STATE SIGNIFICANT DEVELOPMENT ASSESSMENT
Parkes Solar Farm (SSD 6784)

1. BACKGROUND

Neoen Australia Pty Ltd proposes to develop a new solar farm near Parkes (see **Figure 1**).

1.1 Project setting

The project site is located on a 240 hectare site, approximately 10 kilometres (km) west of the town of Parkes along Henry Parkes Way. The project site is very flat and has been cleared for cropping and grazing. Minimal native vegetation remains within the site.

There are two residential dwellings located within 1 km of the project site (see **Figure 2**)

The region is supported by gold and copper mines and farming including wheat and wool.

Parkes has recently been identified as a 'region of interest' for renewable energy projects because it has good solar resources and spare capacity in it's the electricity network. There is a Transgrid substation located 600 metres (m) north of the project site.

Figure 1: *Project Site Location*

1.2 Project description

The project involves the construction of a new solar farm with an initial capacity of 65 megawatts (MW). It also involves any upgrading or decommissioning of infrastructure and equipment in the future. While the capacity of the proposed solar farm may increase over time as technology improves, the footprint of the development would not increase.

The project is adjacent to the Goonumbla Solar Farm Project (SSD 7618), which is a proposed 150 MW capacity solar farm location on a 385 hectare site directly to the north (see **Figure 2**).

Site access would be via Henry Parkes Way and Pat Meredith Drive. This would require an upgrade of the intersection at Henry Parkes Way and Pat Meredith Drive and paving of the unsealed portion of Pat Meredith Drive.

There are very few landowners in close proximity to the site as the more densely populated areas of Parkes are located over 7 km away. There are four residences surrounding the site, including one located each to the north, east, south and west of the site. The Department has addressed the potential impacts on surrounding residences in **section 4** of this report. None of the nearby landowners objected to the project.

While the project site is already highly disturbed, the Department has ensured that the project has been designed to avoid and/or minimise clearing of species and communities listed under the NSW *Threatened Species Conservation Act 1995* (the TSC Act) and the Commonwealth *Environment Protection and Biodiversity Act 1999* (the EPBC Act). The Department has also required that the project includes landscape planting around the perimeter of the site to minimise any visual impacts and to improve the quality of the existing Inland Grey Box Woodland endangered ecological community (EEC) within and surrounding the site.

The key components of the project are summarised in Error! Not a valid bookmark self-reference.**,** depicted in Error! Reference source not found. and described in detail in the environmental impact statement for the project (see **Appendix B**).

Table 1: *Major components of the project*

Aspect	***Description***
Project summary	The project includes: • approximately 215,000 solar panels supported by approximately 27,000 piles; • approximately 28 photovoltaic boxes or skids, each of them containing an inverter and an 11 kilovolt (kV), 22 kV or 33 kV transformer; • one delivery station in a container or on a 'skid' platform, staff amenities and offices; • internal access tracks for site maintenance vehicles and car parking; • perimeter security fencing, approximately 2.3 m high; and • a 66 kV power line connecting to the existing Parkes Transgrid substation.
Project area	240 hectares
Access route	Access to the site would be via Henry Parkes Way and Pat Meredith Drive.
Road upgrades	Key road works for the project include: • upgrading the intersection at Henry Parkes Way and Pat Meredith Drive; and • paving and widening of the currently unsealed Pat Meredith Drive.
Site entry	Site entry would be via one location from Pat Meredith Drive.
Operational life	The expected operational life of the initial infrastructure is 25-30 years. However, the project may involve infrastructure upgrades that could extend the operational life. The project also includes decommissioning at the end of the project life, which would involve removing all above and belowground infrastructure.
Construction traffic and timeframe	• A total construction period of 9 months, including: - a peak traffic period of 5 months (up to 40 truck and 80 other vehicle trips); and - a non-peak period of 4 months (up to 30 truck and 40 other vehicle trips). • Construction hours would be limited to Monday to Friday 7 am - 6 pm, and Saturday 8 am - 1 pm.
Hours of operation	• The solar farm would operate during times when there is sunlight. • Daily operations and maintenance by site staff would be undertaken Monday to Friday 7 am to 6 pm and Saturday 8 am to 1 pm.
Employment	100 full time equivalent construction jobs and one full time equivalent operational job.
Capital investment value	$100 million

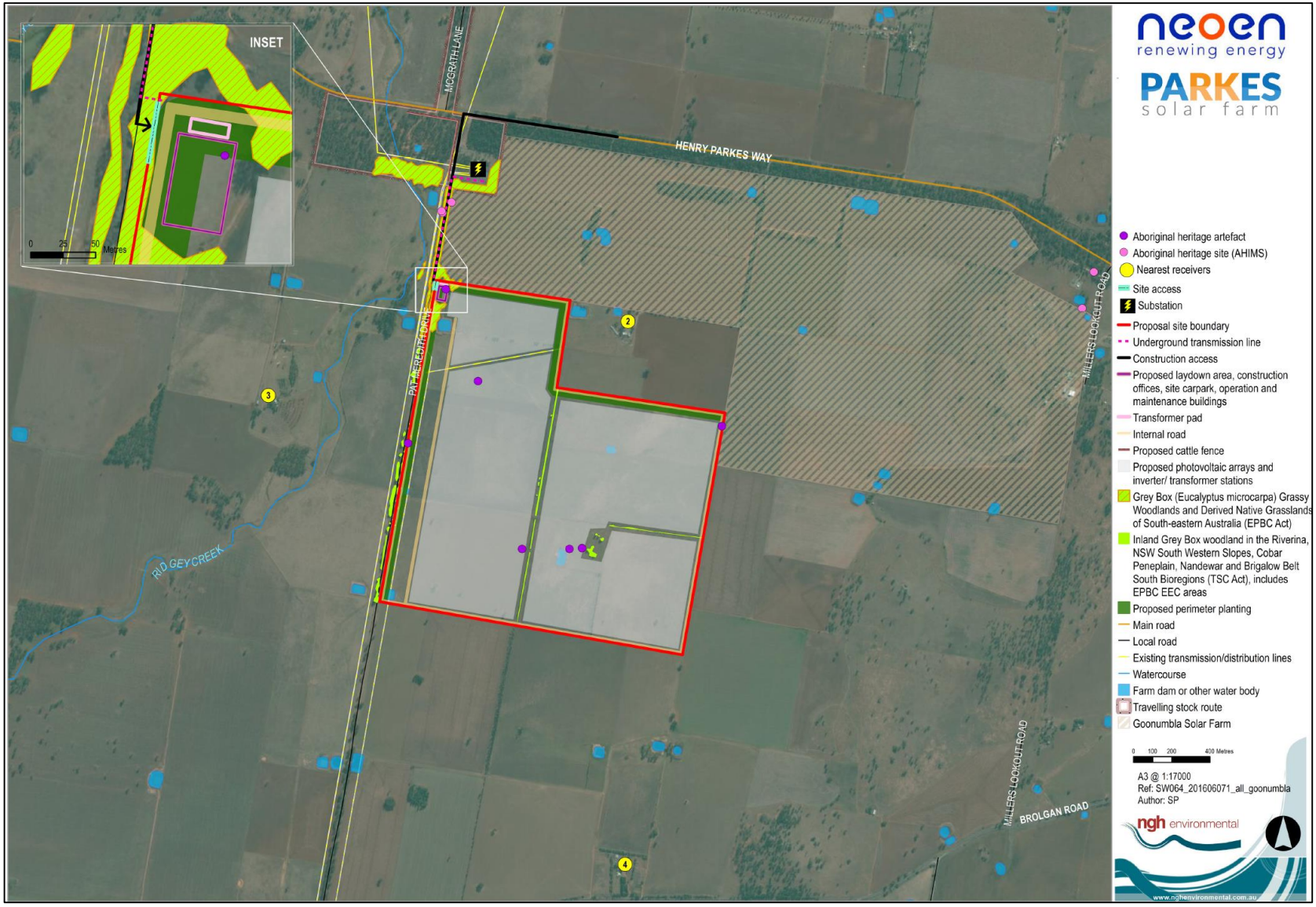

Figure 2: *Project Constraints Plan*

1.3 Strategic context

In 2014, NSW derived only 10.8% of its energy from renewable sources. The rest was derived from fossil fuels, including 82.3% from coal and 6.9% from gas.

Under the international Paris Agreement, Australia has committed to reducing greenhouse gas emissions by 26% to 28% below 2005 levels by 2030. One of the key initiatives to deliver on this commitment is the Commonwealth Government's Renewable Energy Target. Under this target more than 20% of Australia's electricity would come from renewable energy by 2020.

The NSW Government has a Renewable Energy Action Plan, which promotes the development of renewable energy in NSW.

The Australian Renewable Energy Agency (ARENA) has been established by the Commonwealth Government to promote the development of renewable energy across Australia. ARENA is currently running a $100 million funding competition for large-scale solar facilities. There are eight projects shortlisted in NSW. These projects would be able to generate up to 290 MW of solar power, and are worth around $500 million. The Parkes Solar Farm is one of the eight shortlisted projects.

With an initial capacity of 65 MW, the project would generate up to 125,000 MWh of electricity a year. This would power around 20,000 homes, and could save up to 120,000 tonnes of greenhouse gas emissions a year.

The Parkes Solar Farm project is therefore consistent with both the Commonwealth's *Renewable Energy Target* and NSW's *Renewable Energy Action Plan*.

2. STATUTORY CONTEXT

2.1 State significant development

Under the *State Environmental Planning Policy (SEPP) (State and Regional Development) 2011*, the project is classified as State Significant Development (SSD) as it is an electricity generating activity with a capital investment value of more than $30 million.

Consequently, the Minister for Planning is the consent authority for the development. However, under the Minister's delegation of 16 February 2015, the Executive Director, Resource Assessments and Business Systems, may determine the development application as there are no objections and a political disclosure statement has not been made.

2.2 Environmental planning instruments

The provisions of the *Parkes Local Environmental Plan (LEP) 2012* are discussed in **section 4.1** of this report.

Under the *SEPP (Infrastructure) 2007*, the project is permissible as it is an electricity generating works. In accordance with the Infrastructure SEPP, the Department has consulted with Transgrid, and confirmed that there is capacity to accommodate both the Parkes Solar Farm Project and the Goonumbla Solar Farm Project.

SEPP No. 44 – Koala Habitat Protection does not apply as no koalas have been identified within the project area. *SEPP No. 55 – Remediation of Land* also does not apply as no contaminated land has been identified within the project site.

2.3 Other approvals

Under the *Roads Act* 1993, the project requires approvals from the Roads and Maritime Services (RMS) and Parkes Shire Council (Council) for the proposed road upgrades. Under Section 89K of the EP&A Act, the assessment of the impacts of these upgrades is integrated into the planning approval process, and the conditions of these approvals must be consistent with the conditions of any development consent.

The Department has consulted with both RMS and Council during the approval process. They support the project subject to conditions, and these conditions have been incorporated into the proposed conditions of consent (see **section 4.2**).

3. CONSULTATION

On 4 March 2016 and 9 May 2016, the Department inspected the project site with Council representatives.

The Department publicly exhibited the EIS from 25 March 2016 until 28 April 2016. The Department received eight submissions on the project, including six from public authorities, one from the Applicant of the Goonumbla Solar Farm Project and one from a member of the general public. None of the submissions objected to the project.

The one public submission was from a landowner located adjacent to the project site, and while supporting the project, requested that the Department consider potential visual impacts, and the potential for run off and fire hazards. The Department has considered these matters in **section 4** of this report.

The Department of Industry – Division of Resources and Energy (DRE) strongly supports the project as it aligns with the NSW Government policy to increase renewable energy generation, jobs and investment in the State.

Council also supports the project and provided a number of recommendations, which have been incorporated into the recommendations about traffic, as discussed in **section 4.2** of this report.

The recommendations from other public authorities are discussed in the relevant sections of this report.

4. ASSESSMENT

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the three key issues below, including the compatibility of the proposed and existing land uses, the potential traffic-related impacts and local contributions.

The Department has also considered the full range of potential impacts associated with the project and has included a summary of the conclusions relating to these issues in **Table 2**.

4.1 Compatibility of proposed land use

Provisions of the Parkes LEP
The project site is located wholly within the RU1 Primary Production zone under the Parkes LEP.

The RU1 zone includes various land uses that are both permitted with consent and without consent. As a solar farm is not expressly listed as permitted with consent or without consent, it would be considered a prohibited land use under a strict reading of the LEP zoning table.

However, based on a broader reading of the LEP, and consideration of the objectives of the RU1 zone and other Council strategic documents, the Department is satisfied that there is no clear intention to prevent the development of a solar farm on the project site.

Firstly, the Parkes LEP expressly references the Infrastructure SEPP and acknowledges that electricity generating works and solar energy systems are regulated by the Infrastructure SEPP, rather than the LEP. As described above, a solar farm is permitted with consent under the Infrastructure SEPP.

Secondly, the project is consistent with the objectives of the RU1 zone, particularly in relation to:
- *encouraging diversity in primary industry enterprises*;
- *permitting a range of activities that support the agricultural industries*; and
- *minimising fragmentation and alienation of resource lands*.

The project would encourage a new element of agricultural enterprise and diversity through the generation of solar energy, while maintaining a traditional agricultural land use through ongoing grazing of the site. The proposed solar farm would not fragment or alienate any resource lands during its operation as it has generally low impacts and it could be easily returned to agricultural land in the future if decommissioned.

Thirdly, the proposed solar farm would contribute to some of Council's broader goals around land use for the region. In particular, the project would meet a key objective of the *Parkes Shire Land Use Strategy 2012* for the RU1 Primary Production zone:

'To provide for other types of development that are appropriate within a rural zone and that do not compromise the future productivity of the land, including… employment generating development that is well-located within a rural area for example solar power electricity farms.'

Potential impacts on agricultural land

The project site is located within the Central West region of NSW, which has a strong and diverse agricultural sector. Grazing is the most significant land use in the region, followed by broad acre cropping (largely wheat crops).

Access to the project site via Pat Meredith Drive traverses the Currajong Travelling Stock Route on its northern end near the intersection with Henry Parkes Way. The Currajong Travelling Stock Route is used periodically for travelling stock (approximately two times per year for up to a week at a time). The Central West Local Land Services (LLS) has recommended the construction of a fence along Pat Meredith Drive to minimise any impacts on the Currajong Travelling Stock Route during construction of the project, and the Department has included this as a condition of consent.

The project site and the adjacent Goonumbla Solar Farm Project site have a combined size of 625 hectares and currently support cropping and grazing. Given the relatively small size of the two sites, the combined loss of agricultural cropping land from the two projects would result in a negligible reduction in the overall productivity of the region.

Furthermore, the inherent agricultural capability of the land would not be affected by the projects due to the relatively low scale of the development. The land would be used for grazing during operations and could be returned to agricultural uses after the projects are decommissioned.

Both the Department of Primary Industries (DPI) – Agriculture and Council do not consider that operation of the projects would compromise the long-term use of the land for agricultural purposes.

The potential loss of a small area of cropping land in the Parkes region must be balanced against:

- the broader strategic goals of the Commonwealth and NSW governments for the development of renewable energy into the future;
- the environmental benefits of solar energy, particularly in relation to reducing greenhouse gas emissions; and
- the economic benefits of solar energy in an area with good solar resources and capacity in the existing electricity infrastructure.

Based on these considerations, the Department is satisfied that the proposed solar farm represents an effective and compatible use of the land within the Parkes region.

In addition, the Department has recommended suitable conditions to maintain the productivity of the agricultural land during the construction, operation and decommissioning of the project.

4.2 Traffic and transport

Access to the site

The project would be accessed via Henry Parkes Way and Pat Meredith Drive (see **Figure 2**). The Goonumbla Solar Farm Project may also be accessed via this route (as one of three potential options).

The main increase in traffic volumes associated with the project would occur during the nine-month construction period, including a peak period of five months and a non-peak period of four months. There may also be a minor increase in traffic volumes during periods of any upgrading or decommissioning of infrastructure and equipment in the future. There would be negligible traffic during operation.

The traffic volumes for this project would peak at 40 truck movements and 80 other vehicle movements per day during construction.

Road upgrades and site access

Both RMS and Council support the use of Henry Parkes Way and Pat Meredith Drive, provided the required road upgrades are undertaken to support the increased volumes of traffic.

The intersection of Henry Parkes Way and Pat Meredith Drive would need to be upgraded to the satisfaction of RMS and Council, and designed in accordance with the *Austroads Guide to Road Design.*

Pat Meredith Drive would also need to be upgraded in consultation with the Central West LLS and to the satisfaction of Council, including paving and widening of the road to 8.4 metres.

One site access is proposed and would need to be upgraded to a Rural Property Access Type to the satisfaction of Council.

Recommended traffic conditions

The Department has recommended conditions requiring the applicant to:

- undertake the relevant road upgrades prior to the commencement of construction;
- share the cost of the relevant road upgrades with the applicant of the Goonumbla Solar Farm Project, if both projects proceed and share the same access route;
- ensure the length of vehicles accessing the site does not exceed 19 metres;
- ensure the number of vehicles does not exceed:
  - 40 heavy vehicle movements a day during construction, upgrading or decommissioning; and
  - 20 heavy vehicle movements a day during operations;
- temporarily fence Pat Meredith Drive road reserve to the satisfaction of Central West LLS during the construction period in order to minimise the impacts on the Currajong Travelling Stock Route; and
- prepare and implement a Traffic Management Plan in consultation with RMS and Council.

Subject to the recommended conditions, RMS and Council are satisfied that the project would not result in any significant impacts on the road network capacity, efficiency or safety.

4.3 Local contributions

A consent authority has a right to monetary contributions from a developer under sections 94 and 94A of the *Environmental Planning and Assessment Act 1979* when a development is likely to require the provision of, or increase the demand for, public amenities and public services within the area.

While this project would involve an increase of traffic volumes during construction and upgrading periods, there would be no increased demand on Council's public amenities or services as the requisite road upgrades would be undertaken at the expense of the applicant. The applicant would also be required to repair any damage on the road network resulting from project-related traffic.

Following consultation with Council, the Department is satisfied that there would be no increased demand on Council's public amenities or services nor any requirement for developer contributions.

4.4 Other Issues

The Department's consideration of other issues is summarised in **Table 2**.

Table 2: *Other issues*

Issue	***Consideration***	***Recommendations***
Visual	• The project would be visible from two residences surrounding the site. One of these residences is associated with the project. • The proposed solar farm is a relatively low-lying development with panel heights of 2.3-3.4 m. • One submission was received from a non-associated landowner located beyond a hill to the southeast of the project site. While the submission did not object to the proposal, it requested consideration of vegetation buffers along the southern and eastern site boundaries. Given that the project would not be visible from this landowners dwelling, the Department does not consider that vegetation buffers are necessary. • The Department is satisfied that there would be no significant visual impacts on the surrounding non-associated residences, significant vistas or communities with the inclusion of vegetation buffers along sections of the perimeter of the project site.	• Establish vegetation buffers along sections of the perimeter of the project, where it is necessary to minimise visual impacts. • Ensure that external lighting is minimised and complies with the relevant Australian Standards. • Prohibit any signage or advertising on the development, unless for safety purposes.
Biodiversity	• The project site is highly disturbed and has been largely cleared of native vegetation. • There would be no significant impacts on any threatened species or endangered ecological communities (EECs). • The Department has required the project to be redesigned to avoid EEC within and surrounding the site, including construction of an underground power line to avoid Inland Grey Box Woodland EEC. • There would be a limited amount of clearing of a small number of Inland Grey Box Woodland EEC isolated paddock trees. • However, both the Department and OEH are satisfied that the loss of the paddock trees would be compensated through improvements to the quality of the Inland Grey Box Woodland EEC on site and through use of this species in the vegetation buffer.	• Maintain and enhance the Inland Grey Box Woodland EEC on site. • Utilise species that form part of the Grey Box Woodland EEC in the vegetation buffers. • Prepare a detailed Landscaping Plan for the site in consultation with OEH and Council, including measures to maintain and enhance EEC on site.
Noise	• The proposed construction, upgrading and decommissioning activities are predicted to comply with the noise management levels in the *Interim Construction Noise Guideline* (ICNG). • There would be negligible noise during operation.	• Minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG. • Restrict construction hours to Monday to Friday 7 am - 6 pm, and Saturday 8 am - 1 pm.
Water	• The project would require approximately 109 mega litres (ML) of water during construction (primarily for dust suppression) and less than 3 ML per year during operation (primarily to wash the solar panels). • All water would be delivered to the site by truck. • DPI Water is satisfied that the project would not have any impact on water supply and demand in the region, subject to the confirmation from the relevant water authority. • Any potential erosion and sedimentation risks associated with the project can be effectively managed using best practice construction techniques.	• Prohibit water pollution. • Undertake activities in accordance with OEH's *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) manual. • Prepare Stormwater Plans for the site to the satisfaction of Council, and in accordance with Council's guidelines.

Issue	*Consideration*	*Recommendations*
Heritage	• Ten Aboriginal heritage items were identified within and surrounding the site, including seven items on site and three within the Pat Meredith Drive road reserve. • All items have low to moderate significance due to the existing highly disturbed nature of the site and surrounds. • The project would involve earthworks that would likely require the removal or displacement of all identified items. • Given the highly disturbed nature of the project site, the Department, OEH, the Binjang Wellington Wiradjuri Aboriginal Heritage Surveys group and Wiradjuri Council of Elders are satisfied that the project is unlikely to result in any significant impacts on the heritage values of the locality.	• Record, analyse and relocate all identified heritage items that would be disturbed by the development, in consultation with the Aboriginal stakeholders. • Cease works and notify OEH if human remains are identified over the life of the project. • Complete a Chance finds protocol.
Mineral Resources	• A mineral exploration licence exists over the project site. • The Department is satisfied the project is not likely to have significant impacts on future mineral exploration and that future exploration and/or mine development could be designed to co-exist with the solar farm.	• No recommendations.
Hazards	• The Department is satisfied the project would comply with the National Health and Medical Research Council standards for electro-magnetic fields. • There are fire risks associated with all large solar farm developments. These risks can be suitably controlled through the implementation of standard fire management procedures. Fire & Rescue NSW asked for a detailed Emergency Response Plan to be prepared for the development outlining how these risks would be managed.	• Prepare an Emergency Response Plan in consultation with the Rural Fire Service and Fire & Rescue NSW.

5. CONCLUSION

The Department has assessed the development application, the Environmental Impact Statement, the submissions, the applicant's Response to Submissions, and additional information provided by the applicant and relevant government agencies (see **Appendices B, C, D** and **E**). The Department has considered the objects of the EP&A Act and the relevant considerations under section 79C in its assessment of the project.

The Department considers the project site to be appropriate for a solar farm as it has good solar resources and available capacity on the existing electricity network. In addition, the site is very flat and has been largely cleared for agricultural uses. There are very few landowners in close proximity to the proposed solar farm and none of the nearby landowners have objected to the project.

The project would not result in any significant reduction in the overall agricultural productivity of the region. Additionally, the project site could be easily returned to agricultural uses after the project is decommissioned and the inherent agricultural capability of the land would not be affected.

The Department believes the project would assist in transitioning the electricity sector from coal and gas-fired power stations to renewable energy sources. It would generate up to 125,000 MWh of electricity annually, which would power about 20,000 homes and save up to 120,000 tonnes of greenhouse gas emissions per year. It is therefore consistent with the goals of the Commonwealth *Renewable Energy Target* and the NSW *Renewable Energy Action Plan*.

The Department is satisfied that the project achieves a reasonable balance between maximising the efficiency of the solar resource development and minimising the potential impacts on surrounding land users and the environment. The project would also stimulate economic investment in renewable energy and provide flow-on benefits to the local community through job creation and capital investment.

On balance, the Department believes that the project is in the public interest and should be approved, subject to conditions.

6. RECOMMENDATION

It is recommended that the Executive Director:

- considers the findings and recommendations of this assessment report;
- approves the development application for the Parkes Solar Farm; and
- signs the attached recommended conditions of consent (**Appendix A**).

14/6/16

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14/6/16

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APPENDIX A:

Recommended Conditions of Consent

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6784

APPENDIX B:

Environmental Impact Statement

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6784

APPENDIX C:

Submissions

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6784

APPENDIX D:

Response to Submissions

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6784

APPENDIX E:

Additional Information

See website at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6784