



Your reference :  
Our reference : SF16/37714; DOC16/433244-01  
Contact : Ms Sheridan Ledger; (02) 6332 7608

Rose-Ann Hawkeswood  
Resource Assessments  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

23 September 2016

Dear Ms Hawkeswood

**JEMALONG SOLAR FARM PROJECT (SSD 6588)**

**EPA RESPONSE TO THE EXHIBITED ENVIRONMENTAL IMPACT STATEMENT**

I refer to your email of 25 August 2016 requesting the Environment Protection Authority (EPA) provide comment on the publicly exhibited Environmental Impact Statement (the EIS) for the proposed Jemalong Solar Farm Project (SSD 6588) (the Proposal).

As requested, the EPA has considered the EIS for the Proposal in terms of the potential impact to air quality, noise emissions, waste management, erosion and sediment control and hazards and risks. The EPA's response is contained in Attachment A.

At the current time, there is insufficient information available to the EPA to allow it to assess the potential impacts of the Proposal. As such, the EPA recommends the Department of Planning and Environment (DPE) seek further information and clarification in respect of the matters raised in Attachment A prior to finalising its assessment of the potential impacts of the Proposal.

Should you have any further enquiries in relation to this matter please contact Sheridan Ledger at the Central West (Bathurst) Office of the EPA by telephoning (02) 6332 7608.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Darryl Clift'.

**DARRYL CLIFT**  
Head Central West Unit  
**Environment Protection Authority**

## **Attachment A – EPA Response to the Jemalong Solar Farm Project EIS**

### **Air Quality**

The EPA generally requires an Air Quality Impact Assessment (AQIA) impact assessment be prepared for Proposals in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*.

The EPA notes the Secretary's Environmental Assessment Requirements (SEARs) issued by DPE for the Proposal (dated 26 August 2014) did not require an AQIA to be prepared. In the SEARs provided to DPE for the Proposal (dated 5 August 2014) by the EPA it was requested that the following be included in the EIS:

1. Assessment of the risk associated with potential discharges of fugitive and point source emissions for all stages of the Proposal. Assessment of risk relates to environmental harm, risk to human health and amenity;
2. Justification for the level of assessment undertaken on the basis of the risk factors, including but not limited to the proposal location, characteristics of the receiving environment and the type and quantity of pollutants emitted; and
3. A consideration of 'worst case' emission scenarios and impacts.

Based on the information currently available regarding potential emission sources for the Proposal, the EPA considers air dispersion modelling is not required however, further information regarding the above three (3) dot points is required to allow the EPA to properly assess the potential air quality impacts of the Proposal and to determine whether further impact assessment, including air dispersion modelling, will be required.

### **Traffic Generated Dust**

The EPA notes from page 136 of the EIS that Wilbertroy Road and Naroo Lane would remain unsealed but may be re-sheeted with gravel to maintain their condition during construction. Further, it is noted from page 28 of the EIS that approximately 30 employees would be required during the first month rising to 500 employees during peak construction (approximately 9 months) and on page 134 the EIS provides that "it is proposed employees would be transported by bus from the Parkes and Forbes area".

From the EIS it is unclear whether the Proponent has committed to workers to being transported to the site by bus as there is conflicting information in the EIS regarding transport. It is the EPA's expectation that a commitment will be made by the Proponent for the 500 workers to be transported to the site via bus. If such a commitment cannot be fulfilled, the EPA will require;

1. further air quality impact assessment to determine the potential impacts of approximately 500 cars utilising Wilbertroy Road and Naroo Lane;
2. assessment of the viability of utilising water carts to control dust emissions from Wilbertroy Road and Naroo Lane during warm periods; and
3. consideration of alternative dust control methods to control dust emissions from Wilbertroy Road and Naroo Lane and justification for the proposed method to be utilised.

### **Noise**

The SEARs issued by DPE and the EPA required an assessment of noise impacts of the Proposal be conducted in accordance with the *Interim Construction Noise Guideline (DECC 2009)* and the *NSW Industrial Noise Policy (EPA 2000)* (the INP). Having reviewed the noise impact assessment (NIA) in the

EIS, the EPA considers a NIA has not been prepared in accordance with the requirements of either of these guidelines.

The Proponent is required to undertake a NIA for the Proposal strictly in accordance with the INP and the *Interim Construction Noise Guideline*. It is the EPA's expectation that the Rating Background Level (RBL) will be determined in accordance with Section 3.1 of the INP, with the RBL to be utilised for the project-specific noise levels during construction and operating periods. Consideration of meteorological enhancing conditions and modifying factors, including assessment of tonal and impulsive noise characteristics as well as low frequency noise is required. Applicable and relevant data should be provided to support the NIA.

Mapping which clearly indicates the location of the identified sensitive receivers is required.

### Waste Management

#### *Evaporation Ponds*

The EPA understands from Section 2.2.10 of the EIS that two 2,400m<sup>2</sup> evaporation ponds, excavated to a depth of 1.5m, will be required for non-Heat Transfer Fluid (HTF) and non-molten salt drainage and blow down operations from the steam generator. Further, the EIS provides that the evaporation pond sizing also allows temporary operation with a single evaporation pond if one is out of use and sediment and water quality in the evaporation ponds would be monitored for remediation or disposal.

The EPA requests the following information in regards to the evaporation dams:

- Assessment of alternate wastewater management options and justification for the use of evaporation dams;
- A site water balance as justification for the adequacy of the proposed sizing, including confirmation that no discharges from the dams will be required;
- Quality of wastewater to be stored;
- Requirements for the cleaning out of solids, including waste disposal methods;
- The proposed method of lining and justification for that method, based on the likely quality of wastewater to be stored;
- Proposed leak detection assessment methodology; and
- Flood proofing requirements and justification for not flood proofing.

#### *Other Wastes*

The EPA notes the SEARs issued by DPE for the Proposal (dated 26 August 2014) did not require details regarding waste and that Section 7.3 of the EIS committed to the development of a Waste Management Plan (WMP) to minimise waste.

In the SEARs provided to DPE for the Proposal (dated 5 August 2014) by the EPA, details regarding waste were requested to be included in the EIS. This request was made to allow the potential impacts of wastes generated by the Proposal to be assessed during the determination process. The EPA considers that a waste assessment generally consistent with that requested in the EPA's SEARs for the Proposal to be necessary given the potential constraints of waste disposal options in the vicinity of the Proposal.

#### *Construction Wastewater*

Section 6.10.3 and parts 65 and 66 of section 7.3 of the EIS provides that requirements, including discharges, for construction wastewater and concrete washout will be described in the Soil and Water

Management Plan. In the SEARs provided to DPE for the Proposal (dated 5 August 2014) by the EPA, details regarding water management, including discharges, were requested to be included in the EIS.

### *Effluent Management*

The EPA notes the proposed Waste Management Plan will address effluent management (part 53 of section 7.3 of the EIS) with toilet facilities being pumped out to local sewage treatment plant. The EPA requests information regarding whether the proposed effluent management measures are applicable to both construction and operational periods and the viability and sustainability of such measures during the construction period when there will be some 500 employees.

### Erosion and sediment controls

In the SEARs provided to DPE for the Proposal (dated 5 August 2014) by the EPA, it was requested the EIS show the location of the erosion, sediment and leachate control measures which will be implemented to minimise erosion, leachate and sediment mobilisation during the site works.

The EPA notes on page 29 of the EIS that existing groundcover would be retained and controlled grazing may be used to maintain groundcover. Given the potential risks associated with stock near infrastructure, the EPA requests details of how groundcover will be managed over the 165 ha of the Proposal site so as to minimise erosion and sediment impacts in a manner which does not pose a risk to infrastructure.

### Hazards and Risks

While it is noted that an extensive risk assessment has been undertaken and measures to mitigate risk have been determined, the EPA nevertheless has concerns regarding the hazards and risks associated with the Proposal in terms of the nature and volume of materials to be utilised and its location within a floodplain where floods are common and cover a vast area for prolonged periods.

The EPA further notes the Proposal will be a Major Hazards Facility due to volume of sodium to be present. Forbes Shire Council advises on its website that the Forbes area has experienced on average a major flood every seven years since 1887.

Section 1.3.5 of the EIS provides details regarding the alternatives considered including the location of the plant. The considerations which formed the basis for the selection of the location were identified as:

- impacts on native vegetation;
- visual amenity;
- heritage; and
- reasonable proximity to transmission infrastructure.

Of note to the EPA was that a location outside of a floodplain appears to not have been considered.

During 0.5% AEP floods, water levels across the heliostat area vary between 0.88 and 1.14m as per Table 3.2 of the Flood Impact Assessment (FIA). The thermal piping network will be installed on metal stands approximately 0.6m above the ground and while the piping will be insulated to protect against moisture, no other contingencies are proposed in the EIS which aim to protect the integrity of the piping network during flood events. Section 4.3 of the FIA provides that electrical components associated with the thermal piping network should have protection from flood waters and section 3.6 of the Preliminary Hazard Analysis (PHA) indicates a recommendation in the FIA to raise infrastructure above a selected flood level or flood proof infrastructure below the 0.5% AEP flood level. Further, no justification has been provided for not flood

proofing the estimated 29km of piping containing molten sodium or the evaporation ponds as generally recommended in the FIA and PHA.

It should be noted that while the Proposal site may not be subject to flooding in events less than 4% AEP, flooding in its the general location can result in limited access to the Proposal site for extended periods. For example, the Lachlan Valley Way, being the primary access route to the Proposal site for emergency services, has been closed to traffic since 5 September 2016. Further, Wilbertroy and Naroo Lanes which are used as the main access point to the Proposal site from the Lachlan Valley Way are unsealed and are impassable during high rainfall as they are not 'all weather' roads. This lack of access poses a serious risk due to the limitations to maintenance, monitoring and for emergency access during high rainfall and flood events.

The EPA requests the Proponent provides clear and detailed justification for the selection of the proposed site in terms of its potential for flooding and flood related impacts.

#### Environment Protection Licence

In accordance with clause 17 of Schedule 1 of the *Protection of the Environment Operations Act 1997* (the POEO Act), the Proposal will not require an environment protection licence (EPL).

However, considering the type and volumes of chemicals and hazardous materials provided in Section 5.4.1 of the EIS and in particular Table 5-8, the EPA is of the opinion that an EPL will be required for The Proposal in accordance with clause 9 of Schedule 1 of the POEO Act for chemical storage.

Clause 9 of Schedule 1 of the POEO Act provides that where a premises has a capacity to store more than 20 tonnes (pressurised gases), 200 tonnes (liquefied gases) or 2,000 tonnes (chemicals in any other form) an EPL will be required. The POEO Act defines general chemicals storage to be the storage or packaging in containers, bulk storage facilities or stockpiles of any chemical substance classified as a dangerous good in the *Transport of Dangerous Goods Code* other than the following:

- (a) petroleum or petroleum products,
- (b) radioactive substances within the meaning of the *Radiation Control Act 1990*.

Table 5-8 of the EIS provides that 506 tonne of sodium, 2723 tonne of molten salt (a sodium nitrate and potassium nitrate mix), 20KL LPG and 3 tonne of thermal oil. Sodium nitrate, potassium nitrate and sodium nitrate and potassium nitrate mixture are dangerous goods in accordance with the *Australia Code for the Transport of Dangerous Goods by Road and Rail*.

Should approval for the Proposal be granted, the Proponent will be required to apply separately to the EPA for an EPL.

