Springdale Solar Farm

State Significant Development Assessment

SSD 8703

November 2020

NSW Department of Planning, Industry and Environment | dpie.nsw.gov.au

Published by the NSW Department of Planning, Industry and Environment

dpie.nsw.gov.au

Title: Springdale Solar Farm

Subtitle: State significant development assessment SSD 8703

Cover image: Paddock tree in Sutton, Department of Planning, Industry and Environment October 2017

Executive Summary

RES Australia Pty Ltd (RES) proposes to develop a 100 megawatt (MW) solar farm on a rural property located approximately 3.5 kilometres (km) north of the Australian Capital Territory (ACT) and 7 km north west of Sutton village in the South East and Tablelands region of NSW.

There are eight non-associated residences within 1 km of the development footprint which is located close to the state road network via the Federal Highway and the project would connect to the electricity network via TransGrid's 132 kilovolt (kV) transmission line, which transects the south western portion of the site.

The project is classified as State significant development *Environmental Planning and Assessment Act 1979* (EP&A Act) as it is development for the purpose of electricity generating works with a capital investment value of more than $30 million. The Independent Planning Commission (the Commission) is the consent authority for the development as the project has received more than 50 unique public submissions by way of objection.

Engagement

The Department exhibited the Environmental Impact Statement (EIS) for the project and received 230 submissions including 225 public submissions (110 objections, 114 supporting and one comment) and five from special interest groups (one objection, three supporting and one comment). Advice was received from 13 government agencies, utility providers and Yass Valley Council (Council).

The Department also consulted Council and the relevant government agencies on key issues, inspected the site and met with surrounding landowners on 7 August 2018 and met with a community group on 26 June 2020.

Council, agencies and utility providers did not object to the project, subject to the implementation of appropriate mitigation and management measures.

In response to agency advice and submissions on the project, RES undertook additional assessments and amended the project by removing one of the southern solar array areas, increasing infrastructure setbacks from the nearest residence, and further refinements to the development footprint.

The project amendments would lead to better outcomes and address many of the concerns raised in public submissions by reducing impacts on visual amenity and further avoidance of habitat for threatened species.

Assessment

The Department has undertaken a comprehensive assessment of the merits of the project and considered all potential issues, including the mandatory considerations under Section 4.15 of the *Environmental Planning and Assessment Act 1979*. The key assessment issues identified for the project are land use compatibility, potential impacts on visual amenity and biodiversity.

The project site covers 370 hectares (ha) and is currently used for cattle grazing. The development footprint (185 ha) is located on soils classified as Class 4 or 5 under the *Land and Soil Capability Mapping in NSW* (OEH, 2017), meaning that the land is generally more suitable for grazing and requires active management practices, expertise, inputs and technology to manage productivity.

The Department considers that the project would not significantly reduce the overall agricultural productivity of the region and that the inherent agricultural capability of the site would not be affected, and is satisfied that the site could be returned to its full agricultural uses in the future following

rehabilitation. The Department also notes that RES intends to allow sheep grazing on the remainder of the site during operation of the project.

The site and surrounds comprise gently undulating land that has sections that are highly disturbed from a history of prolonged agricultural practices. The site contains patches of remnant native vegetation, including a large stand mature woodland in the west of the site and scattered paddock trees, which would be retained.

The solar farm is relatively low-lying (solar panels up to 4 m high) and existing vegetation provides some screening of the project from most nearby receivers. The proposed vegetation screening would further minimise visual impacts, and the project would not be visible from Sutton village.

The Department has recommended the removal of approximately 1.1 ha of solar panels along the northern boundary of the centre array area, providing increased development setbacks (from 50 to 90 m) from the site boundary to reduce the visual impacts on the closest non-associated residence (R35).

Of the 33 non-associated residences within 2 km of the development footprint, 28 are considered to have low or negligible visual impacts due to topography, distance and intervening vegetation. The Department considers that the remaining five residences which are located between 50 m and 880 m from the development footprint would have moderate visual impacts. This is due to setbacks proposed by RES and recommended by the Department, existing vegetation on site and at residences, and extensive vegetation screening proposed along the edge of the site.

The site has areas cleared of native vegetation and patches of remnant native vegetation, including a large stand on western side of the site. The project has been designed to largely avoid impacts on native vegetation and threatened species habitat, including known Golden Sun Moth habitat and potential habitat for the Striped Legless Lizard. All residual impacts (including clearing of 4.52 ha of Golden Sun Moth habitat and 0.95 ha of Superb Parrot habitat) would be offset in accordance with the NSW Biodiversity Offset Scheme, which is included as a requirement in the recommended conditions.

To address the residual impacts of the project, including Aboriginal cultural heritage, traffic, water, noise and hazards, the Department has recommended a range of stringent conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively minimised or offset to meet acceptable standards.

Summary

Overall, the Department considers the site to be appropriate for a solar farm as it has good solar resources. The site is near existing electrical infrastructure with sufficient connection capacity and is consistent with the NSW Government's *Large-Scale Solar Energy Guideline*.

The project is also consistent with the NSW's *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 – 2030*, as it would contribute 100 MW of renewable energy to the National Electricity Market. Co-location to transmission lines offers an opportunity for direct grid connection without significant new overhead lines and easements, and any potential impacts and efficiency losses that may result.

The project would also provide flow-on benefits to the local community, including up to 200 construction jobs, ten operational jobs and a capital investment of $120 million, and up to $1.3 million in contributions to Council for community enhancement projects.

The Department considers that the project would result in benefits to the State of NSW and the local community and is therefore in the public interest.

Contents

1 Project

1.1.1 RES Australia Pty Ltd (RES) proposes to develop a new State significant development (SSD) solar farm approximately 3.5 kilometres (km) north of the ACT border and 7 km north west of Sutton village, within the Yass Valley local government area (LGA) (see **Figure 1** to **5**).

1.1.2 The project involves the construction of a new solar farm with a generating capacity of approximately 100 megawatts (MW). It also includes the upgrading and decommissioning of infrastructure and equipment over time. While the generating capacity of the project may increase over time as technology improves, the footprint of the development would not be permitted to increase without further planning approval.

1.1.3 The solar farm would connect to TransGrid's existing 132 kilovolt (kV) transmission line that traverses the southern part of the site. The transmission line connects to the national energy grid between the Canberra and Queanbeyan substations.

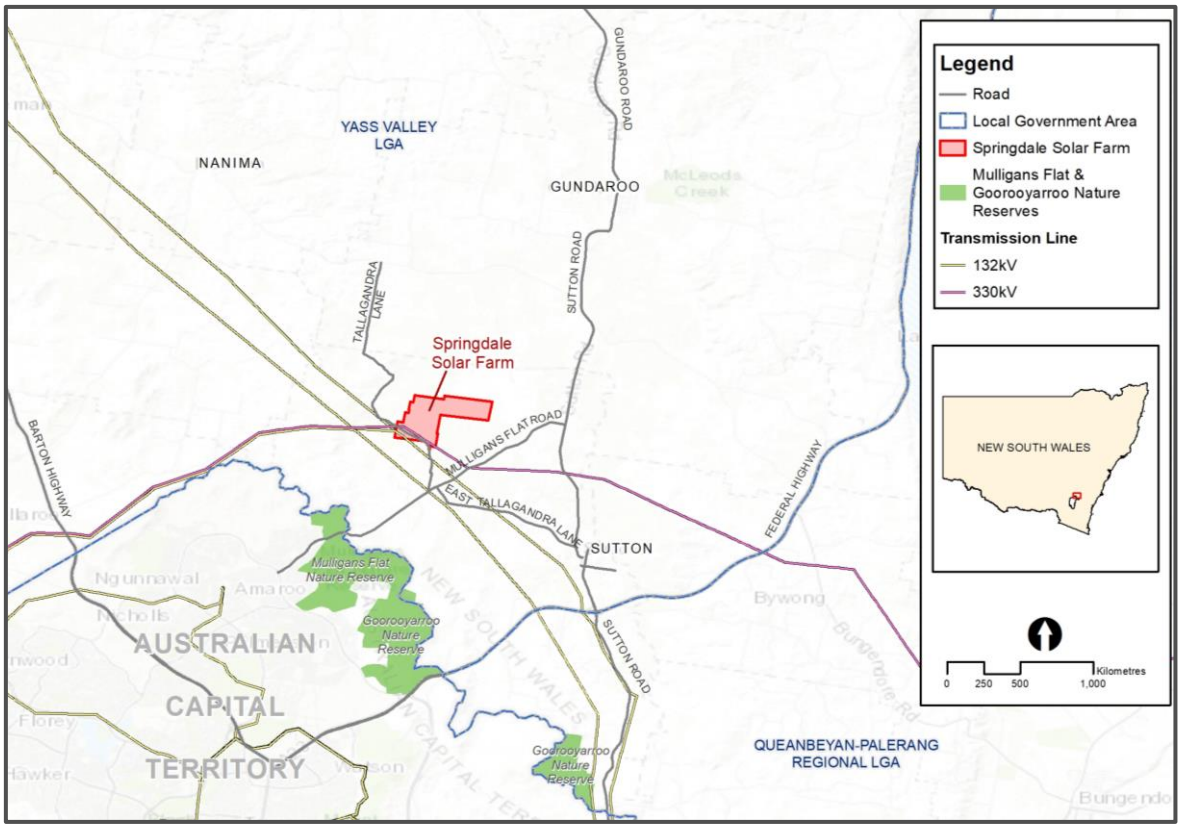

Figure 1 | Regional Context

1.1.4 The key components of the project are summarised in **Table 1** and depicted in **Figure 6**. Further detail is provided in the Environmental Impact Statement (EIS) (see **Appendix B**), Amendment Report (see **Appendix C**), Submissions Report (see **Appendix E**) and additional information provided during the Department's assessment of the project (see **Appendix F**). The Department notes that **Figure 6** also includes the additional setback from residence R35 proposed by the Department in its recommended conditions as discussed in **section 5.2**.

Figure 2 | Existing 132 kV transmission line infrastructure on site

Figure 3 | Intensively grazed area within the Project site

Figure 4 | Existing 330 kV transmission line infrastructure on site

Figure 5 | Looking south from Tintinhull Road

Table 1 | Main Components of the Project

Aspect	Description
Project summary	The project includes: • a generating capacity of approximately 100 MW; • approximately 260,000 single-axis tracking solar panels (up to 4 m high) and 22 inverter stations (up to 4 m high); • an onsite substation and electrical switchyard connecting to TransGrid's existing 132 kV transmission line; • a control building, including office and maintenance buildings (up to 3.5 m high), laydown areas, staff amenities and cark park; • vegetation screening and perimeter security fencing; and • subdivision of land within site for the substation.
Project area	• Site: 370 ha • Development footprint: 185 ha
Access route	• All heavy vehicles would access the site via the Federal Highway, Sutton Road, East Tallagandra Lane, Mulligans Flat Road and Tallagandra Lane.

Site access points and road upgrades	• Access would be via three new site entry points on Tallagandra Lane:
	  ○ one for access to the substation and array south of Tallagandra Lane;
	  ○ one for access to the control building and arrays north of Tallagandra Lane;
	  ○ one for access to the south eastern array on the corner of Tallagandra Lane and Tintinhull Road;
	• One crossing point along Tintinhull Road to allow access between the eastern and western portions of the site; and
	• Upgrades to Tallagandra Lane between the end of the sealed section to the furthest site access point and Tintinhull Road between Tallagandra Lane and the site access point.

Construction	• The construction period would last for about 10 months, including a peak period of up to five months. • Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.
Operation	• The expected operational life is approximately 35 years. However, the project may involve infrastructure upgrades that could extend the operational life.
Decommissioning and rehabilitation	• The project also includes decommissioning at the end of the project life, which would involve removing all infrastructure.
Hours of operation	• Daily operations and maintenance would be undertaken Monday to Friday from 7 am to 6 pm, and on Saturday from 8 am to 1 pm.
Employment	• Up to 200 construction jobs and 5 ongoing operational jobs.
Capital investment summary	• $120 million

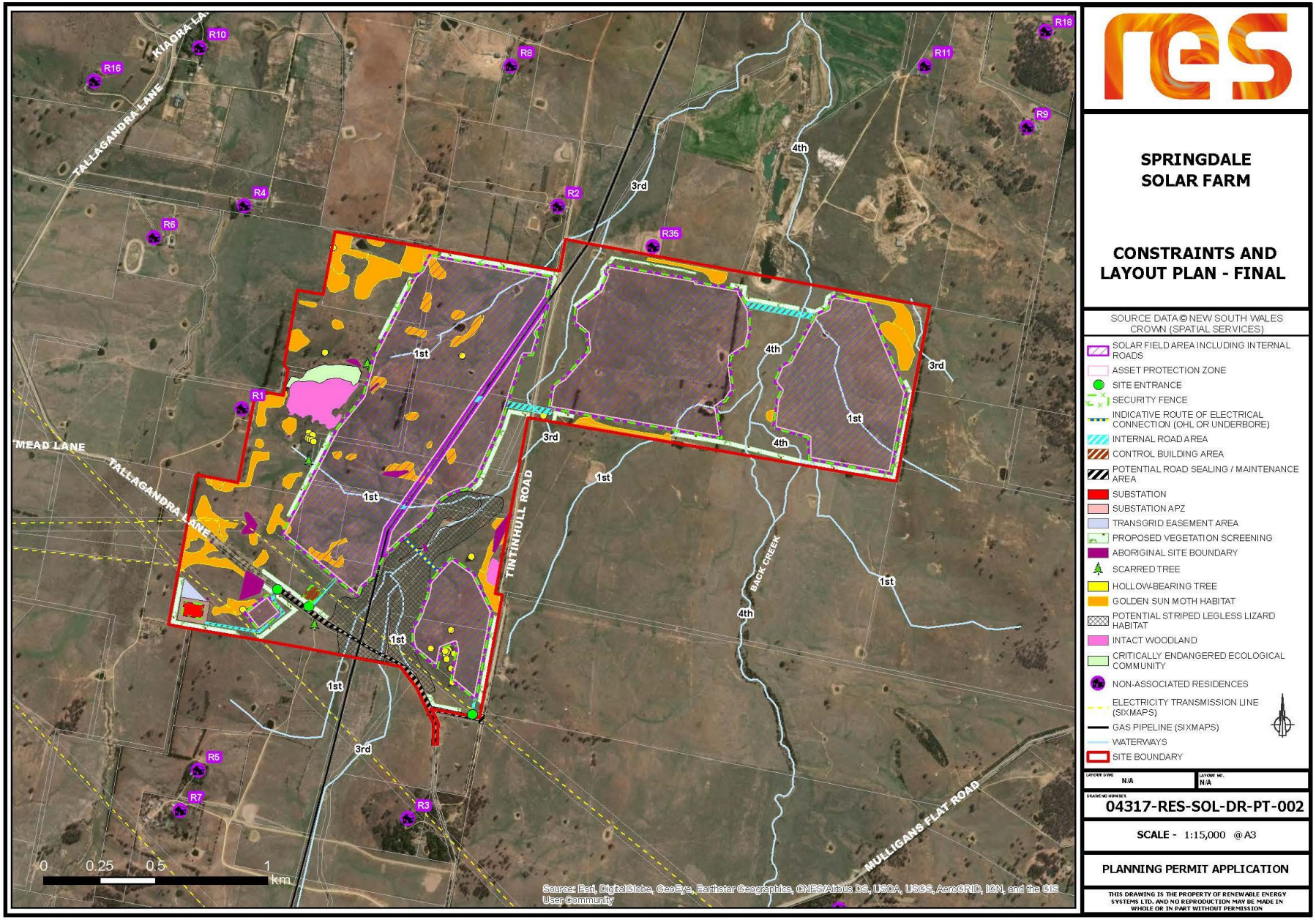

Figure 6 | Site Layout

2 Strategic context

2.1 Site and Surrounds

2.1.1 The project is located on a 370 ha site in the South East and Tablelands region of NSW. The site (as shown in **Figures 2** to **Figure 5**) is zoned RU1 – Primary Production under the *Yass Valley Local Environmental Plan 2013* (Yass Valley LEP) consisting predominantly of cleared pastureland, scattered paddock trees and planted windbreaks and is currently used for grazing cattle.

2.1.2 The site does not include any mapped Biophysical Strategic Agricultural Land (BSAL). Soils within the site are classified as Class 4 or 5 under the *Land and Soil Capability Mapping in NSW* (OEH, 2017), meaning that the land is generally more suitable for grazing and requires active management practices, expertise, inputs and technology to manage productivity.

2.1.3 Land within site is gently undulating, with a gentle slope from west to east (average gradient of 2.5%). On-site elevation ranges between 600 m Australian Height Datum (AHD) on the creek flats of Back Creek and an unnamed waterway to 650 m (AHD) at a prominent north-south trending crest in the western portion of the site (see **Figure 7**).

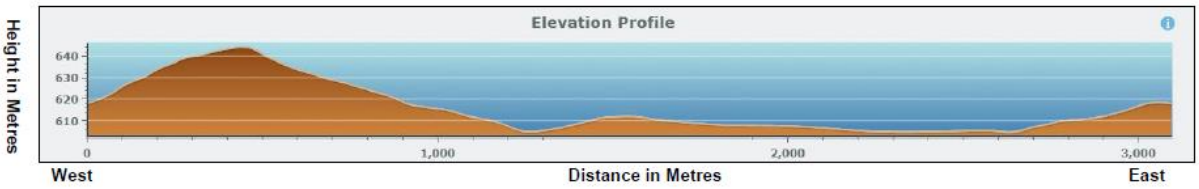

Figure 7 | Elevation Profile of the Site

2.1.4 There is existing electricity transmission infrastructure with a 132 kV and 330 kV TransGrid transmission line transecting the southern portion of the site (see **Figure 2** and **Figure 4**). There is also an existing easement for the APA Group's high-pressure gas pipeline, which runs through the site in a south west to north east direction.

2.1.5 The proposed development footprint is approximately 185 ha and largely avoids site constraints, including watercourses and floodplains, the high-pressure gas pipeline easement, remnant native vegetation and habitat for listed threatened species (including the Golden Sun Moth and Striped Legless Lizard).

2.1.6 Land adjoining the site is also zoned RU1 and has been used for grazing sheep and cattle historically, with several smaller rural residential lots established in the last decade. Mulligans Flat Road is located approximately 1.5 km south east of the site and is a sub-arterial road that connects Sutton village to the Gungahlin District of the ACT, which is approximately 4.6 km from site. Tallagandra Lane transects the southern portion of the site and is primarily used by local traffic.

2.1.7 Mulligans Flat and the Goorooyarroo Nature Reserves are approximately 3.5 south west and 6 km south of the site, respectively, within the ACT and NSW.

2.1.8 There are 33 non-associated residences within 2 km of the proposed development footprint, which are predominantly dwellings on rural properties. The closest non-associated residences are located approximately 50 m north (R35), 300 m north (R2), 410 m west (R1), 500 m south (R3) and 630 m

south (R5) of the site. The other 28 residences within 2 km from the site would have limited views of the project site due to distance or various levels of screening provided by vegetation and topography.

2.1.9 The *Yass Valley Settlement Strategy 2036,* adopted by Council in 2017, proposed an RU6 Rural Transition Zone that included the proposed solar farm site. The zone was proposed to maintain a separation between rural and urban land and to protect high quality natural environments within 5 km from the border with the ACT. The *Yass Valley Settlement Strategy 2036* was finalised in August 2019 following endorsement from the NSW State Government and did not adopt the proposed RU6 Transition Zone. Notwithstanding, RES has undertaken a Land Use Conflict Risk Assessment (LUCRA) for the project, which considers the project against the Council's goals and direction as proposed in the settlement strategy. Land use compatibility issues are discussed further in **section 5.1**.

2.2 Other Energy Projects

2.2.1 Over the last 10 years, the South East and Tablelands region of NSW has attracted wind and solar developers given the abundant wind and solar resources, the presence of major electricity transmission lines and proximity to major load centres. There are three operational, one under construction, two approved and three proposed SSD energy projects within 50 km of the project, with the closest project located approximately 25 km east of the site (see **Table 2** and **Figure 8**).

Table 2 | Nearby energy projects

Project	Capacity (MW)	Status	Approximate distance from the project (km)
Capital II Wind Farm	90	Approved	24
Capital Wind Farm	140	Operational	25
Gunning Solar Farm	316	Proposed	29
Capital Solar Farm	50	Approved	29
Collector Wind Farm	227	Under Construction	31
Woodlawn Wind Farm	48	Operational	34
Cullerin Wind Farm	30	Operational	38
Yass Solar Farm	80	Proposed	38
Parkesbourne Solar Farm	600	Proposed	42

2.2.2 Given the distance of the proposed Springdale Solar Farm from other energy projects, there would be no material cumulative visual or noise impacts. In addition, while the surrounding regional road network may experience an increase in traffic numbers there would be no significant cumulative impact on the local roads along the proposed transport route, as discussed further in **section 5.4**.

2.2.3 The Capital Wind Farm, Woodlawn Wind Farm and Cullerin Wind Farm are operational wind farms, and the Collector Wind Farm is currently undergoing commissioning, with an operational forecast in the first quarter of 2021.

2.2.4 The Capital II Wind Farm and Capital Solar Farm are approved however construction has not commenced. If approved, and the project's construction period overlaps with these projects, cumulative impacts are unlikely due to the distance between projects. The three proposed solar farms in the region are at a preliminary stage with no development application yet submitted to the Department.

2.2.5 The potential cumulative impacts on agricultural land in the region is discussed further in **section 5.1**.

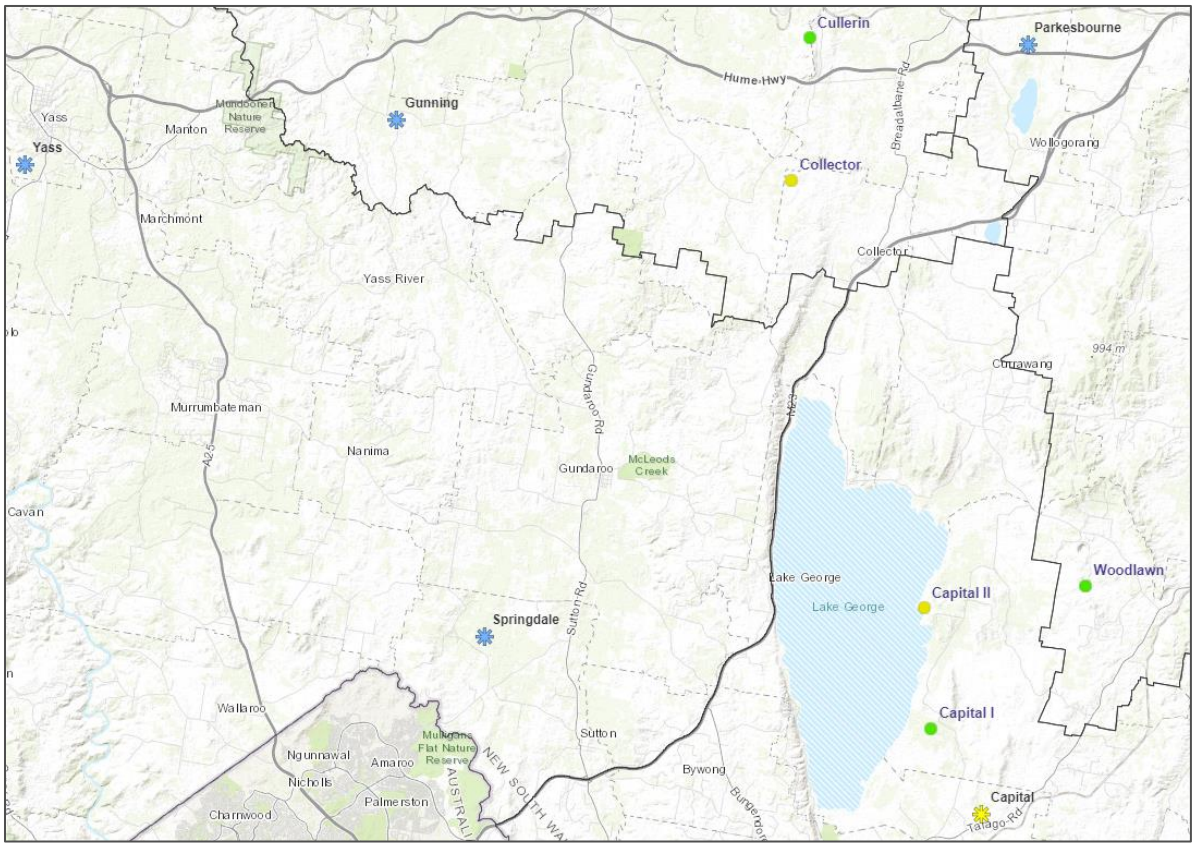

Figure 8 | Nearby Energy Generation Projects

2.3 Energy Context

2.3.1 In 2019, NSW derived approximately 18.7 % of its energy from renewable sources. The rest was derived from fossil fuels, including 76.7 % from coal and 4.1 % from gas. However, there are currently no plans for the development of new coal power stations in NSW, and the development of renewable energy sources, like wind, solar and pumped hydro, is experiencing rapid growth.

2.3.2 This is highlighted in the 2017 *Independent Review into the Future Security of the National Electricity Market* (the Finkel Review), which outlines a strategic approach to ensuring an orderly transition from traditional coal and gas fired power generation to generation with lower emissions. It notes that Australia is heading towards zero emissions in the second half of the century.

2.3.3 The *United Nations Framework Convention on Climate Change* has adopted the Paris Agreement, which aims to limit global warming to well below 2°C, with an aspirational goal of 1.5°C. Australia's contribution towards this target is a commitment to reduce greenhouse gas emissions by 26 % to 28 % below 2005 levels by 2030.

2.3.4 The *NSW Climate Change Policy Framework*, released in November 2016, sets an aspirational objective for NSW to achieve net zero emissions by 2050. The *NSW Net Zero Plan Stage 1: 2020 – 2030*, released in March 2020, builds on the framework and sets out how the NSW Government will deliver on this objective, and fast-track emissions reduction over the next decade.

2.3.5 The Department released the *Large-Scale Solar Energy Guideline* in December 2018 to provide the community, industry and regulators with guidance on the planning framework for the assessment of large-scale solar projects and identify the key planning considerations relevant to solar energy development in NSW.

2.3.6 The Guideline aims to support the growth of the solar industry, whilst ensuring that impacts are adequately assessed, effective stakeholder engagement is undertaken, and that attracting investment is balanced with considering the interests of the community. The Applicant submitted its EIS in September 2018 and its assessment is consistent with the principles of the Guideline.

2.3.7 The Guideline also acknowledges that large-scale solar projects could help to reduce reliance on fossil fuels, thereby contributing to reductions in air pollution and greenhouse gas emissions, whilst also supporting regional NSW through job creation and investment in communities that may not have similar opportunities from other industries.

2.3.8 NSW is one of the nation's leaders in large-scale solar, with 14 major operational projects and eight under construction.

2.3.9 In March 2018, the NSW Government's *Transmission Infrastructure Strategy* identified 10 potential Energy Zones across three broad regional areas, including the New England, Central West and South West regions of NSW. These zones have been identified because they benefit from outstanding energy resources and are close to existing network infrastructure and load centres, but also require further investment into network infrastructures to address existing capacity constraints.

2.3.10 While the project is not located within a Renewable Energy Zone, the NSW Government has a clear policy to encourage investment in new electricity infrastructure and unlock additional generation capacity across NSW (i.e. not only within the Renewable Energy Zones) in order to ensure secure and reliable energy, subject to appropriate site selection, detailed assessment and community consultation.

2.3.11 The project would have direct access to the electricity grid at a location with available network capacity. With a capacity of 100 MW, the project would generate enough electricity to power over 37,000 homes and is therefore consistent with NSW's *Climate Change Policy Framework* and the *Net Zero Plan Stage 1: 2020 – 2030.*

3 Statutory context

3.1 State significant development

3.1.1 The project is classified as State significant development under Section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in Clause 20 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), as it is development for the purpose of electricity generating works with a capital investment value of more than $30 million.

3.1.2 Under Section 4.5(a) of the EP&A Act and clause 8A of the SRD SEPP, the Independent Planning Commission (the Commission) is the consent authority for the development as the project has received more than 50 unique public submissions by way of objection.

3.2 Amended Application

3.2.1 In accordance with Clause 55 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulations), a development application can be amended at any time before the application is determined. Accordingly, RES has sought to amend its application, the details of which are summarised in **section 4.4** of this report.

3.2.2 Under clause 55 of the EP&A Regulation, an application can be amended with the agreement of the consent authority (i.e. the Commission for this development), however, under the delegation of 4 August 2020, the Executive Director, Energy, Industry and Compliance can agree to amendments to an application.

3.2.3 The Department considers that it can accept RES's amended application for the following reasons:

- the project amendments have reduced the impacts of the project as a whole;
- the amended application directly responds to the key issues raised in submissions received by the Department during the exhibition of the original application;
- RES assessed the impacts of the amended project (see **Appendix C, E** and **G**); and
- the Department made the additional information available online and provided it to the relevant agencies for comment.

3.3 Permissibility

3.3.1 The site is located wholly within land zoned RU1 - Primary Production under the Yass Valley LEP, the provisions of which are discussed in **section 5.1**. The RU1 zone allows various land uses that are both permitted with and without consent. As electricity generating works are not expressly listed as permitted with or without consent, it is a prohibited land use under a strict reading of the LEP. However, the LEP expressly references the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP) and acknowledges that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP.

3.3.2 Under the Infrastructure SEPP, electricity generating works are permissible on any land in a prescribed rural, industrial or special use zone. Land zoned RU1 Primary Production is a prescribed rural zone pursuant to the Infrastructure SEPP. Consequently, the project is permissible with development consent.

3.4 Integrated and Other approvals

3.4.1 Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the State significant development approval process, and therefore are not required to be separately obtained for the proposal.

3.4.2 Under Section 4.42 of the EP&A Act, a number of further approvals may be required, but must be substantially consistent with any development consent for the proposal.

3.4.3 The project requires an approval under the *Roads Act 1993* for the proposed road upgrades.

3.4.4 The Department has consulted with the relevant government agencies responsible for the integrated and other approvals, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent to address these matters (see **Appendix I**).

3.5 Commonwealth Approvals

3.5.1 On 3 October 2018, a delegate for the Commonwealth Minister for the Environment and Energy determined the project (EPBC 2018/8258) to be a 'controlled action' in accordance with the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) due to likely significant impacts to listed threatened species and communities (Sections 18 and 18A).

3.5.2 The assessment process under the EP&A Act has been accredited under section 87 of the EPBC Act. Accordingly, the NSW Government has undertaken the assessment on behalf of the Commonwealth and has assessed matters of national environmental significance (MNES).

3.5.3 The Department consulted with the Department of Agriculture, Water and the Environment (DAWE), (formerly Department of Environment and Energy,) in accordance with the accredited assessment process and provided draft copies of this assessment report and the recommended conditions of consent to DAWE for comment.

3.5.4 The Department's assessment of the potential impacts of the project on controlling provisions under the EPBC Act relating to biodiversity is provided in **section 5.3**. Further information on the matters that the Commonwealth Minister must consider under the EPBC Act is provided in **Appendix J**.

3.6 Mandatory Matters for Consideration

3.6.1 Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. These matters are summarised as:

- the provisions of environmental planning instruments (including draft instruments), development control plans, planning agreements, and the EP&A Regulations;
- the environmental, social and economic impacts of the development;
- the suitability of the site;
- any submissions; and
- the public interest, including the objects in the EP&A Act and the encouragement of ecologically sustainable development (ESD).

3.6.2 The Department has considered all these matters in its assessment of the project, as well as RES's consideration of environmental planning instruments in its EIS, as summarised in **section 5** of this report. The Department has also considered relevant provisions of the environmental planning instruments in **Appendix H**, and concluded that the project is consistent with the objectives of those instruments.

4 Engagement

4.1 Department's engagement

4.1.1 The Department publicly exhibited the EIS from 18 July 2018 until 29 August 2018, advertised the exhibition in *The Canberra Times* and *The Australian* and notified adjoining landowners adjacent to the project boundary.

4.1.2 The Department consulted with Council and the relevant government agencies throughout the assessment. The Department also inspected the site with the Biodiversity Conservation Division and visited surrounding landowners on 7 August 2018 and met remotely with the Sutton Solar Action Group (SSAG) on 26 June 2020.

4.1.3 The Department notified and sought comment from TransGrid, Transport for New South Wales (formerly Roads and Maritime Services, TfNSW) and the APA Group (in regard to the high-pressure gas pipeline on the site) in accordance with the Infrastructure SEPP and this is discussed further in **section 4.3**.

4.2 Applicant's Engagement

4.2.1 Renew Estate, the initial Applicant, undertook engagement with the local community as detailed in the EIS, including a dedicated project-specific website and phone number, newsletters and fact sheets, community information sessions, and meetings with adjacent and nearby landowners.

4.2.2 RES announced its acquisition of the project in April 2020, and engagement with the local community undertaken since this time is detailed in the Amendment Report. This includes maintaining the dedicated project-specific website, email address and phone number, an online feedback form and meetings with adjacent and nearby landowners.

4.2.3 RES also undertook consultation with the Department and relevant government agencies during the assessment process.

4.3 Submissions and Submissions Report

4.3.1 During the exhibition period of the EIS, the Department received 230 submissions, including 225 public submissions (110 objections, 114 supporting and one comment) and submissions from five special interest groups.

4.3.2 Advice was also received from 13 government agencies and utility providers, including comments from Yass Valley Council.

4.3.3 Full copies of the submissions are attached in **Appendix D**.

4.3.4 RES provided a response to matters raised in submissions on the project (see **Appendix E**) and has also provided additional information during the Department's assessment (see **Appendix F**).

4.4 Amended Application

4.4.1 Following consideration of submissions on the project, RES amended its application in May 2020, as detailed in the Amendment Report (see **Appendix C**).

4.4.2 The amended application includes:

- removing a 2.6 ha solar array proposed south of Tallagandra Lane;
- reducing an additional 2.9 ha of the development footprint to avoid Striped Legless Lizard and Superb Parrot habitat;
- increasing the setback of solar arrays from dwelling R35 from 30 to 50 m;
- reorientating the site substation;
- an additional access track crossing of the gas pipeline;
- additional vegetation screening along the northern boundary of the site; and
- extending the anticipated operational life of the development from 30 to 35 years.

4.4.3 Despite the proposed changes, the generating capacity of the project would remain the same.

4.4.4 The Department provided the Amendment Report to government agencies for review and comment and made it available on the Department's website. As the project amendments would reduce the impacts of the project as a whole the Department did not exhibit the Amendment Report.

4.5 Key Issues – Government Agencies and Utility Providers

4.5.1 **Yass Valley Council** had concerns with the site being inside the *Yass Valley Settlement Strategy 2036* buffer area around the ACT/NSW border. At the time of lodgement, Council proposed to rezone land within the buffer area to an RU6 transition zone to protect the open rural landscape and environmental values from urban development. Council was concerned a solar farm development was inconsistent with the Strategy's objectives but later conceded that the landscape mitigation measures proposed by the Applicant might assist in softening the visual impacts and requested that any landscaping include mature plantings. The Department also notes that the land rezoning did not proceed and was not adopted in the final Strategy (August 2019).

4.5.2 Council asked that all road upgrades are to comply with Council's *Road Standards Policy* and made several recommendations regarding consideration of the biodiversity corridor stemming from Goorooyarroo Nature Reserve, waste management and development contributions to benefit the community.

4.5.3 RES has responded to Council's comments in the Submissions Report and additional information. This included increasing the proposed monetary contributions towards a community enhancement fund benefitting the community. The Department has recommended a range of consent conditions to address the Council's concerns, which are discussed further in **section 5**. Council advised that it has no residual concerns subject to the recommended conditions of consent.

4.5.4 The **Department of Primary Industries** encouraged the use of grazing to maintain ground cover and control of weeds during operation and requested the removal of all underground infrastructure following decommissioning of the site to ensure the site can be returned to agricultural uses. These issues are discussed further in **section 5.1** and addressed in the recommended conditions.

4.5.5 The **Department's Water Group** clarified that Back Creek and the unnamed central tributary on the project site are fourth and third order streams and noted the risk of impacts by flooding on and off the site are low. They requested details of viable water sources and made recommendations about matters relating to working on waterfront land, watercourse crossings and maintaining adequate groundcover. These issues are discussed further in **section 5.4** and addressed in the recommended conditions.

4.5.6 The **Department's Crown Lands Group** requested that all Crown public roads within the development footprint be closed and purchased by Yass Valley Council. They advised that the Applicant must obtain relevant licences and consents from Crown Lands before accessing or undertaking any activity on crown land and that the Applicant should remove all below-ground infrastructure during decommissioning. RES, in its Submission Report, states that the majority of the Crown public roads are in the process of being closed and purchased by the landowner and has committed to entering into a licence agreement with Crown Lands for any remaining parcels. These issues are discussed further in **section 5.4** and addressed in the recommended conditions.

4.5.7 **Mining, Exploration & Geoscience** (MEG) (formerly known as DRG) requested that it be consulted regarding the location of any land-based offsets required to retire the biodiversity credit liability for the project. Potential sterilisation of mineral resources is already a consideration in the selection of suitable biodiversity offset sites under the Offsets Scheme.

4.5.8 **Heritage NSW** and the **Department's Biodiversity Conservation Division** (BCD) (formerly the Office of Environment and Heritage) acknowledged the cultural values of the site and recommended the Applicant undertake sub-surface testing for Aboriginal heritage items before determination. This is because additional Aboriginal heritage items that may potentially be present underground may warrant avoidance. RES has committed to preparing and implementing a test excavation and salvage program in consultation with local Aboriginal stakeholders and Heritage NSW before finalising its detailed design. This matter is further discussed in **section 5.4**.

4.5.9 BCD recommended avoiding an area of potential breeding habitat for the Superb Parrot, increasing setbacks of plant screening from Golden Sun Moth habitat to avoid shading impacts and requested they be consulted in the development of a Biodiversity Management Plan. RES addressed these matters in its Submissions Report, revising the development footprint and landscaping strategy to minimise biodiversity impacts. BCD acknowledged that RES has gone to considerable effort to avoid biodiversity constraints, and these matters are discussed in **section 5.3**.

4.5.10 BCD had no concerns on the adequacy of the flooding assessment provided in the EIS.

4.5.11 **Transport for NSW** (TfNSW) recommended conditions to manage potential traffic impacts, including completing road upgrades before the commencement of construction, and the preparation of a Traffic Management Plan in consultation with the relevant road authorities. These issues are discussed further in **section 5.4** and addressed in the recommended conditions.

4.5.12 **Fire & Rescue NSW** (FRNSW) and the **Rural Fire Service** (RFS) recommended specific operating requirements related to bushfire and hazard preparation and management, which are incorporated into the recommended conditions of consent.

4.5.13 The **APA Group** is the owner of the Dalton-Canberra transmission gas pipeline traversing the site. It requested the Applicant prepare a Safety Management Study to assess the risk in accordance with *AS 2885 – Pipelines – Gas and liquid petroleum* and to minimise the number of easement crossings on the project site. RES prepared a Safety Management Study in consultation with the APA Group which was included in the Submissions Report. These matters are discussed in **section 5.4**.

4.5.14 **TransGrid** as the Transmission Network Service Provider requested the Applicant clarify the scope of works included the replacement of existing poles with new structures and guy wires, as well as the replacement of conductors and earth wires. TransGrid also advised that works would need to comply with TransGrid's easement guidelines for third party development.

4.5.15 The **Environmental Protection Authority** raised no concerns about the project and made no recommendations.

4.6 Key issues – Community

4.6.1 Of the 225 submissions received from the public, 110 objected, 114 supported and one provided comments on the project. A summary of submissions received from the public is provided in **Table 3**.

4.6.2 Seven duplicate submissions (six in objection and one in support) were received and have not been included in these numbers.

Table 3 | Summary of Community Submissions

Submitter	Objection	Support	Comment	Total
< 5 km	50	5	1	56
5 – 10 km	25	6	0	31
10 - 50 km	29	58	0	87
> 50 km	6	45	0	51
Total	110	114	1	225

4.6.3 Nearly half (45 %) of all objections were received from residents located within 5 km of the site, 23 % were from residents located between 5 km and 10 km from the site and 32 % were from residents located more than 10 km from the site. Regardless of proximity to the site, submissions objecting to the project typically focused on local impacts and matters relevant to the local community.

4.6.4 Of the 114 supporting submissions, approximately 4 % were received from residents within 5 km of the site, 5 % from residents between 5 km and 10 km away, 51 % between 10 km and 50 km, and 40 % were located more than 50 km away.

4.6.5 The key issues raised in public submissions are summarised in **Figure 9**. The most common matters raised in submissions objecting to the project include the following:

- land use compatibility, specifically regarding the change of land use and the loss of productive agricultural land (78 % of all objections)
- construction traffic impacts, specifically regarding the road safety in the locality and Sutton village during construction, and the road quality not being suitable to construction traffic volumes (57 % of all objections);
- economic impacts, including property devaluation, impacts on local business and lack of benefit to the community (55 % of all objections);
- the proposal site contradicts State and local government guidelines, with references to the Department's draft solar guidelines, Yass Valley Council's settlement strategy and the project being located outside of the proposed renewable energy zones (50 % of all objections); and
- visual amenity, including impacts on the surrounding landscape and changing the rural character of the local area (41 % of all objections).

4.6.6 Other issues raised in objections include biodiversity impacts given the site's proximity to nature reserves and the presence of habitat for endangered species, hazards (particularly fire and flooding), erosion risks and water quality, noise, consultation and heritage.

4.6.7 The key matters raised in supporting submissions included views that:

- the project would make a beneficial contribution to reducing NSW's carbon outputs from energy production, make positive contributions to tackling climate change, improving energy security and reducing electricity prices;
- the local economy and community would benefit as a result of the project by creating local jobs, supporting local businesses and the proposed community enhancement fund;
- the project constituted a good use of land and would continue to support agriculture by managed grazing; and
- the avoidance of native vegetation and key habitat on site, as well as the proposed vegetation screening would have a net positive impact on biodiversity on site and in the region.

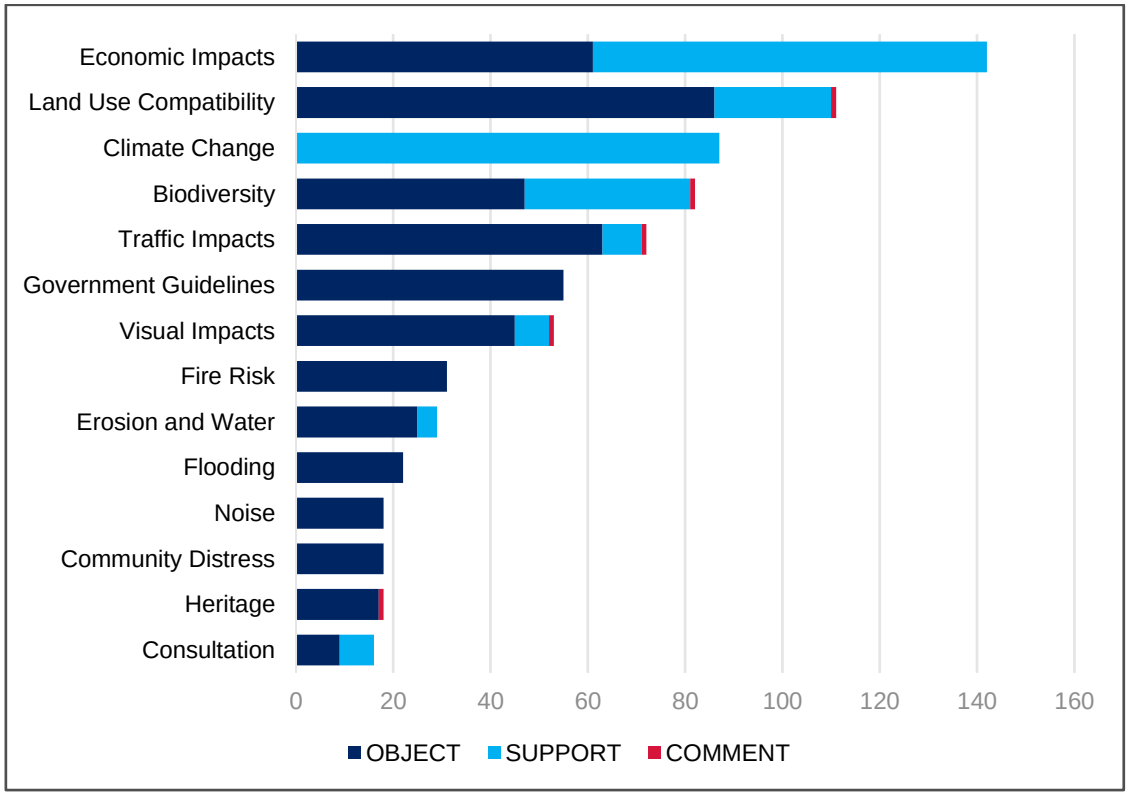

Figure 9 | Key Issues Raised in Public Submissions

4.6.8 A further breakdown and summary of key issues raised by the public is summarised in **Appendix G**. **Section 5** of the assessment report provides a summary of the Department's consideration of these matters and recommended conditions.

4.7 Key Issues – Special Interest Groups

4.7.1 The **Nature Conservation Council of NSW** (NCC) is the peak environment organisation for New South Wales, representing over 150 member societies across the state. NCC is supportive of the project, highlighting that investment in renewable energy projects is an essential step towards a low carbon future.

4.7.2 **Sutton District Community Association Inc** provided comments on several aspects of the project, including the expectation for ongoing community consultation, managing the project's impacts on local roads particularly whilst travelling through Sutton village and ensuring adequate provision for bush fire prevention.

4.7.3 The **Ngunnawal and Ngambri Elders of the NSW and ACT** objected to the project, raising concerns about the Aboriginal Cultural Heritage Assessment undertaken for the proposed development, including the identification of heritage sites within proximity of the proposed development and the value of these sites being correctly identified, recorded and managed.

4.7.4 **Community Power Agency** (CPA) is a not-for-profit established to support communities to participate and benefit from the transition to clean energy. CPA supports the project, and particularly notes the industry-leading approach to sharing benefits of the project, including the proposed community fund and creating opportunities for contractors and local employment.

4.7.5 **Industry Capacity Network** (ICN) is a government supported business network, which engages regional contractors and suppliers for the construction and operation of projects in regional Australia. ICN is broadly supportive of the project and RES's commitment to engage local businesses, contractors and suppliers for the project, thereby maximising the economic benefits of the project for the region.

4.7.6 Although members of the **Sutton Solar Action Group** (SSAG) made individual submissions in the form of objections, the group did not make a submission during the exhibition. SSAG has contacted the Department throughout the assessment process to raise concerns about the project.

4.7.7 In particular, the group expressed concern about the suitability of the site for the development of a large-scale solar project, including in regard to road safety, loss of agricultural land, biodiversity impacts, flooding, visual amenity impacts and lack of local community benefits. These matters are considered in **section 5**.

5 Assessment

5.0.1 The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the key issues, namely land use compatibility, visual amenity and biodiversity.

5.0.2 The Department has also considered the full range of potential impacts associated with the project and has included a summary of the conclusions in **section 5.4**. A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

5.1 Compatibility of Proposed Land Use

Provisions of the Yass Valley LEP

5.1.1 The site is located wholly within the RU1 Primary Production zone under the LEP. As discussed in **section 3.3**, a solar farm is a prohibited land use under a strict reading of the LEP.

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

5.1.3 Firstly, the LEP expressly references the Infrastructure SEPP and acknowledges that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP. As described above, a solar farm is permitted with consent on land zoned RU1 under the Infrastructure SEPP.

5.1.4 Secondly, the project is consistent with the objectives of the RU1 zone, particularly in relation to:

- encouraging diversity in primary industry enterprises and systems appropriate for the area; and
- minimising fragmentation and alienation of resource lands.

5.1.5 Although Council's submission on the EIS expressed concern about the project in regard to the *Yass Valley Settlement Strategy 2036,* and the location of the project within an RU6 transition zone buffer that formed part of the 2017 version of the Strategy, this transition zone was not adopted in the final Strategy (August 2019). Council identified protecting the open rural landscape and the biodiversity values in the area within 5 km of the state border from residential intensification as a planning priority in its *Yass Valley Local Strategic Planning Statement 2020*.

5.1.6 RES undertook a Land Use Conflict Risk Assessment (LUCRA) for the project, which considers the project against the Council's goals and direction. The project design largely avoids areas of significant biodiversity value (see **section 5.3**) and involves implementing and maintaining vegetation plantings in accordance with a landscaping plan to be prepared in consultation with Council and visually impacted receivers (see **section 5.2**).

5.1.7 Council has noted that including mature plantings as part of the landscape plan may assist with mitigating impacts on the rural character. As such, the Department considers these proposed measures would reduce the project's impacts on the rural and environmental character of the area and thereby consistent with the Council's strategy. Council was consulted on the recommended conditions and there are no residual concerns.

5.1.8 Further, the project is consistent with the Department's *South East and Tablelands Regional Plan 2036,* which identifies the development of renewable energy generation as a future growth opportunity for the region. It also aligns with the *Tablelands Regional Community Strategic Plan 2016 – 2036* to implement approaches to reduce carbon footprint, through the development of renewable energy facilities at an appropriate location.

5.1.9 The Department considers that the project is compatible with the LEP for the above reasons. The project's impacts on agricultural land are discussed further below.

Site Suitability

5.1.10 Approximately half of the public submissions objecting to the project raised concerns with the project being outside of the three proposed Renewable Energy Zones (REZ) concluding that it did not align with NSW government guidelines in regard to the site selection process for large-scale solar developments.

5.1.11 The NSW Government's public submission during the exhibition of the Australian Energy Market Operator's *2018 Integrated System Plan* identified three potential priority energy zones, which benefit from outstanding energy resources and are close to existing network infrastructure and load centres, but require further investment into network infrastructures to address existing capacity constraints. The identification of the three REZs does not preclude the development of large-scale solar projects in other parts of the State.

5.1.12 The proposed Springdale Solar Farm is located in an area with available network capacity, abundant solar resources, direct access to the electricity grid at a location with available network capacity, in close proximity to the load centres of Canberra, Wollongong and Sydney, on land that is zoned RU1 with solar development permissible with consent under the Infrastructure SEPP.

5.1.13 The Department considers that the proposal has adequately addressed the site selection process and assessed site constraints in accordance with the NSW Government guidelines.

Potential Impacts on Agricultural Land

5.1.14 Concerns about the project's impact on agricultural land, including the loss of agricultural land and the change in land use, were raised in one third of community submissions objecting to the project.

5.1.15 The South East and Tablelands region of NSW has a strong and diverse agricultural sector, with over 3.3 million ha of land in the region used for agricultural output. The site (370 ha) does not include any mapped BSAL and is currently used for grazing cattle.

5.1.16 The development footprint (185 ha) is located on soils classified as Class 4 or 5 under the *Land and Soil Capability Mapping in NSW* (OEH, 2017) (see below in **Figure 10**). The Department considers that the project would not significantly reduce the overall agricultural productivity of the region, that the inherent agricultural capability of the site would not be affected and is satisfied that the site could be returned to agricultural use in the future following rehabilitation. RES also intends to allow sheep grazing on the remainder of the site during operation of the project.

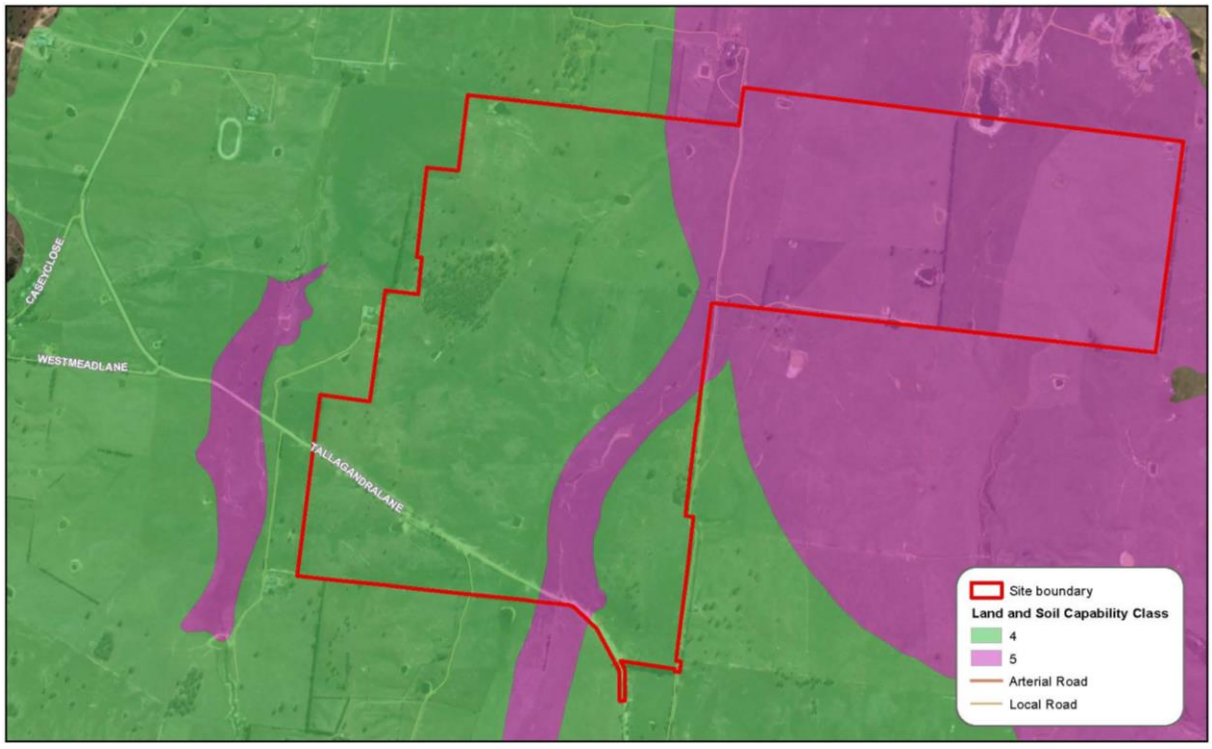

Figure 10 | Land and Soil Capability Class

5.1.17 In this regard, the Department has recommended that RES be required to maintain the land capability of the site (including groundcover and maintaining grazing within the development footprint) and to reinstate the land to agricultural use following decommissioning.

5.1.18 The potential loss of a small area of cropping and grazing land in the 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 environmental benefits of solar energy in an area with good solar resources and capacity in the existing electricity infrastructure.

5.1.19 Based on these considerations, and its detailed assessment of the potential impacts of the project, the Department considers that the proposed solar farm represents an effective and compatible use of the land within the region.

5.2 Visual

5.2.1 Nearly half of the community submissions objecting to the project, including 22 residences within 2 km of the project, raised concerns about visual impacts, including impacts to the scenic quality and rural outlook of the area, completeness of the visual impact assessment, glint and glare from proposed infrastructure and its proximity to surrounding residences.

Visual Context

5.2.2 The site and surrounds are located within a cleared agricultural landscape. Land within the site is undulating, with a gentle slope from west to east (average gradient of 2.5 %). On-site elevation ranges between 600 m Australian Height Datum (AHD) on the creek flats of Back Creek and an unnamed third order stream to 650 m (AHD) at a prominent north-south trending crest in the western portion of the site (see **Figure 11**).

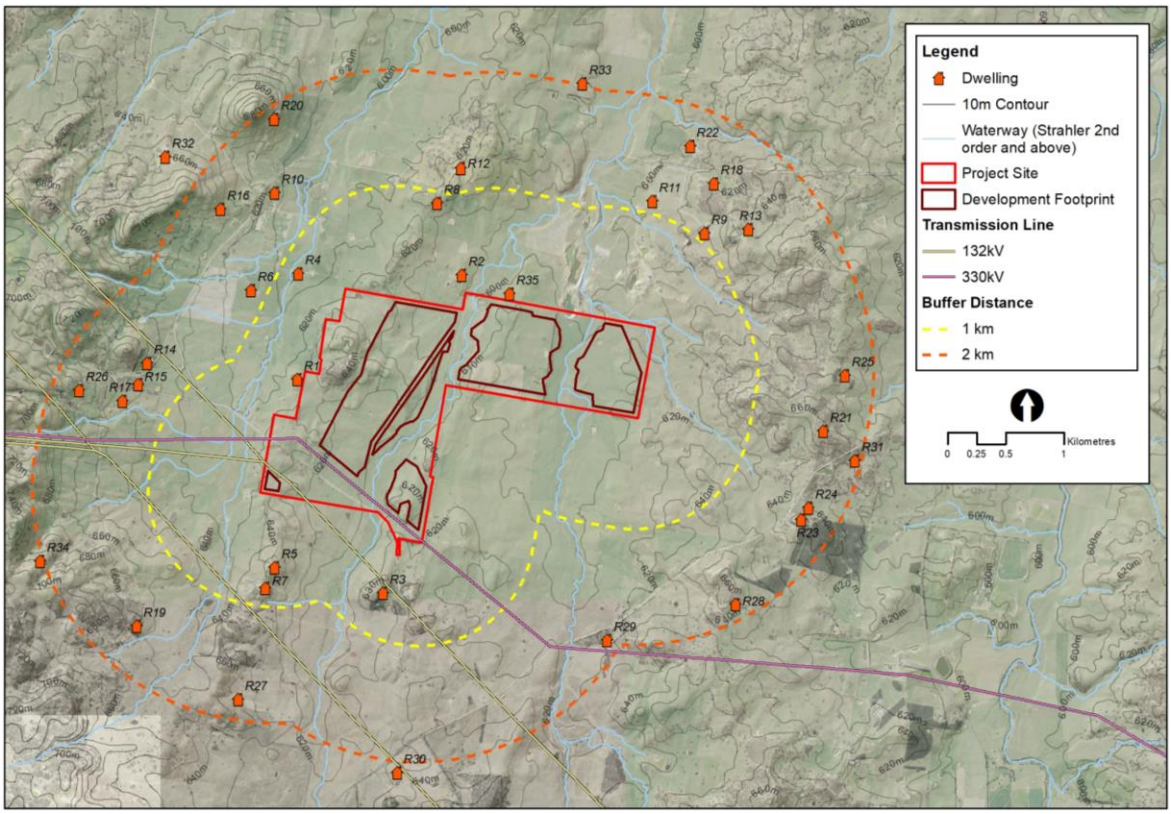

Figure 11 | Location of Residences (within 2km of the development footprint)

5.2.3 Despite the history of farming in the region, there are remnant patches of vegetation, including a large stand of mature native woodland on the north-south trending crest, several planted windbreaks and isolated paddock trees on site.

5.2.4 Two high voltage electricity transmission lines consisting of a 330 kV transmission line on single circuit steel lattice towers and a 132 kV transmission line on single circuit wooden poles transect the south western portion of the site.

5.2.5 Eight non-associated residences are located within 1 km of the development footprint and five objected with concern about visual impact. The nearest residences are approximately 50 m (R35) and 300 m (R2) north of the development footprint at its closest point and others are located between 410 and 880 m. There are an additional 25 non-associated residences located between 1 km and 2 km of the development footprint.

5.2.6 Since the EIS was exhibited, two new dwellings (R35 and R36) have been constructed in proximity to the project. R36 is approximately 2 km west of the nearest project infrastructure with limited views of the development. However, R35 is directly adjacent to the northern boundary of the project.

5.2.7 Mulligans Flat Road is located approximately 1.5 km south east of the site and is a sub-arterial road that connects Sutton village to the Gungahlin District of the ACT. Tallagandra Lane transects the southern portion of the site and is primarily used by local traffic.

5.2.8 The site is not visible from the village of Sutton (7 km south east).

Visual Mitigation

5.2.9 Following the public exhibition of the EIS, RES amended the project layout by increasing the setback distance between the development footprint and northern boundary of the project adjacent to R35 from 30 m to 50 m.

5.2.10 Notwithstanding the increased 20 m setback, the Department has recommended the removal of approximately 1.1 ha of solar panels along the northern extent of the centre array area to increase the setback by an additional 40 m. This would result in a minimum distance of 90 m between R35 and the nearest solar panels.

5.2.11 The additional setback of 40 m is proposed as:

- this setback would almost halve the vertical view angle of panels from residence R35;
- this setback would substantially reduce the visual impacts on R35 and additional setback beyond 90 m is not considered warranted as the development footprint is undulating to south of residence R35 with a further slope to the south beyond 90 m from the residence obscuring views of panels beyond 90 m, the residence is oriented to the north and the landowner has already recently planted a row of vegetation along its southern boundary adjacent to the solar farm further reducing the potential visual impact;
- the setback would also reduce, to a lesser extent, the impact at residence R2;
- the additional setback would allow for a wider vegetation buffer to further mitigate the visual impacts of the project on both R35 and R2; and
- RES has confirmed that it can maintain 100 MW generating capacity within the same footprint due to more efficient panels being available than when the application was initially lodged.

5.2.12 The Department also recommended the onsite substation be relocated approximately 250 m west of the proposed location to reduce the potential visual impacts on R5, which is elevated (660 m AHD) above the site and approximately 690 m south of the substation. Well-established native vegetation, including planted windbreaks and remnant vegetation stands would largely screen views of the relocated substation thereby resulting in low visual impacts on R5. The proposed substation location would not increase the visual impacts on any other non-associated residences.

5.2.13 RES has accepted the Department's recommendation and updated the project layout accordingly. It has also proposed avoidance and mitigation measures to reduce the potential visual impacts on surrounding residences, including:

- retention of a stand of mature vegetation within the western portion of the site;
- removing a 2.6 ha solar array proposed south of Tallagandra Lane;
- adequate buffer areas of between 155 – 270 m for the watercourses and their floodplains, which provide substantial visual breaks between solar array areas; and
- installing vegetation screening along specific parts of the site boundary, in order to screen views of the project from nearby residences. All proposed screening would consist of endemic species to a minimum depth of 20 m to reduce views from affected residences.

Assessment

Landscape

5.2.14 Public submissions highlight that the landscape is valued by the community for its scenic value and agricultural history. The Department notes however, that the low lying nature of the development and existing and proposed vegetation would serve to minimise its visibility from the surrounding area, and the solar farm would not be visible from any major roads or scenic drives.

5.2.15 While the Department recognises that the introduction of the proposed solar farm to a rural area would present a material change to the local landscape, but considers that it would have a limited impact on the region as a whole, noting that the project would not be visible from the village of Sutton

Residences

5.2.16 The EIS and Amendment Report include a visual impact assessment (VIA) that is based on 15 representative viewpoints, including photomontages from three residences (Residences R1, R2 and R35) that would be most impacted (see **Figure 12** – **Figure 17**). There were also concerns that the visual impact assessment (VIA) did not consider all dwellings within 2 km of the project. RES clarified that although the VIA did not provide a detailed assessment of all residences within 2 km of the site it considered that the residences not included would not have views of the project due to intervening topography. The Department's assessment has considered all potentially affected residences.

5.2.17 The nature of the proposed development would minimise its visibility from the majority of surrounding residences, as the solar panels would be relatively low lying (up to 4 m high) and maintenance buildings, inverter stations and substation would generally be a similar size to agricultural sheds commonly used in the area.

5.2.18 With the exception of the five residences noted below (R1, R2, R5, R8 and R35), the visual impact for the remaining residences surrounding the site is expected to be low to negligible, due to the separation distance, the undulating topography of land surrounding the site and intervening native vegetation (see **Table 4**).

5.2.19 R35 is a newly constructed residence located directly adjacent to the northern boundary of the site and would have unobstructed views of the project, however the residence has no southward facing views and have established plantings on the boundary of the residence. Notwithstanding, RES amended the project layout to incorporate a 20 m setback of infrastructure from the project boundary. As noted in **section 5.2.9**, the Department recommended an additional 40 m setback, which RES has accepted, resulting in a total distance of 90 m between R35 and the closest solar panels. The undulating landscape would limit views south of R35 beyond the setback, however RES has also proposed landscape screening to further reduce the potential views of the project.

5.2.20 R2, located 300 m north of the site and slightly elevated (613 m AHD) compared to the site at its closest point, would have interrupted views of the project due to existing mature vegetation and farm sheds within the curtilage of the residence. There would be no solar infrastructure within the buffer area for the third order watercourse and its floodplain south east of the residence. The residence would also benefit from the proposed landscape screening to a depth of 20 m along the northern boundary of the western array area. Further, the setback of infrastructure from R35 would also assist with reducing the extent of visual impacts on R2.

5.2.21 R1, located approximately 410 m west of the development footprint, would have partial views of the project with a large stand of native woodland vegetation on the crest obscuring views of the project directly east and north east of the residence. The residence would have distant views of project infrastructure approximately 430 m south east of the residence, however the proposed landscape screening would reduce views of the project.

5.2.22 R5, located approximately 630 m south of the development footprint and elevated (660 m AHD) with respect to the site, would have distant views of large sections of the project, partially interrupted by native vegetation at the residence and along Tallagandra Lane, and existing high voltage powerlines. Further, as the project has been designed to avoid areas such as the unnamed watercourses and floodplain, and habitat for endangered species, large sections of the site that are visible from the residence would not have any infrastructure installed. Finally, the relocated substation (see **section 5.2.12**) would be largely shielded from view due to existing well-established vegetation.

5.2.23 R8, located approximately 880 m north of the development footprint and elevated (619 m AHD) compared to the development footprint, would have distant views of the northern sections of the project, partially interrupted by topography, isolated paddock trees at the residence and the planted windbreak rows at residence R2. The residence would also benefit from the proposed landscape screening as described in **section 5.2.20**.

5.2.24 To further mitigate the visual impact of the project, RES has proposed extensive vegetation screening (20 m depth) along sensitive sections of the site, particularly to reduce potential views of the project from Tallagandra Lane, Tintinhull Road, R1, R2, R5, R8 and R35.

5.2.25 With the mitigation measures proposed by RES, additional measures recommended by the Department, and other mitigating factors such as distance, topography and existing vegetation, the potential visual impacts of the project would be reduced for all impacted residences (see **Table 4**).

5.2.26 To this end, the Department has required RES to establish and maintain a mature vegetation buffer, which must also consist of endemic species, that facilitates the best possible outcome in terms of screening views from residences R1, R2, R5, R8 and R35.

Figure 12 | Photomontage looking east towards the site from the vicinity of Residence R1 without visual mitigation

Figure 13 | Photomontage looking east towards the site from the vicinity of Residence R1 with an artistic impression of vegetation screening proposed

Figure 14 | Photomontage looking south towards the site from Tintinhull Road in the vicinity of Residence R2 without visual mitigation

Figure 15 | Photomontage looking south towards the site from Tintinhull Road in the vicinity of Residence R2 with an artistic impression of vegetation screening proposed

Figure 16 | Photomontage looking south towards the site from Residence R35 with a 50 m setback without visual mitigation

Figure 17 | Photomontage looking south towards the site from Residence R35 with a 50 m setback with an artistic impression of vegetation screening proposed

Table 4 | Visual Impacts at Surrounding Residences

Residence	Distance to development footprint	Mitigating Factors	Visual Impact Rating
R35	50 m north	• Set back of project infrastructure a further 40 m to a total of 90 m from the northern boundary of the centre array area; • Views from dwelling are oriented to the north and away from project; • Existing new vegetation planting along driveway to the property; and • Additional landscape plantings proposed.	Moderate
R2	300 m north	• Intervening mature vegetation and site sheds on the premises provides partial screening; • 260 m wide gap between arrays at Tintinhull Road and the unnamed tributary floodplain; • Additional setback of project infrastructure from northern boundary near R35; and • Additional landscape plantings proposed.	Moderate
R1	410 m west	• Significant screening provided by existing mature woodland vegetation and the north-south trending crest; • Substation south of the residence would be screened by topography; • Golden Sun Moth conservation area along the western portion of the site would maintain separation distance between project infrastructure and the residence; and • Additional landscape plantings proposed.	Moderate
R3	500 m south	• Significant screening provided by 9 m crest immediately adjoining the dwelling, vegetation on the premises and roadside vegetation along Tallagandra Lane; • Onsite vegetation (Superb Parrot habitat) being retained; • Setback of project infrastructure to avoid threatened species habitat and onsite waterways; • Removal of 2.6 ha section of panels nearest to the residence; • Relocation of substation further west along Tallagandra Lane; and • Additional landscape plantings proposed.	Low
R5	630 m south	• Removal of the 2.6 ha solar array nearest to the residence; • Relocation of the substation 200 m west, with new location screened by existing vegetation at the property;	Moderate

Residence	Distance to development footprint	Mitigating Factors	Visual Impact Rating
		• Partial screening of views by mature vegetation and planted wind breaks at the property; • Existing 330 kV and 132 kV high voltage transmission lines between residence and solar arrays; • Setback of project infrastructure to avoid threatened species habitat and onsite waterways; and • Additional landscape plantings proposed.	
R7	830 south	• Significant screening provided by mature vegetation and elevated crest (location of residence R5); • Existing 330 kV and 132 kV high voltage transmission lines between residence and solar arrays; • Approximately 1.28 km south west of nearest visible array; and • Additional landscape plantings proposed.	Low
R4 and R6	840 m and 1.1 km north west	• Significant screening provided by north-south trending crest and partial screening from site structures and established vegetation on the premises. • Separation distance from development; and • Additional landscape planting proposed.	Low
R8	880 m north	• Some screening provided by north-south trending crest and isolated paddock trees on premises. Partial screening provided by planted windbreak rows at residence R2; • Separation distance from development; and • Additional landscape planting proposed.	Moderate
R12	1.2 km north	• Partial screening from mature vegetation established at the residence and planted windbreak rows at R2; • Removal of project infrastructure from northern boundary near R35 • Separation distance from development; and • Additional landscape planting proposed.	Low
R9	1.1 km north east	• Partial screening from mature vegetation established at the premises; and • Separation distance from development.	Low

5.2.27 While photovoltaic panels are designed to absorb rather than reflect sunlight, the Department recognises that some project components have the potential to generate glare or reflection, including the galvanised steel used for the solar panel mounting framework, but that this diminishes over time.

5.2.28 RES undertook a glint and glare study, which modelled the potential glare impact of the solar panels from 43 observation points, which were chosen to represent potential areas where glint and glare could potentially impact surrounding non-associated residences.

5.2.29 The study concluded that there was no glint or glare risk for the project due to setback distances from most nearby residents, existing well-established intervening vegetation and the proposed vegetation screening shielding or minimising views of the development from surrounding residences, including views of infrastructure with the potential to create glare or reflection.

5.2.30 The Department has recommended conditions requiring the applicant to minimise the off-site visual impacts of the development, including the potential for any glare or reflection, and to ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape. Subject to the recommended conditions, the Department is satisfied that the project would not cause significant glint or glare to nearby receivers.

Conclusion

5.2.31 To address the residual visual impacts, the Department has recommended a range of stringent conditions requiring RES to:

- establish and maintain a 20 m vegetation buffer along sensitive parts of the northern, western and southern boundaries of the site, which must:
  - be planted prior to the commencement of construction;
  - consist of a variety of endemic species that would facilitate the best possible outcome in terms of visual screening;
  - reduce views of the solar panels and ancillary infrastructure within 3 years of the commencement of construction; and
  - be properly maintained with appropriate weed management.
- prepare a detailed Landscaping Plan for the site in consultation with Council and residences subject to a moderate level of visual impact. The plan must include a description of measures that would be implemented to ensure the effectiveness of the vegetation buffer;
- minimise the off-site visual impacts of the development, including the potential for any glare or reflection;
- ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and not mount any advertising signs or logos on site, except where this is required for identification or safety purposes; and
- minimise the off-site lighting impacts of the development, and ensure that any external lighting is installed as low intensity lighting (except where required for safety or emergency purposes), does not shine above the horizontal and complies with *Australian/New Zealand Standard AS/NZS 4282:2019 – Control of Obtrusive Effects of Outdoor Lighting.*

5.2.32 Subject to the proposed amended layout, the associated setbacks and the implementation of the recommended conditions, the Department considers that there would be no significant visual impacts, including cumulative visual impacts, on surrounding residences, and the rural character and visual quality of the area would be preserved as far as practicable.

5.3 Biodiversity

5.3.1 Community submissions objecting to the project expressed concerns about the loss of vegetation and threatened species habitat, the proximity of the site to the Mulligans Flat and Goorooyarroo Nature Reserves and impacts on to the connectivity of the region's biodiversity corridors.

5.3.2 The project is located within a highly fragmented landscape comprised mostly of cleared agricultural land. While the site contains remnant stands of native woodland vegetation, scattered native paddock trees as well as areas of derived native grassland, the site does not overlap with a South East and Tablelands biodiversity corridor.

Avoidance

5.3.3 RES has designed the project to avoid remnant stands of native vegetation, including threatened ecological communities (TEC) and medium quality Golden Sun Moth habitat. After receiving feedback from BCD during the public exhibition of the EIS, RES reduced the disturbance footprint to retain a 0.9 ha cluster of hollow-bearing trees on the south eastern corner of the site which provides habitat for the Superb Parrot (see **Figure 6**).

5.3.4 RES has also revised the development footprint to avoid 1.7 ha of Striped Legless Lizard habitat and committed to avoiding the Striped Legless Lizard habitat utilising either horizontal directional drilling or constructing an overhead transmission line to electrically connect the south eastern solar array with the site.

Biodiversity Impacts

5.3.5 Of the 185 ha disturbance footprint, the project would clear 5.38 ha of native vegetation and 33 paddock trees with the remaining areas being exotic vegetation. Although the native vegetation includes two communities which appear consistent with *Natural Temperate grassland of the South Eastern Highlands* (Critically Endangered) and *White box – Yellow box – Blakely's Red Gum Grassy Woodland and Derived Native grassland* (Critically Endangered), neither community met the condition thresholds to warrant protection under the EPBC Act (see **Appendix J**) or create an offset liability under the BC Act.

5.3.6 The clearing would, however, disturb 4.52 ha of Golden Sun Moth habitat and 0.95 ha of Superb Parrot habitat. Both species are listed threatened species under the BC Act and EPBC Act. **Table 5** provides a summary of the impacts of the project on each species, as well as the species credit liability under the *NSW Biodiversity Offset Scheme*.

Table 5 | Threatened Species Liability

Species	BC Act status	EPBC Act Status	Direct Impacts (ha)	Species Credit Liability
Golden Sun Moth	Endangered	Critically Endangered	4.52	38
Superb Parrot	Vulnerable	Vulnerable	0.94	5

Mitigation and Offsets

5.3.7 Although the clearing of Golden Sun Moth habitat exceeds the 0.5 ha threshold outlined in the Commonwealth's *Significant Impact Guidelines for the Critically Endangered Golden Sun Moth*

(Synemon plana), several factors need to be considered in determining if an action is likely to have a significant impact, including the habitat quality, geographic extent of the impacts, the duration and the magnitude of the impact.

5.3.8 Based on BCD advice, the Department concluded the project is unlikely to lead to the long term decrease in the size of the Golden Sun Moth population. This is because the disturbance footprint avoids all medium quality habitat, large patches (21 ha and 43 ha) of Golden Sun Moth habitat adjoining the disturbance footprint and the project would not fragment the existing population as fencing around habitat would not inhibit the movement of individuals.

5.3.9 The clearing would create an offset credit liability of 38 species credits for the Golden Sun Moth and five species credits for the Superb Parrot. The credit requirement would be retired in line with the NSW Biodiversity Offsets Scheme.

5.3.10 RES proposes a range of mitigation and management measures to address potential indirect impacts on threatened species, communities and their habitats. These include establishing:

- fenced buffer areas around retained Golden Sun Moth habitat outside the development footprint;
- a 60 ha Golden Sun Moth conservation area throughout the western portion of the site which would be protected by ceasing threatening processes (pasture degradation by sowing non-native grasses and ploughing) and improved through active management. This is above and beyond RES's obligations to offset its credit liability; and
- a woodland enhancement zone.

5.3.11 The avoidance and mitigation measures proposed are considered feasible and effective and RES has gone to a considerable effort to demonstrate the hierarchy of avoid, minimise and mitigate in the project design.

5.3.12 The project would not cause any material direct or indirect impacts on the Mulligans Flat and Goorooyarroo Nature Reserves due to the separation distance of 3.5 km and 6 km respectively from the site. Furthermore, RES' commitment to establishing screen plantings around the perimeter of the site using endemic species would function to increase habitat for threatened species and biodiversity connectivity over time.

Recommended Conditions

5.3.13 The Department has recommended conditions requiring RES to:

- avoid the disturbance of native vegetation or fauna habitat located outside the development footprint;
- retire the applicable biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme prior to commencing construction; and
- prepare and implement a Biodiversity Management Plan in consultation with BCD and DAWE, including measures to minimise clearing and avoid unnecessary disturbance of vegetation located within the development footprint.

5.3.14 With these measures, BCD and the Department consider that the project is unlikely to result in a significant impact on the biodiversity values of the locality.

5.4 Other issues

5.4.1 The Department's consideration of other issues is summarised in **Table 6**.

Table 6 | Summary of other issues raised

Findings	Recommendations
Heritage	
• Six public submissions and the Ngunnawal and Ngambri Elders of the NSW and ACT raised concerns about the project's impacts on Aboriginal cultural heritage, including concerns about the impact assessment undertaken, the identification of heritage sites within proximity of the proposed development and the value of these sites being correctly identified, recorded and managed. • The project would not impact important Aboriginal heritage sites present in the locality, including the Reidsdale campsite located 4.5 km away, and the Derrawa Dhaura Aboriginal Place located 2.5 km west. • Heritage surveys undertaken with Registered Aboriginal Parties (RAPs) identified 15 Aboriginal heritage sites, including four isolated artefacts, eight artefact scatters and three potentially culturally modified trees. One artefact scatter has moderate scientific significance, while the rest are of low scientific significance. • The project design avoids 12 of the 15 known Aboriginal heritage sites, including the moderately significant artefact scatter. RES has committed to salvage and relocate the three impacted items to suitable alternative locations. • Because the Applicant identified areas of high subsurface archaeological potential within the site, Heritage NSW recommended that the Applicant completes a test excavation program to inform the project design. • RES has committed to subsurface testing prior to construction to inform the detailed design of the project. This would be done in consultation with RAPs and Heritage NSW following the *Code of Practice for Archaeological Assessment of Cultural Heritage in NSW* (OEH 2010) and detailed in a Heritage Management Plan. • If Aboriginal artefacts or skeletal material are identified during construction of the project all work would cease and an unexpected finds procedure would be implemented. • Surveys did not find any historic heritage items on site. • With these measures, the Department and Heritage NSW consider that the project would not significantly impact the heritage values of the locality.	• Ensure the development does not cause any direct or indirect impacts on any items located within exclusion zones or outside the approved development footprint. • Undertake additional test excavation in consultation with RAPs, prior to the finalisation of detailed design and construction. • Salvage and relocate Aboriginal heritage items to suitable alternative locations. • Prepare and implement a Heritage Management Plan, including procedures for unexpected finds, in consultation with Heritage NSW and Aboriginal stakeholders.

Findings	Recommendations
Traffic and Transport	
• Community submissions raised concerns about road safety and construction traffic travelling through Sutton village, with Sutton Public School and an early learning centre located on the corner of Victoria Street and Bywong Street on the proposed transport route. • The main transport route for all heavy vehicles for the project is via the Federal Highway, Sutton Road leading into Sutton Village, Bywong Street, Victoria Street, Camp Street, East Tallagandra Lane, Mulligans Flat Road and Tallagandra Lane. • Site access would be via three new site access points, with two on Tallagandra Lane and one on Tintinhull Road. • An increase in traffic volumes would occur during the 10 month construction period, with a peak period of 5 months. During the peak period, there would be up to 38 heavy vehicle movements a day. Additionally, there would be three over-dimensional vehicle movements required over the life of the project. • RES has proposed to exclude heavy vehicle movements through Sutton Village during school zone periods (8 – 9.30 am and 2.30 – 4 pm on school days) which would be detailed in a Traffic Management Plan. • The heavy vehicle transport route prioritises the use of the State road network with access from the Federal Highway through a dedicated off ramp and consists of a sealed surface up until the last 150 m of Tallagandra Lane south of the site. • In addition, the Department notes that while an alternate route along Shingle Hill Way and Sutton Road (exiting the Federal Highway further to the north) may avoid Sutton village, it has an uncontrolled right turn from the Federal Highway (rather than a dedicated off ramp) and requires heavy vehicle use of a significantly longer portion (23 km rather than 11 km) of local road. • Council has recommended gravel re-sheeting from the end of the existing seal to past the furthest site access point to cater for the construction vehicle traffic and this is addressed in the Department's recommended conditions. • Street signage at the off ramp from the Federal Highway onto Sutton Road, and on Bywong Street and Victoria Street would likely need to be relocated to accommodate heavy vehicle access. • Traffic during operations would be negligible with a workforce consisting of approximately 5 - 10 full time positions. • By prioritising the use of the State road network, upgrading Tallagandra Lane to Council specifications and the implementation of a Traffic Management Plan to manage movements through Sutton village during the temporary	• Undertake relevant upgrades to Tallagandra Lane, to the satisfaction of the relevant road authority prior to the commencement of construction. • Relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development. • Restrict the number of vehicles during construction, upgrading and decommissioning to the peak volumes identified; • Ensure the length of vehicles (excluding over-dimensional vehicles) does not exceed 19m. • Prepare and implement a Traffic Management Plan, including provisions for dilapidation surveys, details of measures that would be implemented to address road safety, including consideration of Sutton Primary School, other motorists and road users.

Findings	Recommendations
construction period, the Department, TfNSW and Council are satisfied that the project would not result in significant impacts on the road network capacity, efficiency or safety.	
Noise	
• Community submissions expressed concern with construction noise impacts in a rural setting, construction traffic noise impacts and operational noise impacts. • While the proposed construction, upgrading and decommissioning activities would be well below the 'highly noise affected' criterion of 75 dB(A) in the EPA's *Interim Construction Noise Guideline* (ICNG), five residences (R1, R2, R3, R5 and R35) are predicted to experience noise above the 'noise affected level' criterion of 45 dB(A) ranging from 46 to 56 dB(A) during standard daytime construction hours. • The Department considers noise from construction, upgrading and decommissioning can be minimised by implementing the noise mitigation work practices of the ICNG, such as scheduling noisier activities during less noise sensitive period, selecting low noise equipment and liaising with affected residences and informing them when noisy work will occur and what is being done to minimise noise. • Road traffic noise during construction of the project would comply with the relevant criteria in the EPA's *Road Noise Policy*. • With amendments to the layout of inverter stations and inclusion "horse-shoe shaped" noise walls around the six inverters located between Tintinhull Road and Back Creek, 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 7am – 6pm, and Saturday 8 am – 1pm.
Water	
• Community submissions raised concerns with impacts on surface water flows, water usage requirements and previous observations of flooding on site. • The main watercourses on site consist of an ephemeral third order and fourth order stream (see **Figure 6**). With the exception of the road and cable crossings, the project avoids the riparian corridors of these watercourses and RES has committed to undertake all works within waterfront land in accordance with the *Controlled Activities on Waterfront Land guidelines* (DPI 2012). • Critical infrastructure, including the site substation would be located outside the 1% Annual Exceedance Probability (AEP) flood extent. While a portion of the solar arrays are located within flood areas in a 1% AEP event, the risk of impacts by	• Prohibit water pollution in accordance with Section 120 of the *Protection of the Environment Operations Act 1997*. • Undertake activities in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual and Guidelines for Controlled Activities on Waterfront Land (DPI Water, 2018).

Findings	Recommendations
flooding on and off the site is considered low and the project is unlikely to have a significant effect on surface water behaviour. • The Department considers any erosion and sediment risks associated with the project can be effectively managed using best practice construction techniques in accordance with relevant policies and guidelines. • Fuels and chemicals would be stored in a manner that would prevent water pollution. • The project would require up to 2 megalitres (ML) of water during construction (mainly for dust suppression) and 1.6 ML per year during operation. A static water supply (20,000 litres) would also be established and maintained for fire protection. • Water would initially be sourced from onsite farm dams in accordance with harvestable rights and from Council supplies. • Subject to the recommended conditions, the Department and DPIE Water consider that the project would not result in any significant impacts on water resources.	• The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply. • Ensure the solar panels and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, flooding and groundwater at the site.
Hazards	
• The project would comply with the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for electric, magnetic and electromagnetic fields. • The site is not mapped as bushfire prone land and the Department is satisfied that bushfire risks can be appropriately controlled through standard fire management procedures and recommendations made by the RFS and FRNSW. • RES would implement a 10 m asset protection zone around the solar arrays, control building and grid substation. • The Safety Management Study (SMS) completed by RES in consultation with the APA Group confirmed the high pressure gas pipeline can continue to comply with *AS 2885: Australian Standard for Pipelines - Gas and liquid petroleum.* • A separate Quantitative Risk Analysis (QRA) demonstrated the project can comply with the land use safety criteria described in the Department's *Hazardous Industry Planning Advisory Papers No.4 and 10*, provided that all the recommendations are completed in a timely and appropriate manner. • The Department has recommended conditions in accordance with the conclusions of these studies to ensure proper accountability for pipeline safety risks. • DPIE Water, BCD and Council did not raise concerns about flooding risks or hazards on site.	• The development must comply with the relevant requirements in the RFS' *Planning for Bushfire Protection 2019* (or equivalent) and Standards for Asset Protection Zones. • Defendable space and solar arrays are to be managed as an APZ and the development is suitably equipped to respond to fires including water supply tank and appropriate connectors. • Prepare a program for the implementation of all actions and recommendations from the SMS and QRA. • Prepare and implement an Emergency Plan in consultation with APA Group and to the

Findings	Recommendations
	satisfaction of RFS and FRNSW.
Community Enhancement Fund	

• Community submissions raised concerns that the project would have negligible benefits to the local community of Sutton given the site's close proximity to amenities available in the ACT, the lack of local employment opportunities and that benefits would be limited to the construction period.
• The project would provide direct and indirect benefits to the local community, including:
  ○ up to 200 jobs during the 10 month construction period and 5 to 10 jobs during operation of the project;
  ○ expenditure on businesses in the local economy by workers who would reside in Yass Valley LGA, or in the ACT; and
  ○ the procurement of goods and services by RES and any associated contractors.
• To provide benefits to the local community, RES has offered to enter into a 30 year Voluntary Planning Agreement (VPA) with Council totalling approximately $1,260,000 and consisting of a one-off $100,000 payment at the commencement of construction of the project and an annual contribution of $40,000 for the 29 years beyond commencement of construction, to be adjusted for inflation.
• The funding would be administered via a VPA established under Section 7.4 of the EP&A Act.
• Priority would be given use the funding for projects within the immediate vicinity of the project as defined by the following three priorities:
  ○ first priorities: local projects within 10 km of the project site;
  ○ second priorities: local projects within 20 km of the project site should no suitable projects be identified within 10 km of project site; and
  ○ third priorities: local projects within the current Yass Valley Council boundary should no suitable projects be identified within 20 km of project site.
• Council has requested that the VPA continue for the life of the project (i.e. beyond 30 years, if operating). Council and RES have been in discussions about the VPA for some time. At this stage RES has made an offer to Council for a total of $1,260,000 over a period of 30 years.
• The Department considers that the offer made by RES is reasonable given the total amount equates to approximately 1% of the capital investment value (CIV) of the project, and is therefore consistent with the fixed levy of up to 1% of CIV contemplated under Section 7.12 of the EP&A Act.
	• The Department has recommended that RES be required to enter into a VPA with Yass Valley Council prior to commencing construction, unless otherwise agreed by the Secretary, in accordance with Division 7.1, Part 7 of the EP&A Act and the terms of RES's offer.

Findings	Recommendations
• The Department has recommended conditions of consent requiring RES to upgrade relevant roads as requested by Council and RES is required to pay for any repairs of any project-related impacts of the road.	
Subdivision	

• RES proposes to subdivide Lot 209 DP 754908 on which the grid substation would be located.
• Although the subdivided lots would be below the minimum lot size of 40 ha, Section 4.2A of the Yass Valley LEP provides exceptions for certain rural subdivisions on land zoned RU1. This is dependent upon satisfying the consent authority that the use of the land after the subdivision will be the same use (other than a dwelling house or a dual occupancy) permitted under an existing development consent for the land.
• The Department is satisfied that the subdivision should be approved as it:
  ○ is necessary for the operation of the substation;
  ○ would not result in any additional dwelling entitlements on the subdivided lots;
  ○ would not adversely affect the use of the surrounding land for agriculture;
  ○ would not increase rural land use conflict in the locality; and
  ○ has regard to the natural and physical constraints affecting the land.
• Council has not objected to the proposed subdivision and the Department accepts that the exact location of the grid substation would be refined during the detailed design stage in consultation with TransGrid and Council.
• RES would also be required to prepare and submit detailed subdivision plans to the Department for approval prior to subdividing the site.
	• Prior to subdividing the site, prepare and submit detailed subdivision plans to the Secretary for approval.
	• Subdivide the proposed lot in accordance with requirements of section 157 of the *Environmental Planning and Assessment Regulation 2000.*

Land Values	

• 33 public submissions, including adjoining landowners, raised concerns about impacts on neighbouring land values, particularly due to visual impacts.
• The Department notes that:
  ○ property values are influenced by a number of factors;
  ○ there is no clear evidence to suggest that solar farms in NSW are adversely affecting property values;
  ○ the project is permissible with development consent under the Infrastructure SEPP;
  ○ a detailed assessment of the merits of the project has found that the project is unlikely to generate significant economic, environmental or social impacts;
	• No specific conditions required.

Findings	Recommendations
○ the impacts of the project can be further minimised by imposing suitable conditions on the project, and requiring a range of standard mitigation measures, such as vegetation screening to be implemented. • Accordingly, the Department considers the project would not result in any significant or widespread reduction in land values in the areas surrounding the solar project.	

6 Recommended Conditions

6.1.1 The Department has prepared recommended conditions of consent for the project (see **Appendix I**).

6.1.2 The Department consulted with RES and relevant agencies on the conditions for the project.

6.1.3 These conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the project;
- ensure standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

6.1.4 The recommended conditions use a risk-based approach that focuses on performance-based outcomes. This reflects current government policy and the fact that solar farms require relatively limited ongoing environmental management once the project has commenced operations.

6.1.5 In line with this approach, the Department has recommended operating conditions to minimise traffic, amenity, water, flooding, biodiversity, heritage and bushfire impacts, and required the following management plans be prepared and implemented:

- Landscaping Plan;
- Biodiversity Management Plan;
- Heritage Management Plan;
- Traffic Management Plan; and
- Emergency Plan.

6.1.6 The recommended conditions also require RES to provide detailed final layout plans to the Department prior to construction.

6.1.7 Other key recommended conditions include:

- *visual* – minimising the off-site visual and lighting impacts of the project, including the potential for any glare or reflection, and ensuring the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape;
- *biodiversity offsets* – retiring biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme;

- *roads* – requiring relevant road upgrades are undertaken prior to the commencement of construction;
- *operating hours* – undertaking construction, upgrading or decommissioning activities onsite during standard construction hours, unless these activities that are inaudible at non-associated receivers;
- *water and flooding* – ensuring the solar panels and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on surface water, flooding and groundwater at the site; and
- *fire* - ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2019*.

7 Evaluation

7.1.1 The Department has assessed the development application, EIS, submissions, Submissions Report and additional information provided by the Applicant and relevant government agencies. The Department has also considered the objectives and relevant considerations under Section 4.15 of the EP&A Act.

7.1.2 The project site is located in a rural area, with eight non-associated residences located within 1 km of the development footprint.

7.1.3 The site would have direct access to the local and regional road network via Tallagandra Lane and Mulligans Flat Road and has direct access to the electricity network via the TransGrid transmission, which traverses the site.

7.1.4 Approximately half the community submissions were in support of the project, with the majority coming from individuals located between 10 to 50 km from the project site. The majority of submissions objecting to the project were from people residing in the vicinity of the solar farm, raising concerns about the suitability of the site for a large scale solar project, amenity impacts and traffic and transport.

7.1.5 The Department considers the site to be appropriate for a solar farm as it has good solar resources, there is available capacity on the existing electricity network, and it is close to major load centres.

7.1.6 The development footprint avoids key constraints, including remnant native vegetation and threatened species habitat, watercourses and their floodplains, the high pressure gas pipeline and most known Aboriginal heritage sites. Any residual impacts would be relatively minor and can be managed through the recommended conditions of consent.

7.1.7 Following amendments to the project, the Department is satisfied that with removal of the southern array area, increase setback distances from the nearest residences, intervening existing vegetation, the topography of the land and proposed additional landscape planting, the project is unlikely to have significant visual impacts on surrounding residences.

7.1.8 The project would not result in a significant reduction to the overall agricultural productivity of the region. RES would manage groundcover within the site through sheep grazing, the site could be returned to agricultural uses after the project is decommissioned and the inherent agricultural capability of the land would not be affected due to the nature of the development.

7.1.9 Importantly, the project would assist in transitioning the electricity sector from coal and gas-fired power stations to low emissions sources. It would generate over 220,000 MWh of clean electricity annually, which is enough to power over 37,000 homes and save over 211,000 tonnes of greenhouse gas emissions per year. It is therefore consistent with the goals of the NSW *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 - 2030.*

7.1.10 To address the residual impacts of the project, the Department has recommended a range of detailed conditions, developed in conjunction with agencies and Council, to ensure these impacts are effectively minimised, managed and/or offset. RES has reviewed the conditions and does not object to them.

7.1.11 The Department considers that the project achieves an appropriate balance between maximising the efficiency of the solar resource development and minimising the potential impacts on surrounding land uses 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, capital investment and substantial contributions to Council for community enhancement projects.

7.1.12 On balance, the Department considers that the project is in the public interest and is approvable, subject to the recommended conditions of consent (see **Appendix I**).

7.1.13 This assessment report is hereby presented to the Independent Planning Commission for determination.

24/11/20

24/11/20

Nicole Brewer
Director
Energy Assessments

Mike Young
Executive Director
Energy, Industry and Compliance

Appendices

Appendix A List of referenced documents

Springdale Solar Farm Environmental Impact Statement, AECOM, June 2018

Springdale Solar Farm Amendment Report, AECOM, 29 May 2020

Springdale Solar Farm Submissions Report, AECOM, 29 May 2020

Springdale Solar Farm Additional Information Package, RES, 1 October 2020

Appendix B Environmental Impact Statement

See the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/project/9756

Appendix C Amendment Report

See the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/project/9756

Appendix D Submissions

See the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/project/9756

Appendix E Submissions Report

See the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/project/9756

Appendix F Additional Information

See the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/project/9756

Appendix G Consideration of Community Views

The Department exhibited the Environmental Impact Statement (EIS) for the project from 18 July 2018 until 29 August 2018 and received 225 unique submissions from the community (110 objections, 114 supporting and one comment) and five from special interest groups (one objection, three supporting and one providing comments.

The key issues raised by the community (including in submissions) and considered in the Department's Assessment Report include land use compatibility (including impacts on rural character and the loss of agricultural land), economic impacts (including lack of benefit to the local community, and potential for property devaluation), traffic impacts (specifically regarding road safety in the locality and Sutton village) and that the proposal site contradicts State and local government guidelines and policies.

Other issues are addressed in detail in the Department's Assessment Report.

Issue	Consideration
Compatibility of the proposed land use • Loss of agricultural land • Changing rural character • Site selection and not adhering to Government guidelines	*Assessment* • The land within the development footprint site is Class 4 or Class 5 land capability. This class of land typically requires active management to sustain cultivation on a rotational basis. • The cumulative loss of agricultural land associated with the project and other approved solar project in the region represents a very small fraction of the 3.3 million ha of land being used for agricultural output in the South East and Tablelands region, therefore resulting in a negligible reduction in the overall productivity of the region. • The site would be returned to agricultural use following decommissioning. • The agricultural operations of adjoining landholders would not be impacted as weeds would be controlled through strict land management measures, erosion and sediment risks can be effectively managed using best practice construction techniques, water pollution is not permitted, and noise and dust would not be significant and would be minimised. • The site would also support local agriculture by permitting managed grazing, and as a result, the Department is satisfied that the project would not result in any significant reduction in agricultural productivity of the region or of local agribusiness. • The project site is located on land zoned RU1 – Primary Production under the Yass Valley LEP and the project is permitted with consent within this zone. • The project is consistent with the *Tablelands Regional Community Strategic Plan 2016 – 2036* and *South East and Tablelands Regional Plan 2036*. • Although the site is not located in one of the proposed Renewable Energy Zones, the site is located in an area with abundant solar resources, direct access to the electricity grid at a location with available network capacity, in close proximity to the load centres of Canberra, Wollongong and Sydney, on land that is zoned RU1

Issue	Consideration
	with solar development permissible with consent under the Infrastructure SEPP. *Recommended Conditions include:* • Restore land capability to pre-existing use. • Restore the groundcover of the site following construction or upgrading, maintain the groundcover with appropriate perennial species and manage weeds within the groundcover • Minimise any soil erosion associated with the construction, upgrading or decommissioning of the development. • Ensure that the development does not cause any water pollution, as defined under Section 120 of the POEO Act. • Ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in with the surrounding landscape, where reasonable and feasible. • Ensure that noise associated with the construction, operation, upgrading and decommissioning of the project complies with the relevant noise criteria. • Minimise dust generated by the development.

Economic Impacts
• Lack of local benefits
• Property devaluation
	Assessment
	• The project would generate direct and indirect benefits to the local community, including:
	  ○ up to 200 jobs during the 10 month construction period and 5 jobs during operation of the project;
	  ○ expenditure on accommodation and business in the local economy by workers who would reside in Yass Valley LGA, or the adjoining LGAs; and
	  ○ the procurement of goods and services by RES and any associated contractors.
	• RES has committed to a Voluntary Planning Agreement (VPA) with Council, which would consist of an initial one-off payment of $100,000, followed by annual payments of $40,000, to be adjusted for inflation, for a period of 30 years (providing a total of $1,260,000 over the life of the project). The contributions would fund projects in the locality according to the following three priorities:
	  ○ first priorities: local projects within 10 km of the project site;
	  ○ second priorities: local projects within 20 km of the project site should no suitable projects be identified within 10 km of project site; and
	  ○ third priorities: local projects within the current Yass Valley Council boundary should no suitable projects be identified within 20 km of project site.
	• Under the Infrastructure SEPP, the project is permissible with consent, and the Department's assessment demonstrates that, with the implementation of the recommended conditions, the project would not result in any significant amenity or environmental impacts. Accordingly, the Department considers the project would not result in any significant or widespread reduction in land values in the areas surrounding the project.

Issue	Consideration
	Recommended Conditions include: • Prior to commencing construction, the Applicant must enter into a VPA with Council.
Traffic Impacts • Increased traffic volumes on local roads and travelling through Sutton Village during the construction period • Local roads unsafe for the volume of heavy vehicles during construction	*Assessment* • There would be minimal traffic to and from the site during the operation of the development. Consequently, the only material traffic impacts would occur during the 10 month construction period, decommissioning and major upgrades. • RES has proposed to exclude heavy vehicle movements through Sutton Village during school zone periods (8 – 9.30 am and 2.30 – 4 pm on school days). • The entire heavy vehicle transport route consists of a sealed surface up until the last 150 m of Tallagandra Lane south of the site. • RES has committed to upgrading Tallagandra from the end of the existing seal to the furthest site access point. • The Department considers that the traffic impacts would be largely short-term, relatively minor and can be managed in according with the recommended conditions. *Recommended Conditions include:* • Undertake the upgrades to Tallagandra Lane prior to commencing construction. • Ensure the number and length of heavy vehicles does not exceed those predicted in the EIS. • Prepare and implement a Traffic Management Plan in consultation with TfNSW and Council.

Appendix H Statutory Considerations

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable planning instruments and regulations.

The Department has considered all of these matters in its assessment of the project and has provided a summary of this assessment below.

Aspect	Summary
Objects of the EP&A Act	The objects of most relevance to the Minister's decision on whether or not to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&A Act. The Department is satisfied that the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), as the project: • is a permissible land use on the subject land; • is located in a suitable location for efficient solar energy development; • is able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard; • would contribute to a more diverse local industry, thereby supporting the local economy and community; • would not fragment or alienate resource lands in the LGA; and • is consistent with the goals of the *Net Zero Plan State 1: 2020 – 2030,* NSW's *Climate Change Policy Framework* and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions. The Department has considered the encouragement of ESD (Object 1.3(b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences. In addition, the Department considers that appropriately designed SSD solar development, in itself, is consistent with many of the principles of ESD., and based on its assessment, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD. Consideration of the protection of the environment, including conservation of threatened and other species of native animals, plants and their habitats (Object 1.3(e)) is provided in **Section 5.3** of

	this report. Following its consideration, the Department considers the project is able to be undertaken in a manner that would improve or at least maintain the biodiversity values of the locality over the medium to long term and would not significantly impact threatened species and ecological communities of the locality. Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is provided in **Section 5.4** of this report. Following its consideration, the Department considers the project would not significantly impact the built or cultural heritage of the locality.
State Significant Development	Under Section 4.36 of the EP&A Act the project is considered a State significant development. Under Section 4.5(a) of the EP&A Act and clause 8A of the SRD SEPP the Independent Planning Commission is the consent authority for the development as the project has received more than 50 public submissions by way of objection.
Environmental Planning Instruments	The *Yass Valley Council Local Environmental Plan 2013* applies and is discussed in **sections 3.3, 5.1** and **5.4** of this report, particularly regarding permissibility, land use zoning, flooding, heritage, bushfire and subdivision. The project is permissible under the Infrastructure SEPP. In accordance with the Infrastructure SEPP, the Department has given written notice of the project to APA Group, TfNSW and TransGrid. The Department has considered the provisions of the *SEPP (Primary Production and Rural Development) 2019.* Of relevance to the project, the SEPP aims to facilitate the orderly economic use and development of lands for primary production, to reduce land use conflict and sterilisation of rural land and to identify State significant agricultural land. While the location of State significant agricultural land has not been finalised, the Department has considered all these matters in **section 5.1** of this report. The Department has considered the provisions of *SEPP No. 55 – Remediation of Land*. A preliminary assessment of the land found no contaminated land within the project site, and the Department is satisfied the site is suitable for the development. *Yass Valley Council* is listed under *SEPP (Koala Habitat Protection) 2019*. However, the assessment concluded that the vegetation within the site is not considered potential Koala habitat.

Appendix I Recommended Instrument of Consent

See the Department's website at:
https://www.planningportal.nsw.gov.au/major-projects/project/9756

Appendix J Consideration of Commonwealth Matters

In accordance with the accredited assessment process under section 87 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the Department provides the following additional information required by the Commonwealth Minister, in deciding whether to approve a proposal under the EPBC Act.

The Department's assessment has been prepared based on the assessment contained in the Springdale Solar Environmental Impact Statement (EIS), Submissions Report, Amendment Report and additional information provided during the assessment process, public submissions, and advice provided by the Department's Biodiversity Conservation Division (BCD), other NSW government agencies and the Commonwealth Department of Agriculture, Water and Environment (DAWE).

This Appendix is supplementary to, and should be read in conjunction with, the assessment included in **section 5.3** of this assessment report which includes the Department's consideration of impacts to listed threatened species and communities, and mitigation and offsetting measures for threatened species and communities, including Matters of National Environmental Significance.

Identifying MNES

The Biodiversity Development Assessment Report (BDAR) for the Springdale Solar Farm has identified and addressed all the listed threatened species and communities which the decision on referral (EPBC 2018/8173) considered that the controlled action may, or is likely to, have an impact on. These entities include:

- Golden Sun Moth (*Synemon plana*) – Critically Endangered;
- Superb Parrot (*Polytelis swainsonii*) – Vulnerable;
- Striped Legless Lizard (*Delma impar*) – Vulnerable;
- Natural Temperate grassland of the South Eastern Highlands – Critically Endangered
- White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered.

DAWE determined that other matters under the EPBC Act are not controlling provisions with respect to the controlled action. These include listed World Heritage, National Heritage, migratory species, Ramsar wetlands, Commonwealth marine environment, Commonwealth land, Commonwealth action, nuclear action, Great Barrier Reef Marine Park, Commonwealth Heritage places, overseas and a water resource, in relation to coal seam gas development and large coal mining development.

Impacts on EPBC Listed Species and Communities

Impacts on threatened ecological communities

One *Biodiversity Conservation Act 2016* (NSW) (BC Act) Threatened Ecological Community (TEC) was identified as being present on site. This was PCT 1330 (*Yellow Box – Blakely's Red Gum grassy woodland on the tablelands, South Eastern Highlands Bioregion*), which was consistent with the Critically Endangered Ecological Community (CEEC pursuant to the BC Act) known as White Box – Yellow Box – Blakley's Red Gum Grassy Woodland and Derived Native Grassland.

Based on the plot data obtained during field surveys, this TEC was not considered to conform with the EPBC definition of the community as:

- no areas had 12 or more, non-grass, native groundcover species; and

- no areas were part of a patch with an average of 20 mature trees per hectare or where natural regeneration of dominant overstorey eucalypts occurred.

Additionally, PCT 320 (*Kangaroo Grass Redleg Grass forb-rich temperate tussock grassland of the northern Monaro, ACT and upper Lachlan River regions of the NSW South Western Slopes Bioregion and South Eastern Highlands Bioregion*) is considered a component of the EPBC CEEC known as the Natural Temperate grassland of the South Eastern Highlands.

However, the plot data also demonstrated that this PCT does not conform with the EPBC definition of the community as:

- no areas had sufficient cover of nominated native species (*Themeda triandra, Poa labillardierei, Carex bichenoviana*); and
- no areas contained either eight native species or two indicator species.

As such, it is concluded that the project would not result in impacts to threatened ecological communities listed under the EPBC Act.

Threatened species assessment of significance

The Department has considered the impacts on the three EPBC listed species identified in the referral advice.

Golden Sun Moth

The project site contains 26.25 ha of contiguous Golden Sun Moth habitat in low and moderate condition (see **Figure J1**). While the project avoids disturbing habitat in moderate condition, it would reduce the area of occupancy of the species within the project site by 4.52 ha. It should be noted that a conservative method for calculating the species polygons has been applied, which capture non-native vegetation which would not normally generate ecosystem credits under the NSW *Biodiversity Assessment Methodology.*

The action may be considered a significant impact on the Golden Sun Moth because the clearing exceeds the threshold of 0.5 ha outlined in Table 3 of the *Significant Impact Guidelines for the Critically Endangered Golden Sun Moth (Synemon plana*).

However, BCD and the Department notes that the thresholds outlined are not designed to be prescriptive, but rather indicative of what is likely to be a significant impact at a national level. A number of other factors need to be considered in determining if an action is likely to be a significant impact, including habitat quality, the geographic extent of the impacts, the duration and the magnitude of the impact.

Therefore, when considering the broader guidance on significant impacts to MNES contained within the *EPBC Act Policy Statement 1.1 Significant Impact guidelines – Matters of National Significance*, it can be concluded that the proposed action is unlikely to:

- lead to a long term decrease in the size of the population of the GSM since:
- over 21 ha of Golden Sun Moth habitat to the west of the disturbance footprint (see **Figure J2**) would be set aside as a conservation area, which involves ceasing threatening processes such as pasture degradation by sowing non-native grasses and ploughing, and implementing active management in perpetuity;
- the species is known to respond positively to active management;
- all the medium quality habitat is being retained; and

- there is at least 43 ha of contiguous habitat to the east of the disturbance footprint.
- fragment the existing population;
- disrupt the breeding cycles of the species as:
- fencing around Golden Sun Moth habitat would not prevent the dispersal of males;
- the locations containing females would be retained; and
- result in invasive species that are harmful to a critically endangered species becoming established in the area as weed species are already established in the development envelope and would be subject to management measures to prevent them from spreading further.

The Department considers that with the proposed site mitigation and offset measures (see **Section 5.3** of this report), the project would not be inconsistent with the objectives of the national recovery plan for the species.

Key mitigation measures would include:

- avoid the disturbance of native vegetation or fauna habitat located outside the development footprint;
- retire the applicable biodiversity offset credits in accordance with the Biodiversity Offsets Scheme prior to commencing construction;
- prepare and implement a Biodiversity Management Plan in consultation with BCD and DAWE, including measures to minimise clearing and avoid unnecessary disturbance of vegetation located within the development footprint;
- staff training and site toolbox talks to communicate environmental features to be protected; and
- implement protocols to prevent the spread of weeds or pathogens.

The Department recommends that DAWE attach Conditions 11 12 and 13 of Schedule 3 of the recommended conditions of consent (see **Appendix I**) to the EPBC Act approval.

Superb Parrot

An approved national recovery plan under the EPBC Act is available for the Superb Parrot.

The Department has considered the approved national recovery plan under the EPBC Act for the Superb Parrot in assessing the impacts of the project, and notes that its key objective is to prevent further decline of its population and achieve a demonstrable sustained improvement in the quality and quantity of habitat to increase carrying capacity.

The proposed action would affect 0.95 ha of Superb Parrot (see **Figure J1**). This is unlikely to have a significant impact on the species because the proposed action would not lead to a long term decrease in the size of the population since the project would:

- only remove seven potential breeding trees, and pre-clearing surveys would be undertaken;
- retain the most significant habitat on site in the south eastern corner which would be fenced to allow for regeneration;
- avoid the tree within the site where Superb Parrots were observed breeding;
- plant screening around the perimeter of the site would use indigenous species which, upon maturity, may provide foraging and breeding habitat for the species;

- unlikely fragment an existing population as it does not create a barrier to the movement of avifauna;
- unlikely disrupt the breeding cycles of the species;
- unlikely modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline because compensatory measures would assist with restoration of foraging and potentially breeding habitat on site; and
- unlikely result in invasive species that are harmful to the vulnerable species becoming established on site.

Striped Legless Lizard

An approved national recovery plan under the EPBC Act is available for the Striped Legless Lizard.

The proposed action is unlikely to have a significant impact on the Striped Legless Lizard as no ground disturbance would occur within mapped areas of this species habitat (see **Figure J1**), it would not fragment the habitat which is wholly contained within the project site and unlikely to result in invasive species that are harmful to the vulnerable species from becoming established.

Requirements for Decisions about Threatened Species and Communities

In accordance with Section 139 of the EPBC Act, in deciding whether or not to approve, for the purposes of Section 18 or 18A of the EPBC Act, the taking of an action and what conditions to attach to such an approval, the Commonwealth Minister must not act inconsistently with certain international environmental obligations, Recovery Plans or Threat Abatement Plans. The Commonwealth Minister must also have regard to relevant approved conservation advices.

Threat Abatement Plans

The Threat Abatement Plans relevant to this project are discussed below and are available at http://www.environment.gov.au/biodiversity/threatened/threat-abatement-plans/approved

Threat Abatement Plan for predation, habitat degradation, competition and disease transmission by feral pigs (relevant to Golden Sun Moth, Superb Parrot, Striped Legless Lizard)

Feral pigs impact on native flora and fauna due to their presence, movement, rooting, wallowing, trampling, consumption of water, animals, plants and soil organisms. Direct impacts from feral pigs include predation, habitat loss and degradation, competition and disease transmission, which can impact on native flora and fauna.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and/or biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for threats from feral pigs

Threat Abatement Plan for competition and land degradation by rabbits (relevant to Golden Sun Moth, Superb Parrot, Striped Legless Lizard)

Rabbits have direct impacts on native flora and fauna by grazing on native vegetation and preventing regeneration, and by competing with native fauna for habitat and food. Rabbits also have indirect and secondary impacts, such as supporting populations of introduced predators by providing a food source, and denuding vegetation exposing fauna species to increased predation. Their behaviour, including

digging and browsing, also leads to a loss of vegetation cover and consequent slope instability and soil erosion, which further degrades fauna habitat.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and/or biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for threats from rabbits.

Threat Abatement Plan for competition and land degradation by unmanaged goats (relevant to Golden Sun Moth, Superb Parrot, Striped Legless Lizard)

Goats affect native flora by grazing on native vegetation and can result in overgrazing. Grazing by goats can prevent regeneration of native flora, cause erosion through overgrazing, foul waterholes and introduce weeds, through ingestion of seeds, which they can deposit in their dung. Goats also compete with native animals for food and shelter.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and/or biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for threats from unmanaged goats.

Threat Abatement Plan for predation by feral cats (relevant to Superb Parrot, Striped Legless Lizard)

Feral cats are significant predators in Australia that interact with native fauna in various ways, including predation, competition for resources and transmission of disease.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and/or biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for predation by feral cats.

Australia's International Obligations

Australia's obligations under the *Convention on Biological Diversity* (Biodiversity Convention) include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and technologies, and by appropriate funding.

The recommendations of this assessment report are consistent with the *Biodiversity Convention*, which promotes environmental impact assessment (such as this process) to avoid and minimise adverse impacts on biological diversity. Accordingly, the recommended development consent requires avoidance, mitigation and management measures for listed threatened species, and all information related to the project is required to be publicly available to ensure equitable sharing of information and improved knowledge relating to biodiversity.

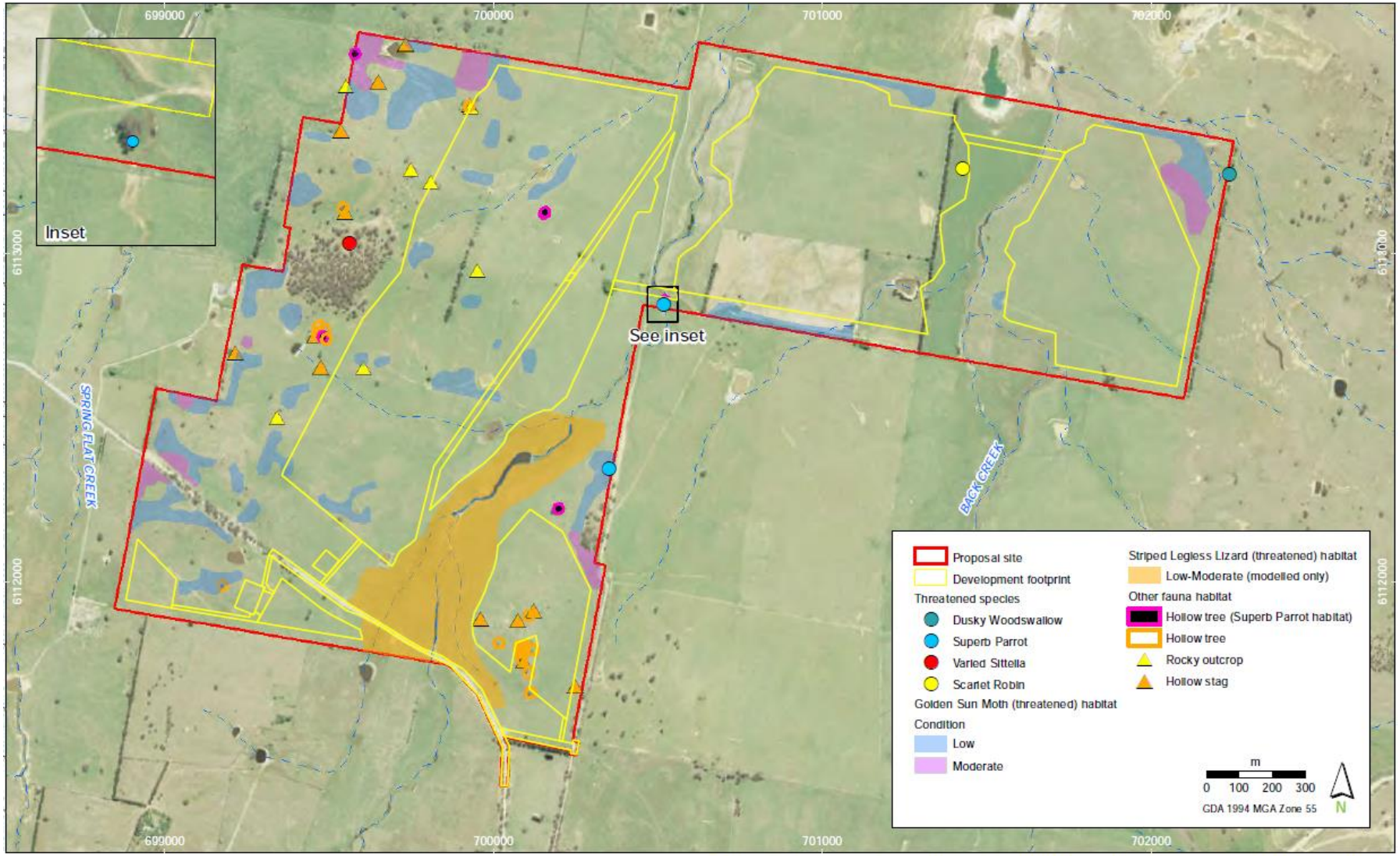

Figure J1 | Threatened species and habitat

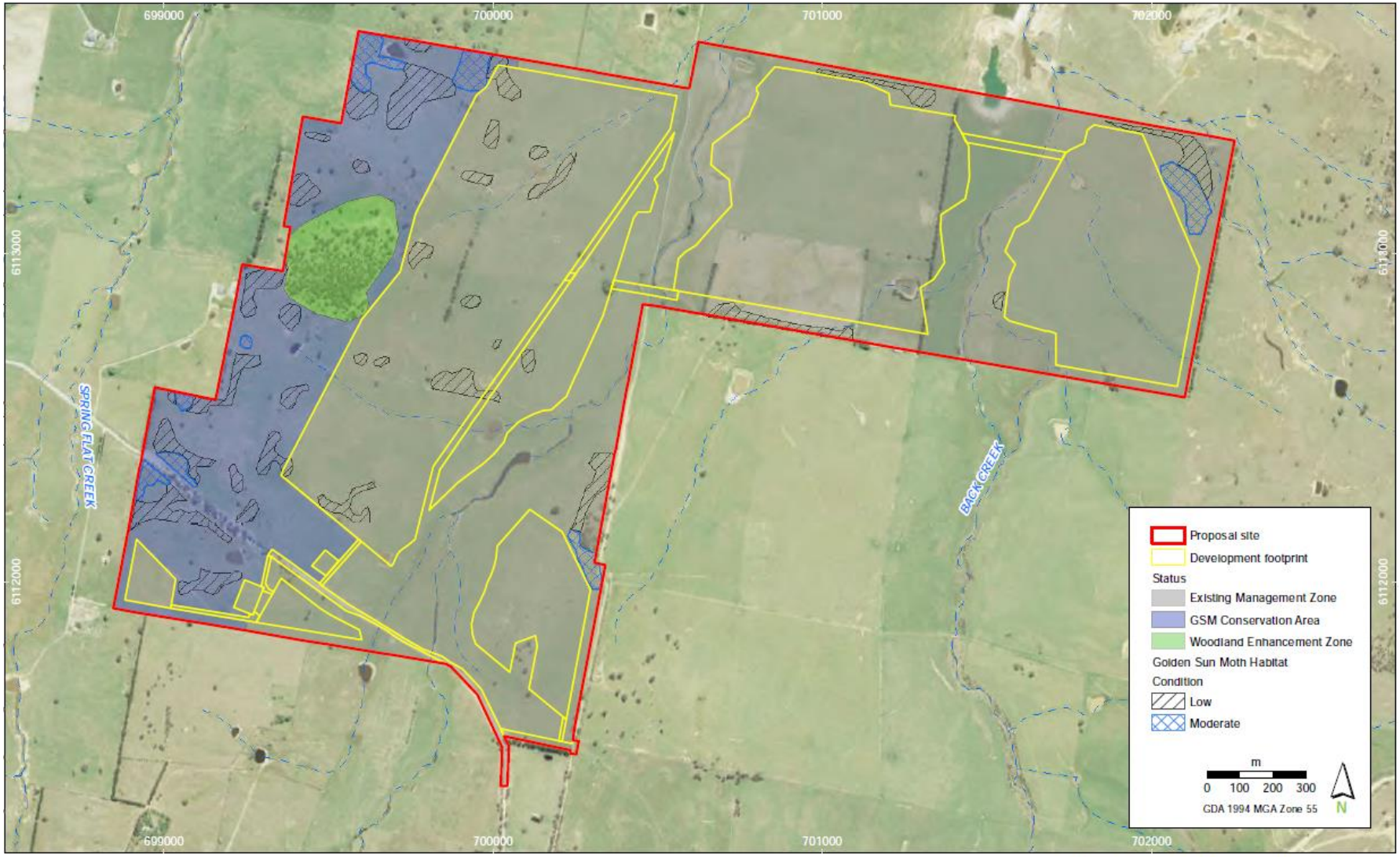

Figure J2 | Proposed Golden Sun Moth conservation area

Additional EPBC Act Considerations

Table J1 contains the additional mandatory considerations, factors to be taken into account and factors to have regard to under the EPBC Act additional to those already discussed.

Table J1 | Additional considerations for the Commonwealth Minister under the EPBC Act

EPBC Act section	Considerations	Conclusion
Mandatory Considerations		
136(1)(b)	Social and economic matters are discussed in section 2.1 and 5.4 of this report.	The project would provide benefits for the local and regional economy and is of public benefit. Up to 200 workers would be required during the construction period and RES has committed to source workers from the local community where possible, and would provide for 5-10 jobs during operation of the project. Impacts on the local community would mostly occur during the construction period, which has been considered in the assessment report. The recommended conditions require the Applicant to implement road upgrades, manage traffic movements through the village of Sutton, and minimise potential amenity impacts including noise, dust and visual by maintaining a setback distance to the nearest receiver. Furthermore, RES has committed to contribute up to $1,260,000 to the community via a Voluntary Planning Agreement with Council which would be used to fund community enhancement projects.
Factors to be taken into account		
3A, 391(2)	Principles of ecologically sustainable development (ESD), including the precautionary principle, have been taken into account, in particular: • the long term and short term economic, environmental, social and equitable considerations that are relevant to this decision; • conditions that restrict environmental impacts and impose monitoring and adaptive management, reduce any lack of certainty related to the potential impacts of the project;	The Department considers that the project, if undertaken in accordance with the recommended conditions of consent, would be consistent with the principles of ESD.

EPBC Act section	Considerations	Conclusion
	• conditions requiring the project to be delivered and operated in a sustainable way to protect the environment for future generations and conserving the relevant matters of national environmental significance; • advice provided within this report reflects the importance of conserving biological diversity, ecological and cultural integrity in relation to all of the controlling provisions for this project; and • mitigation measures to be implemented which reflect improved valuation, pricing and incentive mechanisms are promoted by placing a financial cost on the Applicant to mitigate the environmental impacts of the project.	
136(2)(e)	Other information on the relevant impacts of the action.	The Department considers that all information relevant to the impacts of the project has been taken into account in its assessment.
Factors to have regard to		
176(5)	Bioregional plans	There is no approved bioregional plan related to the activity.
Consideration on deciding conditions		
134(4)	Must consider: • Information provided by the person proposing to take the action or by the designated Applicant of the action; and • The desirability of ensuring as far as practicable that the condition is a cost effective means for the Commonwealth and the person taking the action to achieve the object of the condition.	All project related documentation is available from the Department's website www.planningportal.nsw.gov.au The Department considers that the conditions at Appendix I are a cost effective means of achieving their purpose. The conditions are based on material provided by the Applicant that was prepared in consultation with the Department, BCD and other government agencies.

Conclusions on Controlling Provisions

For the reasons set out in Section 5.3 of this report and this Appendix, the Department considers that the impacts of the action would be acceptable, subject to the avoidance and mitigation measures described in the EIS, Amendment Report and the recommended conditions of consent in **Appendix I**.