

Mr Thomas Allen
Planning & Project Manager

TERRAIN SOLAR PTY LTD
Level 24, 300 Barangaroo Avenue
SYDNEY

19/02/2021

Dear Mr Allen

Marulan Solar Farm (SSD-13137914)
Planning Secretary's Environmental Assessment Requirements

Please find attached a copy of the Planning Secretary's environmental assessment requirements (SEARs) for the preparation of an environmental impact statement (EIS) for the Marulan Solar Farm.

The requirements are based on the information you have provided to date, and have been prepared in consultation with the relevant government agencies. The agency comments are attached for your information (see Attachment 2).

The Department may modify these requirements at any time, and you must consult further with the Department if you do not lodge a development application and EIS for the project within the next two years.

The Department wishes to emphasise the importance of effective and genuine community consultation. A comprehensive open and transparent community consultation engagement process must be undertaken during the preparation of the EIS. This process must ensure that the community is provided with a good understanding of what is proposed, description of any potential impacts and they are actively engaged in issues of concern to them.

Please contact the Department at least two weeks before you plan to submit the development application and EIS for the project. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the required number of copies of the EIS.

The Department will review the EIS for the project before putting it on public exhibition. If it fails to adequately address these requirements, you will be required to submit an amended EIS.

If your development contains any actions that could have a significant impact on matters of National Environmental Significance, then it will also require approval under the Commonwealth's *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. If you have any questions about the application of the EPBC Act to your proposal, you should contact the Department of Agriculture, Water and the Environment in Canberra (6274 1111 or www.awe.gov.au).

If you have any questions, please contact Karl Okorn on 9995 5207 or via email at karl.okorn@planning.nsw.gov.au.

Yours sincerely,

A handwritten signature in blue ink, appearing to be 'NB', followed by a horizontal line.

Nicole Brewer
Director
Energy Assessments

Attachment 1 – Planning Secretary's Environmental Assessment Requirements

Attachment 2 – Agency advice

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979* Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD-13137914
Project Name	Marulan Solar Farm which includes: <ul style="list-style-type: none"> · the construction and operation of a solar photovoltaic (PV) energy generation facility with an estimated capacity of up to 150 MW; and · associated infrastructure, including grid connection and battery storage of up to 100 MWh.
Location	740 Carrick Road, Carrick, NSW, 5 km west of the town of Marulan within the Goulburn Mulwaree local government area.
Applicant	Terrain Solar Pty Ltd
Date of Issue	19/02/2021
General Requirements	<p>The environmental impact statement (EIS) for the development must comply with the requirements in Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulation).</p> <p>In particular, the EIS must include:</p> <ul style="list-style-type: none"> · a stand-alone executive summary; · a full description of the development, including: <ul style="list-style-type: none"> - details of construction, operation and decommissioning; - a site plan showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process); - a detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development; · a strategic justification of the development focusing on site selection and the suitability of the proposed site with respect to potential land use conflicts with existing and future surrounding land uses (including other proposed or approved solar farms, rural residential development and subdivision potential); · an assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, including: <ul style="list-style-type: none"> - a description of the existing environment likely to be affected by the development; - an assessment of the likely impacts of all stages of the development, (which is commensurate with the level of impact), including any cumulative impacts of the site and existing, approved or proposed developments in the region and impacts on the site and any road upgrades, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice; - a description of the measures that would be implemented to avoid, mitigate and/or offset the impacts of the development (including draft management plans for specific issues as identified below); and - a description of the measures that would be implemented to monitor and report on the environmental performance of the development; · a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS; and · the reasons why the development should be approved having regard to: <ul style="list-style-type: none"> - relevant matters for consideration under the <i>Environmental Planning and</i>

	<p><i>Assessment Act 1979</i>, including the objects of the Act and how the principles of ecologically sustainable development have been incorporated in the design, construction and ongoing operations of the development;</p> <ul style="list-style-type: none"> - the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses; and - feasible alternatives to the development (and its key components), including the consequences of not carrying out the development. <ul style="list-style-type: none"> · a detailed consideration of the capability of the project to contribute to the security and reliability of the electricity system in the National Electricity Market, having regard to local system conditions and the Department's guidance on the matter; and · a detailed evaluation of the merits of the project as a whole. <p>The EIS must also be accompanied by a report from a suitably qualified person providing:</p> <ul style="list-style-type: none"> · a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived; and · certification that the information provided is accurate at the date of preparation. <p>The development application must be accompanied by the consent in writing of the owner/s of the land (as required in clause 49(1)(b) of the Regulation).</p>
Key issues	<p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> · Biodiversity – including: <ul style="list-style-type: none"> - an assessment of the biodiversity values and the likely biodiversity impacts of the project in accordance with Section 7.9 of the <i>Biodiversity Conservation Act 2016</i> (NSW), the Biodiversity Assessment Method (BAM) and documented in a Biodiversity Development Assessment Report (BDAR), unless BCD and DPIE determine the proposed development is not likely to have any significant impacts on biodiversity values; - the BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the BAM; - an assessment of the likely impacts on listed aquatic threatened species, populations or ecological communities, scheduled under the <i>Fisheries Management Act 1994</i>, and a description of the measures to minimise and rehabilitate impacts; and - if an offset is required, details of the measures proposed to address the offset obligation. · Heritage – including an assessment of the likely impacts of the development: <ul style="list-style-type: none"> - on historic heritage (including 'Lockersleigh homestead and Ruins of Kyle) and a Statement of Heritage Impact (SOHI), prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual; and - on Aboriginal (cultural and archaeological), including a full archaeological assessment and consultation with the local Aboriginal community in accordance with the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i>; · Land – including: <ul style="list-style-type: none"> - an assessment of the potential impacts of the development on existing land uses on the site and adjacent land, including: <ul style="list-style-type: none"> - a consideration of agricultural land, flood prone land, Crown lands, mining, quarries, mineral or petroleum rights; - a soil survey to determine the soil characteristics and consider the

potential for erosion to occur (including the identification of catchment protection scheme works); and

- a cumulative impact assessment of nearby developments (including operating mines, extractive industries, mineral or petroleum resources),
- an assessment of the compatibility of the development with existing land uses, during construction, operation and after decommissioning, including:
 - consideration of the zoning provisions applying to the land, including subdivision;
 - completion of a Land Use Conflict Risk Assessment in accordance with the Department of Industry's *Land Use Conflict Risk Assessment Guide*; and
 - assessment of impact on agricultural resources and agricultural production on the site and region.
- **Visual** – including a detailed assessment of the likely visual impacts (including any glare, reflectivity and night lighting) of all components of the project (including arrays, transmission lines, substations and any other ancillary infrastructure) on surrounding residences and key locations, scenic or significant vistas, air traffic and road corridors in the public domain and provide details of measures to mitigate and/or manage potential impacts (including a draft landscaping plan for on-site perimeter planting, with evidence it has been developed in consultation with affected landowners);
- **Noise** – including an assessment of the construction noise impacts of the development in accordance with the *Interim Construction Noise Guideline* (ICNG), operational noise impacts in accordance with the *NSW Noise Policy for Industry* (2017), cumulative noise impacts (considering other developments in the area), and a draft noise management plan if the assessment shows construction noise is likely to exceed applicable criteria;
- **Transport** – including:
 - an assessment of the peak and average traffic generation, including over-dimensional vehicles and construction worker transportation;
 - an assessment of the likely transport impacts to the site access route (including Carrick Road, Rampion Hills Road, Munro Road, Brayton Road, Stoney Creek Road, Jerrara Road and Hume Highway), site access point(s), any Crown land, particularly in relation to the capacity and condition of the roads, road safety and intersection performance;
 - a cumulative impact assessment of traffic from nearby developments; and
 - provide details of measures to mitigate and / or manage potential impacts including a schedule of all required road upgrades (including resulting from heavy vehicle and over mass / over dimensional traffic haulage routes), road maintenance contributions, and any other traffic control measures, developed in consultation with the relevant road authority;
- **Water** – including:
 - an assessment of the likely impacts of the development (including flooding) on surface water and groundwater resources traversing the site and surrounding watercourses, drainage channels, wetlands, riparian land, farm dams, groundwater dependent ecosystems and acid sulfate soils), related infrastructure, adjacent licensed water users and basic landholder rights, and measures proposed to monitor, reduce and mitigate these impacts;
 - details of water requirements and supply arrangements for construction and operation; and
 - an assessment of the potential impacts of the development on the Sydney drinking water catchment, including consideration of Water NSW's current recommended practices and standards, stormwater quality modelling

	<p>(MUSIC), and whether the development can be constructed and operated to have a neutral or beneficial effect on water quality consistent with the provisions of <i>State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011</i>;</p> <ul style="list-style-type: none"> - a description of the erosion and sediment control measures that would be implemented to mitigate any impacts in accordance with <i>Managing Urban Stormwater: Soils & Construction</i> (Landcom 2004); <ul style="list-style-type: none"> - Hazards – including: <ul style="list-style-type: none"> - an assessment of potential hazards and risks including but not limited to bushfires, electromagnetic fields or the proposed grid connection infrastructure against the <i>International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines</i> for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields; and - a Preliminary Hazard Analysis prepared in accordance with <i>Hazardous Industry Planning Advisory Paper (HIPAP) No. 6 – Guideline for Hazard Analysis</i> (DoP, 2011) and <i>Multi-Level Risk Assessment</i> (DoP, 2011) - a Quantitative Risk Assessment for the existing high pressure pipelines (gas and ethane) addressing risk criteria under <i>HIPAP No. 4</i> and <i>HIPAP No. 10</i>, taking into account site specific features and potential propagation risks between pipelines, - a assessment of compliance with Australian Standard AS 2885 prepared in consultation with APA Group and including a Safety Management Study where required. - Socio-Economic – including an assessment of the likely impacts on the local community, any demands on Council infrastructure and a consideration of the construction workforce accommodation; and - Waste – identify, quantify and classify the likely waste stream to be generated during construction and operation, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
Consultation	<p>During the preparation of the EIS, you should consult with relevant local, State or Commonwealth Government authorities, infrastructure and service providers, community groups, affected landowners and any exploration licence and/or mineral title holders.</p> <p>In particular, you must undertake detailed consultation with affected landowners surrounding the development, Goulburn Mulwaree Council.</p> <p>The EIS must describe the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
Further consultation after 2 years	<p>If you do not lodge a Development Application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Planning Secretary in relation to the preparation of the EIS.</p>
References	<p>The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. A list of some of the legislation, policies and guidelines that may be relevant to the assessment of the project can be found at:</p> <ul style="list-style-type: none"> - https://www.planningportal.nsw.gov.au/major-projects/assessment/policies-and-guidelines; and - http://www.environment.gov.au/epbc/publications#assessments



Karl Okorn

Our ref: DOC21/58872-1 Your ref: SSD-13137914

Team Leader – Environmental Assessments
Energy Resource Assessment
Planning and Assessment, DPIE

09 February 2021

Dear Mr Okorn,

**Major Projects – New Request for Advice – Marulan Solar Farm (SSD-13137914) Goulburn
Mulwaree Local Government area**

I refer to your request for Secretary's Environmental Assessment Requirements (SEARs) for the proposed Marulan Solar Farm:

- Attachment 1 lists the requirements that need to be addressed in the Environmental Impact Statement (EIS) for the project.
- Attachment 2 lists the guidance material that will assist in the preparation of the EIS.

If you wish to discuss this matter further, please contact Nicola Hargraves, Senior Conservation Planning Officer on 6229 7195.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Michael Saxon'.

MICHAEL SAXON
Director – South East
Biodiversity and Conservation Division

Enclosure: Attachment 1 – Secretary's Environmental Assessment Requirements for the proposed new primary school at Murrumbateman (SSD-11233241). Attachment 2 – Guidance material

Attachment 1

BCD Environmental Assessment Requirements for the proposed Marulan Solar Farm (SSD-13137914)

Biodiversity
<ol style="list-style-type: none">1. Biodiversity impacts related to the proposed Marulan Solar Farm are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the <i>Biodiversity Conservation Act 2016</i> (s6.12), <i>Biodiversity Conservation Regulation 2017</i> (s6.8) and Biodiversity Assessment Method.2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.3. The BDAR must include details of the measures proposed to address the offset obligation as follows;<ul style="list-style-type: none">• The total number and classes of biodiversity credits required to be retired for the development/project;• The number and classes of like-for-like biodiversity credits proposed to be retired;• The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;• Any proposal to fund a biodiversity conservation action;• Any proposal to conduct ecological rehabilitation (if a mining project);• Any proposal to make a payment to the Biodiversity Conservation Fund.<p>If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.</p>4. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the <i>Biodiversity Conservation Act 2016</i>.
Water and soils
<ol style="list-style-type: none">5. The EIS must map the following features relevant to water and soils including:<ol style="list-style-type: none">a. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).b. Wetlands as described in s4.2 of the Biodiversity Assessment Method.c. Groundwater.d. Groundwater dependent ecosystems.e. Proposed intake and discharge locations.

<p>6. The EIS must describe background conditions for any water resource likely to be affected by the proposed Marulan Solar Farm, including:</p> <ul style="list-style-type: none"> a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
<p>7. The EIS must assess the impacts of the proposed Marulan Solar Farm on water quality, including:</p> <ul style="list-style-type: none"> a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the new primary school at Murrumbateman protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality or required changes to existing monitoring programs.
<p>8. The EIS must assess the impact of the Marulan Solar Farm on hydrology, including:</p> <ul style="list-style-type: none"> a. Water balance including quantity, quality and source. b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas. c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches). e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.
<p>Flooding</p>
<p>9. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:</p>

<ul style="list-style-type: none"> a. Flood prone land. b. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas).
10. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.
11. The EIS must model the effect of the proposed Marulan Solar Farm (including fill) on the flood behaviour under the following scenarios: <ul style="list-style-type: none"> a. Current flood behaviour for a range of design events as identified in 11 above. This includes the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
12. Modelling in the EIS must consider and document: <ul style="list-style-type: none"> a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood. b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories. c. Relevant provisions of the NSW Floodplain Development Manual 2005.
13. The EIS must assess the impacts on the proposed Marulan Solar Farm on flood behaviour, including: <ul style="list-style-type: none"> a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure. b. Consistency with Council floodplain risk management plans. c. Compatibility with the flood hazard of the land. d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land. e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site. f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses. g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council. h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council. i. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum

flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.

- j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Attachment 2

Guidance Material

Title	Web address
Relevant Legislation	
<i>Biodiversity Conservation Act 2016</i>	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
<i>Coastal Management Act 2016</i>	https://www.legislation.nsw.gov.au/#/view/act/2016/20/ful
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
<i>Marine Parks Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<i>Wilderness Act 1987</i>	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
Biodiversity Assessment Method (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf
Biodiversity Development Assessment Report	https://www.legislation.nsw.gov.au/#/view/act/2016/63/part6/div3/sec6.12
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf
Accreditation Scheme for Application of the Biodiversity Assessment Metho Order 2017	https://www.legislation.nsw.gov.au/regulations/2017-471.pdf
Biodiversity conservation actions	www.environment.nsw.gov.au/resources/bcact/ancillary-rules-biodiversity-actions-170496.pdf
Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	www.environment.nsw.gov.au/resources/bcact/ancillary-rules-reasonable-steps-170498.pdf

Title	Web address
OEH Threatened Species Website	www.environment.nsw.gov.au/threatenedspecies/
NSW BioNet (Atlas of NSW Wildlife)	www.bionet.nsw.gov.au/
NSW guide to surveying threatened plants (OEH 2016)	www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf
OEH threatened species survey and assessment guideline information	www.environment.nsw.gov.au/threatenedspecies/surveyassessmentguidelines.htm
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm
OEH Data Portal (access to online spatial data)	http://data.environment.nsw.gov.au/
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies.-guidelines-and-manuals/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH 2013)	http://www.environment.nsw.gov.au/resources/protectedareas/development-land-adjoining-130122.pdf
Water and Soils	
Flooding and Coastal Erosion	
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/iew/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

Response History

Public Authority Response

Tuesday, 9 February 2021 1:49:06 PM AEDT

Notes:

Crown Lands offers no objection to the proposed development. However, Crown Lands advises the applicant that no works on a Crown road (including clearing, or any other form of works) can be done without Crown Lands' consent and the Crown road is to be used as access only. The applicant can also contact Crown Lands regarding the closure and purchase of the Crown roads.

Review Response

Based on the information received from the Public Authority do you want to request more information*

Yes

No



OUT21/1428

Karl Okorn

DPIE

karl.okorn@planning.nsw.gov.au .

Dear Karl

Environmental Assessment Requirements– Marulan Solar Farm (SSD-13137914) (Goulburn Mulwaree)

Thank you for your correspondence requesting Environmental Assessment Requirements (EARs) for the above proposal.

The NSW Department of Primary Industries (NSW DPI) Agriculture is committed to the protection and growth of agricultural industries, and the land and resources upon which these industries depend. Important issues are the potential impact on limited agricultural resources and the ability to rehabilitate the land to enable continued agricultural investment.

NSW DPI Agriculture provides recommended SEARs (Attachment 1) and a range of guidelines and resources (Attachment 2) to assist consent authorities, community and proponents in addressing the recommended SEARs.

Specific information should be provided on loss of productive land resource, agrivoltaics opportunities, full soil assessment due to the soil types and erosion potential of the area, earthworks, rehabilitation and decommissioning as per Attachment 1.

Should you require clarification on any of the information contained in this response, please contact Lilian Parker at lilian.parker@dpi.nsw.gov.au.

Yours sincerely

Lilian Parker

Lilian Parker
Agricultural Land Use Planning Officer
Department of Primary Industries - Agriculture
e-signed 5-2-2021

Attachment 1: Environmental Assessment Requirements

Issue	Environmental Assessment Requirement for Environmental Impact Statement
Site Suitability	<ul style="list-style-type: none"> • Include a Land Use Conflict Risk Assessment (LUCRA) to identify potential land use conflict with sensitive receptors including surrounding agricultural land uses. The LUCRA is to address separation distances and management practices to minimise odour, dust and noise impacts. A LUCRA is described in the DPI Land Use Conflict Risk Assessment Guide. • Include a map to scale showing the above operational and infrastructure details including separation distances from sensitive receptors including agricultural land uses.
Consideration of impacts on agricultural resources and land	<p>Characteristics of Agricultural Land</p> <ul style="list-style-type: none"> • Describe the soil, slope, land capability, agricultural productivity, land characteristics and the history of agricultural land uses on the proposed development site. • Describe the current and historical agricultural land uses on surrounding land in the locality including the land capability and agricultural productivity of the surrounding land. <p>Impacts on Agricultural Land, Resources and Land Uses</p> <ul style="list-style-type: none"> • Detail the potential impacts from the proposed development on agricultural land and agricultural land uses on the site and in the locality. • Detail the location and areas of land to be temporarily removed from agricultural use, and those areas which are to be returned to agricultural use on completion of the development. • Consider possible cumulative impacts on surrounding agricultural enterprises and landholders. • Assess impacts on agricultural support services, processing and value adding industries. <p>Measures to mitigate impacts on Agricultural land</p> <ul style="list-style-type: none"> • Demonstrate that all significant impacts on current and potential agricultural developments and resources can be reasonably avoided or adequately mitigated. • Detail the expected life span of the proposed development. • Detail the proposed strategies to manage impacts on agricultural aerial spraying in the area. • Detail considerations for potential land sharing with agriculture.
Suitable and secure water supply	<ul style="list-style-type: none"> • Detail the estimated water demand and water availability and the source of water and any sanitisation methods proposed. • Outline any impacts to water use for agriculture and measures to mitigate against these impacts.
Biosecurity	<ul style="list-style-type: none"> • Include a biosecurity (pests, weeds and disease) risk assessment outlining the likely plant, animal and community risks. The relevant weed or pest animals for a region are addressed in the regional plans or strategies issued by NSW Local Lands Services.

	<ul style="list-style-type: none"> ● Include details of how the proposal will deal with identified biosecurity risks as well as contingency plans for any failures. Include monitoring and mitigation measures for weed and pest management.
Traffic movements	<ul style="list-style-type: none"> ● Detail the volume and route of traffic movements for the proposed development and how potential impacts on surrounding agricultural land uses are proposed to be mitigated (eg noise, dust, volume of traffic). This should include consideration of Travelling Stock Reserves (TSR) and the movement of livestock or farm vehicles along / across the affected roads.
Land stewardship	<ul style="list-style-type: none"> ● Describe the final proposed land use and land form once the life of the proposed development has ceased and rehabilitation has been completed. ● Detail the proposed rehabilitation and decommissioning/closure measures to achieve this land use including the expected timeline for the rehabilitation program. It is expected that the rehabilitation measures will include, but not be limited to removal of all above and below ground infrastructure and will be in accordance with State Environmental Planning Policy No 55 - Remediation of Land. ● Outline the monitoring and mitigation measures to be adopted for rehabilitation remedial actions. ● Provide details of any proposed earthworks including proposed, an assessment of the overall footprint where the natural contours of the land will be modified, the total amount of material involved, how any stockpiled material will be managed and outline of how this material will or will not be used for rehabilitation purposes. ● Provide a complete soil survey, undertaken prior to works commencing, as a benchmark for rehabilitation. ● Detail the cropping history or capability for cropping of the land and how the proposed rehabilitation works will enable this land to be used for cropping in the future. This detail is expected to require that for land with a cropping history or soil capability of category 1 to 3 in accordance with <i>The land and soil capability assessment scheme: second approximation (OEH)</i>, cables/pipes are to be buried at a depth of greater than 500mm below the finished surface level to allow agricultural activities to continue over the top, particularly for non-decommissioning cables/pipes once restoration is complete. ● Where the land contains sodic soils detail the proposed management practices which should ensure that any trenching through sodic soils during construction is to include soil amendment with Gypsum at a minimum rate of 10t/ha (actual rates to be determined following soil testing (Clay content, ECEC and EC)).
Community Consultation	<ul style="list-style-type: none"> ● Consult with the owners / managers of affected and adjoining neighbours and agricultural operations in a timely and appropriate manner about; the proposal, the likely impacts and suitable mitigation measures or compensation.
Emergency Management	<ul style="list-style-type: none"> ● The proposal is to detail contingency plans to enable the operation to deal with emergency situations. The proposal is to detail Emergency Management procedures and responsibilities for

	responding to bushfire threats and possible mass mortality events which might result from extreme climatic conditions, routine or emergency animal disease outbreaks.
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Attachment 2: Recommended Guidelines and Resources

Title	Location
Land Use Conflict Risk Assessment Guide	https://www.dpi.nsw.gov.au/agriculture/lup/development-assessment2/lucra
Agricultural Issues for Extractive Industry Development	https://www.dpi.nsw.gov.au/agriculture/lup/development-assessment2/extractive-industries
Infrastructure Proposals on Rural Land	https://www.dpi.nsw.gov.au/agriculture/lup/development-assessment2/infrastructure-proposals
The land and soil capability assessment scheme: second approximation 2012 (OEH)	https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Land-and-soil/land-soil-capability-assessment-scheme-120394.pdf
Australian Soil and Land Survey Handbook (CSIRO)	https://www.researchgate.net/publication/263102808_Australian_Soil_and_Land_Survey_Field_Handbook_3rd_edition
Guidelines for Surveying Soil and Land Resources (CSIRO)	https://www.researchgate.net/publication/237621641_Guidelines_for_Surveying_Soil_and_Land_Resources
Large Scale Solar Energy Guideline (DPE)	https://www.planning.nsw.gov.au/Policy-and-Legislation/Renewable-Energy/Large-scale-Solar-Energy-Guideline



Our ref: C21/62

Karl Okom
Department of Planning, Industry and Environment
karl.okom@planning.nsw.gov.au

Dear Mr Okom,

Request for input into Secretary's Environmental Assessment Requirements for Marulan Solar Farm, Goulburn Mulwaree LGA (SSD-13137914)

Thank you for your email to DPI Fisheries dated 27 January 2021 requesting input into the draft Director-General Requirements (DGRs) for the project stated above.

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries ensures that developments comply with the requirements of the *Fisheries Management (FM) Act 1994* (namely the aquatic habitat protection and threatened species provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (2013)* (DPI Policy) (available from: [Policy and guidelines for fish habitat conservation and management \(update 2013\) \(nsw.gov.au\)](https://www.nsw.gov.au/policy-guidelines/fish-habitat-conservation-and-management-update-2013)).

All Strahler System 3rd order and above waterways are considered to be key fish habitat. At the proposal site this includes Lockyersleigh Ck, Narambulla Ck and Osborns Ck and part of some of the tributaries flowing to these creeks. Under section 3.2 of DPI Policy, these waterways are considered to the Type 3 key fish habitat, and Class 2/3 waterways. The proposal site is also approximately 600m from the Wollondilly River a Type 1 key fish habitat and Class 1 waterway.

It is important that the project is designed to mitigate potential impacts to the water quality and aquatic habitat of all key fish habitat on and downstream of the proposal site by:

- **Protection and revegetation of riparian buffer zones** and where/if possible the management/rehabilitation of any eroded gullies on site. DPI Fisheries policy advocates the use of terrestrial riparian buffer zone widths as defined in section 6.1.4 of DPI Policy.
- **Allowing fish passage** in the design of waterway crossings and any cable crossing of waterways. The design and construction of key fish habitat watercourse crossing on the site should be undertaken in accordance with the Department's *Policy and Guidelines for Fish Friendly Waterway Crossings* (2004) and *Why Do fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (2004).
- **Minimising erosion and sediment control impacts** to key fish habitat during the construction and operation of the facility. DPI Fisheries recommends the use of best practice sediment and erosion control, and water quality and stormwater management provisions to safeguard and mitigate impacts on water quality at the site and downstream. Note that as this site is situated within Sydney water catchment lands that the project should be designed to have a neutral or beneficial impact on water quality.

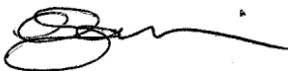
DPI Fisheries has reviewed the draft SEARs for this proposal and request that either the section on Water or Biodiversity include an assessment of potential impacts to fish passage.

A list of DPI Fisheries general information requirements for environmental assessments of development proposals is provided in section 3.3 of DPI Policy. The provision of this information will enable an adequate assessment of potential impacts to aquatic habitats. With regard to this specific proposal it is important that the environmental assessment specifically addresses the following matters:

- A clear description of the location of works, including identification of the waterways present and all relevant plans.
- A clear description of the works to be undertaken, including timing and duration of the works and all relevant plans. This need to include detail on the:
 - location and design of any proposed or upgraded waterway crossings over key fish habitat; and
 - the methodology (e.g. trenching or underboring) for any underground cabling or transmission lines that pass through key fish habitat.
- Description of aquatic and riparian vegetation and instream aquatic vegetation in the vicinity of the development, particularly the extent and condition of riparian vegetation and instream aquatic vegetation, water depth, permanence of water flow and snags (large woody debris) within the footprint of the proposal area.
- Identification and classification of key fish habitat in the area, according to section 3.2 of DPI Policy.
- Details on the location and design of proposed or upgraded waterway crossings of key fish habitat.
- An assessment of all potential impacts to key fish habitat and riparian zones. The extent of aquatic habitat removal and riparian vegetation removal, modification or improvement that may result from the development is to be clearly defined. Potential impacts to water quality and fish passage must be clearly defined.
- An assessment of significance for any threatened species matters listed under the FM Act. Assessment of Significant Guidelines can be found at: [Threatened Species Assessment Guidelines - Assessment of Significance \(nsw.gov.au\)](https://www.dpi.nsw.gov.au/Threatened-Species-Assessment-Guidelines-Assessment-of-Significance)
- A clear description of all proposed safeguards to mitigate impacts on aquatic habitats, water quality and riparian buffer zones. This can include, but not be limited to:
 - A clear map showing the riparian buffer zone width.
 - A description of any riparian buffer zone revegetation or erosion control works.
 - Detail on how fish passage will be provided for.
 - A description of proposed erosion and sediment control techniques to be used during construction.
 - Detail on any onsite design measures to mitigate water quality and flow impacts to within and downstream of the site.

Should you require any further information concerning this proposal, please contact Carla Ganassin on 4222 8342 or carla.ganassin@dpi.nsw.gov.au.

Yours sincerely,



Carla Ganassin
Senior Fisheries Manager (South), Coastal Systems Unit

5 February 2021



OUT21/975

Karl Okorn
Planning and Assessment Group
NSW Department of Planning, Industry and Environment

karl.okorn@planning.nsw.gov.au

Dear Mr Okorn

Marulan Solar Farm (SSD-13137914)
Comment on the Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email of 27 January 2021 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The following advice for you to consider is from DPIE Water and NRAR.

The SEARs should include:

- A description of the watercourses located within the vicinity of the development, including Strahler Stream Order as mapped by Spatial Services NS, and appropriate riparian setbacks in accordance with the *Guidelines for riparian corridors on waterfront land*. (http://www.water.nsw.gov.au/_data/assets/pdf_file/0004/547222/licensing_approvals_controlled_activities_riparian_corridors.pdf).
- Details of water supply requirements and arrangements for the life of the project (both construction and operation);
- An assessment of the likely impacts (including flooding) on surface water and groundwater resources* and measures proposed to monitor, reduce and mitigate these impacts;
- A description of erosion and sediment control measures to mitigate any impacts in accordance with *Managing Urban Stormwater: Soils & Construction* (Landcom 2004);
- The proponent documents and addresses any sedimentation issues, through the development of an Erosion and Sediment Control Plan, in consultation with DPIE Water.
- Consideration of any relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at <https://www.industry.nsw.gov.au/water>).

* These water resources may include local streams/creeks, drainage channels, wetlands, riparian land, farm dams, floodplains, key fish habitat, groundwater dependent ecosystems and acid sulfate soils), related infrastructure, adjacent licensed water users and basic landholder rights.



Any further referrals to DPIE Water & NRAR can be sent by email to:
landuse.enquiries@dpi.nsw.gov.au.

Yours sincerely

Alistair Drew
Acting Senior Project Officer, Assessments
DPIE Water – Knowledge Office
29 January 2021



Our reference: DOC21/50721-2

Department of Planning, Industry and Environment
4 Paramatta Square, Pitt Street
Sydney, NSW, 2001
Attention: Karl Okorn
Team Leader Environmental Assessments, Energy Resource Assessment

8 February 2021

Dear Karl,

Marulan Solar Farm – SSD 13137914

Request for Secretary's Environmental Assessment Requirements

I refer to your email dated 27 January 2021 and request for the NSW Environment Protection Authority (EPA) to provide input into the preparation of Secretary's Environmental Assessment Requirements (SEARs) for the Marulan Solar Farm ('the Project').

The information provided indicates that the Project incorporates the construction and operation of a 150 MW photovoltaic solar farm and associated infrastructure, located on land at 740 Carrick Road, Carrick NSW. Solar farms are not classified as a scheduled activity under Schedule 1 of the *Protection of the Environment Operations Act 1997*. Accordingly, the proponent will not be required to apply for an Environment Protection Licence for the Project should planning consent be granted. Furthermore, Goulburn Mulwaree Council will be the appropriate regulatory authority for all environmental issues during the construction and operation of the Project.

The EPA has reviewed the draft SEARs prepared for the Project and notes that it lists land, noise, water, waste and dust impacts as specific issues to be addressed in the Environmental Impact Statement (EIS). The EPA also recommends that the following issues be addressed in the EIS:

- **Storage of chemicals and fuels:** The EIS must describe the control measures that are to be implemented to ensure the risk of spills to the environment are minimised. Further information is available at: <https://www.epa.nsw.gov.au/licensing-and-regulation/licensing/environment-protection-licences/compliance-audit-program/chemical-storage-handling-and-spill-management>

If you have any queries or wish to discuss this matter further, please contact Lisa Fane or myself on (02) 6229 7002 or at Queanbeyan@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Janine', with a long horizontal stroke extending to the right.

Janine Goodwin
Unit Head
Regulatory Operational Regional South

Karl Okorn

From: Network Connections <networkconnections@essentialenergy.com.au>
Sent: Monday, 1 February 2021 7:59 AM
To: Karl Okorn
Subject: RE: State Significant Development - Marulan Solar Farm (SSD-13137914)

Hi Karl,

The Proponent for this project has recently requested a DER(Detailed Enquiry Response) from EE, which is due to be supplied to the Proponent on the 19/02/2020.

These detailed studies will provide clarity to the viability of this project.

Kind regards,

Michael McLean
Major Network Connections Coordinator



T: 02 6589 8568 | Ext 88568 michael.mclean@essentialenergy.com.au
PO Box 5730 Port Macquarie NSW 2444 | essentialenergy.com.au
General enquiries: 13 23 91 | Supply interruptions (24hr): 13 20 80

Follow us  

From: Karl Okorn <karl.okorn@planning.nsw.gov.au>
Sent: Wednesday, 27 January 2021 7:15 PM
To: Nicholas Hon <Nicholas.Hon@planning.nsw.gov.au>; Doris Yau <doris.yau@planning.nsw.gov.au>; Network Connections <networkconnections@essentialenergy.com.au>; Records@rfs.nsw.gov.au
Subject: State Significant Development - Marulan Solar Farm (SSD-13137914)

WARNING: Do not click links or open attachments unless you recognise the source of the email and know the contents are safe.

The Department of Planning, Industry and Environment has received a request for Secretary's Environmental Assessment Requirements (SEARs) for the Marulan Solar Farm (SSD-13137914). The proposed development is a State Significant Development under the Environmental Planning and Assessment Act.

Please provide input into the SEARs for the proposal including details of any key issues and assessment requirements by **9 February 2021**.

If you have any enquiries, please contact me on (02) 9995 5207 or at karl.okorn@planning.nsw.gov.au

Please find attached Scoping report and draft SEARs.

Thank you,

Karl Okorn
Team Leader

Energy Assessments | Department of Planning, Industry and Environment
T 02 9995 5207 | E karl.okorn@planning.nsw.gov.au

Level 16, 4PSQ, 12 Darcy Street, Parramatta, NSW, 2150 | Locked Bag 5022



Our Vision: Together, we create thriving environments, communities and economies.

The Department of Planning, Industry and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

Public Authority Response

Wednesday, 10 February 2021 2:26:40 PM AEDT

Notes:

Good afternoon Karl,

Marulan Solar Farm (SSD-13137914)

Request for agency input into SEARs

Thank you for your submission of the draft Secretary's Environmental Assessment Requirements (SEARs) and associated scoping report for the above development to Fire & Rescue NSW (FRNSW) for agency review and comment.

It is understood that the draft SEARs have been prepared to identify items required to be assessed within the Environmental Impact Statement (EIS) for the proposed Marulan Solar Farm development located within the Goulburn Mulwaree local government area.

FRNSW are satisfied that the draft SEARs adequately address agency considerations at this time, and as such offer no specific comment or recommendations regarding required assessments. It is requested that FRNSW be given the opportunity to review and provide comment once the EIS has been developed and is released for exhibition.

If you have any queries regarding the above please contact the Fire Safety Infrastructure Liaison Unit, referencing the FRNSW file number BFS21/290. Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Regards,
Nathan



Our ref: DOC21/46775

Mr Karl Okorn
Department of Planning, Infrastructure and Environment
Locked Bag 5022
Parramatta NSW 2124

By email: <karl.okorn@planning.nsw.gov.au>

Dear Mr Okorn

Request for Secretary's Environmental Assessment Requirements (SEARS) for Marulan Solar Farm (SSD 13137914)

Thank you for your referral dated 27 January 2021 inviting SEARS input from the Heritage Council of NSW on the above State Significant Development (SSD) proposal.

The proposed SSD site does not include any State Heritage Register listed items (SHR) according to the supporting information. It is noted however that a number of SHR listed items are in the LGA and confirmation of whether any SHR items are within the study area boundary is recommended in the EIS. However, it does contain several items which are listed under the Goulburn Mulwaree Local Environmental Plan 2009 (LEP)'s heritage schedule which are related. One of these, 'Lockyersleigh, Ruins of Kyle', may contain historical archaeological relics. Goulburn LGA also has an Archaeological Management Plan which was prepared by in 2009 and may contain other sites of archaeological potential which are not currently LEP listed.

It is recommended that the draft SEARs are amended with the following SEARS replacing the previous text to manage historical heritage, noting the current SEARS requirement includes a mixture of historical and Aboriginal heritage management requirements. The new text is set out below in **bold** text.

Separate correspondence should be obtained following referral to Heritage NSW for Aboriginal cultural heritage management under the *National Parks and Wildlife Act 1974* as the supporting Scoping document identifies the need for further assessment of that resource.

Heritage and archaeology

- a) **A Statement of Heritage Impact (SOHI) prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The SOHI is to address the impacts of the proposal on the heritage significance of the site and adjacent areas and is to identify the following:**
- **all heritage items (state and local) within the vicinity of the site including built heritage, landscapes and archaeology, detailed mapping of these items, and assessment of why the items and site(s) are of heritage significance;**
 - **compliance with any relevant Conservation Management Plan;**
 - **the impacts of the proposal on heritage item(s) where required, including to archaeological resources; visual impacts, required BCA and DDA works, new fixtures, fittings and finishes, any modified services;**

- the attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the site and the surrounding heritage items; and
 - justification for any changes to the heritage fabric or landscape elements including any options analysis.
- b) **Historical Archaeology:** The EIS has been supported by an historical archaeological assessment, prepared by a suitably qualified and experienced historical archaeologist in accordance with the Heritage Council guidelines *Archaeological Assessment* (1996) and *Assessing Significance for Historical Archaeological Sites and Relics* (2009). This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential archaeological resource. Archaeological testing may be required to inform the EIS, where this is the case a research design should be prepared to guide the proposed testing program and consultation with the Heritage Council would be required. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations or salvage programme.

As the site contains a local heritage item, and other local items are in the vicinity, advice should be sought from Goulburn Mulwaree local council.

If you have any questions regarding the above advice, please contact Felicity Barry, Senior Historical Archaeologist at Heritage NSW on (02) 9995 6914 or Felicity.Barry@environment.nsw.gov.au.

Yours sincerely



9 February 2021

Dr Siobhan Lavelle, OAM
Senior Team Leader, Specialist Services
Heritage NSW
Department of Premier and Cabinet
As Delegate of the Heritage Council of NSW



Our reference: DOC21/46752-3

Mr Karl Okorn
Team Leader Environmental Assessments
Energy Resource Assessment
Department of Planning, Industry and Environment
email: karl.okorn@planning.nsw.gov.au

Advice provided via the Major Projects Portal

Dear Mr Okorn

**HERITAGE NSW – ABORIGINAL CULTURAL HERITAGE REGULATION
SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)**

Project: Marulan Solar Farm
SSD/SSI application no: SSD- 13137914 (Goulburn Mulwaree)

Thank you for requesting our input on the draft Planning Secretary's Environmental Assessment Requirements (SEARs) for the above state significant project.

Heritage NSW has reviewed the supporting documentation and provides detailed SEARs for the proposed development in relation to Aboriginal cultural heritage matters in **Attachment A**. The then Office of Environment and Heritage (OEH) provided SEARs for a previous solar farm proposal for the same development area on 21 September 2017. Details of the Project Specific advice are still relevant for this new proposal and are attached in **Attachment B**.

We note the Scoping Report (page 21), prepared by Premise and dated 21 January 2021, already outlines that an Aboriginal heritage assessment of the proposal site will be completed as part of the Environmental Impact Statement (EIS).

Heritage NSW advises that a full archaeological assessment, including test excavations, is required because Aboriginal sites with subsurface potential have already been identified within the project area. Test excavations need to be undertaken as part of the upfront EIS assessment to inform the design and approvals process for the whole area that will be affected by the development. Cumulative impact to the archaeological resource of the Marulan area will also need to be considered. Any assessments that will be undertaken to inform the EIS, such as geotechnical investigations, must also consider impacts to Aboriginal cultural heritage.

If you have any questions regarding these comments, please contact me on (02) 6229 7089 or by email: jackie.taylor@environment.nsw.gov.au.

Yours sincerely

Jackie Taylor
Senior Team Leader, Aboriginal Cultural Heritage Regulation - South
Heritage NSW
8 February 2021

Encl – **Attachment A:** Recommended SEARs for Marulan Solar Farm SSD-13137914 - Aboriginal Cultural Heritage; **Attachment B:** Project Specific Advice for Marulan Solar Farm SSD-13137914

ATTACHMENT A: HERITAGE NSW – Aboriginal Cultural Heritage - SEARs

Project Name: Marulan Solar Farm

SSD/I #: SSD-13137914

1. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the [Code of Practice for Archaeological Investigation in NSW](#) (DECCW 2010), and be guided by the [Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales](#) (OEH 2011) and consultation with Heritage NSW.
2. Consultation with Aboriginal people must be undertaken and documented in accordance with the [Aboriginal Cultural Heritage Consultation Requirements for Proponents](#) (DECCW 2010). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.
3. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.
4. The assessment of Aboriginal cultural heritage values must include a surface survey undertaken by a qualified archaeologist. The results of the surface survey is to inform the need for targeted test excavation to better assess the integrity, extent, distribution, nature and overall significance of the archaeological record. Test excavations will need to be completed as part of the assessment process to ensure the impacts to Aboriginal cultural heritage values by the development is adequately considered in the EIS. The results of surface surveys and test excavations are to be documented in the ACHAR.
5. The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts.
6. The ACHAR must outline procedures to be followed in the event Aboriginal burials or skeletal material is uncovered during construction to formulate appropriate measures to manage the impacts to this material.

NOTE: The process described in the *Due Diligence Code of Practice for the protection of Aboriginal objects in NSW* (DECCW 2010) is not sufficient to assess the impacts on Aboriginal cultural heritage of Major Projects.

ATTACHMENT B: Project Specific Advice for Marulan Solar Farm SSD-13137914

Heritage NSW advises that a full archaeological assessment must be undertaken which includes surface survey, subsurface testing, and consultation with Registered Aboriginal Parties to identify any cultural values because Aboriginal objects are known to exist within the project footprint.

Saunders 2005 survey - Lockyersleigh

Saunders undertook archaeological survey of the project area in 2005 and identified 2 areas of high archaeological significance in the west of the project area which should be avoided, including a culturally modified tree. In the south east of the project area several surface sites with moderate potential for *in situ* archaeological deposit were identified. Within the broader region, isolated artefacts and artefact scatters are common. Potential Archaeological Deposits (PAD) can occur in almost all landform contexts but occur most frequently on lower slopes and close to watercourses (Umwelt 2008).

Gunlake Quarry, Peppertree Quarry and Lynwood Quarry

Gunlake Quarry, Peppertree Quarry and Lynwood Quarry are all within 10km of the proposed solar farm. Archaeological investigations at all three quarries have shown this region is very archaeologically significant as it contains high densities of stone artefacts and important cultural values. Over 90,000 artefacts have been recovered through surface and subsurface investigations at Peppertree Quarry to the east of the project area, the highest density of stone artefacts in this region.

At the immediately adjacent Lynwood Quarry, research has shown that surface artefact assemblages in this region are not a reliable indicator of the density of subsurface artefacts: 526 artefacts were recorded on the surface but 4,691 were recovered from salvage excavations (Umwelt 2013). Cultural Heritage Management Zones have been established to the east of the current project area at Lynwood to protect important areas. Highly significant cultural values have also been identified to the north of the proposed Marulan solar farm.

In addition to full archaeological survey with subsurface testing and a consideration of cultural values, the assessment of cumulative impact must consider the impact of the proposed solar farm within the wider context of the Lynwood, Pepperwood and Gunlake quarries.



Regional
NSW

Karl Okorn
Team Leader Environmental Assessments
Dept. of Planning, Industry & Environment
4 Parramatta Square
Parramatta NSW 2150

Our ref: DOC21/59417
Your ref: SSD-13137914

Emailed: via Planning Portal

11 February 2021

Dear Mr Okorn,

Subject: Marulan Solar Farm – Advice on SEARs

Thank you for the opportunity to provide advice on the above matter. This is a response from the NSW Department of Regional NSW – Mining, Exploration & Geoscience (MEG).

MEG has no additional requirements to those in the draft SEARs and notes consultation with exploration titleholders has commenced.

MEG notes that no biodiversity offsets requirements are proposed at this time. However, should biodiversity offsets be required, MEG requests to be consulted in relation to the proposed location of any offset areas (both on and off site) or any supplementary biodiversity measures to ensure there is no consequent reduction in access to prospective land for mineral exploration, or potential sterilisation of mineral or extractive resources.

Queries regarding the above information should be directed to the GSNSW - Land Use team at landuse.minerals@geoscience.nsw.gov.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Steven Palmer'.

Steven Palmer
Manager, Land Use Assessment
Geological Survey of NSW – Mining, Exploration & Geoscience.



NSW RURAL FIRE SERVICE

Department of Planning and Environment (Sydney Offices)
GPO Box 39
Sydney NSW 2001

Your reference: SSD-13137914
Our reference: DA20210205000432-SEARS-1

ATTENTION: Karl Okorn

Date: Friday 12 February 2021

Dear Sir/Madam,

Development Application

State Significant – SEARS – Electricity Generating Works

Marulan Solar Farm - SSD-13137914 740 CARRICK RD CARRICK NSW 2580, 55//DP1141136

I refer to your correspondence regarding the above proposal which was received by the NSW Rural Fire Service on 28/01/2021.

The New South Wales Rural Fire Service advises that the preparation of an Environment Assessment should incorporate a bush fire hazard assessment report prepared by a suitably qualified person. This assessment shall include site-specific recommendations for the proper design of:

- asset protection zones (APZ);
- measures to prevent a fire occurring within the site from developing into a bush/grass fire risk to the surrounding area;
- water supply for fire fighting purposes;
- land and vegetation management;
- emergency management procedures, including the development of a Fire Management plan in consultation with the local NSW RFS District Fire Control Centre; and
- vehicular access and defendable space around the solar array.

Protection for the facilities from bush fires can be achieved through a combination of strategies which will:

- minimise the impact of radiant heat and direct flame contact by separating development from bush fire hazards;
- minimise the vulnerability of buildings to ignition and fire spread from flames, radiation and embers;
- enable appropriate access and egress for the public and firefighters;
- provide adequate water supplies for bush fire suppression operations;
- focus on facility preparedness, including emergency planning and property maintenance requirements; and
- facilitate the maintenance of asset protection zones, fire trails, access for firefighting and on-site equipment for fire suppression and prevention of fire spreading from the site.

For any queries regarding this correspondence, please contact Peter Dowse on 1300 NSW RFS.

Yours sincerely,

Postal address

NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address

NSW Rural Fire Service
4 Murray Rose Ave
SYDNEY OLYMPIC PARK NSW 2127

T (02) 8741 5555
F (02) 8741 5550
www.rfs.nsw.gov.au

Bradley Bourke
Team Leader, Dev. Assessment & Planning
Planning and Environment Services

Our ref: STH17/00162/02
Contact: Andrew Lissenden 0418 962 703
Your ref: SSD 13137914

12 February 2021

Karl Okorn
Department of Planning, Industry and Environment
BY EMAIL: information@planning.nsw.gov.au

REQUEST FOR PLANNING SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS) – MARULAN SOLAR FARM - LOT 55 DP 1141136 (NO.740) CARRICK ROAD, CARRICK (SSD 13137914)

Dear Karl,

Transport for NSW (TfNSW) refers to the notification it received on 27 January 2021 regarding the above request for input into the SEAR's associated with State Significant Development (SSD) application 13137914.

TfNSW has completed a review of the information provided (Scoping Report prepared by Premise, Report No. 221106/REP, Revision 001E and dated 21/01/2021) while focussing on the impact to the state road network and the adjoining rail corridor.

TfNSW notes:

- The key state/classified road is the Hume Highway to which the site has access via the local road network. In addition, a rail corridor adjoins the sites northern boundary. This is an Australian Rail Track Corporation (ARTC) managed line and as such ARTC is the rail authority;
- Input has been requested by the Secretary under Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*; and
- The impact of the proposed development on both the state road network and the adjacent rail corridor needs to be considered and adequately mitigated.

Having regard for the above, TfNSW provides the comments as detailed in **Attachment 1**. These will need to be addressed by the proponent as part of any SSD application lodged.

If you have any questions, please contact myself on 0418 862 703. Please ensure any further correspondence, if not lodged through the planning portal, is sent to development.southern@rms.nsw.gov.au.

Yours faithfully



Andrew Lissenden
Development Assessment Officer
Community and Place | South Region

Cc: karl.okorn@planning.nsw.gov.au; and
Billy.Yung@transport.nsw.gov.au

1. **Traffic Impact Study (TIS):** A TIS is required to examine any potential transport/traffic related implications of the development. As a guide Table 2.1 of the RTA's *Guide to Traffic Generating Developments* outlines the key issues that should be considered in preparing a TIS. In addition, regard should be had for the Austroads publications, particularly the *Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development* and *Part 3: Traffic Studies and Analysis*.

The TIS also needs to address the following:

- a) Given the scale and operational characteristics of the proposed development TfNSW considers that the traffic related issues relevant to the development should be considered and addressed in 3 distinct stages as follows:
 - i. *Construction phase* – The transport of materials and equipment/components for the establishment of the facility (e.g. how many panels per truck, gravel, concrete, etc) and ancillary infrastructure, the movement and parking of construction related vehicles, including workers vehicles, during the construction of the facility, etc;
 - ii. *Operational phase* – The ongoing traffic generation due to the operation, maintenance and servicing of the various elements of the project; and
 - iii. *Decommission phase* - The transport of materials and equipment/components from the site including any and ancillary infrastructure, the movement and parking of construction related vehicles, including workers vehicles, during the decommissioning of the facility, etc
- b) Noting the above stages the following need to be addressed for each stage:
 - i. Details of all traffic types (both heavy and light vehicles) including a description of heavy vehicle types that will be used and the routes that will be taken to enable vehicles that are travelling from the north and south to gain access the site as well as details on the routes that vehicles wishing to leave the site to go north and/or south will take;
 - ii. Details on traffic volumes that are likely to be generated by the proposed development. It should also include details on the distribution of the traffic generated that will come from and go to the north and south.
- c) An assessment of the cumulative impact of traffic from nearby developments (e.g. those developments as noted in the Scoping Report) noting this developments access point to/from the Hume Highway;
- d) An assessment of the suitability of the local road connections with the state road network at each access point being investigated as well as details on any works required. Noting the local road connection with a high-speed road (i.e. the Hume Highway), TfNSW would prefer one access point being provided that allows both north and southbound vehicles to enter and exit the site.

Should it be identified during the assessment that works are required then a strategic design as detailed in Point 4 below will be required as part of the SSD application. The assessment should include consideration of such things like the access points compliance with Austroads Guide to Road Design requirements (e.g. sight distance requirements, turning requirements, need for acceleration/deceleration lanes at the access point, etc) based on a design speed of 10km/h over the posted speed (i.e. 110km/h). Where road safety concerns are identified at a specific location the TIS may be supported by a targeted Road Safety Audit undertaken by suitably qualified persons;

- e) An assessment of glint and glare from the solar panels to ensure they do not cause a nuisance, disturbance or hazard to the travelling public both on the public road network (both local and state

roads) and the adjoining rail corridor. This including mitigation measures to be implemented should issues be identified to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels;

- f) Details of measures to mitigate and/or manage potential impacts including a schedule/timeframe for their provision; and
- g) Details on any Drivers Code of Conduct and how that is managed/enforced including for drivers who are not employed by the proponent/operator.

Please note the above, in relation to road impacts, primarily relates to potential impacts on the state road network. Discussions should be had with Goulburn Mulwaree Council in relation to the information they may require to be included in the TIS concerning local road impacts.

2. Adjoining Rail Corridor: Noting that the development site is adjoining a rail corridor that is managed by ARTC, discussions with ARTC will be required before lodgement of any future SSD application. The SSD application when lodged must detail what discussions have occurred, with whom and how any issues raised are to be addressed.

The person at ARTC to make contact with is Michael Irons, Project Manager Interstate Network (Ph. 02 6939 5467, Email: development@artc.com.au).

3. State Environmental Planning Policy (Infrastructure) 2007: The provisions of Part 3, Division 15, Subdivision 2, Sections 84 and 85 need to be addressed.
4. Strategic/Concept Design: Should it be identified as part of preparing the Environmental Impact Statement (EIS) or during the assessment of the application that mitigation measures are required that will impact a state/classified road or the adjoining rail corridor then a concept design for the proposed works will need to be prepared and submitted. This is needed to clarify the scope of works, demonstrate the works can be constructed (i.e. within the road reserve) and allow the consent authority to consider any environmental impacts of the works as part of their assessment.

The concept design submitted for any proposed road works must include, but not be limited to, legal property boundaries (including the existing road reserve boundaries based on a survey), existing and proposed lane configurations and lane widths at a number of locations along the length of the proposed works, etc. The design provided should be based on a design speed which is 10km/h over the posted speed limit and should demonstrate compliance with the applicable requirements in *Austroads Guide to Road Design* and the relevant TfNSW supplements.

5. Consultation: TfNSW encourages further consultation, as required, during the preparation of the EIS to discuss issues/impacts on the state classified road and the adjoining rail corridor.

5 February 2021

Contact: *Miles Ellis*
Telephone: *(02) 9865 2502*
Our ref: *D2021/8173*

Karl Okorn
Team Leader
Energy Assessments | Department of Planning, Industry and Environment
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PARRAMATTA NSW 2124

Water NSW response to Request for SEARs – Marulan Solar Farm (SSD 13137914)

Water NSW appreciates the opportunity to provide input into the Secretary's Environmental Assessment Requirements (SEARs) for the proposed solar farm (SSD-13137914).

WaterNSW has reviewed the Project Scoping Report prepared by Premise (dated 21 January 2021) and has the following comments and recommendations for inclusion in the Environmental Impact Statement (EIS).

As the development is located within the Sydney Drinking Water Catchment, clauses 9(1), 9(2) and 10(1) of the *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011* (the SEPP) apply. The EIS must specifically address each of these clauses, in particular a clear description and justification as to how the development would achieve a neutral or beneficial effect on water quality.

Recommendations for EIS

The full description of the development and existing environment should also include those aspects which have the potential to impact on the quality and quantity of surface water on or downstream of the project site. This should include:

- the full project site layout and concept design including solar photovoltaic arrays, substation, battery storage buildings and/or containers, access roads and transmission line routes.
- details of the extent of any vegetation clearance and offsets, with specific attention on measures to avoid and/or mitigate impacts to riparian zones and wetland vegetation.
- details of any existing erosion control measures (including Catchment Protection Scheme works), and any other constraints such as existing erosion gullies and the location of sodic and saline soils.
- a Water Cycle Management Study (WCMS) detailing:
 - how potential water quality impacts will be avoided and/or minimised through project design including selection of route and access to minimise land disturbance (and for the proposed 18-month construction period).
 - stormwater quality modelling using MUSIC software showing a comparison of pre- and post-development scenarios on water quality parameters of key concern (Total Suspended Solids, Total Phosphorus and Total Nitrogen), including an electronic copy of the MUSIC model in .sqz format file.

- concept design plans of any stormwater quality treatment measures and watercourse crossings.
- a Site and Soil Evaluation for On-Site Wastewater Disposal if any on-site wastewater disposal is proposed (including in Construction Phase).
- a conceptual Soil and Water Management Plan(s) for the construction phase of the project.

Water NSW requests that it be listed as a stakeholder in any further consultation on this project and looks forward to reviewing the forthcoming Environmental Impact Statement.

If you wish to discuss this letter or the project more generally please do not hesitate to contact Miles Ellis via e-mail at environmental.assessments@waterNSW.com.au.

Yours sincerely

A handwritten signature in black ink that reads "C. Preshaw". The signature is written in a cursive, flowing style.

CLAY PRESRAW
Manager Catchment Protection



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17 February 2021

Karl Okorn
Team Leader - Energy Assessments
Department of Planning, Industry and Environment
Locked Bag 5022
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Dear Karl

Subject: Request for Input into SEARs – Proposed Marulan Solar Farm

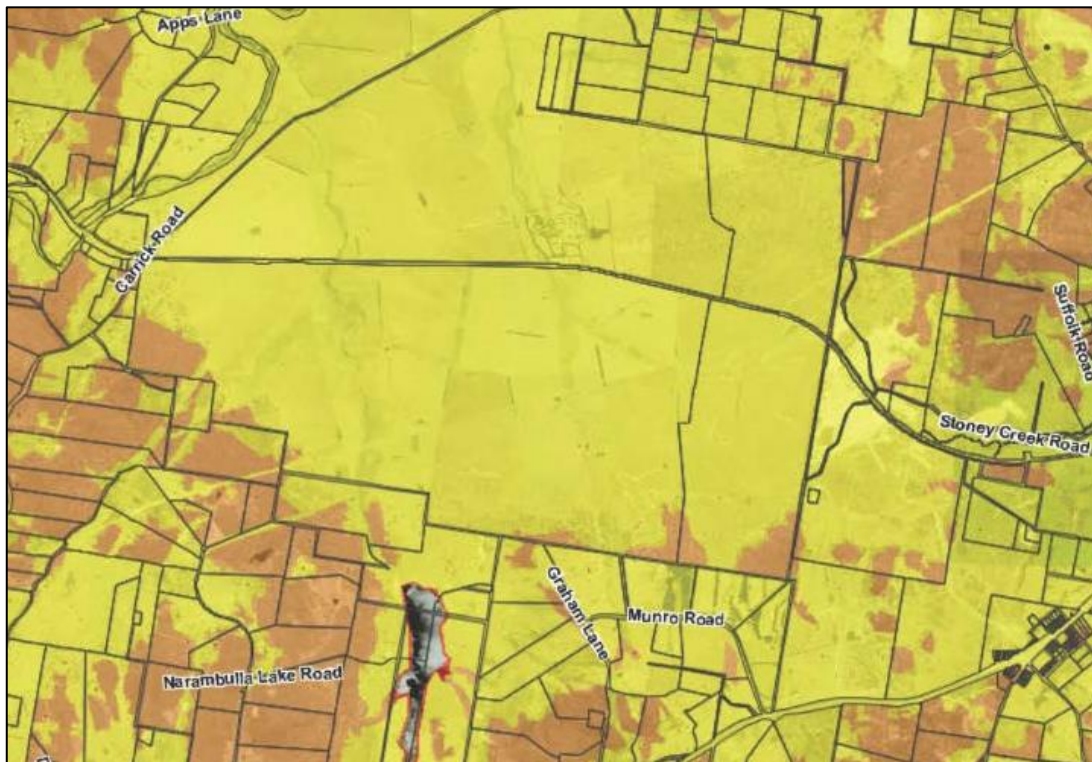
A review of the Draft SEARs and Scoping Report (Report No: 221106/REP, Rev: 001E) prepared by Premise has been undertaken in relation to the above proposal and a report was considered at the 16 February 2021 Council Meeting. At this meeting, Council resolved:

That:

- 1. The report from the Director Planning & Environment in regard to the Department of Planning & Environment's request for input into the Secretary's Environmental Assessment Requirements (SEARs) for the proposed Marulan Solar Farm be received.**
- 2. Council makes a submission to the Department of Planning & Environment (DPIE) on the proposed Marulan Solar Farm setting out the issues raised in the Director of Planning and Environments report to the 16th February Council meeting.**

Accordingly, please accept the following as Council's input into the SEARs.

- Clause 7.4 of the Goulburn Mulwaree LEP 2009 'Restrictions on development adjoining mineral resource areas' applies to the development. The EIS should examine what the resource potential of the site is (if any) and what impact the development may have on utilisation of that resource in future. Given the proximity of the railway line a broader view needs to be taken on utilising this infrastructure for haulage of natural resource material into the future.
- The Goulburn Mulwaree Employment Land Strategy 2016 is relevant to the application as environmental industries are an emerging sector in our economy.
- Detailed information should be provided about rehabilitation of the site should the panels be removed at the end of their useful life. It would be beneficial to consider the life cycle of such infrastructure and have the EIS identify how the panels and associated infrastructure could be reused/recycled
- The Scoping Report suggests that the site is partially bushfire affected. Since the previous proposal at this location, Council's Bushfire Prone Land mapping has been updated (2019). The most recent mapping indicates that the land is totally bushfire affected as per the figure below.



The proposed infrastructure would be susceptible to bushfire attack and furthermore an electrical failure has the potential to start a bush fire. The risk of bushfire needs to be carefully considered.

- The Scoping Report does not include in the hazard analysis section the identification/management/risk of hazardous/significant infrastructure in the investigation area. The APA Gas Pipeline and Highland Source Pipeline cross the subject site and are located within the project investigation area. Risks associated with construction and operation of the facility should be specified in the SEARs, and should also consider the ongoing management of risks to infrastructure. This may include the need for a Safety Management Study to manage risk to human health. The Preliminary Hazard Analysis referred to in the documentation (if based on the Scoping Report) would seem to relate to electro-magnetic radiation. The Scoping Report briefly mentions the gas pipeline and does not mention the Highland Source Pipeline.

In addition to the presence of the APA Gas Pipeline and Highland Source Pipeline, reference is also made to the presence of the Orica explosives depot, which is also located in close proximity to the subject site, on the western fringe of the Marulan Village. Any identification of risk should consider this premises.

- Section 2.4.3.3 – Flooding in the Scoping Report states that the site is not subject to flooding. It should be noted however that no flood studies have been carried out for this locality in order to categorically rule out the impact of flooding.
- There are several watercourses on the site. The management of stormwater runoff from the development needs to be carefully considered to ensure that it doesn't contribute to or exacerbate gully or rill erosion on the existing watercourses. Post development flows from the development should not exceed the pre-development runoff rates. The need for onsite stormwater detention systems should be considered.

As is the case with the majority of the Goulburn Mulwaree LGA, the site is located within the Sydney Drinking Water Catchment. Any SEARs should specifically address water quality impacts in accordance with the SEPP.

- The site is within proximity to local heritage item no. 33 'Lockyersleigh' Homestead, Gardens located at 1092 Towrang Road, Carrick. Any potential impacts on this item pursuant to clause 5.10 of Goulburn Mulwaree LEP 2009 must be considered.

Consultation should occur with both the Pejar Local Aboriginal Land Council and the Mulwaree Community Inc in relation to Aboriginal Cultural Heritage Assessment. It is noted that there are no sites listed on the property on AHIMS but due diligence is recommended in this instance.

- Vegetation on the site would appear to contribute to a corridor of vegetation extending from south-west of the site to north-east of the site. Part of this existing corridor is mapped on the Terrestrial Biodiversity Map pursuant to clause 7.2 of Goulburn Mulwaree LEP 2009. The EIS should carefully consider the impact on this potential corridor including links with riparian habitats throughout the site. Any regeneration actions should consider what is planned or is occurring on the Holcim's Lynwood Quarry site.

Council support the need for a BAM and BDAR as A Critically Endangered Ecological Community (CEEC) – Box Gum Woodland and Derived Grasslands is present in the locality and was identified as a part of the Lynwood Quarry development. The Scoping Report suggests that the project area does not include bushland, but this particular community includes derived grass lands. In addition Koalas are known to be present in the rural catchment around Marulan.

- The visual impact of the transmission lines and other associated infrastructure (as well as the panels themselves) should be considered in relation to adjoining properties.
- The impacts of hauling the panels and related infrastructure in during construction needs to be carefully considered.
- A number of State Significant Developments (SSD) are located in the Marulan locality. Council requests that the applicant assess the cumulative impact of the proposed solar farm in relation to other SSD developments in the locality (such as the Gunlake, Holcim and Boral quarries), with consideration given to social, noise and access matters. This should also take into account the proposed construction access, and whether conflict with haulage vehicles from any quarrying/mining activities can be avoided.

If you require any further information, I can be contacted on (02) 4823 4480.

Yours sincerely



Scott Martin
Director Planning & Environment