



## Manildra Solar Farm Construction – Environmental Representative (ER) Inspection Report


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Date of Inspection	21/02/2018	Location of Inspection	Manildra Solar Farm
ER	Demelza Scott	Proponent Representative	Bjorn Schultz
Weather	Fine and sunny	Construction Contractor Representative	Don Martin
Inspection Summary	Improvement Opportunity - Corrective Actions – Open Corrective Actions: CA191217 – 02: Develop and implement a program for the installation of nest boxes in accordance with the FFMP.		
Comments / Observations	<p>Pile driving and rock driving of posts for the solar arrays was ongoing. A drilling rig subcontractor has been engaged to pre-drill post holes. Installation of modules was underway in the north-east, east and north-west portions of the site. Rock placement was occurring for installation of rock-check dams and rock stabilisation in the drainage line adjacent to the farm dam. Trenching was ongoing alongside the north-south road for cable installation. A mulching subcontractor had mobilised to site to commence mulching of packaging waste (cardboard and pallets).</p> <p>DPE representatives had conducted an inspection on the previous day to review erosion and sediment controls and raised concerns about dust generation from the project.</p> <p>No environmental incidents have occurred and no environmental complaints have been received since the last inspection.</p> <p>The site presents a low environmental risk at the time of inspection.</p>		

Signed:

**Environmental Representative**

Issue	Observations & Corrective Actions	Due Date	Photographic Record
<b>Waste</b>	<p>A range of waste types were stored across the site in designated areas including construction wastes, packaging, mulched vegetation and concrete washout.</p> <p>RCR are reviewing the option to mulch the waste cardboard and wooden pallets for use on site. Samples of the material have been sent to the laboratory for testing to determine if it is fit for purpose as mulch. On receipt of results, RCR and First Solar will review and determine if they submit an application to the EPA for approval to use the material as mulch.</p> <p>The mulching contractor arrived on site on the day of the ER inspection. First Solar have stipulated specifications for mulching pallets and cardboard packing including removal of nails and other extraneous materials and sizing of final mulched product.</p> <p>If approval is obtained from the EPA, RCR intend to use the product for construction of the mulch berm on the western perimeter of the site as detailed in the SWMP. The CEMP should also be updated to reflect the specifications for the mulch, the approval and its intended use.</p> <p>RCR asked about the approved disposal method for concrete washout waste. A review of the CEMP did not identify concrete washout as a waste type to be generated by the project however the Statement of Commitments (which is included as a table in the CEMP) specifies that concrete washout would be deposited in an excavated area, below the level of topsoil, or in an approved landfill site. Where possible, wastewater and solids would be reused on site. The CEMP Waste Management section specifies that no waste is to be buried on site. It is the ER's preference that no waste is buried on site.</p>		

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<b><i>Chemicals and Fuels</i></b>	A representative from Western Petroleum was observed on site inspecting the bulk diesel refuelling station.		
<b><i>Flora and Fauna</i></b>	<p>RCR met with Geolyse to discuss the option for carved hollows instead of nest boxes. Geolyse advised that RCR could use carved hollows to satisfy the requirements for medium hollows however they would still require nest boxes to satisfy the requirements for small and large hollows. RCR have decided to use nest boxes only and require approximately 56 in total. Approval has been sought from the landholder to install a portion of the nest boxes in woodland areas on his land (adjacent to the solar farm), the remainder will be in the woodland area onsite and the biodiversity offset area. Nest boxes are on order.</p> <p>Trenching for cabling is ongoing. RCR are continuing to construct trenches with ramps to allow fauna to escape, are inspecting trenches daily and minimising the time that trenches are open.</p> <p>RCR have provided First Solar with a plan for vegetation screening of the site as part of requirements of Project Approval and Construction Contract. The plan includes vegetation planting along the northern and western boundaries of the site to minimise visual impact on neighbours and road users along the Molong-Manildra Rd.</p>		

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<b>Traffic</b>	<p>It was observed that roadwork speed limit signs were still in place despite RCR advising previously that works on the BAR intersection were complete and they were in the process of handing the road back to Council. RCR advised that they have received verbal confirmation of handover from Council however they are waiting for the written confirmation.</p> <p>Signs have been made, and are ready to install, for a reduction in the speed limit during construction hours to 80km/hr. RCR have bags to put over the signs so that the highway speed limit of 100km/hr remains outside construction hours.</p> <p>It was observed that the designated staff and contractor car park was full and a number of vehicles were parking along the verge of the entrance road. RCR advised that buses are being provided from Parkes and Orange however site staff from other local towns were driving themselves to site. RCR advised that Brefni finishing their engagement would free up parking spaces.</p>		
<b>Noise</b>	<p>RCR have purchased noise monitoring equipment and conducted noise monitoring on the roadside near receptor 2 and Manildra Public School. The CNMP requires that noise monitoring be conducted at the residences, a minimum of 3 m from the nearest façade and/or solid fence/wall. Results must be compared to the Rating Background Levels and Assessment Criteria specified in the CNMP.</p> <p><b>Corrective Action 210218-01 – Repeat construction noise monitoring at the residences of receptor 2 and receptor 5 to confirm whether noise generated by the project is below the Assessment Criteria and Work Generating High Noise Impact Levels.</b></p>	9/03/2018	

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## **Soil and Water**

First Solar/RCR have increased the area of cut and fill from 13ha in the original approval to 34ha. The Soil and Water Management Plan and associated Erosion and Sediment Control Plan were provided to DPE in September 2017. DPE have since conducted two site inspections (the most recent one being 20/02/2018) to inspect the earthworks and the ESCs that have been implemented. DPE were concerned that the ESCs were not enhanced sufficiently with the significant increase in cut and fill area.

RCR have been consulting with a representative from Soil Conservation Service who recommended:


- changing the downstream sediment control from sediment fences to hay bales in areas of active earthworks to allow them to be removed and reinstated as required
- installing additional sediment fences across the site to break up the slope length
- spreading straw more sparsely to provide groundcover protection but to not inhibit regrowth.


RCR have ordered hay bales however they are yet to be installed. Sighted stockpile of initial hay bales during inspection. Sighted additional sediment fences installed across arrays. Sighted straw used as groundcover, RCR advised that straw spreading is conducted when there is a delay in other works.

RCR advised that the bulk of the earthworks have been completed and Brefni are due to finish up at site this week. Brefni are completing the installation of rock check dams and rock stabilisation in identified areas across the site.

First Solar requested that additional rock be placed to stabilise the road on the eastern boundary where the natural drainage line flows onto site, and that, on completion of works, the access road to the




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	<p>standpipe and farm dam be removed so as not to impede natural water flow.</p> <p>Topsoil spreading was underway during the inspection and was generating localised dust. RCR could consider options for pre-treating topsoil with a binding agent prior to spreading and establishing procedures that prohibit spreading of topsoil where wind conditions would exacerbate dust generation.</p> <p>Drilling, pile driving and traffic movements on site roads were all observed to be generating localised dust. RCR advised that two water trucks were still maintained however these were not observed to be operating during the inspection. No dust was not observed to be travelling over site boundaries or impacting on neighbours and no dust complaints have been received, however the CoA requires that there are no visible dust emissions from the project.</p> <p><b>Corrective Action 210218-02 – Implement all practicable dust mitigation measures to cease emission of visible dust generated by the project.</b></p> <p><b>Corrective Action 210218-03 – Place additional rock to stabilise the internal road on the north-east perimeter from water flowing onto site.</b></p> <p><b>Corrective Action 210218-04 – On completion of construction, remove the access road from the array to the farm dam so as not to impede natural water flow.</b></p>		


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<b><i>Complaints</i></b>	RCR reported that no complaints have been received since the last inspection.		
<b><i>Incident Management</i></b>	RCR reported that no environmental incidents have occurred since the last inspection.		
<b><i>Permits and Approvals</i></b>	Refer to Waste section.		

## Appendix A Corrective Actions Register

Reference	Action	Category <i>A: Stop Work</i> <i>B: Immediate Action</i> <i>C: Closed within 2 weeks</i> <i>D: Non-critical</i>	Date Opened	Responsibility	Date Closed
170810 – 01	Maintain spill kits in areas that are readily accessible in the event of a spill.	B	10/08/2017	RCR SCECO	13/09/2017
170810 – 02	Manage trenches in accordance with Protocol 4: Trenching to minimise trap hazard for fauna.	B	10/08/2017	RCR SCECO	13/09/2017
130917 – 01	Conduct appropriate checks and inductions on subcontractors, their staff and plant/equipment prior to conducting any work on the project.	C	13/09/2017	RCR SCECO	18/01/2017
111017 – 01	Fence rocky outcrops within the development envelope that are not to be disturbed	C	11/10/2017	RCR SCECO	14/11/2017

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	including a 2.5m buffer as per FFMP or provide justification for not fencing.				
191217 – 01	Conduct maintenance on sediment fencing.	C	19/12/2017	RCR SCECO	20/12/2017
191217 – 02	Develop and implement a program for the installation of nest boxes in accordance with the FFMP.	C	19/12/2017	RCR SCECO	
210218 – 01	Repeat construction noise monitoring at the residences of receptor 2 and receptor 5 to confirm whether noise generated by the project is below the Assessment Criteria and Work Generating High Noise Impact Levels.	B	21/02/2018	RCR SCECO	

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210218 – 02	Implement all practicable dust mitigation measures to cease emission of visible dust generated by the project.	B	21/02/2018	RCR SCECO	
210218 – 03	Place additional rock to stabilise the internal road on the north-east perimeter from water flowing onto site.	C	21/02/2018	RCR SCECO	
210218 – 04	On completion of construction, remove the access road from the array to the farm dam so as not to impede natural water flow.	D	21/02/2018	RCR SCECO	