



Victoria Government Gazette

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SPECIAL

Code of Practice for Electric Line Clearance [Vegetation] 1999



Office of the
Chief Electrical Inspector

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PART : 1 GENERAL**1 Introduction**

This Code is the prescribed Code of Practice for the purposes of Part 8 of the **Electricity Safety Act 1998**.

1.1 Objectives Of Code

The objectives of this Code are to -

- (a) ensure public safety; and
- (b) establish standards that must be observed when electric lines operate near vegetation; and
- (c) reduce vegetation related interruptions to electricity supply; and
- (d) balance fire and electrical safety, reliability of the electricity system and community costs with conservation values, in the best interests of the people of Victoria; and
- (e) minimise the effect of electric lines on vegetation.

1.2 Prescribed Penalty Provisions

The provisions of this Code that are penalty provisions for the purposes of section 90 of the **Electricity Safety Act 1998** are clauses 3.1.1, 3.1.2, 3.2.1, 3.2.2, 3.2.7, 3.2.8, 3.3, 4.1.1 and 4.1.2.

2 Definitions**2.1 Definitions**

In this Code -

- | | |
|---------------------------------------|---|
| ‘aerial bundled cable’ | means an insulated cable certified as being manufactured to Australian Standard AS 3560 or AS 3599 Part 1 or AS 3599 Part 2; |
| ‘affected person’ | means, in relation to the pruning or clearing of vegetation – <ul style="list-style-type: none"> (a) an occupier of land; or (b) a person responsible for the management of public land – whose use of the land is likely to be affected by the proposed pruning or clearing; |
| ‘away’ | in relation to a pole holding an electric line, means that section of the electric line that is not near the pole; |
| ‘construct’ | includes to reconstruct or make structural changes; |
| ‘hazardous bushfire risk area’ | means – <ul style="list-style-type: none"> (a) an area that a fire control authority has assigned a fire hazard rating of “high” or “very high” under section 80 of the Act; or (b) an area other than an urban area specified under section 79 of the Act unless a fire control authority has assigned to that area a fire hazard rating other than “high” or “very high” under section 80 of the Act; |
| ‘important vegetation’ | means - <ul style="list-style-type: none"> (a) botanically, historically or culturally important vegetation; or (b) vegetation of outstanding aesthetic or ecological significance or (c) the habitat of rare or endangered species; |
| ‘low bushfire risk area’ | means – <ul style="list-style-type: none"> (a) an area that a fire control authority has assigned a fire hazard rating other than “high” or “very high” under section 80 of the Act; or |

	(b) an urban area specified under section 79 of the Act unless a fire control authority has assigned to that area a fire hazard rating of “high” or “very high” under section 80 of the Act;
‘low voltage’	means a voltage not exceeding 1000 volts alternating current or 1500 volts direct current;
‘near’	in relation to a pole holding an electric line, means within a distance to the pole of 1/6th of the span of the electric line;
‘nominal voltage’	means the voltage at which the electric line is designed to operate;
‘powerline’	means an electric line with a nominal voltage of 66,000 volts alternating current or less;
‘service line’	means the terminating span of a low voltage electric line used to take electricity from a distribution company's supply network to a point of supply;
‘the Act’	means the Electricity Safety Act 1998 ;
‘transmission company’	means a company that owns or operates a transmission line;
‘transmission line’	means an electric line with a nominal voltage of more than 66,000 volts alternating current, excluding the tower;
‘vegetation’	means the whole or any part of a tree.

2.2 Words And Expressions

In this Code, words and expressions, other than those defined in clause 2.1, have the same meaning as in the Act.

2.3 Diagrams

Diagrams in the Figures in Parts 2 and 3 are not intended to limit the operation of this Code.

3 Duties Of The Responsible Person

3.1 Duties Of All Responsible Persons

3.1.1

A responsible person must -

- (a) create a space that is clear of vegetation around an electric line; and
- (b) ensure that the space is kept clear of vegetation.

3.1.2

The space between the electric line and the vegetation must be at least the size or dimension of the clearance spaces set out in Parts 2 and 3.

3.2 Duties Of Particular Responsible Persons

3.2.1

A responsible person referred to in section 84(4), (5), (6) or (7) of the Act must –

- (a) give 14 days notice in the form set out in the Schedule –
 - (i) of pruning to the occupier of the land on which the tree is to be pruned and other affected persons; and
 - (ii) of clearing of a tree to the owner and occupier of the land on which the tree is to be cleared and to other affected persons; and
- (b) if the responsible person, after taking reasonable steps, is unable to give notice under paragraph (a)(i) to the occupier of the land on which the tree is to be pruned, give 21 days notice of pruning in a newspaper circulating generally in the locality of the land.

3.2.2

A responsible person referred to in section 84(4), (5), (6) or (7) of the Act must ensure that the following things are carried out before commencing the pruning or clearing of a tree required for the purposes of this Code –

- (a) consult with affected persons and take reasonable steps to negotiate –
 - (i) agreement with the affected persons about the pruning to be undertaken if the pruning will change from the established practice for that location; or
 - (ii) a modification of the pruning to be undertaken or an alternative method for maintaining the clearance space if an affected person objects to the pruning proposed in a notice under sub-clause 3.2.1;
- (b) consult with the owner of the land and affected persons concerning proposed clearing of the tree and take reasonable steps to negotiate –
 - (i) the clearing of the tree that is acceptable to the owner and those persons; or
 - (ii) a method for maintaining the clearance space other than clearing the tree that is acceptable to the owner and those persons;
- (c) consult with affected persons concerning arrangements for –
 - (i) normal access by the responsible person to clearance spaces; and
 - (ii) the use of chemicals;
- (d) consult with the occupier of the land on which the tree is to be pruned and take reasonable steps to negotiate methods of disposal of debris resulting from the pruning that are acceptable to the occupier;
- (e) consult with the owner of the land on which the tree is to be cleared and take reasonable steps to negotiate methods of disposal of vegetation resulting from the clearing that are acceptable to the owner.

3.2.3

A responsible person referred to in section 84(4), (5), (6) or (7) of the Act must have a written statement setting out the methods that the person will use to carry out the consultation and negotiation required under clause 3.2.2 and the time limits within which the consultation and negotiation will be carried out.

3.2.4

In locations of important vegetation, a responsible person referred to in section 84(4), (5), (6) or (7) of the Act must –

- (a) before commencing pruning or clearing of a tree required for the purposes of this Code, obtain expert advice on the regrowth of vegetation; or
- (b) ensure that methods of construction, acceptable to the Office, for electric lines are used.

3.2.5

Clauses 3.2.1, 3.2.2 and 3.2.4 do not apply to a distribution company or transmission company that is undertaking emergency pruning or clearing after a serious electrical incident.

3.2.6

The provisions relating to pruning in clauses 3.2.1, 3.2.2 and 3.2.4 do not apply to a distribution company or transmission company that is undertaking urgent pruning during the month of November in any year or during a fire danger period declared under the Country Fire Authority Act 1958.

3.2.7

A distribution company or transmission company that carries out pruning in accordance with clause 3.2.6 must ensure that the space cleared of vegetation around the electric line does not exceed the clearance space by more than 500 millimetres.

3.2.8

A distribution company or transmission company that has carried out pruning or clearing in accordance with clause 3.2.5 or 3.2.6 must, as soon as practicable after completing the pruning or clearing, notify –

- (a) the occupier of the land on which a tree was pruned and other affected persons of the pruning; and
- (b) the owner and occupier of the land on which a tree was cleared and other affected persons of the clearing.

3.3 Additional Duties Of Municipal Councils, Roads Corporation And Others

If the responsible person referred to in section 84(4) or (6) of the Act is aware of the concerns of any person about the safety of pruning or clearing a tree near a powerline, the responsible person must consult –

- (a) if a railway or tramway company owns or operates that powerline, the railway or tramway company; and
- (b) in all other cases, the distribution company that is responsible for distributing power to that powerline.

4 Management Procedures to Minimise Danger

4.1

Distribution companies must follow the management procedures set out in clauses 4.1.1 and 4.1.2 to minimise the danger of electric lines causing fire or electrocution.

4.1.1

A distribution company must, at least once a year, advise occupiers of land on which there is a private electric line that the distribution company is responsible for distributing power to about the following matters –

- (a) the duties of the responsible person under this Code;
- (b) the dangers of pruning and clearing trees;
- (c) the precautions that should be taken to safely maintain the electric line.

4.1.2

A distribution company must, on the request of a responsible person to whom the distribution company distributes power, advise the responsible person –

- (a) how to identify places where pruning or clearing of trees will be required; and
- (b) where to obtain advice and information on methods for maintaining clearance between electric lines and vegetation.

PART: 2 Powerline Clearance**5 Clearance Spaces****5.1**

5.1.1

The clearance spaces in all directions from an electric line, for all areas and for all nominal voltages of powerlines constructed with an aerial bundled cable or an insulated service line are those illustrated in Figures 5 and 5.1 and set out in Table 5.1 being -

- (a) the clearance spaces near the pole set out in column 1 of Table 5.1; and
- (b) the clearance spaces away from the pole for the spans set out in columns 2, 3 and 4 of Table 5.1.

5.1.2

For low bushfire risk areas –

- (a) the clearance space for aerial bundled cables near the pole may be reduced if tree trunks and limbs near the aerial bundled cable present no risk of abrasion; and

- (b) the clearance space between an aerial bundled cable and foliage may be reduced to allow foliage that has insufficient strength to abrade the cable in the period between pruning to remain in contact with the aerial bundled cable.

5.2

5.2.1

The clearance spaces for low bushfire risk areas, for powerlines other than those constructed with an aerial bundled cable or an insulated service line for the types and the nominal voltages given are those set out in Table 5.2 and illustrated in Figure 5 and, except for 66kV electric lines, in Figure 5.2 being –

- for 66kV electric lines, no vegetation vertically above the powerline; and
- the clearance spaces in all directions, except vertically above the line for 66kV electric lines, near the pole set out in column 1 of Table 5.2; and
- the clearance spaces in all directions, except vertically above the line for 66kV electric lines, away from the pole for the spans set out in columns 2 and 3 of Table 5.2.

5.2.2

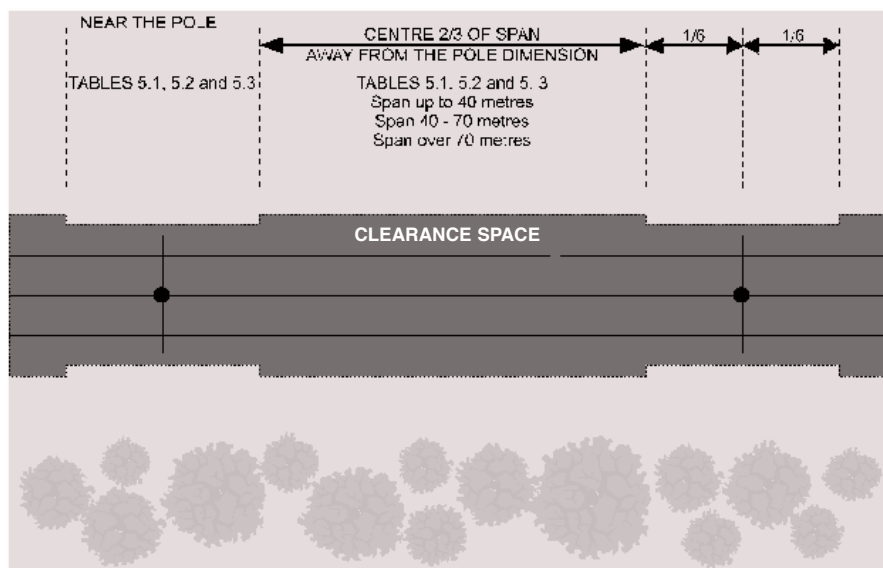
If the Office exempts a responsible person in relation to clearance spaces surrounding an electric line with a nominal voltage of 22,000 volts or less in a low bushfire risk area, the person must comply with the clearance spaces for the types and the nominal voltages given illustrated in Figure 5.2 and set out in Table 5.2A being the clearance spaces in all directions for the spans set out in columns 1, 2, 3 and 4 of that Table.

5.3

The clearance spaces for hazardous bushfire risk areas, for powerlines other than those constructed with an aerial bundled cable or an insulated service line and for the types and the nominal voltages given are those illustrated in Figures 5 and 5.3 and set out in Table 5.3 being –

- no vegetation vertically above the powerline; and
- the clearance spaces in all directions, except vertically above the line, near the pole for the spans set out in column 1 of Table 5.3; and
- the clearance spaces in all directions, except vertically above the line, away from the pole for the spans set out in columns 2, 3 and 4 of Table 5.3; and
- the clearance spaces in all directions, except vertically above the line, for spans over 350 metres set out in column 5 of Table 5.3.

Figure 5: ALL AREAS: PLAN VIEW OF AN OVERHEAD POWERLINE



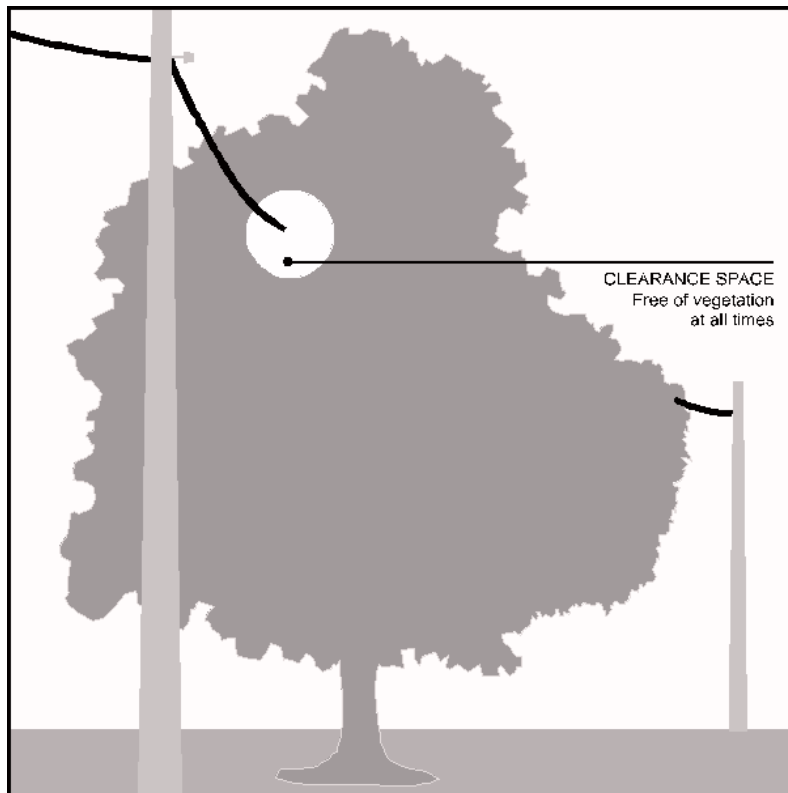
NOT TO SCALE

Table 5.1 CLEARANCE SPACES SURROUNDING A POWERLINE
All Areas
Aerial Bundled Cable Or Insulated Service Line

Type of Powerline	Clearance spaces			
	Near pole	Away from pole		
	1 All spans	2 Spans up to and including 40 metres	3 Spans exceeding 40 up to and including 70 metres	4 Spans exceeding 70 metres
	In all directions			
Aerial bundled cable	300mm	300mm	600mm	900mm
Insulated service line	600mm	600mm	1000mm	1000mm

Note: Table 5.1 is illustrated in Figures 5 and 5.1.

Figure 5.1: ALL AREAS



NOT TO SCALE

Table 5.2 CLEARANCE SPACES SURROUNDING A POWERLINE
Low Bushfire Risk Areas
Other Than Aerial Bundled Cable Or Insulated Service Line

Type of Powerline	Clearance spaces		
	Near pole	Away from pole	
	1 All spans	2 Spans up to and including 40 metres	3 Spans exceeding 40 metres
Nominal voltage	In all directions (except vertically above for 66kV)		
Insulated low voltage	300mm	300mm	600mm
Bare low voltage	1000mm	1000mm	1500mm
Bare 6.6kV, 11kV, 22kV	1500mm	1500mm	2000mm
66kV	2250mm	2250mm	3000mm
For 66kV - The space vertically above the powerline must be kept clear of vegetation at all times			

Note: Table 5.2 is illustrated in Figure 5 and, except for 66kV electric lines, in Figure 5.2.

Table 5.2A CLEARANCE SPACES SURROUNDING A POWERLINE
Low Bushfire Risk Area
Other Than Aerial Bundled Cable Or Insulated Service Line

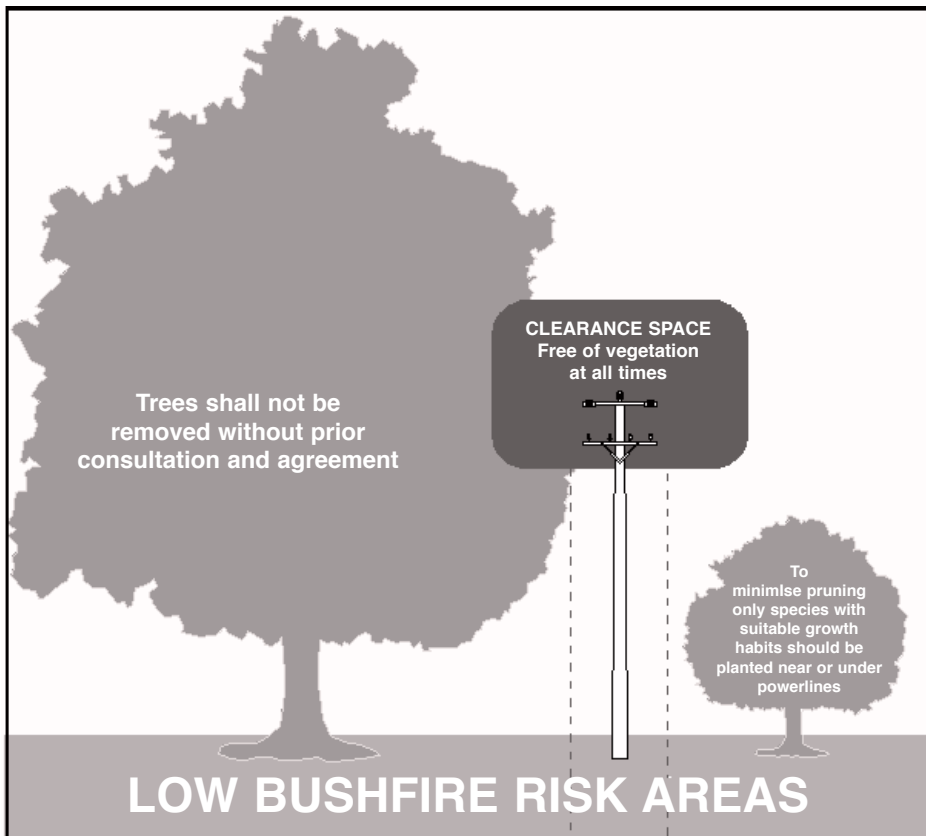
WHERE AN EXEMPTION TO THE REQUIREMENTS OF TABLE 5.2 HAS BEEN GRANTED

Type of Powerline	Clearance spaces			
	1 Spans up to and including 30 metres	2 Spans exceeding 30 up to and including 45 metres	3 Spans exceeding 45 up to and including 70 metres	4 Spans exceeding 70 metres
	In all directions			
Insulated low voltage	300mm	300mm	600mm	600mm
Bare low voltage	1000mm	1000mm	1500mm	1500mm
Bare low voltage & additional safety measures	500mm	600mm	800mm	1500mm

Type of Powerline Nominal voltage	Clearance spaces			
	1 Spans up to and including 30 metres	2 Spans exceeding 30 up to and including 45 metres	3 Spans exceeding 45 up to and including 70 metres	4 Spans exceeding 70 metres
	In all directions			
Bare 6.6kV, 11kV & 22kV	1000mm	1500mm	2000mm	2000mm
Covered 6.6kV, 11kV & 22kV	1000mm	1250mm	1500mm	2000mm

Note: Table 5.2A is illustrated in Figure 5.2.

Figure 5.2: LOW BUSHFIRE RISK AREAS



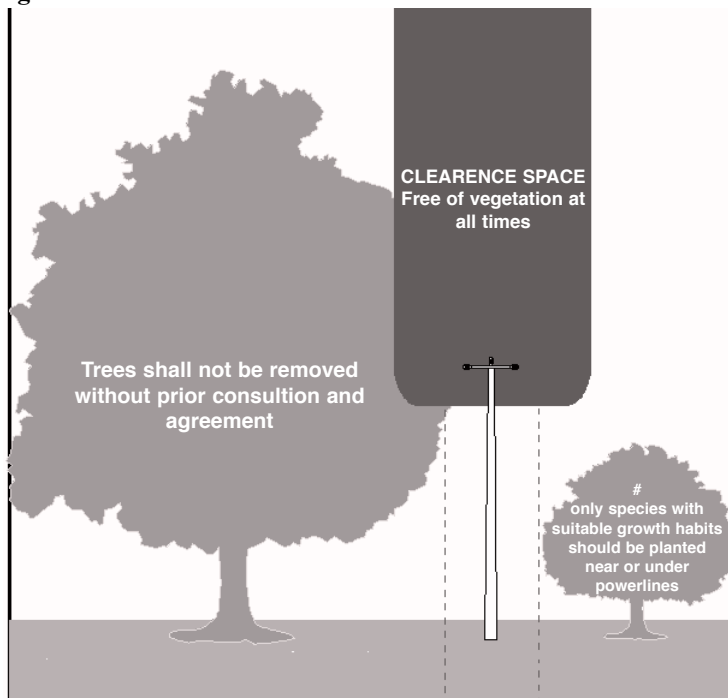
NOT TO SCALE

**Table 5.3 CLEARANCE SPACES SURROUNDING A POWERLINE
Hazardous Bushfire Risk Areas
Other Than Aerial Bundled Cable Or Insulated Service Line**

Type of Powerline Nominal voltage	Clearance spaces				
	Near pole	Away from pole			5 Spans exceeding 350 metres
	1 Spans up to and including 350 metres	2 Spans up to and including 40 metres	3 Spans exceeding 40 up to and including 70 metres	4 Spans exceeding 70 up to and including 350 metres	
In all directions (except vertically above the line)					
Insulated low voltage	600mm	600mm	1000mm	1000mm	2250mm
Bare low voltage	1500mm	1500mm	2000mm	2000mm	2250mm
Bare 6.6kV, 11kV, 22kV	1500mm	1500mm	2000mm	2000mm	2250mm
66kV	2250mm	2250mm	3000mm	3000mm	3000mm
For all voltages - The space vertically above the powerline must be kept clear of vegetation at all times					

Note: Table 5.3 is illustrated in Figures 5 and 5.3.

Figure 5.3: HAZARDOUS BUSHFIRE RISK AREAS



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Unsuitable species may be removed but only with prior appropriate consultation and agreement.

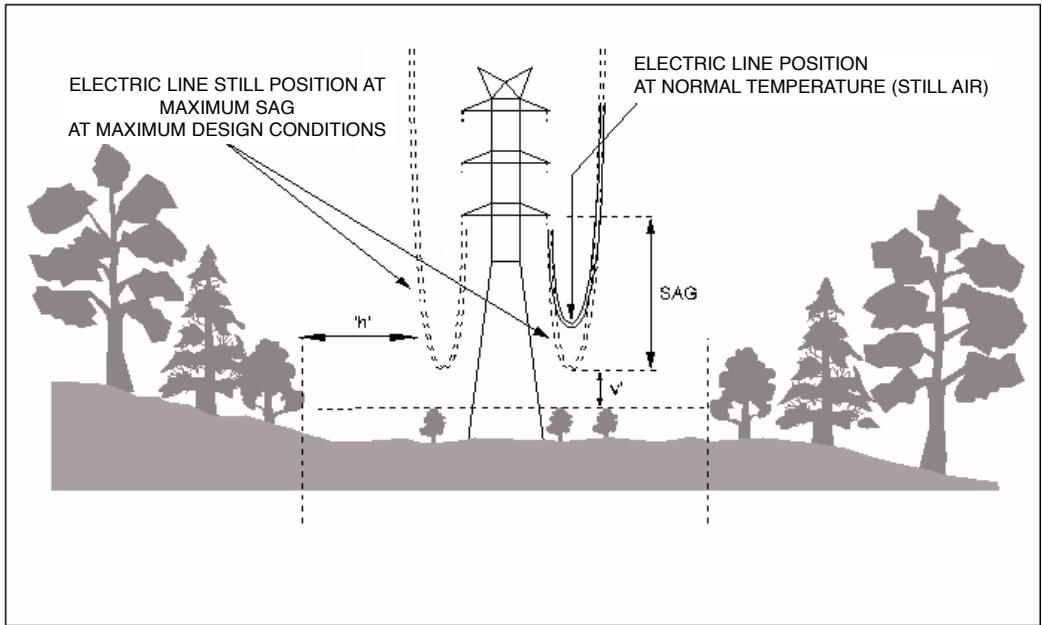
PART: 3 Transmission Line Clearance

6 Clearance Spaces

The clearance space for a transmission line is as follows –

- (a) there must be no vegetation vertically above the transmission line; and
- (b) the horizontal dimension of the clearance space is that marked “h” in Figure 6 and set out for the spans and nominal voltages given in Table 6 as measured from the side of the transmission line that is away from the tower supporting that line when the line is at its still position; and
- (c) the vertical dimension of the clearance space is that marked “v” in Figures 6 and 6A and set out for the spans and nominal voltages given in Table 6 as measured from the ground side of the transmission line vertically below the transmission line at the lowest point that the line may assume because of sag of the line under the highest temperature for which the line was designed.

Figure 6: ALL AREAS: VIEW OF THE TRANSMISSION LINE



NOT TO SCALE

Figure 6A: ALL AREAS: VIEW OF THE TRANSMISSION LINE

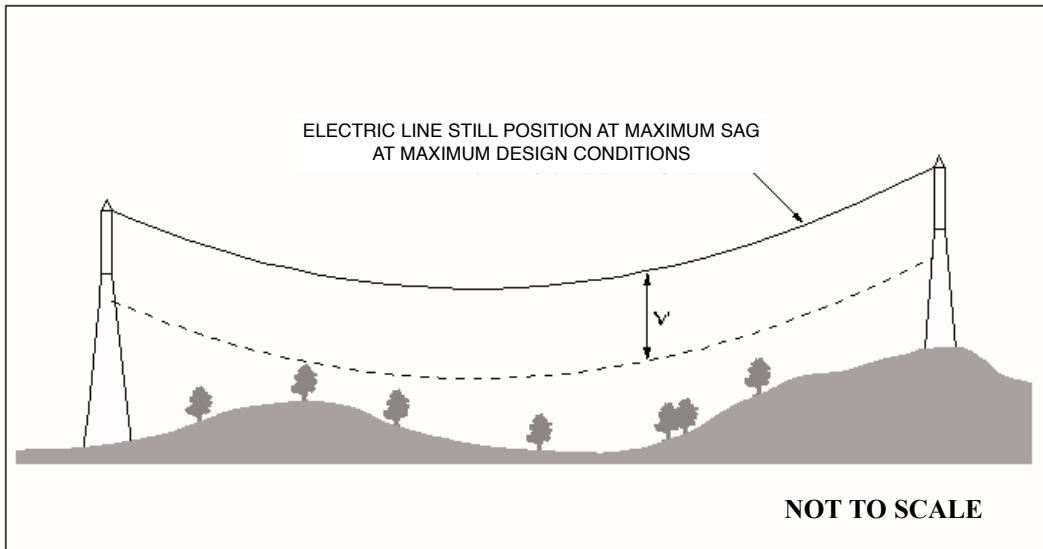


Table 6: CLEARANCE SPACES SURROUNDING A TRANSMISSION LINE

	Clearance spaces after allowance for full sag		Clearance spaces	
	Spans up to and including 400 metres	Spans exceeding 400 metres	Spans up to and including 400 metres	Spans exceeding 400 metres
1 Nominal Voltage	2 Dimension 'v'	3 Dimension 'v'	4 Dimension 'h'	5 Dimension 'h'
220kV	3700mm	4000mm	13000mm	15000mm
275kV	4200mm	4500mm	13000mm	15000mm
330kV	4700mm	5000mm	14000mm	16000mm
500kV	6400mm	6750mm	15000mm	17000mm
For all voltages- The space vertically above the transmission line must be kept clear of vegetation at all times				

Notes:

- (a) Table 6 is illustrated in Figures 6 and 6A.
- (b) Columns 2,3,4 and 5 of the table give the clearance spaces necessary between the transmission line and vegetation at the design limits of sag. We recommend that additional allowance be made for future growth or regrowth in assessing need for pruning or clearing.
- (c) Dimension 'v' - clearance measured vertically from the lowest level of the transmission line when at maximum sag.
- (d) Columns 4 and 5 of the table gives horizontal safety distances between the transmission line and vegetation, which include allowance for sag for all spans. These are working distances assessed from the normally observed position of the transmission line and are applied at any point along the span.

SCHEDULE

Date _____

<p>NOTICE OF PRUNING OR CLEARING Code of Practice for Electric Line Clearance (Vegetation) 1999</p>
--

Dear Sir/Madam

<p>We give you notice that a tree/s*: on/near* your property require pruning/clearing* to meet the necessary clearance space for the electric line.</p>
--

Pruning will result in cutting back parts of the tree/s from the clearance space to allow for minimum clearance distance of _____ millimetres plus an allowance for regrowth over the next _____ years.

If you do not contact us within FOURTEEN DAYS from the date of this notice, we will proceed with the necessary pruning works to ensure clearances are maintained during this regrowth period.

These pruning works are programmed to be carried out by our contractors or by us on ____/____/____ or within 5 days before or after this date.

If we are proposing to clear any tree or the pruning is a change from established practices we will consult and negotiate with you before works start.

Responsible Representative:	
Name	
Company	
Telephone	

Electric Line Name _____

Spur Name _____

Pole Number _____

Ref. Number _____

* Delete as applicable

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