

## General Restrictions for Overhead Power Lines

Endeavour Energy wishes to provide the following list of 'General Restrictions' applicable to the '**Easement Area**'. It should be noted that these are indicative guidelines only and that this information should be administered in conjunction with the requirements of the Work Health and Safety (WH&S) Act and WorkCover legislation.

Endeavour Energy recommends a policy of '**prudent avoidance**' be adopted in relation to the use of the easement area for ongoing staff activities or work areas. Additionally, WH&S and WorkCover legislation should be consulted in relation to this matter.

As existing ground levels throughout the easement are unknown, it is assumed that minimum design clearances exist within the easement area. As such, references to permissible heights on any activity may alter from that stated within this document. **Written approval** must be sought for any activity within the easement area. For such approval, detailed plans drawn to scale and fully dimensioned showing property boundaries and other relevant information should be forwarded to Endeavour Energy.

Approval to encroach into the easement area will not be granted where an alternate site clear of the easement area exists. All approvals granted are subject to the encroachments being removed or relocated; at the owner's expense should Endeavour Energy require this for cable maintenance, construction or emergency works.

Should any earthing be disturbed whilst work is being carried out, all work should immediately cease and Endeavour Energy notified so that the earthing can be reinstated.

1. Construction of buildings (permanent or temporary) e.g. Houses, site-sheds, shipping containers, other substantial structures or parts thereof, including eaves, guttering and footings, shall not be erected within the easement area.
2. No encroachment into the easement will be permitted within 15 metres of the closest structure and 5 metres from the vertical projection of the closest conductor.
3. Changes to ground levels within the easement area are not permitted without the prior written approval of Endeavour Energy. Applications are to be supported by a geo-technical report prepared by a civil engineer.
4. **Statutory clearances to the conductors are to be maintained at all times.** It should be noted that power lines are designed to allow for sag and swing sideways, consequently allowance for this needs to be considered at all times. The statutory clearance from 0 kV to 132 kV conductors is 3 metres, in all directions, at all times. This measurement

applies to, but is not limited to; persons, vehicles, hand tools, equipment, cranes, lifting gear, plant and load. Consideration needs to be given and the clearances increased where there is the likelihood of any inadvertent movement or swinging of the plant, crane, load or lifting gear towards the power lines.

5. Construction of roads, car and truck parking areas, and subdivisions will only be considered for approval provided that access to the structures is maintained and the layout is such that; sufficient building area is left clear of the easement, it will not create numerous utility crossings or later requests for encroachments.
6. If required, In order for Endeavour Energy to carry out the necessary calculations, the applicant must submit a Centre-line Profile, a recent survey, showing the following information:

### **REQUIREMENTS FOR PROFILE CLEARANCE TO TRANSMISSION LINES**

**Note:** Clearances cannot be determined and will not be processed unless all of the required information is submitted.

#### **THE INFORMATION TO BE SUPPLIED:**

- In AutoCAD Format.
- Have a vertical exaggerated scale of 10:1. E.g. Horizontal Scales 1:1000 Vertical Scale 1:100 or Horizontal Scale 1:500 Vertical Scale 1:50.
- Information on the paper size that the drawing needs to be printed at for the scale to be correct e.g. Horizontal Scale 1:1000 Vertical Scale 1:100 when printed on A2.

#### **THE CENTRELINE PROFILE IS TO INCLUDE ALL OF THE FOLLOWING INFORMATION:**

- Lot and DP Number of Block.
- Date, Time and Temperature at the time of each reading taken.
- Total Length of span.
- Conductor Attachment height at each structure.
- Reading at the base of each structure.
- On the conductor or closest to the ground, a reading every 25-30 metres, of the existing RL [Natural Ground Surface] or as the terrain dictates for the entire span.

**Note:**

The amount of distance required for each reading may be reduced on poles with smaller spans

- Other information may be required where the structures are strained or changes of direction occur on pole lines.
7. A second survey may be required upon completion of work.

8. Vehicles with elevating or extending components such as earth moving vehicles, concrete pumping vehicles, loaders, fork lift trucks, tip trucks, cranes, including Derrick style cranes and hoists, Hiabs, Palfingers including others, and are not to proceed under the conductors until such components are returned to the travelling position.

Concrete pumping vehicles are not permitted to operate within an easement for electricity purposes.

9. Vehicles, plant or equipment having a height when fully extended that exceeds 4 metres shall not be brought onto an easement area without the prior written approval of Endeavour Energy.
10. The area within the easement is not to be used for the loading or unloading of trucks.
11. No soil or other material is to be stored, loaded or unloaded within the easement area.
12. The area within the easement is not to be used for storage or stacking of goods or materials, especially flammable or explosive material.
13. Application for approval for the erection of non-climbable flagpoles, CTV cameras, security lighting, weather vanes, signs and the like might be granted, subject to a height limitation of 4 metres and the earthing of all metallic parts.

#### **MINIMUM APPROACH DISTANCES OF PLANT AND LOADS TO LIVE ELECTRICAL APPARATUS (FOR NON-AUTHORISED PERSONS)**

<b>NOMINAL VOLTAGE</b>	<b>MINIMUM APPROACH DISTANCE</b>
<b>Not exceeding 132 000V</b>	<b>3 metres</b>
<b>Above 132 000V but not exceeding 330 000V</b>	<b>6 metres</b>
<b>Above 330 000V</b>	<b>8 metres</b>

**Caution:** The operator of the plant must be able to identify the voltage level of the apparatus that they are approaching with the plant or assume 8 metres as a minimum.

14. All personnel are to be advised of the hazards of working in close proximity to high voltage wires. Extreme caution is to be observed when working within the easement area and around any poles and structures.

15. All machinery or plant within an electricity easement is to be operated by adequately trained and accredited persons.
16. Endeavour Energy recommends the use of a suitably trained safety observer when work is being carried out within the easement area.
17. A hazard identification and risk assessment should be carried out within the easement area. A safe work method statement should be provided for any work carried out within the easement area. All staff should be briefed regularly, or when there are any changes, as to the contents of the risk assessment and safe work method statement.
18. For the attention of staff and visitors to the site and to ensure constant vigilance, Endeavour Energy recommends that clearly visible safety signs be erected, in accordance with the relevant safety standards, alerting attention to the transmission lines and associated hazards.
19. Flammable, combustible or explosive materials, including gas bottles, are not permitted within the easement area. Flammable liquid carriers shall not be placed within the easement area.
20. Garbage, refuse or fallen timber is not permitted within the easement area. Burning off is not permitted within the easement area without the prior written approval of Endeavour Energy.
21. Any metallic fencing within the easement shall require earthing and isolating in accordance with the Australian Standards as per AS3000.
22. Structures such as detached garages, sheds, stables, carports, unroofed veranda's, fixed plant, equipment and in-ground swimming pools, will only be considered for approval if no other practicable alternative site is available clear of the easement area. Above ground swimming pools are not permitted. No approvals will be granted for any of the above where they are proposed within 15 metres of the closest structure, closer than 5 metres from the vertical projection of the closest conductor, if access is restricted or safety clearances are not maintained. Furthermore, any proposed structures must not exceed 2.5 metres in height and the floor area of the encroachment must not exceed 20m<sup>2</sup>.

**Please Note:** - Due to the effects of induction and possible lightning/line fault step and touch potential, requests for pools inside the easement must be provided with an electrical engineering consultant's report indicating the pools step and touch levels and measures to reduce the hazards to acceptable levels. A current injection test may need to be conducted to verify the design. Applicants may require the assistance of a consultant in preparing the design and conducting the test, and should be advised that the costs of carrying out a safety analysis for a swimming pool proposed to be built within an easement are very high, often more than the cost of the pool itself. Further conditions relating to swimming pools may also apply.

23. Installation of utility services, such as power, telephone, gas, water and sewerage (overhead, underground, or on the surface) may be considered for approval by Endeavour Energy's Overhead and Underground Mains Manager. Proposed site dimensions in relation to assets are required.
24. Trees, plants or shrubs with a mature height that does not exceed 3 metres may be planted within the easement area provided they are no closer than 15 metres from the closest structure and no closer than 5 metres from the vertical projection of the closest conductor. No plants are permitted in an area where they may obstruct access.
25. Dogs and livestock shall not be kept within the easement area if they are likely to create a dangerous situation for Endeavour Energy staff and thus restrict access.
26. Normal agricultural pursuits are permitted however, care should be taken when ploughing or operating mobile machinery in the vicinity of structures or supporting guys. Earthing systems are particularly prone to damage from such activities. It is imperative that access to the easement area and structures be available at all times. Whilst reasonable care will be taken, Endeavour Energy will not be responsible for any damage to crops caused whilst accessing and working within the easement area. The restrictions applying to the heights of mobile plant and equipment must be observed.
27. 24 hour 7 day a week access is required to the easement for emergency and maintenance purposes. Any locked gates are to have an Endeavour Energy lock incorporated in the locking system. Please contact Integrity Locking 1300 366 488 for details.

In addition to the above, details of some fencing restrictions are provided for your information. Written approval must be sought prior to the commencement of work.

- A. Brick, masonry walls or other substantial structures or parts thereof shall not be erected within the easement area.
- B. All other types of fencing erected within the easement area are subject to a height limitation of 2.5 metres.
- C. The erection of any fencing is not permitted within 10 metres of a structure or guy and is not permitted in a location that could create an unsafe working area for Endeavour Energy staff.
- D. All metallic fences are required to be earthed and isolated in accordance with Endeavour Energy's specifications or Australian Standards AS3000.
- E. Gates (4.2m) are required in boundary fences to facilitate longitudinal access to the easement area and associated structures by truck. All access gates are to include Endeavour Energy locks in the locking system. Please refer to the above point 27.