0
A252	0.8

TABLE SHOWING DEPTHS AS AT 25/07/2006

Ref.	Depth
155	1
156	1
157	0.9
186	0.4
187	0.5
188	0.7
189	0.6
190	0.5
191	1
192	0.5
193	0.5
194	0.5
195	0.9
196	0.8
197	1.3
198	1
199	1.4
200	1.1
201	0.6
202	0.7
203	1.1
204	0.4
205	0.4
210	1.2
211	1.3
212	1.2
213	1
216	0.5
217	0.5
218	0.3
223	1.3
224	1.4
225	1.2
226	1.4
227	1.5
228	1.4
230	1.1
232	1.1
233	1
234	1
235	1.1
236	1.1
237	0.85
246	1.1
501	0.3
502	0.5
503	0.5
504	0.8
506	0.8
510	0.7
511	1.0
514	0.7
516	1.1
517	1.3
519	1.0
520	0.7
521	0.7
524	0.8
525	1.0
526	1.3
527	0.9
528	0.9
529	0.7
530	0.4
531	0.5
532	0.5
533	0.5
535	0.4
536	0.6
537	0.6
538	0.8
539	1.0
540	0.5
541	0.5
542	0.5
543	0.5
544	0.5
548	0.5
A2	1.5
A3	1.6
A4	2.0
A5	2.0
A6	2.0
A7	2.0
A8	3.0
A9	3.0
A10	2.7
A11	2.3
A12	1.5
A13	1.5
A14	1.5
A19	1.3
A24	1.3
A26	1.0
A27	1.0
A28	0.8
A32	1.0
A33	1.2
A34	1.3
A35	1.4
A36	1.2
A37	1.4
A39	1.4
A40	1.4
A41	1.4
A42	1.3
A43	1.2
A44	1.4
A45	1.4
A46	1.2
A47	1.2
A49	0.8
A50	0.5
A51	0.9
A52	0.4
A54	1.0
A55	1.0
A56	0.9
A57	0.5
A58	0.7
A59	0.7
A60	0.9
A61	1.0
A65	1.1
A68	0.4
A70	0.7
A72	0.5
A73	0.5
A74	0.7
A76	0.7
A77	0.8
A78	0.4
A79	0.6
A80	0.6
A81	0.7
A82	0.9
A83	0.9
A86	1.0
A89	1.0
A164	0.6
A167	1.0
A168	1.0
A200	1.0
A203	0.2
A204	0.2
A207	0.2
A208	0.4
A209	0.8
A210	1.0
A211	0.6
A212	0.6
A213	0.3
A215	0.2
A217	0.6
A219	0.7
A220	0.9
A222	0.5

NOTATIONS

LEVELS TO THE AUSTRALIAN HEIGHT DATUM VIDE PM 349

UNDERGROUND ELECTRICITY & COMMUNICATIONS CABLES MEASURED ON 25/07/2006, 04/08/2006, 04/11/2004 & 01/02/2005 WERE LOCATED BY GIPPSLOCATE & UNDERGROUND LOCATING SERVICES.
UNDERGROUND ELECTRICITY & COMMUNICATIONS CABLES MEASURED ON 08/07/2009 WERE SHOWN ON-SITE BY STUART TATE OF HOLCIM.
UNDERGROUND ELECTRICITY CABLES MEASURED ON 28/02/2012 WERE SHOWN ON-SITE BY ROB WOOD OF HOLCIM.

UNDERGROUND ELECTRICITY & COMMUNICATIONS CABLES MEASURED ON 20/05/2014 WERE SHOWN ON-SITE BYJOHN PICKERING OF HI-TECH ELECTRICAL SERVICES.

Services shown hereon have been located using information supplied by GIPPSLOCATE & UNDERGROUND LOCATING SERVICES. Landair Surveys can accept no responsibility for the location or completeness of data supplied by GIPPSLOCATE & UNDERGROUND LOCATING SERVICES. Prior to any demolition, excavation or construction on the site, additional investigations should be made for possible location of further underground services.

LEGEND

- OVERHEAD ELECTRICITY
- ELEC LINES UNDERGROUND
- POSSIBLE ELEC LINES UNDERGROUND
- PROPOSED UNDERGROUND HV LINE
- JUNCTION PIT
- GRATED PIT
- SIDE ENTRY PIT
- PROPOSED UNDERGROUND LV LINE

OAKLANDS ROAD
QUARRY ACCESS ROAD
DBX-A
CONTINUES SOUTH TO POWER POLE
OTHER CABLES LIKELY TO BE IN AREA
TO OAKLANDS ROAD
OLD T1
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P10A P10B P10C P11 P12 P13 P14 P15 P16 P17 P18 P19 P20 P21 P22 P23 P24
13 m 17 m 93 m 100 m 100 m 100 m 80 m 75 m 100 m 70 m 98 m 100 m 71 m 63 m 68 m 89 m 71 m 75 m 91 m 57 m 42 m 45 m
T1 T2 T2B T2A T3 T4 T5
NOTE 1 NOTE 2 NOTE 3
ISOLATION TRANSFORMER T1
LV HV HV
FENCE
OFFICE
VIDE TRENCH
BLENDING PLANT
WATER AND ELEC IN SAME TRENCH
WEIGHBRIDGE
SWITCHBOARD
POWER BOX
TRANSPORT OFFICE
TRUCK MAINTENANCE SHEDS
WASH SHED
PUMP SHED
SWITCHBOARD
MINIMUM DEPTH OF TRENCH = 0.6m
SANDPLANT SWITCHBOARD
TERTIARY CRUSHER
TERTIARY CONTROL ROOM
WORKSHOP
SWITCH ROOM
PRIMARY CRUSHER
SECONDARY
FINAL SCREEN
WATERTANK
TRUCK WASH
WHEELWASH CONTAINER
DIESEL BOWSER
made ground

NOTES
1. HV SWITCHBOARD RATED UP TO 36 kV WITH METERING/PROTECTION/ISOLATION
2. 22 kV / 22 kV 4000 kVA ISOLATION TRANSFORMER RATED UP TO 33 kV
3. 22 kV HV SWITCHBOARD FOR SITE NETWORK PROTECTION & NEW T1A INDOOR DRY TYPE TRANSFORMER 22 kv / 400V

SCALE
0 15 30 45 60 75m
1:1500 (A1)
LENGTHS ARE IN METRES

REV	DESCRIPTION	DRN	CHK	APP	DATE
C	MINOR CHANGES	MV	AJ		01/04/2019
B	MINOR CHANGES	MV	AJ		28/03/2019
A	PRELIMINARY ISSUE	CG	AJ		04/12/2018

X:\ARA 1\Projects\ACAD\BLabels\ara_logo_colour6.jpg

Factory 10, 23 Susan St. Eltham , Vic. 3095.
Ph : (03) 9431 3229 - Fax: (03) 9439 2122
www.araelec.com.au

DESIGN: A. JEFFREY
DRAWN: C. GUNATHILAKE
STATUS: PRELIMINARY

HOLCIM (AUSTRALIA) OAKLANDS JUNCTION QUARRY REFCL OPTION 3: ISO TXF \ 22 kV OVERHEAD LINE RETICULATION DIAGRAM

A1
DRAWING NUMBER: 8614-DWG-251
REV: C

Date: 29/07/2022 10:38:39 AM
C:\Users\mkonstan\Downloads\8614-DWG-251RevC.dwg

Overhead Span from	Overhead Span to	Length of Span (m)	Clearance at pole (mm)	Clearance centre 2/3 of span (mm)
Pole 1	Pole 2	18	1500	1500
Pole 2	Pole 3	12	1500	1500
Pole 3	Pole 4	17	1500	1500
Pole 4	Pole 5	93	1500	1579
Pole 5	Pole 6	100	1500	1591
Pole 6	Pole 7	100	1500	1591
Pole 7	Pole 8	100	1500	1591
Pole 8	Pole 9	80	1500	1558
Pole 9	Pole 10	75	1500	1550
Pole 10	Pole 10A	100	1500	1591
Pole 10A	Pole 10B	100	1500	1591
Pole 10B	Pole 10C	70	1500	1541
Pole 10	Pole 11	70	1500	1541
Pole 11	Pole 12	100	1500	1591
Pole 12	Pole 13	98	1500	1587
Pole 13	Pole 14	71	1500	1543
Pole 14	Pole 15	71	1500	1543
Pole 15	Pole 16	63	1500	1530
Pole 16	Pole 17	68	1500	1538
Pole 17	Pole 18	89	1500	1573
Pole 18	Pole 19	71	1500	1543
Pole 19	Pole 20	75	1500	1550
Pole 20	Pole 21	61	1500	1526
Pole 21	Pole 22	57	1500	1520
Pole 22	Pole 23	42	1500	1500
Pole 23	Pole 24	15	1500	1500

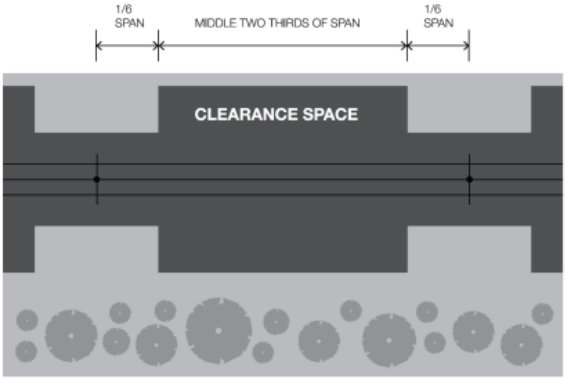
Holcim (Aust) Pty Ltd 22kV Overhead Span Register

18. Appendix 3: Minimum Clearance Space Information

Clearance Space

FIGURE 1—PLAN VIEW OF ELECTRIC LINES IN ALL AREAS

Clauses 24, 25, 26, 27, 28 and 29, Graphs 1, 2, 3, 4, 5 and 6

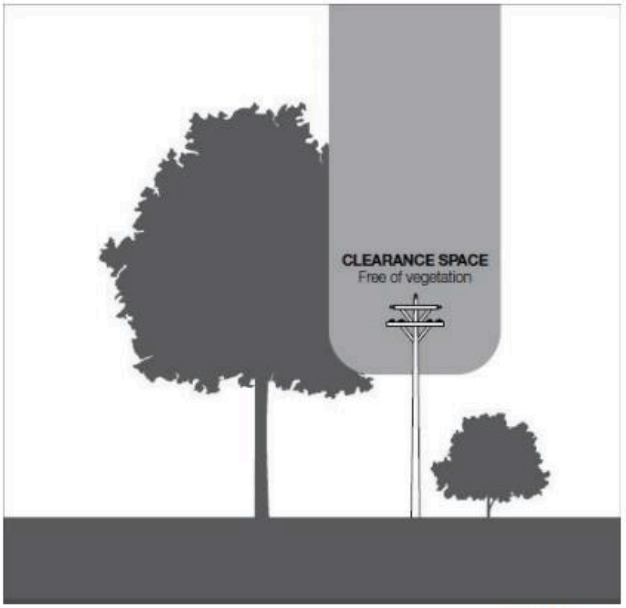


Reference: Electricity Safety (Electric Line Clearance) Regulations 2020

Uninsulated electric lines in HBRA (Clearance Space)

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

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



NOT TO SCALE

Reference: Electricity Safety (Electric Line Clearance) Regulations 2020

28 Uninsulated low voltage and high voltage electric lines (other than a 66 000 volt electric line) in a hazardous bushfire risk area

(1) This clause applies to an electric line that—

(a) is an uninsulated cable; and
(b) does not have a nominal voltage of 66 000 volts; and
(c) is located in a hazardous bushfire risk area.

(2) The minimum clearance space for a span of the electric line is—
(a) the space extending away from the line in all directions perpendicular to its axis for the applicable distance and an additional distance that allows for conductor sag and sway; and
(b) the space above the space described in paragraph (a).

(3) The ***applicable distance*** for the first and last sixths of the span is 1500 millimetres.

(4) The ***applicable distance*** for the middle 2 thirds of the span is—
(a) if the span distance is less than or equal to 45 metres—1500 millimetres; or
(b) if the span distance is greater than 45 metres and less than or equal to 500 metres—the distance calculated in accordance with the following expression—

$$1500 + \left((SD - 45) \times (500 \div 303)\right)$$

where—
SD is the span distance; or
(c) if the span distance is greater than 500 metres—2250 millimetres.

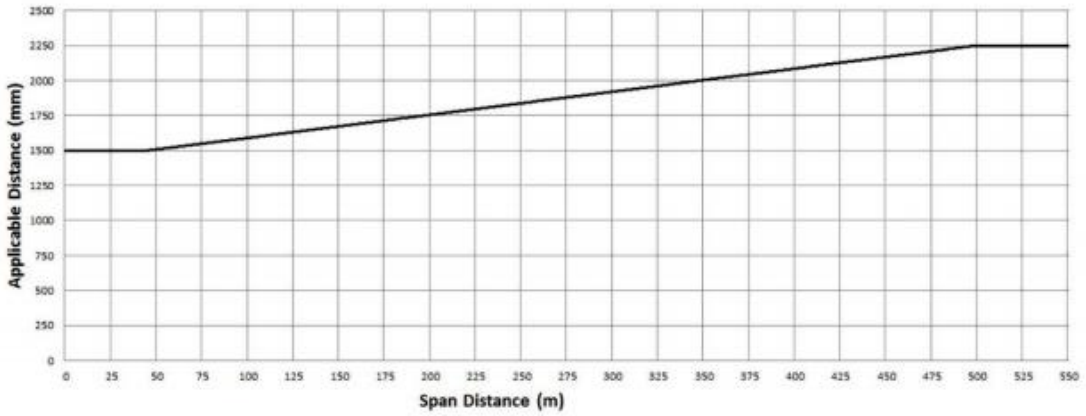
Notes
1 The applicable distance for the middle 2 thirds of the span is represented as a graph in Graph 5 of Schedule 2.
2 The minimum clearance space for an electric line span to which this clause applies is partially illustrated in Figures 1 and 5 of Schedule 2.

Reference: Electricity Safety (Electric Line Clearance) Regulations 2020

Clearance Space Graph

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

Clauses 3 and 28



Reference: Electricity Safety (Electric Line Clearance) Regulations 2020

- **Appendix 4: Oaklands Junction Quarry – Locality Plan**

Appendix 5: Training Details / Matrix

Electrical Line Clearance - Roles Training Requirements	SAFETY OBSERVER	ASSESSOR/ INSPECTOR	working from an ELEVATED WORK PLATFORM	required to CLIMBING / WORK IN THE TREE	GROUND WORKER
Certificate II in ESI – Powerline Vegetation Control should include	Required	Required	Required	Required	Required
UETDREL002 Comply with environmental requirements	Required	Required	Required	Required	Required
UETDREL006 Work safely in the vicinity of live electrical apparatus as a non-electrical worker	Required	Required	Required	Required	Required
UETDRVC001 Apply work health and safety requirements for powerline vegetation control	Required	Required	Required	Required	Required
UETDRVC009 Monitor vegetation control work in the vicinity of live electrical apparatus	Required	Required	Required	Required	Required
UETDRVC007 Control vegetation using pruning techniques	Required	Required	Required	Required	Required
AHCMOM213 Operate and maintain chainsaws	Required	Required	Required	Required	Required
UETDRVC004 Control vegetation in the vicinity of live electrical apparatus from an elevated work platform	Required		Required		
UETDRVC005 Control vegetation in the vicinity of live electrical apparatus from ground level	Required		Required		Required

TLILIC0005 – Licence to operate a boom-type elevating work platform (also equivalent is High risk work licence - WP)	Required		Required		
UETDRVC006 Control vegetation in the vicinity of live electrical apparatus from within the tree				Required	
UETDRVC010 Perform rescue from within a tree in the vicinity of live electrical apparatus				Required	
UETDRVC002 Assess vegetation in an electricity supply industry environment		Required			
AHCPCM204 Recognise plants		Required			
FWPHAR2208 Operate a mobile chipper/mulcher					Required
HLTAID009 - Provide Cardiopulmonary Resuscitation	Required	Required	Required	Required	Required

Note: The Regulations require qualified persons to complete annual refresher training as follows to maintain currency.

	Safety Observer	EWP Operator	Climber	Ground worker
Provide CPR	Required	Required	Required	Required
Perform EWP Escape	Required	Required		
Perform EWP Rescue	Required	Required		
Provide First Aid in an ESI Environment	Required	Required	Required	Required
Safe Approach Distances	Required	Required	Required	Required
Undertake release and rescue from a tree near live electrical apparatus			Required