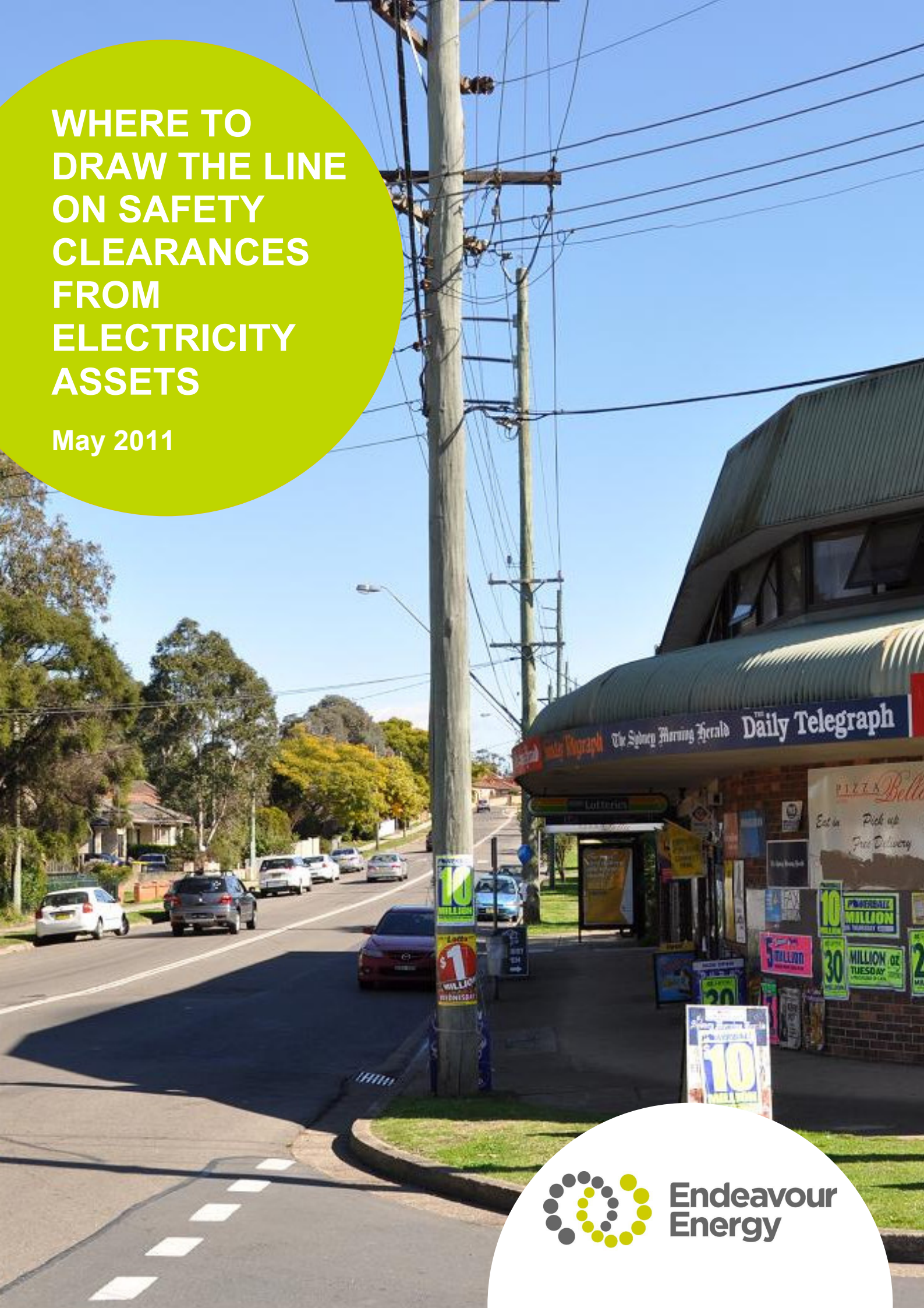


# WHERE TO DRAW THE LINE ON SAFETY CLEARANCES FROM ELECTRICITY ASSETS

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Endeavour  
Energy



## Where to draw the line on safety clearances from electricity assets

### Are you in the clear?

#### Important information on safe distances

This brochure is designed to inform anyone working on or around buildings or sites that are connected to or in the vicinity of electricity assets of safe distances that must be maintained from electricity assets, overhead or underground.

Awareness of safety clearances could mean the difference between a safe, successful project and a fatal accident.

It may also save time and money by ensuring the design of a home or building complies with safety requirements without additional measures being taken.

#### Drawings in this brochure specify the minimum safety clearances for working or living near electrical assets.

**Note:** Full details about safe work practices, including penalties for non-compliance, are set out in the WorkCover NSW document *Work near overhead power lines: Code of practice 2006*. The Code can be viewed at the following link:

[www.workcover.nsw.gov.au/formspublications/publications/Documents/work\\_near\\_overhead\\_power\\_lines\\_code\\_of\\_practice\\_1394.pdf](http://www.workcover.nsw.gov.au/formspublications/publications/Documents/work_near_overhead_power_lines_code_of_practice_1394.pdf)

The requirements for maintaining safe distances from electricity assets are also set out in the **State Environmental Planning Policy (Infrastructure) Regulation, 2007** (Division 5 - Electricity transmission or distribution, Subdivision 2 - *Development likely to affect an electricity transmission or distribution network*).

This requires local councils to seek comments from Endeavour Energy before approving any development application where electricity infrastructure is present.

#### Types of assets

The following pictures show typical electricity assets that may be installed in residential areas.



High and low voltage overhead mains



Underground service pillar

## Ensuring you're in the clear

All buildings and other structures must comply with minimum safety clearances from overhead electricity conductors.

The minimum distances from the closest conductor to the building or other structures must be maintained during strong winds or high operating temperatures. Under these conditions, the conductor can swing or sag considerably towards the building or structure.

The minimum safety clearances are shown in the illustrations in this brochure. They have been prepared to suit Endeavour Energy's asset construction practices.

If it appears that conductors are closer than the minimum safety clearances shown in the table, call Endeavour Energy for advice.

Some important considerations regarding minimum safety clearances include:

- Knock-down/rebuilds, where a small, single storey home is replaced by a larger or double storey home, or where land is rezoned to allow multi-storey construction, such as apartments or town houses.
- Moving the location of a driveway or building driveways close to pillars or poles.
- Installing a tall antenna in areas where broadcast reception is poor.
- Erecting a flagpole.
- Any building work near underground or overhead power lines.
- Erecting a cubby house.
- Raising the ground level below power lines.
- Erecting metal fences or scaffolding close to poles or lines.
- Excavating near poles or where electricity assets run underground.
- Using a crane near overhead lines

Swimming pools are generally unsuitable for installation near electricity assets, and are rarely allowed. Above-ground pools, in particular, are regarded as inherently unsafe.

## Working with safety near the point of attachment

The point of attachment is where the electrical wires attach to a home or building. When work is being carried out near the point of attachment, special care must be taken to avoid contact with these electrical wires, and the mounting bracket, or to avoid damaging them.

The safe distance from a point of attachment is 1000mm.

Care must be taken with activities such as:

- Cleaning leaves from guttering.
- Painting gutters, fascias and eaves.
- Pruning trees and shrubs (particularly around the electrical wires).
- Attaching aluminium cladding to the fascias and the eaves.
- Replacing the guttering.

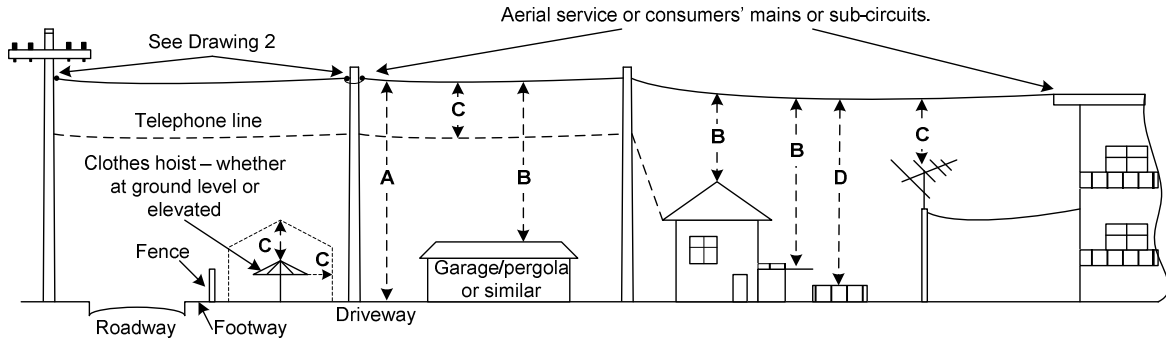
## Keeping your distance

The minimum safety clearances over structures, roads and driveways are shown in the following drawings.

**Remember** – these are the **minimum** safe distances. In some cases, the distance may increase to ensure public safety.

### Drawing 1: Minimum safety clearances over structures

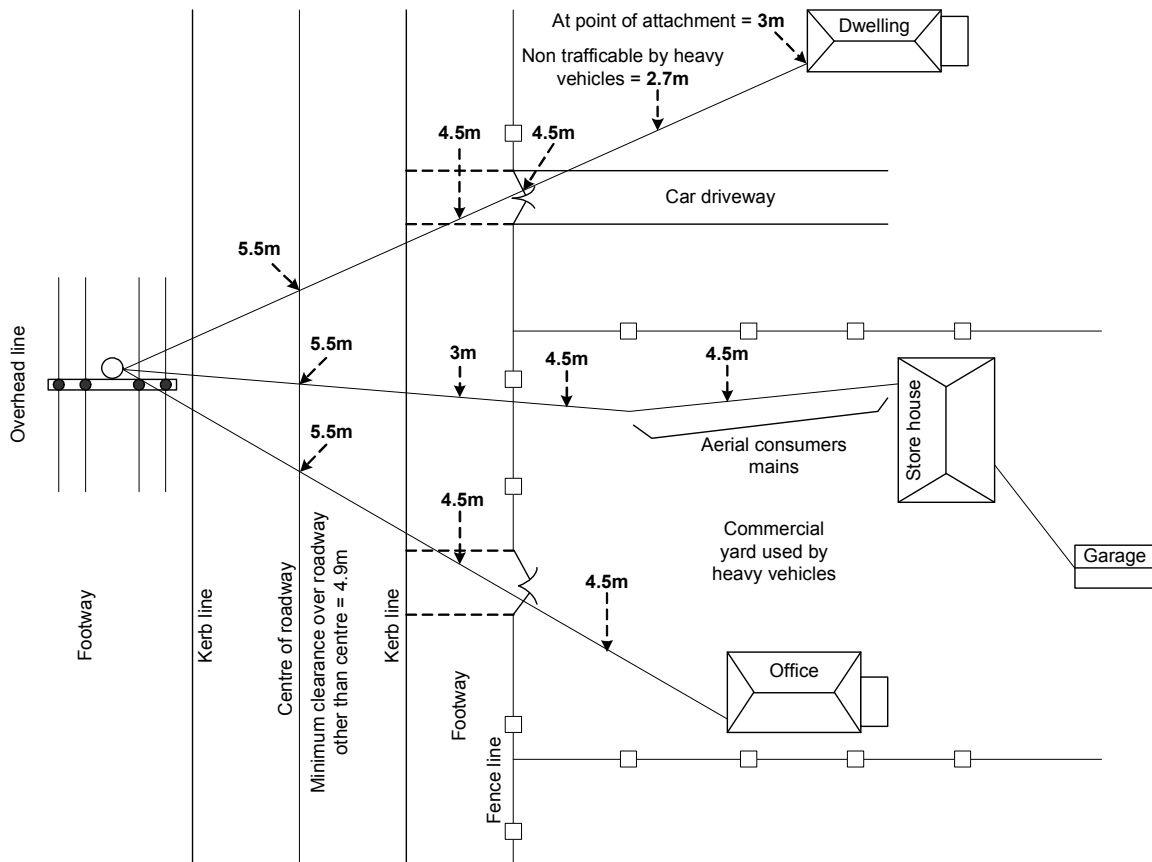
*Aerial consumers' and service mains*



| Application<br>Type of aerial conductor | Minimum height above buildings, structures, ground or elevated areas (mm) |            | From, <b>buildings, TV/radio antenna or stay wire and telephone lines</b> (mm). | Above water level in swimming pool, above walkway around pool | Above areas where irrigation pipes are used, or above areas where sail craft are used |
|---|---|------------|---|---|---|
|   | Over ground   | Over roofs |   |   |   |
|   | A   | B          | C   | D   |   |
| Bare or insulated live conductors       | Bare 5500<br>Insulated 4500   | 3700       | 2000<br>3000<br>for clothes lines   | Not permitted   | Refer to Integral Energy  |

### Drawing 2: Minimum safety clearances over roads and driveways

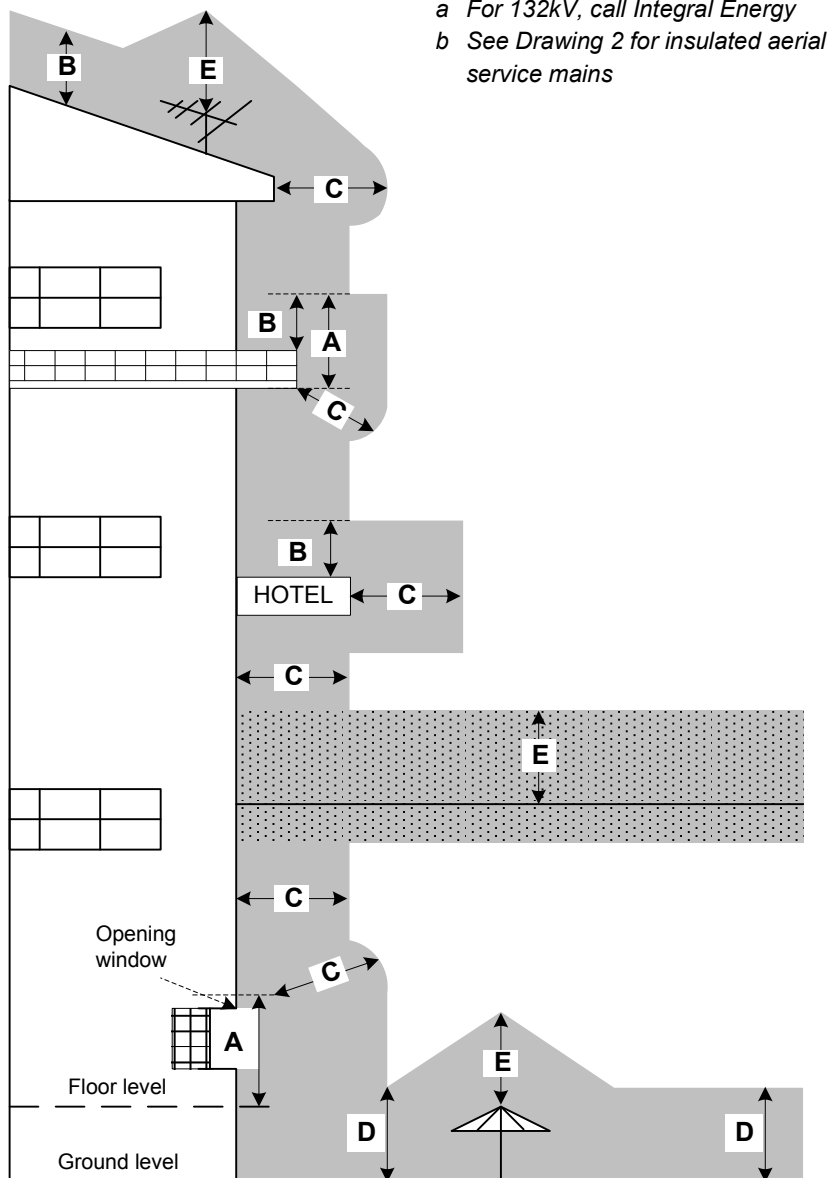
*For insulated aerial service mains*



### Drawing 3: Minimum safety clearances near structures

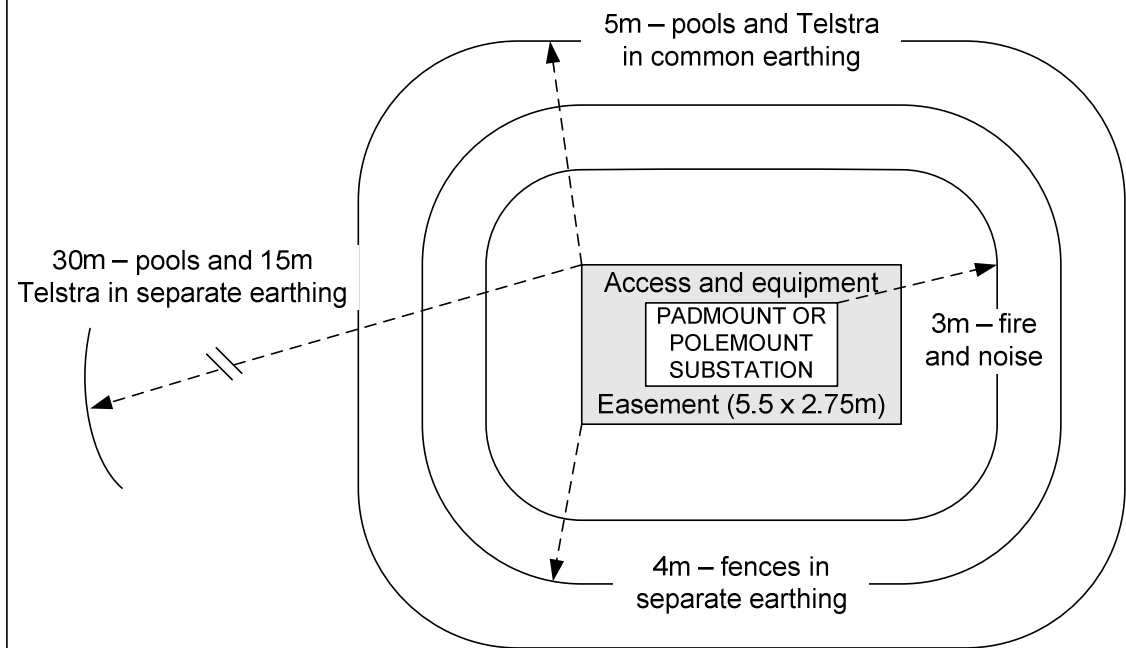
|  | 0-1000V<br>LV                 | 1-22kV<br>HV | 33kV <sup>a</sup><br>Trans. |
|--|-------------------------------|--------------|-----------------------------|
| <b>A</b> Above standing areas  | 3700mm                        | 3700mm       | 5000mm                      |
| <b>B</b> Accessible areas  | 2700mm                        | 2700mm       | 4500mm                      |
| <b>C</b> Non-accessible areas  | 1000mm                        | 2100mm       | 2500mm                      |
| <b>D</b> Ground  | 5500mm <sup>b</sup><br>(bare) | 7300mm       | 7300mm                      |
| <b>E</b> Above outdoor TV<br>antennas, aerial cables<br>or clothes lines | 1800mm                        | 3000mm       | 3000mm                      |

- a For 132kV, call Integral Energy*  
*b See Drawing 2 for insulated aerial service mains*



**The above drawing specifies the minimum safety clearances for working or living near electrical power lines.**

**Drawing 4: Substations - segregation requirements from other structures**



**Padmount substation (above) and pole mounted substation (right)**

### Underground services

Care must also be taken to ensure that building or excavation activities do not infringe on underground cable, ducts and protective covers. Before undertaking any work in the vicinity of underground cables, advice should be obtained from the **Dial Before You Dig** service (see page 7 for phone number).



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## Who to call

For further information on safe distances, please call:

| Region         | Local government areas  | Contact name and number                    |
|----------------|---|--|
| <b>North</b>   | Bathurst, Baulkham Hills, Blacktown, Blue Mountains, Hawkesbury, Lithgow, Parramatta, Penrith, plus parts of Hornsby, Mid-Western and Ryde. | Project Manager<br><b>131 081</b>          |
| <b>Central</b> | Camden, Campbelltown, Fairfield, Holroyd, Liverpool, Wingecarribee, Wollondilly, plus parts of Bankstown.                                   | Customer Service Manager<br><b>131 081</b> |
| <b>South</b>   | Kiama, Shellharbour, Shoalhaven, Wollongong.  | Customer Service Manager<br><b>131 081</b> |

Application forms for asset relocation on connection can be found on Endeavour Energy's website at [www.endeavourenergy.com.au/Our network/How do I get started?](http://www.endeavourenergy.com.au/Our%20network/How%20do%20I%20get%20started?), or by calling Endeavour Energy's Network Connections Customer Consultant on **9853 6234**.

Drawings contained in this document are a general guide only to Endeavour Energy's safe distances requirements. Full details are contained in Endeavour Energy's design and construction drawings and Standards, which are available on request.

The key drawings are:

- Drawing no. 0011985, sheets 1 and 2; Drawing no. 086232; and, Drawing no. 086242.

Reference should also be made to Mains Maintenance Instruction MMI 0015 – Management of Endeavour Energy's electricity easements.

Dial Before You Dig service - **1100**.

WorkCover Assistance Service - **13 10 50**.

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