
From:
Sent: Thursday, 8 March 2018 1:39 PM
To:
Cc:
Subject: FW: Ralston Avenue, Belrose: TransGrid Concerns
Attachments: Memorandum AB283819.pdf; GovGaz 75-05 P11966.pdf; GovGaz 67-01 P616A.PDF; Memorandum 7753746Q.PDF; Deposited Plan 1139826.pdf; Aerial with Overlay.PDF

From:
Sent: Thursday, 8 March 2018 1:27 PM
To:
Cc: Subject: Ralston Avenue, Belrose: TransGrid Concerns

Hi

Please pass on my thanks to the PAC for taking the time to discuss with us TransGrid's concerns regarding the proposed development at Belrose. Further to the discussion, below is an outline of our key points, along with some additional information.

BACKGROUND

Registered Property Interests

TransGrid has the following property interests registered against property Lot 1 DP 1130826:

Easement	Identifier within Deposited Plan 1139826 (see attached)	Easement Terms (see attached)	Acquisition year
Easement for transmission line 60 wide and variable width	'E2' (see pg 5, 8 of DP)	Memorandum AB283819	2009

Easement for transmission line 60 wide	'E3' (see pg 5, 7, 8 of DP)	See highlights in GovGaz 67-01	1967
Easement for transmission line variable width	'E4' (see pg 5, 8 of DP)	Memorandum AB283819	2009
Easement for <u>access</u> over track in use	'E5' (see pg 3, 5, 8 of DP)	Memorandum 7753746Q	2009
Easement for transmission line 60 wide	'E6' (see pg 5, 7, 8 of DP)	See highlights in GovGaz 75-05	1975

E2 & E4: Clause (b) of the registered transmission line easement terms 'Memorandum AB283819' stipulates that no development is to occur within the easement burdened land, unless TransGrid has provided written permission.

E5: The registered access easement terms 'Memorandum 7753746Q provides that TransGrid has the right to use the access way, with vehicles, and to maintain/upgrade the access track when needed.

E3 & E6: The Government Gazettal of the land resumptions for these easements provides that TransGrid may construct and maintain the transmission lines.

Legislative Provisions

In accordance with SEPP (Infrastructure) Division 5, Clause 45, a consent authority must give notification to TransGrid for any development application within or near our transmission easements, or adjacent to our substations.

Under section 49 of the Electricity Supply Act, TransGrid has the authority to issue notices for the removal/modification of any works near our assets that may result in our assets becoming a public safety risk, as well as the power to remove such works in the case of an emergency.

Bushfire Risk Management

TransGrid maintains a minimum 3m Asset Protection Zone around our substation infrastructure. The APZ is designed to:

1. prevent an external bushfire impacting upon assets internal to the substation
2. prevent the propagation of a fire internal to the substation into an external bushfire.

For substations identified as being located within bushfire zones, TransGrid undertakes an increased level of routine APZ maintenance. Sydney East is identified as being in such a zone and is listed in our routine maintenance plans as requiring a higher maintenance frequency. Additionally the vegetation within our electricity easements is also routinely maintained. This vegetation maintenance offers a potential fire break to properties in the area.

CONCERNS

Continuity of Suitable Access

TransGrid has a registered easement for access across Lot 1 DP 1130826, along the existing Heath Fire Trail. This right of access was formalised to secure suitable access to structures along TransGrid's transmission line no. 27 (within easement 'E2').

TransGrid requires unimpeded, 24/7 access to each structure along its transmission lines. The tracks used by TransGrid are required to be suitable for truck access, and are used to facilitate routine inspections and maintenance, emergency works, and any future upgrade / modification works. The access routes used by TransGrid are often located outside of the electricity easements due to terrain difficulties, and also to make use of existing tracks/roads.

The proposed development will remove a portion of the existing Heath Fire Trail, and restrict TransGrid's ability to continue to use this as the access track to our structures. (In the attached 'Aerial with Overlay', the scar of the existing track can be seen relative to the proposed development.)

TransGrid requires a suitable alternate access track be created (at the proponents cost) and formalised by a registered easement for access in favour of TransGrid (at the proponents cost), prior to the commencement of any works that may impede access along the existing route. Financial compensation may also arise as a consequence of the extinguishment of the existing access easement and creation of an alternate access easement.

Development Works within High Voltage Electricity Easements

All development in close proximity to the transmission lines is required to meet:

- AS/NZS 7000:2010 Overhead Line Design – Detailed Procedures
- WorkCover NSW ‘Work near overhead Power Lines’ Code of Practice, 2006
- ISSC 20 Guideline for the Management of Activities within Electricity Easement and Close to Electricity Infrastructure (Sep 2012) Industry Safety Steering Committee, Electricity Council of NSW.

It is apparent that the current proposal includes development works to Wyatt Road and fire trail works, which will be underneath four of TransGrid’s transmission lines (making a total of 12 live high voltage conductors).

TransGrid requires the proponent to submit detailed designs/elevations for the proposed works, which are compliant with the standards and guidelines mentioned. These will then be assessed by TransGrid. If the designs are not compliant with TransGrid requirements, TransGrid will not provide written permission for the works to proceed.

Public Safety Risks in Event of Fire

Smoke arising from fires (such as bushfires and building fires) reduces the natural insulating properties of air, due to the concentration of airborne particulate matter. Thick smoke around high voltage transmission lines can act as a conductor, creating a risk of electrical flash-overs to the ground. This flash-over risk is higher if thick smoke is coupled with an intense fire beneath the lines. In such conditions there is a heightened risk that people / vehicles passing underneath the live transmission lines, may be struck by an electrical flash-over. This would likely result in significant injury or death.

The Sydney East 330,000 kilovolt substation is a critical transmission supply point for power distribution to Sydney. The substation supplies Ausgrid substations across a geographical range spanning between Mt Colah – North Sydney – Mosman - Belrose, including the Ausgrid substation at Royal North Shore Hospital. The de-energisation of Sydney East substation may result in a wide spread blackout affecting a significant area of north-eastern Sydney, having significant impacts to residents, businesses, and public infrastructure/services.

In the event of a fire in the vicinity of Sydney East, and the Rural Fire Service making a request to TransGrid to turn-off electrical supply to the substation, there would be joint risk discussions before the request was agreed to. The risk discussions would include consideration of the impact to the security of the electricity network and associated impacts to the wider community. It is very uncommon for TransGrid and the RFS to agree that de-energisation is the most appropriate risk mitigation, and it is very unlikely that Transgrid would agree to de-energise Sydney East substation, due to its criticality.

The proponent’s bushfire risk management plan for the proposed subdivision, should not rely on an expectation that the transmission lines around Sydney East substation would be de-energised, as this is extremely unlikely. Further, in certain fire scenario’s the road passing beneath our transmission lines should not be identified as a suitable emergency egress route for the residents.

Noise Compliance at Sensitive Receivers

TransGrid operates the Sydney East 330kV substation 24/7. This includes the continual running of large, outdoor, power transformers.

TransGrid has previously used the Industrial Noise Policy (now replaced by the Noise Policy for Industry) as a framework for assessing the acceptability of its operational noise emissions. Previous studies by TransGrid identified that the operational noise levels from the substation at the existing nearby sensitive receivers, were considered acceptable against the INP.

TransGrid has not considered if the operational noise levels would be acceptable at the additional sensitive receivers as a consequence of the proposed subdivision. There is therefore a risk that new residents could be exposed to operational noise levels that are considered unacceptable.

In the event of noise complaints being made to EPA, and if the noise levels are deemed unacceptable, TransGrid may become liable for implementing noise mitigation measures, at significant cost.

TransGrid strongly recommends that the onus should be on the proponent to demonstrate that the location of the new residential lots will not result in unacceptable noise levels for the residents, that may lead to operational noise non-compliance issues for TransGrid's existing operational substation.

If you would like further clarification or information, please contact me.

Regards,

Manager Property and Environment | Network Planning and Operations

TransGrid | 180 Thomas Street, Sydney, NSW, 2000

Property & Environment is a team of dedicated and talented individuals who are constantly striving to improve the advice and service they provide. Together they complete capital project deliverables; provide strategic and robust advice to support clear decision-making; continually improve the quality of their land information databases; and manage and protect TransGrid's portfolio of property and assets efficiently. The team undertakes its work collaboratively, and with pride.

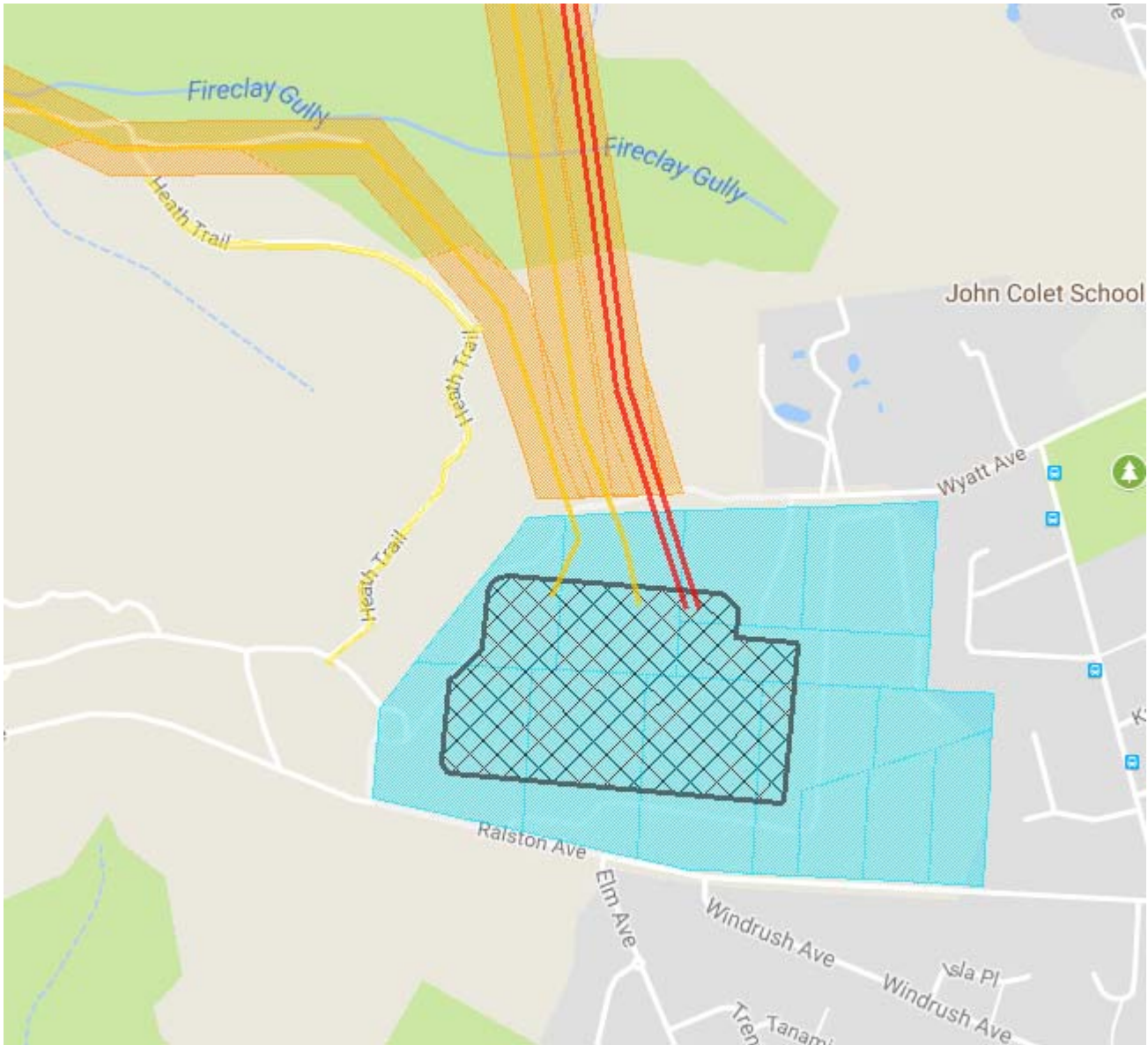
Map from TransGrid spatial system

Blue shading = TransGrid property

Orange shading = TransGrid electricity easements

Yellow line = TransGrid easement for access

Orange & Red lines = TransGrid transmission lines (each with 3 live conductor wires)



Manager Property and Environment | Network Planning and Operations

[TransGrid](https://www.transgrid.com.au/privacy) | 180 Thomas Street, Sydney, NSW, 2000

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