

## Appendix A

### Agency Submissions



Mr Andy Winter  
Edify Energy  
Level 1, 34-35 South Steyne,  
Manly, NSW 2095

Dear Mr Winter

**Darlington Point Solar (SSD 8392)  
Response to Submissions**

The public exhibition of the Environmental Impact Statement (EIS) for the Darlington Point Solar Farm concluded on Wednesday 20 June 2018.

The Secretary requests that you prepare and submit a report detailing your responses to all issues raised in submissions. The submissions can be viewed on the Department's website [www.majorprojects.planning.nsw.gov.au](http://www.majorprojects.planning.nsw.gov.au).

In addition, the Department requests that you:

- provide a Preliminary Hazard Assessment, given the scale of the proposed battery energy storage system; and
- consult directly with the Office of Environment and Heritage and Murrumbidgee Council to ensure you adequately address their comments.

Please note that Murrumbidgee Council has advised the Department that it intends to provide its submission shortly after its Council meeting held on 26 June 2018.

Please provide your response to the Department by **Friday 20 July 2018**.

If you wish to discuss this matter, please contact Iwan Davies on the above contact details.

Yours sincerely,



26/6/18

Phillipa Duncan  
A/Director  
Resource and Energy Assessments

OUT18/7826

Ms Ellen Jones  
Resource and Energy Assessments  
NSW Department of Planning and Environment

By email: [ellen.jones@planning.nsw.gov.au](mailto:ellen.jones@planning.nsw.gov.au)

Dear Ms Jones

**Darlington Point Solar Farm (SSD 8392)**  
**Comment on the Environmental Impact Statement**

I refer to the email of 17 May 2018 to the Department of Industry in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries. Any further referrals to Department of Industry can be sent by email to [landuse.enquiries@dpi.nsw.gov.au](mailto:landuse.enquiries@dpi.nsw.gov.au).

The department provides the following recommendations for consideration in assessment of the proposal. Detailed comments are provided at **Attachment A**.

**Recommendations prior to project approval**

- Further details should be provided regarding the management of existing on site dams during construction and operation of the project. Where they are to be removed an assessment is requested of the impacts of removing the dams on aquatic habitat and the impacts of discharging water stored in the dams.
- Further details should be provided regarding the quantities, sources and security of water required during the construction and operation of the project.

**Recommended conditions of approval**

- That the proponent prepares a Soil and Water Management Plan as part of the Construction Environmental Management Plan in consultation with the Natural Resources Access Regulator, prior to commencement of activities.
- That the proponent undertakes a full soil survey prior to construction.
- That all underground cables and infrastructure be removed once the site is decommissioned.

Yours sincerely



Alex King  
**Director Cabinet and Legislation Services**  
15 June 2018

Hi Ellen,

NSW Department of Industry – Lands & Water have no objection or comments to contribute to this proposal.

Thanks and kind regards,  
Bec

**Bec Byrne** | Natural Resource Management Project Officer

**NSW Department of Industry – Lands & Water**

PO Box 1030 Griffith NSW 2680 | Farm 217, Murray Road | Hanwood NSW 2680

**T:** 02 6960 1343 | **M:** 0447 167 637 **Central:** 1300 886 235 **E:** [bec.byrne@crowmland.nsw.gov.au](mailto:bec.byrne@crowmland.nsw.gov.au)

**W:** [www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au) | [www.industry.nsw.gov.au](http://www.industry.nsw.gov.au)

Hi Ellen

I refer to your email of 17 May 2018 to the Environment Protection Authority (EPA) requesting our comments on the Darlington Point Solar Farm located approximately 10 kilometres south of Darlington Point, within the Murrumbidgee Local Government Area.

As per our letter to the Department of Planning and Environment dated 2 May 2017 the EPA has responsibilities for pollution control and environmental management for scheduled activities under the *Protection of the Environment Operations Act 1997* (POEO Act). Based on the information provided the proposed activity is not scheduled under the POEO Act and the proposed photovoltaic solar farm does not require an Environment Protection Licence. Murrumbidgee Council will be the appropriate regulatory authority for matters relating to the POEO Act for this development.

On this basis the EPA has no further comments to make in relation to the proposal.

If you have any further enquiries about this matter please contact me by telephoning 02 6969 0700 or by electronic mail at [riverina.farwest@epa.nsw.gov.au](mailto:riverina.farwest@epa.nsw.gov.au).

Thanks

**Craig Bretherton**

**Manager Regional Operations**

Riverina Far West Region

South & West Branch, NSW Environment Protection Authority

☎ 02 6969 0700 Mobile ☎ 0427 223 516

[craig.bretherton@epa.nsw.gov.au](mailto:craig.bretherton@epa.nsw.gov.au) [www.epa.nsw.gov.au](http://www.epa.nsw.gov.au) [@EPA\\_NSW](https://twitter.com/EPA_NSW)

**Report pollution and environmental incidents 131 555 (NSW only) or +61 2 9995 5555**



Please send all official electronic correspondence to [riverina.farwest@epa.nsw.gov.au](mailto:riverina.farwest@epa.nsw.gov.au)

12<sup>th</sup> June 2018

Ellen Jones  
Planning Officer – Resource and Energy Assessments – Planning Services  
Department of Planning & Environment  
GPO BOX 39  
SYDNEY NSW 2001

Your Ref: SSD 8392  
Our Ref: DOC18/364559

Emailed: [ellen.jones@planning.nsw.gov.au](mailto:ellen.jones@planning.nsw.gov.au)

Dear Ms Jones

**Re: Darlington point Solar farm (SSD 8392) – EIS Exhibition**

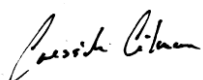
Thank you for the opportunity to provide advice on the Environmental Impact Statement (EIS) for the Darlington point Solar Farm (SSD 8392). This is a response from the Department of Planning & Environment – Division of Resources & Geoscience, Geological Survey of New South Wales (GSNSW).

GSNSW reviewed the EIS for the Darlington Point Solar Farm (SSD8392). The proponent has addressed all requirements in relation to operating mines, extractive industries, mineral, coal or petroleum resources, and exploration activities.

GSNSW notes that in relation to biodiversity offsets requirements, no offset sites have been identified at this stage.

Queries regarding the above information, and future requests for advice in relation to this matter, should be directed to the GSNSW Land Use team at [landuse.minerals@geoscience.nsw.gov.au](mailto:landuse.minerals@geoscience.nsw.gov.au).

Yours sincerely



Cressida Gilmore  
Manager – Land Use

04 June 2018

Ellen Jones  
Planning Officer  
Resource and Energy Assessments (Planning Services)  
The Department of Planning and Environment  
320 Pitt Street, GPO Box 39, Sydney  
NSW 2001

By email to: ellen.jones@planning.nsw.gov.au

Dear Ellen

**Darlington Point Solar (SSD 8392) - Notice of Exhibition (Agencies)**

With reference to your email dated 17 May 2018 regarding the subject matter, this is to advise that the proposed solar farm project is located directly adjacent to TransGrid's 330/220/132kV Darlington Point Substation on Donald Ross Drive. Proposed solar farm and the TransGrid substation share common boundary on the North, East and South of the substation site. Edify Energy intends to connect to the 132kV bus bar using one of the spare bays in the North-East corner of the substation.

Edify Energy submitted Connection Application for this project on 20 April 2017. Enquiry Response was provided by TransGrid on 8 May 2017. Subsequently, a Connection Process Agreement (CPA) was executed on 04 January 2018.

Feasibility of connection and scoping is currently underway in accordance with the terms of CPA. TransGrid has been working closely with Edify Energy with a view to identify optimal connection options for this development.

Yours faithfully



Inder Rai  
**Proposal Manager**



15 June 2018

SWT17/00050  
SF2017/089031  
MM

The Manager  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

Attention: Ellen Jones

**SSD-8392 APPLICATION – PROPOSED DARLINGTON POINT SOLAR FARM, DONALD ROSS DRIVE DARLINGTON POINT.**

I refer to correspondence forwarded to Roads and Maritime Services requesting the provision of key issues and assessment requirements to be included in the Secretary's Environmental Assessment Requirements.

Roads and Maritime Services has reviewed the Environmental Impact Statement (EIS) and Traffic Impact Assessment prepared by ARUP for the Darlington Point Solar project. From the information provided it is understood that the proposal is for the establishment and operation of a 275 MW solar photovoltaic (PV) plant and associated infrastructure on the subject site. The subject site has frontage and access to Donald Ross Drive, which is classed as a local road, within a 100 km/h speed zone.

The site does not have frontage to the Sturt Highway or Kidman Way but will rely on access by these roads for workers and delivery of components. Access to the development site is proposed from Donald Ross Drive. It is understood from the submitted documentation that access to the site will be via the intersection of Donald Ross Drive with the Sturt Highway or Ringwood Road with the Kidman Way during both the construction and operational phases of the project. As access to the development site is proposed from Donald Ross Drive any access driveway should be consistent with the requirements of Council.

The submitted documentation fails to identify a specific route for access to the site but instead identifies several options which will require further confirmation. The TIA identifies that access to the site for components for the solar farm is available from Adelaide and Sydney via the Sturt Highway and from Melbourne via the Kidman Way. Therefore the TIA has assumed an equal split for heavy vehicles accessing the site from Sydney, Melbourne or Adelaide representing 33% from each city. It is unusual for the components for the solar farm to be sourced from different locations.

It is understood that the anticipated construction period will be up to 12 months. Due to the characteristics of such a development the significant proportion of traffic generation (for both light and heavy vehicles) occurs during the construction and decommissioning stages of the development with the operational phase of the development generating limited traffic. The submitted documentation considers the heavy and light vehicle traffic generation for construction of the facility. The documentation does not finalise the preferred route for the delivery of components to the development site or the source of other products, such as the aggregate, water and sand. The submitted reports acknowledge that this development will require the

preparation of an appropriate Construction Traffic Management Plan. As the proposal relies on access via the classified and local road network this plan should be finalised in consultation with the relevant road authorities, in this case being both the Roads and Maritime Services and Council.

The submitted documentation indicates that access to the development site is proposed from Donald Ross Drive and through its intersection with the Sturt Highway. The intersection of Donald Ross Drive with the Sturt Highway is currently constructed with a sealed Auxiliary Right Turn (AUR) and Auxiliary Left Turn (AUL) treatment from the Sturt Highway. The intersection of the Kidman way with Ringwood Road is a sealed 4 way intersection with limited turn treatment.

The mode of transport proposed is heavy articulated vehicles up to B-Double in size. Access for B-Double vehicles by either Donald Ross Drive or Ringwood Road is permitted but under restrictions as listed in the B-Double Route approval. Any travel by these roads is to comply with the route restrictions.

The submitted documentation indicates that the construction workforce is proposed to be housed within the local area including Darlington Point, Coleambally, Griffith and surrounding localities. It is proposed that approximately 300 construction personnel would be required on site during the peak construction period. The Traffic Impact Assessment refers to the use of a park and ride system to transport works to and from the site and refers to the use of a parking area within close proximity to the Solar Farm site. Close proximity to the site may be along Donald Ross Drive. As the location of the parking area is not specified the traffic generation to the site is unknown.

The submitted documentation fails to provide sufficient detail to identify the types, volumes and origin/destination of delivery, construction and personnel traffic generated during the construction period. The current intersection of Donald Ross Drive with the Sturt Highway is currently constructed to an appropriate standard to accommodate the anticipated traffic generation. Based on the information provided access to the development site, particularly for heavy vehicles, should be restricted to via the intersection of the Sturt Highway and Donald Ross Drive. As Donald Ross Drive is classed as a local road access to the site from this road shall be to the satisfaction of Council.

Roads and Maritime is mainly concerned with the provision of safe access between the subject site and the public road network and the impact of the development on the safety and efficiency of the road network. Roads and Maritime emphasises the need, particularly during the construction phase of this development, to minimise the impacts on the existing road network. As the subject site is to be accessed via an intersection with the Sturt Highway or the Kidman Way which are located within a 110 km/h speed zone the following conditions are proposed for road safety reasons.

Roads and Maritime Services has assessed the Development Application based on the documentation provided and would raise no objection to the development proposal subject to the Consent Authority ensuring that the development is undertaken in accordance with the information submitted as amended by the inclusion of the following as conditions of consent (if approved):-

1. Prior to the commencement of construction activities a Traffic Management Plan shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) to outline measures to manage traffic related issues associated with the development, particularly during the construction and decommission processes. The appointed transport contractor shall be involved in the preparation of this plan. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to the following;
  - i) Finalise details of haulage, including transport routes, volumes, vehicle type and length, timing, and frequency,
  - ii) Finalise details of any required road-specific mitigation measures.
  - iii) Require that all vehicular access to the site be via the approved access route.
  - iv) Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic,

- v) Proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered.
  - vi) The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times. The management of construction staff access to the works site is to include strategies and measures employed to manage the risks of driver fatigue and driver behaviour.
  - vii) Measures to address adverse climatic conditions that may affect road safety for vehicles used during construction, operation and decommissioning of the facility (e.g. fog, dust, wet weather).
  - viii) procedures for informing the public where any road access will be restricted as a result of the project,
  - ix) any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the project,
  - x) a Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, safe overtaking and maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code,
  - xi) details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site,
2. Vehicular access to the development site, particularly heavy vehicles, shall be restricted to via the intersection of the Sturt Highway and Donald Ross Drive.
  3. The pick up and drop off location(s) for the proposed park and ride as referred to in the Traffic Impact Assessment shall be located at sites to the satisfaction of both the Council and Roads and Maritime Services.
  4. The Proponent must engage an appropriately qualified person to prepare a Road Dilapidation Report for transport routes particularly the intersections of the Sturt Highway with Donald Ross Drive and/or the Kidman Way with Ringwood Road to be used during the construction (and decommissioning) activities, in consultation with the relevant road authority (Roads and Maritime Services and Council). This report is to address all road related infrastructure. Reports must be prepared prior commencement of, and after completion of, construction (and decommissioning). Any damage resulting from the construction (or decommissioning) traffic, except that resulting from normal wear and tear, must be repaired at the Proponent's cost. The applicant is accountable for this process, rather than the proposed haulage contractor. Such work shall be undertaken at a time as agreed upon between the Proponent and relevant road authorities.
  5. Prior to the commencement of construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.
  6. Glint and glare from the solar panels shall not cause a nuisance, disturbance or hazard to the travelling public on the public road network. In the event of glint or glare from the solar plant being evident from a public road, the proponent shall immediately implement glare mitigation measures such as construction of a barrier (e.g. fence) or other approved device to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels.
  7. Any works within the road reserve of the Sturt Highway or the Kidman Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents.
  8. All works associated with the project shall be at no cost to the Roads and Maritime Services.

Under the provisions of the Environmental Planning & Assessment Act the Consent Authority is responsible to consider any likely impacts on the natural or built environment. Depending on the level of environmental assessment undertaken to date and nature of the works it may be necessary for the developer to undertake further environmental assessment for any ancillary road works required as a condition on the development.

Any enquiries regarding this correspondence may be referred to the Manager, Land Use for Roads and Maritime Services (South West Region), Maurice Morgan, phone (02) 6923 6611.

**Please forward a copy of the Notice of Determination for this Development Application to the Roads and Maritime Services at the same time as advising the applicant.**

Yours faithfully



Per:  
Jonathan Tasker  
Acting Director  
South West NSW



Our ref: DOC18/318237

Ms Ellen Jones  
Planning Officer - Resource and Energy Assessments  
Department of Environment & Planning  
GPO Box 39  
SYDNEY NSW 2001

Email: [ellen.jones@planning.nsw.gov.au](mailto:ellen.jones@planning.nsw.gov.au)

Dear Ms Jones

**Re: Darlington Point Solar Farm (SSD 8392)**

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Thank you for your e-mail on 17 May 2018 referring the Darlington Point Solar Farm to the Heritage Council of NSW for comment.

A review of the documentation indicates that no items listed on the State Heritage Register and no historic archaeology is within the subject site, or in the immediate vicinity. Therefore, the Heritage Council of NSW has no comment on this project.

If you have any questions regarding this advice, please contact Bronwyn Smith in the Customer Strategies team, Heritage Division, Office of Environment and Heritage, on 9873 8500 or at [heritagemailbox@environment.nsw.gov.au](mailto:heritagemailbox@environment.nsw.gov.au).

Yours sincerely

15/06/2018

**Katrina Stankowski**  
**Senior Team Leader**  
North Assessments, Heritage Division  
Office of Environment and Heritage  
**As Delegate of the Heritage Council of NSW**

13 June 2018

Ellen Jones  
Planning Officer  
Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Dear Ellen

**Re: Darlington Point Solar Farm (SSD 8392)**

I write in response to your department's recent request to review and provide comment on the Darlington Point Solar Farm (SSD 8392), located on Donald Ross Drive, Darlington Point, in the Murrumbidgee local government area.

Local Land Services provides consideration to, and comment in respect of, the zone of the land and native vegetation clearing. For our agency's purpose, the land is considered to be regulated land subject to authorisation for removal of native vegetation under the *Local Land Services Act 2013*.

The Environmental Impact Statement (EIS) includes the below, as noted:

- The land proposed for SSD 8392 is freehold and zone RU1 – primary production.
- The development proposed is deemed State Significant Development, a major project for NSW.
- I have reviewed the EIS with particular regard to clearing/removal of native vegetation.
- Vegetation is to be offset, consistent with a Biodiversity Offset Strategy included in the BAR.
- A Biodiversity Offset Plan (BOP) will be developed and implemented as part of the proposal and will include ongoing grassland monitoring in association with Charles Sturt University.

Local Land Services note that the key biodiversity issues of concern have been considered in the EIS.

Clearing provisions under the *Local Land Services Act 2013*, section 600 states:

For the purposes of this Part, the clearing of native vegetation in a regulated rural area is

**authorised under other legislation** in any of the following cases:

- (a) The clearing was authorised by:
  - (i) a development consent under **Part 4** of the *Environmental Planning and Assessment Act 1979*, or
  - (ii) a State significant infrastructure approval under Part 5.1 of that Act

The Darlington Point Solar Farm proposal, including vegetation clearing, is being assessed under **Part 4** of the EP&A Act. The potential impacts on native vegetation are discussed in section 7.1 of the report and in more detail in Appendix C.

Accordingly, as the EIS gives consideration for such clearing, LLS does not provide any additional consent as an agency.

In summary, the EIS completely addresses matters with respect to vegetation clearing, offsetting and biodiversity requirements and authorises activities via the Planning legislation pathway.

Local Land Services has no further comment in respect to matters under Part 5 of the *Local Land Services Act 2013*.

Kind regards,



Nicole Robinson



File Ref. No: BFS18/1358 (8000003608)  
 TRIM Doc. No: FRN18/1058  
 Contact: Station Officer Graeme Turnbull

13 June 2018

The Department of Planning & Environment  
 C/- Ellen Jones  
 GPO Box 39  
 SYDNEY NSW 2001

E: [ellen.jones@planning.nsw.gov.au](mailto:ellen.jones@planning.nsw.gov.au)

Dear Ellen Jones,

**Environmental Impact Statement (EIS)  
 Darlington Point Solar Project (SSD8392)  
 Donald Ross Drive, Darlington Point**

I refer to the above development proposal and the Department of Planning & Environment's (the Department) invitation for agencies to provide input for consideration in response to the EIS. Fire & Rescue NSW (FRNSW) have reviewed aspects of the EIS and the following comments and recommendations are submitted for consideration.

FRNSW notes that the facility's proposed location is within a NSW Rural Fire Services' (RFS) Fire District. Notwithstanding, in the event of a significant fire event (either on or off-site in proximity to the development) or hazardous material incident FRNSW will be responded to either assist the RFS or to fulfill the role of designated combat agency.

It is FRNSW experience that small and large scale photovoltaic installations present unique electrical hazard risks to our personnel when fulfilling their emergency first responder role (n.b. the Fire Brigades Act 1989 imposes specific statutory functions and duties upon the Commissioner of FRNSW).

In addition, the Work Health and Safety (WHS) Act 2011 (and its subordinate Regulation) classify FRNSW as a person (entity) conducting a business or undertaking (PCBU). Clauses 34 and 35 of the WHS Regulation impose specific obligations upon a PCBU to identify hazards and manage risks at workplaces.

Due to the electrical hazards associated with large scale photovoltaic installations and the potential risk to the health and safety of firefighters, both FRNSW and the NSW Rural Fire Service must be able to implement effective and appropriate risk control measures when managing an emergency incident at the proposed site.



### **Recommendation/s**

Should a fire or hazardous material incident occur, it is important that first responders have ready access to information which enables effective hazard control measures to be quickly implemented. Without limiting the scope of the emergency response plan (ERP), the following matters are recommended to be addressed:

1. That a comprehensive ERP is developed for the site.
2. That the ERP specifically addresses foreseeable on-site and off-site fire events and other emergency incidents, (e.g. fires involving solar panel arrays, bushfires in the immediate vicinity or potential hazmat incidents).
3. That the ERP detail the appropriate risk control measures that would need to be implemented in order to safely mitigate potential risks to the health and safety of firefighters and other first responders (including electrical hazards). Such measures would include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the photovoltaic system (either in its entirety or partially, as determined by risk assessment).
4. Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site should also be included in the ERP.
5. That two copies of the ERP (detailed in recommendation 1 above) are stored in a prominent 'Emergency Information Cabinet' which is located in a position directly adjacent to the site's main entry point/s.
6. Once constructed and prior to operation, that the operator of the facility contacts the relevant local emergency management committee (LEMC). The LEMC is a committee established by virtue of Section 28 of the State Emergency and Rescue Management Act 1989. LEMCs are required to be established so that emergency services organisations and other government agencies can proactively develop comprehensive inter agency local emergency procedures for significant hazardous sites within their particular local government area. The contact details of members of the LEMC can be obtained from the relevant local council.

For further information please contact Fire Safety Assessment Unit, referencing FRNSW file number BFS18/1358 (8000003608). Please ensure that all correspondence in relation to this matter is submitted electronically to [firesafety@fire.nsw.gov.au](mailto:firesafety@fire.nsw.gov.au).

Yours sincerely

A handwritten signature in black ink, appearing to read 'M. Castelli', is positioned above the printed name.

Station Officer Mark Castelli  
Team Leader  
Infrastructure Liaison Unit



## NSW RURAL FIRE SERVICE



The Secretary  
NSW Planning & Environment  
GPO Box 39  
Sydney NSW 2001

Your Ref: SSD 8392  
Our Ref: D18/5640  
DA18053013283 AB

**ATTENTION:** Ellen Jones

8 June 2018

**Agency Comment: Darlington Point Solar Farm (SSD 8392) Environmental Impact Statement; Sturt Highway Darlington Point**

Dear Ms Jones

I refer to NSW Planning and Environment correspondence dated 18 May 2018 seeking comment from the NSW Rural Fire Service (NSW RFS) regarding bush fire protection requirements for the above State Significant Development application.

The NSW RFS has received and reviewed the Environmental Impact Statement (EIS) and understands the development proposal is for a proposed 275 Megawatt (MW) photovoltaic (PV) solar farm.

The EIS states:

*"Key development and infrastructure components of the DPSF is proposed to include:*

- Photovoltaic (PV) solar panels*
- Steel mounting frames with piled foundations*
- A single-axis tracking system*
- Direct current (DC) / alternating current (AC) inverter stations*
- Medium voltage (33kV) electrical reticulation network*
- A 33/132kV switchyard, including an internal 33kV switch-room*
- Internal access tracks for operational maintenance and housekeeping, to be largely located in bushfire set-back zones*
- Security perimeter fencing*
- Staff car park and small amenities building*
- Battery energy storage system facility".*

**Postal address**

Records  
NSW Rural Fire Service  
Locked Bag 17  
GRANVILLE NSW 2142

**Street address**

NSW Rural Fire Service  
Planning and Environment Services (North)  
Suite 1, 129 West High Street  
COFFS HARBOUR NSW 2450

T (02) 6691 0400  
F (02) 6691 0499  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)  
Email: [pes@rfs.nsw.gov.au](mailto:pes@rfs.nsw.gov.au)

The subject land is not mapped bush fire prone land by Murrumbidgee Shire Council. However, it is noted that the land contains significant grassland vegetation formations. Further, the NSW RFS is the primary response agency for all structural fires on the land.

The NSW RFS recommends the following conditions be included in any approvals granted:

1. A Fire Management Plan (FMP) shall be prepared in consultation with NSW RFS MIA Fire Control Centre. The FMP shall include:
  - 24 hour emergency contact details including alternative telephone contact;
  - Site infrastructure plan;
  - Fire fighting water supply plan;
  - Site access and internal road plan;
  - Construction of Asset Protection Zones (APZ) and their continued maintenance;
  - Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations;
  - Such additional matters as required by the NSW RFS District Office (FMP review and updates).
2. The entire solar array development footprint to 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'.
3. A 20,000 litre water supply (tank) fitted with a 65mm storz fitting shall be located adjoining the internal property access road within the required APZ.
4. To allow for emergency service personnel to undertake property protection activities, a 10 metre defendable space (APZ) that permits unobstructed vehicle access is to be provided around the perimeter of each of the solar array development sites including associate infrastructure.

For any queries regarding this correspondence please contact Alan Bawden on 1300 NSW RFS.

Yours Sincerely



Martha Dotter

**Acting Team Leader – Development Assessment and Planning**

*The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006', visit the RFS web page at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au) and search under 'Planning for Bush Fire Protection, 2006'.*



## Office of Environment & Heritage

Your reference: SSD 8392  
Our reference: DOC18/313877  
Contact: Miranda Kerr  
Ph 02 6022 0607  
Date: 15 June 2018

Ellen Jones  
Planning Officer  
Resource and Energy Assessments, Planning Services  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

Via email: [ellen.jones@planning.nsw.gov.au](mailto:ellen.jones@planning.nsw.gov.au)

Dear Ms Jones

### RE: Darlington Point Solar Farm (SSD 8392) – Exhibition of Environmental Impact Statement

I refer to your email dated 17 May 2018 seeking comment from the Office of Environment and Heritage (OEH) about the Environmental Impact Statement (EIS) for the Darlington Point Solar Farm located approximately 10 km south of Darlington Point, in the Murrumbidgee Local Government Area.

We have reviewed the exhibited EIS against the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning and Environment (DPE) on 9 May 2017.

OEH considers that the EIS **does not** meet the Secretary's requirements for biodiversity and Aboriginal cultural heritage assessment (ACH). **Attachment A** summarises the key issues requiring further consideration.

The EIS **does** meet the Secretary's requirements for flooding.

A summary of our assessment, advice and recommended conditions of approval is provided in **Attachment A**. Detailed comments are in **Attachment B**.

All plans required as a Condition of Approval that relate to flooding, biodiversity or ACH should be developed in consultation and to the satisfaction of OEH, to ensure that issues identified in this submission are adequately addressed.

If you have any questions regarding this matter, please contact Miranda Kerr on (02) 6022 0607 or email [miranda.kerr@environment.nsw.gov.au](mailto:miranda.kerr@environment.nsw.gov.au).

Yours sincerely

**ANDREW FISHER**  
Senior Team Leader Planning  
South West Branch  
Regional Operations  
Office of Environment & Heritage

ATTACHMENT A – OEH Assessment Summary for Darlington Point Solar Farm Environmental Impact Statement (SSD 8392)

ATTACHMENT B – Detailed comments for Darlington Point Solar Farm Environmental Impact Statement (SSD 8392)

## ATTACHMENT A OEH Assessment Summary for Darlington Point Solar Farm Environmental Impact Statement (SSD 8392)

### Key Issues

1	Issue	<p>The EIS and Aboriginal Cultural Heritage Assessment Report (ACHAR) contain the following issues that must be completed prior to project approval to meet requirements of the SEARs:</p> <ol style="list-style-type: none"> <li>1. The AHIMS search is greater than 12 months currency. An updated AHIMS search is to be conducted and results presented in the EIS and ACHAR. Any Aboriginal sites not previously identified will require assessment and management in accordance with SEARs.</li> <li>2. Update EIS Tables 37, 39 and 41 and Figure 20 with AHIMS site numbers for the newly identified sites from the current field assessment.</li> <li>3. Update Table 40 in the EIS consistent with the significance assessment in the ACHAR and in accordance with any further assessment or comments received from Aboriginal stakeholders.</li> <li>4. The OEH must be notified on the discovery of Aboriginal objects under Section 89A of the NPW Act. This includes provision of: <ul style="list-style-type: none"> <li>• Aboriginal site recording forms submitted to AHIMS for any newly identified Aboriginal object(s) through the course of the project.</li> <li>• Aboriginal Site Impact Recording Forms submitted to AHIMS for each site impacted.</li> <li>• Reporting to the OEH on the discovery of human remains.</li> </ul> <p>We recommend the following protocol be included to ensure compliance with legislation in place to protect ACH in NSW and to ensure no additional harm is caused if Aboriginal sites and objects are encountered during proposed works:</p> <p><i>If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:</i></p> <ul style="list-style-type: none"> <li>• <i>Not further harm the object</i></li> <li>• <i>Immediately cease all work at the particular location</i></li> <li>• <i>Secure the area to avoid further harm to the Aboriginal object</i></li> <li>• <i>Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location</i></li> <li>• <i>Not recommence any work at the particular location unless authorised in writing by OEH.</i></li> </ul> <p><i>If skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.</i></p> <p><b>Recommended action:</b></p> <ul style="list-style-type: none"> <li>• <i>The EIS and ACHAR be revised to provide a current AHIMS search, AHIMS numbers for newly identified Aboriginal sites, consistency in significance assessments and address OEH mandatory reporting requirements</i></li> </ul> </li> </ol>
	Extent and Timing	Pre-determination

2	<i>Issue</i>	<p>The Framework for Biodiversity Assessment (FBA) has not been properly applied and the impact of this development has not been adequately assessed.</p> <p><b>6 Avoid and minimise impacts</b></p> <p>The direct and indirect impacts of the proposal have not been clearly identified. Mitigation measures can therefore not be directly related to a specific impact. The BAR should follow the guidelines for avoiding and minimising impacts set out in 8.3.2 of the FBA.</p> <p><b>8 Application of Credit Discount to Ecosystem Credits</b></p> <p>OEH are obliged to assess the credit obligation through the FBA. The method for discounting ecosystem credits provided in section 8.6 of the BAR is not consistent with Section 10 of the FBA.</p> <p>Installation of the solar array and associated infrastructure is likely to result in total sterilisation of the development footprint as foraging habitat for the Australian bustard</p> <p><b>Recommended actions:</b></p> <ul style="list-style-type: none"> <li><i>Adequate consideration and minimum information requirements for Chapter 8 of the FBA must be provided (refer to Table 21 of the FBA).</i></li> <li><i>Section 10 of the FBA is correctly applied provide a reasonable offset for the probable complete loss of Australian bustard habitat within the development footprint.</i></li> </ul>
	<i>Extent and Timing</i>	Pre-determination
3	<i>Issue</i>	<p><b>3.5.3 Targeted flora surveys</b></p> <p>Section 1.3 (page 25) lists the project-specific SEARs identified by OEH. It is not clear whether species credit threatened flora species requiring further consideration were specifically targeted during field survey.</p> <p><b>Recommended action:</b></p> <ul style="list-style-type: none"> <li><i>OEH require confirmation that species credit flora species listed in Section 1.3 were specifically surveyed during the targeted flora survey, surveyed during the correct period and included in the BioBanking assessment.</i></li> </ul>
	<i>Extent and Timing</i>	Pre-construction
4	<i>Issue</i>	<p><b>3.8 Field survey limitations</b></p> <p>This section states that flora and fauna required under the BioBanking calculations have been surveyed during the appropriate survey period</p> <p><b>Recommended action:</b></p> <ul style="list-style-type: none"> <li><i>OEH require evidence that all the species credit species that require assessment, including those listed on the SEARs as species for further consideration, were surveyed during the correct period. BioBanking Credit Calculator entries are to be updated and/or expert reports provided to fulfil all FBA survey requirements.</i></li> </ul>

	<i>Extent and Timing</i>	Pre-determination
4	<i>Issue</i>	<p><b>Use of expert reports (Section 7.2 Vegetation Impacts)</b></p> <p>The FBA allows the use of expert reports for determining species presence or absence on a site. To use an expert, the proponent must submit a request to OEH for approval by the OEH Chief Executive. An expert report is not considered unless this approval is given.</p> <p>The proponent has not applied for, and the OEH Chief Executive has not granted, approval for the Charles Sturt University Graham Centre for Agricultural Innovation to provide expert advice for this project.</p> <ul style="list-style-type: none"> <li>• <i>Experts providing reports for use in place of survey information in the BAR must be approved by the OEH Chief Executive</i></li> </ul>
	<i>Extent and Timing</i>	Pre-determination

**OEH Advice****1.1 Is the 'baseline' for impact assessment reasonable? Yes/No**

Yes for flooding and Aboriginal cultural heritage. More information is required to be sure the biodiversity assessment 'baseline' has been completed according to requirements

**1.2 Are predictions of impact robust (and conservative) with suitable sensitivity testing? Yes/No**

Yes for flooding and Aboriginal cultural heritage

Impacts to biodiversity have not been adequately assessed.

**1.3 Has the assessment considered how to avoid and minimise impacts? Yes/No**

Yes for flooding and Aboriginal cultural heritage

'Avoid and minimise' impacts to biodiversity requires further work

**1.4 Does the proposal include all reasonably feasible mitigation options? No**

Further identification of impacts to biodiversity is required to identify reasonable mitigation options.

**2. Is the assessed impact acceptable within OEH's policy context? No**

The biodiversity assessment is not acceptable under the NSW Biodiversity Offsets Policy for Major Projects

**3. Confirmation of statements of fact**

Facts regarding flooding and ACH are generally correct.

Sound ecological advice is needed to fully consider impacts of the proposal

**4. Elements of the project design that could be improved**

Adequate consideration of biodiversity constraints

## **ATTACHMENT B Detailed comments for Darlington Point Solar Farm Environmental Impact Statement (SSD 8392)**

### **Flooding**

#### **The EIS meets the Secretary's requirements for flooding.**

OEH are satisfied that the flooding assessment in Section 7.3 (page 111) of the EIS has effectively addressed flooding-related impacts of this development and will provide a basis for the appropriate design of the proposal to minimise flood risks.

In summary:

- The simple desktop hydraulic analysis complies with the OEH recommended approach and effectively identifies flow paths that cross the site in major flood events, i.e. 90-year ARI (average recurrence interval).
- This level of assessment is fit for purpose given the rural nature of the area and limited flood risk exposure.
- Flooding depths during the 90-year ARI event are expected to be less than 0.25 m over a majority of the site with isolated areas of up to 0.75 m. Flood waters would be slow-moving and originate from overflows of the Murrumbidgee River upstream of the site boundary during major events.
- The assessment has identified that the proposed location of major infrastructure, including the electricity substation and the operations and maintenance facility (but excluding the solar panel arrays that are on posts above the flood level), are not expected to be flood prone in the 90-year ARI flood event.
- OEH support the finding that the impact on surrounding land owners is expected to be negligible.

### **Aboriginal cultural heritage**

#### **The Aboriginal Cultural Heritage Assessment Report (ACHAR) requires more work to meet the Secretary's requirements.**

OEH has reviewed the EIS and Appendix G Aboriginal Cultural Heritage Assessment report (ACHAR).

##### **1. AHIMS search currency**

We note in the EIS and ACHAR the AHIMS search was conducted on 20 April 2017. This is greater than 12 months currency at the time of public exhibition of the EIS.

- *An updated AHIMS search should be conducted and results presented in the ACHAR and EIS.*
- *Any Aboriginal sites not previously identified in the EIS within the project area will require assessment, consultation with Aboriginal parties regarding significance, assessment of the impacts from development, a demonstration of avoidance where achievable; and management in accordance with the SEARs.*

##### **2. AHIMS numbers of newly identified Aboriginal sites**

- *Update EIS Tables 37, 39 and 41 and Figure 20 with AHIMS site numbers for the newly identified sites from the current field assessment.*

##### **3. Significance assessment in EIS**

The ACHAR contains assessment results that have not been updated in the EIS. Specifically, Table 40 in the EIS is missing aesthetic and historic values that are provided in the ACHAR. Likewise, social values are not identified in the EIS with a note to be updated once the draft ACHA public consultation period is complete. Table 41 states that sites have high cultural value.

- *Update Table 40 in the EIS to be consistent with the significance assessment in the ACHAR and in accordance with any further assessment or comments received from Aboriginal stakeholders.*

#### 4. Mandatory reporting requirements to OEH

Section 7.4.4 of the EIS and section 12 of the ACHAR require updating to be consistent with mandatory reporting requirements to OEH.

Under Section 89A of the *National Parks and Wildlife Act 1975*, OEH must be notified on the discovery of Aboriginal objects. This includes:

- Aboriginal site recording forms submitted to AHIMS for any newly identified Aboriginal object(s) through the course of the project;
- Aboriginal Site Impact Recording Forms (ASIRFs) submitted to AHIMS for each site impacted. We note that one site (Tubbo AFT 01 / AHIMS 49-5-0152) is proposed to be impacted by the Solar Farm development and collection of surface artefacts has been recommended by Griffith Local Aboriginal Land Council as a mitigation measure (KNC, 2018:35). Following collection of the stone artefacts and harm, an ASIRF must be completed and submitted to AHIMS. The ASIRF provides for an option for a SSD approved project under site impact authorisation on page one of the form.
- Reporting to the OEH on the discovery of human remains.

We recommend the following protocol be included in the ACHAR to ensure compliance with legislation in place to protect ACH in NSW and to ensure no additional harm is caused if Aboriginal sites and objects are encountered during proposed works:

*If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:*

- Not further harm the object
- Immediately cease all work at the particular location
- Secure the area to avoid further harm to the Aboriginal object
- Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location
- Not recommence any work at the particular location unless authorised in writing by OEH.

*If skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.*

#### Historic Heritage

We are unable to comment on the Historic Heritage Assessment provided within the EIS. OEH's Heritage Division are the appropriate contact for historic cultural heritage. Please forward the relevant sections to [heritage@heritage.nsw.gov.au](mailto:heritage@heritage.nsw.gov.au) if a copy of the assessment has not already been provided.

#### Biodiversity

**The Biodiversity Assessment Report (BAR) at Appendix C does not meet the Secretary's requirements for biodiversity.**

The Framework for Biodiversity Assessment (FBA) has not been properly applied and the impact of this development has not been adequately assessed.

The BAR fails to provide an ecologically sound basis for justifying a reduction in ecosystem credits, and the discount has not been determined or assessed using the FBA.

OEH would not support a proposed discounted offset for PCT 45 'Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion' because the proposal does not adequately offset the loss of threatened species habitat.

## **Biodiversity Development Assessment Report**

### **1.1.2 Construction methodology**

OEH appreciate the provision of detailed information about construction and operation methods for the proposal. However, statements about regrowth following construction and photographic evidence of regenerating non-specific grasses in other locations (page 18, 20) are not relevant to the loss of condition of native species diversity and cover in areas mapped as moderate condition native grassland (PCT 45).

### **Figure 1-2 Proposed development footprint (page 17)**

The site map does not show areas of complete biodiversity loss, such as hardstand areas and tracks. Figure 4 in the EIS (page 12) gives a better picture of the proposed development, however the location of roads or tracks are still not shown.

Section 7.6 (page 106) mentions that a 'fire buffer' of 20 m will be incorporated around the "retained woodland and grassland habitat". This area must be included in the development footprint.

### **1.4 Definitions (page 26)**

Terms and definitions used in the BAR should follow the FBA.

### **1.7 Australian Project Grassland Experience (page 29)**

The photographs of non-specific grass growth under solar panels do not provide evidence of the potential impact of the solar panel array on PCT 45 and the ecosystem species that rely on this vegetation for habitat. Statements about the likely response of native grasslands in the Riverina following disturbance from construction are not supported by evidence from peer-reviewed ecological studies.

### **3.5 Flora survey methods (page 38)**

It is important to mention in Section 3.5.1 that floristic surveys for the BioBanking plots were undertaken in April. Even in a wet autumn, most herbaceous species in the Riverina will be infertile and difficult to identify or not apparent above the ground. Diversity in native grasslands is best captured in spring when most non-grass species are above ground, flowering and identifiable.

#### **3.5.3 Targeted flora surveys (page 42)**

Section 1.3 (page 25) lists the project-specific SEARs identified by OEH. It is not clear whether species credit threatened flora species requiring further consideration were specifically targeted during field survey.

Habitat preferences, likelihood of occurrence and potential impacts on threatened flora appear to be provided in Appendix 4. Riverina grassland is the only known habitat for *Sclerolaena napiformis*, which is endangered under State and Federal legislation, so should have been specifically targeted in the development footprint. This species is identified from other *Sclerolaena* by seed and vegetative characteristics, rather than its minute flowers.

One of the few collections of *Convolvulus tedmoorei* in NSW was made near Darlington Point. We note that *Convolvulus erubescens* was recorded in the BioBanking plots, however following a revision of the genus in 2001 (Johnson 2001), *C. erubescens* is highly unlikely to occur in the area. Seeds are important for identification, so survey a month or so after flowering is ideal.

Habitat preferences for *Lepidium monophloeoides* should include grassland and this species also should have been targeted during searches of PCT 45.

#### **Recommended actions:**

- *OEH require confirmation that species credit flora species listed in Section 1.3 were specifically surveyed during the targeted flora survey, surveyed during the correct period and included in the BioBanking assessment.*

### **Table 3-2 PCTs, Zones and BioBanking Plots (page 40)**

The justification that Zone 6 (PCT 28 White Cypress Pine open woodland) will not be impacted by the proposal is not adequate for reducing the number of BioBanking plots completed in Zone 6.

This vegetation zone may be part of the *Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes bioregion* endangered ecological community listed on the *Biodiversity Conservation Act 2016*.

The FBA requires assessment of biodiversity values over the whole development site (FBA 3.3, page 5), which is defined as the entire site not just the proposed development footprint. The detailed site design has not been completed. Assessment of biodiversity values on the entire site is required if other constraints necessitate extra vegetation clearing in the future, or accidental clearing or disturbance occurs outside the proposed development footprint and the proponent requires additional offsets.

There is no explanation about why a rectangular area in the centre of the northern boundary that appears to be inside the development site is not included in any of the surveys.

### **3.6.3 Fauna habitat assessment**

The assessment of hollows in paddock trees mentioned in Table 3-5 should be fully described in this section.

### **3.6.4 Bird species with a high likelihood of occurrence (page 47)**

This section should refer to Section 3.7 and Appendix 4 where habitat suitability and likelihood are presented.

### **Plains-wanderer targeted surveys (page 51)**

OEH require targeted surveys for Plains-wanderer (*Pedionomus torquatus*) to be 50 m apart. However, the site visit undertaken by OEH on 24 July 2017 confirmed that the site was not core or primary habitat for plains-wanderer so further assessment is not required.

### **3.8 Field survey limitations (page 54)**

This section states that flora and fauna required under the BioBanking calculations have been surveyed during the appropriate survey period.

#### **Recommended action:**

- *OEH require evidence that all the species credit species that require assessment, including those listed on the SEARs as species for further consideration, were surveyed during the correct period. BioBanking Credit Calculator entries are to be updated and/or expert reports provided to fulfil all FBA survey requirements.*

### **4.2 Landscape value assessment**

The IBRA subregion in the BioBanking Credit Calculator is LA-Murrumbidgee. Is that the correct region? If not, are there implications for the calculator results?

### **4.3.2 Plant community types (page 60)**

The map of PCTs and Biobanking plots should also include reference to the vegetation zones used for the BioBanking assessment.

### **4.4 Flora species recorded (page 73)**

This section should acknowledge limitations of the floristic survey being undertaken in April. Fewer of the characteristic herbaceous species that may be present on the site would have been present or identifiable than if survey had been undertaken in spring.

## 5 Threatened biodiversity (page 78)

Please confirm whether the assessed paddock trees provided potential habitat or were observed to be habitat for threatened species.

### 5.2. Species credits (page 81)

It is assumed that the title for this section should include Lanky Buttons, rather than Winged Peppercress, which is the common name for *Lepidium monoplocoides*.

#### 5.3.1 Fauna species

This section includes the first mention that six hollow-bearing paddock trees are likely to be removed as part of the project.

## 6 Avoid and minimise impacts

The FBA requires the proponent to demonstrate that reasonable measures have been taken to avoid and minimise the direct and indirect impacts of the proposal on biodiversity values.

The direct and indirect impacts of the proposal have not been clearly identified. Mitigation measures can therefore not be directly related to a specific impact. The BAR should follow the guidelines for avoiding and minimising impacts set out in 8.3.2 of the FBA.

Impacts should include at least consideration of shading and species diversity, concentration of rainfall and rain shadows beneath the panels, soil erosion potential in storm events, temperature changes beneath the panels, and changes to specific habitat requirements for threatened species.

There is discussion on page 97 and 98 about mitigating impacts of the solar array on grassland diversity, habitat value and fire risk. Fuel load has not been identified as an impact to threatened species or their habitats.

### *Buffers*

Section 7.6 (page 106) mentions that a 'fire buffer' of 20 m will be incorporated around the "retained woodland and grassland habitat" that would "require removal of some of the woodland habitat". The buffer is included in this section as an impact mitigation.

OEH consider that installing firebreaks within woodland does not demonstrate avoidance of impacts, and that temporary fencing around woodland and threatened ecological communities in which no disturbance or clearing is to occur is a more appropriate mitigation measure.

### *Impacts to Plains Grass Grassland (PCT 45)*

Section 1.6 (pages 28-29) states that there is a depth of agricultural knowledge to understand grassland growth and management. However, the BAR does not demonstrate an understanding of current scientific knowledge about the ecological functioning of *Austrostipa aristiglumis*-dominated grasslands or provide evidence about how their component species respond to the likely microclimatic impacts, their ability to be rehabilitated or predicted changes in species composition and how that impacts threatened species habitat.

### Recommended action:

- Adequate consideration and minimum information requirements for Chapter 8 of the FBA must be provided (refer to Table 21 of the FBA).
- Require all fire breaks to be within previously disturbed or cleared area, and not within a buffer around retained vegetation. A protection buffer from all disturbance and clearing should be placed around mapped woodland to minimise edge effects from construction and operation of the proposal.

## 7.2 Vegetation Impacts (page 102)

This section fails to identify specific impacts to habitat values due to construction and operation of the solar array. The potential loss of diversity due to microclimatic changes to soil, water availability and sunlight has not been addressed.

While the site is not 'pristine' and has a long history of grazing, most of the grassland floristic plots met the benchmark for floristic species diversity when sampled during autumn, and the vegetation description for PCT 45 in the BAR states that there is high native diversity. This evidence shows that the proposal site has been subject to a more conservative grazing regime than other remnants of native grassland on private land.

#### *Consideration of the CSU Report*

OEH have provided consistent advice, including at the site visit on 24 July 2017, email on 30 October, by phone on 10 November 2017 and on 19 March 2018 in response to the draft BAR, that the key issue for this site is the impact of the solar farm on biodiversity – the vegetation community, not just the dominant grasses, and that the assessment must address the impact of the solar farm on ecological functioning of the site's native vegetation.

The FBA allows the use of expert reports for determining species presence or absence on a site. To use an expert, the proponent must submit a request to OEH for approval by the OEH Chief Executive. An expert report is not considered unless this approval is given.

While the authors of the report have recognised expertise in agronomy, we have strongly recommended that the proponent consult expert grassland ecologists for advice on potential impacts and mitigation measures.

The proponent has not applied for, and the OEH Chief Executive has not granted, approval for the Charles Sturt University Graham Centre for Agricultural Innovation to provide expert advice for this project.

We have identified limitations of the study that would indicate that an agronomy-based approach is not appropriate for informing the project.

- The CSU report identified very few of the forbs that are listed in the Biobanking plots, which were sampled at a suboptimal time for species detection, and concentrated their assessment on native grasses. The impact of the proposal on overall species composition would then have been difficult to assess, and it seems that a general assumption has been made that if biomass is reduced through grazing and mowing, the native forb component is 'unlikely to be affected greatly'.
- The lower number of species reported by the CSU report indicates that the survey design for the CSU report may not be suitable for sampling the range of life forms present.
- The approach used for assessing credit discounts is based on the area in which the height of the dominant grass will be reduced by shading from the panels, which was calculated as 33% in the CSU report. That value was reduced to 20% through a suggestion, rather than evidence that the response of the grass would be curvilinear rather than linear. There is no basis in the CSU report for using growth reduction as a measure of impact, compared with other measures such as a reduction in species richness or change in cover of component species.

#### Issue:

- *Experts providing reports for use in place of survey information in the BAR must be approved by the OEH Chief Executive.*

## **8 FBA Assessment**

### **8.5 Biodiversity Credit Requirement Calculations (page 114)**

Ecosystem credits are used to measure the loss of biodiversity values. The offset requirement for PCT 45 on the proposal site is to compensate for the loss of habitat for ecosystem credit threatened species.

In the BioBanking credit calculation for the proposal, the ecosystem species with the highest Tg value for Zone 1 PCT 45 is Australian Bustard (*Ardeotis australis*). **That means that 25,061 ecosystem credits are required to compensate for loss of foraging habitat for the Australian bustard.**

The Australian Bustard very large, heavy-bodied, ground-dwelling bird up to one m tall. The larger male has a wingspan of up to 2.3 m. It mainly inhabits tussock and hummock grasslands where it forages and sometimes roosts and is occasionally observed in pastoral and cropping country. Specific threats are alteration to tussock grasslands through overgrazing, and loss, fragmentation and degradation of semi-arid open grassy woodlands (OEH 2018).

## **8.6 Application of Credit Discount to Ecosystem Credits**

### *Application of the FBA*

When applying the FBA, assessors have the option to record partial clearing or partial impacts in a vegetation zone to allow for variation in impact. This is based on consideration of the starting values for each of the ten condition attributes and expected future value. In this case, the impacts of any clearing as well as the direct and indirect impacts of shading due to the solar array would be considered separately.

Section 10.3.1.3 of the FBA allows for the calculation of a different 'future site values' score for these separate parts of a vegetation zone. To use this method, the assessor must separately map these areas of the vegetation zone and include the map in the BAR. The calculator would then determine the loss in condition which contributes to determining the final credit obligation.

This approach was not used by the proponent.

The FBA does not provide the opportunity to discount the credits after the calculator has produced the Biodiversity Credit Report.

OEH are obliged to assess the credit obligation through the FBA. The method for discounting ecosystem credits provided in section 8.6 of the BAR is not consistent with Section 10 of the FBA.

OEH South West Branch have recently become aware of the Capital Solar Farm in Palerang LGA, where the area under the array is to be maintained as native pasture. The project was approved in 2010 and included a proposal to reduce offset requirements for solar array construction and operation in a native pasture environment.

We have included reference to the Capital Solar Farm as an example of how the calculation of future site value has been informed by an appropriate technical study.

By providing this information, we are not endorsing its application for the Darlington Point Solar Farm assessment. OEH do not consider that the proponent has presented an ecologically sound basis for justifying a reduction in ecosystem credits, and consider that the full credit requirement is an appropriate offset for the proposal.

### *Compensation for impacts to biodiversity*

Installation of the solar array and associated infrastructure is likely to result in total sterilisation of the development footprint as foraging habitat for the Australian Bustard. A large bird such as this is unlikely to take off and land between and around individual panels in the solar array.

A reduction in ecosystem credits does not provide a reasonable offset for the probable complete loss of Australian Bustard habitat within the development footprint.

In addition to the consideration of threatened fauna habitat, the assessment presented in the BAR shows that the grassland is a native vegetation community in relatively good condition. Any reduction in condition needs to be adequately offset to compensate for the range of threatened species habitat provided by the proposal site.

The Offset Plan developed for Capital Solar Farm mentioned above used the Biobanking Calculator (V2) to determine offsets for partial impact. The environmental assessment recognised that apart from changes to specific habitat for threatened species, the ground vegetation would be affected by various altered microclimate and soil conditions (NGH 2010). The change in site condition was estimated using a more comprehensive assessment of impacts. The proponent commissioned a technical analysis that quantified the reduction in irradiation and these results were used to inform the future site values in mapped zones of partial impact.

It is important to note that vegetation under the array at the Capital Solar Farm was less intact than at the Darlington Point proposal site. The offset strategy requires compensation if a comprehensive ecological program of monitoring floristic diversity and vegetation condition monitoring shows that loss to biodiversity values exceeds the credits provided by the offset package.

Recommended actions:

- *Section 10 of the FBA is correctly applied to provide a reasonable offset for the probable complete loss of Australian Bustard habitat within the development footprint.*

## **Appendix 2 Flora species list**

Tables provided in Appendix 2 are difficult to interpret. Table headings need to be repeated on each page.

## **References**

Johnson RW (2001). A taxonomic revision of *Convolvulus* L. (Convolvulaceae) in Australia. *Austrobaileya* 6:1-39.

NGH (2010) *Capital Solar Farm Environmental Assessment - Appendix E Biodiversity Assessment*. NGH Environmental, Bega.

NGH (2013). *Capital Solar Farm Offset Plan V3*. NGH Environmental, Bega.

OEH (2018) Australian Bustard – profile, Office of Environment and Heritage Threatened Species website, url: <http://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10063>.





**Murrumbidgee  
COUNCIL**

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(SSD8392.)

31 July 2018

Department of Planning and Environment  
GPO Box 39  
**SYDNEY NSW 2001**

Your Reference: OUT17/17056  
Attention: Ellen Jones

Dear Ellen

**AMENDMENT TO STATE SIGNIFICANT DEVELOPMENT 8392 – DARLINGTON  
POINT SOLAR FARM**

Council have met with and discussed the proposal with the developer, Edify Energy Pty Ltd and are in full support of the proposal proceeding with amendments outlined in the meeting and defined in the following.

A report was presented to the July meeting of Council and Council resolved to amend Council's Submission as outlined below.

1. A safety fence be erected around the site prior to commissioning the site.
2. As all bulk deliveries are to be via Donald Ross Drive Council will require details of the proposed road upgrade works and traffic management plan of the following areas
  - The entrance to the development on Donald Ross Drive;
  - Any emergency entry or exit points onto the road network from the site.
3. Council and the developer have agreed to a contribution towards community infrastructure. A planning agreement is to be entered into between Council and Edify Energy Pty Ltd

- 4 Council is concerned that only above ground infrastructure will be removed. Council request that all above and below ground infrastructure be removed as part of the decommissioning of the site.
- 5 Council are concerned about the location of the park and ride area. This was discussed with the developer who are now looking at a bus service. Council have no concerns with this change.

If you require further information please contact me on 03 5886 1200 or email:  
[susana@murrumbidgee.nsw.gov.au](mailto:susana@murrumbidgee.nsw.gov.au)

YOURS SINCERELY

A handwritten signature in black ink, appearing to read 'Susana', followed by a long horizontal flourish.

**SUSAN APPLEYARD**  
**DIRECTOR OF ENVIRONMENTAL SERVICES**