

Thomas Piovesan

Subject: FW: 2017-305 - Notice of Exhibition - Costco Wholesale Warehouse and Distribution Centre (SSD 8209) - Penrith LGA
Attachments: TG Easement Guidelines for Third Party Development (V10).pdf

From: Skye Shanahan [mailto:Skye.Shanahan@transgrid.com.au] **On Behalf Of** Easements&Development
Sent: Wednesday, 1 November 2017 1:39 PM
To: Thomas Piovesan <thomas.piovesan@planning.nsw.gov.au>
Subject: RE: 2017-305 - Notice of Exhibition - Costco Wholesale Warehouse and Distribution Centre (SSD 8209) - Penrith LGA

Hi Thomas,

TG Reference Number: 2017 – 305

RE: Notice of Exhibition
Costco Wholesale Warehouse and Distribution Centre (SSD 8209) - Penrith LGA – Lot
12 in DP 1178389

Thank you for referring the above mentioned SSD proposal to TransGrid. Further to my colleagues email sent on Friday afternoon (Lauren Vine), we apologise for the delay in response and will aim to provide the *Department of Planning and Environment* with a prompt formal submission once we can clarify a few components of this SSD.

As you are aware, TransGrid operates and maintains the NSW high voltage transmission line network. After review of the subject parcel of land, TransGrid can confirm the development site is impacted by the following TransGrid infrastructure and easement:

- *Sydney South – Sydney West No 1 330KV transmission line (feeder 30, structure span 10-13)*

In the interest of public safety, the design and placement of any proposed development should ‘prudently avoid’ TransGrid easements and infrastructure. Any development to be located near high voltage transmission lines must be thoroughly assessed by TransGrid and this process takes considerable time. A review of the final design of the proposed development must be undertaken by our engineers.

As preliminary advice please see a copy of *TransGrid’s Easement Guidelines for Third Party development (V10)* above. These guidelines are not an exhaustive list and should there be any uncertainty further consultation with TransGrid is required.

Can you please request from the developer

1. Is the developer proposing to change the existing ground level within our transmission line easement? If yes then we will require a 3D DXF plan to check the vertical and horizontal clearances of the new proposed finish ground level.

We refer to drawing (**DAC1.01 – Issue A**), this plan refers to a carpark. However, the plan isn’t clear if it will be encroaching into our easement corridor? If yes then a 3D DXF plan will be required. TransGrid will also need to assess the small access road connecting onto the roundabout, as this

will be encroaching into our easement. Is this part of this SSD or has it been previously approved in a prior determination.

2. Please also advise of any other proposed activity either within TransGrid's easement and/or immediately adjacent too.

For example is there any pipes and/or cables proposed to encroach into TransGrid's Easement corridor?

TransGrid requires time to duly assess the proposed development per the documentation provided, particularly to the extent that impacts on our easement and the infrastructure therein. This review of the proposed development must be completed prior to a formal response to the notice issued.

If you have any questions, please do not hesitate to contact me directly.

Kind regards,

Skye Shanahan

Enquiry Services Coordinator | Network Planning and Operations

TransGrid | PO Box 87, Horsley Park

T: (02) 9620 0104

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Background

TransGrid acquires Transmission Line (TL) and cable easements to provide adequate clearance along the route of a TL for construction and maintenance work and to preserve certain property rights in perpetuity. These easements also ensure no work or other activity is undertaken under or near a TL or cable that could create an unsafe situation either for persons or for the security of the TL or cable.

The TL or cable easement area and its ongoing maintenance are control measures that cannot be compromised. Easements are established to prevent and mitigate against the following electrical safety risks:

- > Infringement of electrical safety clearances e.g. due to an activity or vegetation growth;
- > Electrical Induction e.g. due to parallel conducting materials;
- > Step and touch potentials under fault conditions e.g. due to lightning or bushfire;
- > Failure of structures or line equipment e.g. due to third party vehicle or plant impact;
- > Transfer off easement of dangerous voltages, e.g. by services installed within the easement area; and
- > Blowout of a conductor under high wind (or blow in of vegetation) e.g. into an adjacent structure.

TransGrid's paramount concern is the safety of people and property. TransGrid is also bound to maintain its infrastructure efficiently and cost effectively. The TL and cable easements, along with the accesses, have been designed to facilitate effective operational maintenance.

Development Approval Process

The *Environmental Planning and Assessment Act 1979* may empower Local Councils to act as the consent authority for development applications. In these situations, a Development Application (DA) is prepared and submitted to the Local Council for development consent.

The *State Environmental Planning Policy (Infrastructure) 2007* (SEPP), which commenced on 1 January 2008, requires Local Councils to consult with Electricity Network Operators before granting development consent for proposals that might adversely affect:

- > existing electricity infrastructure; and
- > easements for electricity purposes, even if no infrastructure has yet been constructed in the easement.

The Local Council must take into consideration any comments made by the Electricity Network Operator who has 21 days to respond to any written notification of a DA received by Council. Council must take into consideration any comments provided by the Electricity Network Operator before it determines any DA. TransGrid's initial response may be a request for additional information to assess a development that seeks to encroach or is immediately adjacent to our easements and infrastructure. Such a request is likely to then be forwarded to the applicant.

The party submitting the development application is required to consult with TransGrid in accordance with the *State Environmental Planning Policy (Infrastructure) 2007 (SEPP)*; the *NSW Occupational Health and Safety Act 2000*; the WorkCover NSW 'Work Near Overhead Power Lines' Code of Practice 2006, and; the WorkCover NSW 'Work Near Underground Assets' Guide 2007.

TransGrid Approval

The statutory approval authority should obtain a written approval from TransGrid for all proposed activities within an easement area in accordance with regulation 45 of the *SEPP*.

It is recommended that the development proponent consult with TransGrid prior to lodging a DA, so the proposed development may be assessed relative to TransGrid's easements and infrastructure within the specific locality. Statutory notification pursuant to regulation 45 of the *SEPP* may not always provide an adequate response time for TransGrid to assess any development proposed within or immediately adjacent to our easements and infrastructure. Therefore, it is considered to be in the best interests of any development proponent to thoroughly consult and attempt to resolve all and any issues with TransGrid prior to submitting a DA. In consulting with TransGrid prior to submitting the DA, the following information must be provided.

1. Detailed specifications and plans drawn to scale and fully dimensioned, showing property boundaries and other relevant information. Survey plans must clearly identify TransGrid's easements; any high voltage transmission infrastructure located therein (including stanchions); and horizontal clearances;
2. Three dimensional CAD file of the development, preferably in 3D-DXF format; and
3. TransGrid will also require an *Impact Assessment* of the development on TransGrid's infrastructure and associated interests (including easements). Details of how any adverse impacts will be managed, mitigated or resolved must also be provided. The *Impact Assessment* form is contained in **Appendix A** of these guidelines.

Upon receipt of the abovementioned documentation, TransGrid will assess the proposed development in relation to its impact on TransGrid infrastructure, easements and means of access. For complicated proposals the consultation process will be comprehensive and the proponent should allow sufficient time for this process prior to lodgement of a DA (see *Timeframes* below).

General Development Proposal Guidelines

1. Prohibited Activities and Encroachments

A number of activities and encroachments are not permitted within the easement area. These are detailed in the "TransGrid Easement Guide" contained in **Appendix B** of these guidelines.

Any *Development Proposal* should be designed in such a way that:

- > It does not involve the listed activities, nor introduce the identified encroachments; and
- > Does not encourage other parties to undertake such activities or introduce such encroachments in the future.

2. Development

The Development Proposal should be planned taking into consideration the policy of "*prudent avoidance*" as identified by The Right Honourable Harry Gibbs Report (*Inquiry into Community Needs and High Voltage Transmission Line Development*).

This report placed recommendations on the design of new TL's having regard to their proximity to houses, schools, work sites and the like and is equally valid when considering new developments proposed in proximity to existing powerlines and associated easements.

The policy not only considers electrical safety risks it also takes into consideration Electric and Magnetic Field (EMF). The EMF strength rises from the easement edge to beneath the conductors and the most practical way to achieve *prudent avoidance* is to keep any development entirely outside the easement area.

If it is desired to place any part of a development within an easement the proponent shall, in conjunction with the *Development Proposal*, undertake an *Impact Assessment* (see **Appendix A**) to be provided to TransGrid that covers the changes in risk and mitigation measures proposed. General development requirements are listed in **Appendix C**.

Relocating Infrastructure and Interruption to Transmission

The development proponent will be liable for any costs involved in any agreed relocation of TransGrid infrastructure as part of any proposed development. Depending on how the development proposes to encroach on TransGrid's easement, an earthing study and earthing modifications may be required at the developer's expense. Further, the developer will also be liable for any costs and penalties incurred as a consequence of interruptions to TransGrid's transmission operations arising from the development, whether planned or inadvertent.

Post Construction Compliance Statement

The Development Proposal, as provided to TransGrid, must include as-built plans compliant with TransGrid's drawing management system of the final construction where approval of an encroachment is granted. The as-built drawings must be accurate, scaled and display distances/measurements, demonstrating compliance to the agreed plans and implementation of agreed control measures.

Timeframes

TransGrid will respond to a Local Council notification of a proposed development within 21 days as required in the SEPP, however that response may not be an approval (or disapproval). If the Development Proposal does not meet the requirements of these Guidelines, or in the event further detailed engineering analysis is required, TransGrid may require the Development Proposal to be revised and resubmitted or additional information will be sought.

Developers are advised to consider TransGrid's requirements early in the process as discussed and not as an afterthought that could result in project delays, including the future demolition of any prohibited construction works. To this extent, development proponents and their consultants are encouraged to contact and meet with TransGrid in the preliminary planning and design stages of the development in order to establish what restrictions and prohibitions apply and what, if any conditional encroachments can be accommodated.

Further Assistance

For any further development enquiry assistance please contact the Enquiries Services Coordinator:

Enquiries Services Coordinator	Telephone	(02) 9620 0104
	Mobile	0427 094 860
TransGrid Community Liaison Group	Phone	1800 222 537
	Email	community@transgrid.com.au
	Website	www.transgrid.com.au

Appendix A - Development Proposal Impact Assessment

Details of the Development

Street Address	
Land and Title References	
Encroachment and/or Proximity to Easement	
Development Proposal's Clearances to TransGrid's high voltage infrastructure	
Detailed plans of development attached	

Safety

Consideration	Yes/No (If Yes, please provide details and mitigation/resolution)
Are ground levels being changed within or in the vicinity of the easement? If so, by how much?	
Is any part of the development proposed within 30m of a transmission line structure or guy? If so, how close to the structure/guy?	
Will the development increase earth potential rise risk? (If unsure please consult with TransGrid Enquiries Services Coordinator.)	
Will the development contain metallic structures or services in the easement?	
Will the development result in voltages being transferred off the easement or bring remote earths onto the easement? (If unsure, please consult with TransGrid's Enquiries Services Coordinator.)	
Are public spaces or recreational areas proposed within or adjacent to the easement?	
Will the development encourage people to congregate and/or spend time within the easement or immediately adjacent thereto?	
Are structures with a height greater than 2.5m proposed on the easement?	
Will an Elevated Work Platform (EWP) be required to maintain any structures within the easement?	
Is infrastructure proposed that is a fire hazard, or that would encourage the storage or use of flammable material on the easement?	
Is infrastructure proposed that would require emergency workers (such as fire fighters) to come near, or their equipment to come onto or near high voltage conductors?	

Consideration	Yes/No (If Yes, please provide details and mitigation/ resolution)
Will the easement or the nature of the land in the vicinity of the easement, be altered in any way that would encourage prohibited encroachments to occur within the easement?	
Will access around any TransGrid structure be altered preventing EWP's, crane or other plant access? (Required for TransGrid maintenance purposes.)	
Will the development introduce other risks to maintenance staff when working within the easement?	
Will access to the easement be altered that would introduce risks to TransGrid personnel including, although not limited to, asset inspectors or patrol staff?	

Operations

Consideration	Yes/No (If Yes, please provide details and mitigation/ resolution)
Have any ground level developments been proposed (including roads, driveways, parking lots and turning bays etc) that would expose TransGrid transmission structures and lines to impact risk? (If unsure please consult with the TransGrid Enquiries Services Coordinator.)	
Will the development result in a change in water flows or drainage that could impact on the foundations or structural integrity of any TransGrid structure or guy-wire?	
Are excavations or surface activities proposed that would impact a TransGrid structure's foundations, stability or subterranean earthing systems? (If unsure please consult with the TransGrid Enquiries Services Coordinator.)	

Maintenance

Consideration	Yes/No (If Yes, please provide details and mitigation/ resolution)
Have roads, driveways or landscaping been proposed that would prevent or hinder TransGrid maintenance, or increase maintenance costs, for the above or below ground components of the transmission line structure?	
Will access to the easement or within the easement, be obstructed, restricted or altered?	
Have access roads, bridges, crossings and the like been designed to cater for the weight and size of TransGrid maintenance plant (EWPs and Cranes)?	
Does the development encourage the placement of obstructions that would prevent access for routine or emergency works?	

Development Design & Construction

Consideration	Yes/No (If Yes, please provide details and mitigation/ resolution)
Has the development been designed so that during the construction phase TransGrid is not restricted from undertaking normal maintenance and inspection activities?	
Has the development been designed so that during the construction phase prohibited activities or encroachments are not required in the easement area?	
Has the design health and safety risk assessment complied with the following WorkCover NSW instruments: <ul style="list-style-type: none">• 'Work Near Overhead Power Lines' Code of Practice 2006; and/or• 'Work Near Underground Assets' Guide 2007?	

TransGrid's Rights

Consideration	Yes/No (If Yes, please provide details and mitigation/ resolution)
Are TransGrid's existing access rights preserved, pursuant to the terms of the easement?	
Will TransGrid be exposed to new or higher maintenance costs (e.g. landscaping or other development changes impacting easement access, use and maintenance)?	
Does a new deed of easement need to be negotiated by the development proponent?	

Preservation of Easement for Access

Consideration	Yes/No (If Yes, please provide details and mitigation/ resolution)
Will TransGrid's <i>Easement for Access</i> be affected?	
Does a new <i>Easement for Access</i> need to be arranged by the development proponent, including to supersede an existing registered right of carriageway?	

Appendix B - Prohibited encroachments and activities

TransGrid will use its powers under the Electricity Supply Act, involve WorkCover or take other legal action as required to prevent or halt prohibited activities.

1. Transmission Lines

Activities and encroachments that are **prohibited** within a Transmission Line (TL) Easement include, but are not limited to (Note 2), the following:

- > The construction of houses, buildings, substantial structures, or parts thereof.
- > The installation of fixed plant or equipment.
- > The storage of flammable materials, corrosive or explosive material.
- > The placing of garbage, refuse or fallen timber.
- > The planting or cultivation of trees or shrubs capable of growing to a height exceeding 4 metres.
- > The placing of obstructions within 20 metres of any part of a transmission line structure or supporting guy-wire.
- > Camping or the permanent parking of caravans or other camping vehicles.
- > Public spaces or recreational areas which encourage people to spend time within or congregate within the easement.
- > The parking or storage of flammable liquid carriers or containers.
- > The installation of site construction offices, workshops or storage compounds.
- > Flying of kites or wire-controlled model aircraft within the easement area.
- > Flying of any manned aircraft or balloon within 60m of any structure, guy-wire or conductor.
- > Flying of remote controlled or autonomous aerial devices (such as UAVs) within 60m of any structure, guy-wire or conductor.
- > Placing any obstructions on access tracks or placed within the easement area that restricts access.
- > Any vegetation maintenance (such as felling tall trees) where the vegetation could come within the Ordinary Persons Zone – refer to the WorkCover NSW 'Work Near Overhead Power Lines' - Code of Practice 2006'.
- > Any substantial excavation within 15 metres of a pole or supporting guy-wire or guy foundation or within 20 metres of a tower
- > The climbing of any structure (any development that encourages or facilitates climbing will not be permitted).
- > Any change in ground levels that reduce clearances below that required in AS7000.
- > The attachment of any fence, any signage, posters, or anything else, to a structure or guy-wire.
Note: Interference to electricity infrastructure is an offence under the *Electricity Supply Act 1995*.
- > The movement of any vehicle or plant between the tower legs, within 5m of a structure, guy-wire or between a guy-wire and the transmission pole.
Note: Any damage to electricity infrastructure is an offence under the *Electricity Supply Act 1995*.
- > The storage of anything whatsoever within the tower base or within 10m of any tower leg.
- > Any structure whatsoever that during its construction or future maintenance will require an Accredited person to access.
Note: The final structure may meet AS7000 clearances, but may be accessible (e.g. by EWP) by Ordinary Persons within the Ordinary Persons Zone.
- > Any work that generates significant amounts of dust or smoke that can compromise the TL high voltage insulation.
- > The erection of any structure in a location that could create an unsafe situation work area for TransGrid staff.
- > Burning off or the lighting of fires.

- > Any activity (including operation of mobile plant or equipment having a height when fully extended exceeding 4.3 metres) by persons not Accredited or not in accordance with the requirements of the WorkCover NSW 'Work Near Overhead Power Lines' Code of Practice 2006 that is within (Note 1):
 - 3m of an exposed 132kV overhead power line
 - 6m of an exposed 220kV or 330kV overhead power line
 - 8m of an exposed 500kV overhead power line

Note: Distances quoted are to the design conductor position (i.e. maximum sag and blowout)

The following activities may possibly be approved with conditions. TransGrid's prior written consent is required. The proponent will have to demonstrate (using the Impact Assessment process) that the risks associated with the activity have been satisfactorily mitigated.

- > Temporary parking of caravans and other large vehicles in the outer 3m of the easement area, subject to a 4.3 metre height restriction and metallic parts being earthed.
- > The erection of flagpoles, weather vanes, single post signs, outdoor lighting, subject to a 4.3 metre height restriction and metallic parts being earthed.
- > The erection of non-electric agricultural fencing, yards and the like.

Note: Fencing that exceeds 2.5 metres in height or that impedes access would not be approved.

- > The erection of metallic fencing less than 2.5 metres in height providing that it is earthed, located more than 20 metres from any part of a transmission line structure or supporting guy and greater than 4 metres of the vertical projection of the overhead conductors.
- > The erection of electric fencing provided that the height of the fencing does not exceed 2.5 metres and provided that the fence does not pass beneath the overhead conductors.

Note: Approval may be given for a portable electric fence to pass underneath the conductors provided that it is supplied from a portable battery-powered energiser that is located remotely from frequented areas. Where it is necessary for a permanent electric fence to pass beneath the overhead conductors, or where an extensive permanent electric fencing system is installed in proximity to a transmission line certain additional safety requirements will be required.

- > The installation or use of irrigation equipment inside the easement.
NOTE: An irrigation system will not be approved if it is capable of coming within 4 metres of the overhead conductors; exceeds 4.3 metres in height; consists of individual sections of rigid or semi-rigid pipe exceeding 4.3 metres; is capable of projecting a solid jet of water to within 4 metres of any overhead conductors; requires fuel to be stored within the easement; and/or requires an outage of the transmission line for its operation.

- > The installation of low voltage electricity, telephone, communication, water, sewerage, gas, whether overhead, underground or on the surface.

Note: Services that do not maintain standard clearances to the overhead conductors that are within 15 metres from the easement centre-line, 20 metres from any part of a transmission line supporting structure or are metallic and within 30 metres of any part of a structure will not be approved. TransGrid may impose additional conditions or restrictions on proposed development.

- > The installation of high voltage electricity services, subject to there being no practicable alternative and provided the standard clearances are maintained to the supporting structures.

Note: Where extensive parallels are involved certain additional safety requirements may be imposed by TransGrid, depending on the particular case and engineering advice.

- > Swimming pools, subject to TransGrid's strict compliance criteria.

Note: Above ground pools will not be approved. In-ground pools will not be approved if there is a practicable alternative site clear of the easement area. If there is no practical alternative site, in-ground

pools including coping will not be approved if it encroaches more than 4.5 metres, or is less than 30 metres away from a transmission line structure. A site specific assessment by TransGrid is required.

- > Detached garages, detached carports, detached sheds, detached stables, detached glass houses, caravans, site containers, portable tool sheds, pergolas and unroofed verandahs attached to residences on the outer 3 meters of the easement only.

- > Prefabricated metal (garden) sheds. TransGrid approved sheds must be earthed.

Note: Sheds exceeding 2.5 metres in height, with a floor area exceeding 8m², encroaching more than of up to 3 metres or within 30 metres of any part of a transmission line structure will not be approved. Connection of electric power will not be approved.

- > Single tennis courts.

Note: Tennis courts that hinder access are for commercial use or do not provide adequate clearances shall not be approved.

- > Subdivisions. See **Appendix C** requirements.

- > Roads, carparks, cycleways, walking tracks and footpaths on the outer part of the easement or as a thoroughfare across the easement, subject to horizontal and vertical clearances. Restrictions and other conditions on consent may also apply. These will not be approved when located within:

- 20 metres of any part of a transmission line structure
- 10 metres of the centre-line of a transmission line 132kV and below
- 17 metres of the centre-line of a transmission line above 132kV

Note: Roads and pathways that cross the transmission line as a thoroughfare may be permitted. Where it is proposed that a road passes within 30 metres of a transmission structure or supporting guy, TransGrid may refuse consent or impose restrictions and other conditions on consent. Where a road passes within 30 metres of a transmission structure or supporting guy, the structure's earthing system may require modification for reasons including, but not limited to, preventing fault currents from entering utility services which may be buried in the road. The option of raising conductors or relocation of structures, at the full cost to the proponent, may be considered.

- > Excavation – subject to restriction criteria.

Note: Substantial excavations located within 20 metres of any part of a steel tower or pole structure and exceeding a depth 3 metres will not be approved.

- > Quarrying activities, earthworks, dam or artificial lake construction.
- > Mining. Approval would be based on the merits of the proposal and any related circumstances.
- > Use of explosives.

Note 1: An encroachment or activity that is located outside the prohibited distance of the infrastructure but still within the easement will not necessarily be permitted. It will generally need to be addressed in the Impact Assessment and remains subject to TransGrid prior consent.

Note 2: The above list is not exhaustive and if there is any uncertainty as to whether an activity or encroachment is acceptable within an easement, please contact TransGrid. TransGrid may impose additional conditions or restrictions on proposed development.

2. Cables

The location of TransGrid's subterranean infrastructure and associated easements includes, but is not limited to, beneath private freehold and strata land as well as public roadways and railways etc. All development proposed within immediate proximity of TransGrid's subterranean infrastructure, including high voltage cables, stratum tunnels and conduits, must undertake a *Dial Before You Dig* search of any land where development is proposed, including roads adjoining a development site where subterranean services are proposed to be installed. The activities listed below are prohibited within cable easements:

- > The storage of flammable liquids or explosives
- > The planting or cultivation of trees or shrubs with extensive root systems
- > The construction of houses, buildings or substantial structures
- > The installation of fixed plant or equipment
- > The placing of garbage, refuse or fallen timber
- > Boring directly over the cable lay (eg. the installation of fencing or safety railing)
- > The raising or lowering of existing ground surface levels
- > Any excavation within 2m of an underground cable.

The following activities may be approved with conditions. TransGrid's prior written consent is required. The proponent will have to demonstrate (using the Impact Assessment process) that the risks associated with the activity have been satisfactorily mitigated.

- > Parking of vehicles

Note: Parking will be prohibited if the surface is not capable of supporting the vehicles likely to be parked, risking the crushing of the cable/ducts or erosion of the ground

- > The operation of mobile plant and equipment

Note: Such operations will be prohibited if the surface is not capable of supporting the vehicles likely to be parked, whereby risking the crushing of the cable/ducts or erosion of the ground

- > The erection of structures spanning the easement
- > Excavation
- > Concrete driveways
- > The installation of metallic pipes, fences, underground or overhead cables and services
- > Road-boring within approved distances of a high voltage cable.

Where TransGrid's prior written consent has been granted to undertake work near an easement and related subterranean infrastructure, including the tunnels and conduits that accommodate our high voltage transmission line cables, all works must be undertaken in accordance with the WorkCover NSW 'Work Near Underground Assets' Guide 2007. Further, all development works must comply with the TransGrid guidelines for subterranean infrastructure referring to the document titled "*Requirements for Working In the Vicinity of TransGrid Underground Cables*".

Appendix C - General Requirements for Developments and Subdivisions

The following list of current general requirements is provided for your information. It should be noted that the list is not exhaustive and, where there is any doubt concerning a particular activity within the easement area advice should be sought from TransGrid.

1. Completed Works

The completed works shall provide for the following considerations:

- > A safe unobstructed working platform shall be preserved around the transmission line structures for access by EWP, cranes as well as other large plant and equipment. No obstructions of any type shall be placed within 30 metres of any part of a transmission line structure.
- > Roads, streets etc (including kerb to property boundaries) and intersections shall not be located within 30 metres of any TL structure.
- > Developments must meet the clearances requirements set out in AS7000 between their finished level and the conductor at its maximum operating temperature.
- > Proposed roadway locations shall also take into consideration any street lighting requirements to ensure that statutory clearance requirements are followed. The design clearances should include future maintenance safety issues. TL outages will not be provided for street light maintenance. Access to the TL and its structures shall be available at all times for TransGrid plant and personnel. In this regard a continuous and unobstructed access way shall be retained along the easement.
- > Where fences are required for security purposes access gates will be installed in an agreed location and a TransGrid lock will be fitted.
- > Application of “prudent avoidance” in relation to electric and magnetic fields should always be observed.
- > No increase in earth potential rise risks.
- > All underground services installed more than 20 metres but within 30 metres of a TL structure shall be non-metallic. Utility services (including street lighting), whether above or below ground, shall not be installed without prior written approval of TransGrid.
- > Excavation work or other alterations to existing ground levels shall not be carried out within the easement area without the prior approval of TransGrid. Approval will not normally be granted for such work within 20 metres of any supporting structure.
- > Boundaries for new subdivided properties should not be located within the easement.
- > Fenced boundaries for all new properties in the subdivision shall not be within 30 metres of any TL structure.
- > A “Restriction-as-User” (88B Instrument) shall be placed on the titles of any created lots that may become affected by a TL easement. Any proposed activity within an easement area will require the prior written approval of TransGrid (appropriate wording will be advised when required).
- > Any proposed development must not impact on TransGrid's costs of inspecting, maintaining or reconstruction of the transmission lines.
- > In order to comply with its statutory responsibilities to maintain adequate clearance between the conductors and any forms of vegetation, TransGrid maintains its easements as follows:
 - Tall growing species likely to infringe safe clearances are to be removed regardless of existing height at time of construction.
 - Trees likely to fall onto conductors or towers are also to be removed whether on the easement or off the easement (ref. Sec 48 of the Electricity Supply Act 1995).

- Shrubs and other vegetation of lower mature height within the easement will be reduced and managed, generally by slashing with ground level retained.
- Vegetation management will aim to reduce available fuel and subsequent bushfire risks in accordance with NSW Rural Fire Service Bush Fire Environmental Assessment Code that sets out the requirements for hazard reduction strategies such as Asset Protection Zones and Strategic Fire Advantage Zones.
- Removed vegetation will be mulched or chipped and removed from site or retained on site in accordance with owner/stakeholder requirements.
- Other works considered necessary in order to provide a safe working environment for maintenance staff, contractors and for the property owner/manager will be undertaken.

Proposed vegetation plantings, such as Riparian corridors, within the transmission line easements shall be compatible with the above maintenance requirements and must consider on-going vegetation control.

2. Construction

During construction, the development plans shall also provide for the following considerations:

- > Vehicles, plant or equipment having a height exceeding 4.3 metres when fully extended shall not be brought onto or used within the easement area without prior TransGrid approval.
- > Where temporary vehicular access or parking (during the construction period) is within 16 metres of a transmission line structure, adequate precautions shall be taken to protect the structure from accidental damage. Plans need to be submitted to TransGrid for prior approval.
- > The easement area shall not be used for temporary storage of construction spoil, topsoil, gravel or any other construction materials.

3. Costs

The Developer shall bear all costs of any specialist design studies, TransGrid supervision, reconstruction or modification of the transmission line and its components, including consultation and design required to maintain clearances due to proposed ground level changes; road crossings within the easement; or due to any damage to the TL arising from the development.

Example of the Required Working Platform for Transmission Tower Maintenance

