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Independent Planning Commission

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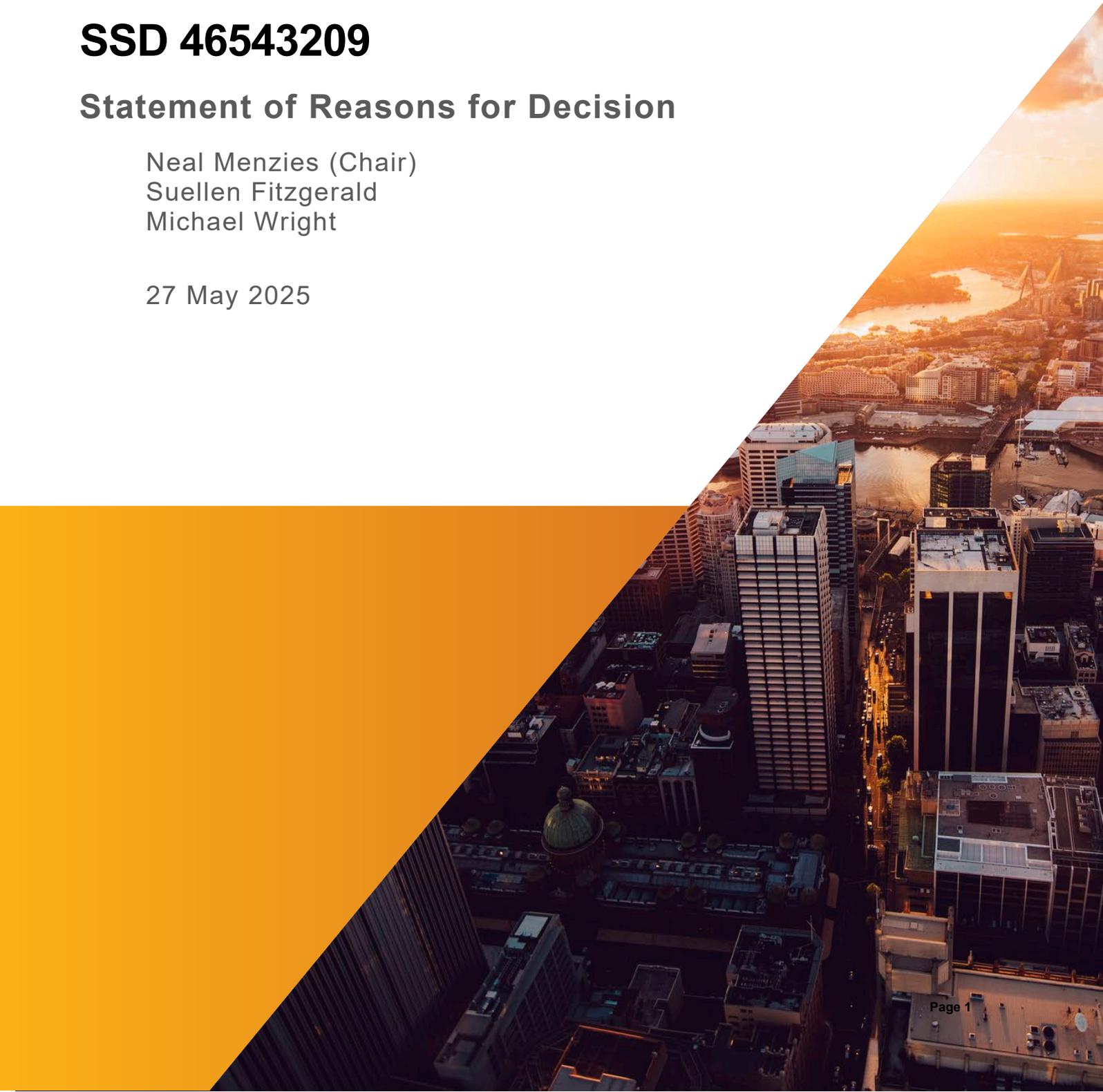
# Muswellbrook Solar

## SSD 46543209

### Statement of Reasons for Decision

Neal Menzies (Chair)  
Suellen Fitzgerald  
Michael Wright

27 May 2025



## Executive Summary

ESCO Solar Farm 9 Pty Ltd as trustee for the ESCO Solar Farm 9 Trust (Applicant) has applied for development consent for the construction of a new 135-megawatt solar farm, battery energy storage system and associated facilities, known as the Muswellbrook Solar Farm (Project). The Site is located adjacent to and within the former Muswellbrook Coal Mine (Site), approximately 2.5 km east of Muswellbrook within the Muswellbrook Shire Council (Council) local government area and Hunter-Central Coast Renewable Energy Zone.

The Project requires approximately \$302 million in capital investment, up to 200 construction related jobs and nine operational jobs.

The Project is State significant development (SSD) pursuant to section 4.36 of the *Environmental Planning and Assessment Act 1979* and section 2.6(1) of *State Environmental Planning Policy (Planning Systems) 2021*. The NSW Independent Planning Commission (Commission) is the consent authority for the Project as more than 50 public submissions by way of objections were made to the Department of Planning, Housing and Infrastructure during its assessment of the application.

Commissioners Neal Menzies (Chair), Suellen Fitzgerald and Michael Wright were appointed to constitute the Commission Panel in determining the application. As part of the determination process the Commission met with representatives of the Applicant, the Department and Council.

Key issues which are the subject of findings in the Statement of Reasons for Decision relate to social and economic impacts, visual impacts, the energy transition, land use compatibility, traffic and transport.

The Commission sought additional information from the Applicant and the Department. After consideration of the material and views of the community, the Commission has determined that, subject to conditions, development consent should be granted to the SSD application.

The Commission finds that the Site is suitable for the Project given its location within the Hunter-Central Coast Renewable Energy Zone and its consistency with the applicable strategic land use planning framework and relevant statutory requirements. The Project represents a significant contribution to the State's transition to renewable energy and renewable energy targets. Specific conditions have been imposed by the Commission to ensure potential impacts arising from the development are adequately addressed. These include requirements for the Applicant to undertake a road safety audit associated with proposed road works, consult with Council on road maintenance, develop a waste management plan, prepare and implement a biodiversity management plan, develop an accommodation and employment strategy and prepare a comprehensive decommissioning and rehabilitation plan.

The Commission's reasons for approval of the Project are set out in this Statement of Reasons for Decision.

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## Defined Terms

ABBREVIATION	DEFINITION
<b>AAM</b>	Additional and Appropriate Measures
<b>AES</b>	Accommodation and Employment Strategy
<b>Applicant</b>	ESCO Solar Farm 9 Pty Ltd as trustee for the ESCO Solar Farm 9 Trust
<b>Applicant supporting documentation</b>	Additional information and documentation provided to the Department by the Applicant dated 12 June 2024, 25 June 2024, 19 July 2024, 22 July 2024, 9 August 2024, 26 August 2024, 10 September 2024, 10 October 2024, 21 October 2024, 13 November 2024, 11 December 2024, 13 December 2024, the 'Additional and Appropriate Measures' letter dated 25 June 2024 and Preliminary Site Investigation, dated 7 May 2025
<b>Application</b>	Muswellbrook Solar Farm (SSD-46543209)
<b>APZ</b>	Asset Protection Zone
<b>AR</b>	Department's Assessment Report
<b>AR para</b>	Paragraph of the Department's Assessment Report
<b>BAM</b>	Biodiversity Assessment Method
<b>BC Act</b>	<i>Biodiversity Conservation Act 2016</i>
<b>BCS</b>	Biodiversity Conservation and Science Group within the NSW Department of Climate Change, Energy, the Environment and Water
<b>BDAR</b>	Biodiversity Development Assessment Report
<b>BESS</b>	Battery Energy Storage System
<b>Biodiversity Offsets Scheme</b>	<i>NSW Biodiversity Offsets Policy for Major Projects</i>
<b>BSAL</b>	Biophysical Strategic Agricultural Land
<b>Commission</b>	Independent Planning Commission of NSW
<b>Council</b>	Muswellbrook Shire Council
<b>CPI</b>	Consumer Price Index
<b>DCCEEW</b>	Australian Government Department of Climate Change, Energy, the Environment and Water
<b>Department</b>	Department of Planning, Housing and Infrastructure
<b>Department's AR</b>	Department's Assessment Report, dated December 2024
<b>DPIRD Agriculture</b>	Agriculture Division of the NSW Department of Primary Industries and Regional Development
<b>DRP</b>	Decommissioning and Rehabilitation Plan
<b>EII Act</b>	<i>Electricity Infrastructure Investment Act 2020</i>
<b>EIS</b>	Applicant's Environmental Impact Statement, dated July 2023, and its accompanying appendices
<b>EMS</b>	Environmental Management Strategy
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPA</b>	NSW Environment Protection Authority
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<b>ICNIRP</b>	International Commission on Non-Ionizing Radiation Protection
<b>EPI</b>	Environmental Planning Instrument
<b>ESD</b>	Ecologically Sustainable Development
<b>FRNSW</b>	Fire and Rescue NSW
<b>Guideline FAQ</b>	Large-scale Energy Guideline, Frequently Asked Questions
<b>ha</b>	Hectare
<b>HCC REZ</b>	Hunter-Central Coast Renewable Energy Zone
<b>km</b>	Kilometres

<b>kV</b>	Kilovolt
<b>LGA</b>	Local Government Area
<b>LSC</b>	Land Soil Capability
<b>Mandatory Considerations</b>	Relevant mandatory considerations, as provided in s 4.15(1) of the EP&A Act
<b>Material</b>	The material set out in section 3 of this report.
<b>MCC</b>	Muswellbrook Coal Company
<b>MNES</b>	Matters of national environmental significance
<b>Muswellbrook LEP</b>	<i>Muswellbrook Local Environmental Plan 2009</i>
<b>MW</b>	Megawatt
<b>SEPP Planning Systems</b>	<i>State Environmental Planning Policy (Planning Systems) 2021</i>
<b>SEPP Resilience and Hazards</b>	<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>
<b>SEPP Transport and Infrastructure</b>	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>
<b>PHA</b>	Preliminary Hazard Analysis
<b>Project</b>	Muswellbrook Solar Farm as described in section 2.3 of this report.
<b>RFS</b>	NSW Rural Fire Service
<b>SAII</b>	Serious and Irreversible Impacts
<b>Site</b>	As described in section 2 of this report.
<b>SSD</b>	State Significant Development
<b>SWMP</b>	Soil and Water Management Plan
<b>Technical Supplement</b>	<i>NSW Large-Scale Solar Energy Guideline 2022 and Solar Energy Visual Technical Supplement</i>
<b>TfNSW</b>	Transport for NSW
<b>TMP</b>	Traffic Management Plan
<b>VPA</b>	Voluntary Planning Agreement
<b>WMP</b>	Waste Management Plan

# 1. Introduction

1. On 19 December 2024, the NSW Department of Planning, Housing and Infrastructure (**Department**) referred the State significant development (**SSD**) application SSD-46543209 (**Application**) by ESCO Solar Farm 9 Pty Ltd as trustee for the ESCO Solar Farm 9 Trust (**Applicant**) to the NSW Independent Planning Commission (**Commission**) for determination.
2. The Application seeks approval for the Muswellbrook Solar Farm (the **Project**), located in the Muswellbrook Shire Council (**Council**) Local Government Area (**LGA**) pursuant to section 4.38 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**).
3. The Application constitutes SSD under section 4.36 of the EP&A Act and section 20 of Schedule 1 of the *State Environmental Planning Policy (Planning Systems) 2021* (**SEPP Planning Systems**) as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million.
4. In accordance with section 4.5(a) of the EP&A Act and section 2.7 of SEPP Planning Systems, the Commission is the consent authority as more than 50 public submissions have been made by way of objection.
5. Andrew Mills, Chair of the Commission, determined that Neal Menzies (Chair), Suellen Fitzgerald and Michael Wright would constitute the Commission for the purpose of exercising its functions with respect to the Application.
6. The Department concluded in its Assessment Report (**AR**) that the Project site offers strong solar resources, direct access to regional roads, and efficient connection to the electricity network via transmission infrastructure with available capacity. The Department's AR also concluded that the Project would achieve an appropriate balance between optimising solar resource development and minimising impacts on surrounding land users and the environment. The Department deemed the Project to be in the public interest and approvable.

## 2. The Application

### 2.1 Site and locality

7. The Project site (the **Site**) is defined as being within the Project area illustrated in **Figure 1** below and encompasses approximately 482 hectares (**ha**). The Site is located approximately 2.5 kilometres (**km**) east of Muswellbrook and within the Hunter-Central Coast Renewable Energy Zone (**HCC REZ**). Access to the Site is via the New England Highway, using either Muscle Creek Road or Sandy Creek Road (AR para 6).
8. The Site is adjacent to and within the remaining Muswellbrook Coal Company (**MCC**) coal mine infrastructure area and open-cut pits. The Site also includes areas currently used for agricultural grazing. It consists largely of previously cleared land, is traversed by existing 132 kilovolt (**kV**) and 330 kV transmission lines, and comprises land zoned RU1 Primary Production, SP2 Infrastructure (classified road), and C3 Environmental Management (AR para 5).

9. The Site does not contain any mapped Biophysical Strategic Agricultural Land (**BSAL**). Land within the development footprint has been verified as Land Soil Capability (**LSC**) Classes 4 (moderate to high limitations), 5 (high limitations), and 6 (very high limitations) (AR para 7).
10. There are 128 non-associated residences located within 2 km of the development footprint, the majority of which are within the Woodland Ridge Estate located south of the Site. Of these, 20 residences are located within 500 m of the Site (AR para 9).

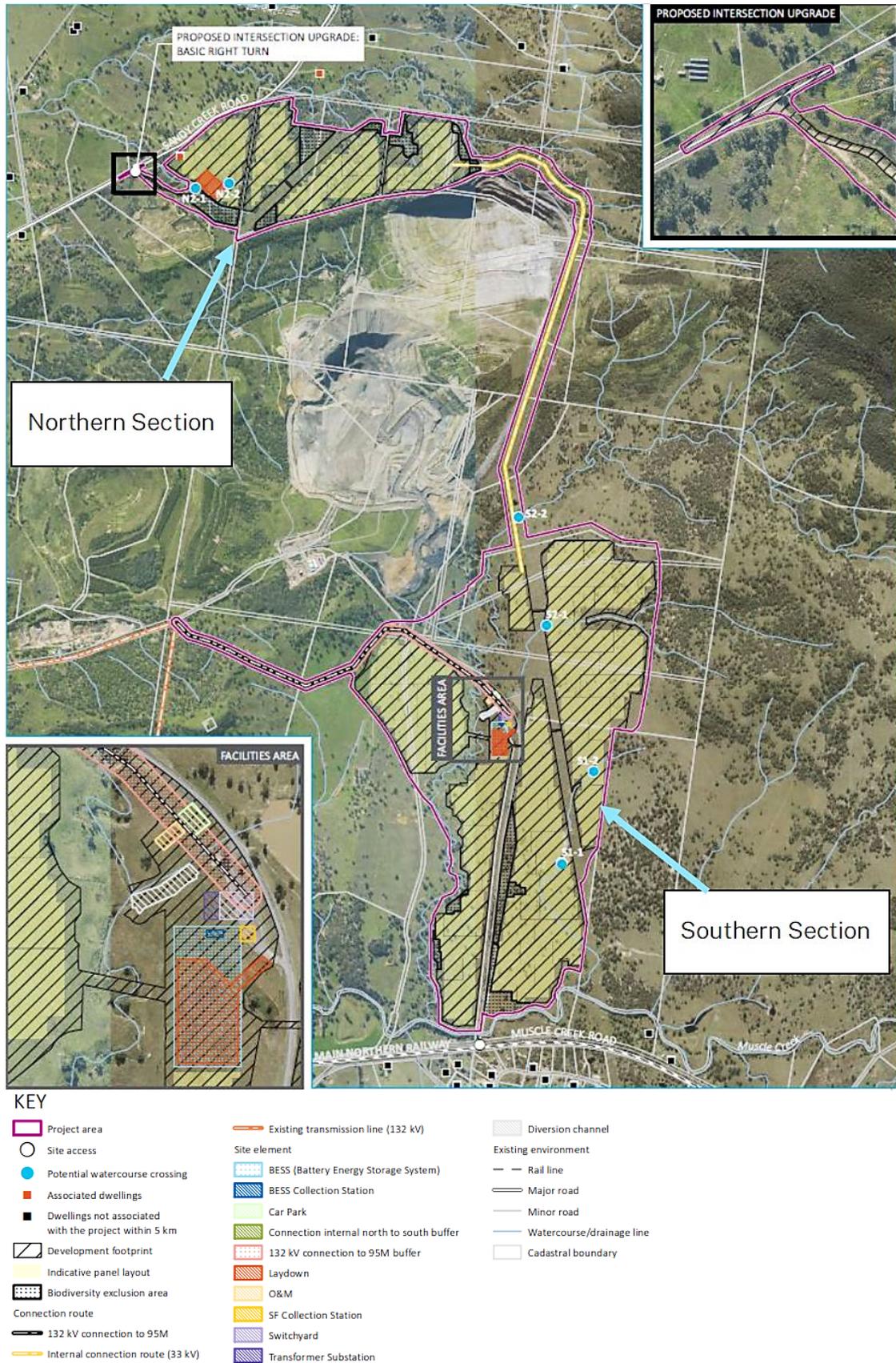
## 2.2 Existing operations

11. According to the Applicant's Environmental Impact Statement (**EIS**), the Project is located adjacent to and within the MCC coal mine infrastructure area, which is situated on land primarily owned by Idemitsu, the mine operator. Coal mining operations at Idemitsu's MCC coal mine ceased in November 2022, following 115 years of activity.
12. Idemitsu has prepared a Draft Master Plan for the redevelopment of the MCC coal mine site to support post-mining investment and employment in the region (EIS, p.1). The Draft Master Plan sets out the vision for the site, referred to as the Muswellbrook Clean Industries Precinct. This precinct encompasses a variety of renewable energy and other initiatives, including the Muswellbrook pumped hydro energy storage, solar and battery storage facilities, green hydrogen projects, and training facilities (EIS, p.1).

## 2.3 The Project

13. The Applicant is seeking approval for a 135-megawatt (**MW**) solar farm, a battery energy storage system (**BESS**) with a capacity of up to 135 MW and storage duration of 2 hours, and associated infrastructure including (but not limited to):
  - approximately 300,000 solar panels and associated mounting infrastructure;
  - an on-site substation with a connection voltage of up to 132 kV;
  - an operational infrastructure area, including demountable offices, amenities, equipment sheds and storage;
  - electricity transmission line infrastructure connecting to the grid, and
  - other ancillary infrastructure.
14. The Site is 482 ha in size with a proposed development footprint of 318 ha and solar array area of 300 ha (AR Table 1).
15. The Project also includes the use of existing MCC site access points along Sandy Creek Road (northern access) and Muscle Creek Road (southern access). Additionally, it includes an upgrade to the intersection of Sandy Creek Road and the northern Site access which would consist of a basic right turn treatment for vehicles turning right into the Site from Sandy Creek Road (AR para 6).
16. The construction period for the Project is expected to span approximately 31 months, comprising a 15-18 month construction period for the solar farm and a 13 month construction period for the BESS. The expected operational life of the infrastructure is approximately 35 years (AR Table 1).
17. Further detail about the main aspects of the Project is set out in Table 1 of the Department's AR.

Figure 1 – The Project Site (Source: Department’s AR, Figure 3)



## 3. The Commission's Consideration

### 3.1 Material considered by the Commission

18. In this determination, the Commission has considered the following material (**Material**):
- the Planning Secretary's Environmental Assessment Requirements, dated 21 September 2022;
  - the following information provided by the Applicant for the Department's assessment:
    - the Environmental Impact Statement (**EIS**), dated 7 July 2023 and its accompanying appendices;
    - the Submissions Report, dated 15 February 2024 and its accompanying appendices;
    - information and supporting documentation provided in response to the Department's requests for additional information (**Applicant supporting documentation**);
  - all public submissions on the EIS made to the Department during public exhibition;
  - all Government agency advice to the Department;
  - the Department's AR, dated December 2024;
  - the Department's recommended conditions of consent;
  - comments and presentation material from meetings with the Department, Applicant and Muswellbrook Shire Council (**Council**), as referenced in Table 4 below;
  - responses to the Commission's questions on notice provided by the Department, dated 24 January 2025, and the Applicant, dated 24 January 2025;
  - Council's submission to the Commission, dated 7 February 2025;
  - comments and material presented at the public meeting held on 12 February 2025;
  - all written comments received by the Commission up until and including 19 February 2025;
  - the Department's responses to the Commission's request for further information, dated 4 March 2025, 11 March 2025 and including all supporting attachments;
  - the Department's advice dated 14 March 2025 on the feasibility and workability of proposed conditions.

### 3.2 Strategic context

19. The Commission has considered the strategic planning framework, policies and guidelines relevant to the Site and Project. The Commission finds that the Project is consistent with both the Commonwealth and NSW State Government's strategic planning framework, policies and guidelines (see Table 1 below).

Table 1 - Strategic planning framework, policies and guidelines

Strategic Context	Discussion
<b>Australia's Long Term Emissions Reduction Plan 2021</b>	The Commonwealth Government's Long-Term Emissions Reduction Plan 2021 states that <i>"an increased share of renewables will be the foundation for a near zero emission grid by 2050"</i> (page 45), that <i>"energy storage technologies are essential for Australia to shift to lower emission electricity systems"</i> and that <i>"the challenge is to ensure our electricity system remains secure, reliable and affordable as the share of variable renewables grows"</i> (pages 45 and 52).
<b>Annual Climate Change Statement 2023</b>	The Australian Government's Annual Climate Change Statement 2023 makes commitments on achieving net zero by 2050, noting that the <i>"Climate Change Act 2022 legislated our emissions reduction targets of 43% below 2005 levels by 2030 and net zero by 2050"</i> (page 5). As the largest emissions source in the Australian economy, <i>"decarbonising the electricity sector will be vital to meeting our emissions reduction targets"</i> (page 22).
<b>Australian Energy Market Operator's 2024 Integrated System Plan</b>	The Integrated System Plan <i>"is a plan for investment in the NEM (National Energy Market) to ensure a reliable and secure power system, through Australia's transition to a net zero economy"</i> (page 3). The Plan states that:  <i>"As coal-fired power stations retire, renewable energy connected with transmission and distribution, firmed with storage, and backed up by gas-powered generation is the lowest-cost way to supply electricity to homes and businesses through Australia's transition to a net zero economy."</i> (page 3).
<b>NSW Climate Change Policy Framework 2016</b>	The NSW Climate Change Policy Framework 2016 describes the NSW Government's objective to achieve net zero emissions by 2050 and aim to <i>"maximise the economic, social and environmental wellbeing of NSW in the context of a changing climate and current and emerging international and national policy settings and actions to address climate change"</i> (page 1).
<b>NSW Net Zero Plan Stage 1: 2020-2030 and Implementation update 2022</b>	The Net Zero Plan Stage 1: 2020-2030 outlines the NSW Government's objective <i>"to achieve net zero emissions by 2050"</i> (page 4). The 2022 implementation update on the Plan provides details of the NSW Government's policies, programs and progress in achieving the Plan's priorities.
<b>NSW Electricity Infrastructure Roadmap 2020</b>	In November 2020, the NSW Government released the NSW Electricity Infrastructure Roadmap, which is NSW's 20-year plan to transform the electricity system by coordinating investment in transmission, generation, storage and upgrading infrastructure as NSW's ageing coal-fired power plants are retired.
<b>Electricity Strategy 2019</b>	Released by the NSW Government in 2019, the NSW Electricity Strategy notes that renewable energy is <i>"now the most economic form of new generation, with a mix of wind and solar firmed with gas, batteries and pumped hydro expected to be the most economic form of reliable electricity"</i> (page 11). The Strategy also seeks to prioritise renewable energy zones to diversify the State's energy mix and provide affordable electricity supply (page 20).

Strategic Context	Discussion
<b>NSW Solar Energy Guideline</b>	<p>The Department's Large-Scale Solar Energy Guideline (2022) "provides the community, industry, applicants and regulators with guidance on the planning framework for the assessment of large-scale solar energy projects" (page 6).</p> <p>The Department's AR (para 18) outlines that an updated solar guideline was released in November 2024, which did not change the key outcomes of the assessment.</p> <p>The Department's AR (para 19) provides that "the Guideline recognises that large-scale solar projects could help to reduce reliance on fossil fuels, thereby contributing to reduction in air pollution and greenhouse gas emissions, while also supporting regional NSW through job creation and investment in communities that may not have similar opportunities from other industries".</p>
<b>Renewable Energy Zone</b>	<p>The NSW Government has declared five renewable energy zones under section 24(1) of the <i>Electricity Infrastructure Investment Act 2020 (EII Act)</i> to help energy transmission and generation capabilities in strategic areas.</p>
<b>Regional and Local Plans</b>	<p>In determining the Application, the Commission has also considered the following regional and local plans:</p> <ul style="list-style-type: none"> <li>• <i>Hunter Regional Plan 2036</i>;</li> <li>• <i>Hunter Regional Plan 2041</i>; and</li> <li>• <i>Muswellbrook 2020-2040 Local Strategic Planning Statement</i>.</li> </ul> <p>The Commission considers that the Project is generally consistent with relevant aspects of the above regional and local plans.</p>

### 3.2.1 Other energy projects in the area

20. The Commission has considered the cumulative impacts of six SSD renewable energy projects located within 10 km of the Site, which are at various stages of the assessment process as set out in Table 2 of the Department's AR. Of these projects, two are under construction ('Maxwell Solar Farm' and 'Liddell Battery and Bayswater Ancillary Works Project'), two have been approved ('Muswellbrook BESS' and 'Bowmans Creek Wind Farm'), and two are proposed ('Muswellbrook Pumped Hydro Energy Storage Project' and 'Upper Hunter BESS').
21. The Department states that since the Project was lodged, an SSD application has also been submitted for the 'Maison Dieu Solar Farm' (AR para 12). However, in accordance with the Department's *Cumulative Impact Assessment Guidelines for State Significant Projects 2021*, the Department notes that both the Applicant's and its own cumulative impact assessments have focused on relevant future projects that have been exhibited and are currently under assessment, as outlined in Table 2 of the AR (AR para 12).

### 3.3 Statutory context

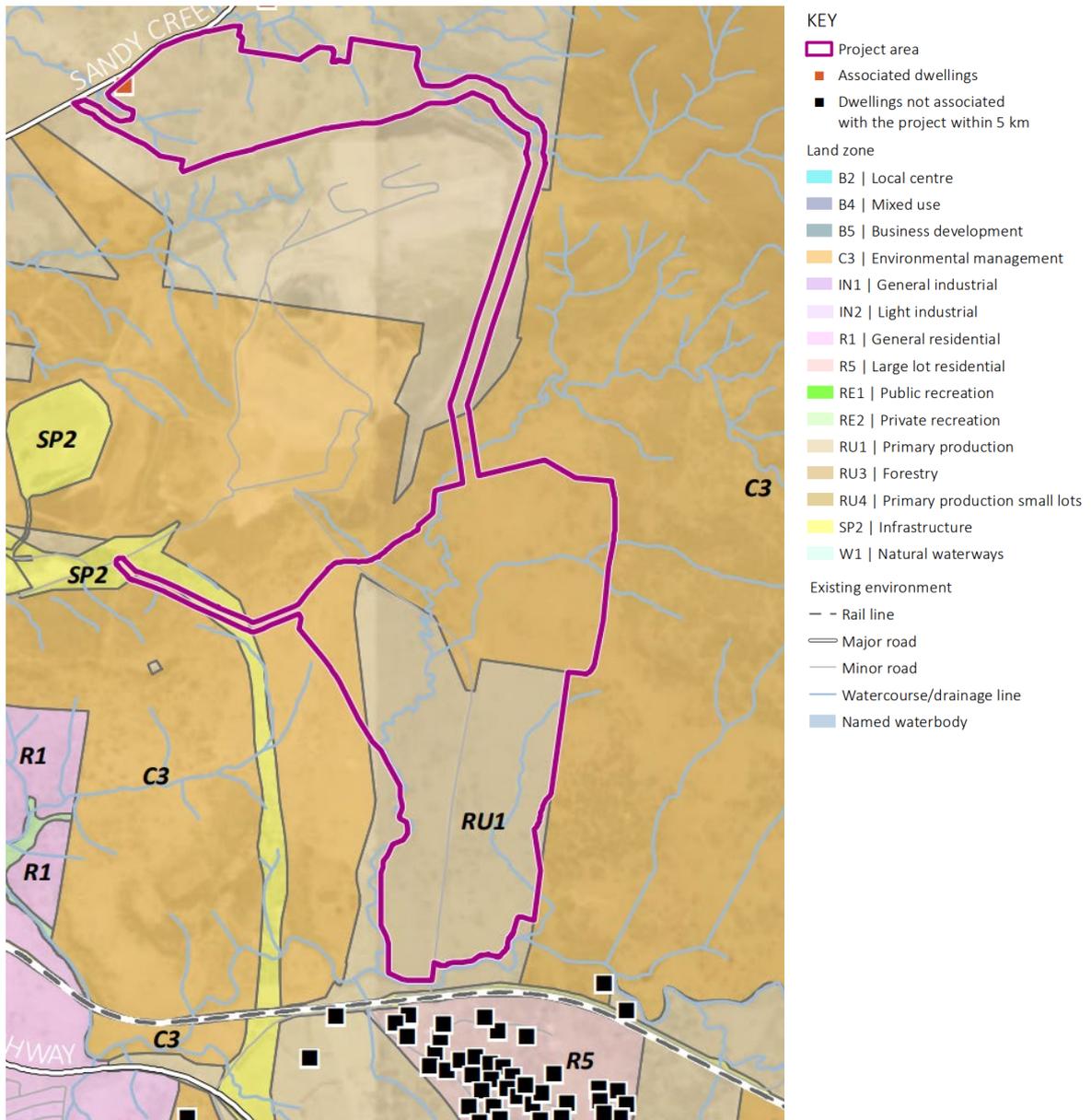
22. The Commission has given consideration to the statutory context relevant to the Project in **Table 2** below.

*Table 2 – Statutory context*

<b>Statutory Context</b>	<b>Commission's Comments</b>
<b><i>Objects of the EP&amp;A Act</i></b>	In this determination, the Commission has considered the Objects of the EP&A Act and is satisfied that the Application is consistent with those Objects.
<b><i>Ecologically Sustainable Development</i></b>	The Commission finds that the Project is consistent with ecological sustainable development (ESD) principles and would achieve an acceptable balance between environmental, economic and social considerations.
<b><i>State Significant Development</i></b>	The Application is SSD under section 4.36 of the EP&A Act because it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million as per section 20 of Schedule 1 of SEPP Planning Systems.
<b><i>Permissibility</i></b>	<p>The Site is located on land zoned RU1 Primary Production, SP2 Infrastructure (Classified Road) and C3 Environmental Management under the <i>Muswellbrook Local Environmental Plan 2009 (Muswellbrook LEP)</i>. Refer to <b>Figure 2</b>.</p> <p>Electricity generating works are permitted with consent on any land in a prescribed non-residential zone, including RU1 Primary Production and SP2 Infrastructure zones, under section 2.36 of the <i>State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP Transport and Infrastructure)</i>.</p> <p>Although land zoned C3 Environmental Management is not a prescribed zone under SEPP Transport and Infrastructure, section 4.38(3) of the EP&amp;A Act allows development consent to be granted for SSD applications where the development is partly prohibited.</p>
<b><i>Commonwealth matters</i></b>	<p>According to the Department, a delegate of the Australian Government Department of Climate Change, Energy, the Environment and Water (<b>DCCEEW</b>) determined the Project was a 'controlled action' pursuant to the <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i>, due to its potential impacts on threatened species and communities (AR para 29).</p> <p>The Australian Government agreed that the proposal may be assessed by the NSW Government, in accordance with the Bilateral Agreement between the NSW and Assessment Requirements. The Department consulted with DCCEEW in accordance with the accredited assessment process and provided draft copies of this assessment report and the recommended conditions of consent to DCCEEW for comment. The Department has adopted the comments of DCCEEW within its assessment (AR para 30-31).</p> <p>The Commission has considered the Department's assessment of matters of national environmental significance (<b>MNES</b>) and agrees that the impacts of the 'action' would be acceptable, subject to the avoidance and mitigation measures proposed by the Applicant and the Department's recommended conditions of consent.</p>

Statutory Context	Commission's Comments
<b>Integrated and other NSW Approvals</b>	Pursuant to section 4.41 of the EP&A Act, several approvals are integrated into the SSD process and therefore are not required to be separately obtained for the Project (AR para 27). Pursuant to section 4.42 of the EP&A Act, several further approvals are required but must be substantially consistent with any development consent for the Project (AR para 27).

Figure 2 – Project area zoning under Muswellbrook LEP (Source: EIS, Figure 3.7 extract)



### 3.4 Mandatory considerations

23. In determining this Application, the Commission is required to take into consideration the matters listed in section 4.15(1) of the EP&A Act (to the extent they are relevant to the development the subject of the Application) (**Mandatory Considerations**). The mandatory considerations are not an exhaustive statement of the matters the Commission is permitted to consider in determining the Application. To the extent that any of the Material does not fall within the mandatory considerations, the Commission has considered that Material where it is permitted to do so, having regard to the subject matter, scope and purpose of the EP&A Act.

Table 3 – Mandatory Considerations

<b>Mandatory Considerations</b>	<b>Commission's Comments</b>
<b>Relevant environmental planning instruments (EPIs)</b>	<p>Appendix I of the Department's AR identifies relevant EPIs for consideration. The key EPIs (in their present, consolidated form) include:</p> <ul style="list-style-type: none"> <li>• SEPP Planning Systems;</li> <li>• SEPP Transport and Infrastructure;</li> <li>• <i>State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP Resilience and Hazards)</i>; and</li> <li>• Muswellbrook LEP.</li> </ul> <p>The Commission agrees with the Department's assessment of EPIs as set out in its AR and in the additional and supplementary information provided. The Commission therefore adopts the Department's assessment in this regard.</p>
<b>Development control plans (DCPs)</b>	<p>Section 2.10 of SEPP Planning Systems states that development control plans do not apply to SSD. The Commission does not consider any development control plans to be relevant to the determination of the Application.</p>
<b>Any planning agreement or draft planning agreement</b>	<p>The Applicant has proposed to enter into a voluntary planning agreement (<b>VPA</b>) with Council, which has agreed to the general terms proposed should the Project be approved. The terms of offer are (AR, Table 9):</p> <ul style="list-style-type: none"> <li>• monetary contribution of \$850 per MW paid annually and adjusted for consumer price index (<b>CPI</b>).</li> <li>• annual instalments spent in the following ratios: <ul style="list-style-type: none"> <li>○ ten percent (10%) specialist staff contribution;</li> <li>○ forty-five percent (45%) Muswellbrook Shire Community Benefit Fund contribution (incorporating training and scholarships, provided these are not in lieu of the Applicant employing trainees and apprentices); and</li> <li>○ forty-five percent (45%) neighbour benefits contribution (administered by Council).</li> </ul> </li> </ul>
<b>Likely impacts of the development</b>	<p>The likely impacts of the Application have been considered in section 5 of this Statement of Reasons for Decision.</p>
<b>Suitability of the site for development</b>	<p>The Commission has considered the suitability of the Site and finds that the Site is suitable for the following reasons:</p> <ul style="list-style-type: none"> <li>• the Site is located within the established HCC REZ;</li> </ul>

- the Site can physically cater for the proposed development and has suitable access to solar resources;
- the use of the Site for the purpose of electricity generation is an orderly and economic use of the land;
- the Site has access to existing electricity transmission networks;
- the Site can be readily accessed from the State and regional road network;
- the development footprint avoids high-value agricultural land whilst also not precluding the use of the land for agriculture (sheep grazing) during operation;
- adverse impacts on surrounding receivers and local biodiversity have been minimised as far as practicable and would be further managed and mitigated by the imposed conditions of consent;
- the development of the Site for the purpose of electricity generation will facilitate social and economic benefits for the community and for the State of NSW; and
- the development of the Site will assist in meeting Australia’s and NSW’s target of net zero emissions by 2050.

Matters pertinent to Site suitability are also discussed in section 5 below.

***The public interest***

The Commission considers that the carrying out of the Project would be, subject to the imposed conditions, in the public interest.

The Project represents a significant contribution to the State’s transition to renewable energy and renewable energy targets. The Project will support employment (including up to 200 construction jobs and 9 operational jobs) and have the capacity to power up to 52,310 homes. Further, the Project is anticipated to contribute to the local economy through expenditure and local procurement of goods and services.

The Commission has weighed the predicted benefits of the Application against its predicted negative impacts (detailed in section 5 below) and finds that, with the imposed conditions of consent, the likely benefits of the Project will outweigh its predicted negative impacts.

### 3.5 The Commission’s meetings

24. As part of the determination process, the Commission met with various persons as set out in **Table 4**. All meeting transcript/notes were made available on the Commission’s website.

*Table 4 – Commission’s Meetings*

<b>Meeting</b>	<b>Date</b>	<b>Transcript/notes available on</b>
<b><i>Applicant</i></b>	16 January 2025	21 January 2025
<b><i>Department</i></b>	17 January 2025	21 January 2025
<b><i>Council</i></b>	17 January 2025	21 January 2025
<b><i>Public Meeting</i></b>	12 February 2025	14 February 2025

### 3.6 Site inspection and locality tour

25. On 10 February 2025, the Commission conducted an inspection of the Site. Commissioners Neal Menzies (Chair), Suellen Fitzgerald and Michael Wright attended the Site inspection. The Commission invited a representative from Council to attend and observe at the Site Inspection. The Commission also viewed the Site from vantage points located south of the Site. Notes from the Site inspection were made available on the Commission's website on 14 February 2025.

## 4. Community Participation & Public Submissions

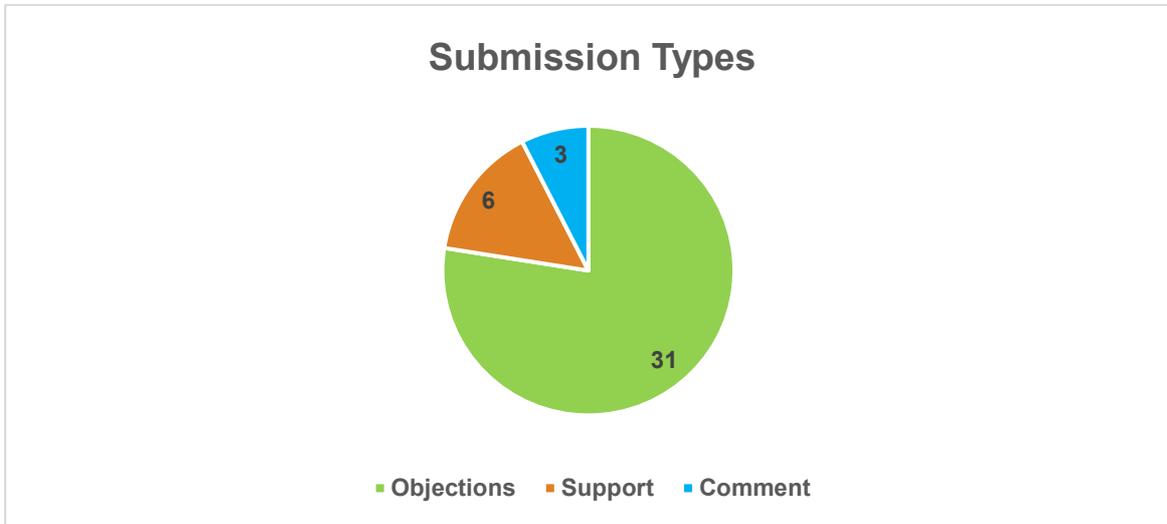
### 4.1 Public meeting

26. The Commission conducted a public meeting on 12 February 2025. The public meeting was held online and live streamed, with registered speakers presenting to the Commission Panel via telephone or video conference.
27. In total, the Commission heard from the Department, the Applicant, 5 representatives from various community groups/organisations and 5 individual community members during the public meeting. Presentations made at the public meeting have been considered by the Commission as submissions and are referenced in section 4.2 below.

### 4.2 Public submissions

28. As part of the Commission's consideration of the Project, all persons were offered the opportunity to make written submissions to the Commission until 5pm Wednesday 19 February 2025.
29. The Commission received a total of 40 unique written submissions (44 submission in total) on the Application. Unique submissions received comprised (**Figure 3**):
- 6 submissions in support;
  - 31 objections; and
  - 3 comments.
30. Section 4 of this report outlines the matters raised in the submissions received and considered by the Commission. These submissions have been carefully considered, as detailed in the Key Issues section of this report (see section 5 below).

Figure 3 – Unique submissions received by the Commission categorised by type

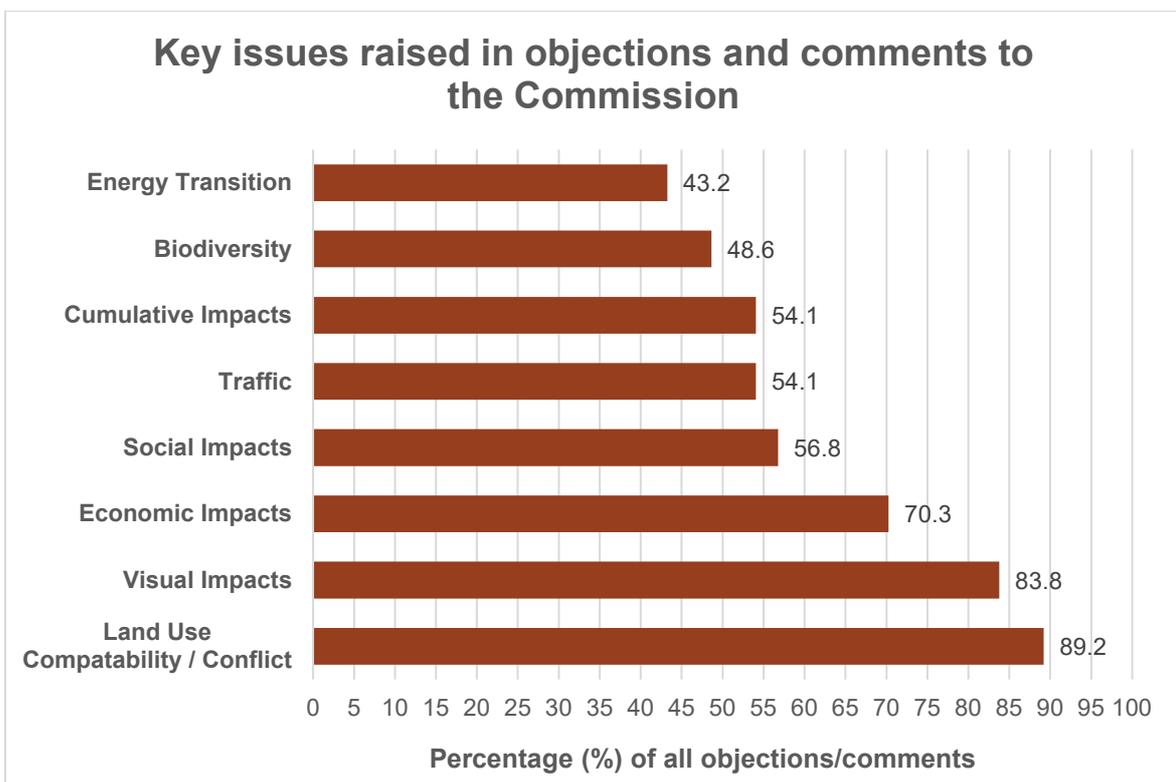


31. For the reasons set out in this Statement of Reasons, the Commission considers that the matters raised in submissions do not preclude the grant of development consent and that the matters can be satisfactorily addressed by the conditions of consent imposed by the Commission.

**4.2.1 Key issues raised**

32. Key issues raised in written objections and comments to the Commission are outlined below in **Figure 4**.

Figure 4 – Key issues raised in written submissions to the Commission



#### 4.2.2 Summary of issues

33. **Table 5** below provides a summary of issues raised in submissions. The Commission notes that the submissions referred to below are not an exhaustive report of the submissions but are reflective and illustrative of what the Commission regards as the main issues that emerged from the submissions.

*Table 5 – Key issues raised in submissions*

<b>Key issue</b>	<b>Summary of issues raised in written submissions</b>
<b><i>Social and economic impacts</i></b>	<ul style="list-style-type: none"> <li>The Project represents a significant economic opportunity for local and regional businesses and will contribute to the Hunter Valley's energy transition.</li> <li>Concerns over the Project's ability to secure employment of local workforce and <b>procure</b> resources <b>locally</b>.</li> </ul>
<b><i>Visual impacts</i></b>	<ul style="list-style-type: none"> <li>General concerns regarding the Project's visual impacts, especially on the Woodland Ridge Estate located to the south of the Site.</li> </ul>
<b><i>Energy transition</i></b>	<ul style="list-style-type: none"> <li>Project contributes to addressing climate change and the State's energy transition.</li> </ul>
<b><i>Land use compatibility</i></b>	<ul style="list-style-type: none"> <li>General concern about a solar farm not being an appropriate land use in proximity to residential land uses.</li> </ul>
<b><i>Traffic and transport</i></b>	<ul style="list-style-type: none"> <li>General concerns about the condition of the existing road network the Project proposes to utilise.</li> </ul>
<b><i>Other issues</i></b>	<ul style="list-style-type: none"> <li>Other issues raised included cumulative impacts, biodiversity, waste management, contamination, natural hazards, fire risks, workforce and accommodation, and property values.</li> </ul>

## 5. Key Issues

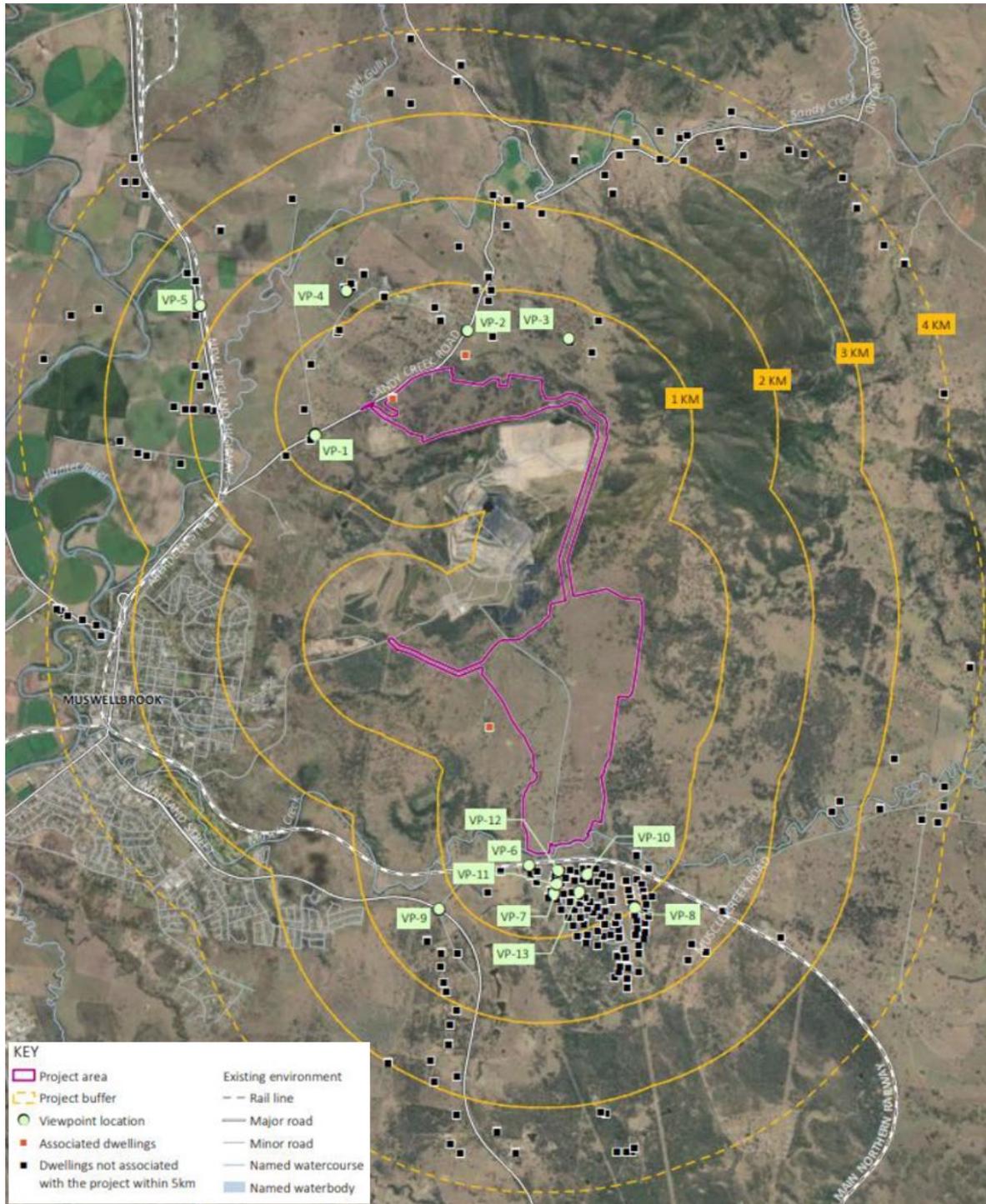
### 5.1 Visual impacts

34. The Applicant provided a Landscape and Visual Impact Assessment (**LVIA**) with the Application and two addendums to the LVIA were also provided to the Department during their assessment process (AR, para 157). The Department undertook an assessment against the provisions of the Large-Scale Solar Energy Guideline (2022) and accompanying *Technical Supplement - Landscape and Visual Impact Assessment* (AR, para 159), finding the potential visual impacts of the Project on the surrounding landscape character, sensitive receivers (i.e. non-associated dwellings) and public viewpoints to be low (AR, para 166).
35. As discussed previously in section 2.1 above, the Site is located on and adjacent to the existing MCC site, with rural land uses and rural-residential developments surrounding the area. A large 'rural lifestyle' estate located to the south of the Site comprises 91 dwellings, the closest of which is 205 m from the Project's boundary (AR, para 160-162). **Figure 5** below shows associated and non-associated dwellings within 5 km of the Site.

#### 5.1.1 Landscape character and residences

36. The Department notes that the land uses within and immediately surrounding the Site are largely mining and agricultural. The Site's topography and existing vegetation is considered by the Department to minimise views of the Project from the surrounding area, further noting impacts on the local landscape have also been reduced through the Project's design process, including a reduction in the development footprint (AR, para 168). The Department found the Project would have a limited impact beyond the immediate vicinity of the Site, including on the broader landscape character of the locality.
37. The topography of the locality and existing mature vegetation also contributes to the visibility of the Project being low, with the Department acknowledging that visibility from surrounding residences would be minimised due to the proposed solar panels being low lying (up to 4 m high), and the BESS and substation being centrally located towards the middle of the Site (AR, para 170-171).
38. There are 128 non-associated residences located within 2 km of the development footprint. The Applicant's visual assessment concluded that no residences would experience moderate or high visual impacts, with all non-associated residences to experience, low, very low, or nil visual impacts when assessed against the Large Scale Solar Energy Guideline (2022) Technical Supplement (AR, para 172).

Figure 5 – Nearby dwellings and project buffers (Source: AR, extract of Figure 8)



### 5.1.2 Cumulative visual impact

39. In consideration of cumulative visual impacts, the Department’s AR (para 175) notes the SSD projects in **Table 6** below are located within the vicinity of the Site.

Table 6 – Cumulative visual impact considerations

Project	Project Status	Distance and Direction from the Site	Department Assessment
<i>Muswellbrook BESS</i>	Approved	1.5km West	In the early stages of the assessment process and would be required to undertake a full assessment of cumulative impacts against the Project, per the <i>Cumulative Impact Assessment Guidelines for State Significant Projects</i> .
<i>Muswellbrook Pumped Hydro</i>	Proposed	1.5km East	
<i>Upper Hunter BESS</i>	Proposed	7km North	
<i>Maxwell Solar Farm</i>	Approved	6km South	No cumulative visual impacts anticipated.
<i>Bowmans Creek Wind Farm (BCWF)</i>	Approved	8km East	Potential for low cumulative visual impacts due to distance, topography and intervening vegetation.

### 5.1.3 Other visual impact matters

#### *Public Viewpoints*

40. A total of 12 public receptor viewpoints were assessed (the closest being 2.8 km west of the development footprint), along with views from three main roads (New England Highway, Muscle Creek Road and Sandy Creek Road) and the nearby railway line. It was found that the Project would have low to nil visual impacts from these public viewpoints (AR, 177-178).

#### *Glint and Glare*

41. The Applicant's glint and glare analysis identified the potential for glare to be experienced by 16 residential receivers and along roads and the railway line adjacent to the Project. Locations most likely to be impacted would be along Muscle Creek Road and the adjacent railway line. Transport for NSW (**TfNSW**) also raised road safety concerns for the proposed Muswellbrook Bypass project due to glare from the solar panels during operation (AR, para 180).
42. The Applicant subsequently undertook additional modelling and proposed panel 'backtracking' (a process of the solar panels being specifically angled to prevent panel-to-panel shading as well as glint and glare impacts). The modelling nominates angles for groups of panels across the Site, ensuring light is reflected away from sensitive receivers (AR, para 181). Conservatively modelled scenarios (i.e. without consideration of existing vegetation in place) resulted in no glare impact on the receivers arising.

### 5.1.4 Commission's findings on visual impacts

43. The Commission acknowledges that the proposed development would result in a visual and landscape character change within the locality, as raised in several submissions received by the Commission. For large-scale solar farm projects, a degree of visual impact is typically an unavoidable development outcome.

44. The Commission notes that non-associated dwellings will, at most, experience a low visual impact, as assessed under the Large-Scale Solar Energy Guideline (2022) and accompanying *Technical Supplement - Landscape and Visual Impact Assessment* (AR, para 165). Throughout the assessment process the Applicant refined the array layout, retained existing vegetation and as discussed above, proposed a panel backtracking scenario to mitigate the Project's visual impacts (AR, para 164).
45. The Commission finds that sensitive receivers (including public receptor viewpoints), will have minimal visual impacts arising from the Project. Consequently, there will also be a minimal impact to the rural landscape qualities and character of the broader locality.
46. Overall, the Commission agrees with the Department and finds that the Project's visual impacts (including cumulative impacts, glint and glare) are acceptable, subject to the Commission's imposed conditions of development consent which require:
- compliance with proposed backtracking scenarios and the LVIA;
  - ancillary structure colours to be complementary with the surrounding landscape; and
  - ensuring all lighting associated with the development is not obtrusive on the surrounding area.

## 5.2 Social and economic impacts

47. The Department states in its AR that the Project would generate direct and indirect benefits to the local community, including up to 200 construction jobs and 9 operational jobs, powering up to 52,310 homes, and providing flow on benefits to the local economy through expenditure and procurement of goods and services (AR Table 9).
48. The Department considers the Project would have a positive socio-economic impact on the local community, noting the in-principle agreement between Council and the Applicant to enter into a VPA consisting of:
- monetary contributions of \$850 per MW paid annually, adjusted per the consumer price index; and
  - annual instalments spent in the following ratios:
    - 10% specialist staff contribution;
    - 45% Muswellbrook Shire Community Benefit Fund contribution (incorporating training and scholarships, provided these are not in lieu of the Applicant employing trainees and apprentices); and
    - 45% neighbour benefits contribution (administered via Council).
49. The Commission acknowledges the in-principle VPA agreement between Council and the Applicant, including the monetary terms involved, and considers it beneficial in delivering benefits to the community throughout the Project's life. The Commission has imposed a condition requiring the Applicant to enter into a VPA with Council in accordance with Division 7.1 of Part 7 of the EP&A Act and the terms of their agreement (summarised above) dated 12 June 2024.
50. The impacts of the construction workforce on local accommodation, as well as the Applicant's ability to engage local workers and procurement, are further discussed below.

### 5.2.1 Construction workforce accommodation

51. With up to 200 construction workers required during the peak construction period, some submissions raised concerns regarding the Project's impact on the availability of local accommodation. Council also expressed a preference for a more strategic approach to housing workers, suggesting that there were potential benefits in sharing accommodation with other projects in the area.

52. The Department states that 54% of construction workers are expected to be sourced from the local and regional area and therefore will not require accommodation, noting that the Applicant has committed to maximising local employment to reduce pressure on local accommodation and services (AR Table 9). The remaining 46% of construction workers are expected to be non-local workers and would require accommodation in the local area.

### *Commission's findings*

53. The Commission acknowledges that the Applicant has identified a temporary accommodation provider that has confirmed it can accommodate the non-local construction workers in need of accommodation (AR Table 9).
54. To ensure a coordinated approach to mitigating impacts on local accommodation availability, the Commission has imposed a condition requiring the Applicant to develop an Accommodation and Employment Strategy (**AES**) for the Project in consultation with the Council. The AES must:
- propose measures to ensure there is sufficient accommodation for the workforce associated with the development, including during periods of high demand; and
  - consider the cumulative impacts associated with other State significant development projects in the area and explore opportunities for the colocation of worker accommodation with other major energy projects in the area.
55. The Commission considers that with the implementation of the AES, potential impacts on housing and short-term accommodation availability can be appropriately managed.

## **5.2.2 Local employment and procurement**

56. Some submissions raised concerns about the Project's ability to procure the required workforce and resources locally. In its submission to the Commission, Council recommended that the Applicant be required to develop a Procurement Strategy in consultation with the Council.

### *Commission's findings*

57. The Commission notes that the proposed terms of the VPA between Council and the Applicant, dated 12 June 2024, would require the Applicant to:
- provide a procurement plan to demonstrate local spend for Council's approval; and
  - employ four (4) local residents of Muswellbrook Shire as apprentices/trainees on the Site during the construction phase.
58. As previously noted, the Commission has imposed a condition requiring the Applicant to enter into a VPA with Council in accordance with the Applicant's offered terms.
59. The Commission has also imposed a condition requiring the Applicant to prepare an AES, in consultation with the Council, before construction begins. This Strategy must:
- investigate options for prioritising the employment and training of local workers and First Nations people for the construction and operation of the development, where feasible; and
  - include a local procurement strategy.
60. The Commission is satisfied that these conditions will prioritise local employment and establish a framework for the Applicant and Council to facilitate local hiring and procurement.

## 5.3 Land use compatibility

### 5.3.1 Land zoning and strategic considerations

61. As noted in **Table 2** and **Figure 2** above, the Site is located on land zoned under Muswellbrook LEP as:
- RU1 Primary Production (RU1 zone);
  - SP2 Infrastructure (Classified Road) (SP2 zone); and
  - C3 Environmental Management (C3 zone).
62. Under the SEPP Transport and Infrastructure, electricity generating works are permitted with consent on any land in a prescribed non-residential zone, which includes RU1 and SP2 zones. Although land zoned C3 is not a prescribed zone under SEPP Transport and Infrastructure, section 4.38(3) of the EP&A Act allows development consent to be granted for SSD applications where the development is partly prohibited.
63. The Department states that the merits of the use of the C3 zoned land on the subject Site was considered as part of their assessment and concludes that it is satisfied that it is an appropriate use of the land (AR para 61). The Department considers that the Project (AR para 65 and Department's response to Commission's questions on notice):
- is compatible with the landscape character of the area noting the Site and its immediate surrounds are primarily mining and agricultural based activities;
  - is consistent with the C3 zone objectives in that it has been designed to protect and retain areas of ecological value; and
  - will improve areas of Box Gum Woodland across the Site through the Additional and Appropriate Measures (**AAM**) (refer to section 5.4 below) committed to by the Applicant and is unlikely to significantly impact the biodiversity values of the locality subject to conditions.
64. The Department further notes that the Project aligns with the broader strategic planning objectives for the Site (AR para 68). Given the objectives of the RU1, SP2, and C3 zones, as well as key strategic documents for the region (including the *Hunter Regional Plan 2036* and the *Muswellbrook Local Strategic Planning Statement 2020-2040*), the Department finds no clear intent to prohibit the development of a solar farm on the subject land (AR para 62).

#### *Commission's findings*

65. The Commission accepts the Department's assessment of incorporating the C3 zoned land into the Site and agrees that the Project is an appropriate, orderly and economic use of the land, aligning with the broader strategic planning objectives for the Site.
66. The Commission acknowledges the existing rural landscape qualities and character of the surrounding locality. Whilst the Commission does not consider the Project will have a significant impact on this character, a condition of development consent imposed by the Commission requires the Applicant to detail measures within a biodiversity management plan outlining what would be implemented to minimise clearing and avoid unnecessary disturbance of vegetation associated with the construction and operation of the development, including retention of hollow bearing trees within the development footprint where possible.

### 5.3.2 Potential loss of agricultural land

67. The Applicant's Land, Soils and Erosion Assessment, prepared by EMM and dated May 2023, assessed the agricultural capability of the Site and found that land in the Project area comprises (AR para 72):
- 396.1 ha of Class 4 moderate capability lands;
  - 25.2 ha of Class 5 moderate to low capability lands;
  - 60.6 ha of Class 6 low capability lands; and
  - no mapped BSAL or State Significant Agricultural Land.
68. The Department states that the Project has avoided higher productivity agricultural land, an approach which is consistent with its Large-Scale Solar Energy Guideline which focuses on identifying BSAL and land Classes 1, 2 and 3 as constraints that should be considered in site selection (AR para 73).
69. The Department further notes that neither the Agriculture Division of the Department of Primary Industries and Regional Development (**DPIRD Agriculture**) or Council raised concerns that the Project would compromise the long-term use of the land for agricultural purposes, subject to the implementation of recommended conditions (AR para 75).

#### *Commission's findings*

70. The Commission agrees with the Department that:
- the inherent agricultural capability of the land would not be affected by the Project due to the relatively low scale of the development (AR para 74); and
  - the Project would not fragment or alienate any resource lands in the LGA and is capable of being returned to usable agricultural land following decommissioning (AR para 78).
71. Notwithstanding these findings, to further preserve the agricultural capacity of the subject land, the Commission has imposed a condition requiring the Applicant to maintain the agricultural land capability of the Site, including:
- establishing the ground cover of the Site within 3 months following the completion of any construction or upgrading;
  - properly maintaining the ground cover with appropriate perennial species and weed management over the life of the development; and
  - maintaining grazing within the development footprint, where practicable, over the life of the development.

### 5.3.3 Compatibility with nearby residential areas

72. Submissions received by the Commission noted general concerns regarding the land use compatibility of the solar farm with nearby residential land uses, particularly at Woodland Ridge Estate which is located south of the Site.

#### *Commission's findings*

73. The Commission notes that the Site is adjacent to and within the boundaries of the former MCC coal mine, which operated for 115 years before ceasing operations in November 2022. As the Site sits adjacent to a previously active mine with nearby residential areas such as Woodland Ridge Estate coexisting in proximity to it, the Commission does not consider the solar farm to be an incompatible land use within the surrounding context. The Project's potential impacts to sensitive residential receivers have been adequately mitigated with any residual impacts able to be managed and further mitigated via development consent conditions.

74. Furthermore, the Commission finds that the Project is an appropriate use of the land and aligns with the broader strategic planning objectives for the Site as previously discussed. The Commission is satisfied that potential impacts related to the Project's proximity to Woodland Ridge Estate (including visual, socio-economic, and traffic and transport impacts) can be effectively mitigated through the imposed conditions.

## 5.4 Other issues

75. The Commission's findings on other issues are summarised in **Table 7** below.

*Table 7 – Other issues*

Key issue	Discussion
<b>Traffic and transport</b>	<p>The Department considers that the Project will not have significant impacts on road capacity, efficiency, or safety, provided the Applicant complies with conditions, including (AR para 106):</p> <ul style="list-style-type: none"> <li>• using only the approved access route for Project related vehicles, which includes haulage from Port of Newcastle or Port Botany via National Highway M31, Pacific Motorway M1, New England Highway, Sandy Creek Road, and Muscle Creek Road (AR para 86). Site access will be through existing points on Sandy Creek Road (northern) and Muscle Creek Road (southern) (AR para 87);</li> <li>• completing road upgrades before construction begins, including upgrading the Sandy Creek Road and northern access road intersection to accommodate heavy vehicles with a basic right-turn treatment (AR para 100);</li> <li>• limiting vehicle numbers during construction, upgrades, and decommissioning to the peak volumes identified in the EIS (AR para 106);</li> <li>• restricting construction vehicle movements on Sandy Creek Road between 7:30am to 8:30am and 3:45pm to 4:45pm during NSW school terms (AR para 96);</li> <li>• ensuring the length of vehicles (excluding heavy vehicles requiring escort) do not exceed 19 m for Sandy Creek Road and 26 m for Muscle Creek Road (AR para 106); and</li> <li>• preparing and implementing a Traffic Management Plan (<b>TMP</b>) in consultation with TfNSW and Council, including protocols for managing turns at the New England Highway/Sandy Creek Road intersection, provisions for dilapidation surveys, and road safety measures (AR para 106).</li> </ul> <p>The Commission agrees with the Department's assessment and has imposed its recommended conditions to mitigate traffic and transport impacts.</p> <p>Submissions raised general concerns about the condition of the existing road network that the Project proposes to utilise, particularly Muscle Creek Road. In their submission to the Commission, Council suggests that any requirement to make good damage caused by the Project to Sandy Creek or Muscle Creek Roads be extended to cover associated drainage infrastructure, rather than the pavement only.</p> <p>To address concerns raised by the community and Council, the Commission has imposed further conditions requiring:</p>

Key issue	Discussion
	<ul style="list-style-type: none"> <li>• a road safety audit on the design of the proposed Sandy Creek Road and the northern access intersection upgrade to identify potential safety deficiencies and risk areas;</li> <li>• the repair and maintenance of road related infrastructure, including drainage structures and surface pavement, of Sandy Creek and Muscle Creek Roads; and</li> <li>• development of a Maintenance Management Plan for Sandy Creek Road and Muscle Creek Road in consultation with Council, prepared in accordance with TfNSW M3 specifications for road maintenance.</li> </ul>
<b>Biodiversity</b>	<p>The Commission acknowledges that the Applicant prepared a Biodiversity Development Assessment Report (<b>BDAR</b>) for the Project in accordance with the <i>Biodiversity Conservation Act 2016 (BC Act)</i> and Biodiversity Assessment Method (<b>BAM</b>). In response to feedback from the Biodiversity Conservation and Science Group within the NSW Department of Climate Change, Energy, the Environment and Water (<b>BCS</b>), the Applicant submitted a revised BDAR addressing concerns relating to Serious and Irreversible Impacts (<b>SAIL</b>), BAM calculations, species impact, and survey requirements. BCS reviewed and accepted the revised BDAR, confirming that all residual concerns had been resolved (AR para 111).</p> <p>The Commission notes that the Applicant proposed AAMs to minimise the risk of SAIL for Box Gum Woodland, which were accepted by BCS (AR para 112).</p> <p>The Commission agrees with the Department's assessment, noting that:</p> <ul style="list-style-type: none"> <li>• the Applicant has designed the Project to avoid and minimise impacts on high quality vegetation and habitat (AR para 114);</li> <li>• the Department and BCS consider the impacts of the Project on SAIL entities can be adequately minimised through the Applicant's proposed AAMs (AR para 131);</li> <li>• the Applicant has addressed all threatened species and ecological communities included in the Commonwealth Referral Decision (EPBC 2022/09303). The assessments covered species recorded during field surveys or identified as having a moderate or higher likelihood of occurring in the Project area, including two threatened ecological communities and 15 threatened fauna species, while no threatened flora species were considered likely to occur (AR paras 143-144); and</li> <li>• before undertaking any development that may impact biodiversity values requiring offsets, the Applicant must retire the required ecosystem and species credits as outlined in the Department's AR (Table 6 and Table 7), in accordance with the NSW Biodiversity Offsets Scheme.</li> </ul> <p>The Commission notes that amendments to the <i>Biodiversity Conservation Act 2016 (BC Act)</i>, which came into effect on 7 March 2025, require concurrence from the Minister for the Environment for SSD where consent conditions differ from the credit requirements in the BDAR. The Department confirmed the following in its response dated 11 March 2025 regarding this:</p> <p><i>"The Department's interpretation is that concurrence from the Environment Minister is not required pursuant to s 7.14 of the BC Act for SSD-46543209 (Muswellbrook Solar Farm)."</i></p>

Key issue	Discussion
	<p>Subject to the imposed conditions, including the requirement for the Applicant to prepare and implement a Biodiversity Management Plan, the Commission considers the Project appropriately minimises impacts to biodiversity values through Project design and appropriate mitigation measures, and would not result in a significant impact on biodiversity values.</p>
<b>Contamination from solar panels</b>	<p>The Commission heard concerns from community members during the public meeting regarding the potential for solar panels to cause contamination as a result of heavy metals and chemicals leaching into the environment. The Large-scale Solar Energy Guidelines, Frequently Asked Questions (<b>Guideline FAQ</b>) states the following in relation to the potential for solar panels to cause contamination (pages 4-5):</p> <p><i>“The metals in solar panels (including lead, cadmium, copper, indium, gallium and nickel) cannot be easily released into the environment. This is because metals such as cadmium telluride or cadmium sulfide are enclosed in thin layers between sheets of glass or plastic within the solar panel. Because of this, the use of metals in solar panels has not been found to pose a risk to the environment. To readily release contaminants into the environment, solar panels would need to be ground to a fine dust.”</i></p> <p>The Commission acknowledges the community’s concerns on contamination, however, accepts the advice of the Department as outlined in the Guidelines FAQ.</p> <p>The Commission has imposed conditions of consent that require the preparation of a:</p> <ul style="list-style-type: none"> <li>• Soil and Water Management Plan (<b>SWMP</b>); and</li> <li>• Environmental Management Strategy (<b>EMS</b>).</li> </ul> <p>The imposed conditions require the SWMP and EMS to include reporting, monitoring, and review measures for the Project and its environmental performance before construction begins.</p>
<b>Bushfire and other hazards</b>	<p>According to the Applicant’s Bushfire Strategic Study prepared by Cool Burn Fire and Ecology, dated May 2023, the Project is located on land that is bushfire prone.</p> <p>The Applicant states that the Project would not present a substantial bushfire threat or represent an unacceptable hazard in the event of a bushfire, subject to the implementation of mitigation measures set out within the EIS (AR Table 9).</p> <p>The Applicant’s Preliminary Hazard Analysis (<b>PHA</b>) prepared by Sherpa Consulting, dated May 2023, was prepared in accordance with relevant guidelines, including <i>SEPP (Resilience and Hazards) 2021</i>, <i>Hazard Industry Planning Advisory Paper No. 4 &amp; 6</i> and <i>Victorian Big Battery Fire Statement of Technical Findings</i> (Energy Safe Victoria 2021). The PHA assessed potential hazards and risks (such as fires, spontaneous ignition, and electromagnetic fields) for the proposed grid connection infrastructure. The PHA also evaluated compliance with the International Commission on Non-Ionizing Radiation Protection (<b>ICNIRP</b>) <i>Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields</i> (PHA p. 9).</p> <p>The PHA concluded that the risk profile of the Project was tolerable and that the resulting consequences are not expected to have significant offsite impacts (AR Table 9).</p>

<b>Key issue</b>	<b>Discussion</b>
	<p>The Commission agrees with the Department, Fire and Rescue NSW (<b>FRNSW</b>) and the NSW Rural Fire Service (<b>RFS</b>) that risks associated with the Project would be minimal and can be suitably controlled through the implementation of conditions including the requirement for:</p> <ul style="list-style-type: none"> <li>• the preparation of Fire Safety Study and an Emergency Plan prior to construction commencing;</li> <li>• all chemicals, fuels and oils to be stored in accordance with Australian Standards and NSW Environment Protection Authority (<b>EPA</b>) requirements;</li> <li>• the Project to comply with relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2019 and Standards for Asset Protection Zones (<b>APZ</b>); and</li> <li>• the BESS not to exceed a total capacity of 135 MW.</li> </ul>
<b>Waste</b>	<p>Council raised concerns with solar panel waste (including batteries) being disposed of at landfill sites within the Muswellbrook Shire LGA. Council also anecdotally suggests that a significant amount of waste will be generated as a result of damaged and/or defective solar panels during transit to the Site and the construction phase.</p> <p>The Commission has imposed a robust condition of consent which requires the Applicant to develop a final Waste Management Plan (<b>WMP</b>) prior to commencing construction. The condition requires the WMP to:</p> <ul style="list-style-type: none"> <li>• be prepared in consultation with Council;</li> <li>• identify appropriately licensed waste and resource management facilities for waste disposal and recycling, with an emphasis on maximising recycling; and</li> <li>• describe measures to achieve specific waste management objectives (e.g. relating to waste minimisation, storage, handling and classification).</li> </ul> <p>With those conditions, the Commission is satisfied that the Project will be able to adequately address its waste and recycling requirements.</p>
<b>Decommissioning and rehabilitation</b>	<p>Conditions of development consent recommend by the Department include site rehabilitation objectives. The Commission finds it prudent to reinforce these objectives via a formal Decommissioning and Rehabilitation Plan (<b>DRP</b>). Accordingly, a condition of development consent requires the Applicant to prepare a <b>DRP</b> that describes measures to be implemented to achieve the site rehabilitation objectives. Further, the Applicant must develop the plan in consultation with Council, and detail the most appropriate potential future mix of land uses for the Site.</p>
<b>Property values</b>	<p>The Commission notes concerns raised by submitters that the Project would result in adverse impacts on property values within the area.</p> <p>The Department considers that the Project would not result in any significant or widespread reduction in land values in areas surrounding the Project. The Department also notes that the Land and Environment Court has ruled on several occasions that the assessment of the impacts of projects on individual property values is not generally a relevant consideration under the EP&amp;A Act, unless the Project would have significant and widespread economic impacts on the locality, which is not the case in this instance (AR, Table 9).</p> <p>The Commission agrees with the Department's assessment and notes that individual property values are not a relevant planning matter for consideration in the determination of the Project.</p>

<b>Key issue</b>	<b>Discussion</b>
<b><i>Cumulative impacts</i></b>	<p>As part of the Applicant's EIS, a cumulative impact assessment was conducted to evaluate potential effects on traffic, noise, visual amenity, biodiversity, land compatibility, and demand for accommodation, facilities, goods, and services.</p> <p>The Department notes an assessment has been completed with reference to the <i>Cumulative Impact Assessment Guidelines for State Significant Projects</i>. Potential cumulative impacts have been identified with the nearby Muswellbrook BESS, Muswellbrook Pumped Hydro, Muswellbrook Bypass, and Bowmans Creek Wind Farm projects (AR Table 9).</p> <p>The Commission considers the Project to be designed in a way that minimises overall cumulative impacts, given the relative distance from nearby projects and the low likelihood of significant overlap in development timelines. However, to mitigate potential cumulative impacts on road traffic and accommodation requirements among these projects, the Commission has imposed conditions requiring the Applicant to prepare:</p> <ul style="list-style-type: none"> <li>• an AES in consultation with Council, which considers cumulative impacts from other SSD projects in the area. The AES should also explore opportunities to co-locate worker accommodation with other major energy projects; and</li> <li>• a TMP be prepared in consultation with Council and TfNSW. The TMP must outline measures to minimise traffic impacts during construction, upgrades, or decommissioning, including strategies to reduce potential cumulative traffic impacts from overlapping projects in the area.</li> </ul>
<b><i>Energy transition</i></b>	<p>The Department notes that the Project would generate up to 135 MW of renewable energy and will assist in Australia's transition to lower emissions energy generation. In addition, the Project would generate direct and indirect benefits to the local community, including up to 200 construction jobs and 9 operational jobs, power over 52,000 homes, and provide flow on benefits to the local economy through expenditure and procurement of goods and services (AR Table 9).</p> <p>The Commission agrees with the Department's assessment (AR Appendix H) that:</p> <ul style="list-style-type: none"> <li>• the Project aligns with national and NSW policies by diversifying energy generation, reducing carbon emissions, and enhancing energy security;</li> <li>• inclusion of a 135 MW / 270 MWh battery will enhance grid stability by storing solar energy for use during peak demand; and</li> <li>• the Project would play a key role in increasing renewable energy capacity and supporting the transition to a cleaner energy system as coal-fired power stations are phased out.</li> </ul>
<b><i>All other issues</i></b>	<p>The Commission agrees with the Department's assessment of all other issues at section 5.6 of its AR, including noise, dust, water and erosion, subsidence, existing transmission infrastructure, Aboriginal and historic heritage, and insurance.</p> <p>Subject to the imposition of conditions as relevant to each of these issues, the Commission is satisfied that the Project's impacts are minor and capable of being appropriated monitored and managed.</p>

## 6. The Commission's Findings and Determination

76. The views of the community were expressed through public submissions and comments received (both as part of the Department's exhibition and the Commission's determination processes), as well as in oral presentations to the Commission at the public meeting. The Commission carefully considered all of these views in making its decision.
77. The Commission has carefully considered the Material before it as set out in section 3.1 of this report.
78. For the reasons set out above, the Commission has determined that the Application should be approved subject to conditions. These conditions are designed to:
- prevent, minimise and/or offset adverse environmental impacts;
  - set standards and performance measures for acceptable environmental performance;
  - require regular monitoring and reporting; and
  - provide for the on-going environmental management of the development.
79. The reasons for the Decision are given in this Statement of Reasons for Decision dated 27 May 2025.



Neal Menzies (Chair)  
Member of the Commission



Suellen Fitzgerald  
Member of the Commission



Michael Wright  
Member of the Commission



**New South Wales Government**  
Independent Planning Commission

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