

Department of Planning, Housing and Infrastructure

[dphi.nsw.gov.au](http://dphi.nsw.gov.au)



# Richmond Valley Solar Farm

State Significant Development Assessment Report (SSD-41020244)

October 2025





# Acknowledgement of Country

The Department of Planning, Housing and Infrastructure acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

---

Published by NSW Department of Planning, Housing and Infrastructure

[dphi.nsw.gov.au](http://dphi.nsw.gov.au)

Richmond Valley Solar Farm (SSD-41020244) Assessment Report

Published: October 2025

## Copyright and disclaimer

© State of New South Wales through Department of Planning, Housing and Infrastructure 2025. Information contained in this publication is based on knowledge and understanding at the time of writing, October 2025, and is subject to change. For more information, please visit [nsw.gov.au/copyright](http://nsw.gov.au/copyright).

# Preface

This assessment report provides a record of the Department of Planning, Housing and Infrastructure's (the Department) assessment and evaluation of the State significant development (SSD) application for the Richmond Valley Solar Farm, located approximately 7 kilometres east of Rappville, in the Richmond Valley local government area, lodged by Richmond Valley Solar & BESS Pty Ltd. The report includes:

- an explanation of why the project is SSD and who the consent authority is;
- an assessment of the project against government policy and statutory requirements, including mandatory considerations;
- a demonstration of how matters raised by the community and other stakeholders have been considered;
- an explanation of any changes made to the project during the assessment process;
- an assessment of the likely environmental, social and economic impacts of the project;
- an evaluation weighing up the project's likely impacts and benefits, having regard to the proposed mitigations, offsets, community views and expert advice; and provides a view on whether the impacts are on balance, acceptable; and
- a recommendation to the decision-maker, along with the reasons for the recommendation, to assist them in making an informed decision about whether development consent for the project should be granted and any conditions that should be imposed.

# Executive Summary

Richmond Valley Solar & BESS Pty Ltd, a wholly owned subsidiary of Ark Energy Projects Pty Ltd (Ark), proposes to develop a 435 megawatt ( $MW_{AC}$ ) State significant development solar farm and associated 475  $MW_{AC}$  / 3,148 MW-hour (MWh) battery energy storage system, approximately 7 kilometres (km) east of Rappville in the Richmond Valley local government area.

The site is zoned RU1 Primary Production and has been subject to logging, plantation forest operations, livestock grazing and occasional cultivation for pasture improvement. The surrounding land is predominantly zoned RU1, except Ellangowan State Forest located adjacent to the western boundary and Bungawalbin State Forest located adjacent to the eastern boundary. An existing 330 kilovolt (kV) transmission line traverses the site, approximately 1.6 km north-west of the proposed site substation.

The Department of Planning, Housing and Infrastructure (the Department) exhibited the Environmental Impact Statement (EIS) for the project from 25 July to 21 August 2024 and received 48 public submissions (44 objections, two comments and two in support). Richmond Valley Council (Council) provided comment about visual amenity, waste, bushfire risk and decommissioning. Advice was also received from 12 government agencies.

The Department consulted with Council and relevant government agencies on key issues and inspected the site. None of the agencies, Council or utility providers objected to the project, and they each recommended the implementation of mitigation and management measures.

Ark provided a Submissions Report and an Amendment Report in June 2025 and additional information up to 10 October 2025 addressing matters raised by Council, agencies and public submissions.

In response to agency and Council advice and public submissions received, Ark amended the project to reduce impacts on biodiversity values. Project amendments outlined in the Amendment Report in June 2025 included amendments to the BESS size, model and inverters, transmission line cut in area, the development footprint and perimeter fencing, and a revised over size over mass (OSOM) transport route.

These amendments required the preparation of additional project documentation, with the amended project designed to lead to better outcomes and address key concerns raised by the Department, Council, agencies and in public submissions.

The key assessment matters include energy transition, land use compatibility, biodiversity, traffic and amenity. The Department has undertaken a comprehensive assessment and recommended

conditions, developed in conjunction with agencies and Council, to ensure all potential impacts are effectively minimised, managed or offset.

The site does not contain any mapped Biophysical Strategic Agricultural Land (BSAL), and the majority (90%) of the land within the development footprint is categorised as Land and Soil Capability Class 4 (moderate to severe limitations) with the remainder comprising Class 5 (severe limitations). The project would not significantly reduce the overall agricultural productivity of the region and the site could be returned to agricultural uses in the future.

The development footprint is approximately 789 hectares (ha) and requires the clearing of approximately 23 ha comprising native vegetation, which would require offsetting under the NSW Biodiversity Offset Scheme. The project has been designed and refined to avoid and minimise biodiversity impacts to native vegetation.

Following receipt of comments from the Conservation Programs, Heritage and Regulation division of the NSW Department of Climate Change, Energy, the Environment and Water (CPHR) on the EIS, Ark amended the project layout to avoid impacts on a threatened flora species, *Rotala tripartita*. In its advice on the amended Biodiversity Development Assessment Report (BDAR), CPHR confirmed that the issues relating to potential impacts on *Rotala tripartita* had been adequately addressed and the issue was considered to be resolved.

The Department considers the biodiversity impacts of the project have been adequately addressed, and are acceptable, subject to a range of mitigation and adaptive management measures and by offsetting the residual biodiversity impacts.

The Department considers the project would not result in unacceptable impacts on the capacity, efficiency or safety of the road network. Potential traffic impacts are largely restricted to the 24-month construction period and would be suitably managed through road upgrades, restricting vehicles to approved routes and implementation of a Traffic Management Plan.

The project is consistent with the Commonwealth's *Renewable Energy Target*, and NSW's *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 – 2030*, as it would contribute 435 MW<sub>AC</sub> of renewable energy to the National Electricity Market, including a battery with a capacity of 475 MW<sub>AC</sub> / 3,148 MWh. Importantly, the battery would enable the project to store energy for dispatch to the grid outside of daylight hours and / or during periods of peak demand, which has the potential to contribute to increased grid stability and energy security.

The Department considers the site is appropriate for the project as it has good solar resources, available capacity on the existing electricity network and is consistent with the Department's *Large Scale Solar Energy Guideline*.

The project would also provide flow-on benefits to the local community, including up to 327 construction jobs, up to 15 operational jobs and a capital investment of \$1.2 billion. A voluntary planning agreement to Council is also proposed.

The Department considers the project would not result in any significant adverse impacts on the local community or the environment, and any residual impacts could be managed through the implementation of the recommended conditions.

Overall, the Department's assessment concludes that the project would result in benefits to the State of NSW, the local community, is in the public interest and approvable.

# Contents

<b>Preface</b> .....	<b>i</b>
<b>Executive Summary</b> .....	<b>ii</b>
<b>1 Project</b> .....	<b>1</b>
1.1 Project overview.....	1
<b>2 Strategic Context</b> .....	<b>5</b>
2.1 Site and surrounds.....	5
2.2 Other energy projects.....	6
2.3 NSW Solar Guideline.....	6
2.4 Energy context.....	6
<b>3 Statutory Context</b> .....	<b>8</b>
3.1 State significant development.....	8
3.2 Amended application.....	8
3.3 Permissibility.....	8
3.4 Integrated and other approvals.....	9
3.5 Commonwealth approvals.....	9
3.6 Renewable energy zone .....	10
3.7 Mandatory matters for consideration.....	10
3.8 Objects of the EP&A Act.....	10
3.9 Biodiversity development assessment report.....	10
<b>4 Engagement</b> .....	<b>11</b>
4.1 Department’s engagement.....	11
4.2 Summary of advice received from government agencies.....	11
4.3 Summary of Council’s submission.....	13
4.4 Summary of public submissions.....	14
4.5 Response to submissions.....	14
4.6 Amendment report.....	15

<b>5</b>	<b>Assessment.....</b>	<b>17</b>
5.1	Energy Transition.....	17
5.2	Land use compatibility .....	17
5.3	Biodiversity .....	19
5.4	Traffic and transport.....	27
5.5	Visual.....	33
5.6	Other issues.....	37
<b>6</b>	<b>Evaluation.....</b>	<b>50</b>
<b>7</b>	<b>Recommendation.....</b>	<b>52</b>
<b>8</b>	<b>Determination .....</b>	<b>52</b>
	<b>Appendices.....</b>	<b>53</b>
	Appendix A – Environmental Impact Statement.....	53
	Appendix B – Submissions and government agency advice.....	53
	Appendix C – Submissions Report.....	53
	Appendix D - Amendment Report .....	53
	Appendix E – Additional information .....	53
	Appendix F – Recommended Development Consent.....	53
	Appendix G – Statutory considerations.....	53
	Appendix H – Assessment of Matters of National Environmental Significance.....	56

# 1 Project

## 1.1 Project overview

Richmond Valley Solar & BESS Pty Ltd, a wholly owned subsidiary of Ark Energy Projects Pty Ltd (Ark), proposes to develop a 435 megawatt ( $MW_{AC}$ ) State significant development (SSD) solar farm and associated 475  $MW_{AC}$  / 3,148 MWh battery energy storage system (BESS) (the project), approximately seven kilometres (km) east of Rappville in the Richmond Valley local government area (LGA) (see Figure 1).

The project would involve construction of a solar farm, BESS, substations, underground cabling, offices, internal access roads and upgrading and decommissioning of equipment over time. The project would include overhead powerlines that connect to the existing 330 kV Transgrid powerlines within the north-western extent of the site (see Figure 2).

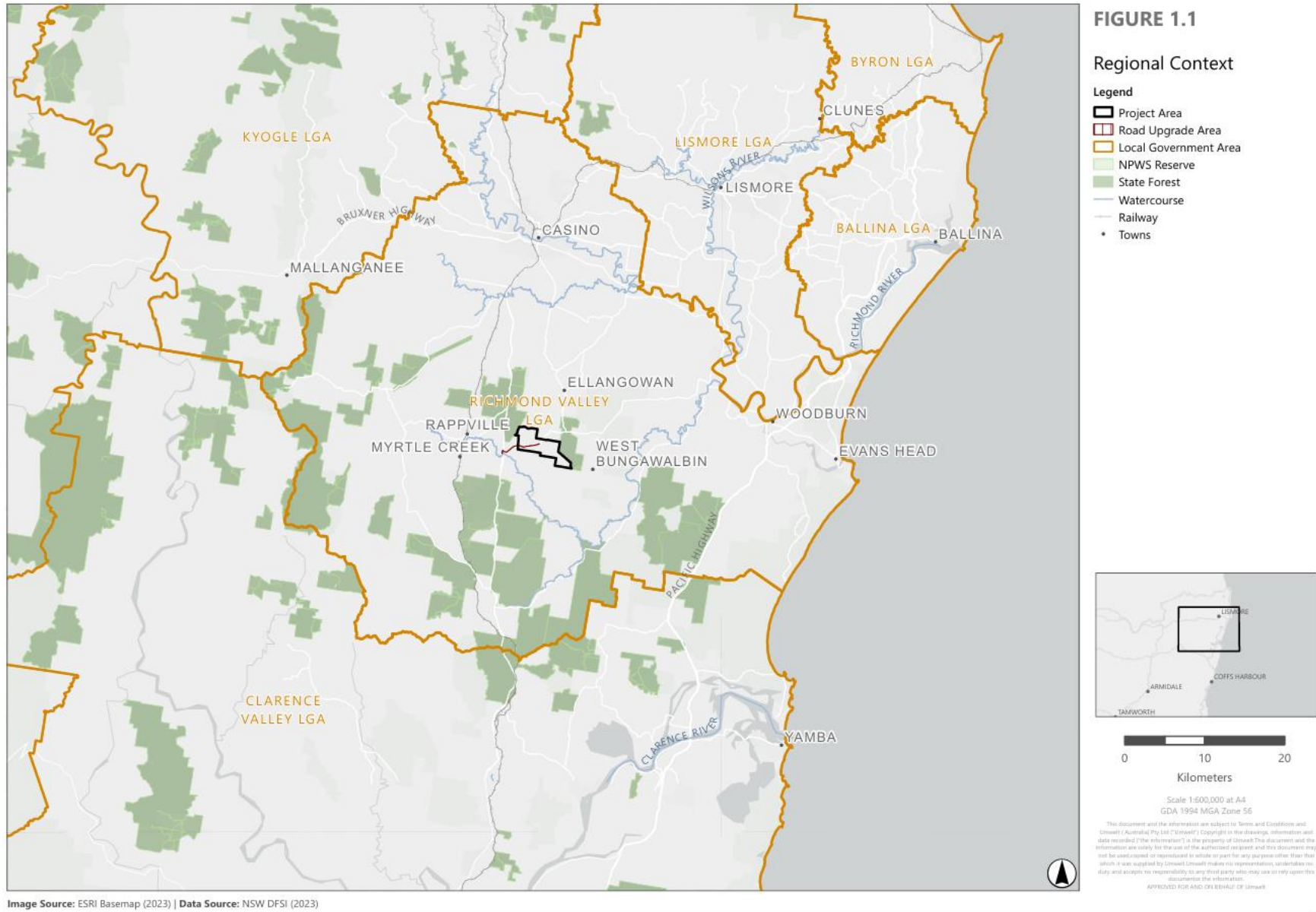
Access to the site is proposed via Avenue Road, Main Camp Road and Summerland Way. Construction of the project would be approximately 18 to 24 months, with a peak construction period of approximately six months.

The key components of the project are summarised in Table 1, depicted in Figure 2 and described in detail in the Environmental Impact Statement (EIS) and supporting documentation (see Appendix A, Appendix C and Appendix E).

**Table 1 | Key components of the project**

Aspect	Description
<b>Project summary</b>	<p>The project includes:</p> <ul style="list-style-type: none"><li>• approximately 730,000 solar panels mounted on a single axis tracking system (up to 4 m high) with a generating capacity of up to 435 <math>MW_{AC}</math>;</li><li>• inverters, an on-site substation and switchyard, with underground electrical conduits and cabling;</li><li>• a 2 km double circuit 330 kV transmission line including 11 transmission towers to connect into Transgrid's existing 330 kV transmission line in the north-western portion of the project area;</li><li>• a centralised lithium-ion BESS with up to 475 <math>MW_{AC}</math> / 3,148 MWh capacity; and</li><li>• internal access roads, staff amenities, control buildings, maintenance buildings, offices, laydown areas, car park and security fencing.</li></ul>

Aspect	Description
<b>Project area</b>	<ul style="list-style-type: none"> <li>• Site: approximately 1,475 hectares (ha).</li> <li>• Solar farm and BESS development footprint: approximately 789 ha.</li> <li>• Road upgrade development footprint: approximately 12 ha.</li> </ul>
<b>Site entry and access route</b>	<ul style="list-style-type: none"> <li>• Three proposed access points off Avenue Road (Figure 2). <ul style="list-style-type: none"> <li>– one main access point approximately 3 km from the Avenue Road / Main Camp intersection; and</li> <li>– two secondary access points on the southern side of Avenue Road.</li> </ul> </li> <li>• Major solar components would be delivered via heavy and over size over mass (OSOM) vehicles via three routes. The transformer will travel from Melbourne via route 1 and switchrooms will travel either from Brisbane via route 2 or from Melbourne via route 3 (Figure 4). All three routes will access the site via Summerland Way, Main Camp Road, Avenue Road and access into the project area via the main access point (Figure 5).</li> </ul>
<b>Road upgrades</b>	<ul style="list-style-type: none"> <li>• Basic Left turn treatment to be installed on the northern approach to the Summerland Way / Main Camp Road intersection, and a rural short channelised right standard treatment on the southern approach.</li> <li>• Upgrade to provide a cross section of Main Camp Road and Avenue Road to provide a 6m sealed pavement on a 7m formation.</li> <li>• Construction of site access points as outlined above.</li> </ul>
<b>Construction</b>	<ul style="list-style-type: none"> <li>• Construction expected to take between 18 and 24 months, with a peak period of approximately 6 months.</li> <li>• Construction hours limited to Monday to Friday 7 am - 6 pm and Saturday 8 am - 1 pm.</li> </ul>
<b>Operation</b>	<ul style="list-style-type: none"> <li>• The expected operational life of the infrastructure is approximately 30 years. However, the project could involve infrastructure upgrades that may extend operational life.</li> <li>• The solar farm and BESS would operate 24 hours a day, seven days a week.</li> </ul>
<b>Decommissioning and rehabilitation</b>	<p>The project includes decommissioning at the end of the project life, which would involve removal of all above and below infrastructure would be removed and the land rehabilitated.</p>
<b>Subdivision</b>	<p>Subdivision would be required to facilitate connection to the transmission network and onsite switchyard (which would be Transgrid owned), and to enable the existing landowner to retain residual agricultural land.</p>
<b>Employment</b>	<p>Up to 327 full time equivalent (FTE) construction jobs and up to 15 FTE operational jobs.</p>
<b>CIV</b>	<p>Approximately \$1.2 billion</p>



**Figure 1 | Regional context map**

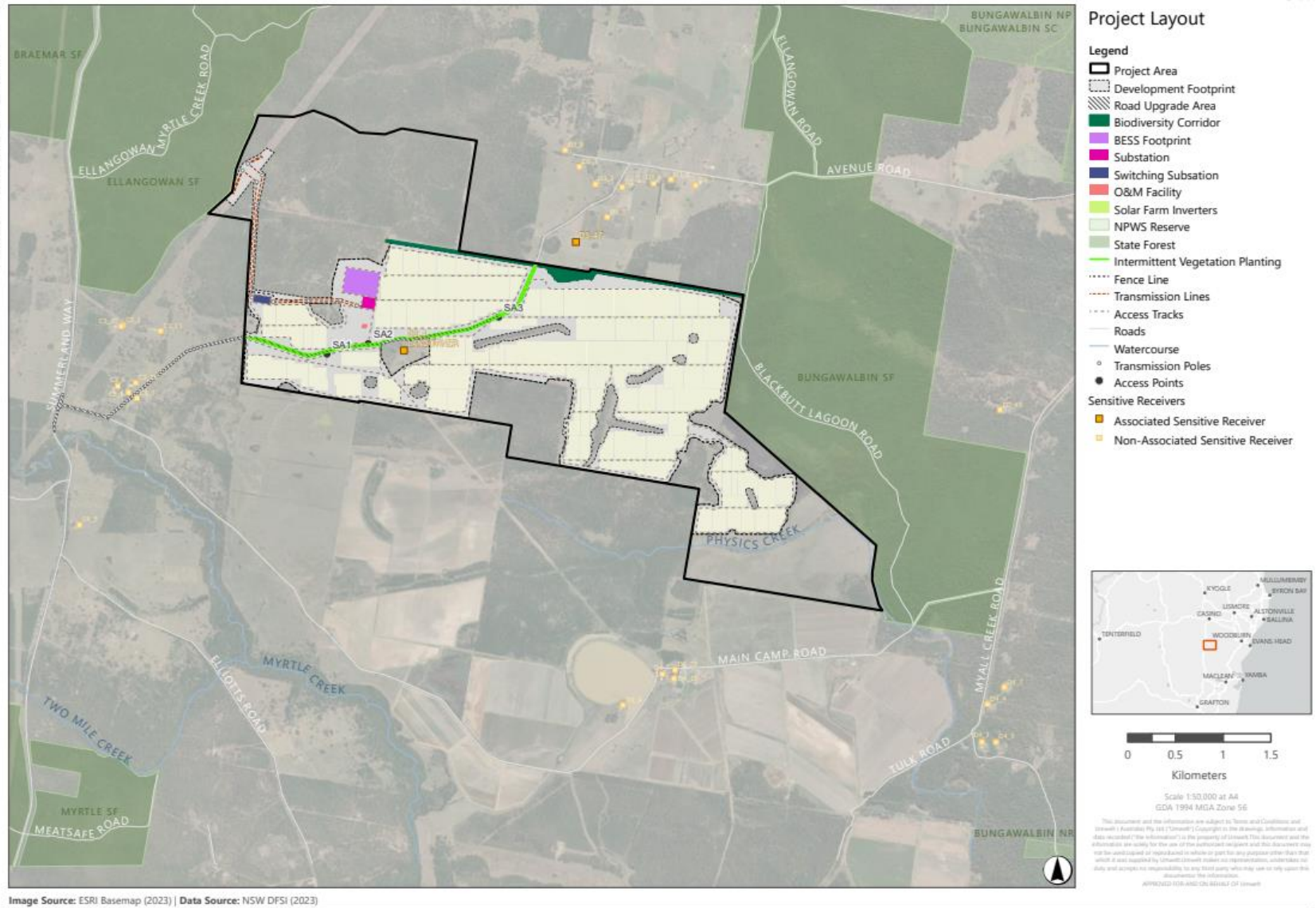


Figure 2 | Project Layout

## 2 Strategic Context

### 2.1 Site and surrounds

The site is zoned RU1 Primary Production and has been subject to logging, plantation forest operations, livestock grazing and occasional cultivation for pasture improvement. The current land use within the project area is livestock grazing on pasture and fodder crops.

Access to the site would be via one of the three site access points on Avenue Road (accessed via Summerland Way and Main Camp Road). Road upgrades would occur at Summerland Way, Main Camp Road and Avenue Road to facilitate the proposed development.

The surrounding land is predominantly zoned RU1, except Ellangowan State Forest located adjacent to the western boundary and Bungawalbin State Forest adjacent to the eastern boundary (both zoned RU3 Forestry), Myrtle Creek to the south (zoned W1 Natural Waterways) and Bungawalbin National Park and State Conservation Area partially adjoining to the north-east (zoned C1 National Parks and Nature Reserve).

The site is located within the Richmond River Catchment and includes several small water bodies and 1<sup>st</sup> and 2<sup>nd</sup> order Strahler streams. A 3<sup>rd</sup> order Strahler stream intersects the northern part of the project area, extending east before flowing south-east towards Physics Creek. A 4<sup>th</sup> order Strahler stream, identified as Physics Creek and marked as a sensitive watercourse, intersects the southeastern corner of the Project Area.

An existing 330 kV transmission line is located within the site, approximately 1.6 km north-west of the proposed substation. The existing transmission line runs north-south from Coffs Harbour through Grafton and north beyond Lismore. The site is also bisected by Avenue Road, which connects with Summerland Way to the west via Main Camp Road and with Myall Creek Road to the east.

The development footprint has been designed to avoid site constraints such as remnant woodland areas and flood prone land. The majority of the site (approximately 90%) is classified as land and soil capability Class 4 (moderate to severe limitations), with the remainder comprising Class 5 (severe limitations).

A total of 49 dwellings are located within a 4 km radius of the project area. The closest non-associated residences are located between 900 m and 1 km away (C3\_11, D3\_3 and D4\_23).

The key features of the project are described in detail in the Project Description chapter of the EIS and outlined in Section 1.

## 2.2 Other energy projects

The Summerville Solar Farm was approved by the Department in May 2025. The site is located 6 km west of the project area.

As per the Department's *Cumulative Impact Assessment Guidelines for State Significant Projects 2021*, Ark's and the Department's assessments of cumulative impacts has considered the relevant future projects to be those that have been exhibited and are currently under assessment.

Potential cumulative impacts at a regional level relate to loss of agricultural land and workforce accommodation. The broader potential cumulative impact on agricultural land in the region is discussed further in Section 5.2 and workforce accommodation is addressed in Section 5.6.

## 2.3 NSW Solar Guideline

The Department released the *Large-Scale Solar Energy Guideline* (the Solar Guideline) in December 2018 to provide the community, industry, and regulators with guidance on the planning framework for assessing largescale solar projects and identifying the key planning considerations relevant to solar energy development in NSW.

The Solar Guideline was revised in August 2022 and November 2024 following extensive consultation, to ensure the assessment of large-scale solar energy projects continues to be transparent, consistent and supported by the best available information. The 2022 revised guideline applies to this project, however the application is also broadly consistent with the objectives of the 2024 guideline.

The Solar 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.

## 2.4 Energy context

In 2024, NSW derived approximately 37% of its energy from renewable sources, the remainder being from fossil fuels, including 60% (coal) and 3% (gas). NSW is one of the nation's leaders in large-scale renewable projects, with 47 major operational projects and 92 either under construction or planned for construction.

The Commonwealth and State energy context is described in Table 2. The project's alignment with existing Commonwealth and State policies and strategies are described in Section 3.

The project’s alignment with existing Commonwealth and State policies and strategies are considered in Section 3.

**Table 2 | Energy Context**

Policy	Summary
<i>Australia’s Long Term Emissions Reduction Plan (2021)</i>	Sets a pathway to net zero emissions by 2050 and affirms Australia’s commitment to meeting its revised 2030 target (43% below 2005 levels).
<i>Australian Energy Market Operator’s 2024 Integrated System Plan (ISP)</i>	<p>Notes:</p> <ul style="list-style-type: none"> <li>• without coal, investment is needed to meet significantly increased electricity demand requiring a six-fold increase in large-scale variable renewable energy generation;</li> <li>• a mix of solar and wind is needed, and they offer complementary daily and seasonal profits; and</li> <li>• forecasts there will be a demand for 83 GW of utility-scale wind and solar in the National Electricity Market by 2034-35, and 127 GW by 2049-50.</li> </ul>
<i>NSW Climate Change Policy Framework (2016), Transmission Infrastructure Strategy (2018), Electricity Strategy (2019), Electricity Infrastructure Roadmap (2020), Net Zero Plan Stage 1: 2020 – 2030 (2020) and Implementation update (2022), North Coast Regional Plan 2041, and Richmond Valley Local Strategic Planning Statement.</i>	<p>Relevant aspects of these policy documents include:</p> <ul style="list-style-type: none"> <li>• aims to achieve net zero emissions in NSW by 2050 and reduce emissions by 70% below 2005 levels by 2035;</li> <li>• notes all coal fired power plants in NSW are scheduled for closure within the next twenty years;</li> <li>• provides regional goals to support net zero by 2050; and</li> <li>• supports the development of the Richmond Valley Regional Job Precinct, which creates a hub focused on renewable energy among other industries.</li> </ul>

## 3 Statutory Context

### 3.1 State significant development

The project is classified as SSD 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 (Planning Systems) 2021* (Planning Systems SEPP), as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million.

Under section 4.5(a) of the EP&A Act and clause 1(b) of section 2.7 of the Planning Systems SEPP, the Minister for Planning and Public Spaces (the Minister) is the consent authority for the project. However, under the Minister's delegation of 9 March 2022, the Executive Director, Energy, Resources and Industry Assessments, may determine the development application as Richmond Valley Council (Council) did not object, there were less than 50 unique objections from the general public and Ark did not report any political donations.

### 3.2 Amended application

In accordance with clause 37 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), a development application can be amended at any time before the application is determined. Ark sought to amend its application, the details of which are summarised in Section 4.6 of this report.

The Department accepted the amended application for the following reasons:

- the project amendments served to minimise the potential impacts of the project (environmental and social),
- the amended application directly responds to key issues raised in public submissions received by the Department during exhibition of the original application;
- Ark assessed the impacts of the amended project (see **Appendix D** and **Appendix E**); and
- the Department made the additional information available online and sent it to Council and relevant government agencies for comment.

### 3.3 Permissibility

Under the *Richmond Valley Local Environmental Plan 2012* (Richmond Valley LEP), electricity generating works are permissible with consent on any land in a prescribed non-residential zone, including RU1 zones. The proposal is therefore permissible with consent.

### 3.4 Integrated and other approvals

Under section 4.41 of the EP&A Act, a number of other approvals are integrated into the SSD approval process and therefore are not required to be separately obtained for the project. Under section 4.42 of the EP&A Act, a number of further approvals are required, provided such approvals are substantially consistent with any development consent for the project (e.g. approvals under the *Roads Act 1993*).

The Department has consulted with the relevant government agencies responsible for integrated and other approvals, including Council and Transgrid, and has 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 F**).

### 3.5 Commonwealth approvals

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), assessment and approval are required from the Australian Government if a project is likely to impact on a Matter of National Environmental Significance (MNSW), as it is considered to be a ‘controlled action’.

On 21 November 2023, a delegate of the Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) determined the project was a ‘controlled action’ in accordance with the EPBC Act, due to its potential impacts on threatened species and communities (sections 18 & 18A of the EPBC Act).

In its determination, the Australian Government agreed the proposal may be assessed by the NSW Government, in accordance with the Bilateral Agreement between the NSW and Australian governments. The Department issued Secretary’s Environmental Assessment Requirements for the project addressing MNES on 4 March 2024.

The Department consulted with DCCEEW in accordance with the accredited assessment process and provided draft copies of this assessment report and recommended conditions of consent to DCCEEW for comment. Following their review of the project, DCCEEW provided a response back on 23 September 2025 with no concerns or comments. The Department’s assessment of impacts to MNES is provided in **Section 5.3**.

Following the determination of this SSD application (if approved), the matter would be referred to DCCEEW for determination under the EPBC Act.

### 3.6 Renewable energy zone

The project is not within a REZ. The closest REZ (New England REZ) is located approximately 100 km north-east of the project. The Solar Guideline notes the development potential of land located outside the identified REZs to further support the transition to renewable energy.

### 3.7 Mandatory matters for consideration

Section 4.15 of the EP&A Act outlines matters a consent authority must take into consideration when determining development applications. The Department has considered these matters in its assessment of the project, as well as Ark's consideration of environmental planning instruments in the EIS, as summarised in **Section 3** of this report. The Department has also considered relevant provisions of the environmental planning instruments in **Appendix G**.

### 3.8 Objects of the EP&A Act

In determining the application, the consent authority should consider whether the project is consistent with the relevant objects of the EP&A Act (section 1.3) including the principles of ecologically sustainable development (ESD). Consideration of those factors is described in **Appendix G**. As a result of the analysis in **Appendix G**, the Department is satisfied that the development is consistent with the objectives of the EP&A Act and the principles of ESD.

### 3.9 Biodiversity development assessment report

Section 7.9(2) of the *Biodiversity Conservation Act 2016* (BC Act) requires all SSD applications to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless it is determined that the project is not likely to have any significant impact on biodiversity values (as identified in the BC Act and in the *Biodiversity Conservation Regulation 2017*). The BDAR (see **Appendix A**) and the overall impact of the project on biodiversity values is assessed in **Section 5.3**.

# 4 Engagement

## 4.1 Department’s engagement

The Department publicly exhibited the EIS from 25 July to 21 August 2024, advertised the exhibition in the *Northern River Times* and *The Australian* newspapers and notified surrounding landowners.

The Department also consulted with Council and government agencies throughout the assessment and inspected the site and surrounding areas in August 2025.

The Department also notified and sought comment from Transgrid and Transport for NSW (TfNSW) in accordance with the Transport and Infrastructure SEPP, as discussed further in Section 4.2 of this report.

## 4.2 Summary of advice received from government agencies

During EIS exhibition, the Department received advice from 12 government agencies. A summary of the advice is provided in Table 3 and full copies of the advice are provided in Appendix B.

**Table 3** | Summary of agency advice

Agency	Advice summary
<b>Conservation Programs, Heritage and Regulation Group of the NSW Department of Climate Change, Energy, the Environment and Water (CPHR)</b>	<ul style="list-style-type: none"><li>Concerns were raised regarding the survey effort for threatened species, and for the species polygons for the Barking Owl.</li><li>Following its review of the Submissions and Amendment Reports (including an amended BDAR), and further consultation with Ark, CPHR confirmed that the issues relating to project had been resolved.</li><li>In particular, CPHR confirmed that issues associated with potential impacts on SAI entities (i.e. <i>Rotala tripartita</i> and <i>Maundia triglochinosoides</i>) were resolved.</li></ul>
<b>Crown Lands</b>	Confirmed that landowner consent has been provided for relevant parcels of Crown land.
<b>Department of Primary Industries and Regional Development – Agriculture</b>	Noted that the EIS covered the main potential impacts to agricultural resources and productivity, and land use conflict. Also commented that grazing the land would help to mitigate bushfire risk and recommended implementation of a grazing management plan, a 70% ground cover target and removal of all infrastructure upon decommissioning.

Agency	Advice summary
<b>Department of Primary Industries and Regional Development – Fisheries (DPIRD Fisheries)</b>	<ul style="list-style-type: none"> <li>Noted that one of the waterways to be crossed by the project is mapped as habitat for the Southern Purple Spotted Gudgeon and recommended bridge structures in this area, rather than box culverts.</li> <li>Also requested further information regarding impacts of the project on fish passage.</li> <li>Ark confirmed that the amendments made to the project design to avoid impacts on <i>Rotala Tripartita</i> also resulted in the avoidance of the creek crossings of concern to DPIRD Fisheries.</li> <li>In its advice on the Submissions Report, DPIRD confirmed that its concerns had been addressed.</li> </ul>
<b>Fire and Rescue NSW (FRNSW)</b>	<p>Recommended conditions of consent to require the development of a Fire Safety Study and Emergency Plan.</p>
<b>Forestry Corporation (Forestry)</b>	<ul style="list-style-type: none"> <li>Primary concern was the potential fire threat. However, acknowledges that Ark has been engaging with the NSW Rural Fire Service to address planning and risk abatement.</li> </ul>
<b>Heritage NSW Group within NSW DCCEE (HNSW)</b>	<ul style="list-style-type: none"> <li>Requested a contemporary AHIMS search be undertaken and further information on the consultation process be provided, including confirmation that the ACHAR was provided to all Registered Aboriginal Parties.</li> <li>Following review of the Submissions Report, Heritage NSW confirmed its concerns had been addressed and recommended conditions of consent to mitigate impacts to Aboriginal objects.</li> </ul>
<b>NSW Environment Protection Authority</b>	<p>Recommended conditions regarding disposal of waste associated with construction, operation, upgrading and decommissioning, which the Department has implemented in the conditions of consent. The EPA also requested a Waste Management Plan be prepared for the project, which Ark has committed to preparing.</p>
<b>NSW Rural Fire Service (NSW RFS)</b>	<p>Supported the recommendations of the Bushfire Threat Assessment.</p>
<b>NSW State Emergency Service</b>	<ul style="list-style-type: none"> <li>Recommended the O&amp;M facility be relocated outside the probable maximum flood (PMF) extent.</li> <li>Raised concerns regarding the shelter-in-place strategy outlined in the EIS and recommended referring to DPHI's <i>Shelter in place guideline for flash flooding</i>, which the Department has implemented in the conditions of consent.</li> </ul>

Agency	Advice summary
TfNSW	<ul style="list-style-type: none"> <li>Requested additional information be provided as part of a revised Transport Impact Assessment (TIA) including: <ul style="list-style-type: none"> <li>high-risk OSOM route assessment with strategic concept designs and swept paths;</li> <li>traffic mitigation measures, and road upgrades;</li> <li>the weight of the high-risk OSOM movement of the transformer on bridges and culverts; and</li> <li>scope of the intersection works for the Summerland Way/Main Camp Road.</li> </ul> </li> <li>The updated Addendum TIA addressed the mitigation measures, road upgrades and scope of works at the intersection for Summerland Way and Main Camp Road.</li> <li>TfNSW are satisfied that the pinch points 6 through 12 along the high-risk OSOM route are low risk, although ongoing liaison would occur.</li> <li>TfNSW are also satisfied that the proposed mitigation measures will manage the risk associated with the high risk OSOM vehicle movements travelling over bridges, in accordance with the Traffic Management Plan (TMP).</li> </ul>
Water Group within NSW DCCEE (Water Group)	<ul style="list-style-type: none"> <li>Requested further information regarding: <ul style="list-style-type: none"> <li>the project's water demand and supply;</li> <li>potential impacts on groundwater dependant ecosystems;</li> <li>how the project layout aligns with buffer requirements from watercourses as per the <i>Guidelines for Controlled Activities on Waterfront Land</i>.</li> </ul> </li> <li>Following its review of the additional information provided by Ark, the Water Group confirmed its concerns had been adequately addressed.</li> </ul>

The Department of Primary Industries and Regional Development – NSW Resources raised no concerns.

### 4.3 Summary of Council’s submission

Council did not object to the project but raised concerns regarding:

- visual amenity – Council recommended a landscape plan to maintain the Summerland Way landscape character;
- bushfire risk and contamination concerns related to the proposed battery;

- on-site sewage management, requesting all wastewater be handled through an on-site system;
- impacts on biodiversity, requesting that offsets be sought in the Richmond Valley area and any fencing is minimised; and
- decommissioning and rehabilitation process, including the need to consider potential future land uses.

Ark consulted with Council to address their concerns and further responded to Council's comments in its Submissions Report. Council also provided input into the recommended conditions set.

## 4.4 Summary of public submissions

During exhibition, the Department received 48 public submissions, including 41 from individuals and seven from interest groups, consisting of 44 objections, two comments and two in support.

Of the 48 public submissions, only 12 individuals were located within 5 km of the project, while more than half of the objections (~60%) were located more than 100 km from the project.

The most common matters raised in public submissions include the following:

- the use of agricultural land;
- hazards and risk (including bushfire); and
- ecological impacts.

### 4.4.1 Submissions in objection

Public submissions objecting to the project cited a range of matters, with the key matters including potential impacts to biodiversity, reliability of renewable energy, bushfire risk, impacts on agricultural land, contamination risks, visual and flooding impacts.

The Department has undertaken a detailed assessment of these issues in **Section 5** of this report, including consideration of advice from government agencies and Council.

### 4.4.2 Submissions in support

Two public submissions supported the project, stating the project is essential for helping to achieve zero emissions.

## 4.5 Response to submissions

Following the public exhibition period, the Department asked Ark to respond to issues raised in the submissions and advice received from government agencies.

Following consideration of submissions on the project, Ark amended its application as detailed in the Submissions Report, provided to the Department in June 2025 (see Appendix C). The Submissions Report summarises the actions taken since exhibition, analyses the submissions, and provides a response to key themes.

The Department published the Submissions Report on the NSW Planning Portal and forwarded to relevant government agencies and Council for comment.

## 4.6 Amendment report

Ark prepared an Amendment Report to detail the project amendments and identify additional management and mitigation measures proposed since submission and exhibition of the EIS (see Appendix D).

In summary, the amendments outlined in the Amendment Report included a reduction in the number of battery containers, an increase in the number and power capacity of inverters, relocation of the perimeter fence, an increase in the size of the transmission line cut-in area, relocation of the switching station, amendments to the vertical arrangement of the solar panels, a decrease in area of the development footprint and a revised OSOM transport route. These changes are captured within Figure 2 above and a comparison between the original and amended project is detailed within Table 4 below.

**Table 4** | Amendment comparison

Aspect	EIS Project	Amended Project	Difference
<b>BESS area</b>	5 ha	9 ha	Increased by 4 ha
<b>Number of battery containers</b>	716	588	Decrease by 158
<b>Number of inverters</b>	106	186	Increase by 80 inverters
<b>Inverter power capacity</b>	Up to 272 MW	Up to 475 MW	Increase by 200 MW
<b>Length of perimeter fence</b>	31.9 km	27 km	Decrease by 4.9 km
<b>Location of perimeter fence</b>	Aligned largely to development footprint	Aligned to Lot / DP boundaries and some existing fence lines	Changes to location of perimeter fence in some locations

Aspect	EIS Project	Amended Project	Difference
<b>Transmission line cut-in area</b>	7 ha	13 ha	Increase by 6 ha
<b>Switching station location</b>	Adjacent to the BESS (north-west of development footprint)	Western boundary within the development footprint	800 m west but remaining within the development footprint
<b>Solar panels</b>	Designed to provide a minimum of 300 mm freeboard for the lowest edge above the maximum 1% AEP flood level	Designed to provide a minimum of 100 mm freeboard for the lowest edge above the maximum 1% AEP flood level	200 mm less freeboard for the lowest panel edge above the maximum 1% AEP flood level
<b>Development footprint</b>	803 ha	789 ha	Decrease by 14 ha
<b>OSOM transport route</b>	One route from Brisbane Port	One route from Melbourne for the proposed transformer components and two potential route options from Brisbane and Melbourne for the switchroom components	Addition of one new OSOM route and one new OSOM route option

# 5 Assessment

The Department has undertaken a comprehensive assessment of the merits of the project. This report provides detailed discussions of the key issues, namely energy transition (Section 5.1), land use compatibility (Section 5.2), biodiversity (Section 5.3), traffic and transport (Section 5.4) and visual (Section 5.5).

The Department has also considered a number of other issues. These issues are considered relatively minor and are assessed in Section 5.6 below.

## 5.1 Energy Transition

The project aligns with a range of national and State policies, which identify the need to diversify the energy generation mix and reduce grid carbon emissions while providing energy security and reliability.

With a generating capacity of 435 MW<sub>AC</sub>, the project would generate enough electricity to power about 174,853 homes. This is consistent with the *NSW Climate Change Policy Framework* of achieving net zero emissions by 2050. The inclusion of a battery would enable the project to store energy for dispatch to the grid outside of daylight hours and/or during peak demand as well as providing grid stability services and back-up capacity to ensure security of supply.

The project is in an area with direct access to the transmission network and abundant solar resources. As such, the project would play an important role in:

- increasing renewable energy generation and capacity;
- firming the grid by including 475 MW / 3,148 MWh of energy storage; and
- contributing to the transition to a cleaner energy system as coal fired generators are retired.

## 5.2 Land use compatibility

### 5.2.1 Provisions of the LEP

The site is located on land within the RU1 Primary Production zone the under Richmond Valley LEP. As discussed in Section 3.3, a solar farm is a permissible land use with consent on land zoned RU1 under the Richmond Valley LEP.

The project is consistent with the objectives of the RU1 zoning under the LEP, particularly by:

- providing diversity in primary industry enterprises and systems appropriate for the area;

- minimising fragmentation and alienation of resource lands; and
- minimising conflict between land uses within this zone and land uses within adjoining zones.

Economically, Richmond Valley LGA has traditionally relied on agriculture. The introduction of solar energy generation would contribute to a more diverse local economy, thereby supporting the local economy and community.

Furthermore, the proposed solar farm would encourage renewable energy development which is consistent with key government strategic planning guidance, including the *North Coast Regional Plan 2041*, which includes an objective to promote renewable energy opportunities.

### 5.2.2 Potential Loss of Agricultural Land

The project has a development footprint of approximately 789 ha, which is currently used for cattle grazing. Following decommissioning of the project, approximately 786 ha would be restored for agricultural use (i.e. all land other than that required by the switching substation).

The Soil, Land Use and Agriculture Impact Assessment (Soil Assessment) submitted with the EIS demonstrated that there is no biophysical strategic agricultural land (BSAL) within the development footprint. In addition, the majority of the site (approximately 90%) is classified as land and soil capability Class 4 (moderate to severe limitations), with the remainder comprising Class 5 (severe limitations). The project has therefore avoided higher productivity agricultural land, an approach which is consistent with the objectives of the Solar Guideline.

Based on the findings of the Soil Assessment, the Department is satisfied the project would not affect the inherent agricultural capability of the land due to the relatively low scale of the development and the ability to rehabilitate and return the site to agricultural use following decommissioning.

Accordingly, the Department has included requirements to maintain the current land capability, where practicable, during construction and operation of the project as well as a requirement to fully reinstate the agricultural capability of the land following decommissioning of the project.

The Department notes neither Council nor DPI Agriculture raised concerns that the project would compromise the long-term use of the land for agricultural purposes, subject to the removal of project infrastructure at decommissioning. DPI Agriculture recommended a range of mitigation measures, including maintenance of a minimum groundcover target of 70% (outside of an actively disturbed area) and reinstatement of stock fences, dams and access tracks following decommissioning of the project.

The Department considers the development would not fragment or alienate any resource lands in the LGA and is capable of being returned to agricultural use following decommissioning. Further, the

Department considers the project represents an effective and compatible use of the land within the region and that the site is suitable to accommodate the development.

## 5.3 Biodiversity

The project has the potential to impact biodiversity during construction of the solar farm through the clearing of native vegetation. The site is predominantly comprised of paddocks that have historically been cleared and modified for agricultural activities. However, fragmented patches of both remnant and regrowth native woody vegetation occur throughout the site.

A Biodiversity Development Assessment Report (BDAR) was prepared for the project in accordance with the *Biodiversity Conservation Act 2016* (BC Act) and Biodiversity Assessment Method (BAM), with a revised BDAR prepared in response to issues raised by CPHR.

CPHR indicated the revised BDAR adequately assesses the biodiversity impacts associated with the project. The Department considers the biodiversity impacts of the project have been adequately addressed, and are acceptable, subject to mitigation and adaptive management measures and by offsetting residual biodiversity impacts.

### 5.3.1 Avoid and minimise

Ark has generally focused on avoidance of impacts through site selection and avoidance of higher quality native vegetation and habitat during the preliminary design process for the project, which is consistent with the Solar Guideline's focus on avoiding or minimising impacts during site selection and design.

Overall, Ark has designed the project to avoid and minimise impacts on high quality vegetation and habitat, including:

- avoiding low lying swamp areas, riparian vegetation, mature hollow bearing trees and contiguous vegetation along the eastern boundary of the site;
- removing the south-eastern portion of the development footprint (as presented in the EIS) to avoid potential habitat for threatened species;
- planting of a 30 m wide and approximately 3.75 km long biodiversity corridor along the northern boundary of the site connecting the Ellangowan State Forest to Bungawalbin State Forest;
- ensuring landscape scale connectivity between the site and the surrounding State Forest areas would be maintained as far as practicable; and
- prioritising development on large areas of exotic pasture, degraded native grassland and degraded forested areas.

Additionally, Ark further altered the project design in response to CPHR advice to avoid and minimise impacts on *Rotala tripartita* individuals and the majority of the species' habitat, with the impact area reduced to avoid 5,095 individuals of this species (approximately 995 individuals avoided) and approximately 21 ha (54%) of the species' potential habitat.

The project refinements also focused on avoiding impacts to *Maundia triglochinos*, with the amended project avoiding all individuals and potential habitat of this species.

### 5.3.2 Native vegetation

The development footprint is approximately 789 ha and is currently used for cattle grazing. Of the development footprint, approximately 23 ha comprises native vegetation, including the following plant community types (PCTs) (see Figure 3):

- PCT 4046 – Northern Lowland Swamp Turpentine-Red Gum Forest;
- PCT 3428 – Northern Lowland Red Gum-Swamp Turpentine Grassy Forest;
- PCT 3420 – Clarence Lowland Ironbark-Spotted Gum Grassy Forest; and
- PCT 3965 - Far North Floodplain Forb-Sedge Wetland.

A subset of these PCTs conform to threatened ecological communities under State and Commonwealth Legislation. In this regard, the project would result in clearance of the following:

- 3.13 ha of Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions listed under the EPBC Act;
- 4.42 ha of Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion listed under the BC Act; and
- 2.38 ha of Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions listed under the BC Act.

The project area also contains some scattered trees (26 in total) which would be removed for development of the project. The remainder of the development footprint (approximately 766 ha) comprises cleared areas, dams or exotic vegetation that do not conform to native vegetation (see Figure 3).

Table 5 provides a summary of the impacts of the project on native vegetation (including threatened ecological communities), and the relevant ecosystem credit liability under the NSW Biodiversity Offset Scheme.

**Table 5 | Ecosystem credit requirements**

Plant Community Type (PCT)	Vegetation Zone	Conservation Status		Impact Area	Credit Liability
		BC Act	EPBC Act		
<b>PCT 3420: Clarence Lowland Ironbark-Spotted Gum Grassy Forest</b>	Good	-	-	2.4 ha	65
	Moderate	-	-	12.04 ha	272
	Regeneration	-	-	1.84 ha	23
	Scattered trees	-	-	4 trees	4
<b>PCT 3428: Northern Lowland Red Gum-Swamp Turpentine Grassy Forest</b>	Moderate	Partially EEC <sup>1</sup>	Partially EEC <sup>1</sup>	2.67 ha	53
	Low	Partially EEC <sup>2</sup>	-	1.29 ha	16
	Scattered trees	-	-	11 trees	11
<b>PCT 3965: Far North Floodplain Forb-Sedge Wetland</b>	Moderate	EEC <sup>3</sup>	-	2.38 ha	45
<b>PCT 4046: Northern Lowland Swamp Turpentine-Red Gum Forest</b>	Moderate	Partially EEC <sup>1</sup>	Partially EEC <sup>1</sup>	0.46 ha	15
	Scattered trees	-	-	11 trees	11
<b>Total</b>				<b>23.08 ha / 26 trees</b>	<b>515</b>

<sup>1</sup> Parts of this community conform to the Subtropical Coastal Floodplain Forest (Endangered under BC Act and EPBC Act).

<sup>2</sup> Parts of this community conform to the Subtropical Coastal Floodplain Forest (Endangered under BC Act).

<sup>3</sup> The entirety of this community within the project area conform to the Freshwater Wetlands (Endangered under BC Act).

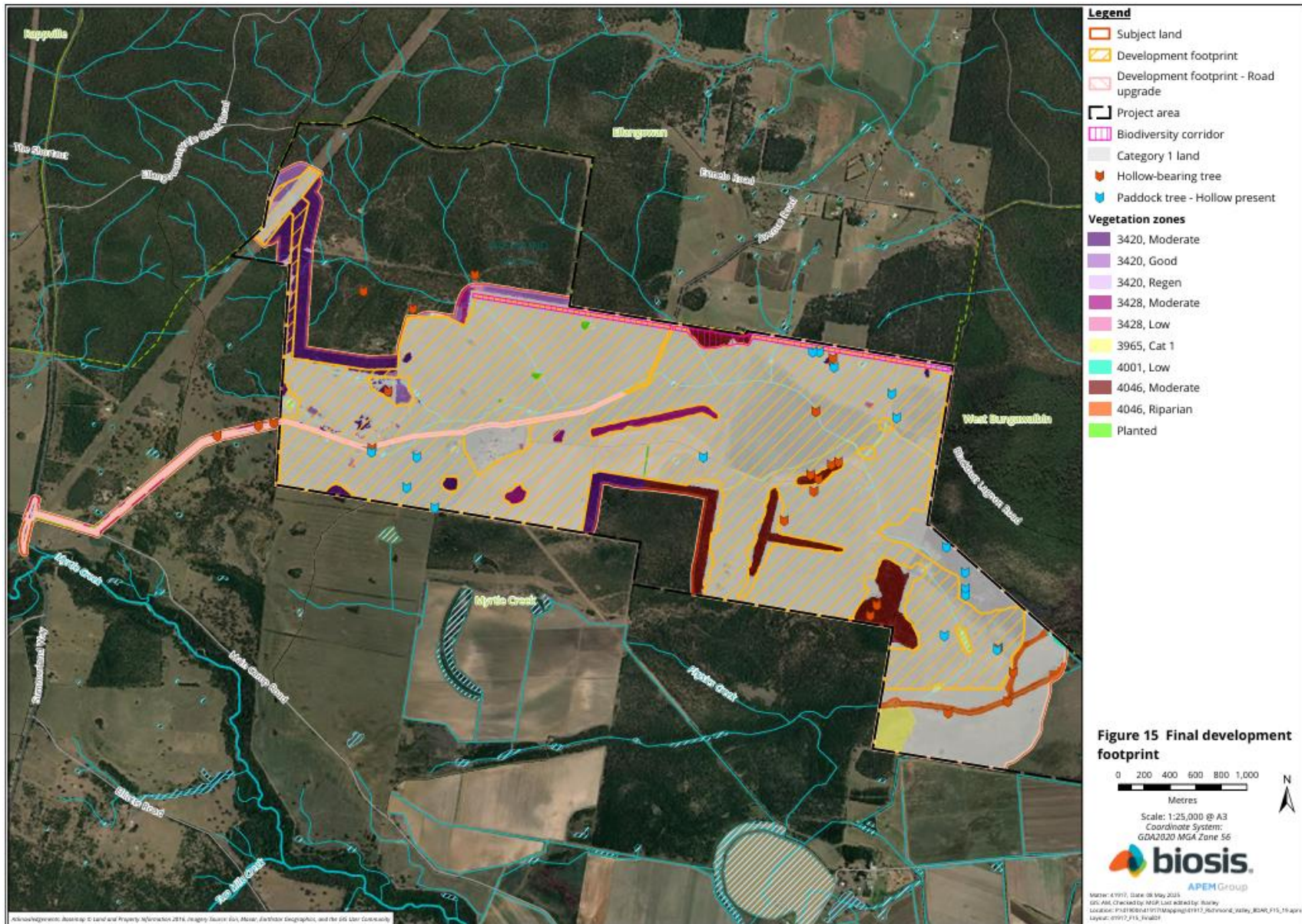


Figure 3 | Plant community types within the project area

### 5.3.3 Threatened flora and fauna

The project has the potential to affect a number of flora and fauna species through direct habitat loss from vegetation clearing, and from indirect impacts.

#### *Ecosystem credit species*

Direct impacts resulting from the development footprint include loss of habitat for 51 threatened ecosystems credit species which were assumed to occur, based on the occurrence of the PCTs discussed above.

Ten of these species were detected within the project area during field surveys (Hoary Wattled Bat [*Chalinolobus nigrogriseus*], Eastern False Pipistrelle [*Falsistrellus tasmaniensis*], Square-tailed Kite [*Lophoictinia isura*], Eastern Coastal Free-tailed Bat [*Micronomus norfolkensis*], Little Bent-winged Bat [*Miniopterus australis*], Large Bent-winged Bat [*Miniopterus orianae oceanensis*], Eastern Long-eared Bat [*Nyctophilus bifax*], Grey-crowned Babbler [eastern subspecies] [*Pomatostomus temporalis temporalis*], Yellow-bellied Sheath-tail-bat [*Saccolaimus flaviventris*] and Greater Broad-nosed Bat [*Scoteanax rueppellii*]).

Potential impacts on these species would be offset via the ecosystem credit requirements detailed in Table 5.

#### *Species credit species*

The following two threatened flora species credit species were recorded during project surveys:

- *Maundia triglochoides* – Vulnerable, BC Act; and
- *Rotala tripartita* (*Rotala tripartite*) – Endangered, BC Act.

*Rotala tripartita* was identified to be a Serious and Irreversible Impact (SAIL) entity. Consideration of a risk of SAIL on the species is discussed in Section 5.3.4. As outlined earlier, the amended project footprint avoids all occurrences of *Maundia triglochoides* and its potential habitat. As such, no species credits are required to be provided for *Maundia triglochoides*.

No other threatened flora species were assumed to be present within the project area.

In relation to threatened fauna, the following species credit species were recorded during project surveys:

- Barking Owl (*Ninox connivens*) – Vulnerable, BC Act;
- Southern Myotis (*Myotis Macropus*) – Vulnerable, BC Act;
- Squirrel Glider (*Petaurus norfolcensis*) – Vulnerable, BC Act; and
- Common Planigale (*Planigale maculata*) – Vulnerable, BC Act.

In addition to the above four species, the Brush-tailed Phascogale (*Phascogale tapoatafa*) and Green-thighed Frog (*Litoria brevipalmata*) (both listed as Vulnerable under the BC Act) were assumed to be present within the project area.

Table 6 provides a summary of the species credits required to be offset for the project.

**Table 6 | Species credit requirements**

Species	Conservation Status		SAIL Entity	Impact on habitat (ha) / number of individuals	Credit liability
	BC Act	EPBC Act			
<b>Flora</b>					
<i>Rotala tripartita</i> ( <i>Rotala tripartita</i> )	E	-	Yes	3.33	102
<b>Fauna</b>					
<i>Litoria brevipalmata</i> (Green-thighed Frog)	V	-	No	3.33	52
<i>Petaurus norfolcensis</i> (Squirrel Glider)	V	-	No	10.69	262
<i>Phascogale tapoatafa</i> (Brush-tailed Phascogale)	V	-	No	20.63	492
<i>Myotis macropus</i> (Southern Myotis)	V	-	No	5.74	133
<i>Ninox connivens</i> (Barking Owl)	V	-	No	13.39	322
<i>Planigale maculata</i> (Common Planigale)	V	-	No	20.63	492
<b>Total</b>					<b>1,855</b>

### 5.3.4 Serious and irreversible impacts

Following receipt of comments from CPHR on the EIS, Ark conducted additional targeted surveys of the project area. During the surveys, Ark identified *Rotala tripartita*, a wetland species which requires significant rainfall to grow (i.e. is not always visibly present in the landscape).

The BioNet Threatened Biodiversity Data Collection lists *Rotala tripartita* at risk of serious and irreversible impact (SAIL) based on Principle 3 (a very limited geographic distribution). *Rotala tripartita* is a riparian species that typically grows in free-standing water with sedges. Extreme

fluctuations in abundance of the species have been reported, with plants observed to germinate prolifically and establish in large numbers after substantial rainfall. Individuals disappear above-ground during dry periods and may only persist during these times in the seed-bank.

Under clause 6.7 of the *Biodiversity Conservation Regulation 2017* (BC Regulation), an impact is to be regarded as serious and irreversible if it is “likely to contribute significantly to the risk of a threatened species or ecological community becoming extinct” on the basis of the relevant principles.

As a result of the initial identification, additional targeted survey effort was undertaken to confirm the extent of the species across the project area. The targeted surveys recorded a total of 5,098 individuals. The majority of the species habitat occurred within mapped Category 1 (exempt) land which had been subject to clearing associated with historical forestry activities and, as confirmed by CPHR in its advice on the Amended BDAR, is not subject to assessment under the NSW BAM.

The species habitat polygons for *Rotala tripartita* were refined and finalised in consultation with CPHR and the Department. Importantly, following the identification of *Rotala tripartita* within the project area, Ark has amended the project layout to avoid impacts on this species, most significantly the south-eastern portion of the development footprint has been removed from the project design.

As a result of the amended project layout, Ark has avoided all but three individuals of the species within a habitat polygon of approximately 3.3 ha. The Department notes the project site is currently used for cattle grazing, including within the areas mapped as the potential *Rotala tripartita* habitat. Given the extent of habitat remaining within the site and in close proximity to the project, the Department considers that the project is not likely to contribute significantly to the risk of the *Rotala tripartita* becoming extinct. In addition, the Department notes that Ark has committed to management measures to ensure the condition of the retained *Rotala tripartita* habitat is maintained and improved, which the Department has included in the recommended conditions.

In its advice on the amended BDAR, CPHR confirmed that the issues relating to potential impacts on *Rotala tripartita* had been adequately addressed and the issue was considered to be resolved.

### **5.3.5 Aquatic Ecology**

According to the Richmond Valley LEP, Physics Creek is identified as Key Fish Habitat. While Physics Creek and connecting tributaries to the north are mapped as freshwater fish habitat for the Endangered Southern Purple Spotted Gudgeon (*Mogurnda adspersa*), many sections of the mapped waterway lack a defined channel with bed and bank features. Accordingly, the EIS concludes that the project area would not provide habitat for the Southern Purple Spotted Gudgeon.

Notwithstanding, the negligible impacts the project is proposed to have on aquatic ecosystems Ark has committed to:

- constructing the proposed waterway crossing in accordance with *Policy and Guidelines for Fish Friendly Waterway Crossing*, *Guidelines for riparian corridors on waterfront land*, *Guidelines for watercourse crossings on waterfront land* and *Guidelines for Controlled Activities on Waterfront Land – Riparian Corridors* to minimise impacts to fish and aquatic habitats;
- carrying out all works within waterfront land in accordance with the *Guidelines for Controlled Activities on Waterfront Land* to protect riparian corridors;
- designing internal roads and other project infrastructure with adequate runoff controls to prevent the introduction of pollutants into the water system; and
- preparing a Soil and Water Management Plan to manage any potential water quality impacts affecting waterways during construction.

DPIRD Fisheries were satisfied with the mitigation measures proposed. The Department considers the potential impacts on aquatic ecology can be adequately managed with implementation of the proposed mitigation measures and the Department’s recommended conditions.

### 5.3.6 Significant impacts on Commonwealth-listed species and communities

Ark identified and addressed all threatened species and communities included in the Commonwealth Referral Decision (EPBC 2023/09641) (Referral Decision).

The only Commonwealth listed species and/or community recorded within the project area is the *Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions* (Endangered, EPBC Act). Notwithstanding, assessments of significance were undertaken for threatened species and communities that were identified as having a moderate or higher potential to occur within the project area. The assessment of significance concluded that the project would not significantly impact any of the identified species or communities.

The Department considered Commonwealth matters in consultation with CPHR and the Commonwealth DCCEEW, including consideration of Ark’s assessments of significance. A summary of this assessment is provided in **Appendix H**.

### 5.3.7 Recommended conditions

The Department has recommended Ark retire the ecosystem and species credits outlined in **Table 5** and **Table 6** in accordance with the NSW Biodiversity Offsets Scheme prior to carrying out any development that could directly or indirectly impact the biodiversity values requiring offset.

Further, the Department has recommended conditions requiring Ark to prepare and implement a BMP in consultation with CPHR to ensure the remaining biodiversity values onsite are appropriately

managed and maintained. The BMP would include a description of a number of measures, including but not limited to:

- maintaining hydrological flows to retained vegetation for all known and potential *Rotala tripartite* habitat; and
- retain topsoil from within the impacted areas of known and potential *Rotala tripartite* habitat and respread within that habitat during earthworks for construction;

With implementation of the BMP, the Department considers the project is unlikely to significantly impact the biodiversity values of the locality.

Overall, the Department considers that the project appropriately minimises impacts to biodiversity values through project design and appropriate mitigation measures, and, subject to the implementation of recommended conditions, would not result in a significant impact on biodiversity values, including no serious or irreversible impacts.

## 5.4 Traffic and transport

Construction of the project involves delivery of plant, equipment and materials, including movement of heavy vehicles requiring escort, which, primarily during construction, has the potential to impact on the local and regional road network.

Three public submissions received during the EIS exhibition periods raised concerns about potential traffic impacts on local roads during the construction period.

TfNSW provided comments on the EIS requesting additional information be provided as part of a revised Transport Impact Assessment (TIA). This revised TIA was to include a high-risk Oversize-Overmass (OSOM) route assessment with strategic concept designs and swept paths, along with identification of any required traffic mitigation measures and road upgrades. TfNSW also raised concerns regarding the high-risk OSOM movement required for the transportation of the transformer, due to the weight of the vehicle and bridge and culverts limits along the OSOM route. TfNSW also advised that the intersection works for the Summerland Way / Main Camp Road needed to be updated to capture all vegetation clearing and widening required for the high-risk OSOM movement.

In response to submissions and advice received from TfNSW, Ark prepared a Submissions Report and Amendment Report, including an updated Addendum TIA. The high-risk OSOM vehicle route was revised with the updated route provided, alongside the bridge and culvert assessment. Intersection works captured all vegetation clearing and widening required for the high-risk OSOM route. However, TfNSW advised that the strategic designs and swept paths did not show the detail required to determine if the vehicles would impact or run over infrastructure at the location of pinch

points 6 to 12 along the high-risk OSOM route. TfNSW reiterated concerns regarding the capacity of bridges to take the weight of the transformer in the high-risk OSOM route, unless the mass was reduced to 14t per axle.

In response to the advice received from TfNSW, Ark prepared strategic designs for pinch points 6 through 12 along the high-risk OSOM vehicle route. TfNSW reviewed these strategic designs, identifying the route as low risk. Ark will continue to liaison with TfNSW regarding the OSOM route.

Additionally, Ark prepared an assessment for the transformer vehicle travelling along the high-risk OSOM route, over the weight-constrained bridges. This assessment identified a range of mitigation measures such as reduced vehicle speed, that could be implemented to address axle mass concerns. TfNSW was satisfied that the proposed mitigation measures will safely manage the risk associated with the high risk OSOM vehicle movements travelling over the bridges along this route. Ark has also agreed to secure concurrence and other approvals as required for their road works.

#### **5.4.1 Traffic routes and site access**

Components for the project would be transported to site from either Melbourne or Brisbane via three potential routes. These include a transport route for the proposed transformer components (Route 1 from Melbourne) and two potential routes for the switchroom components (Route 2 from Brisbane and Route 3 from Melbourne) (see Figure 4).

All vehicles associated with the project would access the site via one of the three site access points on Avenue Road (accessed via Summerland Way and Main Camp Road) (see Figure 5).

#### **5.4.2 Traffic volumes**

The main increase in project related traffic would occur during the 24-month construction period. The peak construction period is projected to occur over the first half of the construction phase.

The estimated peak daily vehicle movements (i.e. one vehicle entering and leaving the site) during this phase of construction would be up to 86 movements per day, including 53 heavy vehicles (including buses) and 33 light vehicles, equating to an additional 172 vehicles per day. A maximum of 16 heavy vehicle movements would be required at peak hour during peak construction. The second half of the construction phase would require significantly less vehicle movements.

Heavy vehicles requiring escort would be limited to 12 movements in total, associated with the components of the transformer and switchroom that are proposed to be transported to the site.

Traffic generation during operations would be significantly less than the construction phase (i.e. up to 15 light vehicles per day during operations, with heavy vehicles only occasionally required for replacing larger components of project infrastructure).

The decommissioning phase would be expected to last less than 24 months, with the peak traffic movements to/from the site during decommissioning conservatively estimated to be approximately 70% of the identified peak construction movements (both material/equipment delivery and peak staff movements).

### 5.4.3 Road upgrades and maintenance

The EIS demonstrated there is sufficient capacity along Summerland Way to accommodate project related traffic, however upgrades would be required along Avenue Road and Main Camp Road, including at its intersection with Summerland Way.

The Summerland Way / Main Camp Road intersection configuration will be upgraded to support the additional traffic anticipated during the peak construction phase of the project. This upgrade will include a basic left (BAL) turn treatment on the northern approach to the intersection, and a rural short channelised right (CHRs) standard treatment on the southern approach (see Figure 5).

The existing configuration of the intersection between Main Camp Road and Avenue Road is considered adequate to cater for the expected additional traffic movements associated with the Project, based on the low background traffic volumes.

To accommodate the additional project traffic volumes, it is proposed that the initial section of Main Camp Road be upgraded from its current configuration (6m wide unsealed) to provide a 6m sealed pavement on a 7m formation, as agreed with Richmond Valley Council (see Figure 5). Similarly, it is proposed that the current configuration of Avenue Road (4.5m wide unsealed) be widened/ upgraded to provide a 6m sealed pavement on a 7m formation, as agreed with Richmond Valley Council (see Figure 5).

To achieve appropriate Safe Intersection Sight Distances (SISD), vegetation would need to be cleared on the southern side of the Summerland Way / Main Camp Road intersection. This clearance has been accounted for in the BDAR.

In addition to the above, temporary hardstand is required at both the roundabout centre located on Bruxner Highway and Hare Street in Casino, and also on the inside corner, outside edge of Main Camp Road and outside edge of Avenue Road. Road signs would need to be temporarily removed and replaced to facilitate the proposed OSOM movements.

Council and TfNSW are satisfied with the proposed road design and upgrades, subject to the recommended conditions of consent.

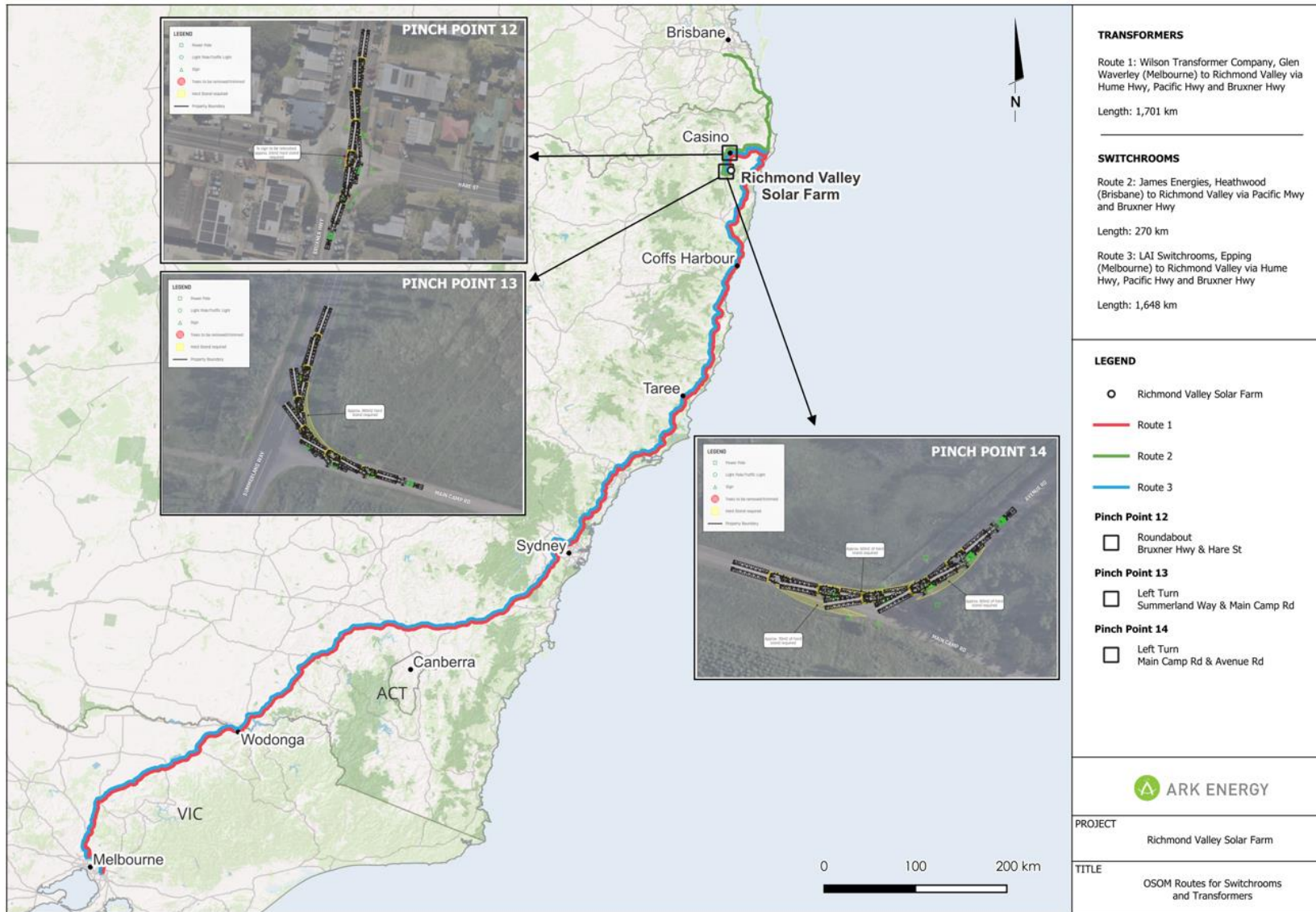


Figure 4 | Project transport routes

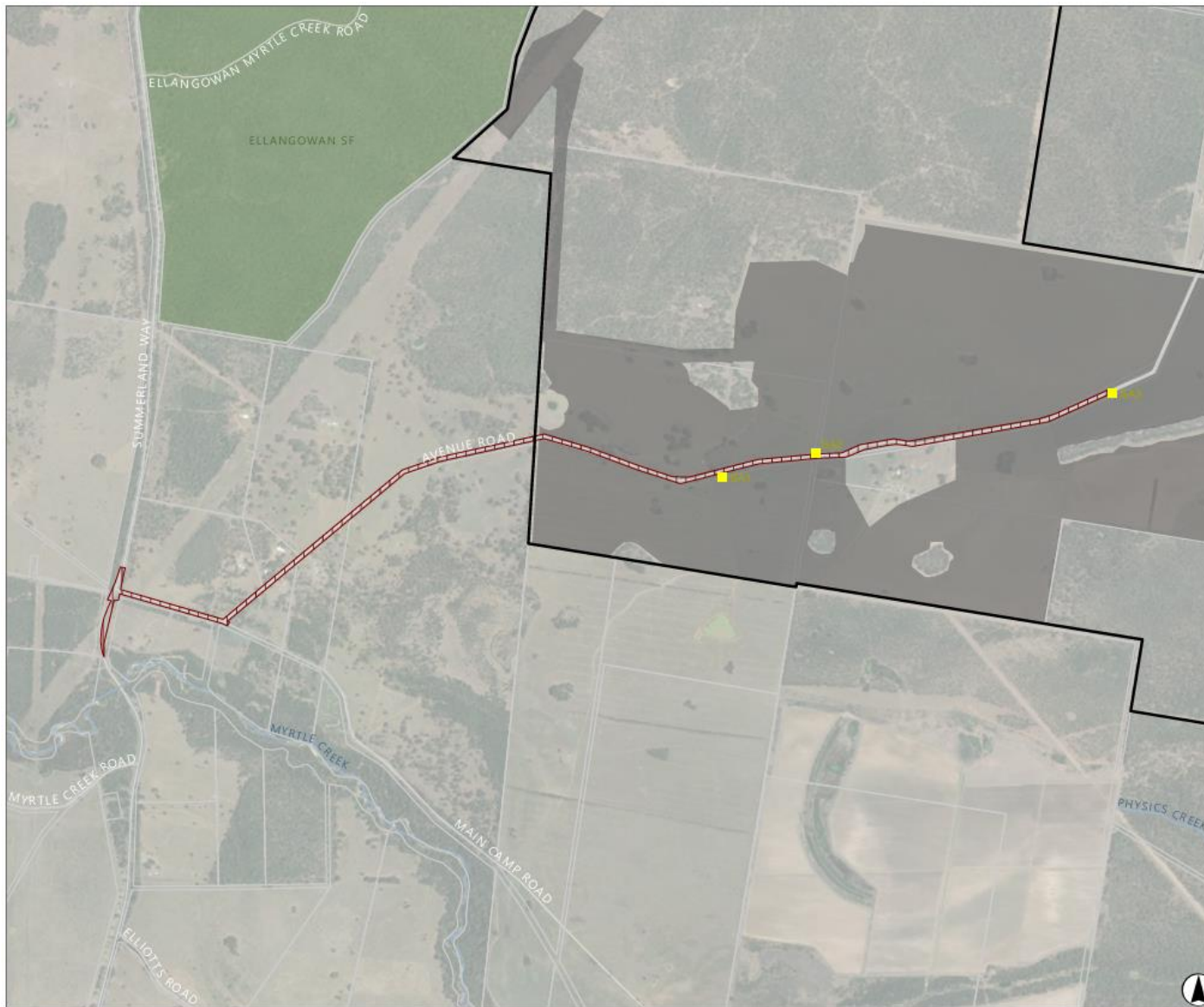


Image Source: ESRI Basemap (2023) | Data Source: NSW DFSI (2023)

**FIGURE 1.4**

**External Road Upgrades**

- Legend**
- Project Area
  - Development Footprint
  - Road Upgrade Area
  - Access Points
  - State Forest
  - Roads
  - Watercourse



Scale 1:25,000 at A4  
 GDA 1994 MGA Zone 56

This document and the information are subject to Terms and Conditions and Copyright (Australia) Pty Ltd ("Copyright") in the drawings, information and data recorded. The information is the property of Unswick. This document and the information are solely for the use of the authorized recipient and this document may not be amended or reproduced or used in part for any purpose other than that which it was supplied by Unswick. Unswick makes no representation, warranty, liability and accepts no responsibility to any third party who may use or rely upon this document for the information.

APPROVED FOR AND ON BEHALF OF UNSWICK

**Figure 5 | Location of proposed road upgrades**

#### 5.4.4 Cumulative impacts

As discussed in Section 2.2, there were two proposed energy projects within 50 km of the project at the time of preparing the EIS (i.e. Summerville Solar Farm and Myrtle Creek Solar Farm). Since preparing the EIS, the development application for Summerville Solar Farm has been approved, whilst the Myrtle Creek Solar Farm application has been withdrawn.

The three projects were anticipated to share a common haulage route on the State Road network (i.e. Summerland Way). The EIS demonstrates that Summerland Way has sufficient capacity to accommodate construction traffic of the three projects (noting Myrtle Creek Solar Farm is no longer going ahead) and the results of the additional cumulative impact assessment indicated that the proposed configuration of the intersection with Main Camp Road would be able to operate within acceptable limits.

To ensure this occurs, the Department has recommended that the project TMP provide measures to minimise potential cumulative traffic impacts with other projects in the area during construction, upgrading or decommissioning works.

#### 5.4.5 Recommended conditions

Subject to the recommended conditions, the Department and TfNSW are satisfied the project would not result in significant impacts on road network capacity, efficiency or safety. The Department has recommended conditions of consent requiring Ark to:

- undertake relevant road upgrades prior to commencement of construction;
- obtain all relevant approvals prior to use of heavy vehicles and heavy vehicles requiring escort on the public road network;
- restrict the number of vehicles during construction, upgrading and decommissioning to the identified peak volumes;
- ensure length of vehicles (excluding OSOM vehicles requiring escort) don't exceed 19 metres; and
- prepare and implement a TMP in consultation with TfNSW and Council, including provisions for dilapidation surveys and operation of shuttle buses, and details of the measures that would be implemented to address road safety.

## 5.5 Visual

Concerns relating the visual impacts of the project were raised in eleven public submissions received during the exhibition period, including by community members with specific concerns regarding views from their residences.

To assess the potential visual impacts of the project, Ark prepared a Landscape and Visual Impact Assessment in accordance with the Solar Guideline and accompanying *Technical Supplement – Landscape and Visual Impact Assessment* (the Technical Supplement). In addition, the Department visited the site and nearby locations to assess visual impacts in August 2025.

### 5.5.1 Visual Context

The site and surrounds consist of low-lying flats comprising primarily cleared and modified land to support agricultural activities. Remnant patches of native vegetation are present in pockets throughout the project area, which is surrounded by several densely vegetated State Forests, National Park and Conservation Areas.

Land within the site is predominantly characterised as gently undulating with the elevation ranging between approximately 25 m Australian height datum (AHD) in the south-east, rising to approximately 70 m AHD on crested areas in the west.

### 5.5.2 Project design considerations and mitigation

Ark has proposed the following measures to avoid and minimise its potential visual and glint and glare impacts, including:

- minimising reflective surfaces on ancillary infrastructure by using non-reflective dark colours;
- minimising light spill from the project area by strategically placing and directing the construction and external lighting;
- using light shield fittings to avoid light spill; and
- modifying the resting angles of solar panels (rather than the standard horizontal resting angle) based on the assessed glare risk.

The Department notes that the low-lying nature of the development, gently undulating topography and existing vegetation would minimise views of the project from the surrounding area. Impacts on the local landscape have been reduced through project design.

### 5.5.3 Assessment

#### *Visual amenity*

As outlined in Section 2.1, a total of 49 dwellings are located within a 4 km radius of the project area (see Figure 6). The closest non-associated residences (C3\_11, D3\_3 and D4\_23) are all located between 900 m and 1 km away)<sup>1</sup>.

The preliminary assessment, undertaken in accordance with the Technical Supplement, identified 26 private receptors and seven road receptors (all along public roads) which warranted detailed assessment. Of these, six private receptors (D3-1, D3-2, D3-3, D3-4, D3-5 and D3-8 – see Figure 6) and two road receptors along Avenue Road (VP04 and VP05) were classified with an initial ‘moderate’ visual impact rating. Photomontages from each of these receptors were prepared.

Assessment of these photomontages determined a final overall visual impact rating of ‘low’ at all receptors. Under the Solar Guideline, no mitigation measures are required for visual impacts assessed as being low or very low. Despite the low visual impact, Ark has agreed to prepare a Landscaping Plan to provide for intermittent planting along Avenue Road to soften the view of the solar farm from receivers. The Department is satisfied that the project would not result in significant visual impacts on nearby residences.

While the Department recognises that the introduction of solar infrastructure to a rural area would result in a change to the local landscape, it considers the project would have a limited impact on the local landscape and region as a whole.

Notwithstanding, the Department has recommended conditions requiring Ark to minimise off-site visual impacts of the development and ensure the visual appearance of all ancillary infrastructure (including paint colours) blend in as far as possible with the surrounding landscape.

#### *Glint and Glare*

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.

Ark’s glint and glare analysis, which is based on a worst-case scenario, identified the potential for temporary glare to be experienced by four residential receptors (C3-3, C3-6, C3-8 and C3-20) and two road receptors, along Avenue Road and Main Camp Road.

---

<sup>1</sup> Although the EIS identifies the closest non-associated residence as receiver D3-47, Ark has subsequently purchased this property, and it is now considered an associated residence.

Each of these receptors, with the exception of Avenue Road, were assessed as having a 'low' glare impact as they would experience less than 10 hours of glare per year. Avenue Road was assessed as having a 'high' glare impact as it would experience over 30 hours of glare per year (experiencing up to 534 hours per year). These glare impacts are associated with PV arrays 6, 10 and 19.

Further assessment identified the lack of screening vegetation between the project and Avenue Road was the key contributing factor behind these impacts. Council provided feedback proposing vegetation screening be considered. Ark agreed to provide intermittent planting along Avenue Road, to reduce the impact of glint and glare for road users. While the planting of full vegetation screening would typically be proposed to mitigate this impact, the location of the project within a bushfire zone was considered justification to investigate alternative mitigation measures. The intermittent planting will be designed and maintained in accordance with RFS's *Planning for Bushfire Protection 2019*.

Ark concluded that application of the following operational controls of PV arrays 6, 10 and 19 reduced the potential glare impacts from 534 hours per year down to zero:

- normal tracking angle of  $\pm 60^\circ$ ; and
- no backtracking operation.

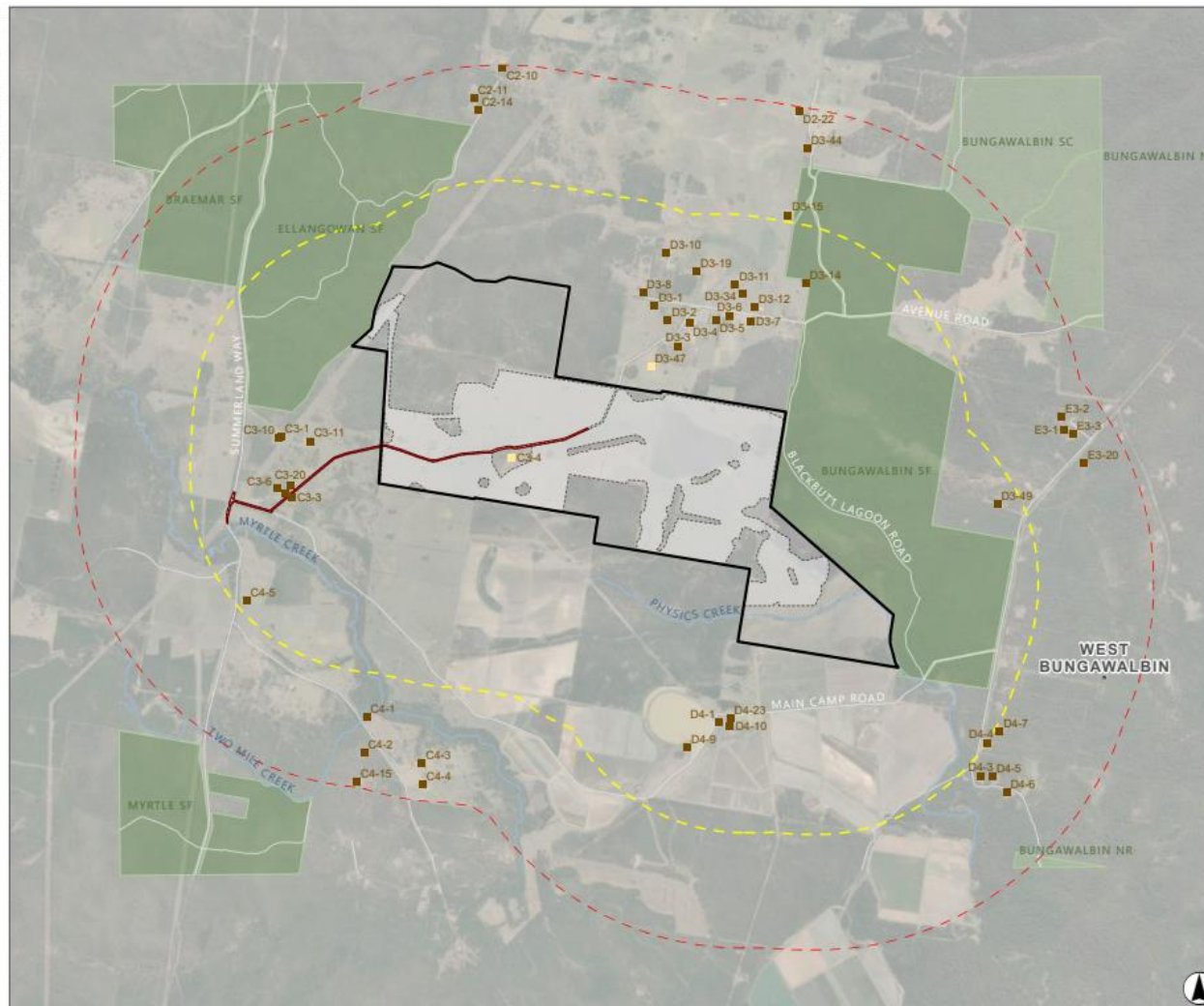
In this case, the panels would move between the operational range (maximum tilt) and remain at this angle, only switching back during the night.

The Department notes that TfNSW did not raised concerns in relation to glare impacts along Avenue Road. Subject to the recommended conditions, including a condition limiting the resting angle of specific panels during specified time periods, the Department is satisfied that the project would not cause significant glint or glare to nearby residences, road users and aircrafts.

### ***Night lighting***

The project would only require the use of low-level night lighting for security at the substation and within the operations and maintenance facility, as well as night-time maintenance and cases of emergency. Further to this, the project is located approximately 200 km north-east of the Siding Spring Observatory, and no impacts from the project are anticipated.

Notwithstanding, the Department has recommended conditions requiring Ark to minimise offsite lighting impacts and ensure that any external lighting installed is 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 4282:2023 – Control of Obtrusive Effects of Outdoor Lighting*.



**FIGURE 6.12**

**Preliminary Assessment- Private Viewpoints**

- Legend**
- Project Area
  - Development Footprint
  - Road Upgrade Area
  - Associated Receptor
  - Private Receptor
  - NPWS Reserve
  - State Forest
  - Roads
  - Watercourse
  - 4 km from the nearest solar array
  - 2.5 km from the nearest solar array



This document and the information are subject to Terms and Conditions and Licenses. All rights reserved. "umwelt" is the property of Umwelt. This document and the information are only for the use of the authorized recipient and this document may not be reproduced or transmitted in whole or part for any purpose other than that which it was prepared by Umwelt. Umwelt makes no representation, undertaking, warranty, and accepts no responsibility to any third party who may use or rely upon the information. APPROVED FOR AND ON BEHALF OF Umwelt

Image Source: ESRI Basemap (2023) | Data Source: NSW DFSI (2023)

**Figure 6 | Private viewpoints surrounding the project**

#### 5.5.4 Recommended conditions

The Department has recommended conditions of consent requiring Ark to:

- implement the operational controls for PV arrays 6, 10 and 19 in accordance with 'Scenario 6' set out within the *Glint and Glare Assessment* prepared by Moir Landscape Architecture;
- minimise the off-site visual impacts of the development, including the potential for any glare or reflection;
- prepare a Landscaping Plan to the satisfaction of the Secretary, to provide for intermittent planting along Avenue Road within the project area to reduce visual impacts for road users; and
- minimise the off-site lighting impacts of the development.

Subject to the recommended conditions, the Department is satisfied that the project would not result in significant visual impacts. The site selection and project design are consistent with the Solar Guideline, particularly in avoiding sites with high visibility such as those on prominent or high ground positions, or sites which are located in a valley with elevated nearby residences with views toward the site.

The Department considers that Ark has adequately reduced the potential visual impacts of the project to an acceptable level while maintaining the proposed solar power generating capacity.

#### 5.6 Other issues

The Department's consideration of other issues is summarised in Table 7 below.

**Table 7 | Assessment of other issues**

Issue	Findings and conclusions	Recommended conditions
<b>Noise</b>	<ul style="list-style-type: none"> <li>• In the absence of mitigation controls, and under worst-case noise-enhancing meteorological conditions, construction noise levels are predicted to exceed the ‘noise management level’ of 45 dB(A) in the EPA’s <i>Interim Construction Noise Guideline</i> (the ICNG) at eight receivers located in close proximity to the project site. These include exceedance of:               <ul style="list-style-type: none"> <li>– up to 3 dB(A) at three non-associated residential receivers;</li> <li>– up to 14 dB(A) at two non-associated residential receivers;</li> <li>– up to 29 dB(A) at three non-associated residential receivers.</li> </ul> </li> <li>• The larger exceedances at the five most highly affected receivers are due to the road upgrade works. These impacts will be transient in nature and temporary, lasting no longer than 3 months.</li> <li>• The noise assessment was conservative, as it assumes that all equipment is operating simultaneously at the closest point in the development footprint to the respective receiver.</li> <li>• Importantly, all noise generated during construction would be below the ‘highly noise affected’ criterion of 75 dB(A) in the ICNG at all nearby receivers.</li> <li>• Notwithstanding, Ark has committed to a range of noise mitigation measures in line with the best practice requirements outlined in the ICNG, including prior notification to potentially affected receivers and a noise monitoring program. Ark has also committed to developing a Noise Management Plan which would be implemented during the construction period with adequate noise testing to ensure that the noise levels are accurately recorded to manage and prevent noise exceedances.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimise noise generated by the construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG.</li> <li>• Comply with the noise management levels as derived from the NSW <i>Noise Policy for Industry</i> (EPA, 2017) at any non-associated residence.</li> <li>• Prepare a Noise Monitoring Report to monitor noise levels at identified non-associated receivers.</li> <li>• Restrict construction hours to Monday to Friday, 7 am – 6 pm and Saturday, 8 am – 1 pm.</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>The operational noise levels at all non-associated receivers are predicted to comply with the day, evening and night noise limits in accordance with the Noise Policy for Industry.</li> <li>Road traffic noise during construction and operation along Summerland Way would comply with the relevant criteria in the EPA's <i>Road Noise Policy</i> (RNP). In regard to impacts along Avenue Road, construction traffic noise levels are predicted to comply with the criteria at the majority of the receivers, with the exception of two (receivers C3_3 and C3_8). Exceedances of up to 5 dB were predicted to occur at these receivers during the night-time period (with traffic movements anticipated to occur between 6 am–7 am).</li> <li>In order to mitigate this impact, Ark has committed to restricting vehicle movements along Avenue Road between 10 pm and 7 am during the construction period, unless there is a secured neighbour agreement with both receivers C3_3 and C3_8.</li> <li>Due to large distances between the project and identified sensitive receivers, any vibration impacts from construction activities would be negligible.</li> <li>The noise assessment was conservative, assuming that peak construction traffic movements for all projects are occurring simultaneously, which is unlikely to occur. No noise exceedances are anticipated to occur during daytime hours. The construction timeframe is limited, with a small number of receivers who may be impacted by an increase in noise associated with the construction traffic for this project. Mitigation measures, such as reduced vehicle speeds are deemed to be adequate mitigation.</li> <li>Overall, noting the conservative assessment and the temporary nature and short term duration of the works, the Department considers that noise generated during construction and operation of the project can be appropriately managed through implementation of the proposed mitigation measures and adherence with the recommended conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Restrict vehicle movements along Avenue Road between 10 pm and 7 am during the construction period.</li> </ul>

## Water Resources

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>The project site is located within the Richmond River basin, which includes local catchments of Myrtle Creek and Two Mile Creek to the southeast of the project area, and Bungawalbin Creek and Lower Bungawalbin Wetlands to the east.</li> <li>The majority of the watercourses within the project area are 1<sup>st</sup> and 2<sup>nd</sup> order Strahler streams. A 3<sup>rd</sup> order Strahler stream intersects the northern part of the project area, extending east before flowing south-east towards Physics Creek. A 4<sup>th</sup> order Strahler stream, identified as Physics Creek and marked as a sensitive watercourse, intersects the southeastern corner of the Project Area. All watercourses in the project area flow to the Richmond River.</li> <li>The topography of the project area is relatively flat and provides for a broad floodplain with numerous minor flow paths and topographical depressions which are likely to accumulate surface water under local catchment flooding conditions.</li> <li>Land within the south-eastern and central portion of the site are mapped as wetlands within the Richmond Valley LEP. These wetlands have been avoided by all project infrastructure.</li> </ul> <p><u>Flooding</u></p> <ul style="list-style-type: none"> <li>Arcadis Australia Pacific Pty Limited undertook a Flood Impact Assessment which demonstrated that the project would leave the site morphology largely unchanged. The flood assessment concluded that the greatest impact to flooding would be the inclusion of the chain mesh perimeter fencing given its potential for blockage generated by debris transported within the flood flows.</li> <li>The potential blockage of the fence structure can result in an increase in extent of afflux as well as the area of effect for the flood level reduction, although, all variation remains within ±100 mm, while minor impacts do extend outside the project area, these are confined to natural landscapes, noting that no roads or building structures would be impacted and modelled flood impacts do not extend beyond Physics Creek.</li> <li>Importantly, the project does not adversely change the flood risk and hazard profile of the site, as depicted in the side-by-side map for the 1% annual exceedance probability (AEP) under the high blockage scenario.</li> </ul>	<ul style="list-style-type: none"> <li>Design, construct and maintain the development in a manner that does not materially alter the flood storage capacity, flood flows or hydrological characteristics of the site or surrounds.</li> <li>Design all waterway crossings in accordance with the documents <i>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) and the <i>Policy and Guidelines for Fish Habitat Conservation and Management</i> (Update 2013).</li> <li>Ensure all works within waterfront land is undertaken in accordance with <i>Guidelines for Controlled Activities on</i></li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>• Noting the potential flood impacts on site and potential constraints on evacuation routes, DPHI consulted with NSW SES seeking advice around suitable emergency responses in the event of a flood that would inform an emergency management plan.</li> <li>• In response to advice received from NSW SES, Ark has committed to undertake further flood investigations during detailed design to confirm the flood immunity objectives and design criteria for the project are met, including the need for collapsable fencing to limit afflux.</li> <li>• Ark has also committed to placing the solar panels at least 100 mm above the 1% AEP flood extent to reduce impacts on flood levels and protect project infrastructure.</li> <li>• While Ark has committed to locating key project infrastructure, including the O&amp;M facility, outside the PMF flood levels, access to/from the site via Avenue Road would be cut off which may pose a safety risk to onsite workers. Importantly, this would occur under existing conditions, not as a result of the project. In this regard, Ark has confirmed that the main internal site access road onto Avenue Road has been designed in consultation with Council to ensure it provides flood immunity in the 20% AEP design event and ensure flood depths are less than 200mm over the road in the 5% AEP design event.</li> <li>• SES advice recommended that a flood emergency management plan be included in the consent conditions, and that Ark consult with the NSW Reconstruction Authority regarding how the proposal aligns with the Northern Rivers Disaster Adaption Plan.</li> <li>• Ark has set out considerations for the provision of suitable shelter in place on the site in the event that the site access is cut off due to flooding.</li> <li>• Ark has also committed to developing a Flood Emergency Response Plan (FERP) that includes procedures to be followed in the event of flooding.</li> </ul> <p><u>Surface water</u></p>	<p><i>Waterfront Land</i> (DPE, 2022).</p> <ul style="list-style-type: none"> <li>• Ensure the solar panels and ancillary infrastructure do not cause impacts from any increased water being diverted off the site or alter hydrology off site.</li> <li>• Prepare a Soil and Water Management Plan.</li> <li>• Prepare and submit a Flood Emergency Response Plan, to be reviewed and updated following a significant flooding event.</li> <li>• Minimise any soil erosion and control sediment generation in accordance with the <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004) manual and ensure the project is constructed</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>Physics Creek is identified as a perennial 3rd and 4th order stream which was observed to have defined bed and banks. As such, a 40 m exclusion zone from the highest bank has been incorporated into the design of the project. Two access tracks are proposed to traverse Physics Cree, and Ark has committed to construct all watercourse crossings in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land (2018)</i> and <i>Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (DPI, 2003)</i>.</li> <li>The Water Group requested Ark provide further information demonstrating that the unnamed tributaries of Physics Creek do not meet the definition of waterfront land for the purposes of the <i>Water Management Act 2000</i>. Ark provided further photographic evidence confirming the absence of a defined channel with bed and banks. Following review, the Water Group provided no further comments.</li> <li>The Department has recommended conditions of consent requiring the development to ensure the solar panels and ancillary infrastructure do not materially alter the flood storage capacity, flood flows or hydrological characteristics of the site or surrounds, and do not cause impacts from any increased water being diverted off the site.</li> <li>With the implementation of proposed mitigation measures, and compliance with recommended conditions of consent, the Department considers the potential additional flood impacts associated with the project to be minor and acceptable.</li> </ul> <p><u>Erosion and sediment control</u></p> <ul style="list-style-type: none"> <li>Ark has committed to preparing a Soil and Water Management Plan to manage any potential water quality impacts affecting waterways during construction.</li> <li>No agencies raised specific concerns in relation to the potential erosion and sedimentation risks associated with the project.</li> <li>The Department considers that any erosion and sedimentation risks associated with the project can be effectively managed by complying with the relevant requirements in the <i>Managing Urban Stormwater: Soils and Construction</i></li> </ul>	<p>and maintained to avoid causing erosion on site.</p>

Issue	Findings and conclusions	Recommended conditions
	<p>(Landcom, 2004) manual and the <i>Managing Urban Stormwater: Soils and construction – Volume 2A manual</i> (Landcom, 2008).</p> <p><u>Water supply</u></p> <ul style="list-style-type: none"> <li>In its advice on the EIS, the Water Group requested that Ark clarified its ability to obtain sufficient water volumes to satisfy the project’s water demand (a total of approximately 140 ML during the construction and decommissioning periods and 3.6 ML annually during operation). Ark has consulted with local water suppliers who have indicated their capacity to supply the anticipated potable and non-potable water requirements of the project during the construction phase.</li> <li>Subject to the recommended conditions, the Department considers that the project would not result in significant impacts on water resources.</li> </ul> <p><u>Groundwater</u></p> <ul style="list-style-type: none"> <li>The project is not expected to affect groundwater resources, including groundwater dependent ecosystems, due to limited excavation depths during construction.</li> <li>Should the final project design identify that construction activities would result in the interception of the groundwater, further assessment will be undertaken in accordance with the <i>NSW Aquifer Interference Policy</i> and appropriate management measures developed to mitigate any potential impacts.</li> </ul>	
<p><b>Dust</b></p>	<ul style="list-style-type: none"> <li>The main source of emissions to the air from the project would occur during the construction phase, and would be caused by increased traffic movements, vegetation removal, and localised dust emissions generated by land disturbance.</li> </ul>	<ul style="list-style-type: none"> <li>Minimise the dust generated by the development.</li> <li>Prepare and implement Traffic Management Plan,</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>Ark would minimise dust generated by the project through use of water suppression on all exposed areas, unsealed roads and stockpile areas when required, and establishment of groundcover as soon as practicable following construction.</li> <li>The sealing of Avenue Road and Main Camp Road would significantly reduce the dust emissions potentially generated across all phases of the project.</li> <li>The Department considers the likelihood of dust generation during operation of the project is low given ground cover would be quickly established across the site.</li> <li>The Department considers that dust generated during construction and operation of the project can be appropriately managed through implementation of the proposed mitigation measures and adherence with the recommended conditions.</li> </ul>	<p>which includes measures to minimise dust generated by construction traffic.</p>
<h3>Hazard and Bushfire risk</h3>		
<p><u>Bushfire</u></p>	<ul style="list-style-type: none"> <li>The site is located on bushfire prone land, noting the project area has a documented history of bushfires as raised in almost half of the community submissions received on the EIS (as discussed in <b>Section 4.4</b>). As such, Ark has prepared a Bushfire Threat Assessment and would be required to comply with the RFS's <i>Planning for Bushfire Protection 2019</i>.</li> <li>Recognising the level of concern from the local community, Ark undertook consultation with the community in September 2023 and February 2024 to assist in identifying a number of factors based on lived experience of recent bushfire events for integration into the assessment, and for consideration in the mitigation of bushfire risk. Further to this, Ark engaged in consultation with the NSW RFS (September 2023) and Fire and Rescue NSW (July 2023) to integrate their perspectives and experiences into the project design.</li> </ul>	<ul style="list-style-type: none"> <li>The BESS must not exceed a maximum energy discharge capacity of 475 MW and a maximum energy storage capacity of 3,148 MWh across the project site and must be installed in an arrangement consistent with the EIS.</li> <li>Prepare a Fire Safety Study and an Emergency Plan for the development.</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>• RFS and Fire and Rescue NSW recommended a fire safety study and an emergency plan be prepared for the development. RFS also recommended an APZ, a 10 metre wide fire break around the perimeter of the development and fire fighting water supply tanks.</li> <li>• While the RFS's <i>Planning for Bushfire Protection 2019</i> requires a 10 m asset protection zone (APZ) for project infrastructure, the project has been designed with APZs which significantly exceed this requirement. For example, the switching station is located approximately 50 m from adjacent vegetation, and the BESS and substation is at least 100 m from uncontrolled vegetation.</li> <li>• Additional information provided by Ark also confirmed that the additional biodiversity corridor plantings would not increase the bushfire hazard levels of the surrounding area, stating that there is already extensive existing native vegetation in the locality that is much closer to existing structures on adjoining land to the north.</li> <li>• The Department considers that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures and recommendations by FRNSW and RFS. Ark has committed to recommendations which satisfy FRNSW and RFS, including: <ul style="list-style-type: none"> <li>– measures including APZs and the Landscaping Plan prepared in accordance with <i>Planning for Bushfire Protection 2019</i>;</li> <li>– preparation of a Fire Safety Study and an Emergency Responders Induction Package in consultation with FRNSW;</li> <li>– preparation of an Emergency Services Information Package in accordance with relevant FRNSW guidelines; and</li> <li>– development and implementation of a comprehensive Emergency Plan.</li> </ul> </li> </ul> <p><u>Hazard</u></p> <ul style="list-style-type: none"> <li>• Ark prepared a Preliminary Hazard Analysis (PHA) in accordance with <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>. The PHA provided recommendations for the appropriate BESS separation distances, including in relation to radiant heat, overpressure, toxic release and electromagnetic fields. The PHA concluded</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure the project complies with the relevant asset protection requirements, provides for a 10 metre wide fire break around the perimeter of the development and fire fighting water supply tanks.</li> <li>• Ensure the quantities of dangerous goods stored and handled at the site are below the threshold quantities listed in the Department's <i>Hazardous and Offensive Development Application Guidelines - Applying SEPP 33</i> at all times.</li> <li>• The Landscaping Plan prepared in accordance with RFS's <i>Planning for Bushfire Protection 2019</i>.</li> <li>• All chemicals, fuels and oils to be stored in</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<p>the project is not considered to be potentially offensive with respect to the <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>.</p> <ul style="list-style-type: none"> <li>• Having reviewed Ark’s response, the Department considers that: <ul style="list-style-type: none"> <li>– dangerous goods stored on-site would unlikely exceed the threshold limits in <i>Hazardous and Offensive Development Application Guidelines – Applying SEPP 33</i>;</li> <li>– the proposed development is not ‘potentially hazardous’ as per <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> relating to the storage of dangerous goods; and</li> <li>– the project meets the qualitative risk criteria outlined in the Department's <i>Hazardous Industry Planning Advisory Paper No. 4 ‘Risk Criteria for Land Use Safety Planning’</i>.</li> </ul> </li> <li>• The Department is satisfied that all avoidable risks have been avoided, the risks from any potential major hazard incident are reduced by the separation to nearby residents and that consequences of the more likely events would be contained within the site boundaries. The Department also notes that there are no existing high-risk installations nearby.</li> <li>• Subject to the recommended conditions, and implementation of the management measures committed to by Ark, the Department considers that the risks associated with the project can be adequately managed.</li> </ul> <p><u>Contamination</u></p> <ul style="list-style-type: none"> <li>• Concerns regarding contamination of surrounding lands and waterways were raised in public submissions, along with Council’s comments on the EIS.</li> <li>• The EIS states that the site does not contain any areas of visible contamination, however it concludes that there is the possibility for evidence of contamination (associated with previous agricultural use of the land) to become present during construction of the project. In this regard, Ark has committed to implement an unexpected finds protocol for contamination, to manage any contamination that may be uncovered during earthworks across the</li> </ul>	<p>accordance with Australian Standards and EPA requirements.</p> <ul style="list-style-type: none"> <li>• Unexpected finds protocol is to be implemented for any potentially contaminated material.</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<p>site. In addition, Ark has committed to preparing a Spill and Contamination Response Plan as part of the overall Emergency Response Plan.</p> <ul style="list-style-type: none"> <li>The Department has considered the contaminated land provisions of the Resilience and Hazards SEPP. Accordingly, the Department requested Ark prepare a preliminary site investigation (PSI) into potential contamination across the site, in accordance with the <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> (Hazards SEPP). The PSI concluded that the overall likelihood for significant contamination to be present within the project area is very low.</li> <li>The Department also considers that the proposed use of the land is not intensive and low risk, even if historical contamination is identified, noting that during operations only a very small number of people would be required to access the site on any regular basis.</li> <li>Regarding the possible contamination of the site from the solar farm itself, the Department’s <i>Frequently Asked Questions – Large Scale Solar Guideline</i> document outlines that the use of metals in solar panels has not been found to pose a risk to the environment as they are enclosed in thin layers between sheets of glass or plastic within the solar panel. To readily release contaminants into the environment, solar panels would need to be ground to a fine dust. As such, contamination of soil resulting from the proposal is not expected.</li> <li>Accordingly, the Department considers that the contamination risks from the proposal are minimal and can be appropriately managed.</li> </ul>	
<b>Waste</b>		
	<p><u>Waste management</u></p> <ul style="list-style-type: none"> <li>Council raised concerns regarding the proposed waste management on site. The NSW EPA also recommended conditions of consent relating to waste management for the project.</li> </ul>	<ul style="list-style-type: none"> <li>Waste Management Plan to be prepared prior to construction.</li> <li>Minimise the waste generated by the</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>Ark has identified waste types and quantities expected to be generated by the Project along with waste treatment facilities capable of accepting most waste streams to be produced by the development within the Richmond Valley LGA. Council’s advice on the Submissions Report indicated that Ark would have to continue to investigate capacity of waste facilities in consultation with Council to confirm the most appropriate facility for project waste. Ark has committed to continue to consult with Council in this regard.</li> <li>Ark has committed to preparing and implementing a Waste Management Plan (WMP) in consultation with Council to identify licensed waste management facilities for waste disposal, consider opportunities to recycle solar panel related waste and consider the location and method of storing lithium-ion batteries.</li> </ul> <p><u>Sewage</u></p> <ul style="list-style-type: none"> <li>Ark has committed to the provision of an on-site sewage management system, which would be designed in accordance with Council’s requirements and approved through a s68 application.</li> <li>Council reviewed the Submissions Report and draft conditions of consent and did not raise any further concerns regarding sewage.</li> <li>The Department considers that project-related waste can be effectively managed with the implementation of the proposed mitigation measures.</li> </ul>	<p>development. Classify all waste in accordance with the EPA’s <i>Waste Classification Guidelines 2014</i> (or its latest version).</p> <ul style="list-style-type: none"> <li>Store and handle all waste on site in accordance with its classification.</li> <li>Remove all waste from the site as soon as practicable, and ensure it is reused, recycled or sent to an appropriately licensed waste facility for disposal.</li> </ul>
<b>Accommodation and workforce</b>		
	<ul style="list-style-type: none"> <li>Up to 327 workers would be required during the peak construction period. The Social Impact Assessment (SIA) assumes that approximately 20% of this workforce would be sourced from the local population. As a result, it is anticipated that an average of 120 full time equivalent (FTE) employees, peaking at 260 FTE employees, would need to be accommodated within a one hour drive of the project.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare an Accommodation and Employment Strategy for the project in consultation with relevant Councils, with consideration to prioritising the employment of local</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>• Ark has committed to source workers from the local community to reduce accommodation and service pressures. Ark’s assessment concluded that there is sufficient accommodation in Richmond Valley, Ballina, Lismore, Grafton and surrounding areas to accommodate the project construction workforce.</li> <li>• There is the potential for construction of the project to overlap with the construction of the approved Summerville Solar Farm. Should this occur, a peak workforce of approximately 700 construction personnel may be required in the region.</li> <li>• The Department requested that Ark further consults with Ballina Shire Council, Lismore City Council and Clarence Valley Council, in addition to Richmond Valley Council. All councils confirmed their willingness to liaise with Ark on the development of the Accommodation and Employment Strategy for the project.</li> <li>• The Department has recommended a condition requiring Ark to develop an Accommodation and Employment Strategy in consultation with Richmond Valley Council, Lismore City Council, Ballina Shire Council and Clarence Valley Council to manage the potential cumulative impacts associated with multiple projects in the region and to encourage the employment of locally sourced workers. The Strategy would require Ark to: <ul style="list-style-type: none"> <li>– 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;</li> <li>– prepare a local procurement strategy to provide mechanisms to prioritise local employment;</li> <li>– propose measures to ensure there is sufficient accommodation for the workforce associated with the project;</li> <li>– consider cumulative impacts with other projects in the area; and</li> <li>– monitor and review the effectiveness of the strategy, including regular monitoring during construction.</li> </ul> </li> <li>• The Department considers that with the implementation of an Accommodation and Employment Strategy, potential impacts on housing and short-term accommodation availability can be appropriately managed.</li> </ul>	<p>workers and consideration of the cumulative impacts associated with other SSD projects in the area.</p>

Issue	Findings and conclusions	Recommended conditions
<b>Heritage</b>		
	<p><u>Aboriginal cultural heritage</u></p> <ul style="list-style-type: none"> <li>• Ark surveyed the project site in consultation with Registered Aboriginal Parties (RAPs).</li> <li>• A search of the Aboriginal Heritage Information Management System (AHIMS) confirmed that there are no AHIMS sites present within the project site. While one culturally modified tree site (ID 13-1-0116) is located 300 m south of the project area, it would not be disturbed by the project.</li> <li>• The field survey identified one aboriginal site, comprised of a single Fine Grained Silicious flake (# 13-1-0252). The Aboriginal Cultural Heritage Assessment (ACHA) concludes that the artefact is not rare, as the material (FGS) and type (flake) are found to commonly occur within the region. Therefore, the artefact is considered to have low scientific significance. Despite this, the artefact would be collected prior to construction and subject to analysis.</li> <li>• The ACHA suggests the lack of identified artefacts within the project area is likely due to “marshy” conditions of the landscape, indicating it was unlikely to be suitable for long-term Aboriginal habitation. A view that was shared by both RAPs present during the field survey.</li> <li>• If any Aboriginal artefacts or skeletal material are identified during construction all work would cease and an unexpected finds procedure would be implemented.</li> <li>• Heritage NSW recommended a heritage management plan be prepared to provide for the salvaging of the artefact identified on site. Ark has committed to preparing this heritage management plan. Heritage NSW is satisfied with this approach.</li> <li>• With the implementation of these measures, the Department considers that the project is unlikely to result in significant impacts on the Aboriginal heritage values of the locality.</li> </ul> <p><u>Historic heritage</u></p>	<ul style="list-style-type: none"> <li>• Ensure the development does not cause any direct or indirect impacts on any items located outside the approved development footprint.</li> <li>• Prepare a Heritage Management Plan for the salvage of the known Aboriginal heritage item and any other items which may be encountered, in consultation with Aboriginal Stakeholders and Heritage NSW.</li> </ul>

Issue	Findings and conclusions	Recommended conditions
	<ul style="list-style-type: none"> <li>No heritage items listed on Commonwealth, National, or State registers are located within or surrounding the site.</li> <li>Site inspections undertaken did not identify any new heritage sites or items occurring within or near the development footprint.</li> <li>The nearest local heritage item to the project area is the ‘Main Camp Homestead &amp; Surrounds’ listed as item number I143 under the Richmond Valley LEP, which is located approximately 800 m south of the site.</li> <li>Although the project would be partially visible from the ‘Main Camp Homestead &amp; Surrounds’, the visual assessment found that the potential for visual impact is considered to be low (<b>Section 5.5</b>).</li> <li>The Department considers that the project would not have any adverse impacts on local heritage items in the area.</li> </ul>	
<b>Community benefit</b>		
	<ul style="list-style-type: none"> <li>The Department considers that, in addition to its contribution to its energy transition, the project would generate direct and indirect benefits to the local community, including: <ul style="list-style-type: none"> <li>– up to 327 construction workers would be required during the 24-month peak construction period and up to 15 operational jobs;</li> <li>– expenditure on accommodation and business in the local economy by workers who would reside in the area;</li> <li>– the procurement of goods and services by Ark and associated contractors; and</li> <li>– the Department considers that the project would not result in any significant or widespread reduction in land values in areas surrounding the project.</li> </ul> </li> <li>Ark has made a letter of offer to Council for an annual contribution of \$850 per MW of installed AC solar capacity (dated 2 October 2025), consistent with the <i>Benefit-Sharing Guideline – Guidance for large-scale renewable energy projects</i> (November 2024).</li> </ul>	<ul style="list-style-type: none"> <li>Ark to enter into a VPA with Council in accordance with Division 7.1 of the EP&amp;A Act and the terms of Ark’s letter of offer (dated 2 October 2025).</li> </ul>

Issue	Findings and conclusions	Recommended conditions
-------	--------------------------	------------------------

- The project is unlikely to result in significant demand on community services and infrastructure (excluding roads, as considered above) given the relatively low level of local employment generated once it is operational.
- The Department considers that the project would have a positive socio-economic impact on the local community.

<b>Land Value</b>		
-------------------	--	--

- Three public submissions received during the exhibition period raised concerns regarding property devaluation.
- 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 notes that:
  - the project is permissible with development consent under the Richmond Valley LEP;
  - a detailed assessment of the merits of the project has found that the project is unlikely to generate significant economic, environmental or social impacts;
  - the impacts of the project can be further minimised by imposing suitable conditions on the project, and requiring a range of standard mitigation measures;
  - the Department considers that the visual impacts of the project on the surrounding residences and road users would not be significant; and
  - 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&A Act, unless the project would have significant and widespread economic impacts on the locality, which is not the case in this instance.

- No specific condition required.

Issue	Findings and conclusions	Recommended conditions
<b>Insurance</b>		
	<ul style="list-style-type: none"> <li>• Four public submissions received during the exhibition period raised concerns regarding increased insurance costs.</li> <li>• The Department notes that the Insurance Council of Australia is not aware of any instances where Insurance Council Members have been unable to provide insurance or have increased premiums as a result of a farm (or a neighbouring property) hosting energy infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• No specific conditions required.</li> </ul>
<b>Subdivision</b>		
	<ul style="list-style-type: none"> <li>• Ark requires subdivision for the project, including a subdivision of Lot 32 DP 755607 and transfer of ownership of the land that will host the project switchyard to Transgrid.</li> <li>• The proposed subdivision of Lot 32 DP 755607 would be below the minimum lot size of 100 ha identified in the Richmond Valley LEP. Under section 4.38(3) of the EP&amp;A Act, development consent for the project can be granted despite the subdivision component of the application being prohibited by the LEP.</li> <li>• Council did not raise any concerns with the proposed subdivisions.</li> <li>• The Department considers that the subdivision should be approved as it: <ul style="list-style-type: none"> <li>– is necessary for the operation of the project (including the substation);</li> <li>– would not result in any additional dwelling entitlements on the subdivided lots; and</li> <li>– is consistent with the key objects of the RU1 zone as it would encourage diversity and primary industry enterprises and minimises conflict between land uses.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Subdivide the proposed land in accordance with requirements of the EP&amp;A Act, EP&amp;A Regulation and the <i>Conveyancing Act 1919</i> (NSW).</li> </ul>

Issue	Findings and conclusions	Recommended conditions
<b>Decommissioning and rehabilitation</b>		
	<ul style="list-style-type: none"> <li>The operational life of the project is 30 years, however there is potential to operate for a longer period of time if solar panels are upgraded over time, which would be permitted under the recommended conditions of consent.</li> <li>The Solar Guideline identifies four key decommissioning and rehabilitation principles for circumstance where an Ark ceases operating a project, which are the removal of project infrastructure, retuning the land to its pre-existing use, including rehabilitating and restoring the pre-existing LCS Class where previously used for agricultural purposes, and the owner/operator of the project should be responsible for the decommissioning and rehabilitation and this should be reflected in an agreement with the host landowner(s).</li> <li>With the implementation of objective-based conditions and monitoring requirements, which are consistent with these key principles, the Department considers that the solar farm would be suitably decommissioned at the end of the project life, or within 18 months if operations cease unexpectedly, and that the site would be appropriately rehabilitated.</li> </ul>	<ul style="list-style-type: none"> <li>Include rehabilitation objectives requiring the site to be rehabilitated within 18 months of cessation of operations.</li> </ul>

## 6 Evaluation

The Department has assessed the development application, EIS, Submissions Report, Amendment Report and additional information and has carefully considered:

- submissions received from members of the community;
- comments provided by Council; and
- advice received from State and local government agencies.

The Department has considered the objectives of the EP&A Act, including Ecological Sustainable Development principles, and relevant considerations under section 4.15(1) of the EP&A Act. The Department has given consideration to Ark's evaluation of the project's merits against applicable statutory and strategic planning requirements.

The project is a permissible land use with consent under the provisions of the Richmond Valley LEP and is located on agricultural land, most of which has been historically cleared and modified for grazing. The project has been designed to utilise topography and existing vegetation to minimise impacts and to largely avoid site constraints, including better quality native vegetation and habitat, while maintaining its ability to utilise the existing electricity infrastructure and road network. This is consistent with the Solar Guideline's focus on avoiding or minimising impacts during site selection and design.

While the project results in a removal of up to 3.33 ha of a SAll entity *Rotala tripartita* habitat, Ark has avoided all but three individuals of the species (i.e. avoided a further 5,095 individuals recorded on-site). The Department considers that the project is not likely to contribute significantly to the risk of the species becoming extinct, noting that CPHR also confirmed that the issues relating to potential impacts on *Rotala tripartita* had been adequately addressed.

To address the residual impacts including biodiversity, traffic and transport, water resources and hazards, the Department has recommended a range of stringent conditions, developed in consultation with agencies and council, to ensure these impacts are effectively minimised, managed or offset.

The Department considered the submissions made through the exhibition of the project and the issues raised by the community and agencies during consultation. These matters have been addressed through changes to the project and the recommended conditions of consent.

The project would assist in transitioning the electricity sector from coal and gas-fired power stations to low emissions sources and is consistent with the goals of the NSW's *Climate Change Policy Framework*, the *Net Zero Plan Stage 1: 2020 – 2030*. It would have a generating capacity of 345 MW<sub>AC</sub> of clean electricity, which is enough to power approximately 174,853 homes, and 475 MW<sub>AC</sub> /

3,148 MWh of energy storage to dispatch energy to the grid when energy generation from renewable resources is limited.

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 users and environment. Through job creation, capital investment and a VPA with Council, the project would also stimulate economic investment in renewable energy and provide flow-on benefits to the local community.

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 F**).

## 7 Recommendation

It is recommended that the Executive Director, as delegate of the Minister for Planning and Public Spaces:

- considers the findings and recommendations of this report;
- accepts and adopts the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- agrees with the key reasons for approval listed in the notice of decision;
- grants consent for the application in respect of Richmond Valley Solar Farm (SSD-41020244), subject to the conditions in the attached development consent; and
- signs the attached development consent (Appendix F).

Prepared by:

- Nestor Tsambos, Team Leader
- Kate Tierney, Senior Environmental Assessment Officer

Recommended by:



10 October 2025

Iwan Davies

Director

Energy Assessments

## 8 Determination

The recommendation is adopted by:



15 October 2025

Chris Ritchie

Executive Director

Energy, Resource and Industry Assessments

# Appendices

Appendix A – Environmental Impact Statement

Appendix B – Submissions and government agency advice

Appendix C – Submissions Report

Appendix D - Amendment Report

Appendix E – Additional information

Appendix F – Recommended Development Consent

Appendices A to F available at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/richmond-valley-solar-farm>

## Appendix G – Statutory considerations

### Objects of the EP&A Act

In line with the requirements of section 4.15 of the EP&A Act, the Department’s assessments 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 4.14(1) of the EP&A Act, including applicable environmental planning instruments and regulations; and

The Department has considered all these matters in its assessment of the project and has provided a summary of this assessment in **Table 8** below.

**Table 8** | Objects of the EP&A Act and how they have been considered

#### Summary

#### Objects of the EP&A Act

The objects of most relevance to the Consent Authority’s decision on whether to approve the project are found in section 1.3(a), (b), (c), (e) and (f) of the EP&A Act.

## Summary

The Department considers 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)), particularly as the project:

- is a permissible land use on the subject land;
- is located in a logical 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 NSW's *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 – 2030* and *Implementation update (2022)* and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions.

The Department has considered the encouragement of Ecologically Sustainable Development (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 facility development, in itself, is consistent with many of the principles of ESD. The Applicant has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD.

Consideration of environmental protection (Object 1.3(e)) is provided in **Section 5.3** of this report. Following its consideration, the Department considers that the project could be undertaken in a manner that would 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. The Department is also satisfied that any residual biodiversity impacts could be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits.

Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is also provided in **Section 5.6** of this report. Following its consideration, the Department considers the project would not significantly impact the built or cultural heritage of the locality, and any residual impacts can be managed and/or mitigated by imposing appropriate conditions.

## 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 1(b) of Section 2.7 of the Planning Systems SEPP, the Minister is the consent authority for the project. This is because the project received less than 50 unique public submissions by way of objection, Council did not object and Ark did not report any political donations.

## Summary

### Environmental Planning Instruments (EPIs)

The *Richmond Valley Local Environmental Plan 2012* (LEP) applies to the extent of determining the permissibility of the project. The project is located in RU1 land use zone under the LEP and is permissible with consent under the provisions of the LEP.

In accordance with the Transport and Infrastructure SEPP, the Department has given written notice of the project to Transgrid (s2.48) and TfNSW. The Department has considered the advice received and, where appropriate, developed conditions of consent to address recommendations and advice of these authorities.

Ark completed a preliminary investigation in accordance with *State Environmental Planning Policy (Resilience and Hazards) 2021* and confirmed the project was not categorised as potentially hazardous or potentially offensive development. A preliminary hazard analysis (PHA) prepared for the project concluded the risk profile of the project was tolerable and that there was negligible risk of off-site consequences associated with the project. Ark has committed to implementing all controls recommended by the PHA. Accordingly, the Department is satisfied that the proposed development is not potentially hazardous or potentially offensive development and does not pose an unacceptable risk to community or environment.

The Department has also considered the provisions of Resilience and Hazards SEPP (Ch 4). The site is not listed as a contaminated site in the NSW EPA Contaminated Land Record and list of NSW contaminated sites. Given the site has historically been used for agricultural uses, the Department considers the site would be suitable for the proposed development.

---

## Appendix H – Assessment of Matters of National Environmental Significance

In accordance with the Bilateral Agreement between the Australian Government and NSW Government, the Department provides the following additional information required by the Commonwealth Minister, in deciding whether to approve a proposed action (i.e. the project under the EPBC Act).

The Department's assessment has been prepared based on the assessment contained in the Richmond Valley Solar Farm Environmental Impact Statement (EIS), Submissions Report, revised Biodiversity Development Assessment Report (BDAR), and additional information provided during the assessment process, public submissions, and advice provided by the Conservation Programs, Heritage and Regulation Group of the NSW Department of Climate Change, Energy, the Environment and Water (CPHR) (former Biodiversity, Conservation and Science), other NSW government agencies and the Australian Government Department of Climate Change, Energy, Environment and Water (DCCEEW).

This appendix is supplementary to, and should be read in conjunction with, the assessment included in Section 5.3 of this report, and includes consideration of impacts to listed threatened species and communities, and mitigation and offsetting measures for Matters of National Environmental Significance (MNES).

### **Controlled Action Decision – EPBC 2023/ 09641**

On 21 November 2023, the Richmond Valley Solar Farm was determined to be a Controlled Action by the AG DCCEEW for the controlling provision of listed threatened species and communities. The Commonwealth Referral Decision (EPBC 2023/ 09641) (Referral Decision) was based on likely significant impacts to:

- Koala (*Phascolarctos cinereus*) – Endangered.
- Grey-headed flying-fox (*Pteropus poliocephalus*) – Vulnerable.
- Slaty red gum (*Eucalyptus glaucina*) – Vulnerable.

Additionally, the AG DCCEEW identified there was some risk that there may be significant impacts on the following matters:

- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions – Endangered.
- Giant barred frog (*Mixophyes iteratus*) – Vulnerable.
- Scrub turpentine, brown malletwood (*Rhodamnia rubescens*) – Critically Endangered.
- Native guava (*Rhodomyrtus psidioides*) – Critically Endangered.
- Rupp's wattle (*Acacia ruppii*) – Endangered.

Of the above, only the *Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions* was confirmed to be present within the project area.

The EIS describes that no threatened species listed under the EPBC Act were recorded or considered likely to occur within the project area.

Potential impacts on each of these entities are assessed in the project BDAR and outlined in the following subsection.

### *Impacts on EPBC Act Listed Threatened Species and Communities*

Section 5.3 of this report describes the biodiversity assessment undertaken for the project and the resulting BDAR.

Table 9 provides a summary of the likelihood of occurrence for each of the species identified above by the DCCEEW as requiring consideration.

**Table 9** | Likelihood of occurrence of MNES

Entity	Conservation Status	Likelihood of Occurrence	Comments
<b>Threatened Ecological Communities</b>			
Subtropical Eucalypt Floodplain Forest and Woodland of the New South Wales North Coast and South East Queensland	E	Present	Community is associated with patches of PCT 4046 and PCT 3428 which meet condition threshold requirements.  Impacts to up to 3.13 ha would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.
<b>Threatened Flora Species</b>			
Slaty Red Gum ( <i>Eucalyptus glaucina</i> )	V	Not recorded	Slaty Red Gum is unlikely to be significantly impacted by the project.  Indirect impacts to the individuals outside the project area would be managed through implementation of the Biodiversity Management Plan.

Entity	Conservation Status	Likelihood of Occurrence	Comments
Scrub turpentine, brown malletwood ( <i>Rhodamnia rubescens</i> )	CE	Not recorded	<p>Scrub turpentine is unlikely to be significantly impacted by the project.</p> <p>Any potential habitat within the project area would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.</p>
Native guava ( <i>Rhodomyrtus psidioides</i> )	CE	Not recorded	<p>Native guava is unlikely to be significantly impacted by the project.</p> <p>Any potential habitat within the project area would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.</p>
Rupp's wattle ( <i>Acacia ruppii</i> )	E	Not recorded	<p>Rupp's wattle is unlikely to be significantly impacted by the project.</p> <p>Any potential habitat within the project area would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.</p>
<b>Threatened Fauna Species</b>			
Koala ( <i>Phascolarctos cinereus</i> )	E	Not recorded	<p>The Koala is unlikely to be significantly impacted by the project.</p> <p>Any potential habitat within the project area would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.</p>

Entity	Conservation Status	Likelihood of Occurrence	Comments
Grey-headed flying-fox ( <i>Pteropus poliocephalus</i> )	V	Not recorded	The Grey-headed flying-fox is unlikely to be significantly impacted by the project.  Any potential habitat within the project area would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.
Giant barred frog ( <i>Mixophyes iteratus</i> )	V	Not recorded	The Giant barred frog is unlikely to be significantly impacted by the project.  Any potential habitat within the project area would be offset via ecosystem credits as outlined in Section 5.3.2 of the main report.

### *Impacts on threatened ecological communities*

As described in Section 5.3.1 of this report, Ark has generally focused on avoidance of impacts through site selection and avoidance of higher quality native vegetation and habitat during the site design process for the action. This has included consideration of avoidance of the *Subtropical Eucalypt Floodplain Forest and Woodland of the New South Wales North Coast and South East Queensland* which is listed as Endangered under the EPBC Act. As a result, the project would clear a total of 3.13 ha of this TEC, with the BDAR concluding that the action would have no significant impact on this community.

CPHR did not raise any concerns in relation to the significant impact assessment undertaken for the species.

Ark has committed to the implementation of a Biodiversity Management Plan (BMP), which would be prepared in consultation with CPHR and DCCEE. The BMP would include a number of management measures to minimise indirect impacts on this TEC, including but not limited to:

- clearly demarcating impact areas boundaries and establishing temporary fencing prior to construction;
- implementing appropriate controls to manage exposed soil surfaces and stockpiles to prevent sediment discharge and erosion, prior to construction commencement;
- implementing weed management measures to prevent the spread of weeds or pathogens;
- implementing adaptive dust monitoring programmes;

- implementing general hygiene protocols to prevent the spread of weeds or pathogens;
- maintenance of an appropriate APZ for the duration of the project life.

Consequently, the Department considers that the potential indirect impacts on the TECs would be minimal and could be adequately managed by implementing the above management measures.

Ark would offset the residual biodiversity impacts of the action in accordance with the requirements of NSW Biodiversity Offset Scheme. The Department considers that impacts to this community would be appropriately offset via the ecosystem credit requirements detailed in Section 5.3 of this report.

***Impacts on threatened flora and fauna species***

As outlined above, the EIS describes that no threatened species listed under the EPBC Act were recorded or considered likely to occur within the project area.

Notwithstanding, assessments of significance were undertaken for threatened species that were initially considered as likely to occur at the time of referral. The assessment of significance of these species determined that the project is unlikely to have significant impact on any threatened flora or fauna species. CPHR did not raise any concerns in relation to the significant impact assessment undertaken for the threatened flora and fauna species.

The Department considers that any potential habitat for the EPBC Act listed species identified above would be appropriately offset via the ecosystem credit requirements detailed in Section 5.3 of this report. The Department has recommended conditions and additional measures to avoid and minimise impacts on threatened fauna species as detailed in Section 5.3 of this report.

***Additional EPBC Act Considerations***

Table 10 contains the additional mandatory considerations, factors to be taken into account and factors to have regard to under the EPBC Act that are additional to those already discussed.

Table 10 | Additional considerations for the Commonwealth Minister under the EPBC Act

EPBC Act Section	Considerations	Conclusion
<b>Mandatory considerations</b>		
Part 1, 3A, 391(2)	Principles of ecologically sustainable development (ESD), including the precautionary principle, have been taken into account, in particular: <ul style="list-style-type: none"> <li>• the long term and short term economic, environmental, social and equitable</li> </ul>	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
	<p>considerations that are relevant to this decision;</p> <ul style="list-style-type: none"> <li>• conditions that restrict environmental impacts and impose monitoring and adaptive management, reduce any lack of certainty related to the potential impacts of the project;</li> <li>• 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;</li> <li>• 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</li> <li>• mitigation measures to be implemented which reflect improved valuation, pricing and incentive mechanisms are promoted by placing a financial cost on the proponent to mitigate the environmental impacts of the project.</li> </ul>	
<p>Part 9 Division 1 Subdivision B 136(1)b</p>	<p>Economic and social matters are discussed in Section 5.6 of this report.</p>	<p>The project would provide benefits for the local and regional economy and is of public benefit for up to 30 years. Up to 327 workers would be required during the construction period.</p> <p>Impacts on the local community would primarily occur during the construction period, which has been considered in the assessment report. The recommended conditions require the proponent to minimise potential traffic and amenity impacts including noise, dust, and visual impacts.</p>

EPBC Act Section	Considerations	Conclusion
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.
139(1)	Requirements for decisions about threatened species and endangered communities	<p>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.</p> <p>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.</p>

**Factors to have regard to**

176(5)	Bioregional plans	There is no approved bioregional plan related to the activity.
--------	-------------------	--

**Consideration on deciding conditions**

EPBC Act Section	Considerations	Conclusion
134(4)	<p>Must consider:</p> <ul style="list-style-type: none"> <li>Information provided by the person proposing to take the action or by the designated Ark of the action; and</li> <li>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.</li> </ul>	<p>All project related documentation is available from the Department’s website <a href="http://www.planningportal.nsw.gov.au">www.planningportal.nsw.gov.au</a></p> <p>The Department considers that the recommended conditions at <b>Appendix E</b> are a cost-effective means of achieving their purpose. The conditions are based on material provided by Ark that was prepared in consultation with the Department, CPHR and other government agencies.</p>

***Conclusion on Controlling Provisions***

For the reasons set out in Section 5.3 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, Submissions Report, BDAR, and the recommended conditions of consent in Appendix F.