



Gilgandra Solar Farm

*State Significant
Development
Modification
Assessment
(SSD 6785 MOD 1)*

June 2019

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Cover photo

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Executive Summary

Neoen Australia Pty Ltd has approval to develop the Gilgandra Solar Farm, about 23 kilometres south of Gilgandra, in the Gilgandra Shire local government area.

The modification application seeks approval to increase the maximum height of the solar panels from 3 metres (m) to 4.2 m, revise the location of ancillary infrastructure and subdivide land within the site for the substation. The proposed modification would enable Neoen to increase the capacity of the project from 40 MW to 50 MW, without increasing the approved disturbance footprint.

The Department notified Gilgandra Shire Council, Dubbo Regional Council, Essential Energy, Roads and Maritime Services and the closest neighbouring landowners. No objections to the proposed modification were received. However, concerns were raised by two adjacent landowners, particularly in relation to potential visual impacts, which the Department has carefully considered in its assessment of the modification.

The Department's assessment has concluded that the modification would not significantly increase the environmental or amenity impacts of the project beyond those that were already assessed and approved. As such, the Department considers that the proposed modification should be approved.



1. Introduction

Neoen Australia Pty Ltd (Neoen) has approval to develop the Gilgandra Solar Farm, approximately 23 kilometres (km) south of Gilgandra, in the Gilgandra Shire local government area (LGA). Access to the site would be via a local road located in the Gilgandra Shire and Dubbo Regional LGAs.

This report provides an assessment of Neoen's application to modify the State significant development consent (SSD 6785) for the Gilgandra Solar Farm. The application seeks to increase the maximum solar panel height from 3 metres (m) to 4.2 m, revise the location of ancillary infrastructure and subdivide land within the site.

The project was approved on 17 July 2017 by the Executive Director, Resource Assessments and Business Systems as delegate of the Minister for Planning. The consent allows for the construction, operation, upgrading and decommissioning of a photovoltaic solar farm, including:

- approximately 152,000 solar panels (up to 3 m high) and 20 inverter stations;
- an onsite substation and direct connection to Essential Energy's existing 66 kilovolt (kV) transmission line;
- a new site entry off Barooka Road, internal access tracks, staff amenities, car parking and construction laydown area; and
- vegetation screening along the northern and western site boundaries.

Neoen is yet to commence construction of the project.



2. Proposed Modification

The modification application seeks approval to increase the maximum height of the solar panels from 3 m to 4.2 m, revise the location of ancillary infrastructure and subdivide land within the site for the substation.

Solar Panels

Since approval of the project, Neoen has identified an opportunity to increase the capacity of the project from 40 megawatts (MW) to 50 MW by installing a more efficient solar panel layout and changing the approved panel type.

The number of panels would increase from approximately 154,000 to 158,000 and the number of inverters would increase from 20 to 26. The revised panel layout is permitted under the existing consent as the solar panels would remain within the approved disturbance footprint that was considered by the Department during its assessment of the original development application.

However, Neoen is proposing to install bifacial solar panels (instead of monofacial panels) (see **Figure 1**). The bifacial panels allow power to be produced from both sides of the panels, and would be up to 4.2 m in height, which is higher than the approved height of the solar panels (3 m).

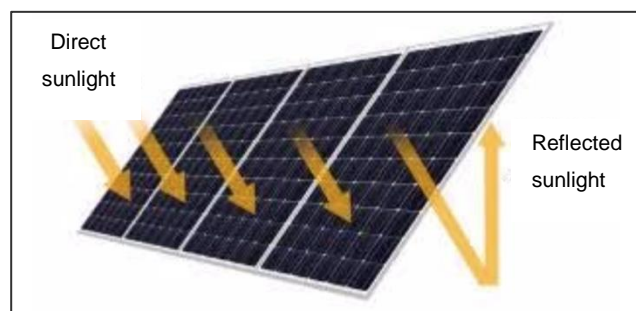


Figure 1 | Proposed bifacial solar

Ancillary Infrastructure

Neoen is seeking to relocate the construction compound (construction laydown area, offices and car park) from the centre of the site to the southwestern corner (see **Figure 2**). This would minimise the need for vehicles to traverse the site from the site access point.

Subdivision

Additionally, Neoen is proposing to subdivide the existing lot (Lot 7, DP 752575) into two lots. Lot 1 incorporates the solar farm development (188.36 hectares), whilst the creation of a new one-hectare lot (Lot 2) for the substation would be transferred to Essential Energy following construction of the approved substation (see **Figure 2**).

The proposed modification would not change any other aspect of the approved project, including the disturbance area or the number of vehicles accessing the site during construction and operation.

These modifications are described in detail in Neoen's Environmental Assessment (EA) (see **Appendix B**) and depicted in **Figure 2**.

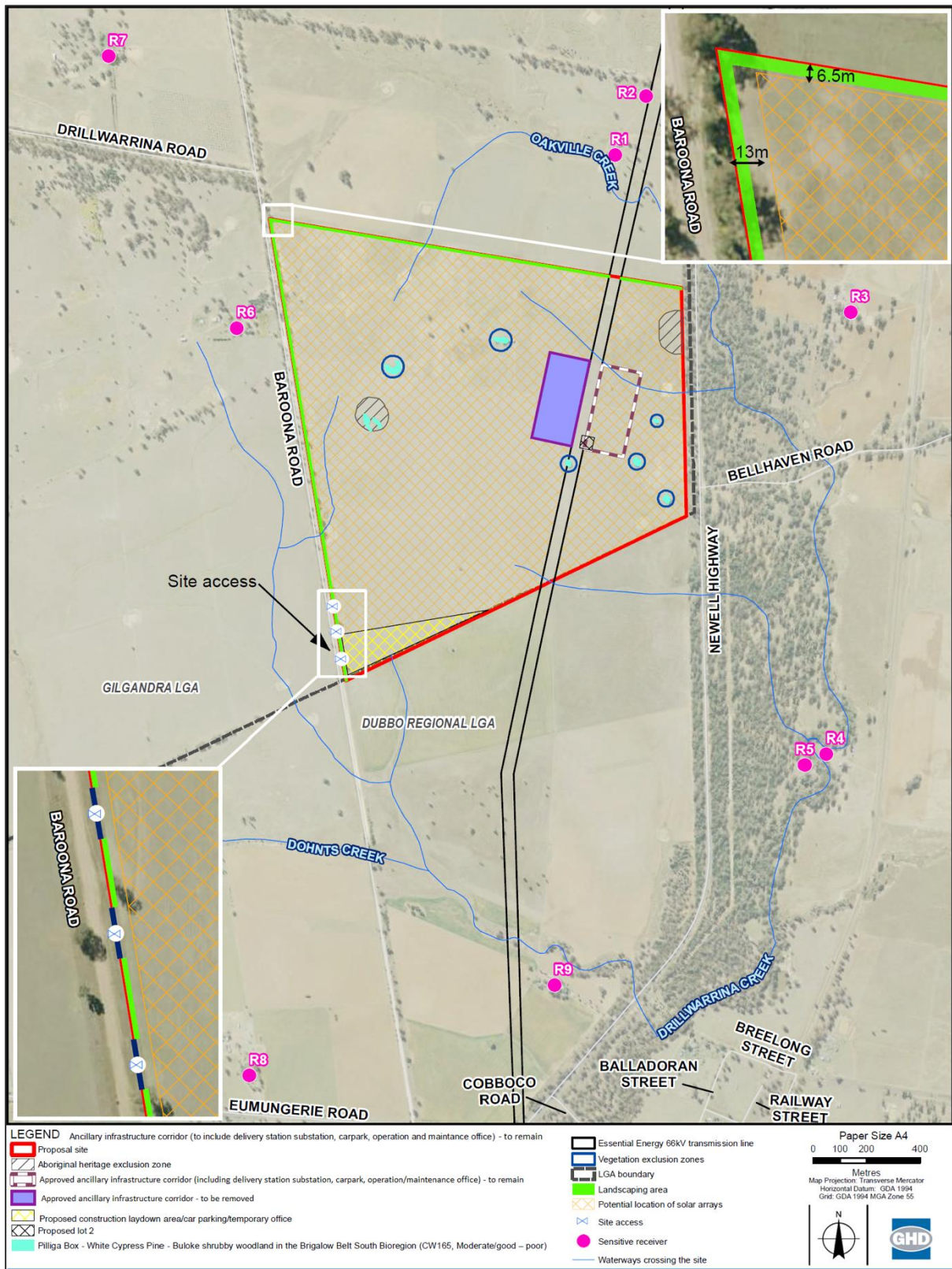


Figure 2 | Location of proposed modifications



3. Statutory Context

3.1 Scope of the Modification

The project was approved under Section 4.36 (previously Section 89E) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and can be modified under Section 4.55 of the EP&A Act.

The Department is satisfied that the application can be characterised as a modification to the original consent that would have minimal impact as it:

- 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.

Consequently, it has considered the merits of the application under Section 4.55 (1A) of the EP&A Act.

3.2 Consent Authority

Although the Minister for Planning is the consent authority for the application, the Director, Resource and Energy Assessments, may determine the application under the Minister's delegation dated 11 October 2017.

While the LEP restricts the granting of consent for subdivisions below the minimum lot size, that restriction does not prevent a modification under Section 4.55 of the EP&A Act, as a modification is not taken to be the granting of consent. As such, the restriction does not in itself prevent approval of the modification.

3.3 Matters for Consideration

In accordance with section 4.55(3) of the EP&A Act, the following must be considered in granting the modification application as relevant to the application:

- environmental planning instruments, proposed instrument or development control plan;
- any planning agreement;
- EP&A Regulation;
- likely impacts of the modification application, including environmental impacts on both the natural and built environments, and social and economic impacts;
- suitability of the site;
- any submissions;
- the public interest;
- the reasons for granting the consent for the original application.

The Department has considered the relevance of the considerations for the modification application below.

Environmental planning instruments, proposed instrument or development control plan

The environmental planning instrument relevant to this modification is the *Gilgandra Local Environment Plan 2011* (Gilgandra LEP).

The proposed substation subdivision will enable the creation of a freehold title to proceed with the construction of the relevant electrical connections and infrastructure.

The considerations under the relevant LEPs are contingent upon whether the subdivision would also create a lot or give rise to new dwelling entitlements.

There are no proposed or draft LEPs or development control plans (DCPs) for Gilgandra LGA for consideration in this modification.

A consideration of the LEP for the proposed substation subdivision is outlined in **Section 5.1** of this report.

Any planning agreement

There are no voluntary planning agreements between Neoen and Gilgandra Shire Council or Dubbo Regional Council.

EP&A Regulation

There are no additional considerations relevant to the modification application in the EP&A Regulation.

Likely impacts of the modification application

The likely impacts of modification are considered in **Section 5** of this report.

Suitability of the site

The suitability of the project site was assessed and considered by the Department in the original application and is not considered relevant to the modification application.

Submissions

The Department notified and sought comment from Gilgandra Shire Council, Dubbo Regional Council, Roads and Maritime Services, Essential Energy and the landowners of the closest residences and this is discussed further in **Section 4** of this report. No submissions on the modification were received from the general public.

Public Interest

The consideration of public interest is provided in **Section 6** of this report.

The reasons for granting the consent for the original application

The Department considered the impacts and benefits of the solar farm in accordance with the EP&A Act in granting consent.



4. Engagement

The Department published the application on its website on 19 February 2019 and referred it to Gilgandra Shire Council, Dubbo Regional Council, Roads and Maritime Services (RMS) and Essential Energy for comment. None of the agencies raised concerns or made recommendations about the proposed modification.

Essential Energy confirmed that the proposed subdivision would be necessary for the transfer of the substation infrastructure to Essential Energy.

While the Department did not formally exhibit the application, it consulted with the owners of the nearest residences to the project (R1 and R6). Both owners raised concerns about the potential visual impact of the panel height increase. The owner of R6 also raised concerns regarding property values (due to the potential visual impacts) and stormwater management associated with the revised infrastructure layout. The Department has considered these concerns in its assessment (see **Section 5** of this report).



5. Assessment

The Department has considered the merits of the proposed modification application in accordance with the relevant matters for consideration described in **Section 3.3**.

In assessing the merits of the proposed modification, the Department has considered the existing conditions of consent; previous environmental assessments for the project; comments from neighbouring landowners; applicable government policies and guidelines; and requirements of the EP&A Act. A list of the key documents that informed the assessment is provided in **Appendix A**.

5.1 Environmental Planning Instruments

The merits of the proposed subdivision to create a lot for the substation have been assessed against the Gilgandra LEP 2011.

The lot proposed to be subdivided for the substation is located on land zoned RU1 – Primary Production under the Gilgandra LEP 2011.

The minimum subdivision lot size for land zoned RU1 is 500 hectares under clause 4.1 of the LEP. The proposed new lot being one hectare would be below the minimum lot size and less than 90% of the minimum lot size.

The proposed subdivision removing a 1 hectare lot would not change the dwelling entitlements of the residual lots.

Broadly, the intent of the restrictions on minimum lot size in the LEP is to:

- ensure land use and development is undertaken on appropriately sized parcels of land;
- ensure that lot sizes have a practical and efficient layout to meet intended use;
- maintain viable farm sizes to promote continuing agricultural production; and
- to prevent the fragmentation of rural land.

The Department has considered the modification application against the intent of the rural zoning and concluded that the proposed subdivision is in the public interest as:

- the project is a permissible use as energy generation works for land zoned primary production under the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP);
- the subdivided land would not be used for residential purposes;
- the subdivision would not adversely affect the use of the surrounding land for agriculture and would not cause any rural land use conflicts;
- the subdivided land would be the same use (as energy generation works) allowed under the existing consent;
- the subdivision for the substation is necessary for the ongoing operation of the solar farm as it is required for the transfer of the substation to Essential Energy and is supported by Essential Energy's submission;
- the subdivided lot for the substation does not contain a dwelling, and the subdivision would not change the existing dwelling entitlements;
- there are no land use conflicts between the subdivided land and the use of surrounding land in the locality (including agricultural land) noting that the solar farm and associated substation have been assessed in detail and the existing approval would effectively manage and minimise any residual impacts associated with the project; and
- the subdivision is consistent with the natural and physical constraints of the land.

Further, Gilgandra Shire Council has not objected to the proposed subdivision.

The Department considers that on the basis of the above, it is reasonable to grant the modification with a condition to limit the subdivision to the creation of one lot for the substation providing information is provided in accordance with requirements of section 157 of the *Environmental Planning and Assessment Regulation 2000*.

5.2 Visual

The project site is located in a rural setting, with nine residences within 2 km of the project boundary (see **Figure 2**). The closest residences are about 200 m west (R6) and 460 m north (R1) of the approved development footprint.

The owners of residences R1 and R6 raised concerns about the potential visual impacts of the modification and the ability of the vegetation screening to effectively screen their views of the project.

Neoen completed a visual impact assessment of the modified project using the same representative viewpoints as assessed for the original project. The assessment concluded that existing vegetation, intervening topography and/or distance would continue to screen views of the site from all residences located south and east of the site (R3, R4, R5, R8, R9), from one residence located to the north (R7), and from the Newell Highway.

However, there would be minor increases in the visibility of the solar panels from the closest residences located to the north and west of the site (R1, R2, R6) and from Baroona Road.

The Department considers the visual impact from these residences and Baroona Road to be minor given:

- the panels would only be at their full vertical position for a small portion of the day;
- the presence of existing vegetation between the impacted receivers and the project would continue to provide partial screening; and
- the existing consent already requires Neoen to establish and maintain a mature vegetation buffer along the northern and western site boundaries to screen views of project infrastructure from residences (and road users) located north and west of the site (see **Figure 2**).

The Department acknowledges that it would take time for the vegetation screening to establish and become effective. However, the conditions of consent require the buffer to consist of mature species that facilitate the best possible outcome in terms of visual screening and to be effective at screening views within 3 years of the commencement of construction.

The existing conditions also require Neoen to prepare a Landscaping Plan in consultation with surrounding landowners (including the owners of R1, R2 and R6) with a program to monitor and report on the effectiveness of the vegetation buffer.

Neoen has commenced preparation of the Landscaping Plan and proposes to plant *Allocasuarina luehmannii* (Bull Oak), which grows to an average height of 6 m to 9 m, with a native understory of shrub species ranging in height from 1 m to 8 m, with most species around 4 m in height (see **Figure 3**). The Department notes that Bull Oak was recommended to Neoen by a local landscaping specialist who was referred to Neoen by the landowner of R6.

In addition, the existing conditions include a requirement that the landscaping buffer be properly maintained and the landscaping plan is required to include a program to monitor and report on the effectiveness of these measures.

Subject to the implementation of the recommended conditions of consent, the Department considers that any change in the visual impact of the project would be minor, and that the rural character and visual quality of the area would not be significantly impacted beyond what is already approved.

Dust, noise and vibration	<ul style="list-style-type: none"> • The original assessment considered a worst-case scenario for dust, noise and vibration (i.e. disturbance of land across the whole site). • As such, the proposed modification would not result in any additional dust, noise or vibration impacts over and above that which was already assessed for the approved project. • The relocated ancillary infrastructure area would continue to be located a significant distance away from all surrounding residences. 	<ul style="list-style-type: none"> • Comply with existing conditions.
Administrative changes	<ul style="list-style-type: none"> • The Department has made a number of administrative changes to the conditions of consent, including updating key definitions and revising conditions to ensure the consent is current in regard to matters relating to weed management, biodiversity legislation and compliance. • These changes would have no material consequence to operation of the approved project. 	<ul style="list-style-type: none"> • Update the table of definitions and revise conditions 9(f), 9(g), 10, 11 and 12 of Schedule 3 and conditions 2 to 8 of Schedule 4.



6. Evaluation

Proposed Modification

The Department has assessed the modification application in accordance with the relevant statutory requirements, having regard to the approved project. The Department has assessed the proposed modification to allow for:

- increase the maximum height of solar panels from 3m to 4.2m;
- revised the location of ancillary infrastructure; and
- creation of one freehold lot to allow for the construction of infrastructure described by the EIS as ‘ancillary infrastructure corridor’.

Consent Authority

While there are development standards that apply to subdivisions, these apply to the granting of development consent and the modification of a consent is not taken to be the granting of consent in accordance with section 4.55 (4). Consequently, there are no constraints on the Department granting the modification.

Likely impacts of the modification application

In assessing the merits of the proposal, the Department has considered the:

- relevant matters for consideration identified in **Section 3.3**;
- existing conditions of approval;
- previous EAs for the project; and
- requirements of the EP&A Act.

The Department considers that the proposed modification application meets these requirements as:

- the modification is consistent with the objectives of the Gilgandra LEP;
- the proposed modification would not impact on the natural and built environments, and there would not be any social and economic impacts given the administrative nature of the subdivision for the substation and long term lease agreements with proprietors;
- there are no draft environmental planning instruments, development control plans and planning agreement or requirements in the EP&A regulation relevant to the modification application;
- Essential Energy’s submission supports the proposed subdivision for the substation;
- the project is permissible use as energy generation works under the Infrastructure SEPP;

- the subdivided land would be the same use (as energy generation works) allowed under the existing approval;
- the subdivision is necessary for the ongoing operation of the solar farm as it is required for the transfer of the substation to Essential Energy;
- there are no land use conflicts between the subdivided land and the use of surrounding land in the locality (including agricultural land) noting that the solar farm and associated substation has been assessed in detail and the existing approval would effectively manage and minimise any residual impacts associated with the project; and
- the modification application is consistent with the reasons given for the original consent.

The Department's assessment has found that any additional environmental and amenity impacts associated with the proposed modification could be mitigated and managed through the existing conditions of consent.

Importantly, the proposed modification would enable Neoen to increase the capacity of the project from 40 MW to 50 MW without increasing the approved disturbance area.

The facilitation of freehold subdivision for the substation lot would assist in the development of the site for the approved solar farm use.

Consequently, the Department considers that the proposed modification is in the public interest, and recommends that it should be approved, subject to conditions.

The Department has drafted a Notice of Modification (see **Appendix C**) and a consolidated version of the development consent as modified (see **Appendix D**). To permit the proposed modification, the conditions have been updated with a new definition of the EIS and a revised figure with the modified development layout.

The Department has also reviewed and revised the list of definitions and a number of key conditions to ensure that the consent is current in regard to matters relating to weed management, biodiversity legislation and compliance.

Neoen has reviewed the proposed changes to the conditions and does not object to them.



7. Recommendation

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

- **consider** the findings and recommendations of this report;
- **determine** that the application Gilgandra Solar Farm Modification 1 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 6785); and
- **sign** the attached notice of modification (**Appendix C**).

Recommended by:

18/6/2019

Iwan Davies

A/Team Leader

Resource and Energy Assessments

Recommended by:

18/6/19

Nicole Brewer

A/Director

Resource and Energy Assessments



8. Determination

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

DKitto 19/6/19

David Kitto

Executive Director

Resource Assessments and Business Systems



Appendices

Appendix A – List of Documents

Environmental Assessment titled *Gilgandra Solar Farm Modification 1 SSD 6785*, GHD, February 2019.

Additional information titled *Proposed Modification of SSD 6785*, Neoen, 17 June 2019.

Draft Landscaping Plan titled *Neoen Australia Pty Ltd Gilgandra Solar Farm Landscaping Plan (Draft)*, GHD, March 2019.

Environmental Impact Statement titled *Neoen Australia Pty Ltd Gilgandra 40 MW Solar Farm Environmental Impact Statement*, GHD, March 2017.

Response to Submissions titled *Neoen Australia Pty Ltd Gilgandra 40 MW Solar Farm Submissions Report*, GHD, June 2017.

Appendix B – Environmental Assessment

<https://www.planningportal.nsw.gov.au/major-projects/project/12221>

Appendix C – Notice of Modification

<https://www.planningportal.nsw.gov.au/major-projects/project/12221>

Appendix D – Consolidated Consent

<https://www.planningportal.nsw.gov.au/major-projects/project/12221>