

Date 26/09/2024

Mr Richard Pearson (Chair)  
Dr Bronwyn Evans AM  
Dr Sheridan Coakes  
Office of the Independent Planning Commission NSW  
Suite 15.02, Level 15, 135 King Street  
Sydney NSW 2001

Dear Commissioners,

**Middlebrook Solar Farm and Battery Energy Storage System (the Applicant): Response to questions on notice and other points raised**

In this submission, the Applicant will respond to the points and questions raised during the IPC's site visit (September 18, 2024) and the public meeting (September 19, 2024). The project commitments included in the Amendment report (Appendix B Consolidated mitigation measures of the Project - [Middlebrook solar farm \(nsw.gov.au\)](https://www.nsw.gov.au/middlebrook-solar-farm) address most of the points raised. For ease of reference, the responses have been categorised into topics, and they include a number of these commitments:

## A - BESS related clarifications

### 1. How will run off from fighting a BESS fire be contained?

The BESS units include containerised Energy Storage System (ESS) blocks. Each ESS block would include heating, ventilation, air conditioning (HVAC), and a fire system.

The fire suppression systems incorporated will predominantly rely on gas (typically nitrogen) as the primary method for fire suppression. Water is unlikely to be used to extinguish fires in the BESS containers (Ref: [Victoria Big Battery Independent Report of Technical Findings](#) from the fire incident in 2021). However, water is likely to be used on nearby vegetation and maintenance buildings, if required. These aspects will be considered in the project's drainage design to mitigate the run-off which is not anticipated to be contaminated with from the BESS.

The updated Preliminary Hazard Assessment (PHA) addressed the project's SEARs, in line with the Hazard Industry Planning Advisory Paper No.6—Guidelines for Hazard Analysis (DoP, 2011) (HIPAP 6) and Multi-Level Risk Assessment (DoP, 2011)(MLRA). The assessment found the likelihood of hazard risks for the project to be either very unlikely or extremely unlikely.

Importantly, the separation distances between the BESS containers (as outlined in the updated PHA) are important factors in mitigating potential fire propagation. These distances are considered in the assessment.

Several interrelated management plans act together to manage and mitigate the BESS in operation. During the detailed design phase of the project and before commencing the construction, the Applicant, in line with the draft conditions of consent received from the Department of Planning, Housing and Infrastructure (DPHI), will prepare a number of plans in consultation with key stakeholders including:

- Bushfire Emergency Management and Operations Plan
- Fire Management Plan - in consultation with NSW RFS Tamworth Fire Control Centre
- Fire Safety Study to meet the requirements of FRNSW
- Firefighting operations plan including methods and resources to manage and extinguish Lithium Battery Fires
- Emergency Response Plan

## **2. How many BESS units will be located in the BESS area?**

The Amendment report has updated the description of the BESS. It is expected that the BESS units will occupy around 4 ha and include up to 260 Battery containers.

## **3. BESS recycling?**

The project proposes ambitious recycling targets, in line with community expectations for this developing industry. While there are currently few facilities, strong commitments like these will assist and promote this new industry and maximise recycling and reuse over disposal. The commitments are that: *Any spent batteries would be recycled at a B-Cycle accredited, EPA permitted and licensed recycler of Li-Ion batteries.* A commitment to a waste management plan is also outlined to manage other waste streams, again with strong recycling objectives.

## **B – Traffic and Dust**

### **4. The extent of Sealing the Middlebrook Road**

Following extensive consultation to date with the council in relation to the Middlebrook road, and in response to the Council's recommendations, the Applicant commits to sealing Middlebrook Road from near the New England Highway up to 440m past Site Access #1.

While the Applicant would repair any damage caused by the project during the construction phase, further consideration should be taken into account that the end of



the sealed road will be more likely to erode at this transition point and therefore its location must consider safety as well as cost.

The consultation with Council is ongoing regarding the extent of sealing.

#### **5. How will dust be managed if not by sealing?**

The project commits to dust management for air/water quality reasons. Sealing the Middlebrook Road from the New England Highway up to 440m past Site Access #1 will significantly reduce the dust from vehicle movements during construction and operation.

The current strategy for managing the dust generated by using the last stretch of the unsealed road leading to Site Access #2 (proposed for limited use) and any unsealed access tracks within the solar farm footprint is to use water tankers to spray the surface with water as and when required, depending on the weather conditions. This approach is standard on most construction sites and is under consideration for this project as well.

The unsealed access tracks within the solar farm footprint will also be subject to speed restrictions which will assist in mitigating the amount of dust generated from traffic movements.

#### **6. What will the traffic breakdown be for the second access?**

Site Access #2 has been considered for limited use and primarily for construction of the substation which is located adjacent to this access. A total of 25% of the overall construction traffic is assumed to use this access. As the substation is located adjacent to this access, all OSOM movements requiring escort will use this access. Further information related to the use of Site Access #2 can be found in section 4.3.1 of the Appendix F Updated Traffic Impact Assessment.

#### **7. The Middlebrook Bridge (Goonoo Goonoo) Status?**

In addition to the information provided by the Council regarding the Bridge, the Applicant undertook an independent Level 2 condition assessment to ascertain its condition. Based on this assessment, the Bridge will require no upgrade. The report has been shared with the Council as part of the Applicant's ongoing consultation.

A traffic management plan will be prepared following the detailed design phase of the project and subject to further consultation with the Council.

#### **8. Use of Marsden Park Road – will it be used or sealed?**

The project doesn't intend to use Marsden Park Road for construction or operational activities. This information will be included in the traffic management plan and its

protocols and communicated to project personnel through appropriate channels, such as inductions and toolbox talks. Consequently, Marsden Park Road will not require upgrade or sealing due to project activities.

## C – Soil, water and land

### 9. Baseline soil survey

The project currently commits to additional soil surveys that will:

- Inform updated land soil capability mapping – to verify the state-based mapping, increasing the survey effort used previously to meeting changing guidelines in this area.
- Inform remediation treatments – during construction and operational management and in particular after construction and during decommissioning of the project.
- Inform the ground cover management plan – ensuring stable pasture is maintained to protect soil resources. Specific roles for a soil scientist and agronomist are also required for this plan.

### 10. Waterways

Best practice guidelines would be applied to construct and rehabilitate areas impacted by the waterway crossings. By buffering waterways and managing the site's ground cover, water quality will be protected. Management protocols will also specify how construction will be managed to avoid spills. Best practice sediment and erosion controls will be applied (Blue Book).

## D – Neighbour Benefit – a local Initiative

Following consultation with the community and in recognition of their preference for some form of direct benefit, the Applicant proposed an annual payment to neighbouring residents within 3 km of the Project. The proposal was based on proximity to the site to scale payments as an equitable way to ensure the benefit is shared with those closer to the Project.

The neighbour benefit fund is a voluntary and obligation-free offer (no strings attached) available to neighbours (identified receivers) within 3km of the Project. The neighbours are able to spend the funds on what they like. There had been suggestions to help pay electricity bills, but we have not limited what the funds can be used for as some neighbours

have solar panels and lower electricity bills already. We are of the opinion that our method is more equitable.

The payments would be made annually for the Project's operational life.

## E – Grid

### 11. Substation location

The indicative location for the substation and BESS was chosen based on several considerations. The most important ones are the proximity to the 330kV line and direct access for Transgrid to the substation from the main road. This arrangement means the operators of the substation will have a quick safe access to the substation especially in the event of an emergency. The location of the substation is directly attributable to the discussions with Transgrid and their requirements for substations.

### 12. Grid capacity

To date, the Applicant has undertaken extensive consultation with Transgrid regarding the connection of the proposed project to the existing 330kV line (Line ID 84, Liddell to Tamworth) traversing the site.

As part of the process, the Project-Rated Capacity and Point of Connection (POC) limitation were designed around the transmission line rating and local substation ratings, including Tamworth. AEMO and Transgrid continually review the transmission network to advise proponents through the connection process and determine current limitations for future investment into substations and transmission lines to facilitate the flow between QLD and NSW.

## F – Visual

### 13. Visual impact assessment methodology

The visual assessment was completed utilizing the new visual guidelines. The consultants, MLA, used montages where required, as well as preliminary tools, to identify receivers for detailed assessment. MLA has completed many similar assessments using these new guidelines.

We have ensured we have followed the appropriate methodology which provides a standardised approach that the Project must follow.

### 14. Visual mitigation

Using the new visual guidelines, the visual amenity impact assessment for the Project demonstrated no greater than low visual impact on residents or local viewpoints.

Although it was not a requirement of the assessment, in good faith, the Applicant also agreed to provide several photomontages for the residents (some 3km away) to address their concerns.

The suggestion of establishing areas for screen planting is inappropriate, given this would further reduce the solar yield and these areas would cause more impact on agricultural production (in operation and after decommissioning) than the installation of solar modules.

Given the extensive reduction of the Project's footprint through its development and the resulting low visual impact from the assessments, the Project is not considering any screening onsite as this will significantly impact the project viability.

However, given the subjective nature of the visual amenity, the Applicant (in good faith) has offered to consider vegetation screening for the neighbouring landowners (within 3km of the Project) on their properties where appropriate. This process will be subject to the Project's approval, the detailed design phase, and further consultation with the respective neighbours.

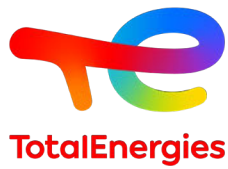
## **15. Glare mitigation**

The initial Glint and Glare assessment (EIS-Appendix D of the Landscape and Visual Assessment) found no impacts on neighbouring residents. However, the assessment identified some glare on portions of Middlebrook Road during limited periods/hours (restricted to Sept to mid-March (between 5:30 am and 6:30 am) and November to early February (between 6:30 pm and 7:05 pm). The glare is attributable to specific areas of the array at these times.

As a result, additional modelling was undertaken to supplement the Glint and Glare Assessment (please refer to [MSF Glare Mitigation Update](#) dated June 24th, 2024). Although conservative, this additional work aimed to determine operational angle restrictions that would eliminate the glare produced by these areas of the array. The assessment found that tracking management of the select panels identified to be contributing to the glare during the above-mentioned periods eliminated glare altogether.

Given the conservative assumptions used for the assessment, the technical recommendation was to further assess the tracking restrictions post-approval based on the final layout to ensure compliance.

The above-mentioned report demonstrates the elimination of any potential glare; therefore, no vegetation screening is proposed.



## G – Other points raised

### 16. Grazing

Sheep grazing can coexist with solar farm activities and has beneficial effects. Hence, provisions in the agreements enable the landowners to undertake sheep grazing during the Project's operational phase. As such, the Applicant commits to preparing a grazing management plan with the objective of protecting stable pastures and soil health for the Project's operational life while providing some ongoing agricultural use.

Kind regards,

Sherry Mohajerani

Senior Development Manager  
TotalEnergies Renewables



TotalEnergies Renewables Australia Pty Ltd

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[REDACTED] Melbourne VIC 3000

Date 26/09/2024

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Suite 15.02, Level 15, 135 King Street  
Sydney NSW 2001

Dear Commissioners,

**Middlebrook Solar Farm and Battery Energy Storage System (the Applicant): Request for update and clarification of recommended conditions of consent**

In this submission, the Applicant requests corrections and clarifications of some of the [Recommended Conditions of Consent](#) for the proposed Middlebrook solar farm and BESS (SSD-10455) as issued by the Department of Planning, Housing, and Infrastructure (DPHI) in August 2024. For ease of reference, the conditions of consent and the Applicant's comments are provided in the table below:

Document Ref	Condition	Details	Applicant Comments
<b>Schedule 2 - Part B</b>			
<b>Environmental</b>			
<b>Conditions -</b>			
<b>General</b>			
LANDSCAPING Land Management	B11	The Applicant must maintain the agricultural land capability of the site, including: (a) establishing ground cover of the site within 3 months following completion of any construction or upgrading; (b) properly maintaining the ground cover with appropriate perennial species and weed management; and (c) maintaining grazing within the development footprint, where practicable, unless the Planning Secretary agrees otherwise	<a href="#">The Applicant requests that this condition be amended to allow for a period greater than 3 months to establish ground cover post-construction, given the Project size and considering the impact of seasonal and weather conditions on this objective.</a>



Prior to carrying out any development that could directly or indirectly impact biodiversity values, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCS, and to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared in accordance with the revised Biodiversity Development Assessment Report (dated 5 April 2024);
- (b) include a description of the measures and timeframes that would be implemented for:
  - (i) protecting vegetation and fauna habitat outside the approved disturbance areas;
  - (ii) managing and enhancing the remnant vegetation and fauna habitat on site;
  - (iii) minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development;
  - (iv) minimising the impacts to fauna on site and implementing fauna management protocols, including the design of security fencing;
  - (v) avoiding the removal of hollow-bearing trees during spring to avoid the main breeding period for hollow-dependent fauna;
  - (vi) rehabilitating and revegetating temporary disturbance areas with native species that are appropriate to the site's ecology and conditions;
  - (vii) maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site;
  - (viii) controlling weeds, feral pests and pathogens; and
- (c) include a program to monitor and report on the effectiveness of mitigation measures and report to BCS following each annual

In its current state, condition B14 (b) (v) will significantly impact the project timing and construction due to the restriction in avoiding clearing hollow-bearing trees in spring (Sep-Nov). Given that the intent of this condition is to avoid impacts to breeding fauna, the Applicant requests the condition be updated to reflect that, should the hollow-bearing trees be found not be occupied for breeding, the clearing could go ahead.

The condition 14b(vi), "The requirement of 'rehabilitating and revegetating temporary disturbance areas with native species that are appropriate to the site's ecology and conditions may conflict with the holder land use. The Applicant requests that this condition be updated and to be subjected to consultation with the landowners to ensure their best use of their properties. For example, if the pasture is exotic, that this be retained.

reporting window;  
 (d) include an incidental threatened species finds protocol to identify the avoid and/or minimise and/or offset options to be implemented if additional threatened species are discovered on site; and  
 (e) include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions.

Following the Planning Secretary's approval, the Applicant must implement the Biodiversity Management Plan.

AMENITY B15  
 Construction,  
 Upgrading and  
 Decommissioning  
 Hours

Unless the Planning Secretary agrees otherwise, the Applicant may only undertake road upgrades, construction, upgrading, commissioning or decommissioning activities between:  
 (a) 7 am to 6 pm Monday to Friday;  
 (a) 8 am to 1 pm Saturdays; and  
 (b) at no time on Sundays and NSW public holidays,

The Applicant requests flexibility for Condition B15 in circumstances where minor delays may occur. Hence, requesting amendment to the condition for a more localised approach via consultation with the Tamworth Regional Council (TRC). The Applicant requests the inclusion of the highlighted wording:

Unless the Planning Secretary agrees, **or as otherwise agreed with the Council**, the Applicant may only undertake road upgrades, construction, upgrading, commissioning or decommissioning activities between:  
 (a) 7 am to 6 pm Monday to Friday;  
 (a) 8 am to 1 pm Saturdays; and  
 (b) at no time on Sundays and NSW public holidays,

AMENITY B16  
 Exceptions to  
 Construction Hours

The following activities may be carried outside the hours specified in condition B16 above:  
 (a) commissioning activities that are inaudible at non-associated residences;  
 (b) the delivery or dispatch of materials as requested by the NSW Police Force or other public authorities for safety reasons; or  
 (c) emergency work to avoid the loss of life, property or prevent material harm to the environment.

The Applicant requests that condition B16(a) be made more flexible by allowing activities that are inaudible at non-associated residences, outside the hours specified in condition B15.

AMENITY B17  
Variation of  
Construction Hours

The hours of construction activities specified in condition B16 of this approval may be varied with the prior written approval of the Planning Secretary. Any request to alter the hours of construction must be:

- (a) considered on a case-by-case or activity-specific basis;
- (b) accompanied by details of the nature and justification for activities to be conducted during the varied construction hours;
- (c) accompanied by written evidence that appropriate consultation with potentially affected sensitive receivers and notification of Councils (and other relevant agencies) has been and will be undertaken;
- (d) accompanied by evidence that all feasible and reasonable noise mitigation and traffic management measures have been put in place; and
- (e) accompanied by a noise impact assessment consistent with the requirements of the Interim Construction Noise Guideline (DECC, 2009), or latest version.

The Applicant requests flexibility for Condition B17 by including wording that reflects the hours of construction activities may be varied in consultation and agreement with the Council or the prior written approval of the Planning Secretary.

Visual B20

The Applicant must:

- (a) unless the Planning Secretary agrees otherwise, limit the angle of solar panel backtracking in accordance with the additional information provided by the Applicant to the Department dated 24 June 2024;
- (b) minimise the off-site visual impacts of the development, including the potential for any glare or reflection;
- (c) ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and
- (d) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.

The Applicant requests update/clarification to condition B20 (a) as follows:

“(a) unless the Planning Secretary agrees otherwise, limit the angle of solar panel backtracking as described in Table 2 and Figures 2 to 5 in the additional information provided by the Applicant to the Department dated 24 June 2024”

HERITAGE B22  
Protection of Heritage  
Items

The Applicant must ensure the development does not cause any direct or indirect impacts on the Aboriginal heritage items identified in Table 1 in Appendix 6, or any Aboriginal heritage items located outside the approved development footprint.

The Applicant requests the correction of the following:

- Condition B22 refers to Tables 1 of Appendix 6. However, the relevant Table in Appendix 6 is labelled as Table 4. The Applicant requests that the numbering reference be corrected accordingly.
- 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 item is currently included in Table 4, but should be relocated to Table 5.

HERITAGE B23  
Heritage  
Management Plan

Prior to carrying out any development that could directly or indirectly impact the heritage items identified in condition B23, the Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary in writing;
- (b) be prepared in consultation with Aboriginal Stakeholders and reviewed by Heritage NSW;
- (c) be prepared in accordance with the Code of Practice of Archaeological Investigation of Aboriginal Objects in NSW (DECC 2010), or its latest version;
- (d) include a description of the measures that would be implemented for:
  - (i) protecting the heritage items identified in Table 1 in Appendix 6 or items located outside of the approved development footprint;
  - (ii) fencing / demarcation (as appropriate) of the identified heritage items prior to carrying out any development that could directly or indirectly impact the identified heritage items;
  - (iii) salvaging and relocating the

Request for correction:

Condition B23 refers to Tables 1 and 2 of Appendix 6. However, the Tables in Appendix 6 are labelled as Tables 4 and 5. The Applicant requests that the numbering reference be corrected accordingly.

In addition, the Applicant is seeking confirmation that the fencing demarcation applies to items in Table 1 (or 4 as in Appendix 6) and those within the development footprint only.

heritage items located within the approved development footprint, as identified in Table 2 in Appendix 6;

(iv) a contingency plan and reporting procedure if:

- heritage items outside the development footprint are damaged;
- previously unidentified heritage items are found; or
- Aboriginal skeletal material is discovered;

(v) ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions;

(vi) ongoing consultation with Aboriginal stakeholders during the implementation of the plan; and

(e) include a program to monitor and report on the effectiveness of these measures and any heritage impacts of the project.

Following the Planning Secretary's approval, the Applicant must implement the Heritage management Plan.

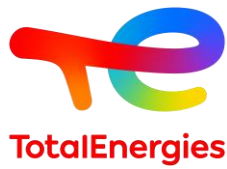
## PART C ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

NOTIFICATIONS C10  
Incident Notification

The Department must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 7.

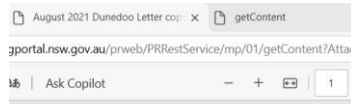
The Applicant requests amendment to the highlighted section of this condition to provide clarity and practicality. Suggested wording as follows:

*The Department must be notified in writing via the Major Projects website within 7 days after the Applicant becomes aware of a "notifiable" incident.*



Schedule 6

MSF Glare Mitigation  
Update – dated 24  
June 2024



24th June 2024  
**Dr. Sherry Mohajerani**  
Senior Development Manager – REN Australia  
**Total Energies Renewables**

For any Council  
related matters

Request for correction:  
Heritage Schedule 6 error:  
o Kiah Creek ISO 1/ 22-9-0263 (Isolated Find) needs to be moved to the items to be salvaged as the ACHA stated that this site will be impacted.  
o All the other sites are correct.  
We note also that the additional information provided by the Applicant to the Department dated 24 June 2024 has not been referenced correctly when the link is clicked. The document name reads as “Dunedoo Letter Copy” on the browser tab.

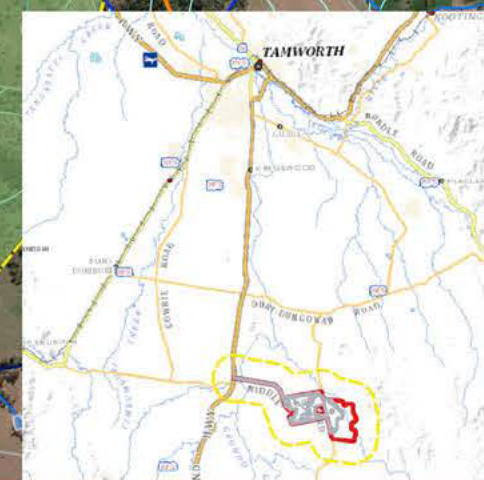
The Applicant requests the document's name to be corrected to reflect the Project and its intended purpose.

To ensure TRC’s concerns and points are addressed appropriately, the Applicant requests that for all matters/conditions related to TRC, are subject to “or otherwise agreed with the council”.

Kind regards,

Sherry Mohajerani  
Senior Development Manager  
TotalEnergies Renewables



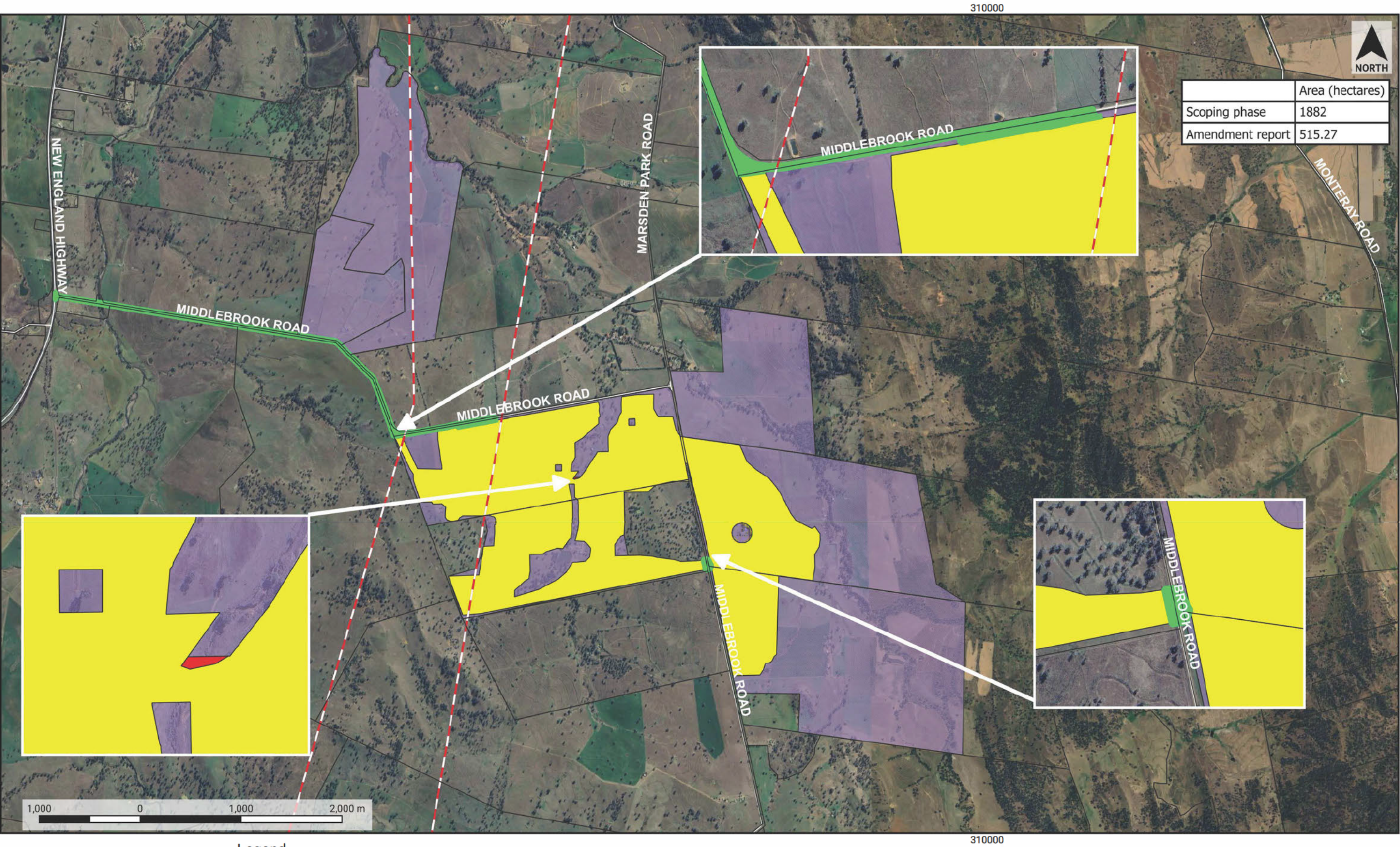


Middlebrook Solar Farm  
Figure 2-5 Location Map



Middlebrook Solar Farm

# Development footprint refinement



DATE 16/09/2024  
MAP / VERSION MSF\_007\_V02  
DRAWN / CHECKED RM /  
PROJECTION EPSG:7856  
SCALE @ A3 1:35000

Legend

Scoping phase development footprint

EIS phase development footprint

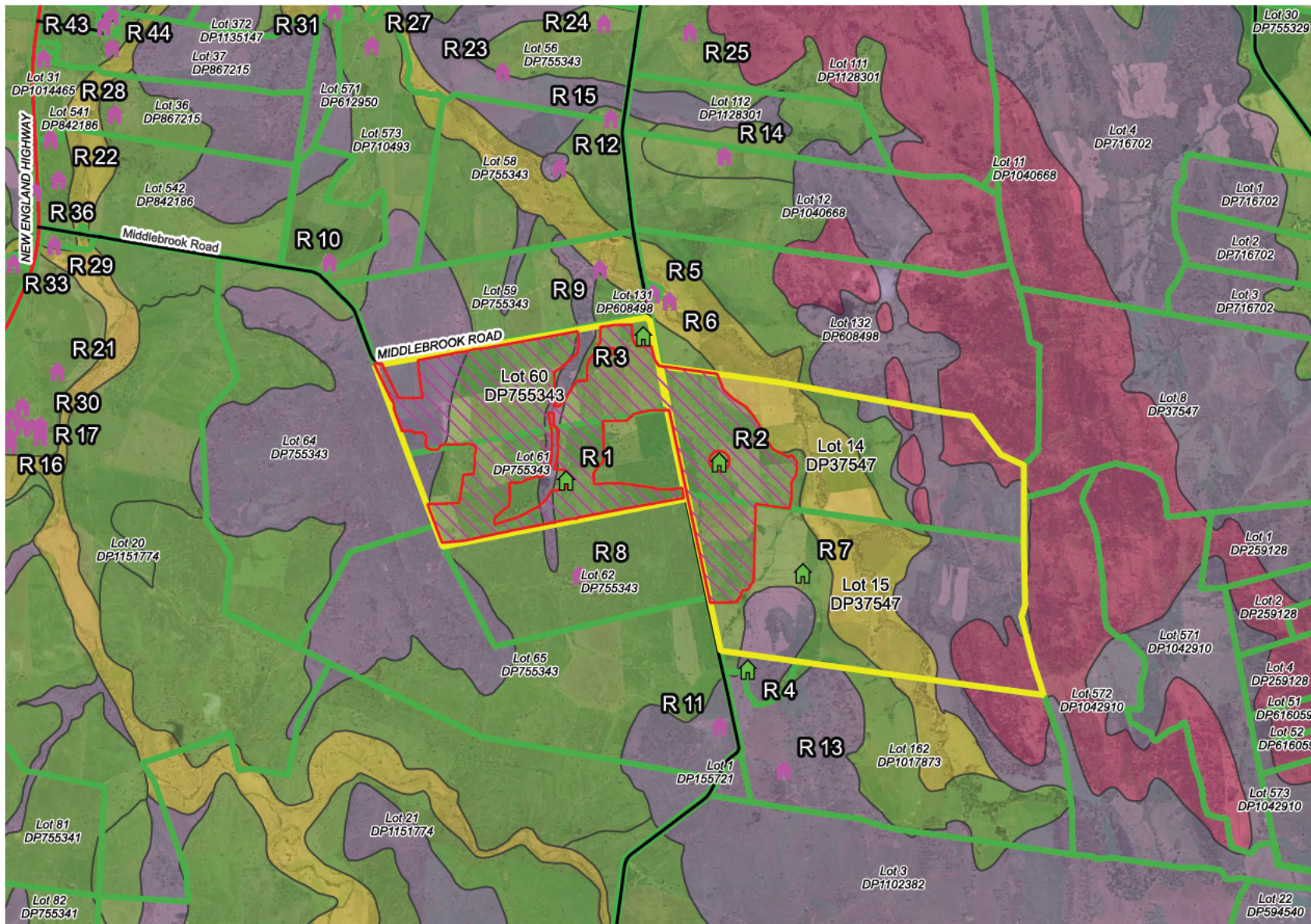
Existing transmission lines

Differences between current revised layout and EIS

Added

Removed



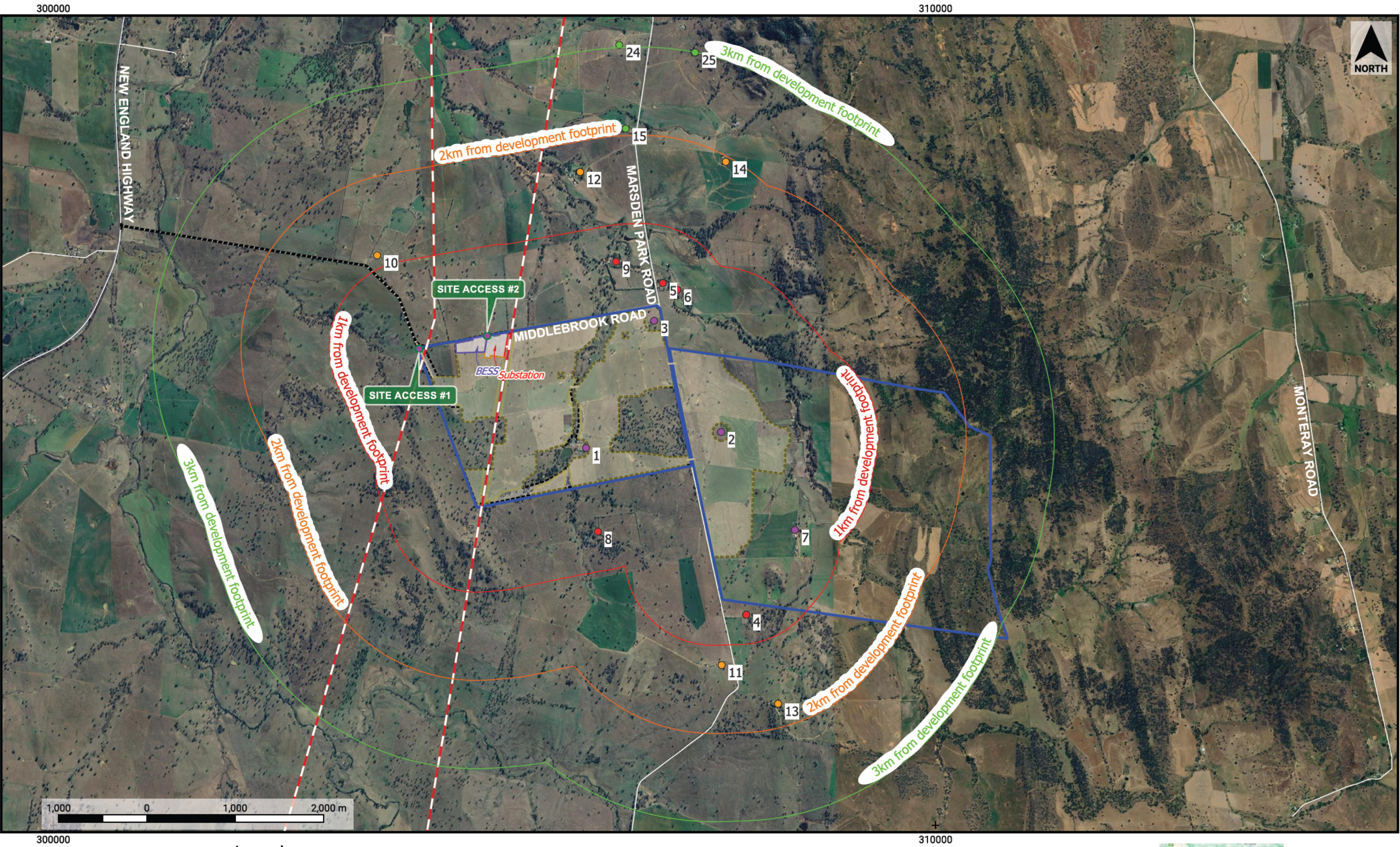


**NGH**



# Middlebrook Solar Farm

## Receiver distances



DATE 12/09/2024  
MAP / VERSION MSF\_006\_V02  
DRAWN / CHECKED RM /  
PROJECTION EPSG:7856  
SCALE @ A3 1:40000

### Legend

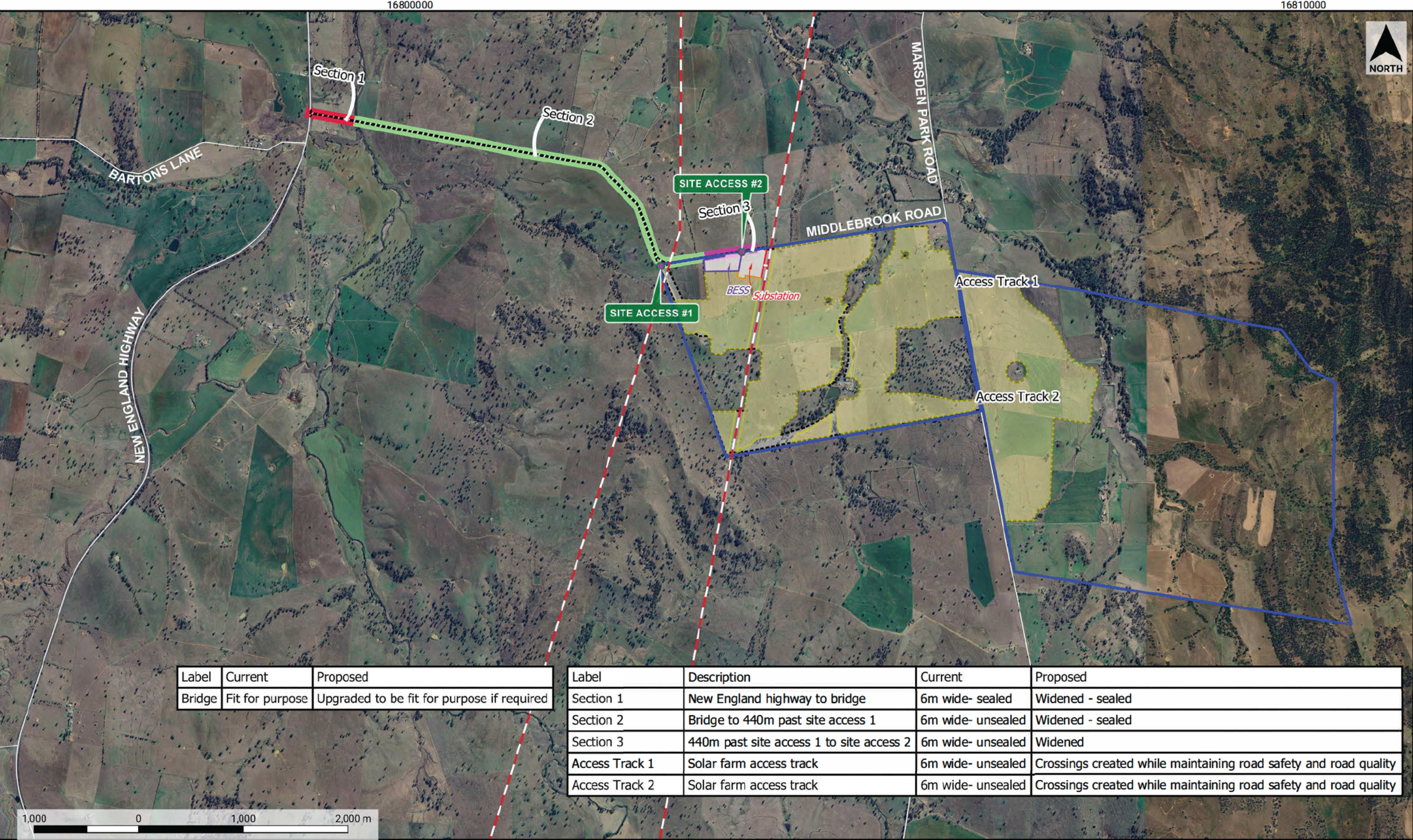
- |                |                                     |   |   |
|----------------|-------------------------------------|---|---|
| Solar area     | Site Boundary                       | Residences within project boundary          | Residences 2-3km from development footprint |
| Substation     | Access Tracks                       | Residences 0-1km from development footprint |   |
| Battery (BESS) | Existing overhead transmission line | Residences 1-2km from development footprint |   |





# Middlebrook Solar Farm

## Roads and bridges - current and proposed upgrades



Label	Current	Proposed
Bridge	Fit for purpose	Upgraded to be fit for purpose if required

Label	Description	Current	Proposed
Section 1	New England highway to bridge	6m wide- sealed	Widened - sealed
Section 2	Bridge to 440m past site access 1	6m wide- unsealed	Widened - sealed
Section 3	440m past site access 1 to site access 2	6m wide- unsealed	Widened
Access Track 1	Solar farm access track	6m wide- unsealed	Crossings created while maintaining road safety and road quality
Access Track 2	Solar farm access track	6m wide- unsealed	Crossings created while maintaining road safety and road quality

DATE  
MAP / VERSION  
DRAWN / CHECKED  
PROJECTION  
SCALE @ A3

13/09/2024  
MSF-003-V07  
RM /  
EPSG:3857  
1:40000

### Legend

- Battery (BESS)
- Site Boundary
- Substation
- Development footprint
- Access Tracks
- Existing transmission lines
- Solar Area

