

Tallawarra Stage B Gas Turbine Power Station

Modification 2 Submissions
Report
(MP07 0124 Mod-2)

EnergyAustralia

2020-09-01

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Contents

1	Introduction	1
1.1	Project modification overview	1
1.2	Purpose of this report	1
2	Consultation	2
3	Response to agency submissions	3
3.1	NSW Environment Protection Authority	3
3.1.1	Issues Raised	3
3.1.2	Response	3
3.1.3	Response to proposed condition of approval changes	5
3.2	NSW Health	6
3.2.1	Issues Raised	6
3.2.2	Response	6
3.3	Shellharbour City Council	7
3.3.1	Issues Raised	7
3.3.2	Response	7
3.4	Wollongong City Council	9
3.4.1	Issues Raised	9
4	Conclusion	10

Appendices

Appendix A – Photomontages	11
Appendix B – Aviation mitigation measures	12

Tables

Table 2-1 Consultation Summary	2
Table 3-1 EPA Comments	3
Table 3-2 Response to EPA proposed condition of approval changes	5
Table 3-3 ISPHU Comments	6
Table 3-4 Shellharbour City Council Comments	7

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1 Introduction

1.1 Project modification overview

The Tallawarra Stage B Gas Turbine Power Station Project (the Project) involves the development of a gas-fired power station and associated infrastructure located adjacent to the existing Tallawarra A Power Station (TAPS). The Project was approved by the then Minister for Planning on 21 December 2010 and is considered Critical State Significant Infrastructure. A modification for the extension of the Project Approval lapse date (Mod-1) was approved by the Executive Director on 6 April 2016.

EnergyAustralia, as the proponent, is seeking a second modification (Mod-2) (the modification) to the Project for approval by the Minister or delegated authority. Through this modification, EnergyAustralia has requested approval to extend the Project approval lapse date by two years and to amend the description of condition of approval 1.5 so that a single open cycle gas turbine (OCGT) may be used for the power plant.

EnergyAustralia has been actively pursuing the development of the Project since the approval of Mod-1 in 2016, however construction is yet to commence due to several unforeseen delays, including the requirement to satisfy condition of approval 1.6 in consultation with Civil Aviation Safety Authority (CASA) and Shellharbour City Council regarding aviation safety. Having now met condition of approval 1.6, subject to subsequent conditions specified by the Department, EnergyAustralia is proceeding with the Project development.

In addition, EnergyAustralia has determined that the current global COVID-19 pandemic may result in the risk of further delays to the Project because of disrupted global supply chains and associated challenges in the mobilisation of construction. The timeframes that these risks may add to the Project are uncertain. Therefore, an extension to the Project approval lapse date is proposed to provide an opportunity to best manage the unforeseen delays and construction timeframe risk.

The modification is justified as it will provide some minor environmental improvements to emissions including five percent lower annual emissions of NO_x, 29 percent lower annual greenhouse gas emissions and slightly lower noise emissions during operation compared to the approved project. The modification will provide EnergyAustralia with the flexibility to incorporate an improved design based on more efficient technology that was not available at the time of the 2010 Project approval.

The Project will support the transition of electricity generation to renewable energy sources by providing electricity to the National Electricity Market (NEM) at short notice during periods of high electricity demand, during supply outages, or when intermittent renewable energy supply is lower than demand.

A request for modification to the Project approval was submitted to the Minister in June 2020¹ and the request and supporting information was circulated to referral agencies by the NSW Department of Planning Industry and Environment (DPIE). Submissions were made by a number of these agencies and this report provides EnergyAustralia's response to these submissions.

1.2 Purpose of this report

This Submissions Report details EnergyAustralia's response to referral agency submissions relating to the Tallawarra B Power Station (Mod-2) Modification Environmental Assessment report. Four submissions were received by DPIE. These submissions were from the NSW Environment Protection Authority (EPA), Illawarra Shoalhaven Local Health District Public Health Unit (ISPHU) on behalf of NSW Health, Shellharbour City Council and Wollongong City Council.

¹ EnergyAustralia (2020) *Tallawarra Stage B Gas Turbine Power Station Modification Environmental Assessment*

2 Consultation

Consultation has been carried out with DPIE and referral agencies regarding the submissions as summarised below in Table 2-1.

Table 2-1 Consultation Summary

Agency	Date	Consultation Summary	Relevant section of this report
DPIE	18 August 2020	<p>A meeting was held with DPIE to discuss the process for responding to the submissions, consulting with agencies where there are ongoing issues, and finalising the conditions of approval.</p> <p>DPIE recommended including a photomontage in the RFI response, and a consultation and communication schedule that EnergyAustralia would undertake prior to construction and operations.</p>	<p>Appendix A</p> <p>Appendix B</p>
EPA	13 August 2020	<p>A meeting was held with EPA and DPIE to discuss the RFIs and EnergyAustralia's response. During the meeting the issues discussed included:</p> <ul style="list-style-type: none"> ■ The inclusion of diesel fuel in conditions of approval. ■ Potential limitations to generation due to NOx criteria if the Project doesn't include emission controls such as SCR. ■ Inclusion of noise mitigations at current stage rather than post-construction. ■ Connecting to networked sewage. 	Section 3.1
Shellharbour City Council	13 August 2020	<p>A meeting was held with Shellharbour City Council, where the following items were discussed:</p> <ul style="list-style-type: none"> ■ The process for allowing a time extension for the project to be confirmed DPIE. ■ Issues related to the change to one OCGT were raised and DPIE noted that they are taking advice from EPA on noise, vibration and emissions. ■ An indicative photo/photomontage showing the comparison between approved project and proposed modification was requested. ■ The process for satisfying the aviation safety conditions. DPIE suggested a schedule to ensure compliance for the condition 1.6 reporting, and that the RFI response should include an appendix detail subsequent consultation that would be carried out by EnergyAustralia prior to construction and operations. ■ Council has sought technical advice on how to monitor the plume and will forward the methodology to DPIE and EnergyAustralia. 	<p>Section 3.3</p> <p>Appendix A</p> <p>Appendix B</p>

3 Response to agency submissions

3.1 NSW Environment Protection Authority

3.1.1 Issues Raised

The EPA provided a submission to DPIE on 29 July 2020 including a total of seven comments as summarised in Table 3-1. These are discussed in Section 3.1.2. EPA have also suggested changes to the conditions of approval for the Project, which are discussed in Section 3.1.3.

Table 3-1 EPA Comments

Issue Raised	Comments
1	EPA recommends any amendment to Approval Condition 1.5 should match the power station option identified and assessed by the Proponent. That is one single 400 MW OCGT unit.
2	EPA recommends that natural gas be the only fuel approved for use in the Open Cycle Gas Turbine. The option to use diesel should be removed from the approval in accordance with the Proponent's design and the air assessment included in the Modification Report.
3	EPA recommends that the existing Project Approval noise limits are applicable to the proposed modification and should be retained.
4	EPA recommends the Project Approval references to the EPA <i>Industrial Noise Policy</i> be updated to the equivalent sections of the new <i>Noise Policy for Industry</i> document.
5	To minimise noise emissions, EPA recommends that gas supply system and gas turbine bypass valve silencers be conditioned on the new power station.
6	EPA would need to carefully consider any future modification to increase NOx emissions where the implementation of BACT is not possible.
7	EPA recommends the Proponent commit to connect to a networked sewage system when it is installed for the adjacent Tallawarra Lands development.

3.1.2 Response

Issue 1

EnergyAustralia accepts EPA recommendation to amend condition of approval 1.5 to state one single up to 400 MW OCGT unit.

Issue 2

In accordance with Mod-2, EnergyAustralia plans to initially use natural gas to fuel the OCGT, however the preference is to retain the ability to convert to liquid fuel at some point in future if required. This may be required because the Eastern Australian gas market faces significant uncertainty into the future, as documented in the most recent AEMO Gas Statement of Opportunities Report². Therefore, EnergyAustralia would seek to retain condition of approval 2.2 which specifies the situations under which the use of diesel fuel would be allowed.

EnergyAustralia acknowledges that to use diesel fuel, further studies would need to be prepared alongside a subsequent project modification application to assess the potential impacts that may arise from diesel firing.

² https://www.aemo.com.au/-/media/files/gas/national_planning_and_forecasting/qsoo/2020/2020-gas-statement-of-opportunities.pdf?la=en

EnergyAustralia would only support the removal of condition of approval 2.2 if this did not preclude a future conversion to liquid fuel, with all required studies to support the approvals at the time.

Issue 3

EnergyAustralia agrees that the existing Project approved noise limits are applicable for Mod-2 and should be retained. Existing noise limits were used in the updated noise and vibration assessment undertaken to assess the potential construction and operational noise and vibration impact of Mod-2. Details of the noise and vibration assessment are provided in Section 7.4 and Appendix B of the Modification Environmental Assessment.

Issue 4

EnergyAustralia supports the EPA request to update the Project Approval references to the EPA *Industrial Noise Policy* to the equivalent sections of the new *Noise Policy for Industry*. The noise and vibration assessment in Appendix B of the Modification Environmental Assessment was carried out in accordance with the current reference document, the *Noise Policy for Industry* (EPA 2017).

Issue 5

The conclusion of the noise and vibration assessment prepared for the Modification Environmental Assessment (Appendix B) was that specific mitigation control measures to meet compliance are not warranted.

While no specific mitigation measures were warranted to meet compliance, the assessment noted that during start up and shut down, there may be air venting episodes that may cause brief (in terms of seconds) noise emissions, depending upon the final plant selection, detailed design and operational procedures. Possible contingency measures suggested included exhaust attenuation.

The need for and feasibility of measures to manage these brief instances of start up and shut down noise including the installation of appropriate control devices and management procedures will be determined during detailed design and as part of a holistic approach to noise mitigation and management for the Project.

As final plant selection, design and operating procedures are yet to be finalised, it would be inappropriate to condition the use of specific noise control devices at this stage, given that noise compliance has been demonstrated through the noise and vibration assessment report without such control devices.

Issue 6

The comment regarding future modifications to increase NO_x emissions is noted. EnergyAustralia acknowledges that should there be further modifications, NO_x control will be a key consideration and could require additional management, such as adjusting the capacity factor, to maintain emissions within licence limits. Moreover, retaining compliance with NO_x emissions may in fact preclude future modification.

Issue 7

EnergyAustralia intends to connect Tallawarra Stage B Gas Turbine Power Station to a networked sewer system at the earliest opportunity. This would be subject to the wastewater infrastructure being available and ready for a connection, and planning to ensure the connection can be made feasibly at reasonable cost. A permanent connection to the sewage network would be designed to accommodate the ongoing operational capacity requirements of the plant, however connection for the temporary construction phase of the Project would not be warranted.

3.1.3 Response to proposed condition of approval changes

The EPA has provided recommended changes to conditions of approval for the Project. The changes and EnergyAustralia's responses are summarised in Table 3-2.

Table 3-2 Response to EPA proposed condition of approval changes

Approval section	EPA proposed condition	EnergyAustralia response
General Operating Conditions	Removing diesel as an approved fuel	The existing approval condition 2.2 should be retained as there could potentially be a need in future conversion to allow the use of liquid fuel. A future plant conversion would be subject to further studies and project modification application to assess potential impacts that may arise from diesel firing.
Monitoring	Replace Table 7 in the Approval	Acknowledged by EnergyAustralia
Concentration Limits	The 100th percentile NO ₂ equivalent concentration limit for diesel fuel has been omitted in approval Table 8.	A concentration limit for diesel emissions should be retained in the conditions of approval for application in the event that short term emergency use of diesel fuel is required.
Monitoring and Recording Conditions	Replace Table 10 in the Approval	Acknowledged by EnergyAustralia
Air Quality Performance Verification Approval Condition 4.8	EPA propose that the timing of the verification program would be six months after commencement of operation "or as otherwise agreed by the EPA".	The condition should be retained to say "or as may be agreed or directed by the Secretary"
	EPA suggest that the monitoring program would need to include maximum design loads as well as normal operating conditions, with a report to be submitted for both operating scenarios	The actual capacity factor of the plant will be dependent on demand in the NEM as determined by the market and AEMO. The plant may not be required to operate at maximum design load during the six months following commencement of operations. The wording should read "for the operating conditions experienced within the monitoring period"
	The performance verification report would be due within 28 days of testing	EnergyAustralia requests that the timeframe for the performance verification report to be submitted to the EPA be extended to 2 months from completion of the testing program rather than 28 days.
Approval Condition 4.8	EPA proposes that remedial measures could be triggered by testing at maximum design loads	Results of air dispersion modelling should be considered in the context of operation over a period of time noting that operational times and periods for the Project will vary, depending on demand.

3.2 NSW Health

3.2.1 Issues Raised

Illawarra Shoalhaven Local Health District Public Health Unit (ISPHU) provided three comments in their submission, which are summarised in Table 3-3.

Table 3-3 ISPHU Comments

Issue Raised	Comments
1	The proponent must demonstrate compliance with the current environmental and health criteria for the project.
2	The air quality impact assessment must demonstrate that operation of the plant in its amended configuration and stack design with plume dispersion device, will not result in cumulative air pollution exceeding relevant ground level concentration criteria at sensitive receptors.
3	The operation of the onsite sewage management system shall ensure that all wastewater is assimilated within the property boundaries without risk to health. Where the opportunity exists to connect to a reticulated sewerage system the premises should be connected at the earliest opportunity.

3.2.2 Response

Issue 1

EnergyAustralia has assessed the Project modification against the current environmental and health criteria in the air quality assessment in Appendix A of the Modification Environmental Assessment. Dispersion modelling was carried out to assess NO_x, PM₁₀, PM_{2.5} and a level 1 screening assessment was carried out to assess regional impacts of photochemical pollution as ozone. Predicted concentrations were found to be within the impact assessment criteria and lower than the two E-Class OCGTs assessed in the original Environmental Assessment. Incremental concentrations of ozone were found to be below the maximum allowable increment. The current approval conditions include monitoring of compliance with the criteria.

The Modification Environmental Assessment demonstrates that compliance with environmental and health conditions and requirements can be achieved for the modified Project.

Issue 2

The air quality impact assessment for Mod-2 has included a cumulative assessment where emissions from the modified Project were modelled in addition to emissions from TAPS and ambient background concentrations. Predicted ground-level concentrations were below the relevant assessment criteria at all locations.

The Modification Environmental Assessment demonstrates that the modified Project is not likely to result in cumulative air pollution exceeding relevant ground level concentration criteria at sensitive receptors.

Issue 3

EnergyAustralia intends to connect Tallawarra Stage B Gas Turbine Power Station to a networked sewer system at the earliest opportunity. This would be subject to the wastewater infrastructure being available and ready for a connection and planning to ensure the connection can be made feasibly at reasonable cost. A permanent connection to the sewer network would be designed to accommodate the ongoing operational capacity requirements of the plant, however connection for the temporary construction phase of the Project would not be warranted.

3.3 Shellharbour City Council

3.3.1 Issues Raised

Shellharbour City Council provided a total of three comments in their submission on 28 July 2020, as summarised in Table 3-4.

Table 3-4 Shellharbour City Council Comments

Issue Raised	Comments
1	<p>Council is of the opinion that the change in legislation (Section 4.53 (1)(c) Lapsing of Consent of the <i>Environmental Planning and Assessment (EP&A) Act 1979</i> on 14 May 2020) removes the need to request the extension of the consent as part of the Mod-2 application.</p>
2	<p>Regarding the request to amend the description of condition of approval 1.5 so that a single open cycle gas turbine may be used for the power plant, council considers inadequate information to have been provided with the current application to determine the impact of the proposed single unit and the ability of the proposed single unit to be able to satisfy the existing conditions of the consent which are proposed to remain unchanged.</p> <p>No details or specifications of the proposed plume dispersion device, the stack or the proposed single open cycle gas turbine development in its entirety are evident in the document accompanying the application.</p> <p>Council is of the opinion that these details are required to enable an adequate assessment of the proposal and its ability to satisfy all existing conditions relating to Visual Impact, Air Quality, and Noise Impact. For these reasons, Council recommends that the determination of the application be deferred and the applicant be requested to submit details and specifications, including a photomontage of the actual proposed single open cycle gas turbine plant including the proposed stack and plume dispersion device.</p>
3	<p>Council recommend Condition 1.6 be amended to read:</p> <p>Nothing in this approval permits the construction and operation of an open cycle gas turbine plant, unless the Proponent has submitted a report to the Secretary which demonstrates that operation of an open cycle gas turbine plant will not have an adverse impact on aviation safety. In this regard</p> <ul style="list-style-type: none"> a) Prior to construction, the applicant must provide a report to the satisfaction of the Planning Secretary, confirming that the final design of the OCGT would meet a CPV of no more than 6.1 metres/second at or below 700 feet AMSL; b) Prior to operation of the plant, the applicant must provide a report to the satisfaction of the Planning Secretary confirming that all the mitigation measures and the inclusion of a plume symbol on aeronautical charts have been or would be implemented (noting that some measures can only be implemented after operations have commenced), as listed in Section 10 of the final aviation impact assessment report dated 13 February 2020. <p>Condition 7.4 requires the submission of an Operation Management Plan to ensure that the plant maintains compliance with the environmental perimeters of the approval. Council considers it appropriate that condition 7.4 also be amended to include the additional conditions recommended for inclusion into Condition 1.6.</p>

3.3.2 Response

Issue 1

Section 5.22(1) of the *EP&A Act (1979)* states that “Part 4 and Division 5.1 do not, except as provided by this Division, apply to or in respect of State significant infrastructure (including the declaration of the infrastructure as State significant infrastructure and any approval or other requirement under this Division for the infrastructure).”

Given the Project was declared as Critical State Significant Infrastructure (CSSI) by the Minister for Planning on 26 February 2008 in accordance with Section 5.13 of the *EP&A Act* (1979) Part 4 Division 4.9 Section 4.53(1)(c) of *EP&A Act* (1979) does not apply to the Project.

Issue 2

The air quality impact of the modification has been assessed to the fullest extent possible prior to detailed design, and considers the impacts at maximum load, minimum environmental load and start up operating load of the plant. The assessment included dispersion modelling of the proposed exhaust including the plume dispersion device (PDD). The characteristics of the PDD are provided in Section 7.1 of the air quality assessment, and a description of the methodology used to account for the angular release of exhaust plumes from the PDD is included in Appendix A of the air quality assessment.

The air quality assessment included a cumulative assessment where emissions from the modified Project were modelled in addition to emissions from TAPS and ambient background concentrations. Predicted ground-level concentrations were below the relevant assessment criteria at all locations.

Similarly, an updated noise and vibration assessment has been prepared to assess the noise impacts of the modification. Predicted noise levels comply with the noise criteria at all existing and future sensitive receivers, and are slightly lower than the previously assessed plant.

It is therefore submitted that sufficient information has been provided in the Modification Environmental Assessment to determine the impact of the proposed single unit and the ability of the proposed single unit to satisfy the conditions of the consent, which are proposed to remain unchanged.

The Modification Environmental Assessment also considered the visual impact of the proposed modification on sensitive receivers that could be impacted by the Project (refer Section 7.5). It is noted that the proposed stack is slightly wider and shorter than the previously approved CCGT stack by 10m. While the stack will be up to 10m higher than the previously approved OCGT, only one stack is proposed rather than two or three.

The design and colour scheme chosen for the built components will be selected to ensure they do not stand out within the natural settings, and unlike the existing Tallawarra A stack, will not have stripes. The stack will have aviation hazard lights installed, similar to those on the Tallawarra A stack. The PDD would be noticeable but not markedly contrasting with the existing environment and the other power station infrastructure on the site.

Photomontages of the Project have been prepared in response to Council's request, and are presented in Appendix A. The photomontages represent the potential visual impact from key viewpoints including Shellharbour and Oak Flats. While they provide an indication of how the Project may be perceived from these key viewpoints, the design of the Project, including the PDD, has not been finalised and may involve changes following the selection of the preferred tenderer, however any changes will not be material to the visual amenity from the vantage points. The photomontages support the outcomes of the visual impact assessment that was provided in the Modification Report and demonstrate that the specific design of the PDD is not material to the visual impact assessment.

Issue 3

The issue of aviation safety has been addressed in the existing conditions and EnergyAustralia has responded to and met requirements to the satisfaction of DPIE to date with further information to be provided.

Condition of approval 1.6 states "Nothing in this approval permits the construction and operation of an open cycle gas turbine plant, unless the Proponent has submitted a report to the Secretary which demonstrates that operation of an open cycle gas turbine plant will not have an adverse impact on aviation safety. This report must be prepared in consultation with Shellharbour City Council, and its conclusions and recommendations must have been agreed to by the Civil Aviation Safety Authority prior to submission to the Secretary. The report must be approved by the Secretary before commencement of construction of an open cycle plant."

Tallawarra B OCGT Aviation Impact Assessment dated 13 February 2020 was submitted to DPIE to satisfy condition of approval 1.6. A letter from Mike Young, Executive Director of Energy, Resources & Compliance

DPIE dated 2 April 2020 states that the Department carefully considered the report and is satisfied that an OCGT plant could be operated such that there would be an acceptable level of aviation safety risk. The Secretary approved the report subject to:

- Prior to construction, Energy Australia providing a report to the satisfaction of the Planning Secretary, confirming that the final design of the OCGT would meet a CPV of no more than 6.1 metres/second at or below 700 feet AMSL; and
- Prior to operations, Energy Australia providing a report to the satisfaction of the Planning Secretary confirming that all the mitigation measures and the inclusion of a plume symbol on aeronautical charts have been or would be implemented (noting that some measures can only be implemented after operations have commenced), as listed in Section 10 of the report.

EnergyAustralia is currently preparing a final report to be submitted to DPIE to satisfy the above aviation safety conditions. This will be submitted following selection of preferred bidder, which includes selection of the OCGT and the PDD design. The existing requirements as set out in condition of approval 1.6 adequately address the aviation safety issue and no modification to these conditions is warranted. EnergyAustralia is responding to the existing condition to the satisfaction of DPIE and is confident that the reporting prior to construction and operations will further satisfy any aviation safety concerns. Amendment to condition of approval 1.6 is unnecessary and would create confusion where the management of the issue is well advanced and conditionally approved by DPIE.

Further, EnergyAustralia considers that the conditions relating to the aviation assessment would not be suitable for inclusion in condition of approval 7.4, which specifies the content required in the Operational Environmental Management Plan, as the aviation safety issue will be adequately addressed prior to construction and operation commencing.

3.4 Wollongong City Council

3.4.1 Issues Raised

Wollongong City Council generally supports the expansion of the Tallawarra Power Station through the Tallawarra B project and has no objection to the modification request to extend the lapse date of the project approval from 21 December 2020 to 21 December 2022.

The submission of Wollongong City Council from 22 July 2020 is noted, and the support for the Project is acknowledged.

4 Conclusion

EnergyAustralia is requesting approval to extend the Project Approval lapse date by two years and to amend the description of condition of approval 1.5 so that a single open cycle gas turbine may be used for the power plant.

The modification is considered justified as it would provide some minor environmental improvements and would provide EnergyAustralia with the flexibility to incorporate an improved design based on more efficient technology that was not available at the time of the 2010 Project approval. It would support the need for a reliable energy supply at short notice and will support the transition of the electricity supply to the NEM to renewable energy sources.

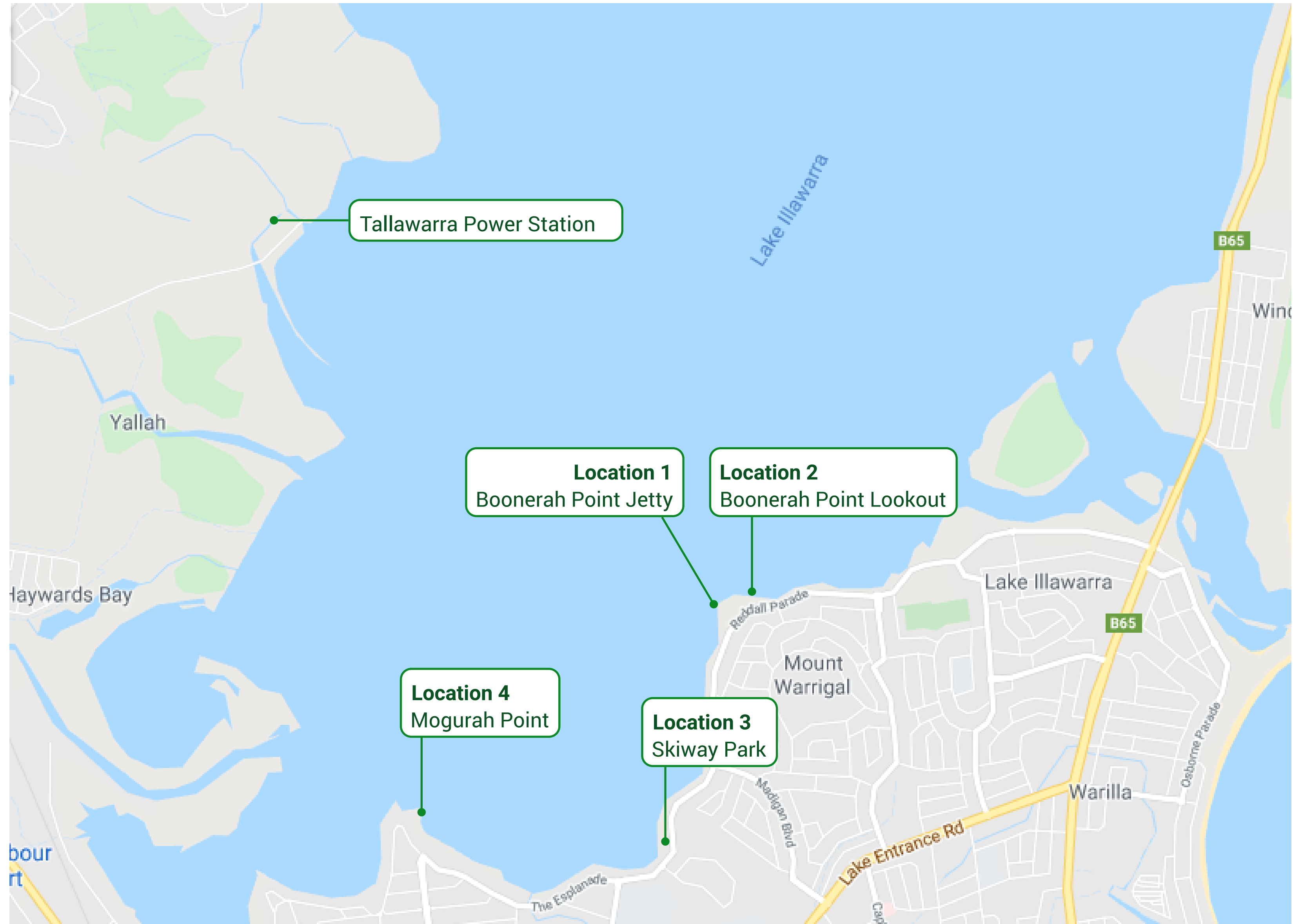
Responses to the Tallawarra Stage B Gas Turbine Power Station Project Modification Environmental Assessment (Mod-2) were received by DPIE in late July and early August 2020 from:

- NSW Environment Protection Authority
- Illawarra Shoalhaven Local Health District Public Health Unit for NSW Health
- Shellharbour City Council, and
- Wollongong City Council.

The submissions all acknowledge the need to extend the approval period. The issues raised in the submissions included air quality, noise, aviation and visual impact as well as a recommendation to connect the Project to a networked sewage system when available. EnergyAustralia considers that with the amendment of condition of approval 1.5, the modifications to the Project will be able to satisfy all existing approval conditions and the Project as approved will adequately manage the issues raised in the submissions.

Appendix A – Photomontages

Location map



Location 1: Boonerah Point Jetty



Existing



Proposed

Photomontage is indicative of the proposed power station.
The final design may change, however changes will not be material to visual amenity.

Location 2: Boonerah Point Lookout



Existing



Proposed

Photomontage is indicative of the proposed power station.
The final design may change, however changes will not be material to visual amenity.

Location 3: Skiway Park



Existing



Proposed

Photomontage is indicative of the proposed power station.
The final design may change, however changes will not be material to visual amenity.

Location 4: Mogurah Point



Existing



Proposed

Photomontage is indicative of the proposed power station.
The final design may change, however changes will not be material to visual amenity.

Appendix B – Aviation mitigation measures

The Planning Secretary has approved the report subject to “prior to operations, EnergyAustralia providing a report to the satisfaction of the Planning Secretary confirming that all the mitigation measures and the inclusion of a plume symbol on aeronautical charts have been or would be implemented (noting that some measures can only be implemented after operations have commenced), as listed in Section 10 of the report”. Reference to the “report” refers to the Aviation Impact Assessment Report that was lodged by EnergyAustralia with DPIE on Friday 14 February 2020.

Item	Mitigation	Status Update
10.1	Alerting through AIP – ERSA, aeronautical charts	<p>Updates to AIP occur twice yearly. Application will be made to update ERSA for YSHL for its November 2022 update, in anticipation of commissioning by the end of 2022 or early 2023.</p> <p>Application will also be made for the inclusion of a plume symbol at this location at the same time. The symbol will be as per the existing symbol for the Laverton plume, except with altitude SFC → 1000 rather than SFC → 2000.</p> <p>These activities will be undertaken in conjunction with Shellharbour City Council as owners of the airport.</p> <p>The timeline to implement changes are as per: https://www.airservicesaustralia.com/services/aeronautical-information-and-management-services/document-amendment-calendar/.</p> <p>It is anticipated that changes to the charts will be required to be informed by May 2022 and changes to the ERSA by July 2022, in order to reach publication in November 2022.</p>
10.2	Alerting through lighting and marking	<p>Appropriate dynamic lighting will be incorporated into the design of the stack and plume dispersion device. Lighting is already installed on the existing Tallawarra power station stack.</p>
10.3	Pilot awareness and operating procedures	<p>A programme of consultation will be developed in conjunction with Shellharbour Council and the airport users. These operators will be witnessing the construction of the power station from the air, so early engagement will be welcomed. These activities should be ramped up from mid-2022 once the project reaches the “first fire” milestone and begins commissioning.</p> <p>An additional measure has been suggested whereby an alert and live status update of the unit operation be broadcast via either CTAF or AWIS radio frequency providing an announcement to create awareness to pilots that Tallawarra B is operating or starting up. Shellharbour Airport Manager has been investigating the possibility of doing this and will provide further information to Energy Australia as it becomes available</p>
10.4	Shut down on certain high activity days	<p>This offer has been made to Shellharbour, but it was noted that Wings over Illawarra activity is concentrated to the west of the field rather than the east. This mitigation can remain in live discussion between Shellharbour Council and Users and EnergyAustralia Tallawarra.</p>
10.5	Electronic Flight Bag (EFB) applications	<p>Discussions have taken place with the two EFB’s offered in Australia, namely OzRunways and AvPlan. Both have confirmed the ability for this functionality to be incorporated into the EFB, and it can be demonstrated prior to Tallawarra B operation (using live Tallawarra A data as a proxy for testing). It would be represented as a shaded area roughly 120m diameter around the plume symbol.</p>



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