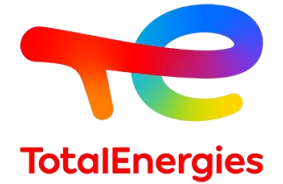


Middlebrook Solar Farm

60 years of history



→ 1963: First exploration in Australia

- Launch of seismic activities in the Simpson Desert, construction of a road to access the site
- The legacy track known as the "French line" remains today one of the few ways to cross the desert



→ 2010s: Marketing & Services and LNG

- Historical partner of mining and automotive manufacturers, offering high-quality and innovative lubricants
- More than 15 B\$ invested in LNG over the last 10 years



→ 2020s: Developing renewables

- TotalEnergies' ambition is fully aligned with Australian roadmap to Net Zero
- 2.5 GW of renewable capacity targeted by 2030

Supporting Australia's energy transition



TotalEnergies at a glance



More than **8 million**
customers in our
15,500
service stations each day



#3 in LNG
with
10 % market share



150,000
charging points
for electric vehicles
by 2028



A portfolio
of **13 million**
gas and power customers
in Europe by 2025



>100 TWh
in electricity production by 2030



Carbon capture
and storage
50-100
MtCO₂eq*
in 2050



± 5 billion \$
in net investment
in renewables
and power in 2023

* MtCO₂eq: million tons of CO₂ equivalent



Electricity

- Rank among the top 5 producers of renewable electricity.
- Become as valuable to our customers in electric mobility tomorrow as we are in fuel distribution today.



Natural gas

- Cement our position among the top 3 worldwide in low-carbon LNG, without Russia.
- Set the standard for decarbonizing the gas value chains.



Petroleum products

- Focus on projects with low emissions and low technical costs.
- Set the standard for decarbonizing the oil value chains.



Decarbonized fuels



- Scale up production of biofuels and biogas.
- Become a major player in the production of clean hydrogen.
- Produce e-fuels.

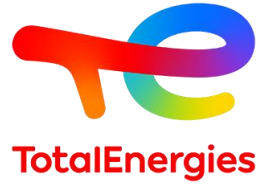


Reduce Scope 3 emissions, together with society

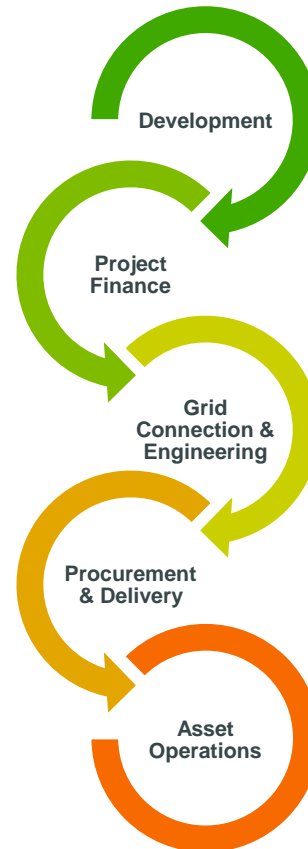


- Guide our customers towards lower-carbon energies.
- Promote a circular economy approach in the use of biomass and plastics.
- Develop a carbon storage offer for our customers with capacity exceeding 10 Mt/year by 2030.
- Forge partnerships with our top 1000 suppliers to reduce emissions from our purchasing.

TotalEnergies Renewables Australia

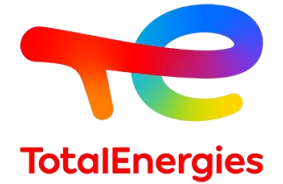


Team of over 34 employees located across Melbourne, Adelaide, Sydney, Brisbane and Perth
Capability to originate greenfield and bring projects through to investment, delivery and operations
Team comprises over 15 GW of collective renewable energy track record



The Renewables Division

On track to be one of the world's top 5 producers of renewable electricity by 2030



Global portfolio

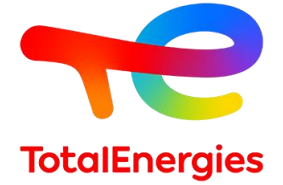


Our global solar, wind and storage portfolio is of 87 GW, including 58 GW under development.

	~ 6,000 employees mobilized to originate, develop, build & operate renewable energy projects to achieve our ambition in electricity.
	>1300 projects in operation and ~250 projects in construction in 60 countries
 	Leveraging TotalEnergies strengths: Access to capital Worldwide footprint Technical/project expertise Brand awareness
	Fastest start on clean energy among European energy majors
	\$5 bn / year investment in electricity and renewables



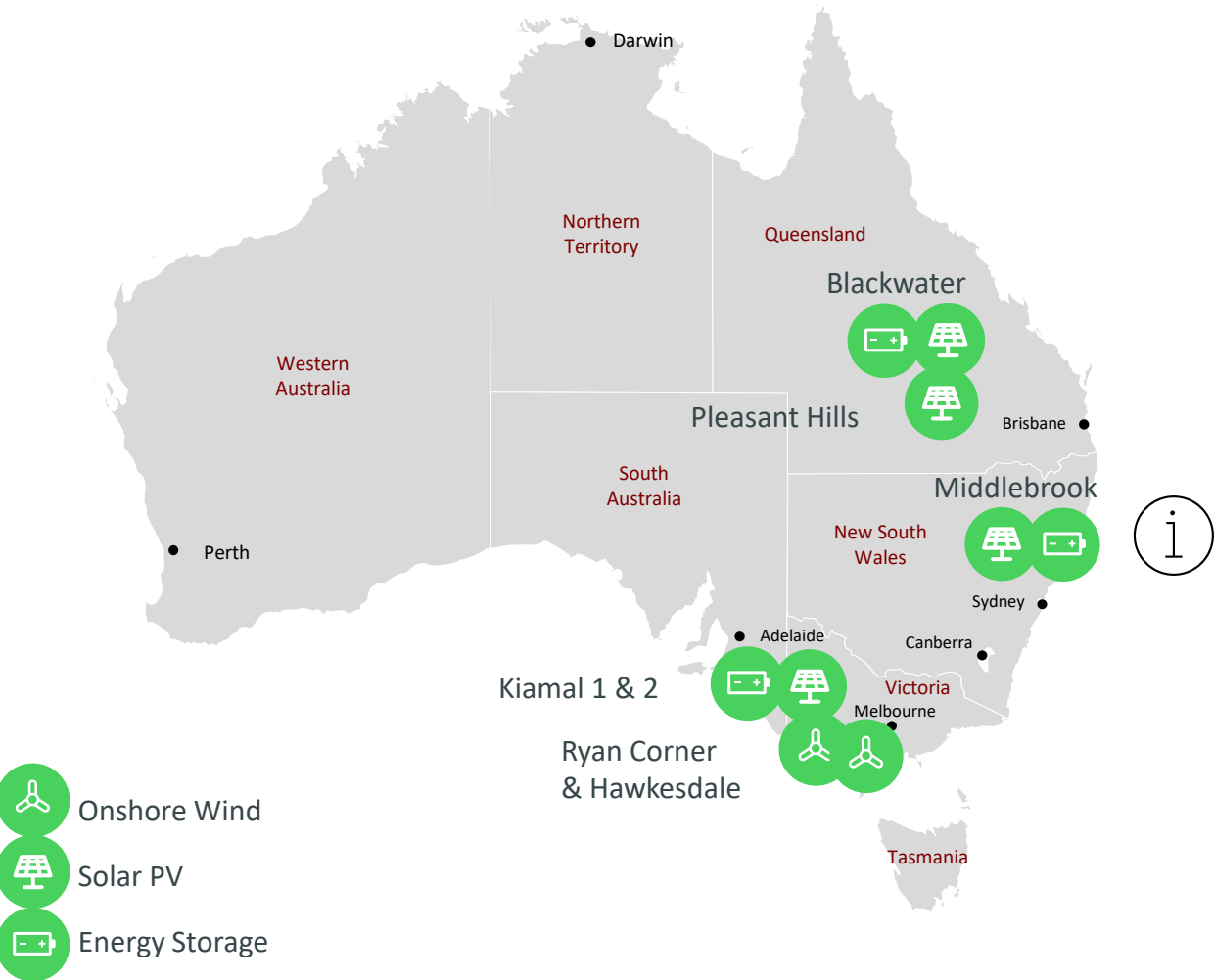
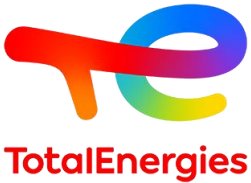
Why do we build solar farms?



- Australia has excellent solar resource, and the **potential to generate much of its electricity from solar energy**
- Drops in the cost of solar panels over recent years has made solar energy **one of the cheapest forms of power generation**
- Solar farms are growing in the global and renewable energy mix. They have minimal noise and visual impacts and **do not generate ongoing emissions that contribute to global warming**
- In some circumstances they can be **grazing** (generally sheep)



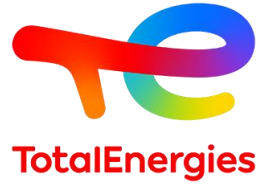
Our other projects in Australia



Project	State	Tech	Capacity
Kiamal 1	Victoria	Solar	256 MWp
Kiamal 2	Victoria	Battery	150MW / 377 MWh
Ryan Corner	Victoria	Wind	214 MW
Hawkesdale	Victoria	Wind	97 MW
Middlebrook	NSW	Solar	320MW / 433 MWp
Middlebrook	NSW	Battery	320MW / 780 MWh
Blackwater	QLD	Solar	221 MWp
Blackwater	QLD	Battery	200MW / 420 MWh
Pleasant Hills	QLD	Solar	120 MWp

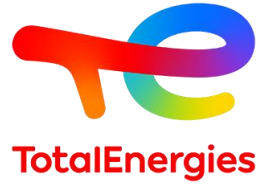


Proposed Middlebrook Solar Farm (MSF)



- The site for the Middlebrook Solar Farm and BESS project is located approximately 22km south of Tamworth within the Tamworth Regional Council
- The solar farm has a generating capacity of 320 MW and the BESS has a capacity of up to 780 MWh
- Connection to the National Electricity Market (NEM) Grid would be via a new substation connecting to the existing Transgrid's 330kV transmission line traversing the site
- There are 10 Receivers (non-associated) within 2.5 km of the project footprint, with the nearest neighbour approx. 360m north of the development
- MSF will contribute towards achieving the net zero emission by 2050 and assist in meeting the increase in electricity demand during the transition to cleaner energy

Development Timeline Overview



- **Project started development in 2019 – 2020**
 - Landowners signed agreements
 - All studies required for the EIS were commenced
- **Towards end of 2020, work towards the assessment and consultation activities for the Project were placed on hold, as COVID 19 lock downs and made travel and face to face consultation difficult. Uncertainty for all parties was high at this time**
- **On 1 July 2021 the Environmental Planning and Assessment Amendment (Major Projects) Regulation 2021 (Amending Regulation) commenced which would affect some of the work undertaken on the project**
- **In 2022 a Gap analysis to provide a framework for completion of the EIS to meet updated guidelines standards. Significant additional work was required including:**
 - Aboriginal heritage assessment, biodiversity work, visual assessment, soil impact assessment and cumulative impacts
- **In June 2023 the updated EIS was submitted**

Project Background

- Scoping Phase – Project footprint approx. 1000 ha

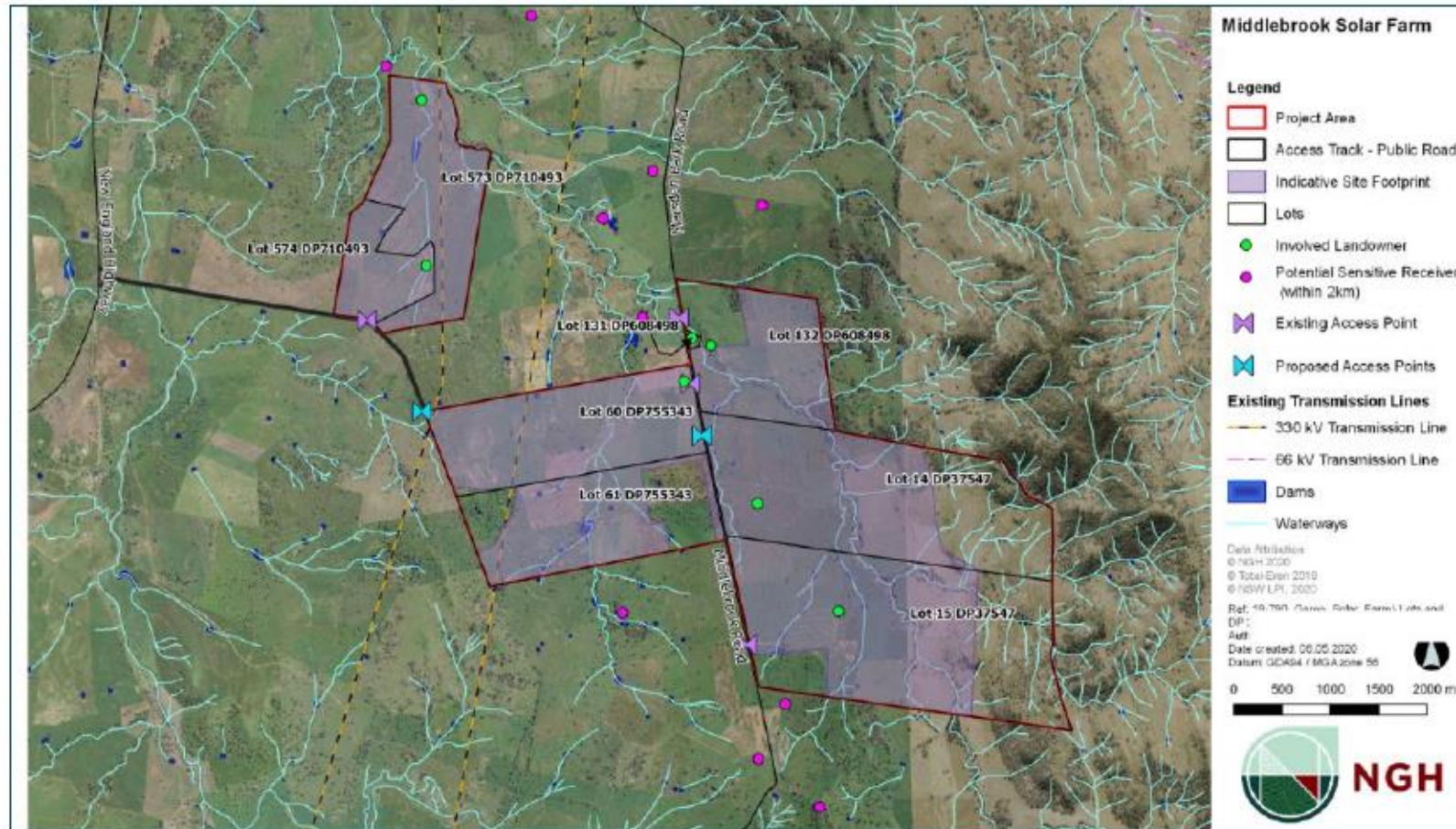
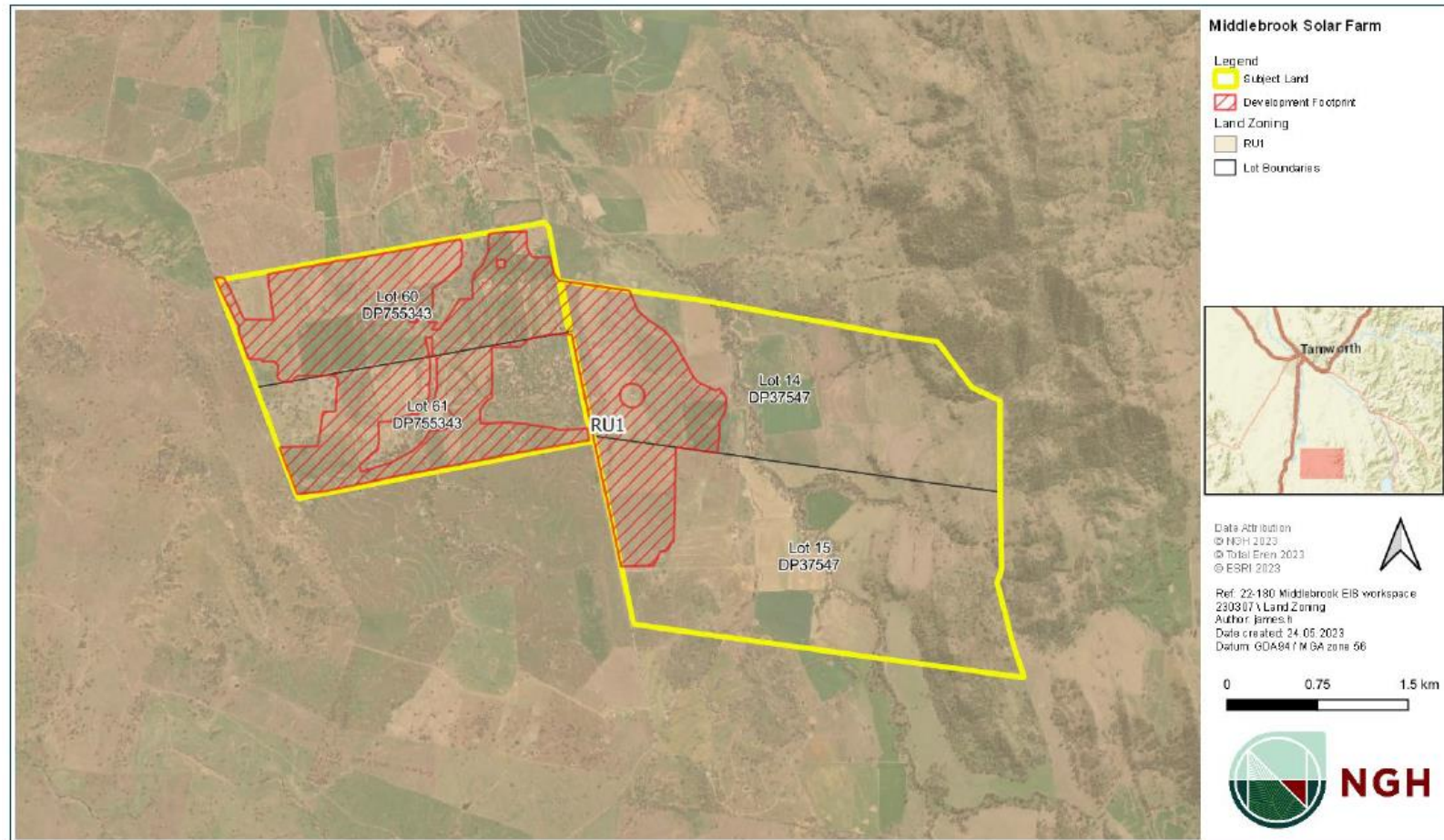


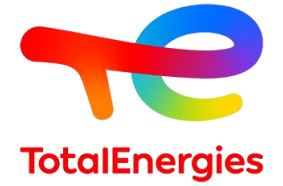
Figure 1-2 Indicative early site layout presented in Middlebrook Solar Farm Scoping Report (NGH 2020).

Project Background

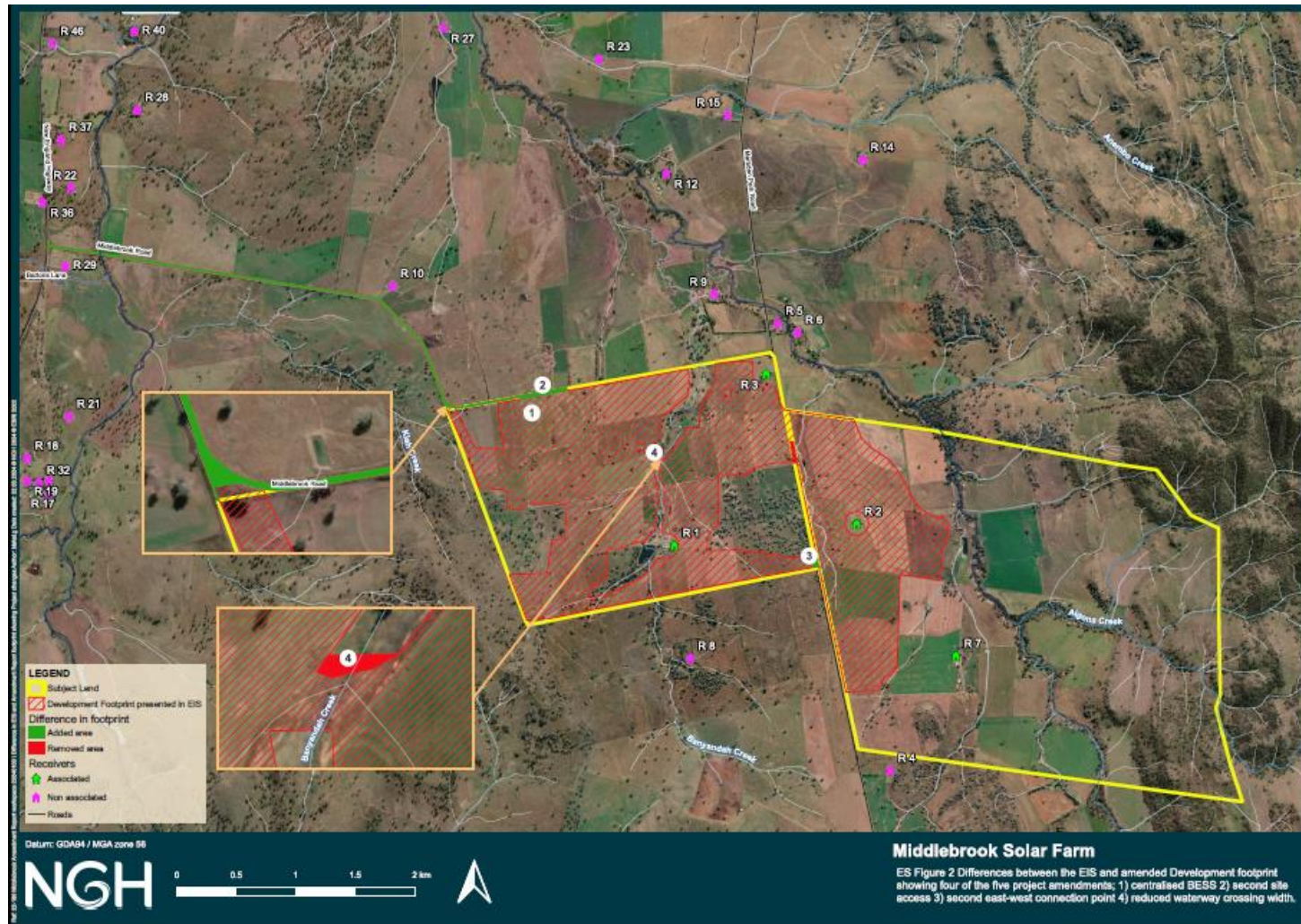
- EIS Phase – Project footprint approx. 530 ha



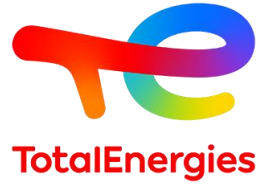
Project Background



- **Amendment Report – Project footprint approx. 515.41 ha**

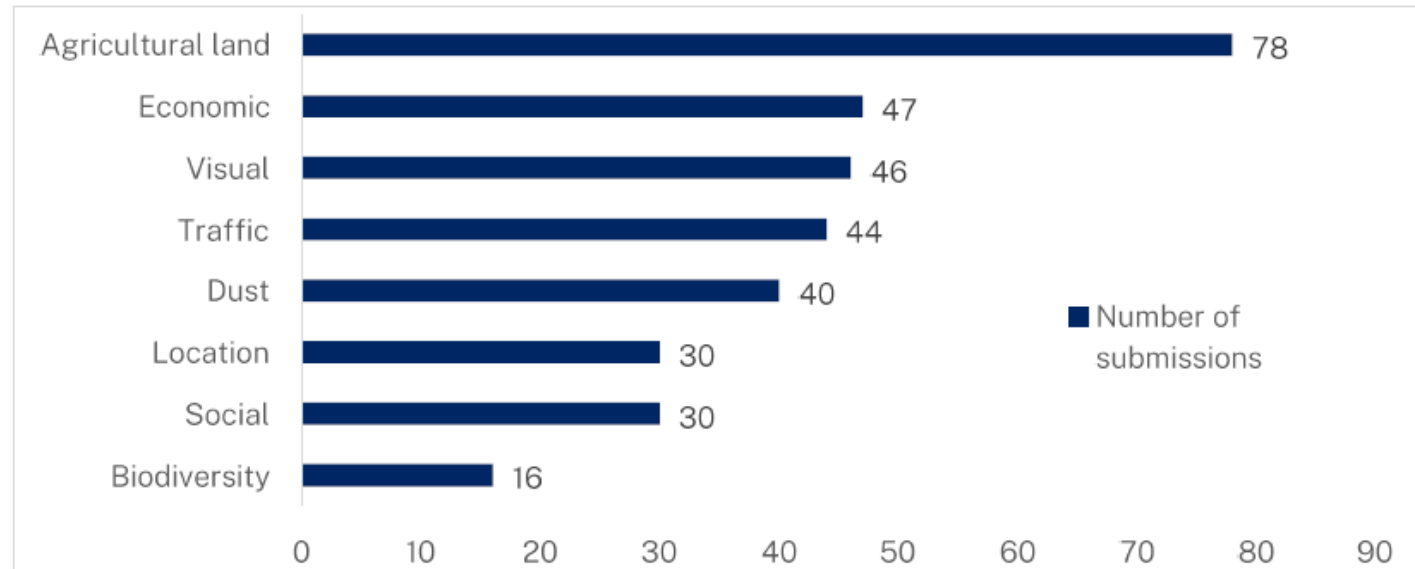


EIS and Public Exhibition Overview

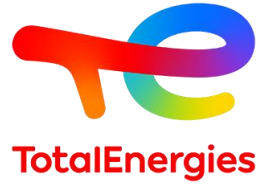


The project was exhibited by DPHI from 7 July 2023 to 3 August 2023

- 129 unique submissions were received from the public (6 objections within 5km)
- Key issues raised included:

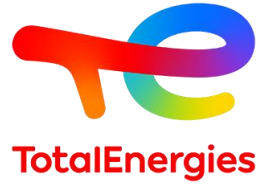


IPC's Agenda Items

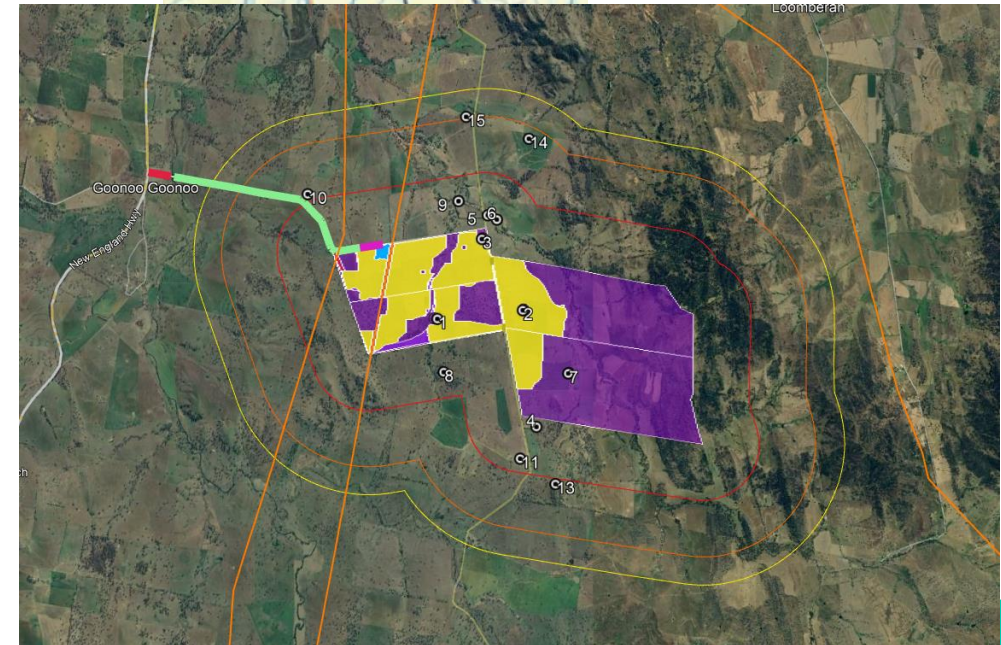


- Community engagement
- Land use compatibility
 - Consideration of agri-solar
- Biodiversity
 - Changes made to the project to avoid areas of high biodiversity values
- Traffic and transport
 - How traffic impacts will be managed over the construction period
- Visual impact
 - Visual impact mitigation
 - Glint and glare
 - Setbacks
- Water resources
 - How it will be sourced for construction
- Accommodation and workforce
 - Impacts on Tamworth community and events (e.g. Country Music Festival)
 - Strategies to be put in place to maximise local employment
- Decommissioning and rehabilitation
- Community benefits
- VPA

Community Engagement

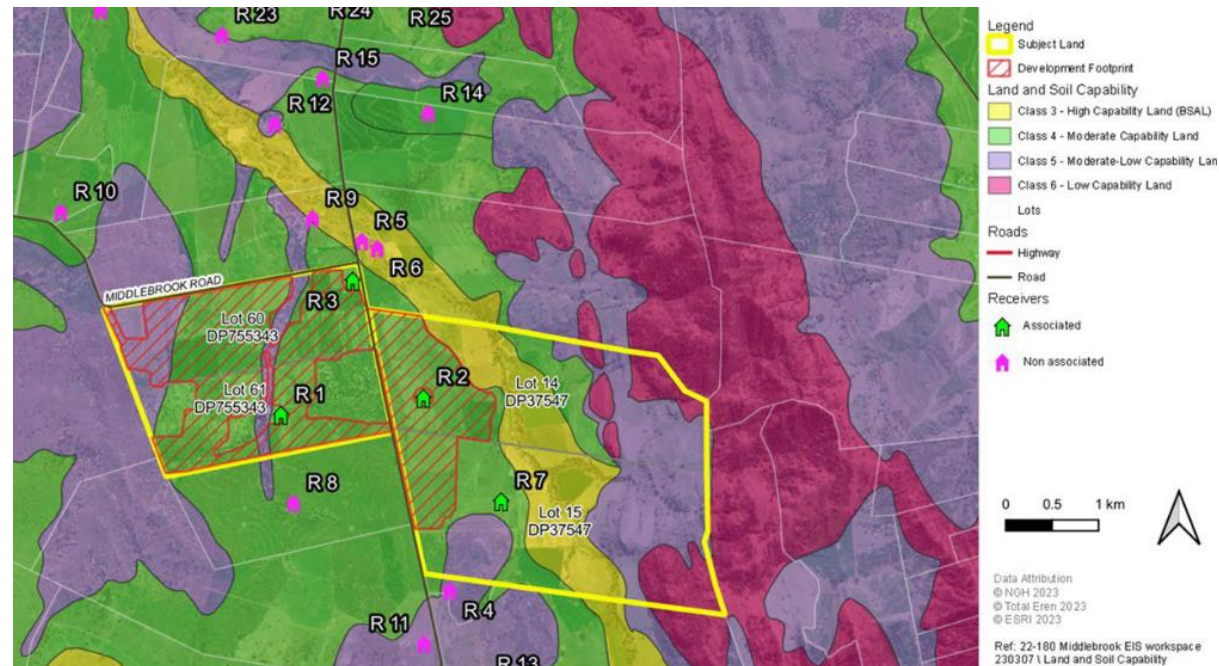


- Engagement activities and focus:
 - On locals/nearby neighbours (within 3km) with potential for impact
 - Understanding of issues/main concerns
 - Consultation activities included, survey, meetings with consultants on site and via other methods during survey period, Open day at Tamworth, project team meetings with neighbours for face-to-face consultation as well as via letter updates, phone calls, and emails
- Some of the key issues:
 - Traffic and roads (including dust)
 - Agriculture
 - Visual
 - Socio economic impacts
- Key changes to the project as a result of consultation reflected these issues:
 - Traffic – sealing to 440m past the first site entrance on Middlebrook road
 - Avoiding important agricultural land and including strong restoration commitments
 - Benefit package

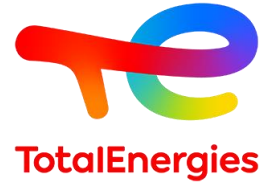


Land Use Compatibility

- The key early design consideration was to exclude all mapped class 3 land – important agricultural land
 - Protects land able to sustain regular cultivation
 - About 90% of the solar farm footprint would be on class 4 land (assessed to have moderate agricultural capability with moderate to high limitations for high-impact land)
 - About 10% of the solar farm is on class 5 (land assessed to have moderate-low agricultural capability and has severe limitations for high impact land management)
 - Lease arrangements with landholders includes considerations for protecting productive lands by allowing them to undertake sheep grazing during operations (ensuring OHS obligations are upheld)



Land Use Compatibility



- **Ways to maintain the value of the agricultural resource are included in all project states:**
 - In design, ensure the module spacing and heights will accommodate agricultural practices, in this case grazing, and not cause excessive shading (by ensuring sufficient row spacing).
 - In construction, minimise the footprint and commit to rehabilitate all areas of disturbance.
 - In operation, monitor soil conditions, maintain ground cover and manage weeds and grazing to protect the soil resource.
 - In decommissioning, strong commitments to restore land capability.
- **There is high confidence in the ability to achieve these commitments due to:**
 - Light footprint – modules are the majority of the impact area and likely to have pile driven supports, there will be minimal soil disturbance required to accommodate the solar panel modules.
 - Operational monitoring actions derisk at end of project life – no surprises
 - For the duration of the project, there will be less intensive land use than current use. Overseas examples point to improved soil and pasture health due to micro-climate effect of panels (and Aust experience accruing). This project will add to that research.
- **While agriculture has been the traditional land use in the region, solar provides an important diversification particularly relevant in droughts, flooding, other climate extremes.**

- **Key values:** Box gum woodland remnants, primarily associated with the riparian areas adjacent to Banyandah Creek.
- **The key habitat that will be impacted are scattered trees with hollows over highly modified ground cover.**
- **The surrounding areas have more intact native vegetation canopy; site selection aimed to:**
 - Minimise impacts on native vegetation
 - Further project key values onsite; riparian connectivity
 - This is shown best by the native vegetation extent map in the BDAR
- **Project response:**
 - Largely exclude better quality remnants and riparian vegetation (set backs from the creek except for necessary crossings)
 - 495.52 ha of the 515.41 ha site is 'category 1'; extensively modified, exempt from most aspects of assessment and does not generate offsets.
- **The result is the removal of:**
 - 4.3 ha of native vegetation (most will low integrity/condition scoring 17-36 out of 100)
 - This includes 2.1 ha of habitat for the Squirrel glider
 - In addition, 118 scattered trees over exotic (non-native) pasture
- **High confidence in the biodiversity assessment finds comes from:**
 - A longer than usual assessment time frame allowing several survey programs between 2019-2024 across different seasons
 - The decision by the applicant to remove areas of higher value from the project

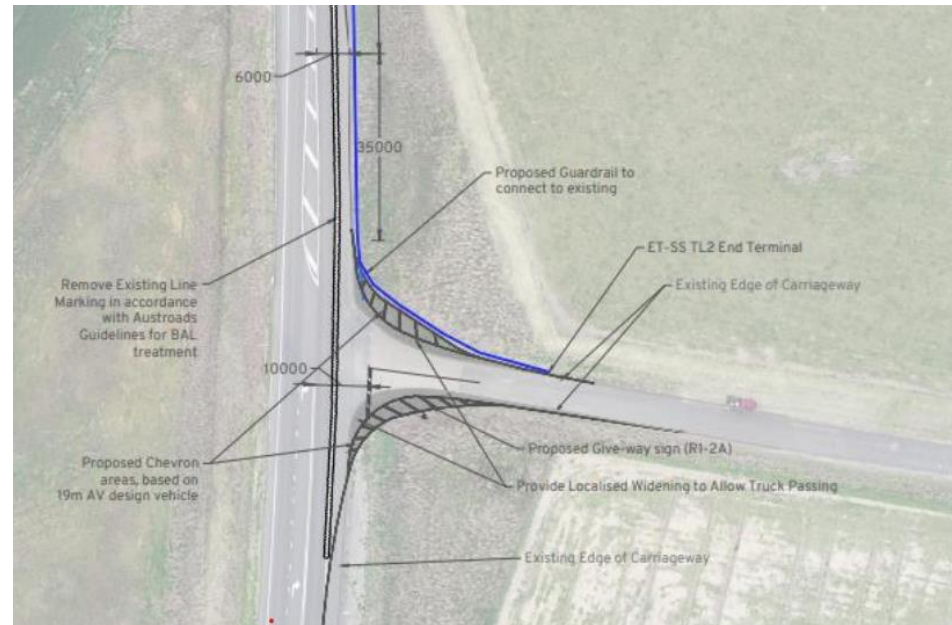
Use of standard management actions and plans to protect adjacent values and minimise overall impacts:

- Timing of clearing to avoid breeding impacts - hollow dependent fauna
 - Relocating habitat features such as hollows
 - Weed and hygiene management
 - Fencing to protect 'no go zones'
 - Adaptive management (feedback loop from monitoring to improve on ground results)
- The recommendation for the EPBC referral has been managed by avoiding better quality box gum woodland remnants (a referral may still be made to obtain certainty for investors that the DCCEEW does not consider the project a controlled action)



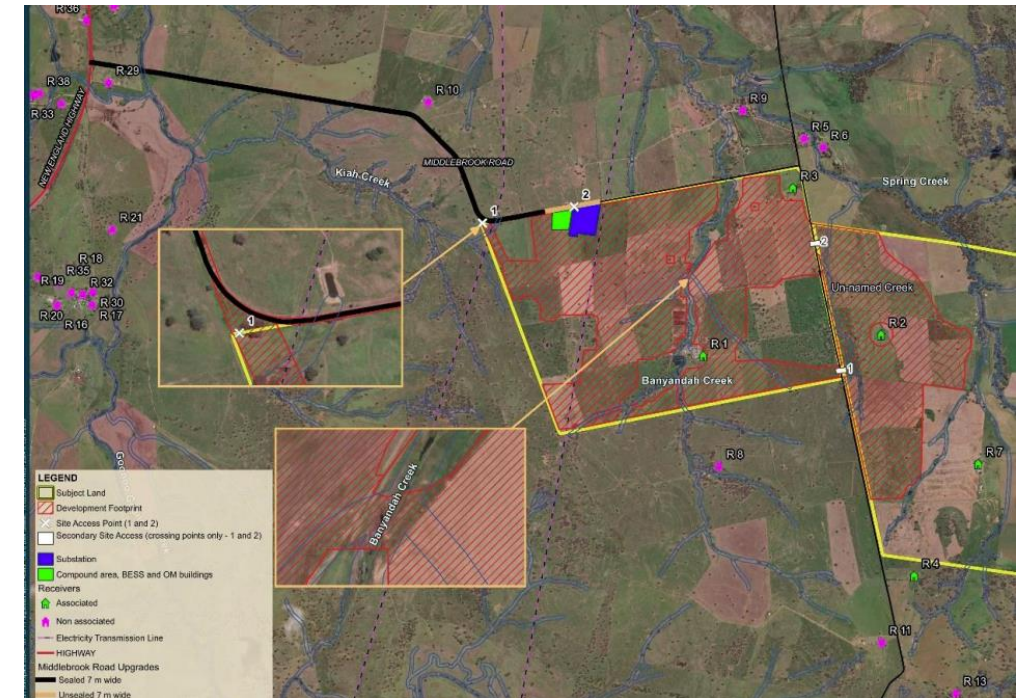
Traffic and Transport

- The project requires an upgrade to the New England Highway intersection with Middlebrook Road; a basic left turn treatment.
- Additional traffic counts were requested by TfNSW to inform the assessment, in addition to more modelling of swept paths for turn treatments and traffic distribution.
- It is noted that more detailed construction management planning will include the TfNSW (to endorse the traffic management plan).

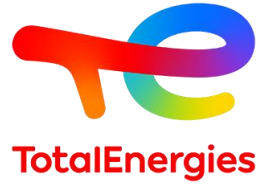


Traffic and Transport

- In addition, to address issues raised by community and council, the project would also –
 - Seal up to the first access to minimise dust and increase safety during construction (about 4km)
 - Add a second access 800m east of the primary access
 - Restrict traffic to Middlebrook Road's first and second access only (not the east west crossings of Middlebrook Road)
 - Protocols to restrict access and manage the construction program – quite detailed including both the traffic impact assessment recommendations, TfNSW recommendations.



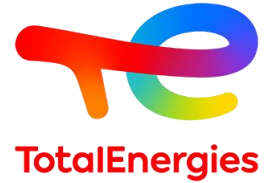
Visual Impact



- **Sparsely populated area, low relief landscape and low-lying infrastructure result in:**
 - No greater than low visual impact for any residence
 - No more than low visual impact for any local viewpoint
- **No screening required to mitigate impacts:**
 - Discussions with neighbours regarding planting on their properties but none have yet taken up the offer
 - Water requirements will be less than assumed in the EIS, given no screen plantings to establish
- **Mitigation is focused on:**
 - Minimising lighting all stages
 - Restricting the panel tracking to eliminate glare *on Middlebrook Road* (not an issue for any residence)
- **Conservative assessment conclusions as necessary setbacks (tracks and APZs) and existing riparian, roadside and other vegetation will also act to reduce views and glare.**
- **Detailed design will show final set-backs and areas with back tracking restrictions.**

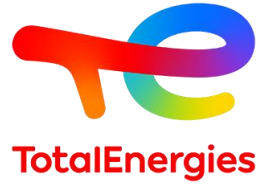
- **Onsite collection**
 - Operations and Maintenance building - Guttering and a water tank would be installed to collect rainwater
- **Offsite sources for construction**
 - Approximately 92.6 ML of non-potable water would be required during construction, mostly for dust suppression, but also for cleaning, concreting, onsite amenities and landscaping. The bulk of this water could be obtained from a council standpipe or supplied through a contractor.
 - Water for dust suppression may be obtained from a Council standpipe in Tamworth (subject to negotiations), which has been scaled down due to sealing of the road.
 - A small amount of potable (drinking) water would be used onsite during the construction period on an as needs basis and stored within temporary water tanks at the staff amenities area.
- **Offsite sources for operation**
 - potable water was assumed to be required for *watering trees*, cleaning panels and watering livestock.
 - Around 10 ML per year was estimated for cleaning, to be sourced from council standpipes/ delivered by contractor.
 - A steel or concrete tank would be installed at the site to store water for bushfire protection and other non-potable water uses, with a minimum of 50,000 L reserved for fire-fighting purposes.
 - Potable water would be required for staff using imported supplies or rainwater collected from tanks beside site buildings.
- **Note: specific quantities will depend on environmental conditions at the time of construction and detailed construction and operational planning**
- **A standard condition has been applied by DPHI:**
 - The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.

Accommodation and Workforce



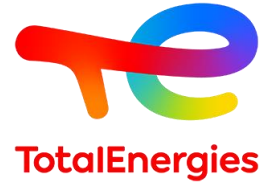
- Up to 400 workers would be required during the peak construction period of 18 months
- The Project aims to maximise hiring locally where possible.
- There is sufficient accommodation in Tamworth and the surrounding region for the accommodation workforce.
- The project commits to develop an Industry Participation Plan in accordance with the recommendations of the Social Impact Assessment, provided with the EIS. This will include:
 - Consideration of local employment and procurement, as well as the accommodation of the non-resident construction workforce.
 - Targeted towards the people and businesses within Tamworth LGA, as well as giving consideration to the wider New England region.
 - Specific opportunities for Aboriginal people and businesses, women, and young people.
 - A Local Procurement Policy.
 - An Accommodation and Employment Strategy.
- The project commits to development of Environmental management plans for all stages of the Project will ensure provisions to consider to most relevant cumulative impacts within concurrent projects at the time of implementation, such as:
- Traffic management: provisions to manage peak construction traffic.
 - Housing: provisions to accommodate and transport workers.
 - Employment: provisions to maximise local employment, in consideration of other local business requirements.

Decommissioning and Rehabilitation



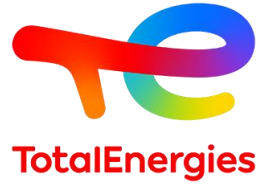
- Key benefit of solar are commitments to rehab– light footprint, clear commitments to monitoring, weeding and preserving protective ground cover
- The *Large-Scale Solar Energy Guideline* identifies four key decommissioning and rehabilitation principles for circumstances where an applicant ceases operating a project, which are
 1. the removal of project infrastructure,
 2. Returning the land to its pre-existing use, including rehabilitating and restoring the pre-existing LSC Class where previously used for agricultural purposes,
 3. The owner/operator of the project should be responsible for the decommissioning and rehabilitation
 4. This should be reflected in an agreement with the host landowner(s).
- **The site can be fully restored (with the exception of the substation and any tracks / fencing, buildings the LO may wish to retain) as included in:**
 - Landholder agreements require agricultural resource is protected
 - Recommended conditions
 - Project commitments and management plans
- **At the end of the project life, all above and below ground infrastructure, where buried above 500 mm, would be removed and the land rehabilitated.**
- **The site to be rehabilitated within 18 months of cessation of operations**

Decommissioning and Rehabilitation



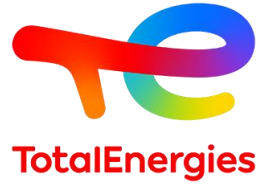
- **Management plans committed to by project**
- **Ground cover management plan to identify baseline conditions for rehabilitation following decommissioning.**
- **A Rehabilitation and Decommissioning Management Plan is to be prepared in consultation with NSW Department of Primary Industries prior to decommissioning. The Rehabilitation and Decommissioning Management Plan is to include:**
 - Removal of all above ground infrastructure with the exception of TransGrid connection assets and substation.
 - Removal of all cabling to a maximum depth of 500 mm.
 - Verification that no adverse impact on land capability for the Disturbance footprint.
 - Verification of a safe, stable and non-polluting site.
- **The decommissioning plan would reference the updated equivalent of:**
 - The Australian Soil and Land Survey Handbook (CSIRO, 2009).
 - The Guidelines for Surveying Soil and Land Resources (CSIRO, 2008).
 - The Land and Soil Capability Assessment Scheme: Second Approximation (OEH, 2012).

Community Benefits



- **The project commits to develop a model of Community Benefit Sharing comprising a:**
 - Community Benefit Fund
 - Neighbouring Benefit Fund – Any neighbouring residence within 3km have been offered an annual payment with no strings attached, this offer is open until the end of the year
- **In accordance with the recommendations of the Social Impact Assessment of the exhibited EIS (final V1.1 26/06/2023, NGH 2023). The model will ensure benefits of the project are shared with the community in a way that adds value to the local area and enhances the social and economic outcomes.**
- **The recommendations are set out in Section 6.3 of the SIA report**
- **They require the benefits are guided by the benefit sharing principles set out by Lane & Hicks, 2019**
 - Appropriate
 - Flexible
 - Transparent
 - Integrated
 - Mutually beneficial
 - Strategic

Community Benefits

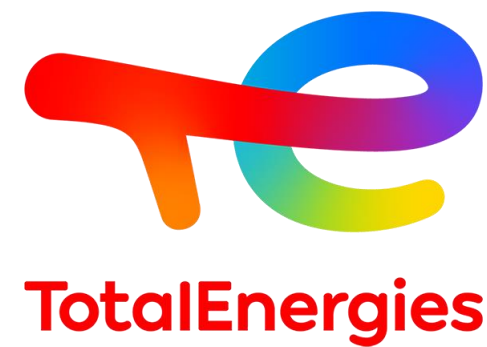


- **It is proposed that the Community Benefit Fund is an annual/bi-annual grants round that make contributions towards local initiatives, based on the following selection criteria:**
 - Contributes to increased resilience for the Loomberah and surrounding communities and addresses a specific local issue
 - Demonstrates strategic alignment with TRC Council Plans and Strategies
 - Supports development of local skills and capabilities
 - Supports the conservation of the local environment
 - Supports a transition to a more sustainable region.
- **Priority will be given to funding initiatives that are focused on the areas surrounding the project area, to ensure the funding is more closely benefiting the local community near the project. To do this, preference will be given to those initiatives that are focused to within a 10km radius of the project, with secondary consideration then also given to those with the 15km–20km range).**

- The most recent VPA proposal was presented on 26 June 2024 and is in line with recommendations in the current Large-Scale Solar Energy Guidelines published by NSW Department of Planning and Environment (dated August 2020).
- Summary of the VPA in the recommended conditions:
- An annual payment of \$82,070 (CPI adjusted) from commencement of operations for the operational life of the project to be paid to Council;
- An annual payment of \$32,000 from commencement of operations for the operational life of the project to be paid into the community benefit fund; and
- Sealing the surface of Middlebrook Road, as identified in Figure 1 of Appendix, to the approximate value of \$321,550.

- SSD will generally develop the detailed site layout and construction methodologies and schedule post approval – therefore commitments are aimed at guiding that next step appropriately
 - The Project description described and assessed in this EIS is therefore intended to *over-estimate impacts* and *over-scope mitigation strategies*. It is a conservative strategy to address uncertainty.
 - Areas of uncertainty are clearly identified, and specific strategies are included to address these in the later stages of the Project, where required.
 - This approach is consistent with the *State Significant Development Guidelines – Preparing an Environmental Impact Statement* (DPE, 2022) which states: ... *with some large, complex Projects this flexibility is often essential as it is difficult, if not impossible, to deal with all aspects of the design of these Projects at the EIS stage.*
- Need for the project – energy transition
 - Assisting the transition as coal fired generators are retired
 - Capacity of 320 MW, the solar farm could generate enough electricity to power about 122,200 homes.
 - Firming the grid with 320 MW / 780 MWh of storage
 - Consistent with the *NSW Climate Change Policy Framework* of achieving net zero emissions by 2050.
- Flow on benefits for region:
 - 400 jobs during construction
 - Capital investment value of \$856 million.
 - Voluntary Planning Agreement proposed to provide \$3.74 million to Tamworth Regional Council.

- **Not in a REZ but the transition requires additional appropriate sites, such as this one, with:**
 - Connection onsite
 - Close to transport corridor
 - Few neighbours
 - Compatible with surrounding and future land uses; agriculture
- **It is within a renewable energy hub, pursuant to the New England NW Regional Plan 2041**
- **The Department consulted with all relevant governmental agencies, Tamworth Regional Council (TRC) as well the nearby sensitive receivers as part of the assessment process.**
- **Agencies, Council and utility providers made recommendations for appropriate mitigation and management measures for the project.**
- **CORRECTION TO DRAFT CONDITIONS:**
 - **As per the Aboriginal Cultural Heritage Assessment Report, AHIMS# 29-2-0263/Kiah Creek ISO 1 (Isolated Find) should be salvaged - as this is in the main site access footprint. This is currently in the Table 4 which requires Avoiding Impact - need to be moved to under Table 5.**



Thank you



Renewables Division