Our ref: DOC20/334078-9
Your ref: SSI-9837

Ms Mandana Mazaheri

Team Leader
Resource Assessments
Department of Planning, Industry and Environment
Mandana.Mazaheri@planning.nsw.gov.au

Dear Ms Mazaheri

Response to Submissions Report – Newcastle Power Station, Tomago (SSI-9837)

I refer to your email dated 30 April 2020 in which Resources Assessments invited Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (the Department) for comment on the Response to Submissions Report for the proposed Newcastle Power Station located at 1940 Pacific Highway (Lot 3 DP104356), Tomago, and associated gas pipelines and electricity infrastructure (within Lot 2 and 4 DP 1043561, Lot 1203 DP 1229590, Lot 1202 DP 1229590, and Lot 202 DP 1173564) (SSI-9837). BCD has previously (9 December 2019 - DOC19/994556-10) provided comments on the Environmental Impact Statement for the project.

BCD has reviewed the '*Newcastle Power Station Project – Environmental Impact Statement Submissions Report*' (prepared by AGL Pty Ltd and dated April 2020), including relevant appendices, annexures and attachments in relation to impacts on biodiversity, Aboriginal Cultural Heritage and flooding.

BCD's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you require any further information regarding this matter, please contact Steve Lewer, Senior Regional Biodiversity Conservation Officer, on 4927 3158 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely

15 May 2020

STEVEN COX
Senior Team Leader Planning
Hunter Central Coast Branch
Biodiversity and Conservation Division

Enclosure: Attachments A and B

BCD's recommendations

Newcastle Power Station, Tomago (SSI-9837) – Response to submissions

Biodiversity

1. BCD recommends that vegetation zones 1 and 3 within PCT 1590 are mapped as Lower Hunter Spotted Gum – Ironbark Forest EEC consistent with mapping of vegetation zone 2 and the BAM calculator is re-run to determine the updated credit yield for these two zones and that the BDAR is amended.

Aboriginal cultural heritage

2. BCD is satisfied that BCD's comments on Aboriginal cultural heritage have been satisfactorily addressed in the response to submissions report and no further Aboriginal cultural heritage assessment is required.

Flooding and flood risk

3. The proponent should develop a trigger for interruption of operation under flooding conditions that may cut access to the site, to ensure waste water storage capacity is not exceeded, and discharge does not occur. This should form part of the Flood Preparedness Plan.

Attachment B

BCD's detailed comments

Newcastle Power Station, Tomago (SSI-9837) – Response to submissions

Biodiversity

1. Vegetation zones 1 and 3 should be mapped as EEC

BCD's review of the Environmental Impact Statement (EIS) recommended that vegetation zones 1 and 3 within plant community type (PCT) 1590 be mapped as '*Lower Hunter Spotted Gum Ironbark Forest in the Sydney Basin and NSW North Coast Bioregions*' (LHSGIBF) endangered ecological community (EEC) consistent with the mapping of vegetation zone 2 (which is mapped as EEC). The revised BDAR (29 April 2020) does not provide sufficient justification for exclusion of vegetation zones 1 and 3 as EEC.

The revised BDAR relies on the lack of characteristic canopy species (e.g. *Eucalyptus fibrosa*) not being located in Zone 1 and the disturbed / degraded nature of Zone 3 to prevent these zones being mapped as the EEC.

The Final Determination for LHSGIBF EEC states in Paragraph 1.2 and 4.3:

- The total species list of the community across all occurrences is likely to be considerably larger than that given in Paragraph 1.2. Due to variation across the range of the community and its geographic spread, not all of the above species are present at every site and many sites may also contain species not listed;

- Species presence and relative abundance (dominance) will vary from site to site as a function of environmental factors such as soil properties (chemical composition, texture, depth, drainage), topography, climate and through time as a function of disturbance (e.g. fire, logging, clearing and grazing) and weather (e.g. flooding, drought, extreme heat or cold). As such not all species may be present; and

- Although, Lower Hunter Spotted Gum Ironbark Forest is usually dominated by *Corymbia maculata* (Spotted Gum) and *Eucalyptus fibrosa* (Broad-leaved Ironbark), with *E. punctata* (Grey Gum) occurring less frequently. Other tree species have been recorded infrequently, including *E. paniculata* subsp. *paniculata* which was the co-dominant ironbark in zone 1.

Vegetation zones 1 and 3 are likely disturbed or local variants of PCT 1590, but they still fit within the broader description of the EEC, albeit lacking in some dominant taxa (as in Zone 1) or disturbed and undefined understorey with a +/- weedy ground layer (as in Zone 3). Vegetation zones 1 and 3 of PCT 1590 should be mapped as the EEC. This will likely lead to an increase in the ecosystem species credit yields for these two zones and affect the credit trading rules (i.e. reduce the number of PCTs they can trade with).

Recommendation 1

BCD recommends that vegetation zones 1 and 3 within PCT 1590 are mapped as Lower Hunter Spotted Gum – Ironbark Forest EEC consistent with mapping of vegetation zone 2 and the BAM calculator is re-run to determine the updated credit yield for these two zones and that the BDAR is amended.

BCD is satisfied that comments 2 to 7 in BCD's comments on the EIS (dated 9 December 2019 - DOC19/994556-10) have been satisfactorily addressed in the response to submissions report.

Aboriginal cultural heritage

2. BCD have no comments in relation Aboriginal cultural heritage

BCD is satisfied with the Aboriginal cultural heritage response to submissions has addressed all of BCD's comments on the EIS related to Aboriginal cultural heritage.

Recommendation 2

BCD is satisfied that BCD's comments on Aboriginal cultural heritage have been satisfactorily addressed in the response to submissions report and no further Aboriginal cultural heritage assessment is required.

Flooding and flood risk

3. There is a risk that excess process water disposal will be blocked during flood events

Table 2-1 of Appendix G (Surface Water and Hydrology Assessment) shows that the proposal may generate up to 19.14 m3 of wastewater during operation, which will be disposed of via tinkering to an off-site facility. Section 6.2.3 of the assessment indicates that road access to the proposal will be blocked during a 1% Annual Exceedance Probability (AEP) event or greater. It is not clear if the proposal can or will continue operating during such an event. If waste water continues to be generated while access to the site is blocked, it may build up beyond the storage capacity of the site and require discharge to the environment.

Recommendation 3

The proponent should develop a trigger for interruption of operation under flooding conditions that may cut access to the site, to ensure waste water storage capacity is not exceeded, and discharge does not occur. This should form part of the Flood Preparedness Plan.

From:	Alder, David
To:	Mandana Mazaheri
Cc:	ANAA Corro; Airspace Protection; Lee, Gary MR 1 (gary.lee1@defence.gov.au)
Subject:	RE: RMS: Request for Advice: Newcastle Power Station (SSI 9837) - Submissions Report [SEC=OFFICIAL]
Date:	Thursday, 7 May 2020 3:56:11 PM
Attachments:	image003.png image004.png image005.png image006.png image007.jpg image001.jpg

OFFICIAL

F19/11066-1

Mandana

CASA has reviewed certain relevant aspects of the Submissions Report. CASA's review was not comprehensive.

An aspect of the Main Report may have not been correctly interpreted, or could be open to interpretation:

Main Report 4.3.2 advises
This includes consideration of the 99.9% critical plume extent rather than the 100%, and adoption of CASA's recommendations regarding critical plume velocity for instrument flight (6.1 m/s) and *visual flight (10.6 m/s).*
CASA recommended a critical velocity of 6.1m/sec for IFR and VFR. CASA correspondence to Defence of 7 April 2020 advised: "*I would recommend 6.1m/sec critical plume velocity for VFR / OLS and IFR / PANS-OPS*." and "*The turbulence will have the same effect on the aircraft whether the pilot is looking at an instrument panel or looking out the window*."

In Appendix B 'Consolidated Mitigation Measures' SE-4, it is suspected that 'Civil Aviation Authority' should read 'Civil Aviation Safety Authority'.

CASA has no other comments at this stage.

Regards
David Alder
Aerodrome Engineer
Air Navigation, Airspace and Aerodromes Branch
CASA Aviation Group
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DOC19/995044-30; EF14/502

Department of Planning, Infrastructure and Environment
Returned via Planning Portal

Attention: Ms Mazaheri
By email: Mandana.Mazaheri@planning.nsw.gov.au

22 May 2020

Dear Ms Mazaheri

Newcastle Power Station Project (CSSI 9837) Response to Submissions
Further Information Still Required by the Environment Protection Authority

I refer to your email to the Environment Protection Authority (EPA) received 1 May 2020, providing opportunity to comment on the Response to Submissions (RTS) in relation to the above proposed development. I also refer to the EPA's submission on 13 December 2019 advising that it would not be able to recommend conditions until additional information was provided on the assessment of air quality and noise impacts.

The proponent, AGL Energy Limited (AGL), proposes to construct a dual fuel power station, known as the Newcastle Power Station (NPS). The NPS, with gas pipelines, electricity transmission lines, site access and associated ancillary facilities would be built in Tomago in New South Wales (NSW). Together, the NPS, gas pipeline, electrical transmission lines and associated infrastructure form the Proposal.

The EPA has reviewed the *Newcastle Power Station Project - Environmental Impact Statement Submissions Report* (RTS) (dated April 2020) and supporting documents and has determined that not all of the information requested in the EPA's letter of 13 December 2019 has been provided. The EPA's additional information requirements are provided at Attachment A to this letter.

The EPA continues to be unable to recommend conditions for the proposal until the requested information is provided.

If you require any further information on this matter, please contact Genevieve Lorang on (02) 4908 6869 or by email to hunter.region@epa.nsw.gov.au

Yours sincerely

MITCHELL BENNETT
Unit Head – Regulatory Operations
Environment Protection Authority

Encl: Attachment A- further information Required

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Attachment A: Further Information Required by the EPA

The EPA requires clarification of the following points prior to considering whether to recommend conditions of approval.

Air Quality Impacts

1. **Benchmarking of emissions controls against best practice**

A report relating to detailed control technology and emissions performance benchmarking against additional jurisdiction guidance and experience is required. The benchmarking must describe and evaluate the full range of available emission control technologies and recommend what is feasible for application at the Newcastle Power Station. Where a technology or emission level is found to be not feasible, a detailed justification must be provided.

The EPA recommended that the preferred power station option and final design of emission controls proposed for implementation at the power station be benchmarked against international best practise technology and performance.

The revised AQIA has included an additional section on air emission controls. The European Commission's *Best Available Techniques (BAT) Reference Document for Large Combustion Plants* (IPPC 2017) has been referenced to benchmark emission control technologies and emission concentrations. For gas turbines, the three main techniques for NOx prevention or reduction are water/steam injection, dry low-NOx burners and catalytic solutions such as SCR.

Water injection technology is proposed for the gas turbine option. The proposed performance for NOx of the turbine is 51 mg/Nm^3 (@ 15 % O_2) for natural gas and 86 mg/Nm^3 for distillate. This is compared to expected emission levels (IPPC, 2017) of 25-50 mg/m^3 daily average for new gas turbines.

SCR is proposed for reciprocating engines. The proposed emission performance for the reciprocating engine for NOx is 150 mg/Nm^3 (@ 15 % O_2) (equivalent to 450 mg/m^3 @ 3% O_2) for both fuels. This is compared to emission levels (IPPC, 2017) of 147-380 mg/Nm^3 for gas and 1531-1751 mg/Nm^3 for distillate.

The RTS only considers a single reference (IPPC, 2017) and does not include a detailed benchmarking and evaluation of feasible emission controls for the Proposal as required.

The benchmarking of control technology and NOx emissions has not considered the application of best available technology and achievable emissions levels from experience in other jurisdictions. Given that NOx is an ozone precursor and that the proposed power station would be in an ozone non-attainment area, NOx emissions should be as low as reasonably and feasibly achievable. Further, as NOx is a precursor to secondary particle formation and the proposed power station would be in a $PM_{2.5}$ non-attainment area, NOx emissions should be as low as reasonably and feasibly achievable.

Achievable emission levels for NOx have been demonstrated to be significantly lower than those referenced and proposed in the RTS AQIA benchmarking. This is demonstrated in the AQIA's figure 6.3 which shows in stack NOx emissions, which are not necessarily best practice, are generally far less than 100 mg/m^3 (@ 15 % O_2) and therefore the proposed 150 mg/m^3 is not best practice (Figure 6.3 reproduced below).

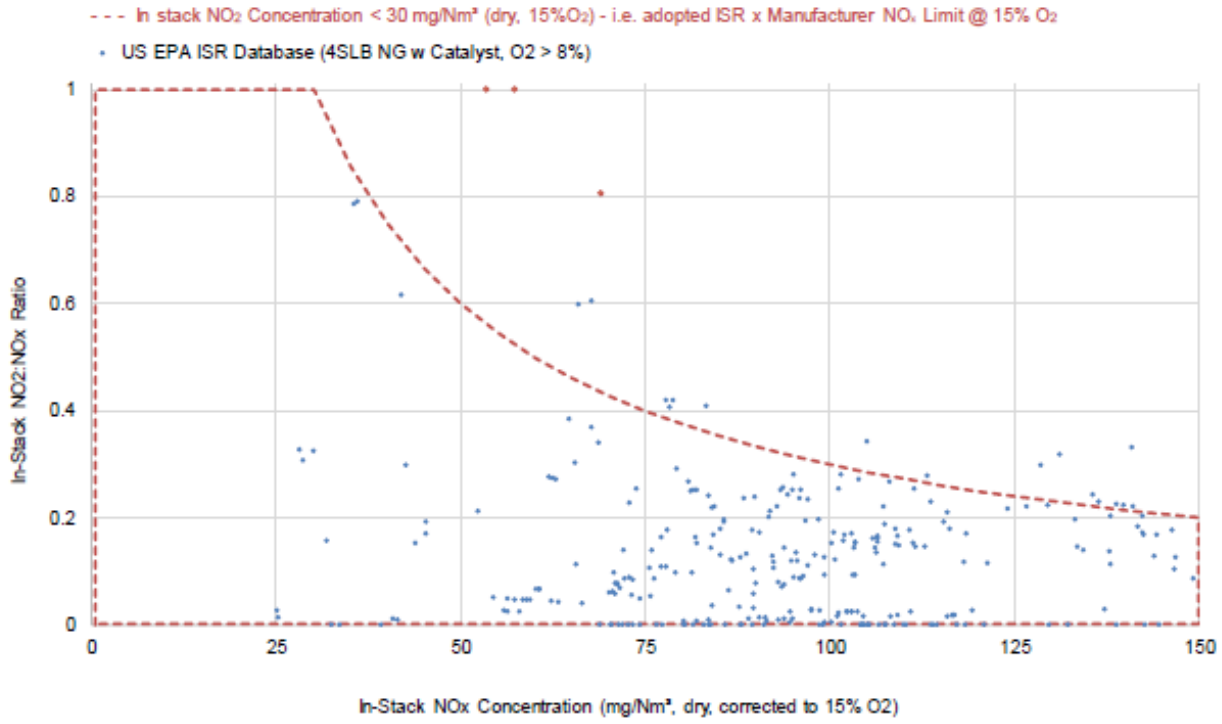

Figure 6.3: ISR vs in-stack NO_x concentration from filtered US EPA ISR database

Additional best available technology emissions limits are available for the US EPA and US state and district jurisdictions which include, but are not limited to: South Coast and Bay Area Air Quality Management Districts, California Air Resources Board and the US EPA's Clean Air Technology Centre.

NOx limits using best available technology are as low as 2 ppmv (~4 mg/m^3) @ 15 % O_2 for 1 hour. Examples of best available technology and emission limits currently in use are available at the following locations:

https://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en
http://www.aqmd.gov/docs/default-source/bact/laer-bact-determinations/aqmd-laer-bact/part-b-section_1-2-1-19-combined-cycle-gas-turbine.pdf?sfvrsn=14)
http://www.aqmd.gov/docs/default-source/bact/laer-bact-determinations/aqmd-laer-bact/ic-engine-a-n-388869---bear-valley-electric.pdf?sfvrsn=0
http://www.aqmd.gov/docs/default-source/bact/laer-bact-determinations/other-laer-bact/partb_sec2_2-1-19_combined_turbine.pdf?sfvrsn=6
https://www.baaqmd.gov/~/media/files/engineering/bact-tbact-workshop/combustion/96-3-3.pdf?la=en
https://www.baaqmd.gov/~/media/files/engineering/bact-tbact-workshop/combustion/89-1-6.pdf?la=en
https://ww3.arb.ca.gov/energy/dg/guidance/gappb1.pdf?_ga=2.3364025.885341680.1589873613-929938400.1589873613

2) Ozone and inter-regional transport assessment

Further refined assessment and consideration is needed of the ozone exceedances for both turbines and reciprocating engines for 24 hours/day operation. This issue could be adequately addressed via commitment to additional emission control based on the benchmarking required under issue 1 (above) and in accordance with the BMP determination requirements of the EPA's *Tiered Procedure for Estimating Ground-Level Ozone Impacts from Stationary Sources.*

The EPA recommended the proponent conduct an ozone and inter-regional transport assessment. The ozone assessment must be conducted in accordance with *Tiered Procedure for Estimating Ground-Level Ozone Impacts from Stationary Sources.*

The revised AQIA has included an additional section on ozone assessment. The ozone assessment followed the NSW *Tiered Procedure for Estimating Ground-Level Ozone Impacts from Stationary Sources* to determine that as Newcastle region is in a non-attainment zone and NOx and VOC emissions exceed the threshold for both 14 % and 100 % operation scenarios a level 1 screening is required.

The assessment correctly states that the screening procedure is not ideally suited to a peaking plant with discontinuous operations. Nevertheless, the level 1 screening assessment shows that only the gas turbine operating for 6 hours a day was below the screening impact level of 0.5 ppb and the maximum allowable increment of 1 ppb. For all other proposed power station configurations and operating regimes, the impact assessment criteria was exceeded.

Instead of progressing to a level 2 ozone assessment, the revised AQIA considers previous studies on ozone and interregional transport, including:

- Impact of emissions from the proposed Tomago power station on photochemical smog in the greater Sydney region, Commonwealth Scientific and Industrial Research Organisation (CSIRO), 2003.
- *Photochemical Pollution Assessment of a Proposed Gas-Fired Power Station at Munmorah*, CSIRO, September 2005, https://www.snowyhydro.com.au/wp-content/uploads/2015/02/Technical-Paper-5-Photochemical-Pollution-Assessment.pdf
- Report on the Assessment of Development Application No.165 05 2002-I Pursuant to Section 80 of the Environmental Planning and Assessment Act, 1979 Proposal by Macquarie Generation to Construct and Operate a Combined Cycle Gas Fired Power Station and Associated Infrastructure at Tomago, in the Port Stephens and Newcastle Local Government Areas, Department of Infrastructure, Planning and Natural Resources (DIPNR), October 2003, https://majorprojects.accelo.com/public/b6d46365f51674f664e366d52cdcce1a/Gas%20Fired%20Power%20Station,%20Tomago%20Assessment%20Report.pdf

The CSIRO (2003) study modelled potential smog generation for a 790 MW dual-fuel gas turbine plant in the Newcastle region. The studies on the proposed Tomago power station predicted net increases in ozone to be 0.2 %. The CSIRO (2005) study on the proposed 660 MW Munmorah gas turbine power on the Central Coast predicted no exceedances of NO_2 and O_3 standards.

These studies of ozone impacts from previously assessed power station proposals only include turbine plants and not reciprocating engines. The CSIRO (2005) report for the Munmorah power station ozone assessment was modelled for a turbine running on distillate with NOx emissions of 162.2 g/s and included the proposed Tomago power station with NOx emissions of 99 g/s in the scenario. In comparison, the AQIA models the emission rate for the proposed Newcastle power station of 56 g/s (14 g/s x 4 stacks) for gas turbine running on distillate and 84.5 g/s (6.5 g/s x 13 stacks) for reciprocating engine running on distillate.

The CSIRO (2005) modelling for ozone only included proposed power station NOx emissions and did not include power station VOC emissions. Additionally, the results of CSIRO (2005) indicate potential for exceedances of the maximum allowable increment (and screening impact level) under the EPA's *Tiered Procedure for Estimating Ground-Level Ozone Impacts from Stationary Sources,* at some locations in the modelling domain.

The revised AQIA has not updated these models for the current proposal or justified and validated the older models (and their associated emission inventories) used in these studies for the case of ozone formation for the proposed Newcastle Power Station. The conclusions drawn in the revised AQIA of the ozone impact from the proposal cannot be supported by the current level of information provided.

Only the proposed gas turbines when operating less than 6 hours/day are predicted to have ozone concentrations that will not exceed applicable assessment criteria. However, the proposed power station will be designed for continuous operation and therefore the proponent needs to consider potential secondary pollution formation, including ozone, in a non-attainment region should the proposed power station operate continuously in the future.

3. Assessment of emission variability, including start-up and shutdown emissions.

If the proponent wishes to gain approval to use diesel fired reciprocating engines, additional information must be provided, including revised assessment with the higher start-up emission and demonstration that emissions are being prevented and minimised.

The EPA recommended that the proponent prepare a revised assessment which adequately considers emission variability, including an assessment of emissions and impacts from plant start-up, shutdowns and variable load.

The revised AQIA includes a review of emissions from start-up and shutdown as an appendix.

The review of gas turbine start-up and shut down emissions indicate lower NOx and CO emissions than operation. Aeroderivative gas turbines of the scale proposed are capable of progressing from rest to full load on time scales in the order of 5 to 10 minutes. These durations include the period prior to ignition (e.g. purging of the turbine), and the time during which the turbines are ramping up to full output.

The review in the revised AQIA provides emission estimates from a California power plant proposal (CH2MHILL, 2010) for start-up and shutdown emissions for a gas-fired LM6000PC gas turbine, which is a water-injected aeroderivative turbine of the scale of those being considered for the Proposal. Over an 8-minute period (from ignition to 100% load), NOx and CO emissions were estimated at 3.5 and 3 pounds (lb) respectively, which equates to average emission rates of 3.3 and 2.8 g/s over this period. These emission rates are similar in scale (slightly lower) to operational NOx and CO emission rates of approximately 5.4 and 3.3 g/s. Over an 8-minute shutdown period, NOx and CO emission estimates are 2.7 and 2.4 lb (respectively), which are lower than those during operation, as well as those estimated over a corresponding 8-minute start-up period, and consequently of lesser significance than operational emissions.

The review of reciprocating engine start-up and shutdown indicate higher NOx and CO emissions than operation and longer start-up and shutdown periods than for a gas turbine, as reciprocating engines employ post-combustion controls (SCR and oxidation catalysts) which require additional time beyond the engine start-up to reach optimal operating conditions.

In the case of diesel operation, whilst the engines are capable of reaching full operating load in 5 minutes, elevated NOx emissions are estimated to continue for up to 30 minutes after commencement of start-up. The duration of this condition depends on the pre-starting temperature of the catalyst bed, which in turn is a function of time since the given unit was last operational.

The revised AQIA includes manufacturer estimates of NOx emissions for a start-up hour:

Table B.1: Comparison of Reciprocating Engine emissions under start-up and operation

Emission Scenario	NOx		CO		Units
	NG	DO	NG	DO	
Operation (full load)	22	23	6	6	kg/hr
Start-up	23	116	6	14	
Proportion: Start-up vs Operation	125%	573%	119%	252%	-

Based on the information presented, emission estimates for start-up and shutdown for natural gas for both the turbine and reciprocating engine are likely to be similar or less than operational emissions.

The start-up and shutdown emissions from distillate from reciprocating engines are likely to be significantly higher than normal operation and distillate from turbines are not provided but are proposed to be similar to operational emissions.

4. Verification of emissions

The proponent should model emissions based final design and emission specifications.

The AQIA has stated that emissions were either estimated from manufacturer data or USEPA AP-42 emission factors (Table 6.1) and given a summary of emission rates (Table 6.6) used in the

modelling to assess impacts. The EPA advised this is not sufficient information to audit and evaluate the emission rates used in modelling (Table 6.6).

The EPA requested a revised air quality assessment based on final plant design. As the emissions inventory is the foundation of the air quality assessment, a detailed discussion of the methodology used to calculate emission rates for each source was requested, including all supporting information such as manufacturer data where no measurements are available.

The EPA also recommended the proponent provide emission rates in both g/s and kg/yr in the emissions inventory.

The revised AQIA has included annualised emissions for all pollutants for both gas turbines and reciprocating engines running on each fuel type for both 14 % and 100 % operation.

5. Revised assessment of acrolein exceedances

If the reciprocating engine option is the preferred option, the proponent must consider additional controls and actions to reduce acrolein emissions and the potential for acrolein exceedances during operation.

The EPA requested that the assessment be revised to:

a) Benchmark the preferred project option against best practice process design and emission control
b) Robustly demonstrate that principal toxic air pollutants will be minimised to the maximum extent achievable
c) Refine the modelling assessment to demonstrate compliance with the impact assessment criteria set out in the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*.

This was necessary because the proposed option of the reciprocating engine using natural gas exceeds the Impact Assessment Criteria (IAC) of 0.42 µg/m^3 for acrolein at the two nearest discrete receptors (0.68 µg/m^3) and beyond the boundary (1.25 µg/m^3).

The revised AQIA includes an analysis of the meteorological conditions that result in exceedances of the impact assessment criterion (IAC) of acrolein. Exceedances of 0.42 mg/m^3 IAC occur for 72 hours of the 8760 meteorological dataset (365 days) and occur:

- During daytime (8am-3pm) (70%)
- During neutral conditions (C & D class stability)
- With strong winds > 6.5 m/s (97 %)
- With moderate temperatures (10-30 °C)

The conditions that are associated with acrolein exceedances do not align with times the proposed plant is likely to operate as a peaking plant.

Noise Impacts

1. Demonstration that attenuated sound power levels can be achieved

The EPA requires demonstration that the adopted attenuated sound power levels are feasible and reasonable to achieve, and whether noise emissions from the proposal can be feasibly and reasonably made free of annoying noise characteristics including low-frequency and/or tonal modifying factors.

The EPA requested detailed information to demonstrate that the adopted attenuated operational sound power levels were feasible and reasonable to achieve, as well as a comprehensive assessment of the applicability of any annoying noise characteristics including low-frequency and/or tonal modifying factors. The EPA recognises that this is a significant infrastructure project and remains concerned about the potential for significant noise impacts, including low-frequency and tonal noise emissions, from facilities of this nature based on its past experience.

This information could be in the form of, but not limited to, manufacturer guaranteed sound power levels and spectra; or data from reviews of other existing power stations using similar technology, plant and equipment.

The proponent responded to these requests by stating that they are in a commercial tender process with multiple vendors for delivery of the project. The proponent advises that both attenuated sound power level data and spectral data for the project components are commercial-in-confidence and have not yet been provided by tenderers.

The proponent has stated that the tender process would require vendors to achieve the noise criteria in the Noise and Vibration Assessment (NVA) and be free of annoying characteristics to avoid tonal or low frequency noise penalties under the Noise Policy for Industry. These commitments do not, however, allow the EPA to assess whether the substantial operational noise attenuation factors adopted in the NVA, and penalty-free spectral noise emissions, are feasible and reasonable to achieve prior to any approval for the project, if granted.

The EIS therefore does not fulfil the requirements of the NSW Environmental Planning and Assessment Regulation (2000) Schedule 2 Part 7(1)(d)(iv) which states that an EIS must include "a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment".

2. Other noise issues

1. The EPA recommends that the proponent adopt LAeq(15minute) descriptors for the Project Amenity Noise Levels in Table 5-3 and Table 5-4 of the NVA, in accordance with the process in Section 2.2 of the Noise Policy for Industry, to ease compliance assessment requirements and maintain consistency across receivers and time periods. The project noise trigger levels in Table 5-4 of the NVA should be revised to account for this change, and the assessment results and conclusions throughout the NVA should also be revised to account for this change.

2. The EPA notes that the project amenity noise criteria for receiver R4 have been revised following EPA's previous comments, however the 5 dB adjustment for a project based- criterion has been omitted and the R4 criteria are now 10 dB higher than for an equivalent residence. The project amenity noise criteria for R4 should thus be reduced by 5 dB to 60/50/45 (Day/Evening/Night).

From:	Brendan.M Hurley
To:	Mandana Mazaheri
Cc:	Fire Safety
Subject:	Newcastle Power Station (SSI 9837) - Submissions Report. BFS20/1324
Date:	Tuesday, 5 May 2020 1:08:10 PM
Attachments:	image002.png image004.png image006.png image008.png image010.png image012.png image014.png

Newcastle Power Station (SSI 9837) - Submissions Report

Dear Mandana,

I refer to the submission of the request for agency input for the response to submissions, dated 30th April 2020, for the above development to Fire & Rescue NSW (FRNSW).

FRNSW reaffirm comments and recommendations previously submitted (2nd January 2020) in preparation of the Environmental Impact Statement (EIS) and maintain that they remain relevant in addressing fire and life safety considerations for the proposed development.

FRNSW notes that on page 63 of the EIS Submissions Report dated April 2020, "AGL notes that an updated FSS is required and acknowledges that this will be finalised upon completion of the detailed design" and "the proposals PHA will also be progressed to a Final Hazard Analysis at the completed design stage".

FRNSW are satisfied with this proposal and response to submissions.

For further information please contact the Fire Safety Infrastructure Liaison Unit, referencing FRNSW file number BFS20/1324. Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Regards
Brendan

Fire and Rescue NSW

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Hunter New England Population Health
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18 May 2020

Dr Mandana Mazaheri
A/Team Leader
Energy, Resources & Compliance Division
Department of Planning, Industry & Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Dr Mazaheri

AGL - NEWCASTLE POWER STATION (SSI-9837)
OLD PUNT ROAD TOMAGO - Response to Submissions

I refer to your advice inviting comment on the Response to Submissions (RTS) exhibited on the NSW Department of Planning, Industry & Environment web site in relation to the Newcastle Power Station SSI-9837). Hunter New England Population Health (HNEPH) has reviewed the RTS and makes the following comments for your consideration.

The HNE Health previous response to the EIS (11 December 2019) states that:

(1) When taking into account the cumulative air quality impacts, the air shed appears to be at the limit for $PM_{2.5}$ annual (at 8.1µg/m^3) and while this development will add only a small increment (to 8.3µg/m^3), the air shed already exceeds the $PM_{2.5}$ maximum annual concentration standard.

And

(2) It is noted also that the NEPC has included a reduction in long-term $PM_{2.5}$ targets as a simplified approach for an exposure-reduction framework, bringing the annual average target to 7 µg/m^3 and the 24-hour target to 20µg/m^3), to be achieved by 2025."

The proponent's response to (1) above was:

> 'During operation, there would be minor exceedances of PM2.5 when compared to the NSW EPA air quality impact assessment criteria, however, this needs to be considered in the context of existing elevated background levels.'

The point of our comment in (1) above is that the background levels are already elevated, and that is an argument for not increasing inputs into the air shed with resulting negative impacts on human health. The proponent has interpreted elevated background levels as a justification for increasing levels. While minor in itself, the total air shed impact is comprised of multiple minor inputs.

The proponent's response to (2) above, is to note the current guideline level, to which they are not ensuring compliance, and does not express an intention to comply with the more stringent future pollution goals.

Hunter New England Local Health District
ABN 63 598 010 203

Hunter New England Population Health
Locked Bag 10
Wallsend NSW 2287
Phone (02) 4924 6477 Fax (02) 4924 6490
Email HNELHD-PHEnquiries@hnehealth.nsw.gov.au
www.hnehealth.nsw.gov.au/hneph

We would seek the proponent's commitment to modify the proposed process to ensure that the proposal does not contribute to exceedances of current or future $PM_{2.5}$ standards in Newcastle. A key interest in assessing the future impacts of this development, will be in whether it can meet future national goals.

If you require any further information please telephone Cindy Gliddon, Environmental Health Officer on 4924 6477 or email HNELHD-PHEnvironmentalhealth@health.nsw.gov.au

Yours sincerely,

Dr David Durrheim
Director - Health Protection
Hunter New England Population Health

14 May 2020

NSW Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

APPLICATION NO: SSI 9837 (Our Ref. 25-2019-3-1)

PROPOSAL: Newcastle Gas Fired Power Station Project

PROPERTY: 1940 Pacific Highway, TOMAGO 2322 (Lot: 3 DP: 1043561)

Dear Mandana Mazaheri,

Thank you for your request dated 30 April 2020 requesting Councils comments on the applicants response to submissions for the proposed Newcastle Power Station (SSI 9837), located at approximately 1940 Pacific Highway, Tomago NSW 2322, currently under assessment by Department of Planning, Industry and Environment (DPIE).

On the 18th December 2019, Council provided comment on the proposed development, highlighting a number of matters, recommended to be considered by DPIE in its assessment of the application. The key matters raised relate to stormwater engineering, flooding, traffic impacts and impacts to biodiversity.

In consideration of the additional information submitted in the applicant's response to submissions, Council makes the following comments.

Stormwater engineering

Stormwater

The following is noted with regard to stormwater discharge and the identification of any necessary easements:

- It is noted that page 34 of the Submissions Report details that the site is located over 2 lots (Lot 3 & 2 DP 1043561) and therefore an easement is not required. Despite this, ownership of separate lots by the same owner does predicate that no easement is required. Easements would still be required for any discharge flow paths or pit and pipe networks on unconsolidated lots.
- It is noted that there is no intention to discharge water over downstream owner's lots (such as Lot 54 DP 570494) but that easements would be required if detailed design required flows.

Water Quality

Given the development is located in a Hunter Water drinking water catchment special area, the applicant needs to demonstrate both Treatment Train Effectiveness (TTE) and Neutral or Beneficial Effect (NorBE) water quality outputs. The applicant has mentioned in the EIS that only NoRBE will be addressed, however they have not included a TTE analysis for the proposed works. This is recommended as a condition of consent, as detailed in Appendix A of this letter.

14 May 2020

Flooding

The proposed power station site is above PMF level and therefore, it is unlikely to have any impact on changing flood levels or flow patterns or velocity outside the property area. Subject to the recommended conditions in Appendix A of this letter, the application is considered satisfactory with regard to flood hazard.

Road Network and Traffic

It is noted that the applicant has continued consultation with TfNSW with regards to impacts on the future Pacific Highway upgrades. Council has no further comment to make in this regard.

Biodiversity Assessment

AGL's responses and the provision of additional information satisfactorily addressed Council's concerns regarding EPBC matters and the BDAR. As such, Council has no further comment to make in this regard.

Thank you for the opportunity to comment on the proposed development. If you wish to discuss the matters raised above or have any questions, please contact me on the below details and I will be happy to assist.

Yours Sincerely,
Dylan Mitchell
Senior Development Planner
Development Assessment and Compliance

14 May 2020

Appendix A: Recommended Conditions

Note: The following conditions are recommended to be applied, as detailed in the discussion within this letter. Council does not object to the modification of these conditions, should the consent authority have equivalent conditions which maintain the same intent.

Condition Title	Condition
Structural engineers Report – Alterations and Additions	A certificate must be prepared by a qualified Structural Engineer certifying the structural adequacy of the property and its ability to withstand the proposed additional, or altered structural loads, must be provided to the satisfaction of the Certifying Authority.
Potential Acid Sulfate Soils	A geotechnical assessment of the site is to be undertaken to determine whether the development works will disturb Potential Acid Sulfate Soils (ASS). Should ASS be encountered within the zone of works, an ASS Management Plan is to be prepared by a suitably qualified Geotechnical Engineer and submitted to the Certifying Authority. The recommendations and/or mitigation measures contained within the ASS Management Plan must be complied with during works.
Civil engineering Plans	Civil engineering plans prepared by a qualified Engineer, indicating drainage, roads, accessways, earthworks, pavement design, street lighting, details of line-marking, traffic management, water quality and quantity facilities including stormwater detention and disposal, must be prepared in accordance with the approved plans and Council's Infrastructure Specifications. Details demonstrating compliance must be provided to the Certifying Authority. Note. Under the Roads Act 1993, only the Roads Authority can approve commencement of works within an existing road reserve.

14 May 2020

Stormwater/Drainage Plans	Detailed stormwater drainage plans must be prepared by a qualified Engineer in accordance with the approved plans, Council's Infrastructure Specifications, Council's Development Control Plans and the current Australian Rainfall and Runoff guidelines using the Hydrologic Soil Mapping data for Port Stephens (available from Council). Details demonstrating compliance must be provided to the Certifying Authority. Note. Under the Roads Act 1993, only the Roads Authority can approve commencement of works within an existing road reserve.
Flood Management Plan	A Flood Risk Management Plan prepared a qualified Flood Engineer must be provided to the Certifying Authority demonstrating compliance with the following: a) The design must show that the proposed development is capable of withstanding the effects of flood waters, including immersion, structural stability, buoyancy and impact and loading from debris up to and including the 1% Annual Exceedance Probability (AEP) event. b) Certification that the proposed development is capable of withstanding the force of any flood waters experienced up to the Probable Maximum Flood Event (PMF). c) Certification demonstrating that any damage to the proposed development sustained in a flood will not generate debris capable of causing damage to downstream buildings or property d) Certification demonstrating that the rainwater tank, finishes, plant fittings and equipment and any other buoyant fixtures will be of materials and functional capacity to withstand the forces of floodwater in events up to and including the 1% AEP event including hydrostatic pressure, hydrodynamic pressure and buoyancy forces.
Stormwater System Operation and Maintenance Procedure Plan	An Operation and Maintenance Plan for the stormwater system must be prepared by a qualified engineer detailing a regular maintenance programme for pollution control devices, covering inspection, cleaning and waste disposal. Details demonstrating compliance must be provided to the Certifying Authority.

14 May 2020

Soil, Erosion, Sediment and Water Management	An Erosion and Sediment Control Plan (ESCP) must be prepared in accordance with Council's Infrastructure Specifications. Details demonstrating compliance must be provided to the Certifying Authority.
Roads Act Approval	For construction/reconstruction of Council infrastructure, including vehicular crossings, roads, footpath, kerb and gutter, stormwater drainage, an application must be made for a Roadworks Permit under Section 138B of the Roads Act 1993.
Flood Emergency Response Plan	A Flood Emergency Response Plan (FERP) for the proposed development must be provided to the Principal Certifying Authority. The FERP must include the following as a minimum: a) A map of the proposed evacuation route to a suitable location above the Probable Maximum Flood (PMF) that provides adequate shelter from the storm, including the route direction and description and identification of the depth of floodwater along the evacuation route in the 1% Annual Exceedance Probability flood and PMF events; b) Specific trigger heights linked to the nearest river and tidal gauges used for flood warnings and the specific evacuation route cut-off times linked to the gauge height; c) Description of the specific flood inundation at the site and the relevant surrounding area, including flood depths, direction of flow, velocities, hazard and specific relevant vulnerabilities; d) Consideration of and strategies for, the needs of the elderly, disabled and vulnerable who may be on site; e) A realistic time period for evacuation preparations linked to the trigger heights and evacuation route cut-off times, which includes: I. Locating important papers, valuables etc., that will be evacuated II. Locating and stacking possessions that are to be left behind, well above the predicted flood level

14 May 2020

	III. Dealing with all utilities such as electricity, gas, water, fuel, toilets, showers, wastewater system (including removal fuses) and moving pumps and machinery above the predicted flood level IV. Time to gather, identify and load animals (pets, livestock and other animals), including the possible need for additional assistance in handling your animals in an emergency. f) Determining the vehicular needs of the site to appropriately respond to the flood risk; g) A strategy for a night time flood emergency; and h) A strategy for effective flood risk management when the electricity, internet, telecommunications etc., are unavailable. Note: Digital elevation data is available from Geosciences Australia, current flood studies are available on Council's website and river gauge/ tidal gauge data is available from the Bureau of Meteorology website

CR2020/002368
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22 May 2020

Department of Planning, Industry & Environment
Energy & Resources - Planning and Assessment
GPO Box 39
Sydney NSW 2001

Attention: Mandana Mazaheri

PACIFIC HIGHWAY (H10) - SSI 9837: NEWCASTLE POWER STATION PROJECT, LOT: 2 & 3 DP: 1023561, 1940 PACIFIC HIGHWAY TOMAGO

Transport for NSW (TfNSW) advises that legislation to dissolve Roads and Maritime Services and transfer its assets, rights and liabilities to TfNSW came into effect on 1 December 2019. It is intended that the new structure will enable TfNSW to deliver more integrated transport services across modes and better outcomes to customers and communities across NSW.

For convenience, correspondence, advice or submissions made to or by Roads and Maritime Services prior to its dissolution, are referred to in this letter as having been made to or by 'TfNSW'.

On 2 May 2020, TfNSW accepted the referral by the Department of Planning, Industry and Environment (DPIE) through the Planning Portal for abovementioned application. DPIE referred the report to TfNSW for comment. This letter is a submission in response to that referral.

TfNSW's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

TfNSW response

TfNSW have reviewed the Environmental Impact Statement Submissions Report (the Report) prepared by AGL, dated April 2020, and relevant Appendices. While it is acknowledged the Report addresses some of the comments previously provided by TfNSW, TfNSW note still there are unresolved issues with the proposal.

TfNSW highlighted these issues and provided feedback in the Table attached to this letter.

Should you require further information please contact Kumar Kuruppu, Development Assessment Officer, on 0429 037 333 or by emailing development.hunter@rms.nsw.gov.au.

Yours sincerely

Marc Desmond
A/Manager Land Use Assessment
Hunter Region
Attach.

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
1	Transport's major concern with the proposal is the impacts of NPS to the committed Critical Infrastructure Project, M1 Motorway extension to Raymond Terrace (M12RT).	Continued commitment from AGL is required to enabling the future delivery of the M12RT project.	Partial	*CU-1: AGL would continue to engage with Transport for NSW as to the collaborative design and construction processes to reduce the cumulative visual impact of the projects (the Proposal and M12RT project).* **This only commits to consultation, not actions and conditions of approval.**
2	Noting the interaction of the proposed Newcastle Gas Power Station and the M12RT project, Transport have been holding negotiations and design reviews with the proponent AGL to ensure that both projects can be delivered across the site. It is also vital that AGL continue to engage with Transport in subsequent development stages to resolve the interfacing impact between the proposed development and M12RT project.	AGL shall continually liaise with Transport on the design of both State Significant Project proposals to ensure both can be delivered in this constrained area.	Yes	*CU-1: AGL would continue to engage with Transport for NSW as to the collaborative design and construction processes to reduce the cumulative visual impact of the projects (the Proposal and M12RT project).*
3	It is noted that the EIS does not make any commitments to providing a project that adequately allows for the provision of the M12RT project in Section 9, Mitigation and Management.	The EIS needs to provide further detail ensure that the M12RT project can be constructed and that there are no future constraints to the operation of the road network, particularly Old Punt Road.	Partial	*CU-1* only commits to consultation, not actions and conditions of approval. Some of the mitigation measures listed *T-1 to T-8* address issues in part. Details referenced below against specific items.

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
4	Transport has recently tabled a key design change to AGL in the area of their proposal. This redesign would minimise the interaction between the M12RT project and the proposal across AGL land, supporting the position above. A copy of our current strategic design, which AGL indicated initial support, is attached. (Please note this design is currently being developed into a concept design level of detail for the M12RT EIS and is not finalised to date. There may be further changes required in this highly constrained location). The key changes that Transport has proposed include: • Minimisation of the interchange requirements across the AGL proposal land • Relocation of the interchange to the existing intersection of Pacific Highway / Old Punt Road. • Upgrades to Old Punt Road to provide improved road conditions, including heavy vehicle access to/from Tomago.	AGL shall liaise with Transport for NSW, and ensure the proposal enables design and construction of the M12RT project.	Partial	AGL have recognised the need for continued consultation (*CU-1*) but have not made critical commitments to ensure the delivery of the M12RT project. There have been major changes made to address major conflicts of the two infrastructure projects and there needs to be adequate commitments / conditions applied to the proposed Power Station to ensure the long term viability of the road network. Refer to following comments below.

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
5	The Proposal includes major utility connections across / within the Old Punt Road corridor. There have been no mitigation measures and limited details included addressing the manner in which these proposed works will be constructed or protected to ensure that Old Punt Road can be upgraded and continued to be maintained in the future.	In this regard, AGL shall provide plans detailing how these utilities works are going to be constructed, protected and maintained in the future.	No	The critical commitments include: *T-6: Prior to construction of the Proposal, AGL undertakes to share designs and collaborate with Transport for NSW to ensure that there is no restriction to the development of the M12RT project and associated local or state roads.* **T-6: This only commits to collaboration, this does not address the issues that are specifically required to be included as commitments or conditions for approval to ensure the M12RT project and road network is not impacted.** *T-7: AGL will design proposed utilities to be adequately protected and/or have suitable vertical clearance so as not to limit the current operation of the road reserve. AGL undertakes to collaborate with Transport for NSW upon finalisation of the M12RT design/exhibition to ensure that there is no restriction to the development of local and state roads relevant to M12RT.* **T-7: This only commits to addressing the <u>current</u> operation of the road network conditions and only collaborating on the future network, which is unacceptable and against all consultation to date.** **The commitment and associated condition needs to include a requirement for all protection measures to provide for the future operation of the road network, particularly the design and construction of the M12RT.**

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
6	The Proposal includes major utility connections across / within the Old Punt Road corridor. There have been no mitigation measures and limited details included addressing the manner in which these proposed works will be constructed or protected to ensure that Old Punt Road can be upgraded and continued to be maintained in the future.	The issues to consider include: Gas Utilities 1. Transport is aware that there are existing gas utilities in the Old Punt Road corridor. AGL should assess whether these utilities that are being connected to are adequately protected and enable future road upgrades along Old Punt Road. 2. The future connections to the proposal should be located where they are adequately protected and / or relocated to ensure there are no conflicts with the future construction of the M12RT and associated upgrade to Old Punt Road. 3. The AGL proposal suggests directional drilling of major gas utilities across the Old Punt Road corridor at depths of only 900-1200 deep. This is very likely to impact on M12RT constructability and maintenance as well as the current assets within the Old Punt Road corridor.	No	**While more information and clarification has been provided in Section 4.3 of the Submissions Report, there are still the following issues:** **1. T-7 only commits to providing protection for current road conditions and collaboration with TfNSW regarding the M12RT project is inadequate for a commitment or condition.** **2. T-7 only commits to providing protection for current road conditions and collaboration with TfNSW regarding the M12RT project is inadequate for a commitment or condition.** **3. AGL have provided clarification that directional drilling would be lower than 1200mm but do not define or prescribe a distance they are willing to commit to achieving.** **While they describe that it will be deep enough to avoid impacts to the road and existing services it is left undefined and also does not recognise the potential impacts to the future construction of the M12RT.** **The information provided for the M12RT design includes the alignment of Old Punt Road moving to the immediate north and there has been no recognition or commitment to cater for this change.** **Without adequate design and protection of this directional drilling asset it is likely to cause major construction management issue for the M12RT project and long term operational management of the road.**

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
7	The Proposal includes major utility connections across / within the Old Punt Road corridor. There have been no mitigation measures and limited details included addressing the manner in which these proposed works will be constructed or protected to ensure that Old Punt Road can be upgraded and continued to be maintained in the future.	Transgrid Utilities 1. The provision of the new Transgrid connection to the facilities has been discussed during the development of the project. Clearance heights over Old Punt Road were raised as an issue that AGL would need to investigate further. It is unclear from the EIS what clearances have been provided from and over Old Punt Road. 2. The clearance heights over Old Punt Road should be consistent with over clearance over Tomago Road. Old Punt Road is a major heavy vehicle access road into the major Tomago industrial area. This road carries oversize/overmass (OSOM) vehicles regularly and this needs to be included in the design of the Transgrid utility connection. 3. Vertical clearance heights along the M12RT have been required to be at 12m. Old Punt Road is proposed as a major interchange connection to the M12RT. The vertical clearance provided over Old Punt Road should be subject to Transport and Transgrid agreement. 4. The new Transgrid towers should be located a suitable clearance from the Old Punt Road reserve to ensure Council / Transport have no horizontal clearance issue to manage in the future.	No	**While more information and clarification has been provided in Section 4.3 of the Submissions Report, there are still the following issues:** **1. T-7 only commits to providing vertical clearance for current road conditions and collaboration with TfNSW regarding the M12RT project is inadequate for a commitment or condition.** **The M12RT design has changed design to allow the Power Station proposal to proceed across the site and relocated the Motorway interchange to Old Punt Road. The M12RT is a Motorway standard road caters for large over-size/over-mass vehicles and the proposed Transgrid connection to the Power Station must not impact upon accessibility in/out of Tomago or this Motorway access strategy. A condition is required to be imposed that the vertical clearance of Transgrid lines over Old Punt Road must be no lower than the existing Transgrid lines that cross Old Punt Road.** **2. As above.** **3. As above.** **4. T-7 only commits to providing vertical clearance, not horizontal clearance. This is inadequate for a commitment or condition to ensure TfNSW does not have horizontal clearance issues when upgrading Old Punt Road for the M12RT project.**

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
8	All heavy vehicles accessing the site would do so via the intersection of the Pacific Highway / Old Punt Road. However, assessment of traffic impact at this intersection has not been provided with TIA. It is noted that a typical peak operation could see up to 120 B-Double tanker movements per day (in and out).	It is recommended to undertake traffic impact assessment on intersection of the Pacific Highway / Old Punt Road. Analysis should also be provided to demonstrate the longest B-Doubles servicing NPS site can safely complete a left hand turn to Pacific Highway.	Partial	**While additional traffic impact assessment (TIA) at the intersection of the Pacific Highway and Old Punt Road was carried out by SECA solutions, TIA does not demonstrate the longest B-Doubles servicing the Proposal can safely complete a left hand turn to Pacific Highway.**
9	It should also be noted that there doesn't appear to be an assessment of OSOM vehicles required to access the site during construction.	AGL should be required to identify and provide an adequate assessment of how these larger heavy vehicles would be accessing the site. Any road improvements as a result of this assessment would be the responsibility of AGL to develop and construct prior to construction of the proposal.	Partially	*T-3 Over Size Over Mass vehicle requirements would be addressed in Traffic Control Plans within the CTMP.* **EIS has committed to the provision of a CHR/s turn treatment at the site access point off Old Punt Road. However, other than T-3, no other assessment has been completed or committed for any other road improvement works that may be required for large vehicles to access the site.**

10	The proposed access from Old Punt Road would need to be adapted to the proposed Transport upgrade to Old Punt Road. The NPS proposal shall include the upgrade of Old Punt Road to accommodate the largest service vehicles accessing the AGL site as part of the AGL project. Further design will be required from AGL and will need to be adapted to fit to the upgrades required on Old Punt Road. In order to allow for right turns into the site access to occur in a safe, a channelised right turn treatment (CHR(S)) on Old Punt Road southbound has been proposed.	The road and intersection upgrade would be the responsibility of AGL. The upgrade work should comply with relevant standards appropriate for major heavy vehicle access.	Partial	*T-5: A CHR turn treatment on Old Punt Road is required to allow for the safe movement of construction traffic turning right into the site and to prevent queuing of vehicles along Old Punt Road. This must be designed in accordance with the Austroads Guidelines and to the satisfaction of PSC and Transport for NSW.* **The above condition is suitable with the additional comments included:** • **This would include full pavement reconstruction across the full road width that adapts to the M12RT design.** • **The trenching of the gas utilities is in the location of the proposed intersection. The conditions would include full protection of the gas utility and pavement reconstruction within the scope of the intersection upgrade.** • **Upgrade to the intersection prior to substantial works commence on site.** *T-8: AGL would design the access from Old Punt Road to integrate appropriately with any development proposal designs for the upgrade of Old Punt Road that are exhibited prior to commencement of the construction of the Proposal.* **T-8 is inadequate as AGL could start construction immediately after EIS approval and the commitment is negated. TfNSW is targeting display of the EIS in 2021 but is in a position to provide more than adequate information to enable the AGL proposal to progress.** **Proposed changed wording:** ***T-8: AGL would design the access from Old Punt Road to integrate appropriately with any***

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
				development proposal designs for the upgrade of Old Punt Road as part of the M12RT.
11	No potential hold area / point is proposed along the access road for at least 100m for allowing free flow into the site, noting that up to 66 truck movements and 270 staff movements are estimated for the AM peak hour construction traffic.	The access road shall be designed to ensure no queuing onto Old Punt Road at the site access. Design of internal roads and service area would only be confirmed as part of the detailed design for the site. As the application seeks approval for construction and operation of the power station, it is requested that a layout of the internal roads and service area be included (as stipulated in the SEARs - site plans and maps at an adequate scale showing the location and dimensions of all project components) and provide analysis that demonstrates adequacy of accommodating OSOM vehicles to access the site.	Partial	*T-5: A CHR turn treatment on Old Punt Road is required to allow for the safe movement of construction traffic turning right into the site and to prevent queuing of vehicles along Old Punt Road. This must be designed in accordance with the Austroads Guidelines and to the satisfaction of PSC and Transport for NSW.* **The above condition is suitable with the additional comments included:** • **This would include full pavement reconstruction across the full road width that adapts to the M12RT design** • **The trenching of the gas utilities is in the location of the proposed intersection. The conditions would include full protection and pavement reconstruction within the scope of the intersection upgrade** • **Upgrade to the intersection prior to substantial works commence on site.**
12	It is optimal for Old Punt Road upgrade and / or utility works (e.g. gas transmission and storage pipelines, and overhead electrical) to be completed as early stage in the AGL program (prior to power plant) to minimise the impact on existing road impacts and enable delivery of the M12RT project. It is noted that through discussions with AGL that the proposal construction works are intended prior to the likely timing for construction of the M12RT project.	1. All road works required to cater for the proposal shall be constructed prior to substantial commencement of the NPS project. 2. AGL shall install the assets in a manner that creates no limitations on the construction and /or operation of the road reserve (e.g. full protection of underground assets that facilitates road construction / operation, and design and construction of above ground assets that has suitable clearances in the road reserve that does not create constraint for Transport construction and operation in the road reserve).	No	**1. No commitment to completing road works prior to substantial construction on site. See previous comments.** **2. See all TfNSW issue responses which includes proposed additional conditions relating to completion of road works.**

	TfNSW Issue	TfNSW Previously Required Outcome in Submission	Addressed Adequately	TfNSW Submissions Report Response
13	The proposed emergency access point in north east corner of NPS site will likely interfere with proposed M12RT and it is not suitable to put vehicles on to the Pacific Highway or proposed motorway.	The EIS needs to provide further details, and undertake further consultation on this emergency access point prior to Transport accepting the location of the emergency access connection. Its location and design will need to adapt to the M12RT design through this area.	No	**DPIE should consider the critical nature of this issue and advise whether it needs to be resolved now.** **The western side of the proposal is bound by the Motorway and the Pacific Highway. TfNSW have stated the unsuitable nature of access along this boundary.** **AGL needs to identify the emergency access location and design prior to approval if they wish to access these roads for this purpose.**
14	The report identified the use of OSOM vehicles.	It is recommended that management of OSOM vehicle movements be included in the construction traffic management plan (CTMP).	Yes	T-3
15	The aboriginal heritage report highlights that Roads and Maritime Services will complete salvage on part of the AGL site, however as AGL will impact the heritage sites prior to Transport works, the cultural heritage salvage must be more comprehensively addressed in the AGL EIS.	Noting the timing of construction, if approval is being sought across the entire AGL site, there shall not be a reliance on Transport to address these issues as our actions can only be carried out after M12RT project approval is granted.	Yes	Clarification included removing any responsibility from TfNSW as part of this proposal.
16	There has been inadequate monitoring and modelling complete to demonstrate what the impacts of both construction and operational surface water discharges to the area affected by the M12RT project. Aquatic species protection thresholds do not appear to align with ANZECC and/or NSW SWQ objectives.	Appropriate and consistent criteria thresholds should be applied to the operation of the site. Any potential discharges to surface water or ground water should be confirmed by the appropriate regulatory authority to enable cumulative impact assessments to be made by both projects. Further monitoring and modelling needs to be completed prior to approval to understand direct and cumulative impacts of the proposed discharges with regards to M12RT.	Yes	**TfNSW would appreciate drainage design plans and assessment to enable simple integration into the M12RT project in future. This can be managed through CU-1.**