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Meeting Date:	06/04/2018
To:	ESCO Pacific Pty Ltd
From:	Samantha Garvitch/Valerie Donat
Subject:	Commonwealth land assessment

Introduction

Under the EPBC Act approval is required for:

1. **An action taken by any person on Commonwealth land** that is *likely* to have a significant impact on the environment (subsection 26(1) of the EPBC Act)².
2. **An action taken by any person outside of Commonwealth land** that is *likely* to have a significant impact on the environment on Commonwealth land (subsection 26(2) of the EPBC Act).
3. **An action taken by a Commonwealth agency anywhere in the world** that is *likely* to have a significant impact on the environment (section 28 of the EPBC Act).

The nine matters of national environmental significance (MNES) are:

- world heritage properties
- national heritage places
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource, in relation to coal seam gas development and large coal mining development.

The *Significant Impact Guidelines: Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies*, outline a 'self-assessment' process to assist in determining whether an action is likely to have a significant impact on the environment. If an action falls within one of the three categories outlined above, or if you are unsure, you should refer the action to the federal environment minister. A person who takes such an action which has not been approved by the minister and which has a significant impact on the environment may be subject to criminal and civil penalties.

A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impact.

To be 'likely', it is not necessary for a significant impact to have a greater than 50 per cent chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility. If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.

In deciding whether or not the action proposed is likely to have a significant impact you must consider the following through the self-assessment process:

1. the environmental context
2. potential impacts likely to be generated by the action, including indirect consequences of the action
3. whether mitigation measures will avoid or reduce these impacts, and
4. taking into consideration the above, whether the impacts of the action are likely to be significant.

There are two identified areas of Commonwealth land within the vicinity of the proposed Mulwala Solar Project. Both sites are located south of the proposed solar farm location, separated by Tocumwal Road, Barooga Road, Mulwala-Barooga Road and Mulwala Canal. It is not expected that the proposed solar farm will impact on any of the identified commonwealth land areas.

Mulwala Solar Project

The Mulwala Solar Project is a utility scale renewable energy development with a capacity of up to 80 MW (AC) that would generate clean and renewable electricity from the power of the sun. The solar farm operation will comprise up to 300,000 solar photovoltaic (PV) modules, known more commonly as 'PV Modules' or 'solar panels'. The solar panels will be installed on ground-mounted frames that will slowly track the daily horizontal movement of the sun. The solar panels and horizontal tracking systems will be mounted in rows that will be electrically connected into arrays before being converted from direct current (DC) to alternating current (AC) electricity, which is the standard form of electricity used throughout Australia. Output from the solar farm would then be connected to the Essential Energy supply network by underground or above ground high voltage cable to the Mulwala Essential Energy substation located a few hundred metres south of the project area.

The project area is located approximately two kilometres north of Mulwala township, within the Federation Local Government Area (LGA). The project area crosses the properties of one landholder who is engaged in agricultural and grazing activities. The land comprises flat-lying open paddocks. The southeast paddock is irrigated with water pumped from a bore. The total project area under assessment for the EIS is 378 hectares, while the development footprint for the solar farm will utilise up to 215 hectares. Significant disturbance of the natural environment within the development site has occurred as a result of the long history of grazing and cropping activities. The visual amenity of the development site has the same character as the surrounding rural landscape, with the surrounding area being predominantly agricultural interspersed with residential dwellings.

It is expected that the construction phase for the project will take approximately eight months from initial site works through to commissioning and is anticipated to have a 40-year operational life span.

The project has been designed to such that it will avoid sensitive features (where possible) to ensure the impacts of the development are minimised. At the conclusion of the project, all site infrastructure will be removed, and the site rehabilitated to enable agricultural activities to resume.

Self-assessment process

Step 1: Environmental context

Defence Mulwala Explosives Factory (SP1 Special Activity Zone)

The Mulwala Facility is the sole remaining manufacturing site of military propellants and high explosives in Australia. The 1030-hectare site is near the border of New South Wales and Victoria. Until recently, it included around 300 buildings, the majority of which were constructed in the early 1940s and the remainder in the early 1990s. The facility at Mulwala is owned by the Commonwealth and operated by a third party (Commonwealth of Australia, 2018). Significant disturbance of the natural environment within the site has occurred as a result of the long history of grazing, cropping and military activities. The visual amenity of the site has the same character as the surrounding rural landscape, with the surrounding area being predominantly agricultural inter-dispersed with residential dwellings.

Within the site, the components of the environment most likely to be impacted are the social, economic aspects of the qualities and characteristics of the area. This site is strategically placed in regional Victoria and in close proximity to the Benalla munitions facility. The site has recently been redeveloped with an ongoing manufacturing contract from 2015 to 2020 confirmed.

The site also contains a number of heritage areas within its boundary, including Mulwala Homestead Precinct Place identified below.

It is not expected that any components or features of this environment are likely to be impacted by the proposed Mulwala solar farm.

Mulwala Homestead Precinct (Place ID 105659, located inside the Defence Mulwala Explosives Factory)

Mulwala Homestead was developed from the 1860s to the 1920s and the precinct is historically significant. Mulwala Station was part of the wave of development of the Riverina during the nineteenth century and the place is associated with the growth of pastoralism in this important region. Mulwala played a notable role in the development of stud flocks and the advancement of wheat growing in this part of New South Wales. Mulwala illustrates many of the characteristics of the Australian nineteenth century homestead, for example high pitched hipped roofs extending to encircling verandas, a joined series of single storey buildings which reflect the process of growth, and a typical selection of materials such as Cypress Pine slabs, weatherboard, corrugated iron, brick and pise, and the original and early materials used in the interiors. The scattering of outbuildings, and their modes of construction and their materials, also serve to typify these sorts of pastoral complexes in the region. The sheep dip and remnant sheep wash are further elements characteristic of sheep properties of the area. The place is of additional interest for the use of pit-sawn (as opposed to adzed) slabs, which makes the place relatively rare. Also, somewhat uncommon is the use of vertical slabs for a Riverina homestead as opposed to just the outbuildings. Of exceptional interest and rarity value is the extent of the surviving elements of the original homestead at the newer high site after the floods of 1867. Further, the property was owned by the one family, the Sloanes, from the 1860s until resumption by the Commonwealth in the 1980s. The grave of a Sloane son, although no longer marked, is in the south-west part of the precinct. The landscape of partly timbered and grazed paddocks, remnant garden, and complex of extended homestead and scattered outbuildings is evocative of the Riverina pastoral life and possesses notable aesthetic values (Australian Heritage Database, 2018).

While the Mulwala Homestead contains heritage values and is considered sensitive to impact, it is not expected that the Mulwala Solar Farm project will have significant impact on these values.

Step 2: Potential impacts

All potential impacts on the environment from the proposed Mulwala Solar Farm construction and operation have been identified within the main Environmental Impact Statement (EIS). These include, but are not limited to:

- Noise and vibration;
- Traffic and transport;
- Visual amenity;
- Biodiversity;
- Aboriginal and historic heritage;
- Surface water and groundwater;
- Bushfire;
- Electromagnetic interference;
- Soils, land use and agriculture;
- Air quality;
- Socio-economic;
- Waste; and
- Cumulative impacts.

The environmental aspects with the greatest potential for impacts to the Defence Mulwala Explosives Factory and Mulwala Heritage Precinct include:

- Visual amenity;
- Aboriginal and historic heritage;
- Bushfire; and
- Socio-economic.

Please refer to the EIS for a description and analysis of the potential impacts associated with the construction and operation of the Mulwala Solar Farm.

Step 3: Impact avoidance and mitigation

Proposed mitigation measures have the opportunity to not only reduce any potential impacts to the Commonwealth land areas but may benefit these existing lands. The following mitigation measures are further described in the Mulwala Solar Farm EIS.

Visual amenity

- Minimise construction light spill by directing construction lighting into construction areas and ensuring the site is not over-lit;
- Work site compounds should be screened, with shade cloth or similar material (where necessary) to minimise visual impacts;
- The site is to be kept tidy and well maintained, including removal of all rubbish at regular intervals;

- Undertake rehabilitation planting as early as possible to replace any vegetation that provided screening to the Defence Mulwala Explosives Factory or Mulwala Homestead Precinct; and
- Undertake regular landscape maintenance works to maximise the health and effectiveness of existing and new plantings and reduce the potential for fire hazard.

Aboriginal and historic heritage

- Due to the proximity of the Mulwala Solar Farm to the Mulwala Homestead Precinct, if suspected archaeological or historical resources are identified, work within the affected area must cease and the area cordoned off. The Heritage Division of the OEH must be notified in accordance with Section 146 of the *Heritage Act 1977*.

Bushfire

- **Asset Protection Zone:** The entire development site should be managed as an Asset Protection Zone as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones'. This requirement should include a 10m wide Asset Protection Zone to be provided around the perimeter of the Solar Farm. Isolated paddock trees, and woodlots can be retained as they are relatively small in size and of a low risk, as long as vegetation does not touch the proposed solar array panels, and access is maintained around the perimeter.
- **Electricity, water and gas services:** The proposed development should have a non-combustible 20,000 litre dedicated water tank with Storz fitting and other fire-fighting equipment in compliance with Australian Standards. Dedicated fire-fighting water supply from either this tank or dams should be specifically for fire tanker refilling/on site fire-fighting. A petrol or diesel or solar powered fire-fighting pump and 30m hose reel with steel nozzle is recommended and can be mounted on a 4WD with water tank. This can be used for grass fire/ember attack fighting by the proponent in the advent of a fire.
- **Internal access roads:** All internal roads should be two-wheel drive, all weather roads (except when crossing a drainage/irrigation channel) around the perimeter of the site and safe design which enable safe access for emergency services and allow crews to work with equipment about the vehicle.
- **Emergency management:** Suitable management arrangements for the implementation of the Emergency Evacuation Plan should be developed. A Bushfire Management Plan (BMP) should be prepared in consultation with NSW RFS District Fire Control Centre. The BFMP should include:
 - 24/7 contact details including alternative telephone contact;
 - Site infrastructure plan;
 - Firefighting water supply plan;
 - Site access and internal road plan;
 - Construction of asset protection zones and their continued maintenance;
 - Location of hazards (physical, chemical, and electrical) that will impact on firefighting operations and procedures to manage identified hazards during firefighting operations; and
 - Such additional matters as required by the NSW RFS District Office (Plan review and update).
- The Local Fire & Rescue Brigade should be informed of the proposal, once approved, regarding its operation, water supplies, and layout;
- Gutters should be cleaned annually (if relevant);

- All doors should be closed during bushfire in local area; and
- The interior of any buildings should have all necessary fire safety provisions (sprinklers, fire extinguishers, smoke alarms) as required by the relevant Australian Standards and legislation.

Socio-economic

- Preparation of a Consultation and Stakeholder Engagement Plan which includes:
 - Providing regular Project updates to the community and businesses;
 - Providing a schedule of activities when there may be heavy vehicles accessing the Project site or when noisy activities may occur;
 - Establishment of a complaints handling procedure and a response protocol; and
 - Preparation of regular project factsheets for distribution to the surrounding residents.
- Ongoing liaison with local community and business representatives to ensure the use of local contractors, labour, materials, and services during construction and operations;
- Liaison with local businesses and services to determine accommodation options and availability so as local tourism is not affected, particularly during the construction phase;
- Liaison with tourism representatives to ensure local events are not impacted by accommodation short falls; and
- Continued engagement with Federation Council to discuss community and business concerns.

Step 4: Are the impacts significant

While the proposed Mulwala Solar Farm Project is located in close proximity to the Commonwealth land areas, due to the existing context and condition of the Commonwealth land areas and surrounding region and nature of the proposed action it is not expected that the potential environmental impacts will significantly affect the Defence Mulwala Explosives Factory or the Mulwala Homestead Precinct.

In some cases, the mitigation and management measures to be implemented within the project boundary have the opportunity to lead to positive impacts on Commonwealth land, particularly for aspects of concern including fire hazard and local economy.

For further information relating to the potential environmental impacts, please refer to the Mulwala Solar Farm EIS.

References

Australian Heritage Database (2018) Mulwala Homestead Precinct, North Rd, Mulwala, NSW, Australia.

https://environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=state%3DNSW%3Blist_code%3DCHL%3Blegal_status%3D35%3Bkeyword_PD%3D0%3Bkeyword_SS%3D0%3Bkeyword_PH%3D0;place_id=105659

(Accessed 27 March 2018)

Commonwealth of Australia (2018) Defence's Management of the Mulwala Propellant Facility.

<https://www.anao.gov.au/work/performance-audit/defences-management-mulwala-propellant-facility>

(Accessed 27 March 2018)

Mulwala Solar Farm Environmental Impact Statement (2018)