



Hay Solar Project MOD 1 & 2

*State Significant
Development
Modification Assessment
(SSD 8113 MOD 1 & 2)*



May 2019

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Executive Summary

Plains SF No1 Pty Ltd owns the Hay Solar Farm, located six kilometres north east of Hay.

The modification applications seeks approval to include an on-site Battery Storage System (BSS) and to commence construction of the northern portion of the site prior to the completion of the site access point required for the southern portion of the site.

The Department notified Hay Shire Council, Roads and Maritime Services, Division of Resources and Geoscience, Fire and Rescue NSW (FRNSW) and the Office of Environment and Heritage. No objections were raised by agencies. One submission was received from a member of the public located over 100 km away which did not object to the project. The submission questioned the disturbance footprint of the BSS and the hazards associated with such technology.

Because the BSS would be wholly contained within the approved disturbance footprint, no additional clearing is proposed. The Department has also consulted with FRNSW to develop strengthened conditions to manage potential hazards associated with the inclusion of a BSS.

The modifications would not result in any material environmental impacts beyond those that were previously assessed and approved. Furthermore, the modification would streamline the construction schedule and improves the project's ability to manage its generation output and capability to offer grid stability services. Consequently, the Department considers it is in the public interest and should be approved.



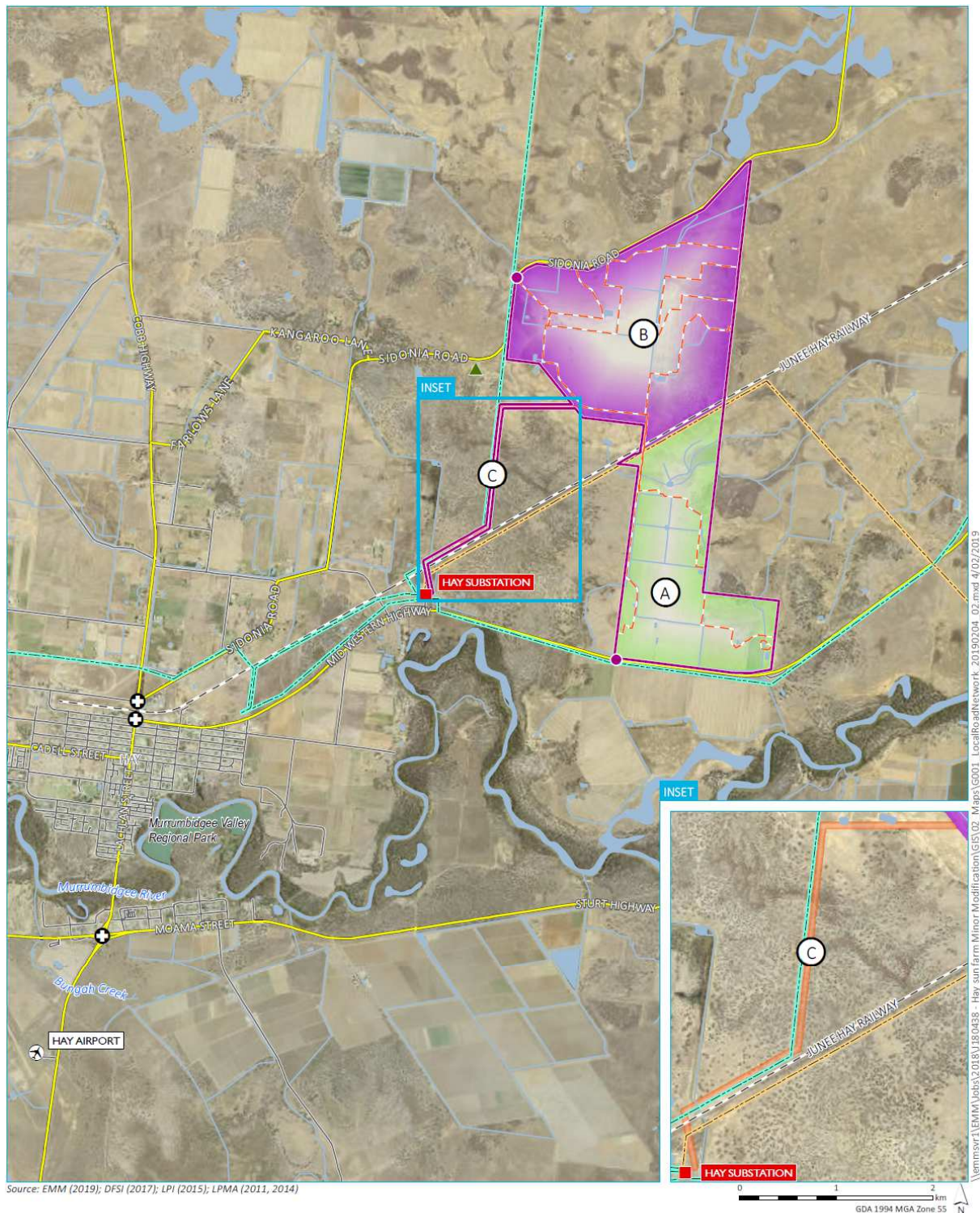
1. Introduction

Plains SF No1 Pty Ltd (the Applicant) has approval to develop the Hay Solar project located 6 kilometres (km) north east of Hay in the Hay Shire local government area. The project site is separated into a northern and southern portion by the Junee-Hay railway corridor, with Sidonia Road providing access to the north and the Mid Western Highway to the south (see **Figure 1**)

The project was approved on 20 December 2017 by the Executive Director, Resource Assessments and Business Systems, as delegate of the Minister for Planning. The development consent permits for the construction, operation, upgrading and decommissioning of a solar farm, including:

- approximately 430,000 solar panels and 50 inverter stations;
- internal access tracks, staff amenities, offices, car parking, laydown areas and security fencing;
- a switchboard building and onsite substation;
- a 2 km overhead transmission line connecting the onsite substation to the existing Essential Energy Hay Substation; and
- two new intersections, one on Sidonia Road and one on the Mid Western Highway at the site entry points.

The Applicant has yet to commence construction of the project.



KEY

- | | | |
|---|-------------------------------------|---------------------------|
| Site boundary | Hay Airport | Watercourse/drainage line |
| A - Southern Portion | Hay gun club | Waterbody |
| B - Northern Portion | Hay substation | NPWS reserve |
| C - Transmission Line Area | 132kV electricity transmission line | |
| Development footprint | 33kV electricity transmission line | |
| Proposed site access location | Rail line | |
| Key intersection | Main road | |
| | Local road | |

Local road network

Hay Sun Farm modification
Figure 4.1



Figure 1 | Northern and Southern Portions



2. Proposed Modification

Under the current development consent, the Applicant is required to upgrade the intersection of the Mid Western Highway and the southern site entry point prior to the commencement of construction of the project.

Modification 1

In order to streamline the construction schedule, the Applicant is seeking consent to commence construction of the northern portion and transmission corridor, prior to the completion of the Mid Western Highway intersection upgrade. Construction on the southern portion of the site would not commence until completion of the intersection and site entry upgrade works on the Mid Western Highway (see **Figure 1**).

Modification 2

The Applicant is seeking consent to construct and operate a Battery Storage System (BSS) on the site to manage electricity output to meet demand, improve the reliability of electricity outputs, and provide frequency control and ancillary services to the electricity network (MOD 2).

The BSS would have a delivery capacity of up to 29 megawatts (MW) and storage capacity of up to 29 MWh. The BSS (up to 2.3m high) would be located adjacent to the on-site substation, occupying an area of up to 235 metres by 132 metres. (see **Figure 2**).

No changes to the disturbance footprint, construction hours, traffic movements, or more vehicle deliveries are proposed as part of these proposals.



3. Statutory Context

3.1 Scope of the Modification

The project was originally approved under Section 4.3 (previously Section 89E) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and any modification to this consent must be made under Section 4.55 of the EP&A Act.

The Department has reviewed the scope of the modification applications and considers that the applications can be characterised as modifications involving minimal environmental impacts as the proposal:

- would not significantly increase the environmental impacts of the project as approved;
- is substantially the same development as originally approved; and
- would not change the approved development footprint.

Therefore, the Department is satisfied the proposed modifications are within the scope of Section 4.55(1A) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(1A) of the EP&A Act rather than requiring a new development application to be lodged.

3.2 Consent Authority

The Minister for Planning is the consent authority under Section 4.5(a) of the EP&A Act. However, under the Minister's delegation dated 11 October 2017 the proposed modifications may be determined by the Director, Resource and Energy Assessments.

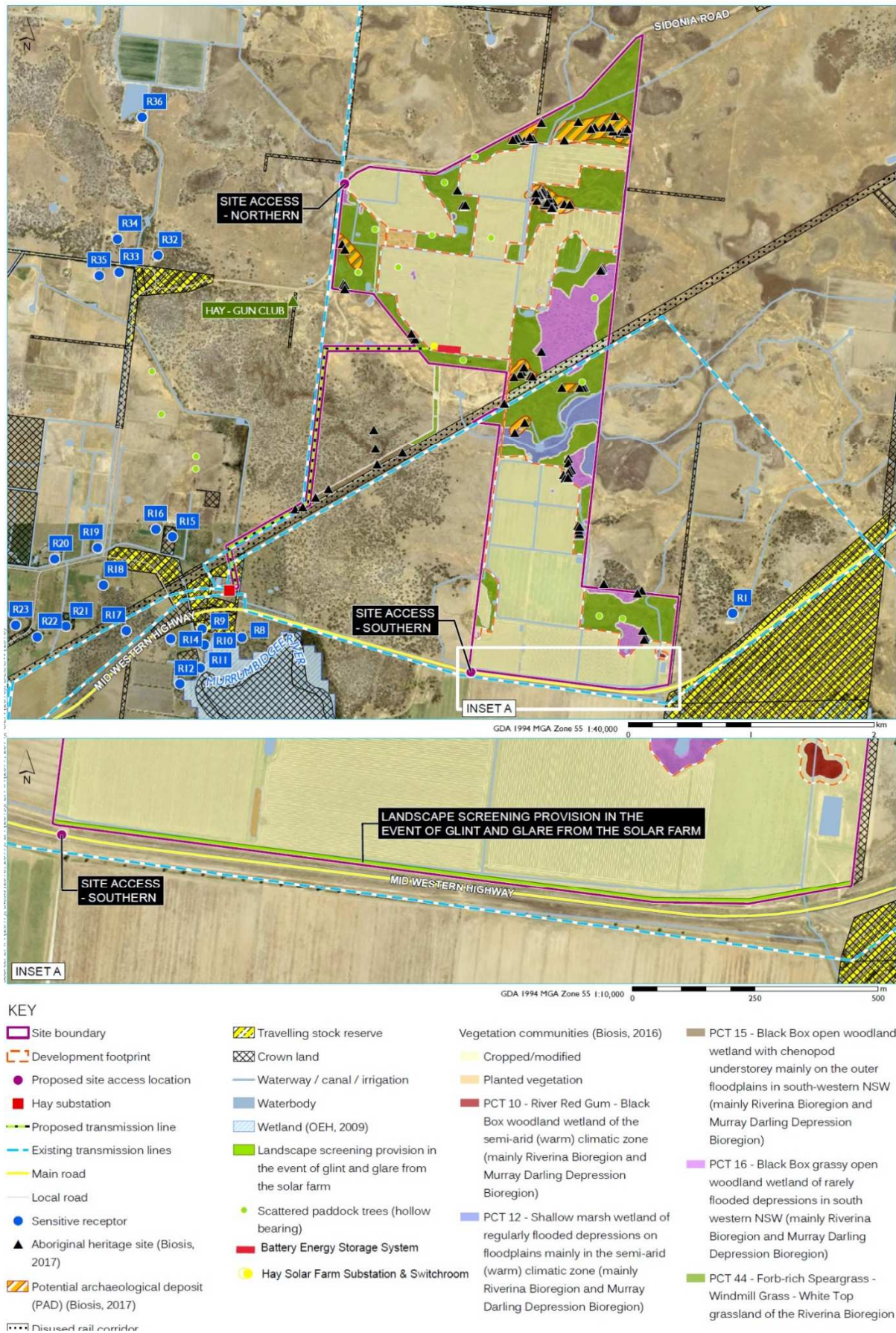


Figure 2 | Proposed Project Layout



4. Engagement

The Department made the modification application for MOD 1 publicly available on its website on 5 February 2019. The Department also referred the application to the Roads and Maritime Service and Hay Shire Council. Neither agency raised any concerns about the proposed modification.

The Department publicly exhibited the modification application for MOD 2 from 7 March 2019 until 20 March 2019 and referred the project to Council, RMS, DRG, OEH and FRNSW. None of the agencies raised any concerns about the proposed modification. FRNSW recommended conditions for fire and safety and emergency response requirements on site. These requirements have been incorporated into the conditions of consent.

One public submission was received from a member of the public located over 100 km away, which did not object but questioned the size of the disturbance footprint required for the BSS and the hazards associated with such technology. Because the proposed BSS is confined within the approved disturbance footprint, no additional surface disturbance is expected. The Department has consulted with FRNSW on managing the potential hazards of the BSS which is discussed in **Section 5.2**.



5. Assessment

The Department has considered the merits of the proposed modification applications. **Section 5.1** summarises the Department's consideration of the effects of the proposed modifications on traffic and transport. **Section 5.2** summarises the Department's consideration of the effects of the proposed modifications on hazards and risks. A summary of other potential impacts associated with the proposal are provided in **Sections 5.3**.

5.1 Traffic and Transport

The intent of the condition requiring site access upgrades to be completed prior to commencement of construction is to ensure the provision of safe access between the project site and the public road network and the impact of the development on the safety and efficiency of the road network.

The project site is divided into the northern and southern portions by the Junee-Hay Railway Corridor. The northern site is accessible by Sidonia Road whilst the southern site is accessible by the Mid Western Highway. It is considered that the safety and efficiency of the road network at Mid Western Highway would not be affected by construction in the northern portion of the site which would be accessed via Sidonia Road.

The proposed modifications would still ensure safety and efficiency at Mid Western Highway as the site entry and intersection treatments would still be completed prior to commencement of construction on the southern portion of the site. The Department has also refined the road access condition to ensure the necessary road upgrade works are completed prior to the commencement of construction and use of the northern portion and use of the northern access point.

The current approved maximum daily heavy vehicle movements are 66 heavy vehicle movements. It is noted that the construction of the northern portion of the site would generate approximately half of the total construction traffic movements anticipated for the overall approved project.

The BSS would require around 30 heavy vehicle movements across the span of construction, equivalent to less than half of the approved maximum daily allowance. There are no proposed changes to the overall duration of the construction period to accommodate both modifications. RMS raised no issues with the proposed changes given the BSS is to be located within the northern part of the solar farm site and that the proposed traffic movements for both modifications are consistent with the approved daily maximum traffic movements.

Further engagement was made with RMS and Council in relation to the road upgrade condition (Schedule 3, Condition 4) to ensure the proposed upgrade works to the northern portion of the project site can be undertaken without impeding on construction works from being carried out prior to the intersection upgrade at the Mid Western Highway. Both RMS and Council raised no objections to the refinement to the condition.

5.2 Hazards and Risks

The proposed modifications to commence construction of the northern portion and transmission corridor, prior to the completion of the Mid Western Highway intersection upgrade is unlikely to generate additional risks.

The proposed BSS would be located adjacent to the on-site substation and consist of modular units on pad mounted foundations. The Applicant would implement a range of hazard prevention measures; including but not limited to, ensuring each modular container is fire rated and sealed to prevent the spread of damage in the case of battery failure and ensuring the facility is fully containerised and bunded.

The Department has carefully assessed the proposed BSS in consultation with its technical hazard specialist and FRNSW to strengthen conditions to manage the potential hazards associated with the development of a BSS. These conditions include:

- a requirement to prepare and implement a Fire Safety Study consistent with the Department's *Hazardous Industry Advisory Paper No. 2 'Fire Safety Study'* guideline in consultation with FRNSW;
- adding a requirement for the Emergency Response Plan to be prepared and implemented in conjunction with the Department's *Hazardous Industry Advisory Paper No. 1*; and
- adding a requirement to ensure the storage and handling of dangerous goods is undertaken in accordance with the NSW Environment Protection Authority's *Storing and handling of liquids: Environmental Protection – Participants Handbook if the chemicals are liquids*.

Subject to the implementation of the additional recommended conditions, the Department is satisfied that the residual risk associated with the facility would be minimal.

5.3 Other issues

In regard to visual amenity, the proposed height of the BSS (2.3 metres) is consistent with the approved height of 2.6 metres of the approved solar panels and trackers. In addition, the BSS would be located adjacent to the approved location of the on-site sub-station, with the nearest sensitive receiver is over 2 kilometres away and therefore is considered would not generate additional visual amenity impacts.

In regard to historic heritage and Aboriginal heritage, the proposed BSS is located in the approved project boundary. Given that no additional footprint is proposed, no changes to surface disturbances are expected. OEH reiterated that the proposed modifications and approved development are subject to the preparation of a Biodiversity Management Plan and Aboriginal Cultural Heritage Management Plan, prior to the construction and operation of the development, respectively.



6. Evaluation

The Department has assessed the modification applications in accordance with the relevant statutory requirements, having regard to the Modification Reports, and documentation relating to the original project.

The modifications would not result in any material environmental impacts beyond those that were previously assessed and approved. Furthermore, the modification would streamline the construction schedule, improves the solar farm's ability to manage its generation output and adds capability to offer grid stability services.

Consequently, the Department is satisfied that the proposed modifications are in the public interest, as they would provide net benefits to the National Electricity Market that can be realised in a timely manner. As such, the Department considers the modification applications should be approved.



7. Recommendation

It is recommended that the Director, Resource and Energy Assessments, as delegate of the Minister for Planning:

- **consider** the findings and recommendations of this report;
- **determine** that the applications Hay Solar Farm Modifications 1 and 2 falls within the scope of section 4.55(1A) of the EP&A Act;
- **accept and adopt** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **modify** the consent (SSD 8113); and
- **sign** the attached approval of the modification (Attachment B).

Recommended by:

Recommended by:

May Patterson

Team Leader

Resource and Energy Assessments

1/3/19

Iwan Davies

A/Team Leader

Resource and Energy Assessments



8. Determination

The recommendation is: **Adopted** / Not adopted by:

David Kitto

Executive Director

Resource Assessments and Business Systems



Appendices

Appendix A – List of Documents

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9618

Appendix B – Modification Reports

Appendix C – Notice of Modification

Appendix D – Consolidated Consent