

## COUNCIL ASSESSMENT REPORT

|                                                                                             |                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Panel Reference                                                                             | 2018WES006                                                                                                                                                                                                                                                                                                                                    |
| DA Number                                                                                   | 2018/32                                                                                                                                                                                                                                                                                                                                       |
| LGA                                                                                         | Federation Council                                                                                                                                                                                                                                                                                                                            |
| Proposed Development                                                                        | Solar Farm                                                                                                                                                                                                                                                                                                                                    |
| Street Address                                                                              | Redlands Road Corowa                                                                                                                                                                                                                                                                                                                          |
| Applicant/Owner                                                                             | Terrain Solar/ Penny Pastoral Company Pty Ltd                                                                                                                                                                                                                                                                                                 |
| Date of DA lodgement                                                                        | 8 February 2018                                                                                                                                                                                                                                                                                                                               |
| Number of Submissions                                                                       | 0                                                                                                                                                                                                                                                                                                                                             |
| Recommendation                                                                              | Approval subject to conditions                                                                                                                                                                                                                                                                                                                |
| Regional Development Criteria (Schedule 7 of the SEPP (State and Regional Development) 2011 | Development with a capital investment value in excess of \$5 million.                                                                                                                                                                                                                                                                         |
| List of all relevant s4.15(1)(a) matters                                                    | i.e. any: <ul style="list-style-type: none"> <li>• Corowa Local Environment Plan 2012</li> <li>• State Environmental Planning Policy (Infrastructure) 2007</li> <li>• State Environmental Planning Policy (State and Regional Development) 2011</li> <li>• State Environmental Planning Policy No. 44 – Koala Habitat Protection (</li> </ul> |
| List all documents submitted with this report for the Panel's consideration                 | i.e. any: <ul style="list-style-type: none"> <li>• plans</li> <li>• clause 4.6</li> <li>• recommended conditions of consent With minor amendments ( attached separately</li> <li>•</li> </ul>                                                                                                                                                 |
| Report prepared by                                                                          | Habitat Planning                                                                                                                                                                                                                                                                                                                              |
| Report date                                                                                 | 18/05/2018                                                                                                                                                                                                                                                                                                                                    |

### Summary of s4.15 matters

Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report? **Yes**

### Legislative clauses requiring consent authority satisfaction

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report? **Yes**

*e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP*

### Clause 4.6 Exceptions to development standards

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report? **Not Applicable**

### Special Infrastructure Contributions

Does the DA require Special Infrastructure Contributions conditions (\$7.24)? **Not Applicable**

*Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions*

### Conditions

Have draft conditions been provided to the applicant for comment? **Yes**

*Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report*



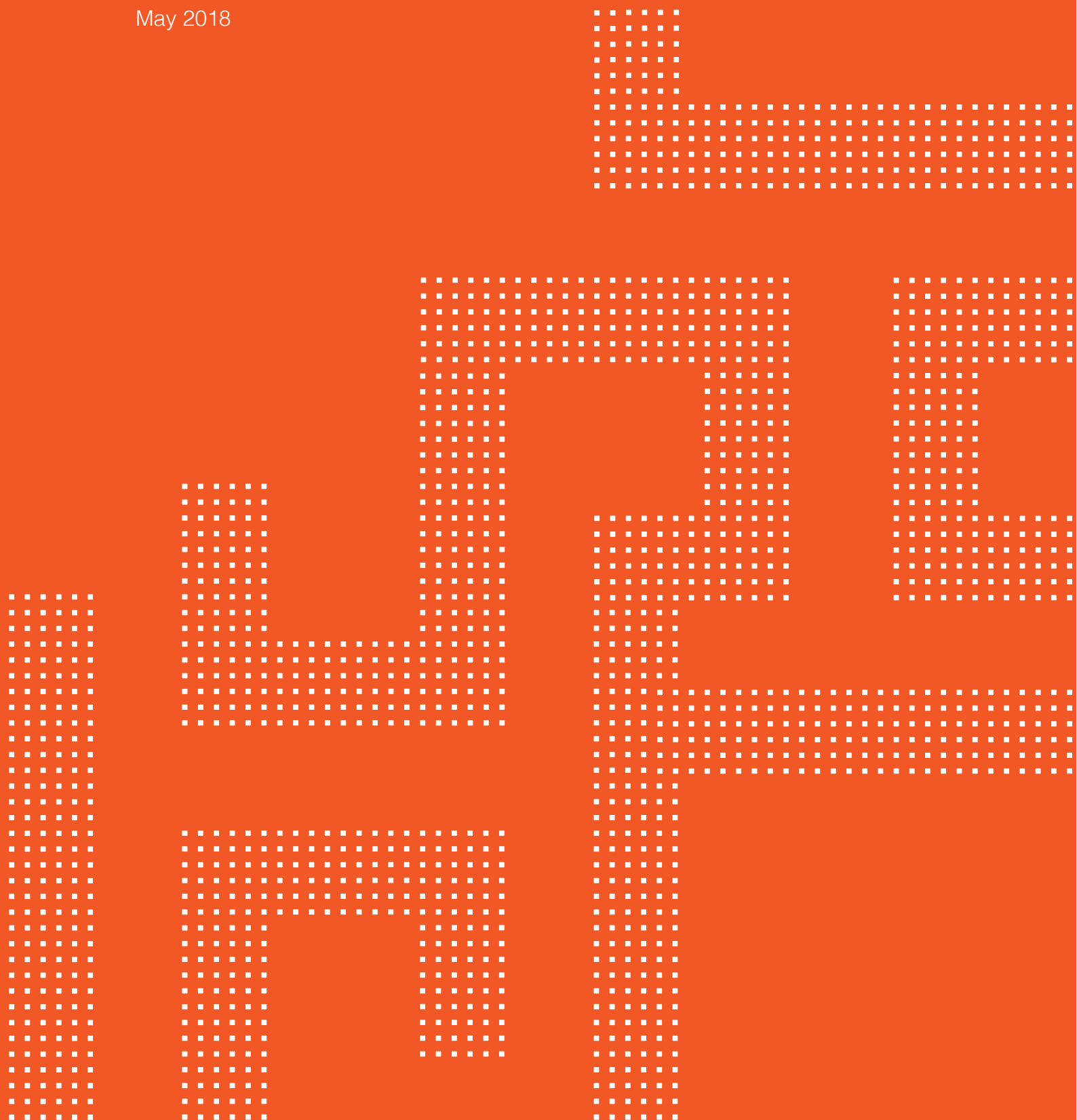
habitat planning

## Development application assessment

### **Solar farm**

Redlands Road, Corowa

May 2018





**Prepared for:**

Consent Authority

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**Document Control**

| Version | Date     | Author | Purpose |
|---------|----------|--------|---------|
| A       | 18/05/18 | WH     | Final   |



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# Attachments

- A. Recommended conditions of consent

# 1. Introduction

This is a report detailing the assessment of a development application received by Federation Council for a solar farm on the western fringe of Corowa in Corona Road.

The assessment is made on behalf of the consent authority and is based on the information provided by Federation Council and an inspection of the site.

# 2. The site

The parcel of land upon which the solar farm is proposed to be located is described as Lots 303, 304, 330 and 389 in DP753734 and is known as the 'Erinvale' property. The parcel of land has frontage to Redlands Road to the south and Tait's Road to the east and north. It is located on the western fringe of the Corowa township adjoining the industrial estate and approximately 3.5 kilometres from central Corowa (see Figure 1)

The subject land has a total area of approximately 108.6 hectares and the solar farm will cover almost all of it. The area is described as rural in character with the predominant form of land use being agriculture (specifically cropping and grazing). On the opposite side of Redlands Road is the Corowa Airport and adjoining to the east at the southern end is the Corowa Industrial Estate. There are two stands of native trees on the eastern boundary and in the north west corner in addition to scattered remnant and re-growth vegetation. Some of the lot boundaries feature planted windbreaks.

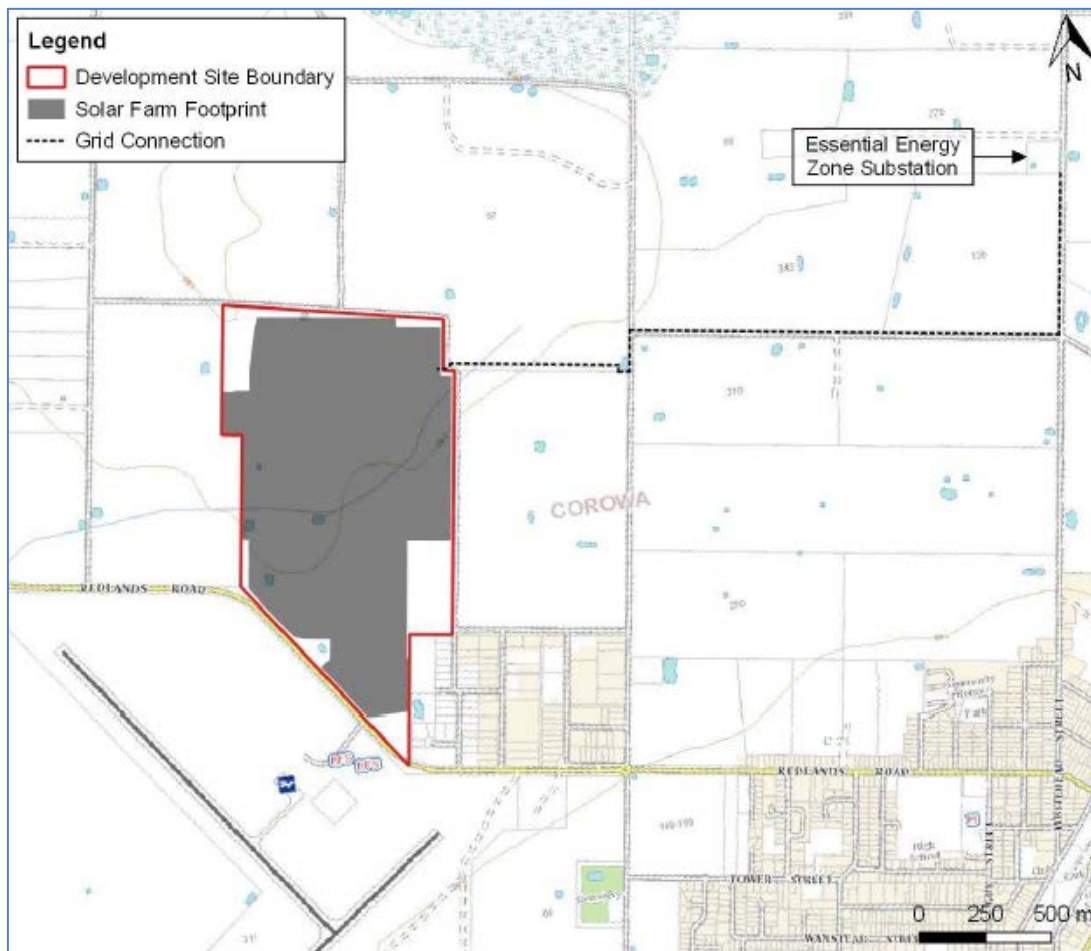
There are a number of small dams and a drain that runs from the north east through to the south west corner. Typical post and wire fencing is used throughout the subject land and there are no buildings.

The land is currently used for dryland cropping.

Access to the subject can be obtained directly from Tait's Road or Redlands Road.

There are no residences within 500 metres of the boundary of any boundary of the subject land.

**Figure 1** Location of the subject land within the context of Corowa (Source: SEE)



**Figure 2** Site plan of the proposal (Source: SEE)







**Figure 3**

View across the subject land from Redlands Road.



**Figure 4**

Patch of remnant vegetation in north west corner and highest part of the subject land.



**Figure 5**

View east down Tait's Road with subject land on the right.





**Figure 6**

View south down Tait's Road with subject land on the right. Good remnant vegetation within the road reserve.



**Figure 7**

View west across the subject land indicating typical existing conditions (cleared land for cropping with patches of vegetation).



**Figure 8**

Patch of trees in south east corner adjoining Tait's Road.



**Figure 9**

View west along Santos Road to the site. It is understood Council has agreed to an extension of this road to reach the site boundary.

### 3. The proposal

The following description of the proposal is taken from the Statement of Environmental Effects (SEE) submitted with the development application.

*The CSF will generate electrical energy by converting solar radiation into electricity through the use of solar PV panels. The farm will operate year-round to generate electricity during daylight hours when electricity demand in NSW is at its peak. The farm will be monitored remotely with a limited on-site presence, apart from routine maintenance.*

*The farm will consist of solar panels, steel racking and piled supports, inverter stations, electrical cabling, telecommunications equipment, an Operations and Maintenance (O&M) Building, switching station and perimeter security fencing.*

*The solar panels will be similar to those used for domestic purposes and will operate as a single axis tracking system (SAT) which follows the sun during the course of the day to ensure optimal energy generation. The farm will consist of linear strings of mounted panels organised into blocks. Each block will connect to an inverter station that will convert the direct current (DC) energy into grid compatible alternating current (AC) energy.*

*Connection to the grid will be via an underground 22 kV cable to Essential Energy's substation on Whitehead Street, approximately 2.5 km to the east.*

*The farm will have a generation capacity of 27 MWac and infrastructure will occupy a footprint of approximately 92 ha.*

Access to the site is proposed from Santos Road within the Corowa Industrial Estate. This road will need to be extended across Council to land to reach the site boundary. It is understood Council is agreeable to this occurring. A series of internal (unsealed) access roads will be constructed to allow movement amongst the panels.

The extent of earthworks required to install the solar panels is not detailed in the application other than that it is expected to be "modest" with the determining factor being ground clearance.

A 2.1 metre high chain link fence with three rows of barbed wire on top (total height 2.4 metres) will be installed around the perimeter of the site for security purposes.

A large 'laydown area' is proposed at the site entrance in Santos Road that will be used for the temporary storage of equipment prior to installation. This area will also accommodate a maintenance building as well as a switching station.

It is expected at its peak up to 100 persons will be employed at the site during construction. Once operational there will be three employees at the site. Portable amenities will be provided during this period and a potable water supply will be provided in bottles.

Construction of the solar farm will take 12 months to complete. A water supply will be maintained on a vehicle for the purposes of dust suppressions as required during construction. The works hours requested for the construction phase are 7am to 6pm Monday to Friday and between 8am and 1pm on Saturdays. There will be no construction activity outside of these hours or on public holidays. Construction will be undertaken in accordance with a Construction Management Plan to be submitted prior to construction commencing.

The solar farm will be operational (i.e. producing electricity) during daylight hours for 365 days per year.

## 4. The development application

The application was lodged with Federation Council in February 2018 accompanied by a fee of \$42,528.87 that includes fees for advertising and integrated development.

The applicant is Terrain Solar and the land is owned by Penny Pastoral Company Pty Ltd with Phillip and Suzanne Penny as Directors. Consent has also been given by Council as owner of the small amount of land required to construct the extension of Santos Road. In addition Essential Energy have consented to the application being made in regards to the use of their land at the Corowa Zone Substation.

The proposed solar farm itself is permissible with consent under the *State Environmental Planning Policy (Infrastructure) 2007* ("the Infrastructure SEPP") as an 'electricity generating works' within a prescribed zone (in this case the IN1 General Industrial Zone and the RU1 Primary Production Zone) and a 'solar energy system' on any land.

The proposed connection between the solar farm and the sub-station in Whitehead Street is permissible without consent because it qualifies as 'electricity transmission or distribution works' by an 'electricity supply authority' under Clause 41 of the Infrastructure SEPP.

The development application is required to be determined by a Joint Regional Planning Panel (JRPP) pursuant to clauses 4(b) and 6(a) of Schedule 4A of the EP&A Act as it is development with a "*capital investment value*" of more than \$5 million.

The development application was advertised and adjoining landowners notified by letter on 15 February 2018 with submissions closing 14 days later.

The administrative requirements for the application under the EP&A Act and Regulation have been satisfied by the above actions.

## 5. Assessment

Section 4.15 of the EP&A Act requires the consent authority to take into consideration the following matters where relevant to the proposed development:

- (a) the provisions of:
  - (i) any environmental planning instrument, and
  - (ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and

- (iii) any development control plan, and
- (iv) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and
- (v) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and
- (vi) any coastal zone management plan (within the meaning of the *Coastal Protection Act 1979*), that apply to the land to which the development application relates,
- (b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,
- (c) the suitability of the site for the development,
- (d) any submissions made in accordance with this Act or the regulations,
- (e) the public interest.

Those matters in Section 4.15 relevant to the proposal are addressed in the following sections.

## 5.1 The provisions of any current or draft environmental planning instrument, development control plan, or matters prescribed by the regulations.

There are a number of current Environmental Planning Instruments (EPI's) applicable to the application. EPI's include State Environmental Planning Policies (SEPP's) and Local Environmental Plans (LEP's). There are no relevant draft EPI's.

Relevant current EPI's are addressed as follows.

### ***State Environmental Planning Policies (SEPPs)***

By definition as an 'electricity generating works' and 'solar energy system', the solar farm is permitted with consent under ***State Environmental Planning Policy (Infrastructure) 2007***, which overrides any conflicting provision within the *Corowa Local Environmental Plan 2012* (CLEP). The cabling between the solar farm and the sub-station in Whitehead Street is permissible without consent under this SEPP.

***State Environmental Planning Policy (State and Regional Development) 2011*** is relevant as it determines that the consent authority for the development application is the JRPP being development with a capital investment value in excess of \$5 million.

As the proposal is by definition neither an 'industry' or 'storage establishment', consideration of ***State Environmental Planning Policy 33 – Hazardous and Offensive Industry*** (SEPP 33) is not required.

The site is located in an area to which ***State Environmental Planning Policy No. 44 – Koala Habitat Protection*** (SEPP 44) applies. SEPP 44 considers land to have 'potential koala habitat' if more than 15 percent of trees are of a species nominated in Schedule 2. Based on the tree identification survey undertaken as part of the Biodiversity Assessment accompanying the application, the land does not qualify. Consequently this SEPP does not require consideration.

***State Environmental Planning Policy 55 – Remediation of Land*** (SEPP 55) requires Council to consider whether land to which a development application relates is potentially contaminated and whether further investigation/remediation is necessary. The land does not appear on contaminated land registers held by the EPA and Council. The SEE states that there is no visible evidence of an activity on the land that may lead to soil contamination and this observation is accepted. Consequently further investigation of the site for potential contamination is not necessary.



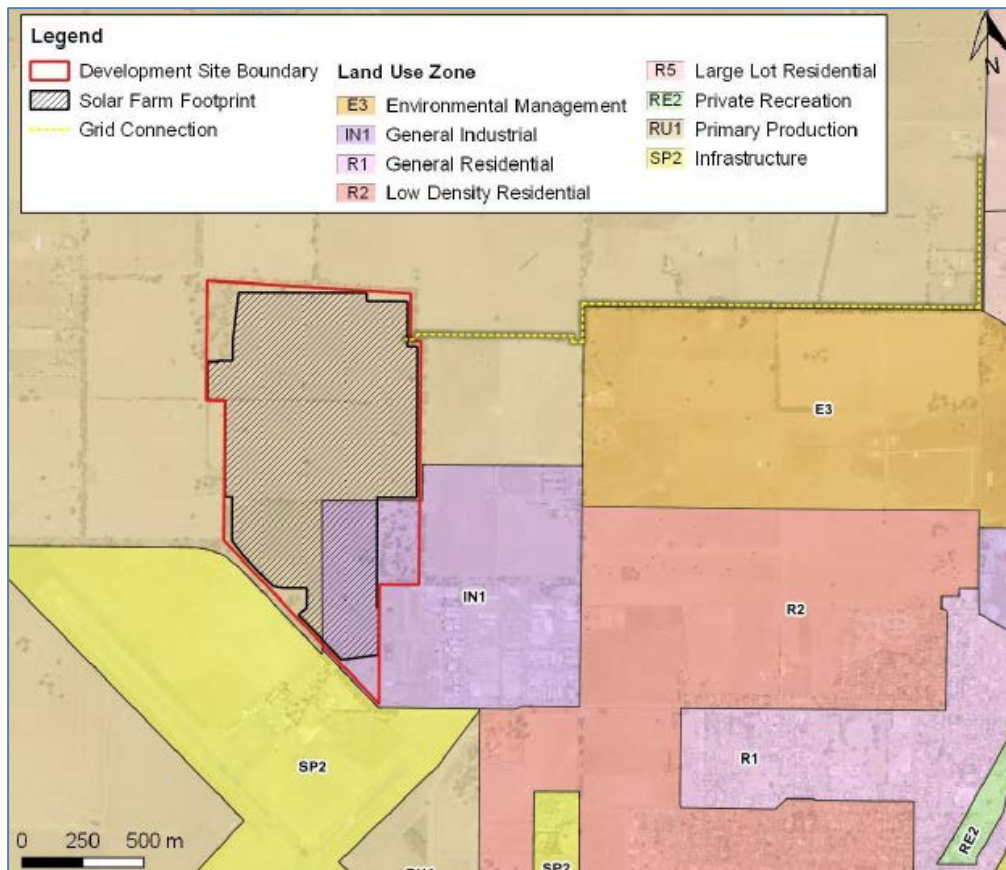
### Local Environmental Plans (LEPs)

The *Corowa Local Environmental Plan 2012* (CLEP) is also an environmental planning instrument and applies to the subject land. Those provisions of the CLEP relevant to the application are addressed as follows.

The subject land is zoned part RU1 Primary Production and part IN1 General Industrial pursuant to the CLEP (see Figure 10). The proposal is defined as an 'electricity generating works' in the dictionary of the CLEP being a "*building or place used for the purpose of making or generating electricity*". 'Electricity generating works' are not nominated in the land use table to the RU1 zone as permissible with or without consent and therefore defaults to being prohibited development. However the permissibility of the proposed development under the Infrastructure SEPP (see above) overrides this prohibition (clause 8(1) of the SEPP) and other conflicting provisions of the CLEP. On the other hand, 'electricity generating works' are not nominated in the land use table to the IN1 zone as permissible without consent or prohibited and therefore default to being permissible with consent under the CLEP.

Either way, development consent for the solar farm is required.

Figure 10 Zoning map (Source: SEE)



Clause 2.3(2) of the CLEP requires the consent authority to have regard to the zone objectives when considering a development application. This can only apply to that part of the site within the IN1 zone under the CLEP as the development is prohibited in the RU1 zone.

The objectives of the IN1 zone are:

- To provide a wide range of industrial and warehouse land uses.

- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.

The first objective is not applicable but the proposal will create employment and have no impact on other land uses. The development will consume approximately 22 hectares of IN1 zoned land, representing approximately one half of the undeveloped land in the Corowa Industrial Estate.

Bearing in mind that the proposal is not by definition an 'industry', the proposal could be said to be inconsistent with the last objective for the IN1 zone in that it is not protecting industrial zoned land for industrial development. The development however takes up undeveloped IN1 zoned land and not existing vacant developed lots. Consequently the current supply of industrial lots in the Corowa Industrial Estate essentially will remain unaffected. In addition, when additional supply is required, the industrial estate can comfortably expand north from Norseman Road once it is re-zoned to IN1. Within this context, the proposal is not considered to be a threat to industrial development within the Corowa Industrial Estate.

The two stands of trees on the site are identified as 'biodiversity' on the Terrestrial Biodiversity Map and consequently Clause 7.4 of the CLEP requires consideration. Under this clause the consent authority must first consider:

- (a) whether the development is likely to have:
  - (i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and
  - (ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and
  - (iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and
  - (iv) any adverse impact on the habitat elements providing connectivity on the land, and
- (b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Secondly, in granting consent, the consent authority must be satisfied that:

- (a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or
- (b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or
- (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

As the two stands of trees are to be retained in the development, there is unlikely to be any detrimental impact on their biodiversity value. The SEE accompanying the development application recommends a number of mitigation measures stemming from the assessment of the environmental impacts of the proposal. The measures are extensive and address all aspects of the development including design, construction, operation, upgrading and decommissioning. The measures are to be reflected in a number of plans to be prepared prior to each aspect of the development proceeding.

These mitigation measures are recommended to be included as conditions of consent and are considered to satisfy the requirements of clause 7.4 of the CLEP.

Clause 7.8 of the CLEP relates to Airspace operations and is relevant having regard for the proximity of the Corowa Airport to the site. The clause requires referral of the proposal to CASA if the consent authority believes it will penetrate the Limitation or Operations Surface of the airport. It is considered the solar panels and ancillary structures and buildings will not penetrate and consequently the clause is excluded from consideration. That



notwithstanding, CASA have been consulted by the applicant in preparing the application and received advice they don't object.

Clause 7.9 requires that consent cannot be granted unless 'essential services' are available to the land or can be made available. In this case the site has access to an electricity supply and the road access will be provided by an extension of Santos Road constructed in accordance with Council's engineering standards. Potable water will be provided to the operations and maintenance building via a roof collection and tank storage system. Stormwater will be addressed in a Stormwater Management Plan to be submitted prior to construction commencing. An on-site wastewater treatment system will be installed and connected to the operations and maintenance building for the use of employees. Having regard for the size of the site and low number of employees when operational, an on-site system will be sufficient.

### ***Development Control Plan Plans (DCPs)***

The ***Corowa Development Control Plan 2013*** (CDCP) sets out guidelines for various types of development (residential, commercial and industrial); specific development issues such as flooding and heritage, and site specific matters such as the Mulwala foreshore land. The nature of the proposal (it is not by definition an 'industry') and its location dictate that few of the provisions of the CDCP are relevant to the assessment of the application.

Part 6.0 of the CDCP references the Strategic Land Use Plan (SLUP) for the former Corowa Shire and requires that "*all development proposals should have regard to the township structure plans for Corowa, Howlong and Mulwala.*" It is noted that purpose of the SLUP is stated in the CDCP as "*to guide the future development and use of land within the Shire for the next 20 years and beyond*".

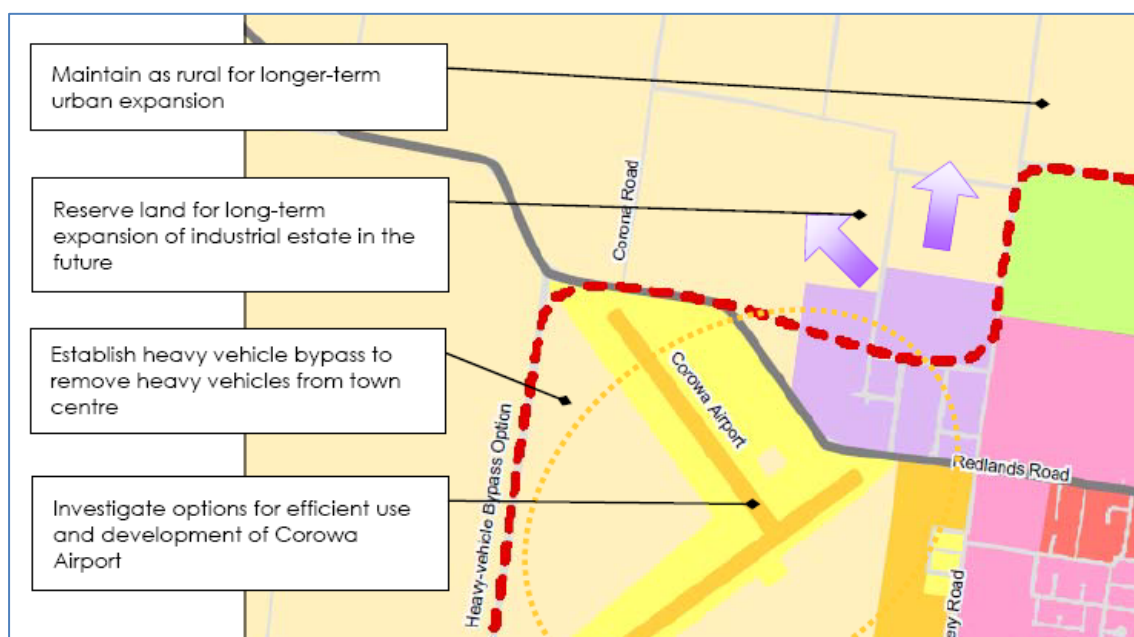
How the Corowa Township Structure Plan (CTSP) influences the site is shown in an extract at Figure 11 and contrary to the view taken in the application, identifies a number of conflicts between the aspirations of the structure plan and proposed solar farm including:

- a portion of the site is preferred for industrial development both now and in the longer term;
- the route of a future heavy vehicle bypass of Corowa is proposed through the site; and
- an 'area of influence' surrounding the Corowa Airport sits over part of the site.

Bearing in mind that the SLUP is a guide only, the structure plan in isolation is not considered to carry sufficient weight to warrant refusal because:

- the existing supply of vacant industrial land in the Corowa Industrial Estate is not threatened by the proposal;
- longer term industrial growth can still be accommodated by expansion north of Norseman Road;
- the route of the heavy vehicle bypass has not been fully investigated and is not an adopted position of Council; and
- the solar farm will have no detrimental impacts on the Corowa Airport as confirmed by CASA.

**Figure 11** Extract from Corowa Township Structure Plan (Source: Strategic Land Use Plan)



## 5.2 Any planning agreement or coastal zone management plan that applies to the land

No planning agreements have been entered into in accordance with Section 7.4 of the EP&A Act. There are also no coastal zone management plans applicable to the subject land.

## 5.3 The environmental, social and economic impacts

The environmental, social and economic impacts of the development are addressed in detail by the SEE accompanying the application. Below is a summary of the key considerations:

The applicant engaged specialist consultants to undertake a 'due diligence' assessment of the potential impacts of the proposal on **Aboriginal cultural heritage**. This assessment concluded:

*The Aboriginal due diligence assessment considered both background research and a visual inspection of the site; neither has produced any evidence to support the potential for Aboriginal artefacts to be present within the project area. The background research identified culturally modified trees in the region surrounding the project area, therefore mature trees were targeted and examined by the archaeologists present and none were identified as culturally modified. The area is low lying, and without a stable water source nearby, it is unlikely to have been a preferred area for occupation.*

Based on this assessment, the application adequately demonstrates there will be no detrimental impact on Aboriginal cultural heritage. The assessment also recommends a number of mitigation measures that are appropriate for inclusion as conditions of consent.

There are no listed items of **European heritage** on or in proximity of the subject land. The application does identify a number of concrete structures on the site that are claimed to have been associated with the war-time use of the Corowa Airport. There are no provisions in the CLEP that prevent the removal of these structures and that is the intention of the applicant. The applicant is however prepared to photographically document the structures prior to their removal. This is an acceptable response and should be conditioned as part of the consent.

The applicant engaged specialist consultants to undertake an assessment of the potential impacts of the proposal on **biodiversity**. This assessment concluded:

*This biodiversity assessment has been completed to assess potential impacts of the project on species and communities listed under the BC Act and EPBC Act. The assessment concluded that the project would not result in significant impacts on these listed species and communities.*

Based on this assessment, the application adequately demonstrates the impacts will not have a significant impact on biodiversity and mitigation measures are recommended for implementation and these can be incorporated as conditions of consent.

The applicant engaged specialist consultants to undertake an assessment of the potential impacts of the proposal from **noise and vibration** generated by construction, operations and traffic. This assessment concluded:

*Overall, based on the results of the assessment, the risk of adverse impacts as a result of the proposed CSF is considered to be low and complies with all applicable criteria. Hence, from an acoustic perspective, the proposed development site is considered acceptable for the proposed use.*

Based on this assessment, the application adequately demonstrates the impacts from noise and vibration are acceptable and mitigation measures are recommended for implementation and these can be incorporated as conditions of consent.

In regards to the potential **visual** impacts of the proposal, the above ground infrastructure includes a perimeter security fencing, a large number of solar panel modules (including the supporting piles and tracking mounts), an operations and maintenance building, the inverter stations and the site switching station. With the exception of the solar panels, this infrastructure is of a low scale and when placed within the context of the size of the site, will have minimal visual impact. The solar panels cover most of the site and as a whole have the potential to have the most impact based on physical presence as well as glare, for which a technical assessment is made in the SEE.

In its assessment of visual impact the SEE concludes:

*In the absence of any recognised landscape conservation areas as listed in local, State or Commonwealth heritage registers, or noted scenic or significant vistas, visual amenity would be valued most by neighbours: local people who live and work in the locality.*

*Whilst the development site and associated solar farm infrastructure will be visible, close, uninterrupted and expansive views of the site do not exist. Stands of roadside vegetation and vegetation within the development site itself that will be retained, will provide partial screening of the solar farm.*

*Visual impact is essentially a subjective judgement. What is intrusive or objectionable to some can be either innocuous or pleasing to others. For this reason, conclusions as to the acceptability or significance of a visual impact is basically an opinion. The existing landscape, views and vistas for those living and working locally would be valued.*

*The proposed solar farm will be visible in the landscape but it will not generate nuisance glare or light spill for any neighbour. Further, the gentle relief of the terrain and existing remnant vegetation that essentially surrounds the site will provide partial screening, such that no vistas from neighbouring homes would be fundamentally changed; noting that the closest dwelling is over 500 m from the solar farm.*

As this conclusion notes, visual impact can be subjective and depend on an affected person's predisposition. In considering the weight to be given to the visual impact in the assessment, it is noted that no submissions on the application were received from adjoining or nearby landowners, inferring an acceptance in this regard. It is also noted that CASA

have not raised any objection to the proposal in terms of potential impacts, particularly in regards to glare, on the operation of the Corowa Airport.

Based on this assessment, the application adequately demonstrates the visual impacts of the proposal are acceptable and mitigation measures are recommended for implementation and incorporation as conditions of consent.

**Traffic** impacts will be at their peak during the 12 month construction period of the solar farm. The SEE states that up to 40 heavy vehicle movements per day and 140 light vehicle movements per day will occur at peak times during this period. All traffic accessing the site will utilise the Santos Road extension for which Council have agreed 'in-principle' to support.

In summary the SEE concludes that:

*Traffic impacts associated with the CSF will be limited to the construction phase. These impacts will be temporary, manageable and monitored. A road condition survey pre- and post-construction, along with a commitment by the proponent to make good any damage to the road network attributable to the solar farm construction will ensure Council's road assets are not degraded, and that the efficiency and safety of the public road network is maintained for motorists.*

The SEE acknowledges that a Traffic Management Plan is appropriate and this will be a condition of consent.

**Drainage** across the site was controlled by series of drains that were constructed to divert drainage away from the airport on the opposite side of Redlands Road. These drains have since been modified to facilitate the movement of farming machinery around the property resulting in some localised flooding around parts of Taits Road. The applicant has stated that the construction of the solar farm provides the opportunity to rectify the drainage issues by submitting a Stormwater Management Plan prior to construction commencing. This is an acceptable response and can be conditioned to ensure it is undertaken.

The subject land is not prone to flooding from a watercourse. Likewise there are no groundwater issues for the development.

The site is not mapped as containing vegetation of a category that represents a **bushfire** risk. Consequently a Bushfire Risk Assessment is not required and/or a Bush Fire Safety Authority does not need to be obtained from the RFS. That notwithstanding, the application states Asset Protection Zones will be established around the perimeter of the site and other operational precautions (e.g. fire extinguishers in all vehicles) will be implemented, particularly during the fire season when the risk is at its greatest.

There will be no **air quality** issues once operational. During the construction phase, dust will be controlled through the use of a water cart and the operation of equipment during periods of high winds will cease. These actions can be conditioned to ensure these actions are implemented.

**Waste** is another potential impact that is restricted to the construction phase of the development. All wastes generated during this period will be stored and disposed off-site to an approved waste management facility. A Waste Management Plan will be a required for Council approval prior to construction commencing.

In regards to potential impacts from **electromagnetic interference** the SEE states:

*EMF increases with voltage and proximity to the apparatus producing, transmitting or consuming electricity. EMF varies according to specific design and construction parameters such as conductor height, electrical load and phasing, and most importantly, whether the conductors are overhead or buried.*

*On the site of the CSF the various EMF generating components would be the PV panels, buried cables, inverters, step up transformers and the switching station. The underground 22 kV grid connection to Essential Energy's substation will not generate EMF.*

*Terrain Solar and/or the EPC Contractor will ensure that in detailed design and equipment procurement that the ICNIRP EMF guidelines will be complied with.*

Adherence to these guidelines will ensure there is no risk to human health from electric and magnetic fields.

The proposal is considered to have a positive ***economic and social*** impact principally through the construction phase. The SEE states that at its peak up to 100 persons will be involved during this 12 month period following which there will be three employees once it is operational. It is expected many of the employees will be located in Corowa and elsewhere in the Shire. The application also makes a commitment to using local goods and services during construction and actively engaging the community to ensure they are aware of this opportunity.

## 5.4 The suitability of the site for development.

The applicant is of the view that the site is suitable for the development for the following reasons.

*The CSF site was selected for development after an extensive screening process. It offers a number of key attributes which provide the opportunity to optimise the solar farm configuration and deliver lower cost energy. It is located suitably close to Essential Energy's substation which provides for efficient connection into the transmission network, which has the capacity to accommodate the output of the CSF. The solar resource at Corowa is also suitable with enough cloud-free days over the year to generate significant energy.*

The site is also considered generally suitable for the proposed development because:

- it is relatively flat land;
- it is separated and therefore buffered from the residential areas of Corowa;
- it won't compromise the future growth of Corowa;
- it has good access to support services and facilities in Corowa;
- there is unlikely to be any detrimental impacts on residents closest to the site and users of the Corowa Industrial Estate;
- it is accessible to the local and regional road network;
- it will not compromise the function of the Corowa Airport;
- it is well separated from the riverine environment of the Murray River;
- there are no watercourses on the land or in proximity;
- few trees require removal;
- the impact on agriculture is restricted to the loss of a small area of land available for this purpose (in the broader context); and
- it adjoins other non-agricultural and infrastructure land uses, including an industrial estate and airport.

## 5.5 The public interest.

'The public' is an amorphous term and can equally apply to a community (such as the residents of Corowa) or much larger areas such as the Riverina Region, NSW, Australia or



even the world.<sup>1</sup> To consider the question of public interest requires consideration of whether the proposal is to the benefit or detriment of 'the public'.

At the macro level of 'public' there is no question that a solar farm is to the public's benefit as it will provide an alternative source of power generation to the burning of fossil fuels. At the micro level there is a benefit through investment in the local economy particularly during the construction phase.

To accept that the proposal is not in the public interest (within the context of the Corowa community) the detrimental impacts must firstly be proven and then considered to outweigh the benefit. The consideration of impacts has been undertaken comprehensively in the SEE with the conclusion reached that subject to implementation of various mitigation measures, there will be no detriment.

## 5.6 Submissions

No submissions to the application have been received.

# 6. Conclusion

The development application the subject of this assessment is for a solar farm on the western fringe of Corowa in Redlands Road. Having made an assessment of the application under Section 4.15 of the EP&A Act, the consent authority can be satisfied that conditional development consent is warranted in this instance. The SEE satisfactorily addresses the environmental impacts and the proposed mitigation measures are considered adequate to ensure any detrimental impacts are ameliorated. It is noted that no objection to the proposal has been received.

# 7. Recommendation

It is recommended that consent for the development application be granted by the consent authority subject to the conditions contained in Attachment 'A'.

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<sup>1</sup> Double Bay Marina v Woollahra Council [2009] NSWLEC 1001

## Attachment A

Recommended conditions of consent

## **1. Approved development**

The development must be carried out in accordance with the attached approved plans and the particulars and statements submitted with the Development Application (including the Statement of Environmental Effects prepared by Geolyse dated February 2018) and subject to the following conditions.

## **2. Consent expiry**

This consent shall expire if the development hereby permitted is not commenced within five years of the date of consent.

## **3. Stormwater Management Plan**

(a) Prior to the commencement of construction the applicant shall provide to Council for endorsement a Stormwater Management Plan that details:

- (i) A design for the collection, conveyance, storage and discharge of stormwater across the site.

(b) Once endorsed the Stormwater Management Plan becomes part of the consent.

## **4. Soil and Water Management Plan**

(a) Prior to the commencement of construction the applicant shall provide to Council for endorsement a Soil and Water Management Plan that as a minimum addresses:

- (i) Details of earthworks.
- (ii) At all times, in all locations, the area of ground disturbance will be limited to that which is the smallest possible footprint that is practicably possible.
- (iii) Erosion and sediment controls will be suitably maintained, including regular monitoring to ensure the measures and controls in place are effective.
- (iv) Immediate stabilisation of worked sections complemented by progressive rehabilitation.
- (v) Erosion and sediment control measures only to be removed once the area is successfully rehabilitated.

(b) Once endorsed the Soil and Water Management Plan becomes part of the consent.

## **5. Construction Management Plan**

(a) Prior to the commencement of construction the applicant shall provide to Council for endorsement a Construction Management Plan that as a minimum addresses:

- (i) Document the environmental procedures and controls that would be implemented throughout construction, including detail on how neighbours would be kept informed about the construction program and how any complaint would be received, resolved and reported.
- (ii) Describe the role, responsibility, authority and accountability of all key personnel involved in construction and detail all monitoring that would be undertaken.
- (iii) Comprise various sub-plans detailing the specific mitigation measures that would be implemented to avoid and manage potential environmental impacts relating to traffic management, biodiversity, Aboriginal heritage, soil and water protection, dust, noise and vibration, waste management and bushfire prevention.

(b) Once endorsed the Construction Environmental Management Plan becomes part of the consent.

## **6. Operations Management Plan**

(a) Prior to commissioning the solar farm the applicant shall provide to Council for endorsement an Operations Management Plan that as a minimum addresses:

- (i) Details of procedures, reporting, and the allocation of responsibilities designed to minimise environmental impacts.
- (ii) Various sub-plans detailing the specific mitigation measures that would be implemented to avoid and manage potential environmental impacts and minimise risks. These would include plans covering land management (specifically relating to fuel loads and noxious weeds) and emergency preparedness.

(b) Once endorsed the Operations Management Plan becomes part of the consent.

## **7. Landscape Plan**

(a) Prior to the commencement of construction the applicant shall provide to Council for endorsement an overall Landscape Plan for the site that addresses:

- (i) Landscaping around the perimeter of the site designed so that in time will provide a visual screen to the development from adjoining and public land.
- (ii) A healthy, self-sustaining, noxious weed free groundcover to be established over the solar farm that does not create a fuel hazard.
- (iii) A maintenance regime.

(b) Once endorsed the Landscape Plan becomes part of the consent.

(c) The landscaping proposed in the Landscape Plan is to be implemented prior to the commissioning of the solar farm.

## **8. Traffic Management Plan**

(a) Prior to the commencement of construction the applicant shall provide to Council for endorsement a Traffic Management Plan that as a minimum addresses:

- (i) Temporary traffic controls, including signage.
- (ii) Notifying the local community about project-related traffic.
- (iii) Scheduling of haulage vehicle movements to minimise convoy lengths or platoons.
- (iv) All vehicles are to be loaded and unloaded on-site and enter and leave the site in a forward direction.
- (v) A driver's code of conduct that addresses travelling speeds; procedures to ensure that drivers adhere to the designated transport routes; and procedures to ensure that drivers implement safe driving practices.
- (vi) Ensuring there is sufficient parking on-site for all vehicles and no parking occurs on the public road network.

(b) Once endorsed the Traffic Management Plan becomes part of the consent.

## **9. Emergency Response Plan**

(a) Prior to the commencement of operations an Emergency Response Plan will be prepared in consultation with RFS and/or Fire & Rescue NSW. This plan will identify the procedures that would be implemented if there is a fire on site or in the vicinity of the site.

## **10. Decommissioning Management Plan**

(a) At least 12 months prior to the solar farm ceasing to operate, the applicant shall provide to Council for endorsement a Decommissioning Management Plan that includes but is not limited to:

- (i) Disconnecting the solar farm from the Essential Energy (or its successor) network.
- (ii) All infrastructure to be removed including modules, piles, racking system, underground cables (where possible) and the site control room and facilities.
- (iii) All removed infrastructure to be recycled off-site where possible.
- (iv) Once all infrastructure is removed, the ground is then to be worked, stabilised and returned to agricultural use.

- (b) Once endorsed the Decommissioning Management Plan becomes part of the consent.

#### **11. Noise and vibration**

- (a) Limiting noise generating construction activities to standard construction hours except where an acceptable acoustic solution can be identified to minimise adverse amenity impacts on the nearest sensitive receivers.
- (b) Consultation with the nearest sensitive receivers throughout the construction process to inform them on the duration and timing of potentially noisy activities.
- (c) All mobile plant and equipment to use broad-band reversing alarms.
- (d) Where there is a choice in the type of machines that performs the same function, the machine that generates the least noise is to be selected.
- (e) Operate plant in a quiet and efficient manner.
- (f) Reduce throttle setting and/or turn off equipment when not in use.
- (g) Regularly inspect and maintain equipment to ensure it is in good working order (including mufflers on vehicles and machinery).
- (h) Equipment and plant would be operated and maintained in accordance with the manufacturer's instructions including replacement of engine covers, repair of defective silencing equipment, tightening rattling components, and repair of leakages in compressed air lines.
- (i) As part of a general induction, all new employees and contractors to be informed of noise management measures, construction hours, the location of sensitive receptors and the protocol for handling any complaint.
- (j) In the event that a complaint being received the source is to be immediately investigated and measures implemented to avoid recurrence. Any complaint received is to be documented.
- (k) In the event that a complaint cannot be resolved, noise monitoring is to be undertaken with either attended or un-attended loggers. Precisely how the monitoring would be performed, where, for how long, and with what sort of equipment, is to be determined on a case by case basis. The justification for the monitoring regime undertaken is to be documented and the results made available to Council upon request.

#### **12. Aboriginal cultural heritage**

- (a) In the event that Aboriginal cultural heritage sites are discovered, work is to immediately cease and archaeological advice sought.
- (b) In the event that known or suspected human remains (generally in skeletal form) are encountered during construction, the following procedure is to be followed immediately:
  - (i) All work in the immediate vicinity is to cease and the find immediately reported to the Site Manager or other nominated senior staff member.
  - (ii) The Site Manager or other nominated senior staff member will promptly notify the police and the state coroner (as required for all human remains discoveries).
  - (iii) The Site Manager or other nominated senior staff member will contact the NSW Office of Environment and Heritage for advice on identification of the human remains.
  - (iv) If it is determined that the human remains are Aboriginal ancestral remains, the Local Aboriginal Land Council is to be contacted by the Site Manager or other nominated senior staff member and consultative arrangements to be made to discuss ongoing care of the remains.
  - (v) If it is determined that the human remains are not Aboriginal ancestral remains, further investigation by the Site Manager or other nominated senior staff member is to be conducted to determine if the remains represent a historical grave or if police involvement is required.

#### **13. European heritage**



- (a) Prior to their removal a photographic archival record of the concrete structures on site is to be compiled and submitted to Council.
- (b) Should any object or item of historic heritage be uncovered during construction, work in that area will cease and the item cordoned off. A qualified heritage specialist is to attend the site to determine the nature of the find and determine the required course of action; including consultation with Council.

#### **14. Biodiversity**

- (a) No trees other than those on land to be occupied by solar panels are to be removed.
- (b) Direct biodiversity impacts are to be avoided through implementation of the following measures:
  - (i) Location of the project in a largely cleared area.
  - (ii) Exclusion of patches of Western Grey Box Woodland at the north-west and south-east boundaries from the footprint of the solar farm.
  - (iii) Retention of trees in Bullecourt Road and Whitehead Street when connecting to the zone sub-station.
- (c) Direct biodiversity impacts to be minimised through implementation of the following measures:
  - (i) Trenching in Bullecourt Road and Whitehead Street to avoid the winter breeding season of Sloane's Froglet.
  - (ii) If works cannot avoid the winter breeding season of Sloane's Froglet, a pre-clearance survey is to be completed by a suitably qualified ecologist, with any frogs moved into suitable habitat adjacent to the works area. Prior to the pre-clearance survey, grasses are to be slashed to a minimum height of 20cm to enable frogs to be readily detected.
  - (iii) Conducting any clearing of hollow-bearing trees outside of winter when any juvenile birds present in nests and microbats in torpor would experience higher rates of mortality and injury.
  - (iv) Implementing a three-stage clearing protocol whereby hollow-bearing trees are:
    - disturbed/tapped by machinery 24 hours prior to felling to allow fauna to self-relocate;
    - felling the trees the following day; and
    - leaving felled trees in situ for at least 24 hours prior to allow any fauna present to self relocate.
- (d) Indirect biodiversity impacts are to be mitigated through implementation of the following measures:
  - (i) Backfilling and stabilisation immediately following installation of the Corowa Grid Connection trench.
  - (ii) Selection of a native or non-invasive cover crop for the Corowa Solar Farm to minimise the potential for weed invasion into retained native vegetation (i.e. Grey Box Woodland and DNG).

#### **15. Bush fire prevention**

- (a) Prior to construction commencing contact is to be made with the Local Brigade of the RFS and details about the construction schedule, contact numbers and site access arrangements are to be shared.
- (b) Static Water Supplies dedicated exclusively for firefighting purposes are to be located strategically around the site and appropriately plumbed for the duration of construction.
- (c) The fuel load over the site prior to and during construction is to be monitored and reduction measures implemented as required.
- (d) No burning of vegetation or any waste material is to take place on the construction site.
- (e) Fire extinguishers are to be available in all vehicles.

- (f) During bushfire season all vehicle and plant movements beyond formed roads and trafficable hard stand areas are to be restricted to diesel, not petrol vehicles.
- (g) During the bushfire season the fire danger status is to be monitored daily (through the RFS website <http://www.rfs.nsw.gov.au> ) and communicated to personnel as required (i.e. on high bush fire risk days).
- (h) Total Fire Ban rules will be adhered to in that the operator will not:
  - (i) (in any grass, crop or stubble land) drive or use any motorised machine unless the machine is constructed so that any heated areas will not come into contact with combustible matter; or
  - (ii) carry out Hot Works (e.g. welding operations or use an angle grinder or any other implement that is likely to generate sparks), unless the necessary exemption from the NSW RFS Commissioner has been obtained and work complies with all requirements specified in the exemption.
- (i) Any fuel or flammable liquid be stored on-site will be in a designated area and will be sign posted.
- (j) A register will be maintained that confirms the quantities and location of any flammable material stored on-site.

## **16. Air quality**

- (a) Limit the area of soil disturbance at any one time.
- (b) Maintain all disturbed areas, stockpiles and handling areas in a manner that minimises dust emissions (including windblown, traffic-generated or equipment generated emissions).
- (c) Where required, undertake strategic watering to achieve dust suppression.
- (d) Where required, minimise vehicle movement and speed.
- (e) Avoid dust generating activities during windy and dry conditions.
- (f) Ensure all construction plant and equipment are operated and maintained to manufacturer's specifications in order to minimise exhaust emissions.
- (g) If necessary, temporary cessation of works resulting in dust raising during excessively dry and windy conditions.

## **17. Waste management**

- (a) The work site is to be kept free of rubbish and cleaned up at the end of each working day.
- (b) All waste that cannot be recycled is to be disposed at a legally operating waste facility.
- (c) No waste is to be burnt or buried on-site.
- (d) All opportunities for recycling are to be implemented.
- (e) All waste is to be classified in accordance with the EPA's Waste Classification Guidelines and stored and handled in accordance with its classification.

## **18. Fuel and chemical management**

- (a) Storage, handling and use of any potentially hazardous materials will be in accordance with the WorkCover NSW *Storage and Handling of Dangerous Goods – Code of Practice* (2005).
- (b) Activities with the potential for spills (e.g. refuelling) is not to be undertaken adjacent any existing drainage line or dam and a suitable spill response and containment kit will be available on site whenever and wherever this type of higher risk activity is undertaken.

## **19. Incident management**

- (a) Procedures to be established for recording and reporting any incident that causes or has the potential to cause material harm to the environment.

## **20. Induction**

- (a) All contractors undertaking any works on-site will be to be inducted on the requirements of the Construction Management Plan and their specific responsibilities before commencing works.

**21. Community consultation**

- (a) Neighbours are to be kept informed of any activity on the site as necessary.
- (b) A procedure to be established for receiving, investigating and reporting any complaint received.

**22. Santos Road extension**

- (a) The extension of Santos Road to the site entrance is to be constructed in accordance with Council's standards and at the applicant's expense.

**23. Upgrading**

- (a) Prior to carrying out any upgrades, the applicant is to provide revised layout plans of the development to Council.

**Reasons for conditions**

The above conditions have been imposed:

- (a) to ensure compliance with the provisions of the applicable environmental planning instruments;
- (b) having regard to Council's duties of consideration under Section 4.15 of the *Environmental Planning and Assessment Act 1979*, as well as Section 4.17 which authorises the imposing of the consent conditions; and
- (c) to protect the amenity, safety and environmental quality of the locality.