



Executive Summary

This environmental impact assessment supports a Development Application for the construction and operation of the Walkaway 2 Solar Farm to be located approximately 40 km south-east of Geraldton, Western Australia.

The proponent of the solar farm is RPV Developments, who is also the Proponent of the Walkaway 2 Wind Farm Project, located on the same land title as the proposed solar farm.

The Walkaway 2 Solar Farm is being developed to compliment the already approved Walkaway 2 Wind Farm facility. It represents a response to measures developed to address global concerns about the potential enhanced climate change arising from anthropogenic greenhouse gas emissions. The local environmental impacts are of a predictable nature and controls will be integrated into the project to address the identified impacts.

The proposed site for the solar farm is considered ideal due to the relatively flat local topography, absence of native vegetation, high solar exposure experienced across the region, favourable zoning and easily accessible connecting infrastructure to evacuate the power generated.

As a significant solar farm development for the Mid-West of Western Australia, the project is a worthy environmental initiative and represents an important consolidation of renewable energy generation in the region.

This environmental impact assessment has identified and addressed the environmental issues likely to be associated with the proposed development. Having regard to the following assessment and the significant environmental advantages of the project, it is considered that the overall environmental impact will be acceptable.



1 Introduction

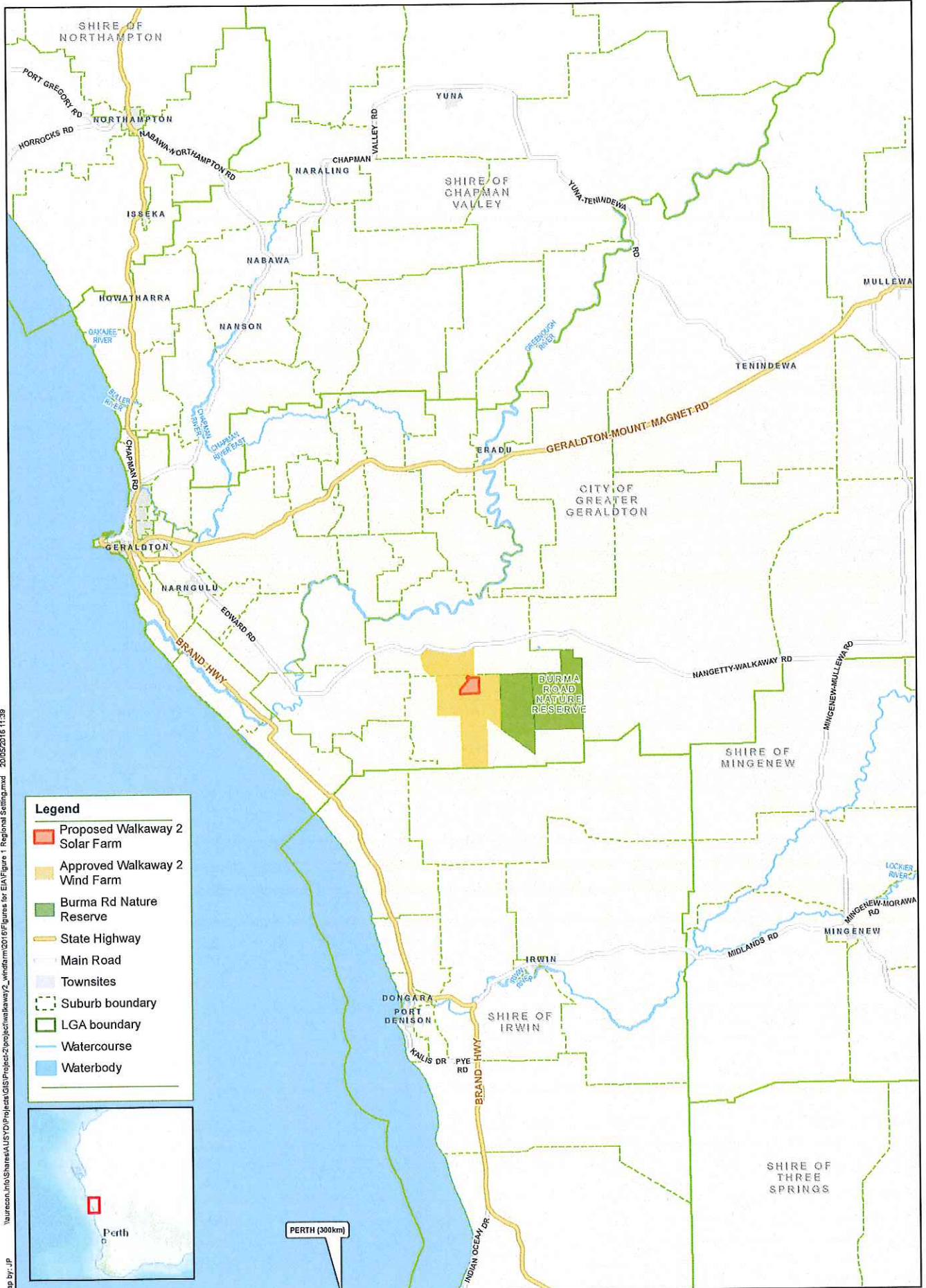
1.1 Background

This environmental impact assessment has been prepared by Aurecon Australasia on behalf of RPV Developments for the construction and operation of the proposed Walkaway 2 Solar Farm and ancillary infrastructure. The project site is located in Western Australia, approximately, 20 km east of the village of Walkaway and approximately 40 km south east of Geraldton (See Figure 1).

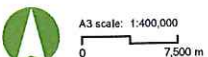
The proposed Walkaway 2 Solar Farm is located immediately east of the existing Alinta Wind Farm which has been operational since 2005 and will be located within one of the properties within the approved Walkaway 2 Wind Farm. The location of the solar farm in relation to the approved wind farm is shown in Figure 2. The proposed solar farm will complement the proposed wind farm's output.

Under Western Australian planning legislation, the Walkaway 2 Solar Farm requires planning approval from the Mid-West Regional Joint Development Assessment Panel (JDAP) due to the estimated project cost being greater than \$10 million. This environmental impact assessment has been prepared to support a development application to be lodged with Council for referral to the JDAP, by RPV Developments.

It is noted that the project's engineering details have not yet been finalised and the assessment of the potential environmental impacts takes into account a range of possible variations in the project description and the worst case impacts that could occur for the equipment and layouts under consideration by RPV Developments. The identification of environmentally sensitive features of the locality also enables development of a project design that excludes these areas and avoids significant environmental impacts. Also to note is that this application, whilst unique and standalone in the sense of a newly proposed development, will rely on much of the environmental assessment undertaken as part of the original wider wind farm approval.



Map by: JP
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Walkaway 2 Wind Farm Environmental Impact Assessment

Figure 1: Walkaway 2 Solar Farm Regional Setting

1.2 Proposal Overview

1.2.1 Proposed location

The proposed development is located approximately 40 km south east of Geraldton in the Mid-Western Region of Western Australia. It is wholly within the local government area (LGA) of the City of Greater Geraldton. The proposed Walkaway 2 Solar Farm is located within the existing approved Walkaway 2 Wind Farm and on a privately owned property identified as 1009 Burma Road, Burma Road on Lot 10283 DP206952. The property is predominantly flat cleared pastoral land used for sheep and cattle grazing and various crops. The property is located within a low density rural settlement. The Burma Road Nature Reserve (C-class) lies 2.4 km to the east of the site.

The proposed development will be located on four cleared, square adjacent paddocks, with vegetated fence lines. Figure 2 provides property details of the land on which the proposed solar farm is to be located and to which the development application applies.

1.2.2 Construction and operation of the solar farm

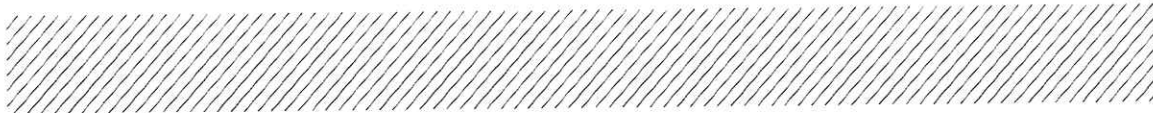
The Walkaway 2 Solar Farm will have a nominal capacity of 45 MW_{AC} and will include the construction of approximately 170,000 solar panels and associated infrastructure, including a substation, underground 33 kV transmission line of approximately 1.5 km to connect the solar plant with the existing 132 kV transmission line. Construction would take approximately 12 months. Some road and intersection upgrades would be undertaken as necessary to facilitate construction.

The solar farm is expected to have a 40 year operating life. Approximately 2-3 personnel would operate and maintain the plant once the solar farm is operational. At the end of the plants operational life, decommissioning would involve the removal of all above ground infrastructure and rehabilitation of the site to allow for a return to agricultural or other land use.

As the specific configuration details and preferred technology of the solar farm design are yet to be finalised, this assessment has assumed the maximum project area envelope within which solar panels would be located. The solar farm would consist of fixed or tracking technology. As the name suggests, fixed solar PV farms involve mounting solar panels on a fixed frame, generally facing north.



Plate 1: Example of Fixed Tilt solar PV farm



Tracking solar PV farms involve mounting solar modules to a frame that automatically tracks the movement of the sun through the day. As a result, tracking solar farms produce greater volumes of electricity than fixed systems, though generally require more land area and higher initial capital and operating expenditure. Tracking technology has become increasingly competitive in recent years and is generally preferred in climates and latitudes similar to Walkaway. See Appendix A for the tracking panel specifications.

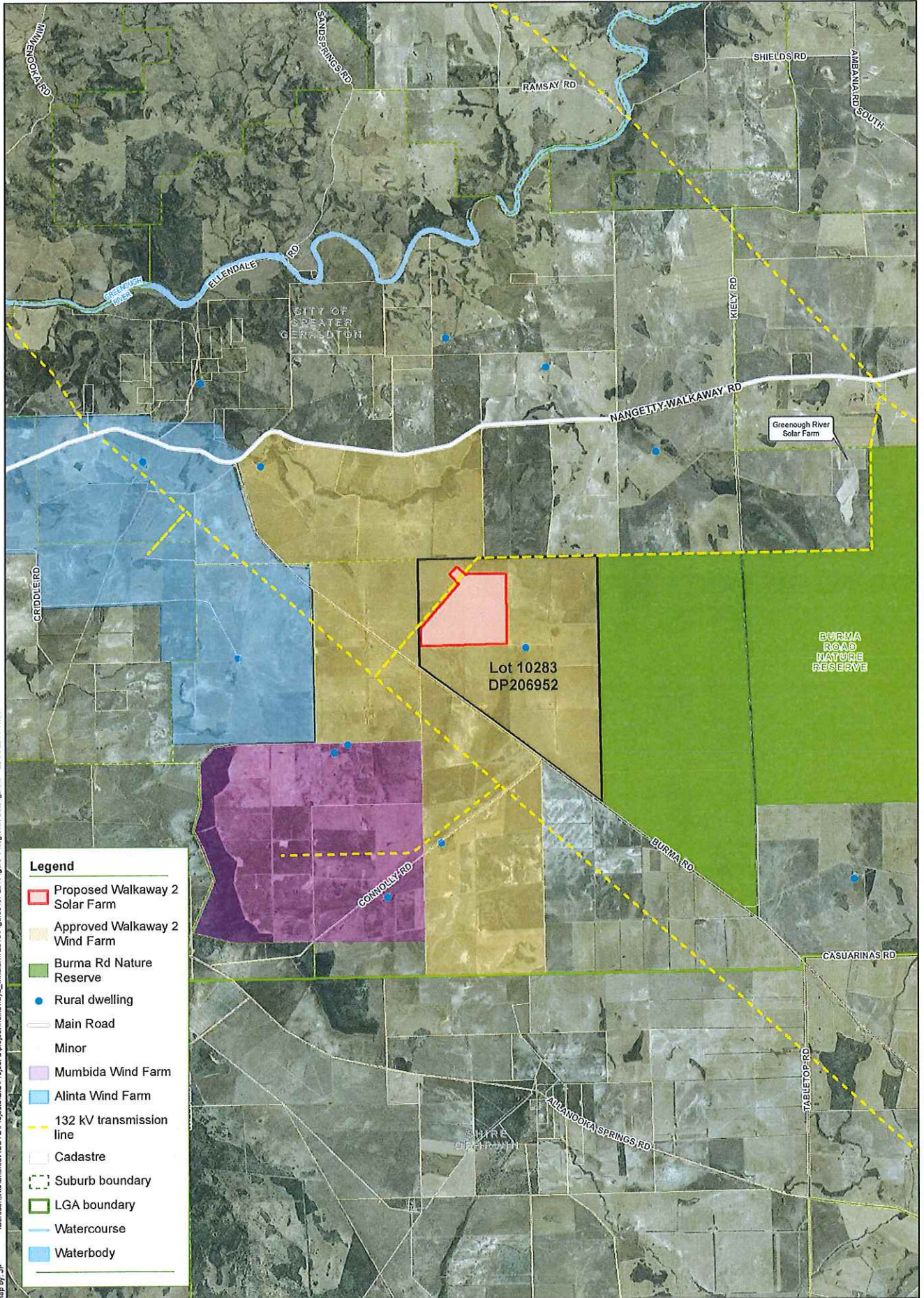


Plate 2: Example of Tracking solar PV farm

Detailed project design is required to enable a viable solar farm development that incorporates mitigation measures and ensures acceptable impact on the environment and surrounding communities. The actual installed solar farm may comprise a lesser scale development than is presented in this environmental impact assessment.

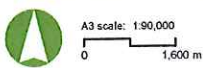
Other solar farms in the area

Located approximately 10.5 km to the north east of the proposal, is the Greenough River Solar Farm which was opened in 2012. The farm produces approximately 22,000 MWh a year of clean energy, with its 150,000 solar panels and occupies an area of nearly 27 hectares. This project allowed WA to lead the country in solar power generation, and highlights the regions abundant solar resource.



Map by: JP
 laurecon:\Info\Shares\GIS\Projects\GIS\Project2\project\walkaway2_windfarm\2016\16\Figures for EIA\Figure 1 Regional Setting.mxd 20/05/2016 11:38

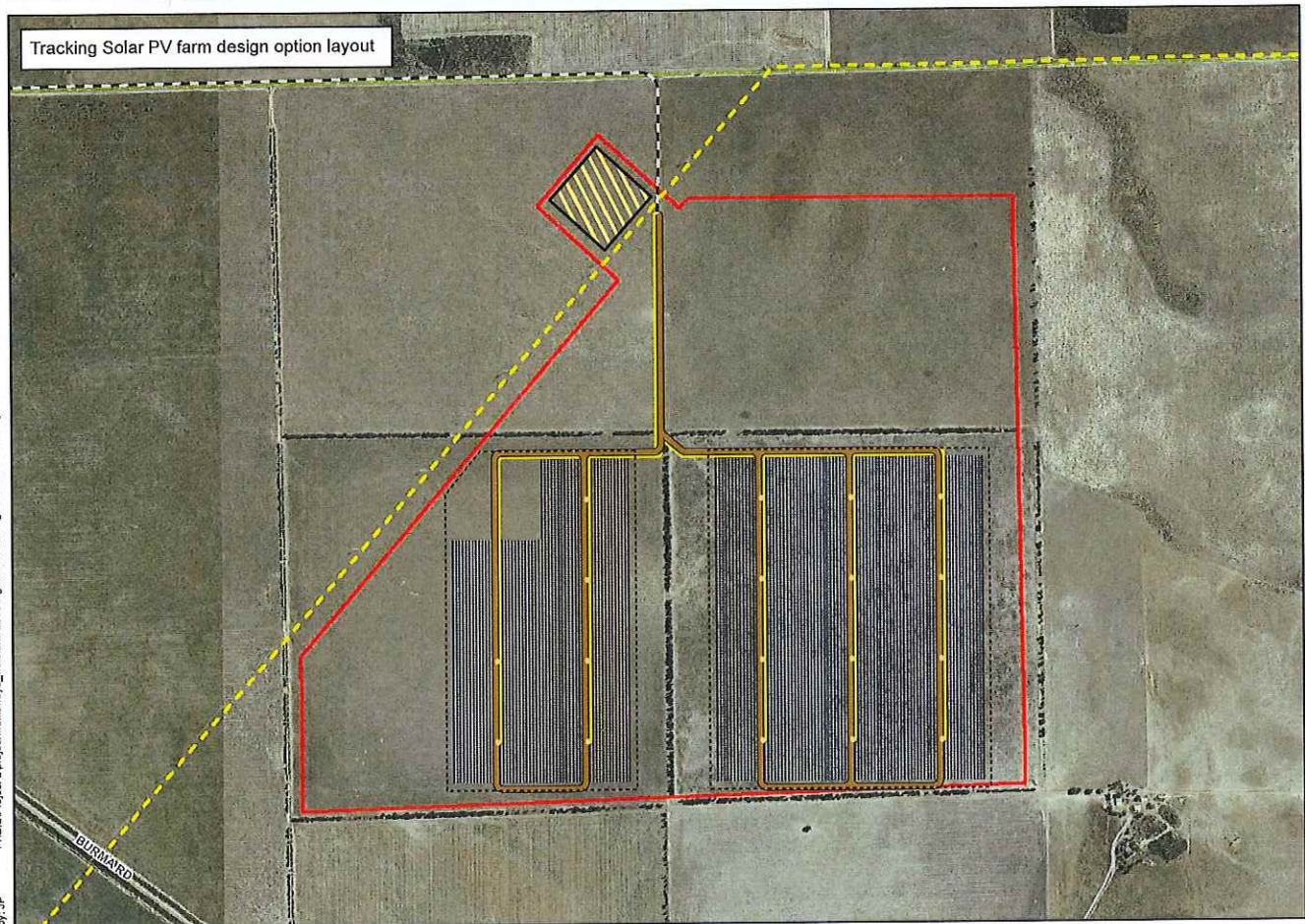
- Legend**
- Proposed Walkaway 2 Solar Farm
 - Approved Walkaway 2 Wind Farm
 - Burma Rd Nature Reserve
 - Rural dwelling
 - Main Road
 - Minor
 - Mumbida Wind Farm
 - Alinta Wind Farm
 - 132 kV transmission line
 - Cadastre
 - Suburb boundary
 - LGA boundary
 - Watercourse
 - Waterbody



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Figure 2: Walkaway 2 Solar Farm Local Context



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Figure 3: Walkaway 2 Solar Farm Design Options