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29 August 2018

APA Reference: 439221
Your Reference: SSD8703

NSW Department of Planning & Environment
GPO Box 39
Sydney NSW 2001

Dear Sir / Madam,

RE: Proposed development of Springdale Solar Farm
State Significant Development Application Number SSD8703

Background
APA owns the Dalton – Canberra Lateral Pipeline located through the subject site in a 20m wide easement (see Table 1 for details):

Table 1: Transmission gas pipelines in the area of consideration

Pipeline	Pipeline Licence	Easement Width (m)	Diameter (mm)	Measurement Length (m)
Dalton – Canberra Lateral	21	20	250	240
Note: measurement length is applied to either side of the pipeline.				

Renew Estate has lodged a Development Application and the EIS is currently on public exhibition, until 30th August 2018. Renew Estate did not engage with APA during preparation of the EIS. However, subsequently Renew Estate engaged with APA and commissioned a Safety Management Study to address issues associated with development in vicinity of the high pressure gas transmission pipeline.

APA statutory obligations

SEPP (Infrastructure) 2007 states that risks associated with development applications adjacent to a gas pipeline corridor needs to be assessed and those risks included in considerations prior to determining an application for development (Clause 55 'Development adjacent to corridor' in Division 9). The EIS considers the SEPP in relation to the delivery of solar energy infrastructure, but does not give any consideration in relation to the potential impacts on existing gas transmission infrastructure of regional importance. This should be addressed in a revised EIS.

As a licence holder for high pressure gas transmission pipelines (HPGTPs) APA has statutory obligations under the *Pipelines Act 1967 (the Act)*. The associated *Pipelines Regulation 2013*, states that a licensee must ensure that the design, construction, operation and maintenance is in accordance with Australian Standards 2885 (AS2885). These are the Standards that APA must consider in assessing and addressing risks associated with development applications under the Infrastructure SEPP.

In considering a development proposal APA is obligated to ensure its pipelines are not damaged, nor subject to development which may increase the future risk of damage. Furthermore, APA must ensure the pipeline is designed to *"reflect the threats to pipeline integrity, and risks to people, property and the environment"* (AS2885.1, s4.3.1). Location classes are used to determine the appropriate pipeline design and management for the circumstances. The location class considers the land use and activities within the Measurement Length (ML), which is the area of consequence in the case of full bore pipeline rupture. The subject pipeline has a ML each side of the pipeline of the distances shown in Table 1 above.

AS2885.1, s2.6 states *"a pipeline in the vicinity of electricity supply powerlines or facilities shall be analysed to determine if controls are required to provide for electrical safety"*. Section 2.6 refers to Appendix R, which references the requirements of AS4853 for electrical analysis (earth potential rise and low frequency induction). Potential impacts arise from transmission lines crossing the pipeline or running alongside the pipeline. In addition to impacts directly on the pipeline, electrical currents have the potential to impede the effective operation of cathodic protection measures (addressed in AS2832). Electrical currents of concern may include feeder lines, transformers, and transmission lines.

Pipeline Risk Profile and the Measurement Length

In managing HPGTP's and considering land use changes, APA must focus on that area geographically defined by AS2885 as the Measurement Length (ML). The ML area is the heat radiation zone associated with a full-bore pipeline rupture. APA is mandated to consider community safety in the ML due to the high consequences of pipeline rupture to life, property and the economy. The ML for the Dalton – Canberra Lateral is 240m each side of the pipeline.

The ML is determined by the design parameters of the pipe (driven by the surrounding environment at the time of construction) and the Maximum Allowable Operating Pressure (MAOP) of the pipe. APA must consider any change of land uses within the ML area to determine the effect of a new use on the risk profile of the pipeline.

Location classes (based on land use) are used to determine the appropriate pipeline design and management for the circumstances. If the location class changes within the ML, a Safety Management Study (SMS) is required to assess the additional risk and ensure actions are taken to reduce the risk to an acceptable level. The proposed use will change the location class of the pipeline in the area of the development.

Proposed Development

The proposal plan indicates a linear gap in the development footprint which appears to align with APA's pipeline and easement, however it is not accurately labelled as a 'high pressure gas transmission pipeline'. There is no statement or plan indicating the high pressure gas transmission pipeline (HPGTP) easement is clear of the siting of solar panels. The proposed development has significant areas of panels to both the east and west of the pipeline easement, and it appears these extend to the edge of the HPGTP easement. The proposed plan shows an internal road crossing of the pipeline in the northern part of the site.

A single area for both control building and substation is located to the south-west of the development site, west of APA's pipeline. Regardless of the final area for control building and substation, the need for crossings of the pipeline is anticipated. These are expected to include:

- Electrical feeder lines (either above or underground) to transformers and the on-site substation
- Electrical transmission lines from the substation to transmission grid connection point
- Access tracks (for construction and operation).

APA seeks to minimise the number of crossings and have these perpendicular to the pipelines. No work on the easements, including crossings, changes in ground level or other works, may occur without the prior authorisation of APA. Detailed design for crossings will need to be informed by field works to positively locate the pipeline (alignment and depth). Such field works must only be performed under APA permit.

Comments

AS2885 requires a Safety Management Study (SMS) to be undertaken whenever the land use classification within the ML changes. A Safety Management Study has been conducted by Sage Consulting Solutions, dated 29 June 2018. The Safety Management Study outlines 11 actions which will need to be implemented to the satisfaction of APA, with all costs to be borne by the applicant.

Electrical works near the pipeline (including crossings) have the potential to impact on the pipelines safe operation and studies in accordance with AS4853 are necessary. The cost of these studies and any necessary mitigations must be borne by the development proponent. The studies will need to be referred to, and endorsed, by APA as per action 2 of the Safety Management Study.

Details of all proposed crossings, and works within the easement, must be submitted to APA for consideration. No crossings may occur without the prior authorisation of APA, and must be completed in accordance with any conditions imposed by APA. This includes the existing location of the Tallagandra Lane crossing. This is reflected in action 3 of the Safety Management Study.

APA acceptance of the proposed development is subject to compliance with the actions of the SMS and the following conditions.

Conditions

1. **No improvements within Easement**
   Buildings, structures, roadway, pavement, pipeline, cable, fence, change in ground level, or any other improvement on or under the land, must not be constructed within the gas transmission pipeline easement, without the prior authorisation of APA. This includes both temporary and permanent improvements of the type detailed above. All construction workers on site must be made aware of this requirement.

2. **Safety Management Study**
   Development must occur in accordance with requirements of the Safety Management Study (SMS), by Sage Consulting Solutions Pty Ltd, dated 29th June 2018. All of the SMS's recommendations/actions must be implemented to the satisfaction of APA. All costs associated with the SMS, and implementing its recommendations/actions are to be borne by the applicant.

3. **Risk Assessment Required**
   Prior to the development commencing, and to inform detailed design, the applicant must conduct electrical hazard studies in accordance with (the requirements of) Australian Standard 4853-2012 (for Low Frequency Induction and Earth Potential Rise). The applicant must address any relevant requirements and any recommendations and/or actions must be implemented to the satisfaction of APA. All costs associated with the study, and implementing its recommendations and/or actions are to be borne by the applicant. The applicant must complete validation testing upon completion of construction.

4. **Electrical Interference Studies**
   The applicant must conduct electrical interference studies in accordance with the requirements of AS2832 once detailed design is complete.

5. **Amend Design to Comply with Australian Standards**
   The applicant must amend its design as required in order to obtain results for the electrical interference studies and electrical hazard studies which comply with the applicable Australian Standard and promptly provide a copy of the studies and reports to APA.

6. **High Voltage Powerlines**
   The applicant must make good (at the applicant's cost) any hazards or risks to the Young to Wagga Wagga Pipeline (including cathodic protection systems), caused by any powerlines, or associated infrastructure.

7. **Construction Management Plan**
   Prior to the commencement of any works, including demolition, on land within 50 metres of the pipeline easement, a construction management plan must be submitted to and approved by APA. The plan must:
   - Prohibit the use of rippers or horizontal directional drills unless otherwise agreed by the operator of the gas transmission pipeline.
   - Avoid significant vibration, heavy loadings stored over the pipeline and heavy vehicle / plant crossings of the pipeline within the easement.
   - Be endorsed by the operator of the gas transmission pipeline where the works are within or crossing the relevant gas transmission easement.

8. **Easement Delineation On Site**
   During construction, the boundary of the easement must be clearly delineated on site by temporary fencing (or other means as agreed by APA), and clearly marked as a hazardous work zone/ restricted area. Any ongoing fencing, or access restriction, as determined by the SMS will be implemented by the proponent. Crossing of the easement during construction must only be at points agreed to by APA, and designed and built to APA's standards.

9. **Easement Delineation On Plans**
   All plans which include the area of the gas pipeline easement must have the easement clearly identified with hatching on the full width of the easement. The easement must also be clearly labelled as *'high pressure gas pipeline easement – no works to occur without the prior authorisation of the pipeline operator'*.

10. **Pipeline Operator Access**
    The ability of the pipeline operator to access the easement must be maintained at all times to facilitate prompt maintenance and repairs. This may be through interlocking padlocks so APA has keyed access as any time. APA field officers will undertake any necessary site induction to facilitate unaccompanied access.

Note
If you are planning on undertaking any physical works on property containing or proximate to a pipeline, or are seeking details on the physical location of a pipeline, please contact Dial Before you Dig on 1100, or APA directly on APAprotection@apa.com.au.

Note
An early works agreement from APA is required for any assessments/approvals that require greater than 3 days assessment or supervision. Lead in times for agreements can be up to 12 weeks. Please contact APA at APAprotection@apa.com.au or 1800 103 452.

Note
Any improvements within the transmission gas pipeline easement undertaken by third parties is at the risk of the proponent who will remain liable. APA will not be liable for any costs associated with the reinstatement of any vegetation and/or infrastructure constructed on the easement.

For any further enquiries relating to this correspondence, please feel free to contact the Urban Planning Team at planningnsw@apa.com.au.

Yours faithfully,

Zijad Bajrektarevic
Urban Planner & Projects Approval
Infrastructure Planning & Protection