

# Oxley Solar Farm

## Independent Planning Commission Briefing

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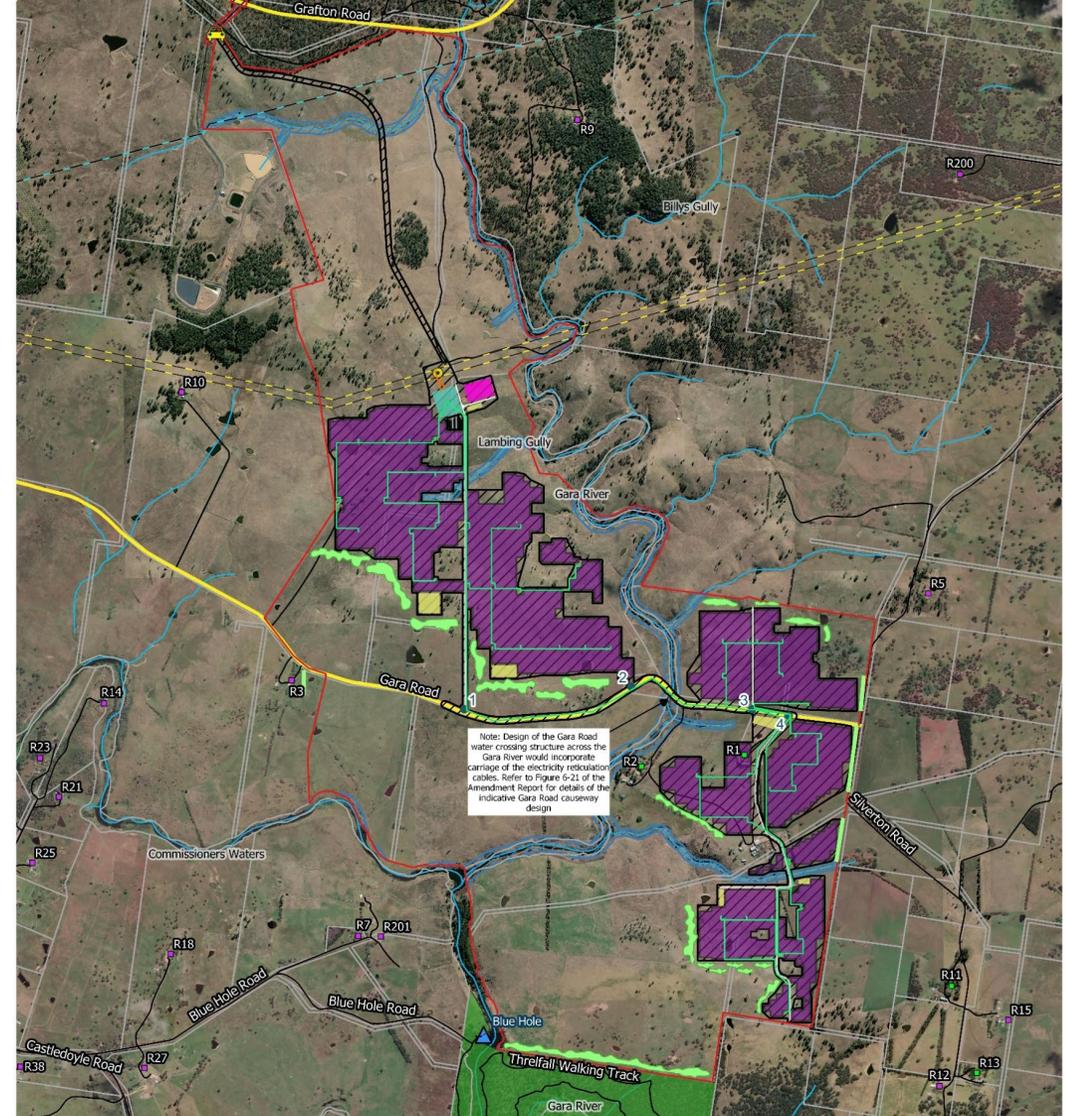
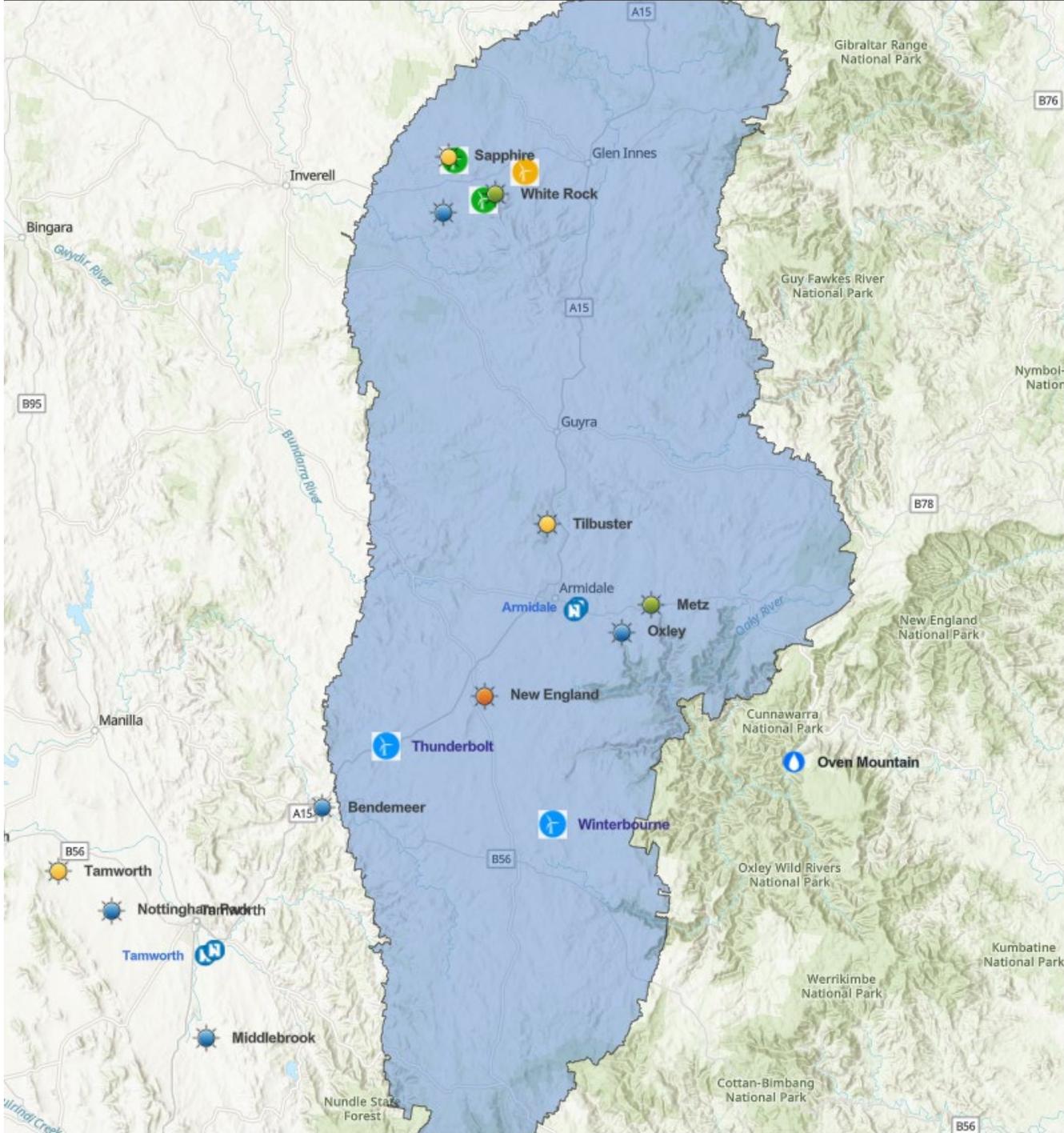
**Iwan Davies**  
Director, Energy Assessments

12 October 2023

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- Context
- Engagement
- Key Issues
- Other Issues
- Evaluation



### Development Footprint

#### Legend

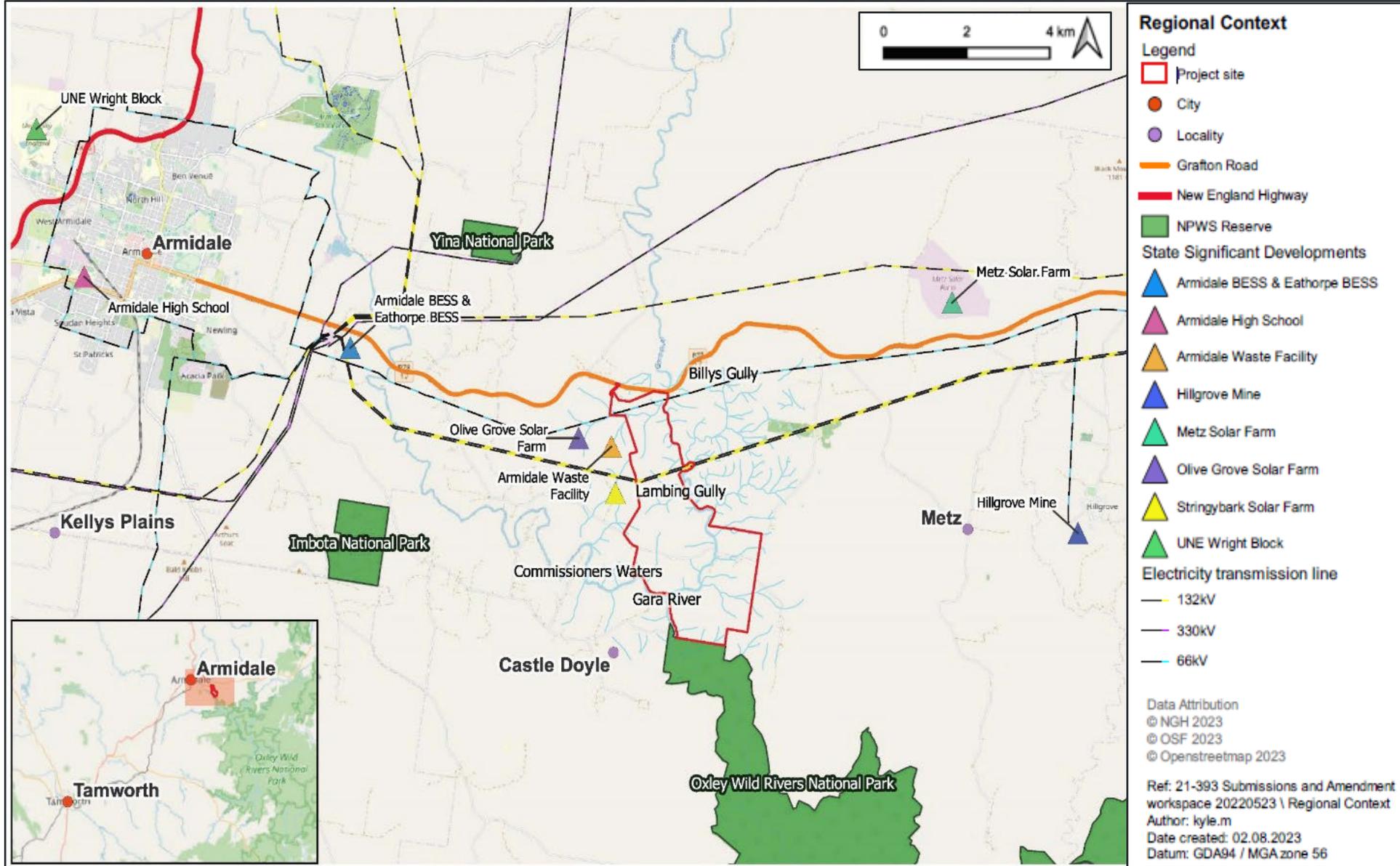
- |                           |                                                                                                                   |                                |
|---------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Project Boundary          | Array area                                                                                                        | 132kV                          |
| Development Footprint     | BATTERY STORAGE                                                                                                   | 66kV                           |
| Roads                     | CONTROL ROOM                                                                                                      | Associated residences          |
| Key roads                 | PV-PCU                                                                                                            | Non-associated residences      |
| National Park             | Shed                                                                                                              | Vegetation screening           |
| Travelling Stock Reserves | Site road                                                                                                         | Site access                    |
| Blue Hole Picnic Area     | Laydown areas                                                                                                     | Gara Road access points        |
|                           | Solar array                                                                                                       | Waterway buffers               |
|                           | Substation                                                                                                        | Waterway >1st order (strahler) |
|                           | Internal electricity reticulation cables (underground in trench within development footprint including Gara Road) |                                |
|                           | Transmission line electrical connection (overhead)                                                                |                                |

0 500 1,000 m

Data Attribution  
 © NGH 2023  
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 © ESRI and their suppliers 2023  
 © NSW Government data 2023

Ref: 21-393 Submissions and Amendment workspace 20220523 \ Development Footprint  
 Author: Kyle M  
 Date created: 18.09.2023  
 Datum: GDA94 / MGA zone 56

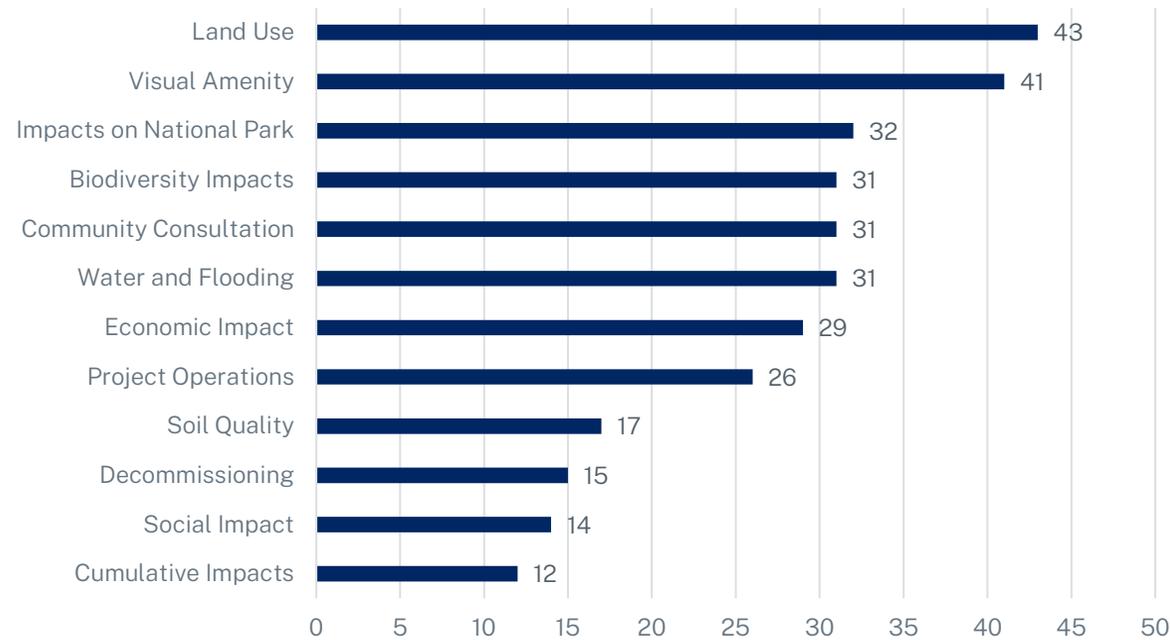
# Regional Context



# Community engagement

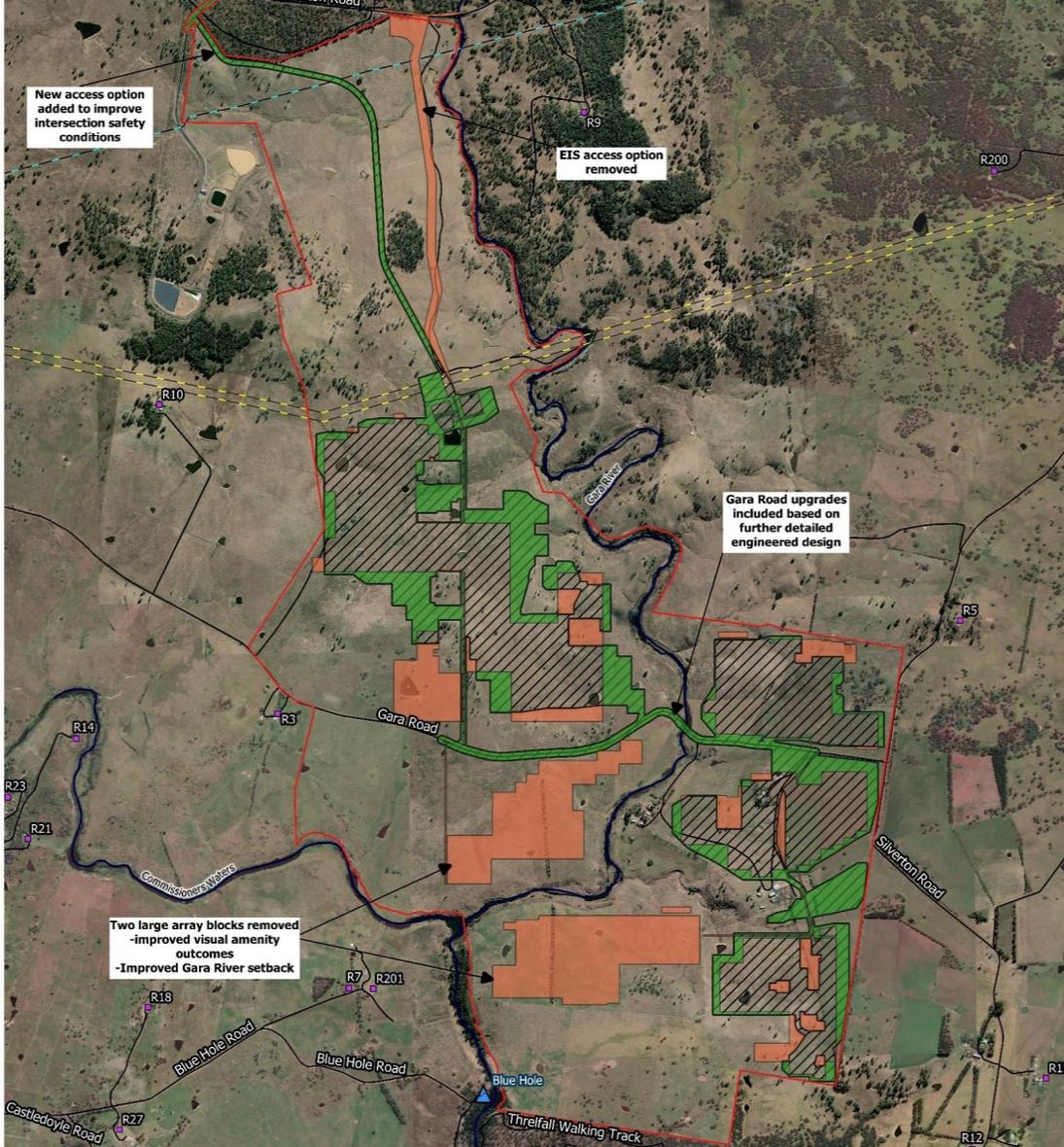
- Public Exhibition – 17 March to 14 April 2021
  - 79 public submissions:
    - 77 objections from individuals
    - 1 comment from an individual
    - 1 objection from a special interest group
  - Advice from government agencies:
    - Armidale Regional Council - comments
- Community information session + Site visit – 4 May 2021
- Consultation with Landowners

# Public submissions

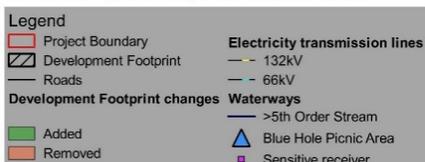


Submitter distance to development footprint	Object	Comment
< 2 km	12	0
2 – 5 km	22	1
5 - 15 km	16	0
15 – 50 km	5	0
> 50 km	17	0
Other*	6	0
<b>Total</b>	<b>78</b>	<b>1</b>

# Project amendments



Development Footprint changes from EIS (EIS indicative layout compared to Amendment)



0 500 1,000 m

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Ref: 21-393 Submissions and Amendment workspace  
 20220523 \ Development Footprint changes from EIS (EIS  
 indicative layout compared to Amendment Development  
 Footprint) to submissions/amendment  
 Author: kyle.m

- Development footprint reduced by 627 ha (from 895 ha to 268 ha);
- Setbacks from residences and National Park:
  - R3 - additional 181 m setback, from 597 m to 778 m;
  - R5 – additional 69 m setback, from 684 m to 615 m;
  - R201 – additional 845 m setback, from 739 m to 1,584 m;
  - Blue Hole Picnic Area: additional 810 m setback, from 475 m to 1,285 m
  - Threlfall Walking Track: additional 498 m setback, from 667 m to 1,165 m
- Biodiversity:
  - avoidance of 451.43 ha (83%) of the 544.21 ha of native vegetation on site;
  - reduction of Box Gum Woodland impact zones from 6.67 ha to 2.6 ha;
- Revised site access point from Armidale Regional Landfill access road via Waterfall Way
- Revised upgrades, including Gara Road / Gara River Causeway

# Key Issues

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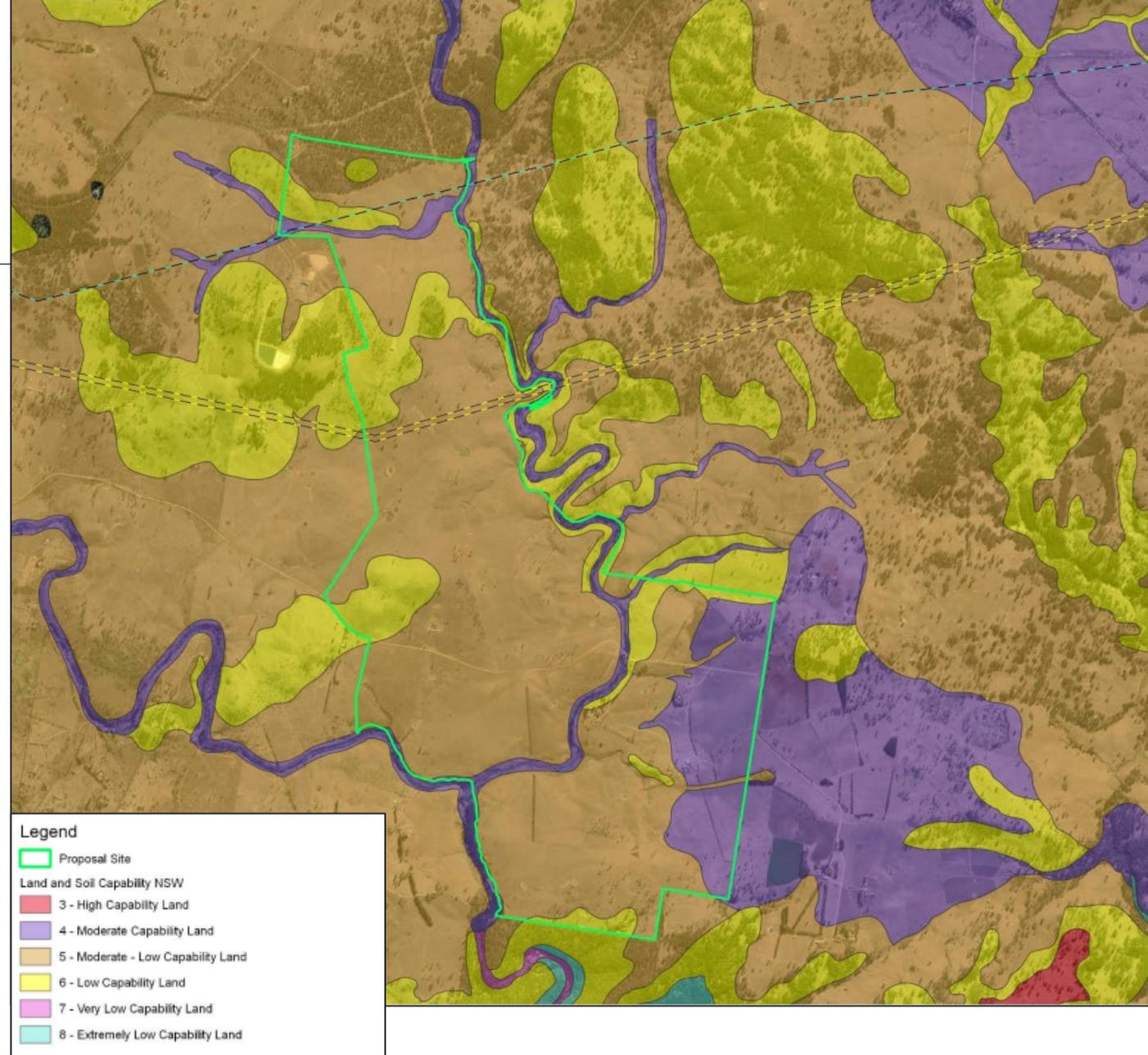
- Energy transition
- Land use compatibility
- Biodiversity
- Visual amenity
- Traffic and transport

# Energy Transition

- 215 MW generating capacity that would power about 80,000 homes
- Project would play an important role in the New England REZ:
  - Increasing renewable energy generation and capacity of the NEM;
  - Firming the grid by including 50 MW / 50 MWh energy storage; and
  - Contributing to the transition to a cleaner energy system as coal fired generators retire.
- Consistent with the *NSW Climate Change Policy Framework* of net zero emissions by 2050
- Project is within an area with direct access to the transmissions network and with available capacity and solar resources

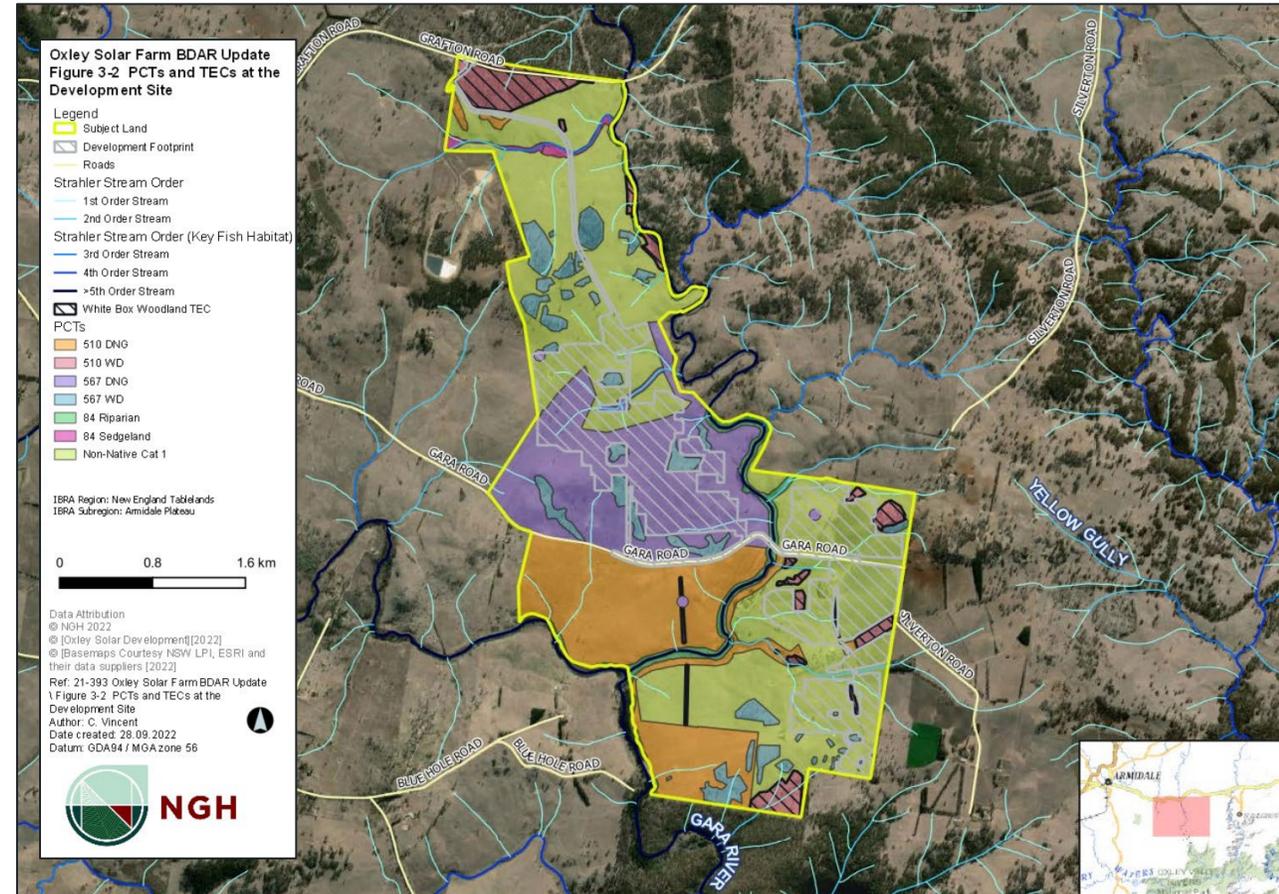
# Land Use Compatibility

- Most common issues raised in submissions
- Land is zoned RU1 under Armidale LEP
- Site is predominately used for grazing with limited cropping occurring
- Sheep grazing may be enabled within the project site whilst the solar farm is operational
- Development footprint is 30% Class 4, 67% Class 5 and 3% Class 6 under Land and Soil Capability Mapping for NSW
- Manage and restore land capability for agriculture following decommissioning
- The combined area of projects in the area is 5,302 ha, which represents 0.07% of the 7.9 million ha of land currently used for agriculture within the New England North West region



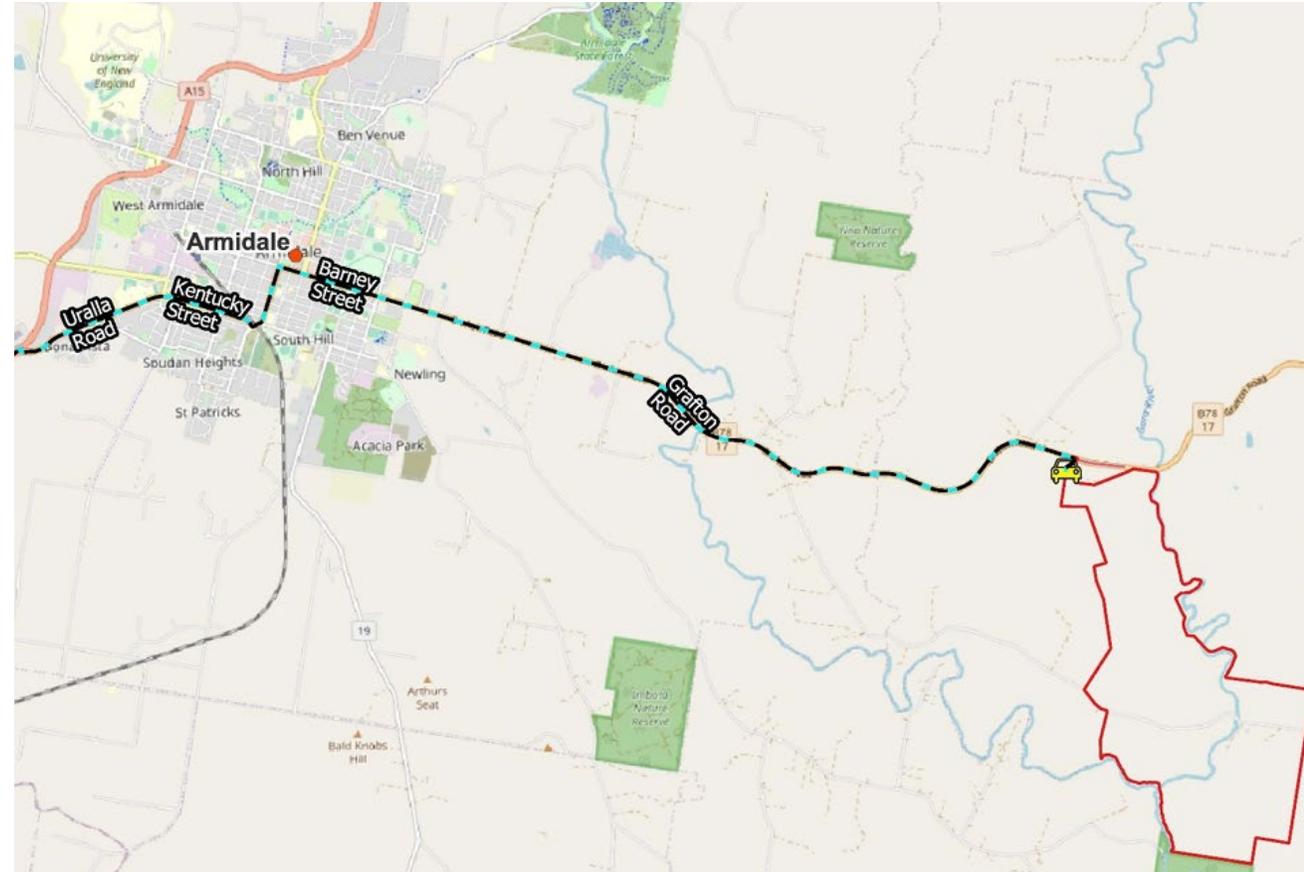
# Biodiversity

- Site is comprised mostly of paddocks that have been cleared for agricultural purposes
- Much of the site (65 %) is considered Category 1 exempt land in accordance with the *Local Land Services Act 2013*
- Project was amended to reduce impacts and avoid higher quality areas of native vegetation
- Box Gum Woodland was identified on site and no solar panels are proposed in these areas with only 1.4% (1.68 ha) to be removed
- Increased setback from Gara River to avoid impacts on better condition native vegetation within the riparian corridor
- Disturbance requires 1,459 ecosystem credits and 1,978 species credits to be retired on accordance with the NSW Biodiversity Offset Scheme.



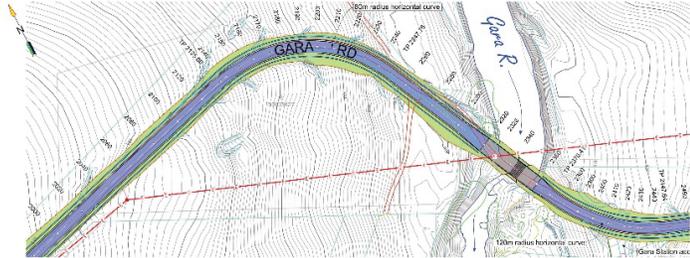
# Traffic and transport

- Transport route: Port of Newcastle or Sydney via the New England Highway, Uralla Road, Kentucky Street, Dangar Street, Barney Street, Waterfall Way and Armidale Regional landfill facility (ARL) access road
- Vehicle movements during construction, up to:
  - 46 heavy vehicle movements per day (during 9-month peak)
  - five heavy vehicles requiring escort movements during construction, upgrading or decommissioning
- Operation: 5 light vehicle movements and up to 2 heavy vehicle movements per day with most occurring early in the morning and late in the afternoon
- Road Upgrades required prior to commencing:
  - widening a 200 m section of the landfill access road
  - Constructing the primary site access point off the landfill access road
  - upgrading a 2km section of Gara Road
  - constructing four secondary access points on Gara Road
  - upgrade of the Gara Road River Causeway

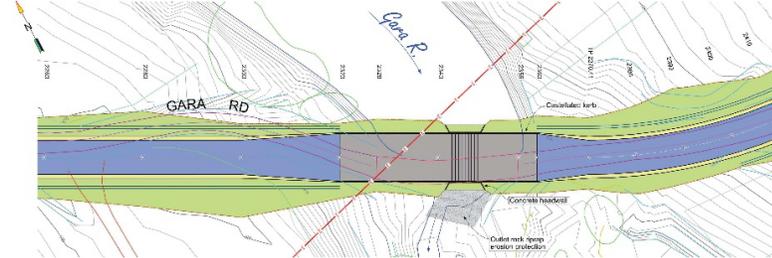




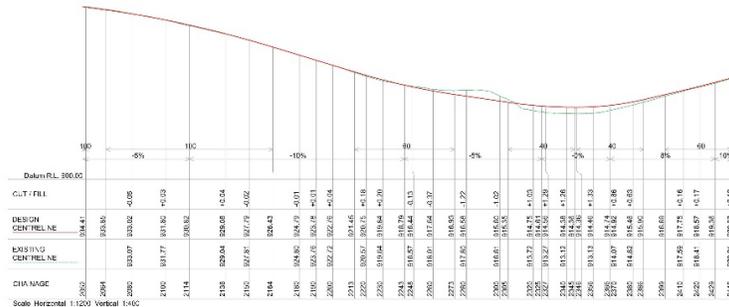
# Road upgrades continued..



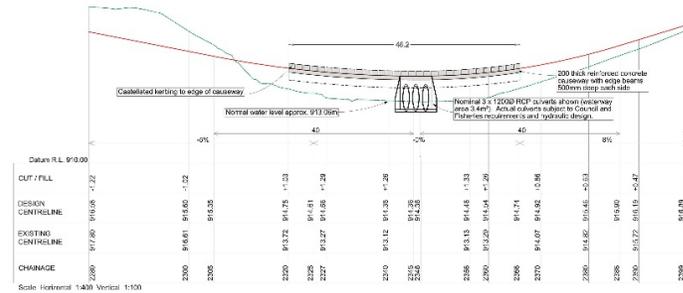
PLAN OF PROPOSED ROAD UPGRADING  
Scale 1:1,200



PLAN OF PROPOSED CAUSEWAY UPGRADING  
Scale 1:400



LONGITUDINAL SECTION OF GARA ROAD CENTRELINE  
Chainage 2052m to 2440m



LONGITUDINAL SECTION OF GARA ROAD CENTRELINE  
Chainage 2280m to 2400m



PERSPECTIVE OF DESIGN REALIGNMENT  
Not to Scale

CONCEPT DESIGN ONLY - NOT FOR CONSTRUCTION  
MINIMAL ARRANGEMENT SHOWN ONLY, SUBJECT TO DETAILED DESIGN  
LEVEL INFORMATION IS DERIVED FROM PHOTOGRAMMETRY  
ALL DESIGN TO COMPLY WITH AS 1720 (R-100) DESIGN  
ROAD TRAFFIC LOAD IS: 80/100  
TRAFFIC BARRIER PERFORMANCE LEVEL: LOW

NO.	DATE	DESCRIPTION	BY	CHECKED
1	05/01/21	ASSET DATA COLLECTION	...	...
2	05/01/21	DESIGN FOR CONSTRUCTION	...	...
3	05/01/21	...	...	...
4	05/01/21	...	...	...

OXLEY SOLAR FARM  
NGH Consulting  
Suite 11, 88-91 Australand Street,  
BEGA NSW 2550

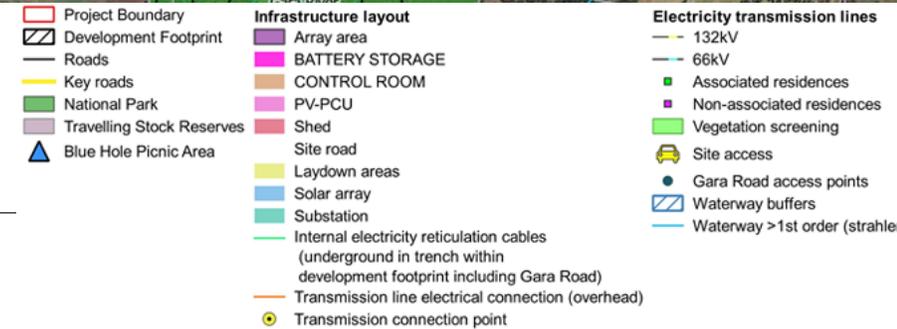
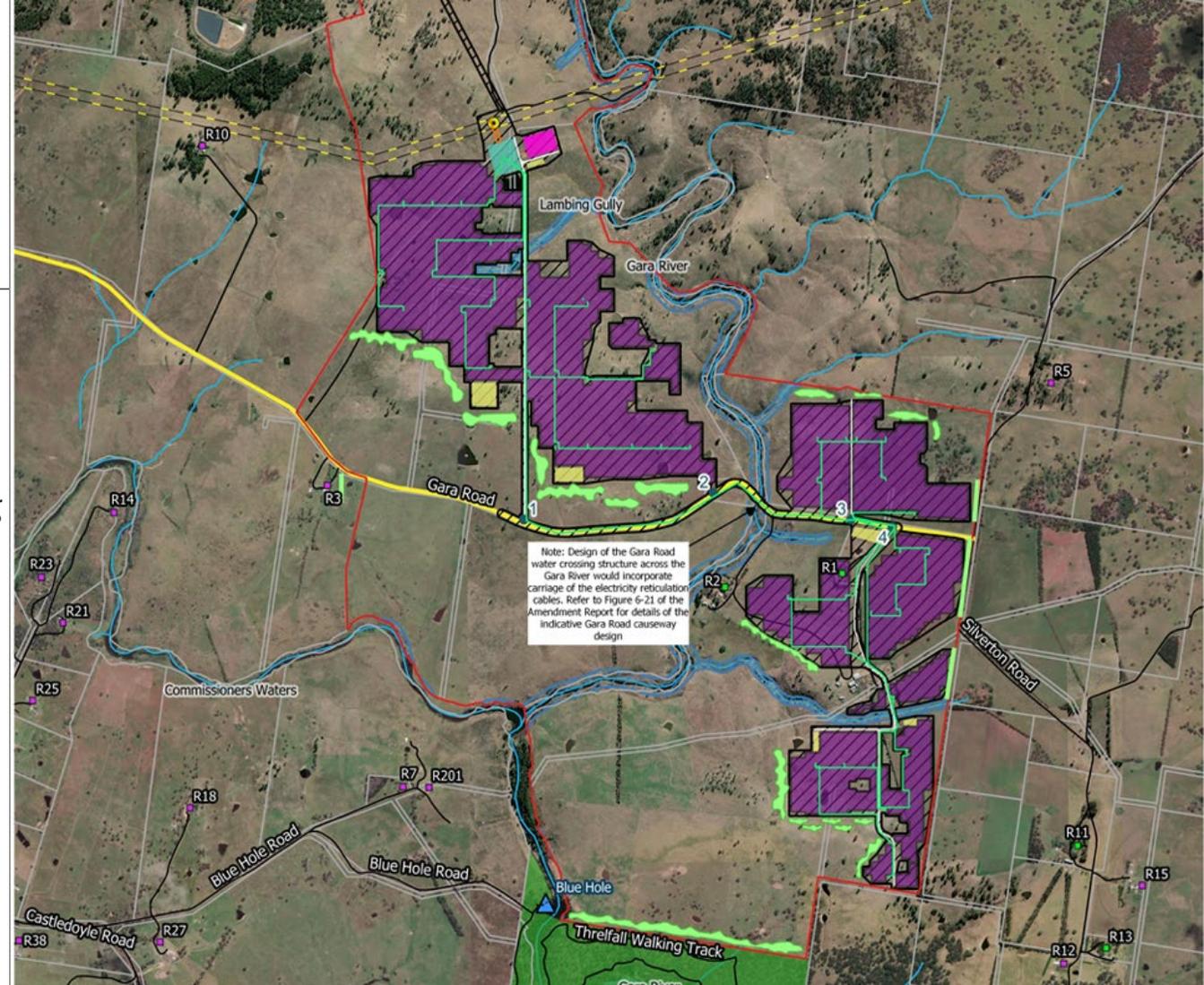
GARA ROAD PLAN & LONGITUDINAL SECTION  
CAUSEWAY CONCEPT DESIGN

New England  
SURVEYING & ENGINEERING  
Land Development Consultants

Scale: 1:1000  
Date: 05/01/21  
Project: OXLEY SOLAR FARM  
Drawing: GARA RD PLAN & LONGITUDINAL SECTION  
Author: ...  
Checked: ...  
Date: 05/01/21

# Visual Impacts

- 11 non-associated residence within 2km of the development footprint
- Amendments to reduce visual impacts:
  - Panels removed to the South-West of the site reducing visual impacts for a number of dwellings along Milne, Blue Hole, Anderson and Castledoyle Road
  - Project infrastructure setback for R3, R5, R7 and R201
- Landscape plantings would further reduce views of the project
- Five residences would have no views of the project
- Six would experience low or very low visual impacts
- OSD will consult with these landowners to implement vegetation planting to assist in reducing residual impacts from these residences.
- Potential for glare to be experienced at 9 residences. Existing and proposed vegetation would reduce potential glare.



# Cumulative Impacts

## Proposals in Armidale Regional LGA

### Oxley Solar Farm

- Generation capacity: 215 MW
- 50 MW / 50 MWh energy storage facility
- Development footprint: 286 ha

### Metz Solar Farm – operational

- Generation capacity: 100 MW
- Development footprint: 507 ha

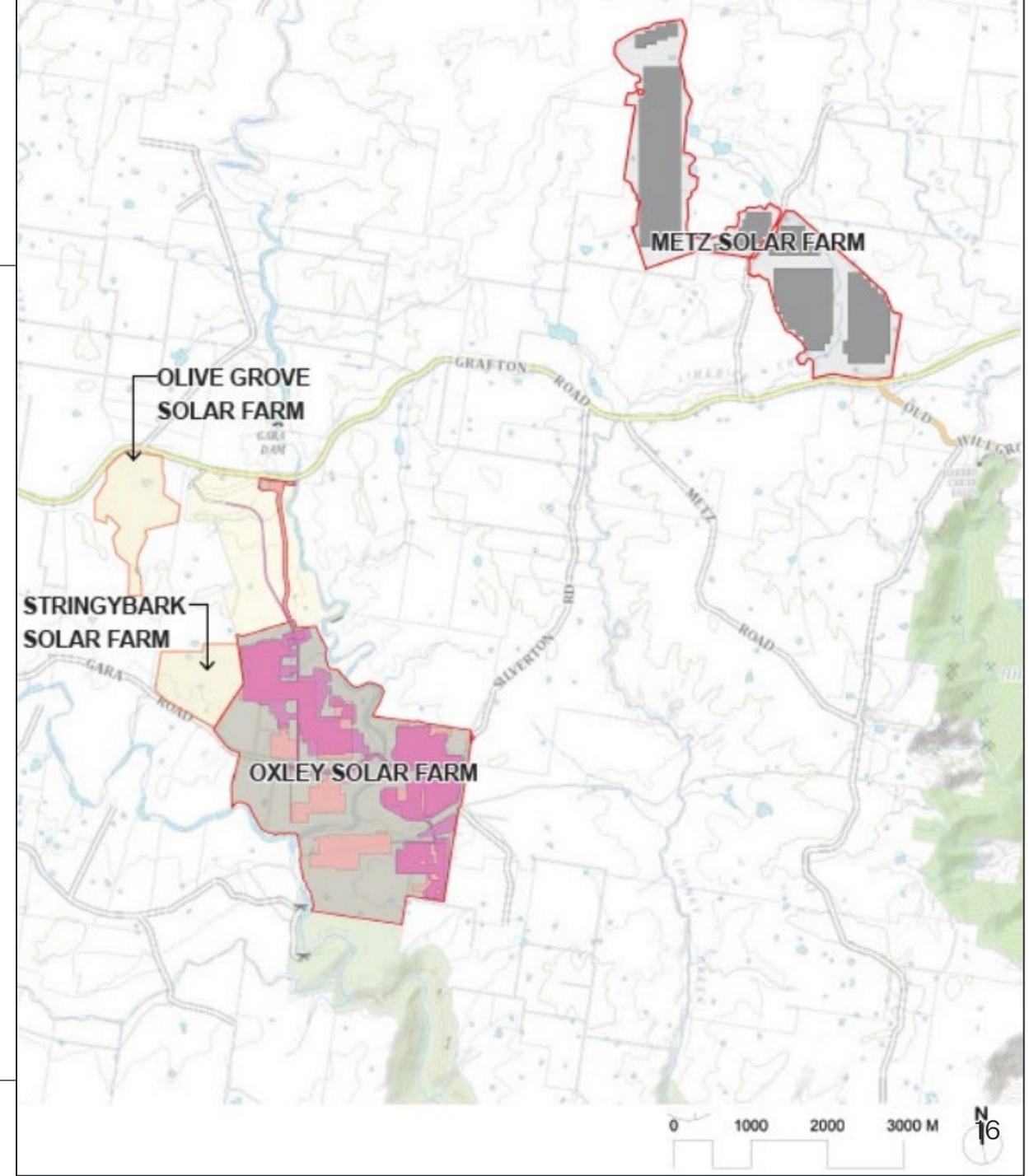
### Stringybark Solar Farm – approved \*

- Generation capacity: 29.9 MW
- Development footprint: 91 ha

### Olive Grove Solar Farm – approved \*

- Generation capacity: 29.9 MW
- Development footprint: 104 ha

\*Not SSD (Determined by the Joint Regional Planning Panel)



# Decommissioning and Rehabilitation

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- Operational life is likely to be 20 to 30 years, with potential to operate longer if panels are upgraded over time, as permitted under the recommended conditions of consent.
- The *Large-Scale Solar Energy Guideline* identifies four key decommissioning and rehabilitation principles:
  1. Return land to pre-existing use
  2. Remove project infrastructure
  3. Rehabilitate and return land to its pre-existing use (including LSC Class)
  4. The owner/operator should be responsible for the decommissioning and rehabilitation
- With the implementation of objective-based conditions and monitoring requirements, 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 be appropriately rehabilitated.

# Other Issues

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As per IPC agenda:

- Historic heritage
- Water supply
- Flood risk
- Bushfire risk and APZs
- Noise impacts
- Socio-economic
- Statutory considerations
- Waste management

- The Department has assessed the application, documents, submissions and advice, as per the requirements of the EP&A Act.
- The Department acknowledges that some members of the community remain strongly opposed to the project, and that the project would result in residual environmental and amenity impacts.
- Changes made to the project through the assessment process have significantly reduced the residual impacts of the project.
- With these changes and the implementation of the recommended conditions, the Department considers that the environmental and amenity impacts of the project can be managed to achieve acceptable outcomes.
- The project would:
  - provide significant economic and social benefits to the region
  - contribute to the transition of the NSW economy away from a reliance on fossil fuels
  - maximise the efficiency of the solar resource while minimising the potential impacts on surrounding land uses, local residents and the environment.