



# Victoria Government Gazette

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## Electricity Safety Act 1998

The Code of Practice for Electric Line Clearance is published by Energy Safe Victoria in accordance with section 89(5) of the **Electricity Safety Act 1998**.

### CODE OF PRACTICE FOR ELECTRIC LINE CLEARANCE

#### PART 1 – PRELIMINARY

##### INTERPRETATION

## 1 Definitions

(1) In this Code –

**aerial bundled cable** means an insulated electric line certified as being manufactured in accordance with any of the following –

- (a) AS/NZS 3560.1 as amended or published from time to time;
- (b) AS/NZS 3560.2 as amended or published from time to time;
- (c) AS/NZS 3599.1 as amended or published from time to time;
- (d) AS/NZS 3599.2 as amended or published from time to time;

**affected person**, in relation to the cutting or removal of a tree on land, means an owner or occupier (including a person who is responsible for the management of public land) of adjacent land where the cutting or removal will affect the use of that adjacent land;

**away**, in relation to a pole holding an electric line, means that section of the electric line that is not near the pole;

**constructed** includes reconstructed or structurally altered;

**hazardous bushfire risk area** means –

- (a) an area that a fire control authority has assigned a fire hazard rating of “high” under section 80 of the Act; or
- (b) an area that –
  - (i) is not an urban area; and
  - (ii) has not been assigned a fire hazard rating of “low” under section 80 of the Act;

**insulated cable** means a low voltage, single or multi-core electric line insulated by a medium other than air;

**low bushfire risk area** means –

- (a) an area that a fire control authority has assigned a fire hazard rating of “low” under section 80 of the Act; or
- (b) an urban area;

**low voltage** means a voltage not exceeding –

- (a) 1000 volts alternating current; or
- (b) 1500 volts direct current;

**near**, in relation to a pole holding an electric line, means within a distance to the pole of one-sixth 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 or less but does not include a transmission line;

**sag**, in relation to a conductor, means the vertical displacement of the conductor below the point at which the conductor is attached to the supporting structure and includes any extra displacement caused by hot weather or high load current;

**SPECIAL**

**suitably qualified arborist** means an arborist who has –

- (a) the qualification of National Certificate Level IV in Horticulture and Arboriculture, including the ‘Assess Trees’ module, or an equivalent qualification; and
- (b) at least three years of field experience in assessing trees;

**sway**, in relation to a conductor, means the horizontal displacement of the conductor caused by wind;

**transmission line** means an electric line –

- (a) with a nominal voltage of more than 66 000 volts; or
  - (b) operating at 66 000 volts that is supported on tower structures; or
  - (c) operating at 66 000 volts that is adjacent to an electric line that has a nominal voltage greater than 66 000 volts.
- (2) In this Code, unless the context otherwise requires, all words and expressions have the same meaning as in the Act.

## **PART 2 – CLEARANCE SPACE AND HAZARD TREE REQUIREMENTS FOR ALL ELECTRIC LINES**

### **2 Clearance space for electric lines**

- (1) A responsible person must create and maintain the required clearance space around a powerline in accordance with this Part and Part 3 of this Code and the Schedule to this Code.
- (2) A responsible person that owns or operates a transmission line must, in accordance with this Part and Part 3 of this Code and the Schedule to this Code –
  - (a) manage trees below the transmission line to mitigate, as far as practicable, the fire risks associated with the fuel load below the transmission line; and
  - (b) manage trees adjacent to the transmission line to avoid, as far as practicable, a tree entering the required clearance space around that line if the tree falls; and
  - (c) create and maintain the required clearance space around the transmission line.
- (3) A responsible person must, as far as practicable, restrict cutting or removal of native trees or trees of cultural or environmental significance to the minimum extent necessary to ensure compliance with the requirements of this Part and Part 3 of this Code and the Schedule to this Code or to make an unsafe situation safe.

### **3 Hazard tree**

If a person identifies a tree as likely to fall onto or otherwise come into contact with an electric line a responsible person may cut or remove the tree provided that –

- (a) the tree has been assessed by a suitably qualified arborist; and
- (b) that assessment confirms the likelihood of contact with an electric line having regard to foreseeable local conditions.

### **4 Habitat trees**

- (1) If a tree is the habitat for fauna that is –
  - (a) listed as threatened in accordance with section 10 of the **Flora and Fauna Guarantee Act 1988**; or
  - (b) listed in the Threatened Invertebrate Fauna List with a conservation status in Victoria of “vulnerable”, “endangered” or “critically endangered”; or

- (c) listed in the Threatened Vertebrate Fauna List with a conservation status in Victoria of “vulnerable”, “endangered” or “critically endangered” –

cutting or removal of that tree must be undertaken outside of the breeding season for that species wherever practicable.

- (2) If it is not practicable to undertake cutting or removal of that tree outside of the breeding season for that species, translocation of the fauna must be undertaken wherever practicable.

## 5 Notification and consultation

- (1) This clause applies to a responsible person who, in order to maintain the required clearance space around an electric line, intends to cut or remove a tree that is –
  - (a) on public land; or
  - (b) within the boundary of a private property which the responsible person neither occupies nor owns; or
  - (c) a tree of cultural or environmental significance.
- (2) Subject to clause 6, a responsible person must give notice of the intended cutting or removal to all affected persons in accordance with this clause.
- (3) If the tree intended to be cut or removed is a tree of cultural or environmental significance, notice under this clause must include details of –
  - (a) the impact of the cutting or removal of the tree; and
  - (b) the actions to be taken to minimise that impact.
- (4) Notice under this clause must be given –
  - (a) at least 14 days and not more than 60 days before the intended cutting or removal is to occur; and
  - (b) in writing or by publication in a newspaper circulating generally in the locality of the land in which the tree is to be cut or removed.
- (5) If the tree intended to be cut or removed is within the boundary of a private property, the responsible person must consult –
  - (a) if the tree is to be cut within the boundary of the property – the occupier of the property; or
  - (b) if the tree is to be removed – the owner of the property.

## 6 Urgent cutting or removal

- (1) This clause does not apply to a responsible person referred to in section 84(2) of the Act.
- (2) A responsible person is not required to comply with clause 5 if that person, in accordance with this clause, undertakes urgent cutting or removal that is required –
  - (a) as a result of encroachment or growth of trees that was not anticipated in the management plan; or
  - (b) as a result of a tree falling or becoming damaged so that it is required to be cut or removed to maintain the required clearance space; or
  - (c) if the arborist’s assessment under clause 3 confirms the imminent likelihood of contact with an electric line having regard to foreseeable local conditions; or
  - (d) during the fire danger period declared under the **Country Fire Authority Act 1958**.
- (3) A responsible person that has undertaken urgent cutting or removal in accordance with this clause must, as soon as practicable after completing the cutting or removal, give notice of that cutting or removal to –

- (a) all affected persons; and
  - (b) the occupier of the land on which the tree was cut or removed; and
  - (c) if a tree was removed – the owner of the land on which the tree was removed.
- (4) A responsible person that has undertaken any urgent cutting or removal in accordance with this clause must record the following details –
- (a) where and when the cutting or removal was undertaken;
  - (b) why the cutting or removal was required;
  - (c) the last inspection of the section of the electric line where the cutting or removal was required.
- (5) A responsible person must keep records of the details recorded under subclause (4) for at least five years.
- (6) A responsible person that undertakes urgent work referred to in subclause (2)(a) or (2)(d) must not remove or cut trees further than 1 metre from the minimum clearance space around the electric line.

#### **7 Additional duties of local councils, the Roads Corporation and others**

If a 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 cutting or removal of trees near a powerline, the responsible person must consult –

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

#### **8 Management procedures to minimise danger**

- (1) A distribution company must, at least once a year, advise occupiers of land above the surface of which there is a private electric line that is within the distribution company's distribution area of the following matters –
- (a) the duties of the responsible person under this Code;
  - (b) the dangers of cutting and removing trees;
  - (c) the precautions that should be taken to safely maintain the line.
- (2) A distribution company must, in relation to its distribution area, on the request of a responsible person advise that person –
- (a) how to identify places where the cutting or removal of trees will be required; and
  - (b) where to obtain advice and information on methods for maintaining clearance between electric lines and trees.

#### **9 Dispute resolution**

A responsible person must establish procedures to be followed for the independent resolution of disputes relating to electric line clearance.

### **PART 3 – ELECTRIC LINE CLEARANCE**

#### **10 Aerial bundled cables and insulated cables in all areas**

- (1) This clause applies to a powerline that is constructed with –
- (a) aerial bundled cable; or
  - (b) insulated cable.

- (2) For a powerline of a type specified in column 1 of Table 1 in the Schedule to this Code, the minimum clearance space extends, in all directions –
  - (a) for the sections near the pole – to the distance specified in column 2 for a powerline of that type; and
  - (b) for sections away from the pole – to the applicable distance specified in columns 3 to 5, as the case requires, for a powerline of that type.
- (3) The required clearance space around a powerline is the smallest space such that if a tree were cut or removed from that space, the tree would not grow into the minimum clearance space around that powerline between cutting times.

**11 Powerlines other than aerial bundled cable or insulated cables in low bushfire risk areas**

- (1) This clause applies to a powerline that is –
  - (a) not constructed with –
    - (i) aerial bundled cable; or
    - (ii) insulated cable; and
  - (b) located in a low bushfire risk area.
- (2) For a powerline of a nominal voltage specified in column 1 of Table 2 in the Schedule to this Code, the minimum clearance space extends, in all directions –
  - (a) for sections near the pole – to the distance specified in column 2 for a powerline of that nominal voltage; and
  - (b) for the sections away from the pole – to the applicable distance specified in columns 3 to 6, as the case requires, for a powerline of that nominal voltage.
- (3) For a powerline which is longer than 100 metres, the minimum clearance space extends, for sections away from the pole, to an additional distance which allows for the sag and sway of the conductors.
- (4) The required clearance space for a powerline is –
  - (a) the smallest space such that if a tree were cut or removed from that space, the tree would not grow into the minimum clearance space around that powerline between cutting times; and
  - (b) for a powerline with a nominal voltage of 66 000 volts – the space above the space described in paragraph (a).

**12 Powerlines other than aerial bundled cable or insulated cables in hazardous bushfire risk areas**

- (1) This clause applies to a powerline that is –
  - (a) not constructed with –
    - (i) aerial bundled cable; or
    - (ii) insulated cable; and
  - (b) located in a hazardous bushfire risk area.
- (2) For a powerline of a nominal voltage specified in column 1 of Table 3 in the Schedule to this Code, the minimum clearance space extends, in all directions except vertically upwards –
  - (a) for sections near the pole – to the distance specified in column 2 for a powerline of that nominal voltage; and
  - (b) for sections away from the pole – to the applicable distance specified in columns 3 to 5, as the case requires, for a powerline of that nominal voltage.

- (3) The minimum clearance space around a powerline extends, for sections away from the pole, to an additional distance which allows for the sag and sway of the conductors.
- (4) The required clearance space around a powerline is –
  - (a) the smallest space such that if a tree were cut or removed from that space, the tree would not grow into the minimum clearance space around that powerline between cutting times; and
  - (b) the space above the space described in paragraph (a).

**13 Transmission lines**

- (1) For a transmission line of nominal voltage specified in column 1 of Table 4 in the Schedule to this Code, the minimum clearance space extends –
  - (a) downwards – to the distance specified in column 2 for a transmission line of that nominal voltage; and
  - (b) horizontally – to the applicable distance specified in column 3, for a transmission line of that nominal voltage.
- (2) The minimum clearance space around a transmission line extends to an additional distance which allows for the sag and sway of the conductors.
- (3) The required clearance space around a transmission line is –
  - (a) the smallest space such that if a tree were cut or removed from that space, the tree would not grow into the minimum clearance space around that transmission line between cutting times; and
  - (b) the space above the space described in paragraph (a).

**SCHEDULE TO THE CODE**  
**TABLE 1**

Clauses 2(1) and 10

**MINIMUM CLEARANCE SPACES SURROUNDING  
A POWERLINE – ALL AREAS**  
**Aerial Bundled Cable or Insulated Cable**

| MINIMUM CLEARANCE SPACES IN ALL DIRECTIONS |                         |                                     |   |                           |
|--|-------------------------|-------------------------------------|---|---------------------------|
|  | Near pole               | Away from pole                      |   |                           |
| 1  | 2                       | 3                                   | 4   | 5                         |
| Type of Powerline                          | All spans near the pole | Spans up to and including 40 metres | Spans exceeding 40 metres up to and including 70 metres | Spans exceeding 70 metres |
| Aerial Bundled Cable                       | 300 mm                  | 300 mm                              | 600 mm  | 900 mm                    |
| Insulated Cable                            | 600 mm                  | 600 mm                              | 1000 mm   | 1000 mm                   |

**Notes**

- (1) For the required clearance space, an additional distance must be added to the minimum clearance space to allow for regrowth during the period between cutting times (see clause 10(3)).
- (2) This Table includes allowances for cable sag and sway.
- (3) Table 1 is partially illustrated in Figures 1, 2 and 3.

TABLE 2

Clauses 2(1) and 11

**MINIMUM CLEARANCE SPACES SURROUNDING  
A POWERLINE – LOW BUSHFIRE RISK AREAS  
Other than Aerial Bundled Cable or Insulated Cable**

| MINIMUM CLEARANCE SPACES IN ALL DIRECTIONS |                                    |                                     |  |   |                            |
|--|------------------------------------|-------------------------------------|--|---|----------------------------|
|  | Near pole                          | Away from pole                      |  |   |                            |
| 1  | 2                                  | 3                                   | 4  | 5   | 6                          |
| Nominal voltage                            | Section of all spans near the pole | Spans up to and including 45 metres | Spans exceeding 45 metres, up to and including 70 metres | Spans exceeding 70 metres, up to and including 100 metres | Spans exceeding 100 metres |
| Up to 1 kV                                 | 1000 mm                            | 1000 mm                             | 2000 mm  | 2500 mm   | 2500 mm                    |
| Over 1 kV, less than 66 kV                 | 1500 mm                            | 1500 mm                             | 2000 mm  | 2500 mm   | 2500 mm                    |
| 66 kV                                      | 2250 mm                            | 2500 mm                             | 3000 mm  | 3500 mm   | 3500 mm                    |

**Notes**

- (1) This Table includes allowances for cable sag and sway for spans up to and including 100 metres.
- (2) For spans exceeding 100 metres, the minimum clearance space must be extended by an additional distance to allow for sag and sway of the conductors (see clause 11(3)).
- (3) For the required clearance space, an additional distance must be added to the minimum clearance space to allow for regrowth during the period between cutting times (see clause 11(4)).
- (4) Table 2 is partially illustrated in Figures 1, 4 and 5.



**TABLE 3**

Clauses 2(1) and 12

**MINIMUM CLEARANCE SPACES SURROUNDING  
A POWERLINE – HAZARDOUS BUSHFIRE RISK AREAS  
Other than Aerial Bundled Cable or Insulated Cable**

| MINIMUM CLEARANCE SPACES IN ALL DIRECTIONS |                                    |                                     |   |                            |
|--|------------------------------------|-------------------------------------|---|----------------------------|
|  | Near pole                          | Away from pole                      |   |                            |
| 1  | 2                                  | 3                                   | 4   | 5                          |
| Nominal voltage                            | Section of all spans near the pole | Spans up to and including 45 metres | Spans exceeding 45 metres, up to and including 350 metres | Spans exceeding 350 metres |
| Up to 1 kV                                 | 1500 mm                            | 1500 mm                             | 2000 mm   | 2250 mm                    |
| Over 1 kV, less than 66 kV                 | 1500 mm                            | 1500 mm                             | 2000 mm   | 2250 mm                    |
| 66 kV                                      | 2250 mm                            | 2250 mm                             | 3000 mm   | 3000 mm                    |

**Notes**

- (1) The minimum clearance space must be extended by an additional distance to allow for sag and sway of the conductors (see clause 12(3)).
- (2) For the required clearance space, an additional distance must be added to the minimum clearance space to allow for regrowth during the period between cutting times (see clause 12(4)).
- (3) Table 3 is partially illustrated in Figures 1 and 5.

TABLE 4

Clauses 2(2) and 13

**MINIMUM CLEARANCE SPACES SURROUNDING  
A TRANSMISSION LINE**

| 1                               | 2                        | 3                    |
|---------------------------------|--------------------------|----------------------|
| Nominal voltage                 | Dimension vertical below | Dimension horizontal |
| 66 kV                           | 3000 mm                  | 3000 mm              |
| Over 66 kV,<br>less than 220 kV | 3700 mm                  | 4600 mm              |
| 220 kV                          | 3700 mm                  | 4600 mm              |
| 275 kV                          | 4200 mm                  | 5000 mm              |
| 330 kV                          | 4700 mm                  | 5500 mm              |
| 500 kV                          | 6400 mm                  | 6400 mm              |

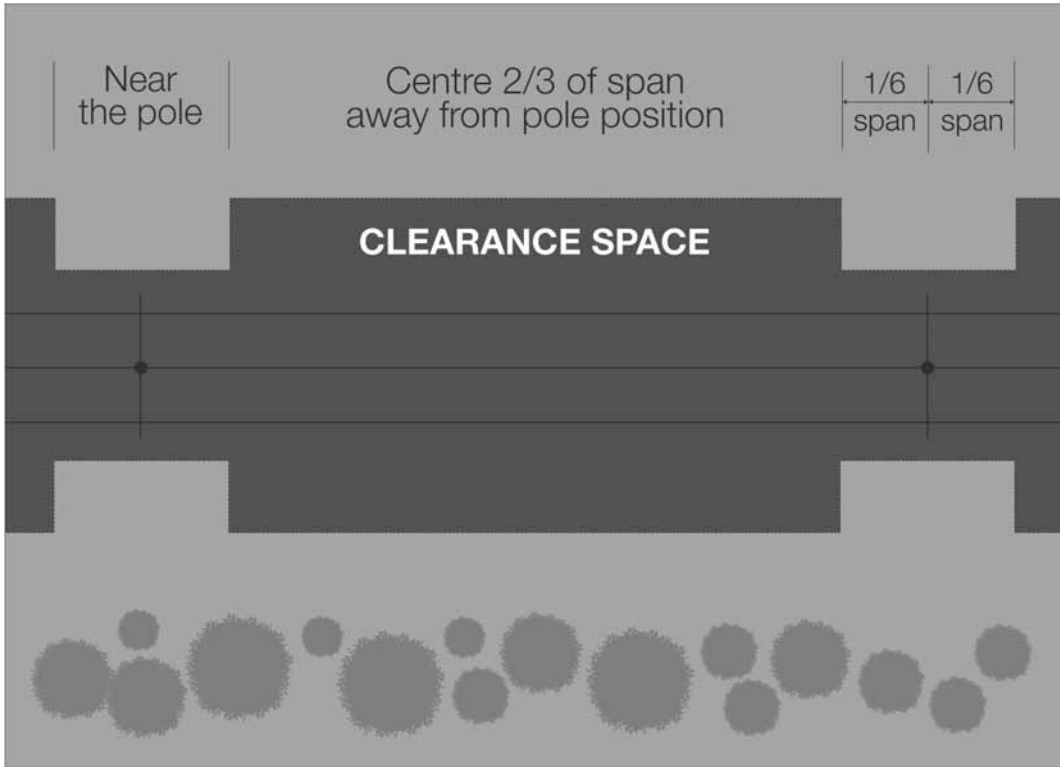
**Notes**

- (1) The minimum clearance space must be extended by an additional distance to allow for sag and sway of the conductors (see clause 13(2)).
- (2) For the required clearance space, an additional distance must be added to the minimum clearance space to allow for regrowth during the period between cutting times (see clause 13(3)).
- (3) For transmission line spans up to 400 metres long, the additional distance required to allow for sag can often be as much as 4 metres.
- (4) For transmission line spans up to 400 metres long, the additional distance required to allow for sway can often be as much as 8 metres.
- (5) Table 4 is partially illustrated in Figures 6, 7 and 8.

Figure 1: All Areas

Tables 1, 2 and 3

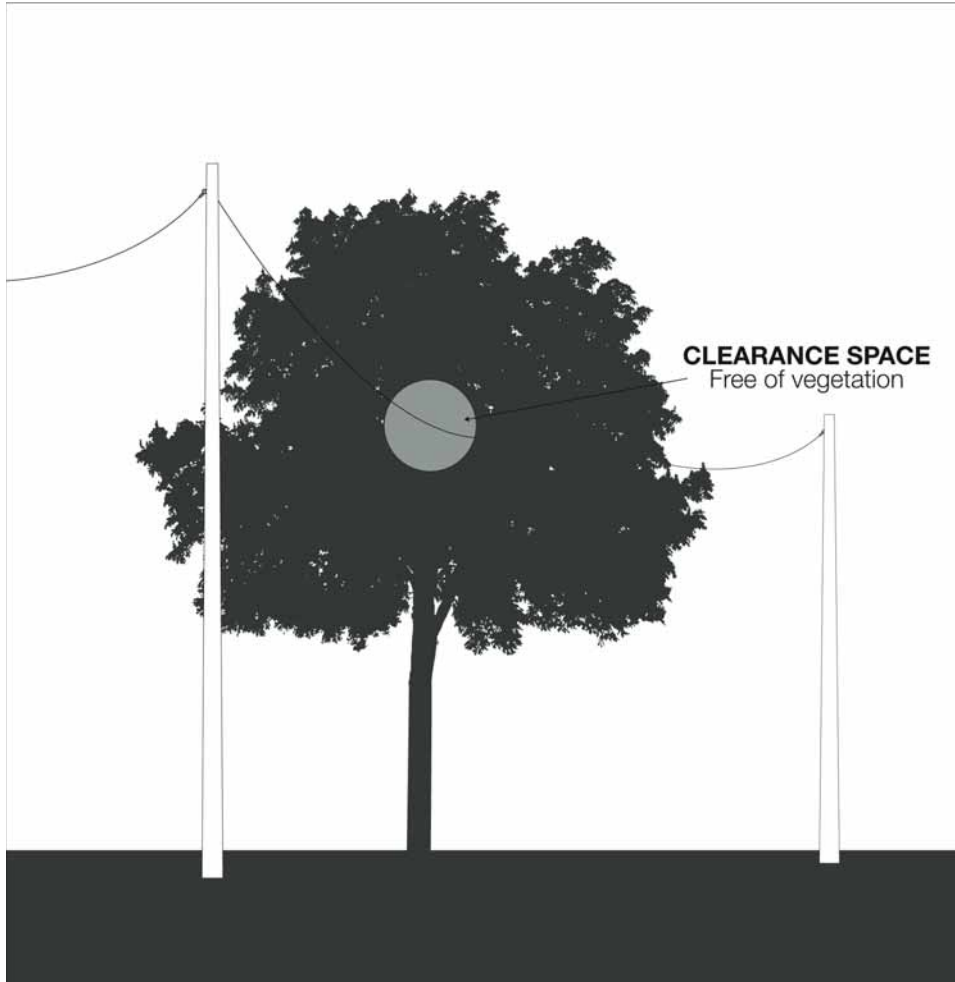
PLAN VIEW OF AN OVERHEAD POWERLINE



NOT TO SCALE

**Figure 2: Aerial Bundled Cables & Insulated Service Lines in All Areas**

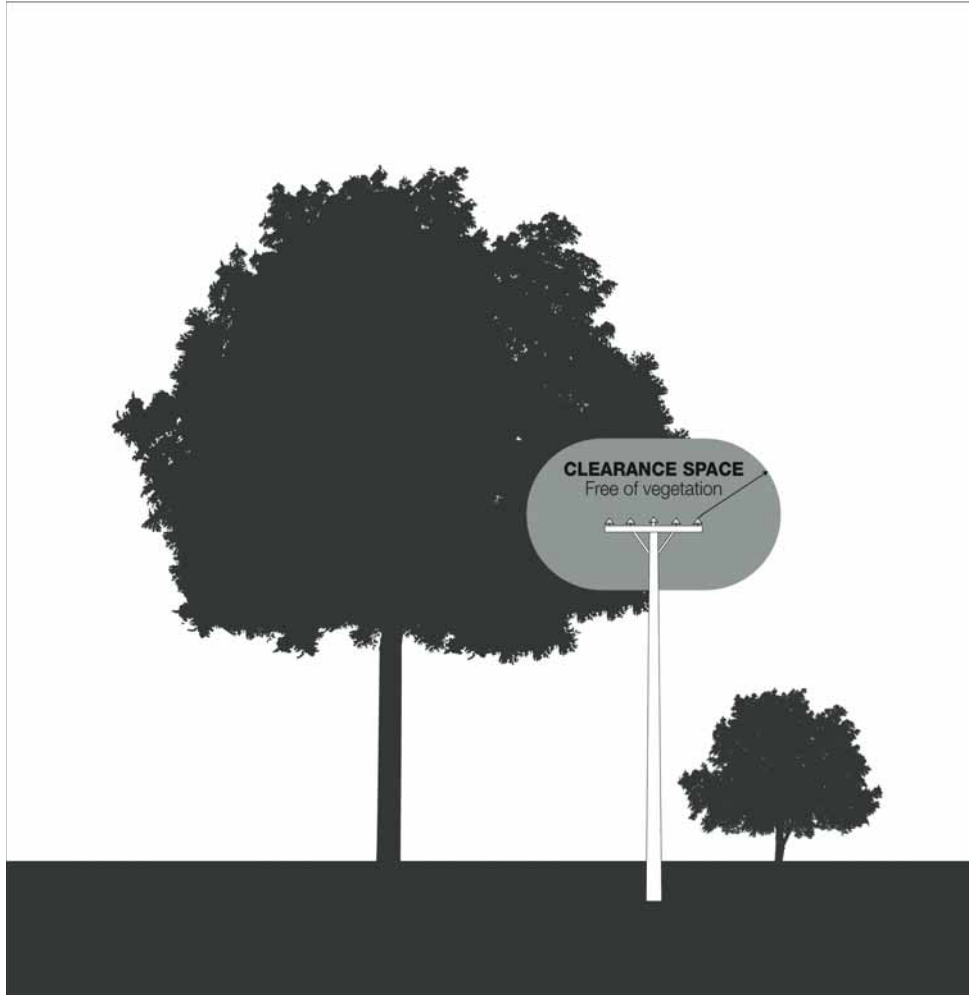
Table 1



NOT TO SCALE

**Figure 3: Insulated Conductors in All Areas**

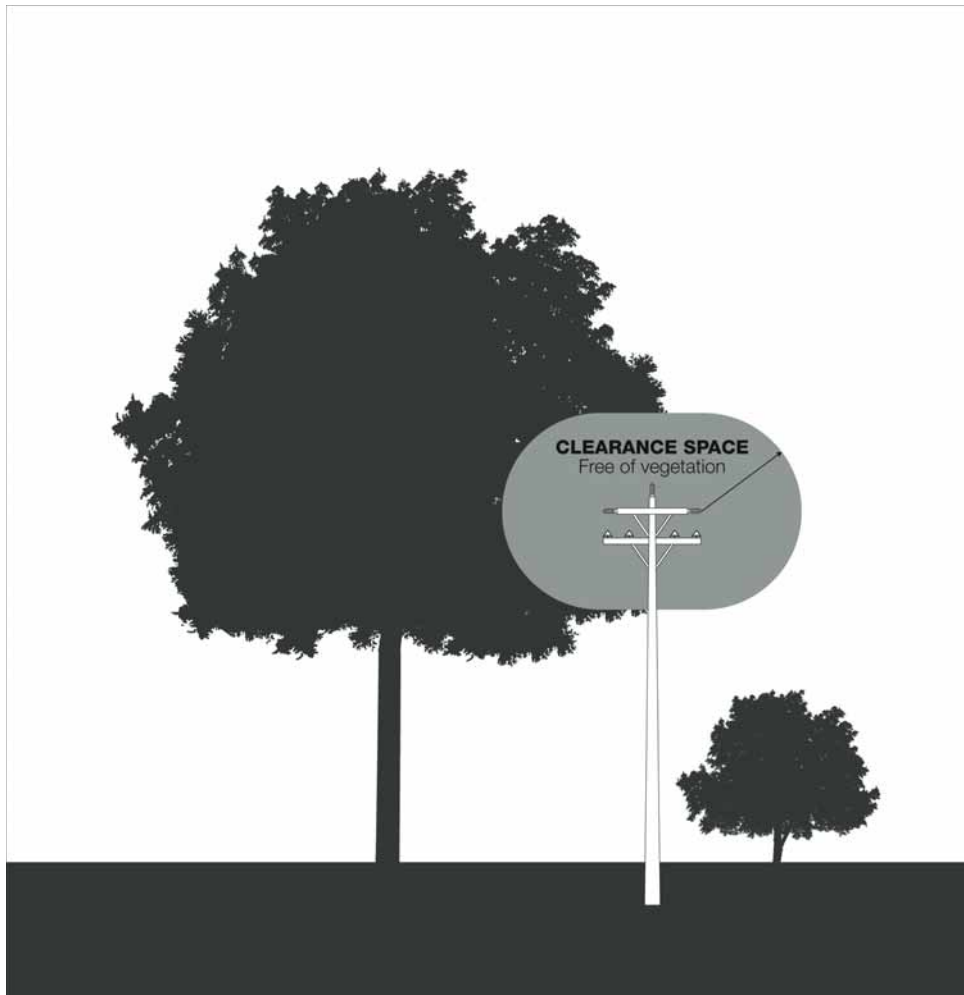
Table 1



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**Figure 4: Low Bushfire Risk Areas (except 66 kv)**

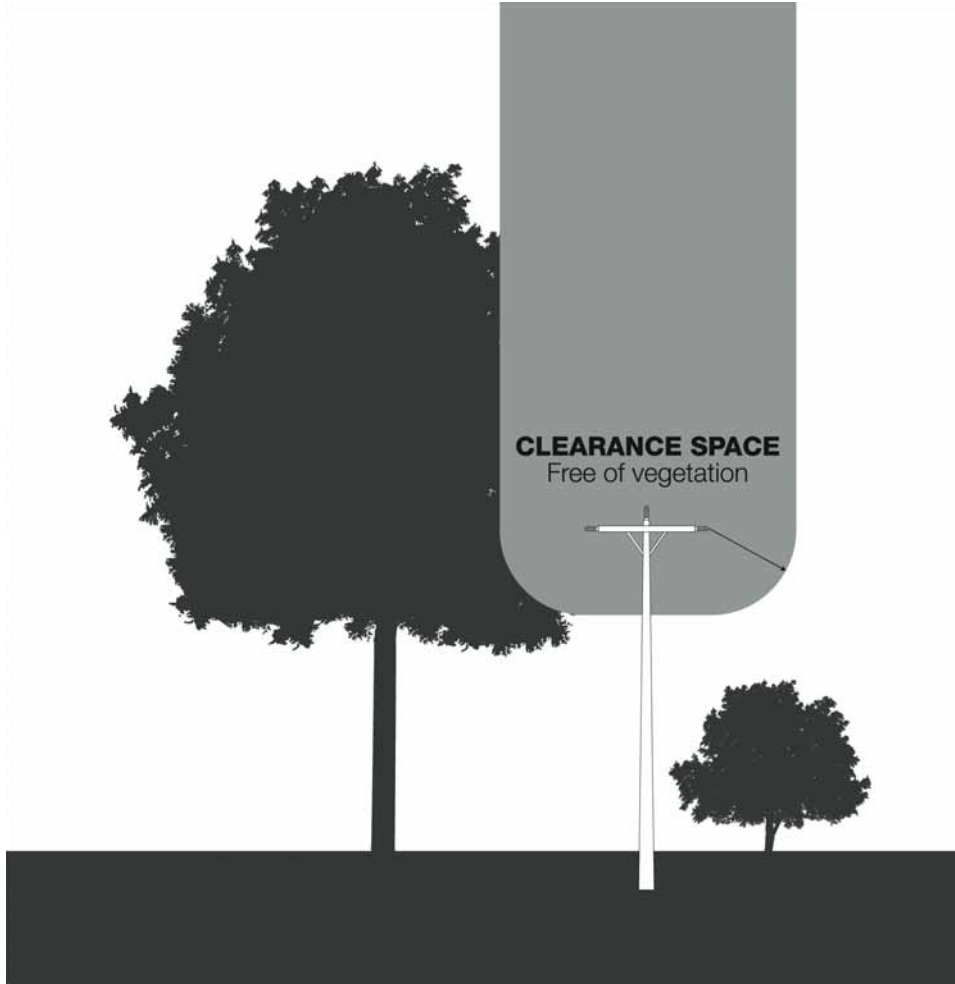
Table 2



NOT TO SCALE

**Figure 5: Hazardous Bushfire Risk Areas and 66 kv in Low Bushfire Risk Areas**

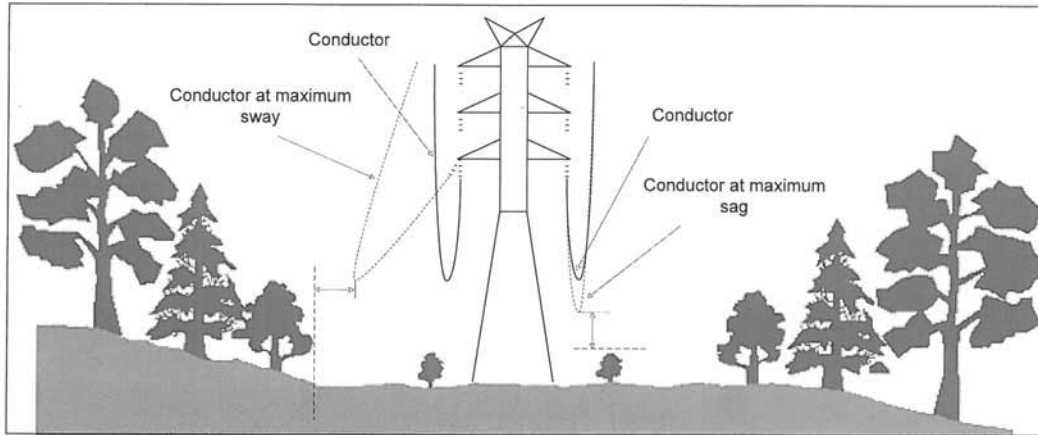
Tables 2 and 3



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**Figure 6: End View of the Transmission Line**

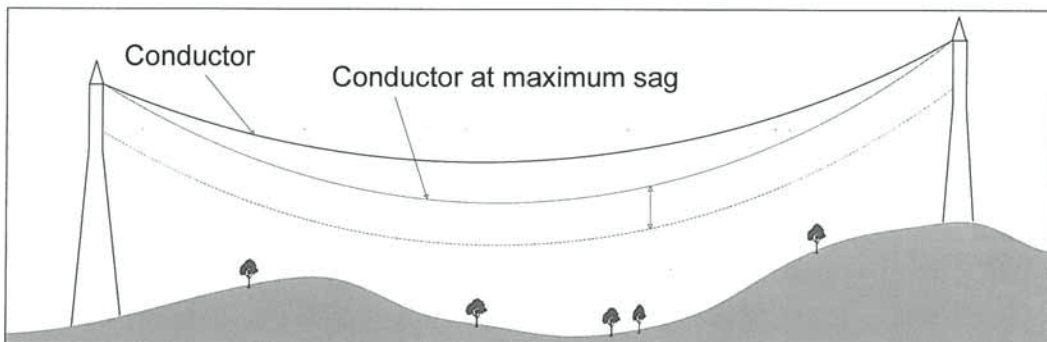
Table 4



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**Figure 7: Side View of the Transmission Line**

Table 4

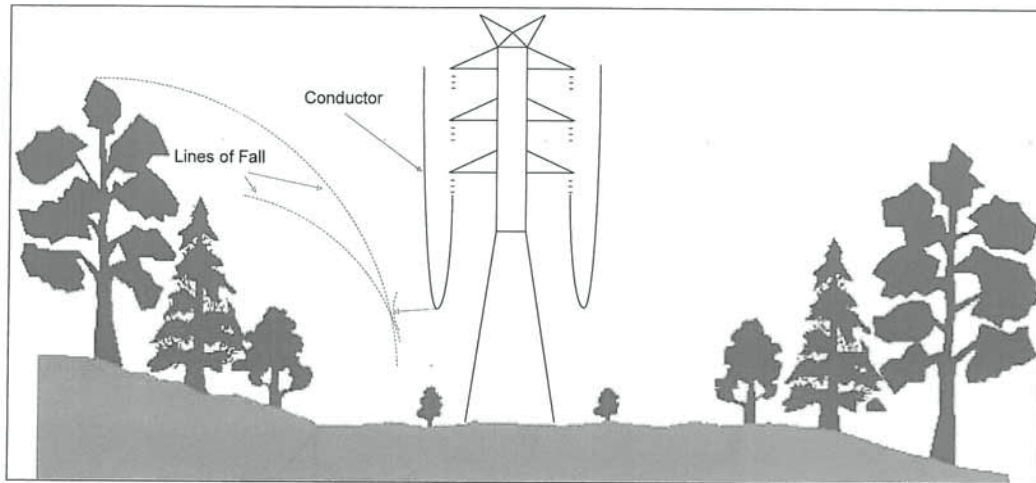


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Figure 8: Trees Adjacent to the Transmission Line

Table 4



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