



Ergon Energy Corporation Limited

Specification for Easement Survey Works

This Material is made available on the basis that it may be necessary for a Registered Surveyor with an appropriate endorsement to undertake the survey requirements to meet statutory obligations.

Easement surveys shall be conducted according to the requirements defined in the Department of Natural Resources and Mines Survey Requirements. All work shall be carried out by an appropriately registered Surveyor with Cadastral endorsement under the Surveyors Act 2003. In addition, they shall be conducted according to the accepted current practices of the Registering Authority. The type of easement survey to be effected will be nominated by the Principal.

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1. Purpose and Scope

This Specification is compiled for the guidance and direction of surveyors concerned with the control and execution of Easement Surveys for Sub Transmission and Transmission Lines. Its purpose is to ensure uniformity in the conduct of surveys; to describe and define the information that must be obtained; and to establish uniform standards for the recording and presentation of survey information.

All information shall be supplied in the following format:-

Datum - Geocentric Datum of Australia (GDA94) in the applicable Zone

Projection - Map Grid of Australia 1994 (MGA94) Universal Trans Mercator using the Geodetic Reference System 1980 Ellipsoid (GRS80)

Elevation – Australian Height Datum (AHD) values based on AUSGeoid98

Feature Codes - Ergon Energy Pty Ltd supplied feature codes

CAD Drawing Layers – All points to be layered to their feature code

2. References

2.1 Ergon Energy controlled documents

Nil

2.2 Other sources

Surveyors Act 2003

Survey and Mapping Infrastructure Act 2003.

Department of Natural Resources and Mines Survey Requirements

Survey and Mapping Regulations and Standards

3. Definitions, Acronyms, and Abbreviations

3.1 Definitions

3.1.1 Sub Transmission: Voltages of 33 000 volts up to, and including, 110 000 volts

3.1.2 Transmission: Voltages of 132 000 volts and above

3.1.3 Principal: For the purposes of this specification the Principal shall be Ergon Energy Pty Ltd unless stated otherwise.

3.2 Acronyms and Abbreviations

The following Acronyms appear in this Specification.

CAD Computer Aided Drafting. Software packages used for general drafting work.

AHD Australian Height Datum

4. Security

Nil

5. Safety, Environmental and Ergonomic Considerations

5.1 Safety

Refer to the Project Management Plan provided by the Project Manager.

5.2 Environmental and Cultural Heritage

Refer to the Principal's Project Management Plan supplied by the Project Manager.

The Principal requires all work to be undertaken in an environmentally sound manner. The Consultant is responsible for ensuring that the Principal's requirements for environmental protection are implemented and the following brief outline of the environmental protection requirements for this contract is provided for the guidance of Consultants.

All vehicles, machinery and equipment to be used on the job must be certified "clean" of all declared plants and noxious weeds by the Consultant.

Should any declared plants or noxious weeds be encountered during the survey, the Consultant shall notify the Principal within 24 hours. Only necessary machinery, vehicles and equipment shall proceed through the infested area.

In areas of weed infestation, all vehicles shall be washed down as they leave the infested area and/or at property boundaries as advised. Vehicles not required to enter the weed areas shall remain on designated 'clean' areas or routes. Access routes, clean areas and infested areas shall be clearly identified by the Consultant and restrictions on moving between clean and infested areas shall be strictly observed.

The Consultant shall ensure that all works are planned and executed with appropriate safeguards to:

- minimise vegetation disturbance;
- minimise earthworks activities which could result in hazards for animals (e.g. pit traps);
- prevent the introduction of exotic species and diseases;
- minimise noise, dust, erosion, sedimentation, water pollution and traffic hazards;
- minimise the disturbance of natural watercourses;
- protect Aboriginal sites and artefacts in accordance with the relevant legislation, and measures to protect other heritage sites;
- minimise the effects of accommodating and servicing the Consultant's workforce; and
- address the need for access and security arrangements and buffer zones to protect the public and the facilities.

The Consultant shall also ensure that all activities are compatible with the principles of sound environmental protection practice.

The Consultant shall comply with all the environmental requirements described above and shall make allowance for this in their tender. The total tender price will be deemed to include allowance for complying with the Principal's environmental protection requirements.

Should the Consultant become aware of any aboriginal cultural heritage objects or areas on the route of the power line, he should not disturb the objects or areas but report them to the Project Manager as soon as possible. In this regard the requirements of the "Aboriginal Cultural Heritage Act 2004" shall be strictly observed.

6. General

- Easement surveys shall be conducted according to the requirements defined in the Department of Natural Resources and Mines Survey Requirements. All work shall be carried out by an appropriately registered Surveyor with Cadastral endorsement under the Surveyors Act 2003. In addition, they shall be conducted according to the accepted current practices of the Registering Authority. The type of easement survey to be effected will be nominated by the Principal.
- A Consulting Surveyor engaged to carry out any survey on behalf of the Principal shall not subcontract the instruction or any part thereof to another Consulting Surveyor or Firm without written approval from the Principal.
- The Project Manager referred to throughout this Specification is the officer nominated by the Principal.
- The Principal reserves the right to alter the order of the survey, and any alteration will be directed by the Project Manager in writing with a minimum of one week's notice. Costs of suspending, relocating and re-establishing survey on the line section directed by the Project Manager will be negotiated with the Consultant using the latest rates supplied for the surveyor's panel PCP 73.
- Work shall commence within three weeks from the date of award of contract.
- Cadastral Plans shall be completed and forwarded progressively
- Where any work is to be done on site, the Consultant shall be deemed to have examined the site and to have satisfied themselves as to the supply and transportation of all necessary materials to site, the facilities available, including accommodation for employees, and all other details involved having regard to the nature and extent of work to be carried out under the Contract.
- On the Cadastral Easement Plans Ergon requires connections to be shown across creeks and roads between adjacent easements where the new power line crosses roads and boundary Creeks. It is a requirement that all the easement plans can be plotted together in their correct relationship for the entire route.
- Meridian for the survey and all plans shall be MGA.
- The Principal requires separate plans for each title except where adjoining titles are held by the same owner with the same mortgagee. In such cases, all titles under common ownership may be included on one plan, provided the tenure is the same, lease hold tenure should be on a separate plan to freehold tenure.
- The Consultant shall be responsible for the preparation of the plans, together with survey records and other information pertaining to the survey in accordance with the requirements of the relevant registering authorities.

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- Copies of Title Searches for each property will be supplied to the Consultant; however additional searches may be necessary. Acquisition of search information shall be the responsibility of the Consultant.
 - All plans are to be “accredited” prior to being forwarded to the Project Manager. The Principal will be responsible for obtaining Ministerial Approval of Crown Plans.
 - Easement surveys are required over unallocated state lands and reserves. Where formal easements cannot be obtained over these lands, the plans will be deposited with DNRM as Red Cat plans.

7. Location and Setting Out

- The location of the proposed survey route is defined on the supplied approved route plan.
- Attention is drawn to the importance of the dimensions shown on the route plans.
- Details of preliminary survey work executed shall be recorded and supplied.
- The centreline for the new power line may not be pegged prior to survey. The coordinates provided by the Principal are accurate and pegs should be placed at each bend point. As the new power line centreline will be the basis of future structure pegging surveys it is essential that the easement surveys show connections to the centreline pegs. To facilitate reinstatement of the centreline, pins should be placed on the centreline where the line intersects with internal and boundary fences. The cadastral easement surveys should show connections to these centreline pins.

8. Property Information and Owner Contact

The Principal will notify the property owner, lessee, tenant and/or other appropriately responsible persons, by personal contact and/or by letter that surveyors will be entering the property. The Consultant shall contact, and give adequate notice to the property owner, lessee, tenant and/or other appropriate responsible person prior to entering onto the property.

The Principal will provide a property schedule complete with the names, addresses and contact phone numbers of registered proprietors and/or lessees together with the property descriptions. This schedule will also list property owner approvals to survey and any special conditions agreed to with the property owner.

It will be the responsibility of the Consultant to verify that the necessary approvals for entry onto any property have been established prior to the commencement of the survey. It shall also be the responsibility of the Consultant to be familiar with any special property arrangements or access conditions.

The Consultant shall ensure that all care is taken with property, gates are left as found, cut timber is left tidy, fences are not damaged, left down or loose, cattle pads are not blocked and that in all respects, good relations with the property owner are preserved.

Property owners are to be referred to the Principal’s Property Officers on all matters relating to easement acquisition, easement compensation and claims for property damage. The Consultant shall notify the Project Manager within 24 hours of all details relating to any incident that may result in a claim from any property owner.

9. Wet Weather

The Consultant shall continue with easement surveys whenever weather and ground conditions permit.

10. Adjustments

If additional work or visits are necessary to remedy any error or oversight by the Consultant the cost is to be borne by the Consultant.

If additional work or visits are required by the Project Manager or if delays are caused through holdups attributable to reasons beyond the control of the Consultant this cost will be met by the Principal based on the tendered Schedule of Rates or subject to justifiable evidence by the Consultant on the nature of the delay.

All gates are to be left closed or open, as found and adequate care is to be taken to prevent straying of or injury to livestock. Any damage or costs caused by the Consultant or their employees to gates, fences, access tracks, livestock, pastures or other property, including by fire, are to be repaired or compensated by the Consultant at their expense and to the satisfaction of the Project Manager.

11. Key Personnel

The Consultant must nominate the project surveyor, who will be in the field on the survey, and will be a licensed surveyor.

The Consultant must also nominate an office based liaison person who will also be a licensed surveyor.

12. Progress Reporting and Payment

Monthly progress reporting, in writing, shall be submitted on the first day of each month.

This report shall provide an indication of the percentage completion of each activity shown on the schedule of work.

Payment will be made on receipt of invoices submitted in terms of Clause 7 of the General Conditions of Contract for Consultancy Services.