



Management of Easement Co-Use Requests Guideline

CONTENTS

PAGE

Management of Easement Co-Use Requests Guideline..... 1

1. INTRODUCTION 3

2. GENERAL 3

3. DEFINITIONS 4

4. APPROVALS 5

 4.1 General 5

 4.2 Local Authority Approvals and SPA 5

5. APPLICATIONS FOR EASEMENT CO-USE 6

 5.1 Assessment Considerations 6

6. SPECIFIC RESTRICTIONS WITHIN EASEMENTS 7

7. ACTIVITIES ON TRANSMISSION LINE EASEMENTS (overhead and underground) . 7

 7.1 Permitted Activities 7

 7.2 Conditional Activities 7

 7.3 Prohibited Activities 7

8. EXISTING ENCROACHMENTS 8

9. FOR PROPOSED CO-USE APPLICATIONS 8

10. FOR PROPOSED IDAS APPLICATIONS 8

ATTACHMENT 1 - ANNEXURE A – GENERIC REQUIREMENTS 9

ATTACHMENT 2 - ANNEXURE B - LIST OF ACTIVITIES12

ATTACHMENT 3 - ANNEXURE C - APPLICATION FOR THE CO-USE OF A POWERLINK
EASEMENT14

1. INTRODUCTION

This guideline contains general information in relation to the management of co-use on/over electricity Easements that are either held solely by Queensland Electricity Transmission Corporation Limited trading as Powerlink Queensland ("Powerlink") or by joint ownership arrangements with other Transmission or Distribution Entities. Powerlink is a government-owned corporation that owns, develops, operates and maintains Queensland's high-voltage transmission network, which extends 1,700km from north of Cairns to the New South Wales border.

Powerlink values the safety of its employees, the public and property. This document provides information relevant to the owners of property subject to an Easement in favour of Powerlink or a Distribution Entity, or persons intending to undertake work on an Easement. The guideline reflects philosophies to ensure the safe operation and maintenance of high voltage transmission lines and associated public safety issues, while recognising the landholder's right to also make use of the affected land.

Powerlink's transmission network is largely protected by registered Easements which contain certain restrictive conditions designed to manage activities within the Easement parameters. Other control mechanisms may be employed where it is not possible to register Easements. These mechanisms may take the form of written agreements, licenses, permits to occupy or some other form of approval, collectively referred to as Wayleave Easements. The information contained in this document should be read in conjunction with, but not override, the conditions contained in any Easement document, arrangement, permit or licence.

The information provided in this document is intended to provide a general indication of co-use activities that may or may not be permitted on an Easement. Powerlink has sole authority to apply the guideline in assessing whether co-use is permissible on a case-by-case basis.

2. GENERAL

An electricity Easement is an encumbrance on the title of land which confers the right to construct, operate and maintain an electricity powerline, cable or apparatus. Easements are acquired by Powerlink to reinforce its legal right to have access to its lines, cables or apparatus for the purposes of construction, operation, maintenance, renewal and replacement. Registered Easements are a public record, and are generally acquired in perpetuity. Easements refer to a clearly defined area and give Powerlink the ability to control some development activities within that defined area. Easements therefore impose an obligation on affected property owners to avoid doing anything which substantially interferes with the rights of Powerlink. Easement conditions and agreements may vary on each corridor and more than one corridor can traverse a land parcel. Powerlink recommends property owners be familiar with the conditions attached to the Easement over their land. .

Powerlink adopts a policy of prudent avoidance in respect to electric and magnetic fields. For this reason, in addition to those of access and safety, Powerlink will not allow dwellings or substantial structures (associated with people exposure) to be built either partially or wholly within the Easement.

To maintain the safe operation of transmission lines, Powerlink has a statutory obligation to keep clear any trees that will infringe safety clearance parameters. The clearances as set out in the Electrical Safety Regulations 2013 Schedule 2, as well as the relevant Powerlink vegetation maintenance rules, guides and work instructions, will all be used by Powerlink to assess any applications made for a Material Change of Use or Co-use.

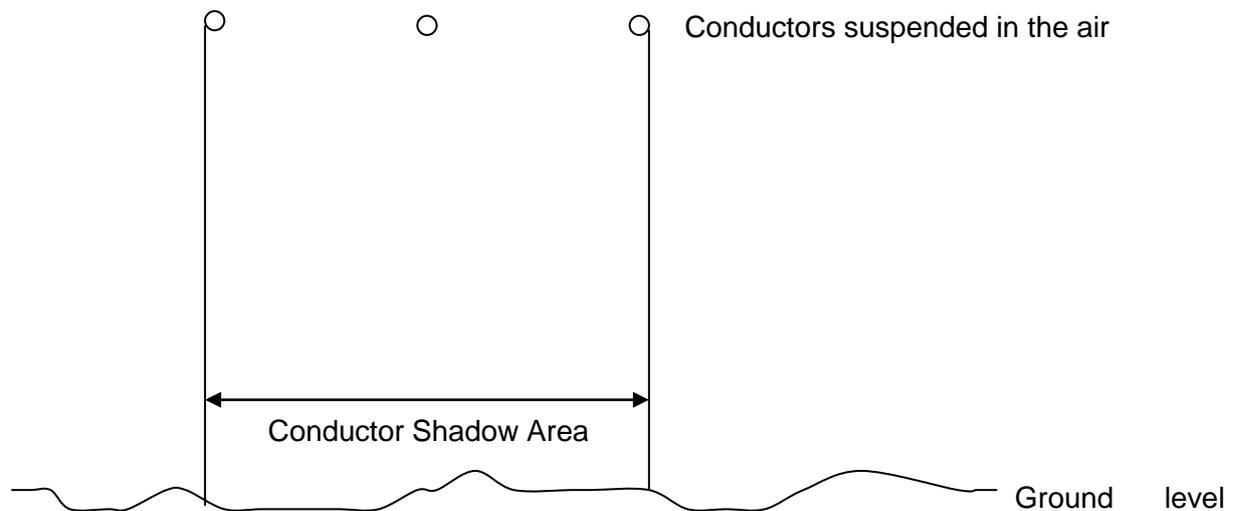
3. DEFINITIONS

Advice Agency for a development application, means an entity prescribed under a regulation as an advice agency for the application.

Blow Out Conditions – High wind conditions which cause the transmission line wires to swing out and away from the structure.

Co-uses – any structure, equipment or activity that is, is to be, or is likely to be present for any purpose within an Easement.

Conductor Shadow Area - the area between the outside conductors of a transmission line when at rest, vertically projected onto the ground beneath. See diagram below.



Distribution Entity- in Queensland, this refers to electricity supply corporations: Energex and Ergon Energy.

Easements - refers to all Easements registered in the Department of Natural Resources and Mines, Titles Office, as well as rights obtained in terms of Wayleave Easements. The conditions of both Easements and Wayleave Easements permit electricity works to be constructed, operated, maintained, re-constructed and dismantled by Powerlink. The term also includes the physical Easement area.

Electric Field Induction – A mechanism where the voltage of the transmission line causes a smaller voltage to build up on conducting (i.e. metallic) structures situated in close proximity to transmission lines.

Electricity Works - means such works, apparatus, structures and things, as Powerlink may consider appropriate as a means of conveying or transmitting electricity, telecommunications and other electromagnetic energy in all its forms. This includes conductors, cables, towers, aerials, poles, foundations, ground anchorage's, supports and other associated works. The expression includes the Electricity Works existing or proposed on the Easement.

Magnetic Field Induction – The magnetic field arising from current flow in a transmission line causes a voltage to build up on conducting (i.e. metallic) structures situated in close proximity to transmission lines.

Material Change of Use, of premises, means—

- (a) the start of a new use of the premises; or
- (b) the re-establishment on the premises of a use that has been abandoned; or
- (c) a material change in the intensity or scale of the use of the premises.

Phase to Earth Fault – A short circuit connection from a transmission line wire to the ground. An example is a tree in contact with the bottom conductor of a transmission line.

Reconfiguration means the subdivision or amalgamation of a lot.

Transferred Potential – consider the situation where a long metallic structure (eg a fence) passes in close proximity to an earthing system for a transmission line or substation. In the event of a fault on the transmission line or substation, transferred potential is the mechanism where the adjacent metallic object can rise in voltage and transfer this voltage to the remote end of the object (i.e. the far end of the fence) where a person may be in contact with it.

Transmission Entity – in Queensland this refers to the Queensland Electricity Transmission Corporation Limited.

Wayleave Easements – a permission that is unregistered to construct, operate and maintain Electricity Works across land. This permission may take the form of written agreements, licenses, permits to occupy or some other form of approval.

4. APPROVALS

4.1 General

To ensure the policy is applied consistently, all approvals of co-use applications or activities affecting Easements will be notified in writing and will include the general conditions set out in Annexure A.

The Manager Network Property has the authority to grant such approvals.

Where specified, or where there is any doubt, evaluations will be based on an engineering assessment which may require a preconstruction inspection and/or a post-construction inspection.

4.2 Local Authority Approvals and SPA

4.2.1 SPA

Where Easements have been designated for community infrastructure under the *Sustainable Planning Act 2009 (SPA)*, the easements must be recorded in the local authority's planning scheme and maps. Prior to the introduction of the *Sustainable Planning Act 2009 (SPA)*, the *Electricity Act 1994* contained a provision that required the incorporation of Powerlink's operating works and totally vacant easements on local authority's maps and in any new planning schemes.

Powerlink is an Advice Agency under the Sustainable Planning Regulation 2009 for:

- The reconfiguration of a lot if:
 - any part of the lot is subject to an Easement in favour of a Distribution Entity or Transmission Entity under the *Electricity Act 1994* and the Easement is for a transmission grid or distribution supply network under that act; or
 - any part of the lot is situated within 100 metres of a substation site; and

- A Material Change of Use not associated with Reconfiguring a lot if:
 - Any part of the premises is subject to an Easement in favour of a Distribution Entity or Transmission Entity under the *Electricity Act 1994* and the Easement is for a transmission grid or distribution supply network under that act; and
 - any structure or work that is the natural and ordinary consequence of the use is, or will be, located wholly or partly in the Easement; or
 - any part of the premises is situated within 100 metres of a substation site; and
- Operational work that is filling or excavation, not associated with reconfiguring a lot, if:
 - any part of the premises is subject to an Easement in favour of a Distribution Entity or Transmission Entity under the *Electricity Act 1994* and the work is located wholly or partly in the Easement; or
 - the work is located wholly or partly within 10 metres of a substation site.

Being an Advice Agency means that even though local authority or private certifier approval is forthcoming, Powerlink's advice on certain activities will still be required. This advice is required in addition to Powerlink's consent.

4.2.2 Local Authority Approval

Powerlink's consent must be sought for the dedication of a Road Reserve on land covered by its easements.

5. APPLICATIONS FOR EASEMENT CO-USE

Powerlink has responsibility for safe and continuous operation of the transmission network and requires access for maintenance, repair, replacement and renewal. It is essential that Powerlink's access along the Easement is not obstructed. Therefore buildings, structures or other objects should not be placed on an Easement.

Powerlink also places high priority on public safety. For the safety of property owners and members of the public, activities which may create a public safety risk should not occur on the Easement. Such risks could possibly arise from induction, step or touch potentials under fault conditions, infringement of safety clearances to conductors or uncovering the structure's earthing system.

Easement conditions give Powerlink the right to construct, maintain, operate, re-construct and dismantle assets on the Easement and to allow vehicle access along the Easement. Some Easement conditions also allow access from the nearest public road across a property containing an Easement.

5.1 Assessment Considerations

When evaluating co-use applications on Easements, Powerlink will also consider probable future plans for augmentation or reconstruction of transmission lines to ensure the co-use applications do not jeopardise future Powerlink plans for the Easement.

In the assessment of a request for a:

- co-use;
- Material Change of Use;
- Reconfiguration of a lot; or
- operational work

within an Easement, the most important questions considered are the following:

- a) Will it result in a public safety risk or hazard? What will be the effect on the safety of persons in respect of Electric and Magnetic Field Induction, earth potential rise, and Transferred Potential, especially during a Phase to Earth Fault?;
- b) Will it affect the safe operation of the line, cable or other asset?;
- c) Will it unduly restrict access, particularly to overhead line structures, underground cable joint bays or surface installations?;
- d) Will it infringe the requirements of the *Electrical Safety Regulation 2013* or other relevant safety criteria with respect to clearances including those which occur under Blow Out Conditions?; and
- e) Will it affect any *anticipated* future works, including maintenance, refurbishment or replacement? This may be particularly critical where space has been provided on the easement for a future transmission line.

6. SPECIFIC RESTRICTIONS WITHIN EASEMENTS

Enquiries are frequently made by property owners and others with regard to the restrictions which apply to the use of land affected by Easements. The activities listed in Annexure B have been categorised as being either “**permitted**”, “**conditional**”, or “**prohibited**”. It should be noted that the list covers a range of common requests and is not necessarily exhaustive. The omission of a particular activity does not relieve those concerned from seeking advice from Powerlink where there is any doubt as to whether Powerlink’s rights are likely to be infringed.

7. ACTIVITIES ON TRANSMISSION LINE EASEMENTS (overhead and underground)

7.1 Permitted Activities

Many everyday activities can be safely carried out on the Easement, eg walking, gardening, driving, parking. Permitted activities are those which do not interfere or obstruct Powerlink in its activities involving construction, operation, maintenance, renewal or replacement of its Electricity Works.

7.2 Conditional Activities

The activities under this category are normally prohibited within transmission line Easements. However, on occasion Powerlink may approve conditional activities which are restricted to a certain distance from the conductor shadow area or structures. Approval to engage in such activities will not be granted other than in the most exceptional circumstances. They will require the prior written consent of Powerlink. These activities are considered to pose an unacceptable level of risk or hindrance to Powerlink’s activities, or to other persons and are therefore limited to those activities that will not restrict or interfere with the maintenance or safe operation of the Electricity Works, provided certain conditions are met. In addition to specific conditions, general conditions, as set out in Annexure A, also apply.

7.3 Prohibited Activities

The activities in this category are prohibited. Powerlink will not allow dwellings or substantial structures to be built within the Easement, in order to exercise prudence in respect of exposure to electric and magnetic fields, and maintain access and safety. However, in some

exceptional instances, Powerlink will permit construction or extensions, provided certain conditions are met (See Conditional Activities).

8. EXISTING ENCROACHMENTS

Powerlink does not accept any liability for damage, howsoever caused, to any unapproved Easement co-use. Where there is an existing encroachment and an applicant applies to obtain Powerlink's consent, or Powerlink discovers the encroachment, Powerlink will assess the encroachment against the following criteria:

Step 1. If the encroachment:

- Does not compromise personal safety, **AND**
- Does not compromise access to the line structures or underground cables, **AND**
- Is not a prohibited activity, **AND**
- Statutory clearances are maintained, **AND**
- It is not living accommodation,

the property owner may be offered a conditional approval.

Step 2. If the encroachment is assessed as prohibited, the owner shall be notified in writing immediately, to the effect that:

- The co-use is an encroachment and is deemed prohibited; and
- All liability rests with the owner; and
- Powerlink is considering options including its removal (at owners' expense).

9. FOR PROPOSED CO-USE APPLICATIONS

A formal application for co-use, fulfilling Powerlink's requirements must be lodged using the form listed at Annexure C and forwarded to:

Property Services,
Powerlink,
PO Box 1193,
VIRGINIA Q. 4014

The application will be assessed according to Powerlink's Assessment Policy for the assessment of application requests and the applicant advised of the outcome in writing within 30 business days from receipt.

10. FOR PROPOSED IDAS APPLICATIONS

For Material Change of Use and Reconfiguration of a lot required under local authority planning schemes, please complete the IDAS forms located on the Department of Local Government and Planning's website and forward these forms to:

Property Services,
Powerlink,
PO Box 1193,
VIRGINIA Q. 4014.

The IDAS applications will be assessed in accordance with the *Sustainable Planning Act 2009 (SPA)*.

ANNEXURE A – GENERIC REQUIREMENTS

The conditions contained in this Annexure have been compiled to assist persons (the applicant) intending to undertake work within the vicinity of high-voltage electrical installations and infrastructure owned or operated by Powerlink. The conditions are supplementary to the provisions of the Electrical Safety Act 2002, Electrical Safety Regulation 2013 and the Terms and Conditions of Registered Easements and other forms of Occupational Agreements hereinafter collectively referred to as the “Easement”. Where any inconsistency exists between this Annexure and the Easement, the Easement shall take precedence.

1. POWERLINK INFRASTRUCTURE

You may not do any act or thing which jeopardises the foundations, ground anchorages, supports, towers or poles, including (without limitation) inundate or place, excavate or remove any soil, sand or gravel within a distance of twenty (20) metres surrounding the base of any tower, pole, foundation, ground anchorage or support.

2. STRUCTURES

No structures should be placed within twenty (20) metres of any part of a tower or structure foundation or within 5m of the conductor shadow area. Any structures on the easement require prior written consent from Powerlink.

3. EXCLUSION ZONES

Exclusion zones for operating plant are defined in Schedule 2 of the Electrical Safety Regulation 2013 for Untrained Persons. All Powerlink infrastructure should be regarded as “electrically live” and therefore potentially dangerous at all times.

In particular your attention is drawn to Schedule 2 of the Electrical Safety Regulation 2013 which defines exclusion zones for untrained persons in charge of operating plant or equipment in the vicinity of electrical facilities. If any doubt exists in meeting the prescribed clearance distances from the conductors, the applicant is obliged under this Act to seek advice from Powerlink.

4. ACCESS AND EGRESS

Powerlink shall at all times retain the right to unobstructed access to and egress from its infrastructure. Typically, access shall be by 4WD vehicle.

5. APPROVALS (ADDITIONAL)

Powerlink's consent to the proposal does not relieve the applicant from obtaining statutory, landowner or shire/local authority approvals.

6. MACHINERY

All mechanical equipment proposed for use within the easement must not infringe the exclusion zones prescribed in Schedule 2 of the Electrical Safety Regulation 2013. All operators of machinery, plant or equipment within the easement must be made aware of the presence of live high-voltage overhead wires. It is recommended that all persons entering the Easement be advised of the presence of the conductors as part of on site workplace safety inductions. The use of warning signs is also recommended.

7. EASEMENTS

All terms and conditions of the easement are to be observed. Note that the easement takes precedence over all subsequent registered easement documents. Copies of the easement together with the plan of the Easement can be purchased from the Department of Environment & Resource Management.

8. EXPENDITURE AND COST RECOVERY

Should Powerlink incur costs as a result of the applicant's proposal, all costs shall be recovered from the applicant.

Where Powerlink expects such costs to be in excess of \$10 000.00, advanced payments may be requested.

9. EXPLOSIVES

Blasting within the vicinity (500 metres) of Powerlink infrastructure must comply with AS 2187. Proposed blasting within 100 metres of Powerlink infrastructure must be referred to Powerlink for a detailed assessment.

10. BURNING OFF OR THE LIGHTING OF FIRES

We strongly recommend that fires not be lit or permitted to burn within the transmission line corridor and in the vicinity of any electrical infrastructure placed on the land. Due to safety risks Powerlink's written approval should be sought.

11. GROUND LEVEL VARIATIONS**Overhead Conductors**

Changes in ground level must not reduce statutory ground to conductor clearance distances as prescribed by the Electrical Safety Act 2002 and the Electrical Safety Regulation 2013.

Underground Cables

Any change to the ground level above installed underground cable is not permitted without express written agreement of Powerlink.

12. VEGETATION

Vegetation planted within an easement must not exceed 3.5 metres in height when fully matured. Powerlink reserves the right to remove vegetation to ensure the safe operation of the transmission line and, where necessary, to maintain access to infrastructure.

13. INDEMNITY

Any use of the Easement by the applicant in a way which is not permitted under the easement and which is not strictly in accordance with Powerlink's prior written approval is an unauthorised use. Powerlink is not liable for personal injury or death or for property loss or damage resulting from unauthorised use. If other parties make damage claims against Powerlink as a result of unauthorised use then Powerlink reserves the right to recover those damages from the applicant.

14. INTERFERENCE

The applicant's attention is drawn to s.230 of the Electricity Act 1994 (the "Act"), which provides that a person must not wilfully, and unlawfully interfere with an electricity entity's works. "Works" are defined in s.12 (1) of the Act. The maximum penalty for breach of s.230 of the Act is a fine equal to 40 penalty units or up to 6 months imprisonment.

15. REMEDIAL ACTION

Should remedial action be necessary by Powerlink as a result of the proposal, the applicant will be liable for all costs incurred.

16. OWNERS USE OF LAND

The owner may use the easement land for any lawful purpose consistent with the terms of the registered easement; the conditions contained herein, the Electrical Safety Act 2002 and the Electrical Safety Regulation 2013.

17. ELECTRIC AND MAGNETIC FIELDS

Electric and Magnetic Fields (EMF) occur everywhere electricity is used (e.g. in homes and offices) as well as where electricity is transported (electricity networks).

Powerlink recognises that there is community interest about Electric and Magnetic Fields. We rely on expert advice on this matter from recognised health authorities in Australia and around the world. In Australia, the Federal Government agency charged with responsibility for regulation of EMFs is the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). ARPANSA's *Fact Sheet – Magnetic and Electric Fields from Power Lines*, concludes:

"On balance, the scientific evidence does not indicate that exposure to 50Hz EMF's found around the home, the office or near powerlines is a hazard to human health."

Whilst there is no scientifically proven causal link between EMF and human health, Powerlink nevertheless follows an approach of "*prudent avoidance*" in the design and siting of new powerlines. This includes seeking to locate new powerline easements away from houses, schools and other buildings, where it is practical to do so and the added cost is modest.

The level of EMF decreases rapidly with distance from the source. EMF readings at the edge of a typical Powerlink easement are generally similar to those encountered by people in their daily activities at home or at work. And in the case of most Powerlink lines, at about 100 metres from the line, the EMF level is so small that it cannot be measured.

Powerlink is a member of the ENA's EMF Committee that monitors and compiles up-to-date information about EMF on behalf of all electricity network businesses in Australia. This includes subscribing to an international monitoring service that keeps the industry informed about any new developments regarding EMF such as new research studies, literature and research reviews, publications, and conferences.

We encourage community members with an interest in EMF to visit ARPANSA's website: www.arpansa.gov.au Information on EMF is also available on the ENA's website: www.ena.asn.au

ANNEXURE B - LIST OF ACTIVITIES**(Note - this list is not exhaustive)**

Type	Permitted	Conditional	Prohibited
Construction		Construction of houses, buildings, substantial structures or parts thereof, including eaves. These activities are considered "Prohibited". In exceptional circumstances, consideration may be given to some relaxation for small encroachments.	The construction of houses, buildings, substantial structures or parts thereof, including eaves, that are: <ul style="list-style-type: none"> • suitable for habitation; • readily convertible to living quarters or occupied for a significant period; • not practically relocatable; or • in excess of 2.5 metres in height.
Driving regular height vehicles	Yes		
Encroachment			Any activity which may negatively affect Powerlink's rights and/or intrude into the regulated safety exclusion zone as defined in the <i>Electrical Safety Regulation 2013</i> .
Flammable Material, etc.			The storage of flammable material, liquids or explosives.
Garbage, etc.			The placing of garbage, refuse, heaping of windows or fallen timber.
Gardening (not landscaping)	Yes		
Landscaping		An assessment will be made regarding ground level alterations and planting of vegetation	
Obstructions			The placing of obstructions of any type within 20 metres of any part of any supporting structure.
Parking (cars only)	Yes		

Type	Permitted	Conditional	Prohibited
Sheds and Garages		Construction of sheds and garages are considered "Prohibited". Only in exceptional circumstances will consideration be given to some relaxation.	
Swimming Pools		Swimming Pools 35m or more from a supporting structure may be approved, with due consideration to conductor clearance and earthing requirements. Applications for pools between 20m and 35m from a supporting structure will need detailed assessment prior to a decision on whether to approve.	Swimming pools, whether above or in-ground, within 20m of a supporting structure, or within the conductor shadow area.
Trees	The planting or cultivation of trees with a mature height less than 3.5 metres and provided Powerlink's access is not impeded.		The planting or cultivation of trees with a mature height greater than 3.5 metres.
Walking	Yes		



ANNEXURE C - APPLICATION FOR THE CO-USE OF A POWERLINK EASEMENT

Full name of applicant:

Applicant's Postal Address:.....

Tel:.....

Fax:.....

Mobile:.....

E-mail:.....

Description of the property in question

Real Property Description (from rates notice):.....

Street Address:.....

Purpose of co-use (E.g. building a sports field, laying a pipe etc.)

.....
.....
.....

The number of the nearest pylon or pole to the place where the co-use is planned (if known)

.....

Details of any construction, plant or machinery use:

A description of the activities, which will occur, and machinery to be used (E.g. excavation, levelling, lifting by crane etc., including maximum extendable height. Attach separate sheets if necessary.).

.....
.....

If explosives are to be used a blasting plan must be attached.

Please provide the following information where applicable

Locality plan and a plan on reasonable scale indicating:

- the dimensions of the structure or object intended to be placed within the easement, e.g. height, length, and width, as well as any other accessories such as storm water pipes etc.
- type of materials that will be used eg. timber, metal, concrete, brick etc.
- the distance from the nearest transmission line structure (as above)
- cross section drawings of proposed cut/fill with the dimensions accurate to 0.1 metres indicating cut/fill and final finished level,
- North arrow.

If this application complies with Powerlink requirements, work will commence in.....(MONTH/YEAR),

and is expected to be completed in(MONTH/YEAR)

SIGNED BY THE APPLICANT.....

DATE.....