Our ref: DOC21/960769
Senders ref: SSI-30358083

Jack Turner
Senior Environmental Assessment Officer,
Energy Resource Assessment
Department of Planning, Industry and Environment
E-mail: Jack.Turner@planning.nsw.gov.au

Dear Mr Turner

Subject: Major Projects – New Request for Advice – Port Kembla Power Station (SSI-30358083)

Thank you for your email of 21 October 2021 requesting input on the abovementioned major project.

Attachment A lists the suggested environmental assessment requirements that will need to be addressed for the project. Attachment B lists the guidance material that will assist the preparation of the environmental assessment.

Also, we would like to bring to your attention that the "Transmission Options Assessment Zone" shown on several plans in the Scoping Report is over an area that is subject to an existing Biobank Agreement (BA421) owned by BlueScope Steel. This would not be supported. However, it appears that the options for lines and switching stations provided in the report are located outside of the Biobank Agreement area which is supported. Please refer to Biobanking Agreement Register at the following link for more information:
https://www.environment.nsw.gov.au/bimsprapp/AgreementDetails.aspx?ID=421

If you have any questions regarding this advice, please do not hesitate to contact Haley Rich, Senior Conservation Planning Officer, via haley.rich@environment.nsw.gov.au or 4224 4166.

Yours sincerely

4/11/2021
Michael Saxon

Director South East

Biodiversity and Conservation Division

Attachment A: EES Recommended Environmental Assessment Requirements (EARs) for Port Kembla Power Station

Attachment B: Guidance Material

Attachment A – EES Recommended Environmental Assessment Requirements (EARs) for the proposed Port Kembla Power Station (SSI-30358083)

1. Biodiversity

1. Biodiversity impacts related to the proposed project are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and Biodiversity Assessment Method.

2. The BDAR must document the application of the avoid, minimise and offset hierarchy including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.

3. The BDAR must include details of the measures proposed to address the offset obligation as follows;

   - The total number and classes of biodiversity credits required to be retired for the development/project;
   - The number and classes of like-for-like biodiversity credits proposed to be retired;
   - The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;
   - Any proposal to fund a biodiversity conservation action;
   - Any proposal to conduct ecological rehabilitation (if a mining project);
   - Any proposal to make a payment to the Biodiversity Conservation Fund.

   If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.

4. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the *Biodiversity Conservation Act 2016*.

2. Water and Soils

1. The Environmental Assessment (EIS) must map the following features relevant to water and soils including:
   a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).

b. Rivers, streams, estuaries (as described in s4.2 of the Biodiversity Assessment Method).
c. Wetlands (as described in s4.2 of the Biodiversity Assessment Method. Coastal wetlands include all areas mapped as 'Coastal Wetlands' under the *NSW Coastal Management State Environmental Planning Policy 2018*.
d. Groundwater.
e. Groundwater dependent ecosystems.
f. Proposed intake and discharge locations.

2. The EIS must describe background conditions for any water resource likely to be affected by the project, including:
   a. Existing surface and groundwater.
   b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.
   c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
   d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
   e. Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions.
3. The EIS must assess the impacts of the project on water quality, including:
   1. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the project protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
   2. Identification of proposed monitoring of water quality.
   3. How the development meets the objectives of the *Coastal Management Act 2016* and management objectives of relevant Coastal Management Areas defined under this Act.
   4. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan)
4. The EIS must assess the impact of the project on hydrology, including:
   a. Water balance including quantity, quality and source.
   b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.

c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water.
f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
g. Identification of proposed monitoring of hydrological attributes.

The EIS must also address the following site-specific requirements:

5. The potential impacts of the development on acid sulfate soils must be assessed in accordance with the relevant guidelines in the Acid Sulfate Soils Manual (Stone et al. 1998) and the Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004).
6. The EIS must describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
7. The description of existing water quality/hydrology in the EIS must be based on suitable data (meaning data collection may be required) and must include:
    a. Water chemistry.
    b. A description of receiving water processes, circulation and mixing characteristics and hydrodynamic regimes.
    c. Lake or estuary flushing characteristics.
    d. Sensitive ecosystems or species conservation values.
    e. Specific human uses and values (e.g. fishing, proximity to recreation areas).
    f. A description of any impacts from existing industry or activities on water quality.
    g. A description of the condition of the local catchment e.g. erosion, soils, vegetation cover.
    h. An outline of baseline groundwater information, including, for example, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment.
    i. Historic river flow data.
8. The assessment of the project on water quality and hydrology in the EIS must include:
    a. Water circulation, current patterns, water chemistry and other appropriate characteristics such as clarity, temperature, nutrient and toxicants, and potential for erosion.

b. Changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, and groundwater).
c. Disturbance of acid sulphate soils and potential acid sulfate soils.
d. Stream bank stability and impacts on macro invertebrates.
e. Water quality and hydrology modelling and/or monitoring, where necessary.

9. The proposed monitoring of water quality must be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Water Pollutant in NSW 2004. The EIS must include a water quality and aquatic ecosystem monitoring program that includes:
   a. Adequate data for evaluating maintenance, or progress towards achieving, the relevant Water Quality Objectives.
   b. measurement of pollutants identified or expected to be present.

3. Flooding

1. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:
   a. Flood prone land
   b. Flood planning area, the area below the flood planning level.
   c. Hydraulic categorisation (floodways and flood storage areas).
2. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.
3. The EIS must model the effect of the proposed project (including fill) on the flood behaviour under the following scenarios:
   a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 1 in 200 or 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
4. Modelling in the EIS must consider and document:
   a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.
   b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.
   c. Relevant provisions of the NSW Floodplain Development Manual 2005.
5. The EIS must assess the proposed project on merits, including:
   a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.

b. Consistency with Council floodplain risk management plans.
c. Compatibility with the flood hazard of the land.
d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.
h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
i. Emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

6. The EIS must describe the potential effects of coastal processes and hazards (within the meaning of the *Coastal Management Act 2016*), including sea level rise and climate change:
   a. On the proposed development
   b. Arising from the proposed development.
7. The EIS must consider have regard to any certified Coastal Management Program (or Coastal Zone Management Plan) and be consistent with the management objectives described in the Coastal Management Act 2016 and development controls for coastal management areas mapped under the *State Environmental Planning Policy (Coastal Management) 2018*.

The EIS must also address the following site-specific requirements:

8. The EIS must consider operational issues of the proposed critical utility during significant flood events up to and including a Probable Maximum Flood event.

4. Coastal Hazards & Coastal Management Areas

1. The EIS must describe the potential effects of coastal processes and hazards (within the meaning of the *Coastal Management Act 2016*), including sea level rise and climate change:
   a. On the proposed development
   b. Arising from the proposed development.
2. The EIS must consider the effects of coastal processes and hazards (within the meaning of the *Coastal Management Act 2016*), impacting the site under the following scenarios:
   a. Current sea level.
   b. Projected future climate change (including sea level rise) scenarios that have been peer-reviewed and widely accepted by scientific opinion.
3. The EIS must have regard to and document:
   a. Consistency with any certified Coastal Management Program (or Coastal Zone Management Plan) and coastal zone emergency action subplans
   b. Consistency with management objectives of Coastal Management Areas described in the *Coastal Management Act 2016* and relevant development controls described in the *Coastal Management SEPP 2018.*
   c. Consistency with any existing entrance management policies or strategies for coastal lakes and lagoons

Attachment B – Guidance Material

Title	Web address
Relevant Legislation	
Biodiversity Conservation Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
Coastal Management Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/20/full
State Environmental Planning Policy (Coastal Management) 2018	https://www.legislation.nsw.gov.au/#/view/EPI/2018/106/full
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Fisheries Management Act 1994	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
Marine Parks Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
National Parks and Wildlife Act 1974	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Wilderness Act 1987	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
Biodiversity Assessment Method (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by the	http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm

Title	Web address
Department of Environment, Climate Change and Water (DECCW, 2010)	
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	http://data.nsw.gov.au/data/
Acid Sulfate Soils Manual (Stone et al. 1998)	http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding and Coastal Hazards	
Coastal management	https://www.environment.nsw.gov.au/topics/water/coasts/coastal-management
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
Coastal Management Manual	https://www.environment.nsw.gov.au/topics/water/coasts/coastal-management/manual
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf
Water	https://www.environment.nsw.gov.au/topics/water
Stormwater management	https://www.environment.nsw.gov.au/stormwater/index.htm

Title	Web address
Waterway health assessment	https://www.environment.nsw.gov.au/water/waterway-health-assessment.htm
Using NSW Water Quality Objectives	https://www.environment.nsw.gov.au/water/planningusingwqos.htm
Risk based framework for considering waterway health.	https://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning

Our Ref: C21/689

Your Ref: SSI-30358083

10 November 2021

Jack Turner
Senior Environmental Assessments Officer
Energy, Resources and Industry – Planning and Assessment
Email: jack.turner@planning.nsw.gov.au

Dear Mr Turner,

Re: SSI-30358083 Port Kembla Power Station – Request for Secretary's Environmental Assessment Requirements (SEARs)

Thank you for your referral of 1 November 2021 seeking DPI Fisheries (a division of NSW Department of Primary Industries) environmental assessment requirements for the Port Kembla Power Station.

DPI Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPI Fisheries seeks to ensure that developments comply with the requirements of the *Fisheries Management Act* (1994) (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)* (DPI Policy). DPI Fisheries is also responsible for ensuring the sustainable management of commercial, recreational and Aboriginal cultural fishing, aquaculture, marine parks and aquatic reserves within NSW.

Port Kembla and its surrounding waters provides important key fish habitat and aquatic biodiversity values that sustain fish stocks and local fishing activity. Much effort has been placed into improving the aquatic environment within Port Kembla Harbour over the years and this has been valued by the community. Some of the creeks in the vicinity of the proposed transmission line are also considered to be key fish habitat. Maps of key fish habitat can be obtained from: Fisheries Spatial Data Portal (nsw.gov.au). It is important that the project be designed to avoid, minimise and mitigate impacts on this key fish habitat, aquatic biodiversity and the aquatic environment.

Port Kembla Outer Harbour and the waters surrounding the harbour provide a popular and accessible recreational fishing location in the Illawarra. The waters outside and offshore of Port Kembla Harbour also support frequent commercial fishing activities in the area. The proposal should be designed to avoid potential impacts to these fishing activities. Further, consultation with commercial and recreational fisheries should be considered as appropriate during the environmental assessment process. DPI Fisheries can assist with information on fishing practices in the area.

DPI Fisheries has reviewed the Port Kembla Power Station Scoping Report (GHD, October 2021). Considering aspects of the proposal with the potential to impact upon key fish habitat, the aquatic environment and fishing activities in the area, DPI Fisheries provides the following environmental assessment requirements for this proposal:

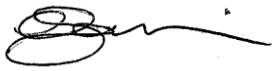
1) A clear description of the project and construction methodologies, including a clear justification for the proposal, and proposed design of the works.
2) A description of the key fish habitat, aquatic biodiversity and environment and commercial and recreational fishing activities within and adjacent to the footprint of the proposal.

3) An assessment of direct and indirect impacts to key fish habitat within and outside of Port Kembla Harbour from cable and pipe laying activities (noting the proposed under boring method).
4) An assessment of the direct and indirect impacts on key fish habitat streams on catchment lands that may be impacted from the construction and maintenance of the energy transmission lines and towers. This may include potential direct impacts to habitat during construction, erosion and sedimentation control impacts and impacts from any waterway crossings that may be required as part of this proposal. Waterway crossings within key fish habitat must not block fish passage.
5) An assessment of significance for any threatened species matters listed under the *Fisheries Management Act*. FM Act Assessment of Significance Guidelines can be found at: Threatened Species Assessment Guidelines - Assessment of Significance (nsw.gov.au)
6) An assessment of the potential for impacts to fish, plankton and aquatic biodiversity from the impingement and entrainment of aquatic organisms in the water intake system. This assessment is to consider research on flow rates that mitigate such impacts. Appropriate measures to mitigate potential impacts are to be described. DPI Fisheries recommends the assessment consider the assessment of impact, design and mitigation measures used in the Sydney Desalination Plant when planning measures to mitigate such potential impacts.
7) An assessment of the impact of the cooling water discharge site on water temperature, water quality, aquatic biodiversity and fish populations. The design of this discharge site is to include mitigation measures to quickly disperse such flows. Modelling of the zone of impact is to consider the temperature of the discharge water against the ambient water temperate and the seasonal variations in this. It should also consider any variations between when the cooling water is sourced directly from the Floating Storage Regassification Unit (FRSU) Unit of the discharge from this site and when it is perhaps sourced from the inner harbour during times when the FSRU may not be in operation.
8) An assessment of the impact of any aspect of the proposal (during both construction and operation of the facility) on commercial and recreational fishing activity in the area.
9) Any mitigation measures that will avoid, minimise or mitigate impacts to key fish habitat, the aquatic environment and biodiversity and fishing activity will need to be clearly described.
10) Assessment of cumulative impacts of this proposal and other proposals in the area (e.g. gas terminal and FSRU, outer harbour proposal etc) on key fish habitat, the aquatic environment, water quality and fishing activities in the area.
11) Assessment of alternative options should be demonstrated as appropriate. This needs to demonstrate that the proposed design being put forward as part of this proposal will reduce the direct, indirect and cumulative impact on key fish habitat, the aquatic environment and associated uses and values in the area. DPI Fisheries strongly recommends that where possible, the cooling water is sourced directly from the FSRU, to reduce the input and impact of cold water into Port Kembla Harbour and reduce the frequency of entrainment of aquatic organisms into the water intake system.

A list of DPI Fisheries general information requirements for environmental assessment of development proposals is also provided in section 3.3 of DPI Policy.

For any further information regarding this proposal, please contact Carla Ganassin on 4222 8342 or carla.ganassin@dpi.nsw.gov.au.

Yours sincerely,



Carla Ganassin
Senior Fisheries Manager, Coastal Systems Unit

OUT21/15838

Jack Turner
Planning and Assessment Group
NSW Department of Planning, Industry and Environment

jack.turner@planning.nsw.gov.au

Dear Mr Turner

Port Kembla Power Station (SSI-30358083)
Comment on the Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email of 21 October 2021 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The following recommendations are provided by DPIE Water and NRAR.

The SEARS should include:

- The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Proposed surface and groundwater monitoring activities and methodologies.
- Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at https://www.industry.nsw.gov.au/water).

Any further referrals to DPIE Water and NRAR can be sent by email to landuse.enquiries@dpie.nsw.gov.au. or to the following coordinating officer within DPIE Water:

Alistair Drew, Project Officer- email: Alistair.drew@dpie.nsw.gov.au

Yours sincerely

Judy Court
A/Project Officer, Assessments
Water – Knowledge Office
1 November 2021

DOC21/924404-2

Mr Jack Turner
NSW Department of Planning Industry and Environment
Locked Bag 5022
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Email: jack.turner@planning.nsw.gov.au

Dear Mr Turner

Secretary's Environmental Assessment Requirements
Proposed Port Kembla Power Station (SSI - 30358083)

I am writing in response to the Department of Planning, Industry and Environment's (DPIE) request for the Environment Protection Authority (EPA) to provide key requirements for the preparation of an Environmental Impact Statement (EIS) for the above proposed development.

Australian Industrial Power Pty Ltd (AIP), a subsidiary of Squadron Energy, provided the *Port Kembla Power Station Scoping Report - October 2021* (the Report) proposing a power plant at Berth 101 in Port Kembla. A Planning Focus Meeting (PFM) was held on 01.11.2021 where the project was explained

The proposal has been described with the following key components:

- The proposed power station would commence operation as a 435 megawatt (MW) open cycle gas fired unit providing short-term dispatchable peaking capacity. The EPA notes that an open cycle peaking plant is existing "off the shelf" equipment and is less efficient that a combined cycle gas fired power station (roughly 33% electrical efficiency versus 50%)
- The less efficient 435 MW open cycle unit may transition to a larger more efficient 635 MW combined cycle unit, based upon the rate at which coal fired power exits the electricity market.
- The plant may be operated on 100% green hydrogen at the end of the decade.
- Subject to obtaining planning approvals, the project could be constructed and able to supply electricity by the summer of 2024/25.
- The natural gas will be supplied by the adjacent Squadron Energy floating storage regassification unit (FSRU) via pipeline operated by Australian Industrial Energy (AIE).
- The proposal describes considerable uncertainty about the possibility of moving to green hydrogen stating that '*The current technology development pathway indicates that operation on 100% hydrogen fuel **may** be possible by the end of the decade*.
- A development approval modification may be required to enable the change in operation to the relevant green hydrogen/gas mix.

Promotional material described the proposal as "Australia's most significant and largest green hydrogen power station" (source: squadronenergy.com - media release 05 Oct 2021).

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The information in the scoping report compared to that provided in project promotional material is different in emphasis. While the EPA appreciates the importance of developing a proposal that has flexibility to react to market and environmental forces, it is also important to provide clear information to the community about what will be constructed and when. The EPA is concerned the way the proposal is described may generate confusion within the community about what sort of power station will be build and what fuel it will consume and when.

It will be very important for the EIS to clearly describe the proposal and provide clear timeframes and commitments for any transition from the initial proposed open cycle peaking plant to a green power plant (hydrogen fired or combined cycle) in the future.

The proposed development is in the same Illawarra air shed as the existing Tallawarra gas fired combined cycle power station. Additionally, construction of a second open cycle peaking plant is about to commence at Tallawarra. The Illawarra airshed is currently identified as a high oxides of nitrogen (NOx) location. Any new proposal should either be NOx neutral and/or achieve Best Available Technique (BAT) emission performance per the EPA's Interim Nitrogen Oxide Policy for Cogeneration in Sydney and the Illawarra. The EIS should discuss NOx emissions against NOx neutrality and include a BAT assessment of the proposed plant.

The assessment of the air quality impacts of the project must be carried out in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*, including an adequately justified worst-case scenario that considers different fuels, dual fuel, open/combined cycle and operational capabilities and intentions (eg. load).

The air assessment should include but not be limited to:

- an ozone assessment conducted in accordance with *Tiered Procedure for Estimating Ground-Level Ozone Impacts from Stationary Sources,*
- a benchmarking assessment of best practice emission control technology and emission concentrations,
- impacts from start-up/shutdown emissions
- appropriate consideration of nearby industry in the cumulative assessment of all air pollutants assessed.
- provide clear commitments to fuel usage including time frames of operating only on natural gas, use of hydrogen sourced from green/renewable production as well as time frames for operating as open cycle and at lower loads.

The water assessment should include but not be limited to:

- Impact of cooling water discharge and interaction with FSRU discharge including operation of cooling water pipelines intake from the inner harbour (or possible direct use from the adjoining floating storage regassification unit (FSRU)) and discharge to a 400m ocean outfall.
- Assessment of any direct use of wastewater from the FSRU and impacts in regard to temperature for both this project and for the Australian Industrial Energy project.
- Assessment of biocide use affecting the FSRU discharges (as well as any used in the PKPS cooling system) with appropriate dispersion modelling, in addition to temperature modelling.
- Impacts from proposed demineralising process if potable water is used in turbines
- Cumulative impacts on marine environment from operation of cooling water intake and outfall
- Pollution discharge modelling, thermal and chemical for near field and far field mixing zone behaviour
- Entrainment of aquatic organisms in intake structures

- Clear description of timing for different components of project. For example, timing for when ocean outfall will be constructed.

Additionally, the EPA would encourage collaboration between AIP and other regulated premises in the vicinity with regards to reuse and/or discharge of water/wastewater between operations. Currently there are a number of new proposals that may discharge into ocean waters in the vicinity of berth 101.

The EPA has provided its key environmental requirements at Attachment A. These relate to:

- EPA Licensing and regulation
- Planning consideration
- Air Quality. In particular NOx emissions.
- Water Quality. Cooling water and process water discharges
- Noise. Including from plant and generating equipment and also any noise generated at the discharge point of any stacks. Assessment of low frequency noise will be very important.
- Waste Management
- Contaminated Land Management.

These should be assessed in accordance with any relevant guidelines/documents listed in Attachment B.

If you have questions regarding the above, please phone Chris Kelly on (02) 4224 4100.

Yours sincerely

William Dove

03.11.2021

WILLIAM DOVE
Unit Head Regulation

Att A: Key Environmental Issues, Att B: Guidance Material

ATTACHMENT A

ENVIRONMENTAL ASSESSMENT REQUIREMENTS

EPA Licensing and regulation

The development must comply with the *Protection of the Environment Operations Act 1997* (POEO Act) and associated regulations at all times (if approved).

Australian Industrial Power (AIP) will be require an environment protection licence under Schedule 1 Clause 17 of the POEO Act for the scheduled activity of ***Electricity generation -*** involving the capacity to generate more than 30 megawatts of electrical power.

Except as expressly provided in an EPL, Section 120 of the POEO Act must be complied with at all times. Further guidance on licensing and type of information relevant to an EPL application that should be included in the EIS can be found in the *EPA Guide to Licensing.*

Planning consideration

Details should be documented on the location of the proposed development including the affected environment to place the proposal in its local and regional environmental context. This should include but not be limited to details of land ownership, maps and/or aerial photographs showing surrounding land uses, planning zonings, potential sensitive receptors and catchments. Details should also be provided on the proposal's relationship to any other industry or facility.

The Environmental Impact Statement (EIS) should describe mitigation and management options that will be used to prevent, control, abate or mitigate identified environmental impacts (including any cumulative impacts) associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. Appropriate Best Management Practices must be outlined.

Air Quality

The environmental outcomes of the project should be to ensure:

- emissions do not cause adverse impact upon human health or the environment.
- compliance with the requirements of the POEO Act and its associated regulations.
- no offensive odours are caused or permitted from the premises.
- emissions of dust from the premises are prevented or minimised.
- maintains or improves air quality to ensure National Environment Protection Measures for ambient air quality are not compromised.
- all relevant guidelines in regard to ambient air quality are satisfied.
- NOx neutrality and / or BAT technology

The EIS should document how the above outcomes will be achieved.

The EPA recommends that an Air Quality Impact Assessment (AQIA) be prepared in accordance with the *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in New South Wale*s. A thorough assessment needs to be undertaken of the proposed activities at the site to assess the impact of any air emissions and the adequacy of proposed air pollution controls.

The AQIA should include, but not be limited to:

- an assessment of the operation of the plant considering all fuels proposed to be used, and considering all generation systems, that is Open Cycle and Closed Cycle power plants.
- an adequately justified worst-case scenario that considers dual fuel, open/combined cycle and operational capabilities and intentions (eg. load).

- describe the methodology used and any assumptions made to predict the impacts. Air pollutant emission rates, ambient air quality data and meteorological data used in the assessment must be clearly stated and justified.
- an ozone assessment conducted in accordance with *Tiered Procedure for Estimating Ground-Level Ozone Impacts from Stationary Sources,*
- a benchmarking assessment of best practice emission control technology and emission concentrations,
- start-up/shutdown emissions and impacts,
- identify and describe in detail all possible sources of air pollution (including pollutants) and activities/processes with the potential to cause air pollutants beyond the boundary of any premises proposed to be licensed by an EPL. This should cover both the construction and operational phases of the development.
- appropriate consideration of nearby industry in the cumulative assessment of all air pollutants assessed. The cumulative assessment should also consider the background air quality of the region and other significant nearby emissions sources, including Tallawarra Station B. The cumulative assessment should also include any developments having been granted development consent, but which have not commenced.

The proponent should provide clear commitments to fuel usage including time frames of operating only on natural gas, use of hydrogen sourced from green/renewable production, as well as time frames for operating as open cycle and at lower loads.

Emissions from all point sources are required to comply with the relevant Protection of the Environment Operations Clean Air Regulations 2010 standards of concentration, including compliance with Group 6 limits. Using best practice and technology for control and mitigation of emissions, emission concentrations are expected to be well below these standards for certain pollutants.

The EIS should document any back up power supply systems including information on whether these will be operated with diesel or gas fired engines. Such activities must be undertaken in accordance with EPA's Interim Nitrogen Oxide Policy for Cogeneration in Sydney and the Illawarra.

Water Quality

The environmental outcome for the project should ensure:
- there is no pollution of waters (including surface and groundwater)
- provides a development that maintains or restores the community's environmental uses and values of water through the achievement of the relevant NSW Water Quality and Flow Objectives
- wastewater is collected, treated, and beneficially reused, where safe and practicable to do so.
- promotes integrated water cycle management that optimises opportunities for sustainable water supply, wastewater and stormwater management and reuse initiatives where it is safe and practicable to do so.
- bunding is designed in accordance with the EPA's *Bunding and Spill Management Guidelines.*

The EIS should document how the above outcomes will be achieved. The EIS should identify and describe all potential water discharges from the site (including both construction and operational phases) that could result in potential pollution of waters. This should include a characterisation of potential water pollutants, receiving waters (including surface and groundwater) and any associated mitigation and management measures to achieve the above outcomes. The proposal must clearly state how bio-fouling will be managed and if pesticides are used, how any impacts will be managed.

The EIS should also include but not necessarily be limited to the following matters:

(a) state the ambient NSW Water Quality Objectives (NSW WQO) and environmental values for the receiving waters relevant to the project, including the indicators and associated guideline values or criteria for the identified environmental values;

(b) identify and estimate the quality and quantity of all pollutants that may be introduced into the water cycle by source and discharge point (including cooling and process wastewater) and describe the nature and degree of impact that discharge(s) may have on the receiving environment, including consideration of all pollutants (and temperature) that pose a risk of non-trivial harm to human health and the environment and taking into account the ANZG (2018) guidelines, including use of pollution discharge modelling (in particular for temperature and any biocides) of near-field and far field mixing zone behaviour and consideration of seasonal differences.
(c) where relevant, identify the rainfall event that the water quality protection measures will be designed to contain (including first flush systems, integrated water cycle management, etc);
(d) demonstrate how construction and operation of the project will, to the extent that the project can influence, ensure that:
    - where the NSW WQOs for receiving waters are currently being met they will continue to be protected; and
    - where the NSW WQOs are not currently being met, activities will work toward their achievement over time;
(e) justify, if required, why the WQOs cannot be maintained or achieved over time;
(f) demonstrate that all practical measures to avoid or minimise water pollution and protect human health and the environment from harm are investigated and implemented;
(g) provide details of measures to minimise and mitigate potential impacts of discharges on the receiving waterway such as recycling, wastewater treatment and/or optimising the location, depth and mode of discharge to maximise dilution, mixing and dispersion;
(h) specify the location of discharge points, on the broader premises justifying why the location was selected over other potential discharge points, including discussion of waterway characteristics at each point (e.g. depth, water quality, hydrodynamics) and consideration of the relative water quality risks
(i) assess the significance of any identified impacts including consideration of the relevant ambient water quality outcomes;
(j) include the results of water quality modelling and analysis including descriptions of water quality impacts under the full range of operating scenarios, including average or typical through to worst case for each discharge point during wet and dry weather;
(k) identify any sensitive receiving environments (which may include estuarine and marine waters downstream) and develop a strategy to avoid or minimise impacts on these environments;
(l) identify proposed water quality monitoring locations, monitoring frequency and indicators of water quality;
(m) Describe how stormwater will be managed during the construction phase. The proponent should provide a commitment in the EIS that a *Soil and Water Management Plan* will be developed and implemented prior to construction in accordance with the *Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B. Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries)* (DECC 2008).
(n) Describe how stormwater will be managed during the operational phase of the project. This should include collecting, assessing, and treating (where necessary), first flush stormwater to achieve the relevant environmental discharge standard.

Noise and Vibration

The environmental outcome of the project should be to minimise adverse impacts due to noise and vibration from the project. The facility should be designed, constructed, operated and maintained so that there are no adverse impacts from noise (including traffic noise). The assessment should consider construction and operational noise and vibration impacts in accordance with relevant NSW noise and vibration guidelines.

The EIS should clearly outline the noise mitigation, monitoring and management measures the proponent intends to apply to the project to minimise noise and vibration impacts during construction and operation of the site. In particular the assessment must include, but not necessarily limited to:

a) The identification and assessment of all potential noise sources associated with the development, the location of all sensitive receptors, and proposed noise mitigation measures.
b) Accounting for adverse weather conditions including temperature inversions.
c) Sound power levels measured or estimated for all plant and equipment must be clearly stated and justified. This should include any original equipment manufacturers data and be appropriately conservative.
d) An assessment of cumulative noise impacts, having regard to existing surrounding industrial activities and development, their own proposal and any approved or substantially proposed industrial sites.
e) Consideration of impacts to sensitive receivers and include consideration of sleep disturbance and, as relevant, the characteristics of noise and vibration (for example, low frequency noise).
f) Consider contingency mitigation measures where they may be any uncertainties about elements of the proposal

The proponent should establish the existing industrial noise contribution during the day, evening and night at relevant receivers to assist in establishing an appropriate project amenity level and potential cumulative industrial noise impacts. The proponent should also consider the need to measure existing industrial noise contributions as part of the initial surveys in line with NPfI Chapter 2.4, in light of the numerous existing and planned industrial sources in the vicinity.

Noise from construction activities should be assessed against the *Interim Construction Noise Guideline (DECC 2009)*. All feasible and reasonable noise mitigation measures to be implemented for any construction noise should be identified.

As the project will be potentially traffic generating, the noise assessment should include an assessment of potential noise impacts arising from this traffic generating development in accordance with the *NSW Road Noise Policy (2011)* guidelines.

Waste

The goal of the development should be to ensure:

- It is in accordance with the principles of the waste hierarchy and cleaner production.
- the handling, processing and storage of all materials used at the premises does not have negative environmental or amenity impacts.
- land pollution is prevented.
- the beneficial reuse of all wastes generated at the premises are maximised where it is safe and practical to do so.
- any waste leaving the site is transported and disposed of lawfully.
- no waste disposal occurs on site.

The EIS should document waste management strategies that will ensure any waste generated during construction and operation is classified and managed in accordance with the latest version of EPA's *Waste Classification Guidelines*.

The EIS should also provide details of how waste will be handled and managed both onsite and offsite to minimise pollution. This should include information on the infrastructure (e.g. bunding and containment) as well as the procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.

The EPA recommends the proponent consult the following guidelines:

- The *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities* (EPA December 2012).

Contaminated Land Management

The environmental outcome of the project is to ensure any contaminated land is identified and appropriately managed for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

In cases where land is potentially contaminated, the investigation and any remediation and validation work is to be carried out in accordance with the guidelines made or approved by the EPA under Section 105 of the *Contaminated Land Management Act 1997* and be in accordance with the requirements and procedures in the following:

- *Contaminated Land Management Act 1997*
- *Contaminated Land Management Regulation 2013*
- *State Environmental Planning Policy (SEPP) 55 – Remediation of Land*.

The involvement of an EPA-accredited Site Auditor should be considered during the contamination management process, including the provision of a Site Audit Statement certifying that the land is suitable for the proposed use(s).

Emergency Response

The EIS should document systems and procedures to prevent and manage all types of emergencies. This includes systems and infrastructure to manage incidents (for example, spills, explosions, fire, flooding and/or severe weather events) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. This should also include appropriate measures to protect the environment during these emergencies such as on-site containment measures for fire water and communication strategies that involves reporting of any incidents to appropriate regulatory authorities.

ATTACHMENT B - GUIDANCE MATERIAL

Title	Web address
Licensing	
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
EPA Guide to Licensing	www.epa.nsw.gov.au/licensing/licenceguide.htm
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW	http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf
Approved Methods for the Sampling and Analysis of Air Pollutants in NSW	http://www.epa.nsw.gov.au/resources/air/07001amsaap.pdf
Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW	http://www.epa.nsw.gov.au/resources/air/20060440framework.pdf
Technical Notes - Assessment and Management of Odour from Stationary Sources in NSW	http://www.epa.nsw.gov.au/resources/air/20060441notes.pdf
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+428+2010+cd+0+N
Air quality guidance note Construction sites	http://www.epa.nsw.gov.au/resources/air/mod3p3construc07268.pdf
Noise and Vibration	
Interim Construction Noise Guideline (2009)	http://www.epa.nsw.gov.au/noise/constructnoise.htm
Assessing Vibration: a technical guideline (2006)	http://www.epa.nsw.gov.au/noise/vibrationguide.htm
Noise Policy for Industry (EPA, 2017)	http://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)
NSW Road Noise Policy (2011)	http://www.epa.nsw.gov.au/noise/traffic.htm
Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC 1990)	http://www.epa.nsw.gov.au/noise/blasting.htm
Waste, Chemicals and Hazardous Materials and Contaminated Land	
Waste Classification Guidelines (2008)	http://www.epa.nsw.gov.au/waste/envguidlns/index.htm
Resource recovery exemption	http://www.epa.nsw.gov.au/waste/RRecoveryExemptions.htm
EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities (Dec 2012)	https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/managewaste/120960-comm-ind.pdf
Water and Soils	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	http://www.environment.nsw.gov.au/water/usinganzeccandwqos.htm

Title	Web address
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf
NSW Government Water Quality and River Flow Environmental Objectives	http://www.environment.nsw.gov.au/ieo/
Stormwater	
Managing urban stormwater: soils and construction	http://www.environment.nsw.gov.au/stormwater/publications.htm
Wastewater	
National Water Quality Management Strategy: Guidelines for Sewerage Systems - Effluent Management (ARMCANZ/ANZECC 1997)	http://www.epa.gov.au/water/policy-programs/nwqms/
National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC 2000)	http://www.epa.gov.au/water/policy-programs/nwqms
Bunding and Spill Management	
Storing and Handling Liquids: Environmental Protection - Participants Manual	http://www.environment.nsw.gov.au/resources/sustainbus/2007210liquidsManual.pdf
Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation	http://www.environment.nsw.gov.au/resources/licensing/ecrchemicalsb05590.pdf
Contaminated Land	
State Environmental Planning Policy 55 - Remediation of Land (SEPP55)	http://www.planning.nsw.gov.au/assessingdev/pdf/sepp55_remediatio.pdf
Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land	http://www.epa.nsw.gov.au/resources/clm/gu_contam.pdf
Guidelines under the Contaminated Land Management Act made or approved by the EPA	http://www.epa.nsw.gov.au/clm/guidelines.htm

Our ref: DOC21/923862

Jack Turner
Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

By email: Jack.Turner@planning.nsw.gov.au

Dear Mr Turner,

Request for Secretary's Environmental Assessment Requirements (SEARS) for Port Kembla Power Station (SSI 30358083)

Thank you for your referral dated 21 October 2021 inviting SEARS input from the Heritage Council of NSW on the above State Significant Infrastructure (SSI) proposal.

The proposed SSI site does not include any State Heritage Register items. However, it is in the vicinity of State Heritage Register item Hill 60/Illowra Battery (SHR no. 01492) and has the potential to impact on several locally significant items listed on the Wollongong Local Environmental Plan 2009.

It is therefore recommended that the draft heritage SEARs are amended as below (**bold**):

Heritage and archaeology

a) A Statement of Heritage Impact (SOHI) prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The SOHI is to address the impacts of the proposal on the heritage significance of the site and adjacent areas and is to identify the following:
   - all heritage items (state and local) within the vicinity of the site including built heritage, landscapes and archaeology **(including maritime and underwater archaeology and cultural heritage)**, detailed mapping of these items, and assessment of why the items and site(s) are of heritage significance;
   - compliance with the relevant Conservation Management Plan;
   - the impacts of the proposal on heritage item(s) including visual impacts, required BCA and DDA works, new fixtures, fittings and finishes, any modified services;
   - the attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the site and the surrounding heritage items; and
   - justification for any changes to the heritage fabric or landscape elements including any options analysis.

b) If the SOHI identifies impact on potential historical and/or maritime archaeology, an historical and/or maritime archaeological assessment should be prepared by a suitably qualified archaeologist in accordance with the guidelines *Archaeological Assessment* (1996) and *Assessing Significance for Historical Archaeological Sites and Relics* (2009). This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential archaeological resource. Where harm is likely to occur, it is recommended that the significance of the

relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations or salvage programme.

As local items are in the vicinity of the subject site, advice should be sought from the relevant local council.

If you have any questions regarding the above advice, please contact Dr Dragomir Garbov, Senior Maritime Archaeology Officer at Heritage NSW on (02) 9995 6066 or Dragomir.Garbov@environment.nsw.gov.au.

Yours sincerely,

Anna London
A/ Director Heritage Operations
Heritage NSW
Department of Premier and Cabinet
As Delegate of the Heritage Council of NSW
3 November 2021

Our reference:DOC21/923859
Date:22 October 2021

HERITAGE NSW – Aboriginal Cultural Heritage - SEARs

Project Name: Major Projects – New Request for Advice - Port Kembla Power Station (SSI-30358083) (Wollongong City)

1. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigation in NSW (DECCW 2010), and be guided by the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (OEH 2011).
2. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.
3. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.
4. The assessment of Aboriginal cultural heritage values must include a surface survey undertaken by a qualified archaeologist. The result of the surface survey is to inform the need for targeted test excavation to better assess the integrity, extent, distribution, nature and overall significance of the archaeological record. The results of surface surveys and test excavations are to be documented in the ACHAR.
5. The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts.
6. The ACHAR must outline procedures to be followed in the event Aboriginal burials or skeletal material is uncovered during construction to formulate appropriate measures to manage the impacts to this material.

NOTE: The process described in the *Due Diligence Code of Practice for the protection of Aboriginal objects in NSW* (DECCW 2010) is not sufficient to assess the impacts on Aboriginal cultural heritage of Major Projects.

Level 6, 10 Valentine Ave Parramatta NSW 2150 ■ Locked Bag 5020 Parramatta NSW 2124
P: 02 9873 8500 ■ E: heritagemailbox@environment.nsw.gov.au

3 November 2021

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

ATTENTION: JACK TURNER

Dear Sir/Madam,

STATE SIGNIFICANT DEVELOPMENT APPLICATION
Response to *SEARs* Stage SSI-30358083
PORT KEMBLA POWER STATION

I refer to the Department's notification for the above State Significant Infrastructure major project application.

Sydney Trains, via Instruments of Delegation, has been delegated to act as the rail authority for the heavy rail corridor (including infrastructure), and as the electricity supply authority (including rail electricity infrastructure/electrical easement) that is in proximity to the project area. As such, we advise the Department to request further information and action from the Applicant as listed in Attachment A. Sydney Trains requests that these comments as worded are not amended without further consultation.

Please contact the Sydney Trains Town Planning Management team via email to DA_sydneytrains@transport.nsw.gov.au should you wish to discuss this matter.

Yours sincerely,

Rita Nakhle
Senior Town Planning Officer
Sydney Trains

Attachment A

- *Sydney Trains requests that the SEARs include Sydney Trains as a separate Agency requiring consultation during the preparation of the EIS. Sydney Trains can be contacted via email DA_sydneytrains@transport.nsw.gov.au*

- *Detailed drawings of proposed excavation/ground penetration works to be provided for the proposed power transmission lines near rail corridor/rail assets. The relevant and applicable clauses within SEPP Infrastructure 2007 must be addressed, and the relevant plans and reports must be provided to support the respective clauses.*

- *Sydney Trains may request the following Rail specific documentation including:*
    a. *Detailed Site Survey (in plan and in section) showing the relationship of the proposed works with respect to rail land, rail assets and infrastructure (including electrical lines and associated easements)*
    b. *Geotechnical Report section considering any potential impact to the rail corridor/rail assets;*

- *Further, Sydney Trains is to be consulted (alongside the Transport Cluster) and be part of the decision making process in identifying the exact location of any future power transmission line near and/or over the rail corridor/rail assets, to ensure our interests are protected and potential adverse impacts are avoided.*

- *Transport Asset Holding Entity (TAHE), as the landowner of the rail corridor, is to be included as a main stakeholder in future discussions and dealings relating to this project. Further, any future applications made under the EP&A Act are to ensure TAHE land owners consent is sought and issued should any works be proposed within TAHE land.*

Our ref: STH18/00131/05
Contact: Rachel Carocci 4221 2548
Your ref: SSI-30358083

1 November 2021

Jack Turner
Department of Planning, Industry and Environment
BY EMAIL: Jack.Turner@planning.nsw.gov.au

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS - SSI-30358083 – PORT KEMBLA POWER STATION

Dear Jack

Transport for NSW refers to your correspondence dated 21 October 2021 seeking TfNSW requirements for inclusion in the Secretary's Environmental Assessment Requirements (SEARs) for the above development.

TfNSW has completed an assessment of the development, based on the information provided and focussing on the impact to the State road network. For this development, the key state road are Masters Road, Five Island Road and Springhill Road.

TfNSW has reviewed the information provided and notes the following:

- The applicant proposes to develop a power station at the inner harbour in Port Kembla. The project also includes a 330 kilovolt power transmission line connecting the power station to the existing electricity network via a switching station at Kembla Grange and a cut-in tower connecting to the existing 330 kilovolt Sydney South to Dapto Transmission Line.
- The arrangements for the proposal are shown in Attachment 1.

TfNSW considers that the information contained in Attachment 2 should be addressed in the SEARs.

If you have any questions please contact Rachel Carocci on 4221 2548.

Please ensure that any further email correspondence is sent to development.south@transport.nsw.gov.au.

Yours faithfully

Rachel Carocci
Development Services Case Officer
South Region

See attached concept design titled Attachment 1

TfNSW has reviewed the information provided and considers that the following information should be addressed in the SEARs:

- Traffic Impact Study (TIS): As a guide Table 2.1 of the RTA's *Guide to Traffic Generating Developments* outlines the key issues that should be considered in preparing a TIS. TfNSW requires the TIS to include the following:
    - Details on the road transport routes to be used to provide access to/from the site. This including vehicles travelling along the State road network wishing to travel to and from the development site;
    - Details on existing vehicle movements along the State road network and likely additional movements to and from the development site on the state road network, including the types of vehicles, peak hour movements and maximum daily movements;
    - Detailed description of the operations of the proposed development to support/justify trip generation associated with the development. With this, the study should assess the need for modelling (ie. network modelling, SIDRA);
    - The traffic study needs to consider the likely impact of the additional traffic associated with the proposed development including the suitability of the existing intersections against *Austroads* standards, the associated need for upgrades and interruptions to traffic flow on the State road network;
    - TfNSW recommends the proponent submit the TIS to TfNSW for review prior to the submission of the development application.

- Power Transmission Line: TfNSW requires details of the proposed power transmission line. TfNSW requires details for the proposed route for the transmission line, including the following:
    - The location of the transmission line in respect to the road corridor;
    - The depth of the proposed transmission line below any TfNSW infrastructure;
    - Any impacts of the transmission line on TfNSW road widening that may be required in the future; and
    - Details of the proposed methodology for construction of the transmission line.

    Notes:
    - The developer must obtain Section 138 consent from TfNSW under the Roads Act, 1993 for any works that impact on the state road network.
    - TfNSW notes the Scoping Report indicates installation of the power line by trenching of the road. TfNSW requires underboring of all State Roads unless it can be proven that this is not possible.
    - An easement will be required for the crossing of the Princes Motorway, the proponent will need to meet all costs for this.

WOLLONGONG CITY COUNCIL
Address 41 Burelli Street Wollongong • Post Locked Bag 8821 Wollongong DC NSW 2500
Phone (02) 4227 7111 • Fax (02) 4227 7277 • Email council@wollongong.nsw.gov.au
Web www.wollongong.nsw.gov.au • ABN 63 139 525 939 - GST Registered

NSW Planning, Industry & Environment
ATTN: Jack Turner
6 Stewart Ave
NEWCASTLE NSW 2300

APPLICATION	DE-2021/163
Date	15 November 2021

Dear Sir

Development	Port Kembla Power Station - State Significant Development (SSD)
Location	Lot 22 Port Kembla Road, PORT KEMBLA NSW 2505

Thank you for the opportunity to comment on proposed State Significant Infrastructure Major Project SSI-30358083. Council has reviewed the Scoping Report (the Report) prepared by GHD dated October 2021 and also participated in a planning focus meeting with the proponent and Department on 1 November 2021.

Council provides the following comments regarding input in the SEARs for any future application:

1. **General**

   a) Council recognises that the Department will receive additional detailed input from Agencies and this expert input will also extend to air quality, water resources, marine ecology and port navigation. Council understands that the project will be regulated with a requirement for annual reporting.

2. **Amenity**

   b) Include potential noise impacts and visual impacts.

   c) Construction noise and vibration impacts, including truck movements.

   d) Cumulative visual impact of additional transmission towers in Kembla Grange. Preference is for transmission lines to be co-located rather than additional towers installed.

3. **Air quality**

   a) Include operational emissions and greenhouse gases.

4. **Biodiversity**

   a) Include both terrestrial and marine biodiversity values.

   b) Note that impact avoidance is the key principle and primary consideration in an assessment of biodiversity impact. The proponent needs to detail how the project has avoided impact upon biodiversity and investigation of all alternatives that may have resulted in either reduced or greater impacts.

5. **Land**

   a) Include potential contamination and acid sulfate soils around Berth 101.

Address 41 Burelli Street Wollongong Post Locked Bag 8821 Wollongong DC NSW 2500
Phone (02) 4227 7111 Ÿ Fax (02) 4227 7277 Email council@wollongong.nsw.gov.au
Web www.wollongong.nsw.gov.au ABN 63 139 525 939 Ÿ GST Registered

b) The site, and Port Kembla in general, is contaminated land. In addition to the considerations outlined in the Report, the investigations and assessments associated with the Environmental Impact Statement (EIS) must give consideration to the creation of preferential migration pathways for contaminants as a result of underground drilling and trenching.

6. Water

a) Include water quality impacts from construction activities in and around the inner harbour and the coastal environment, as well as operation of cooling water pipelines.

b) The Report states: 'The use of potable water would generate a wastewater stream including waste process water, oily wastewater, grey water and sewage. It is planned that the wastewater stream would be sent to the existing sewer system via the wastewater pipeline, subject to trade waste agreements.' The proponent is encouraged to consider treatment of some of the waste water for reuse on site or elsewhere in the Port.

c) The project will need to demonstrate no impact to marine life due to drawing in of seawater for cooling, and again for the discharge of the now-warm, used seawater.

d) The Report states 'Water will be drawn from the inner harbour in the vicinity of the cold water discharge of the FSRU to improve thermal efficiency of the power station and result in a maximum temperature increase from intake to outfall of about 10 degrees Celsius (°C) subject to further refinement of the project design.' The proponent should investigate the use of the cold water discharge of the FSRU directly to the power plant, rather than re-uptake from the ocean. This would reduce any potential impacts on the marine environment, and improve efficiencies.

7. Hazards and Risks

a) The proposal shall address industrial hazards posed by the operation of the power station and the relationship to hazards posed by the nearby Port Kembla Gas Terminal.

b) The cumulative risk of the power plant at Port Kembla, along with the proposed hydrogen plant, gas terminal, ethanol storage and other hazardous developments must be addressed.

c) The development, particularly the power station, needs to be secure with no public access without permission. Use of CCTV, fencing and security guards must be permanently maintained.

d) Monitoring of environmental performance and compliance must be undertaken.

e) Precautions to ensure community and employee safety during the construction phase of the building and the transmission lines must be documented in the application.

8. Strategic Planning Policies

a) <u>West Dapto Urban Release Area</u>

- The proposal has the potential to have a significant impact on the development of the West Dapto Urban Release Area (WDURA). The WDURA is identified as the West Lake Illawarra Growth Area within the Illawarra Shoalhaven Regional Plan 2041 adopted by the New South Wales Department of Planning, Industry and Environment. Under the Plan, West Lake Illawarra is nominated as being regionally significant for the supply of new housing and employment lands. It is predicted by 2041, West Lake Illawarra will grow in population by 55,375 people and require almost half of the projected 58,000 new homes across the region for housing. The

identified employment lands within the West Lake Illawarra are expected to provide developable land that supports jobs for the projected population.

- § In support of realising the goals of the Illawarra Shoalhaven Plan 2041, Council adopted the West Dapto Vision 2018, and the proposed site is located within Stage 1 of the urban development area. It is noted the proposed locations of the transmission lines and associated easements has the potential to reduce/limit the development potential within key designated employment lands and urban release areas. It is therefore recommended that any future proposal be routed in a way that limits impacting upon residential and employment zoned land.
- § Council has discussed the proposal with representatives of the proponent on a number of occasions. Council recognises the significance of the proposed development; yet, to provide a desirable urban outcome it has previously been suggested underground easements be utilised to limit the impact upon the environment, escarpment views and to reduce the amount of developable land that will be affected by easements in addition to reducing conflicts between key road infrastructure and overhead lines. It is recommended any future proposal refer to the comments already made by Wollongong City Council in these meetings.

b) Illawarra Shoalhaven Infrastructure Contribution (SIC) and the Wollongong City-Wide Development Contributions Plan 2021

- § A number of road infrastructure projects are planned within the Stage 1 of the West Dapto Urban Release Area under the Wollongong City-Wide Development Contributions Plan 2021. The planned roads include the extension of Northcliffe Drive and upgrades to West Dapto Road. To identify all planned infrastructure projects and to assist in the routing and design of transmission easements and lines, the Illawarra Shoalhaven Infrastructure Contribution (SIC) and the Wollongong City-Wide Development Contributions Plan 2021 should be referred to as part of any future proposal.

c) Illawarra Escarpment

- § The proposed transmission lines are mapped as being within the Illawarra Escarpment. In 2015, Council adopted the Illawarra Escarpment Strategic Management Plan (2015) (IESMP 2015). Therefore, any proposal will need to address the requirements of the IESMP 2015, including addressing any visual impacts upon significant views.

d) Illawarra Biodiversity Strategy 2011

- § The proposal is mapped as being within a biodiversity corridor under the Illawarra Biodiversity Strategy 2011. Therefore, the proposal is to consider the requirements of the Illawarra Biodiversity Strategy 2011.

9. Heritage

a) The works are within the vicinity of a number of local heritage items including Site of former Berkeley House, Dapto Station Masters Residence, Berkeley Pioneer Cemetery Unanderra Public School, Former Unanderra Council Chambers, Kembla Grange Racecourse Railway Station, Cemetery, Moreton Bay Fig and Hoop Pines and the Illawarra Escarpment Conservation Area.

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b) A detailed Heritage Impact Statement (HIS) should be carried out to assess potential impacts to these items and potential impacts on all heritage items in the vicinity of the works. Specific comments to be addressed in the HIS:

- § Option 1 line route transmission appears to be close proximity to the listed Hoop Pines. Impacts on the health and longevity of the trees should be considered through the preparation of an arborist report. Impacts within the root zones should be avoided.
- § The Scoping Report does not address potential works within the within the Illawarra Escarpment Conservation Area, a listed Heritage Conservation Area (HCA) in Schedule 5 Part 2 of Wollongong Local Environmental Plan 2009 (WLEP 2009). Impacts on the HCA should be considered in the HIS and a visual impact assessment will be required, particularly addressing any proposed transmission lines within the Escarpment Area.

c) An Archaeological Assessment should also be prepared and addressed in the HIS, which identifies the potential impacts to any archaeology protected under the NSW Heritage Act 1977. This Report should consider unlisted archaeological sites in West Dapto including the former Tramway and WWII Tank Trap.

d) The project is also located near a number of known Aboriginal Heritage sites and places with high cultural heritage values such as Hill 60 Reserve and throughout West Dapto. The Scoping Report notes impacts on Aboriginal Heritage to be 'likely'. Therefore a full Aboriginal Cultural Heritage Assessment Report (ACHAR) should be prepared for the works, with archaeological testing where appropriate. It is noted initial surveys have been undertaken to commence this process.

e) Mitigation options should be considered to avoid impacts on Aboriginal Sites and Objects through realignment of the transmissions lines etc.

f) The proponent should ensure consultation is undertaken with the Local Aboriginal Community and Heritage NSW.

g) The following documents should be prepared and submitted with any future development application:

- § Heritage Impact Statement
- § Historic Archaeological Assessment Report
- § Aboriginal Cultural Heritage Assessment Report
- § Arborist Report (if impacts are proposed near listed trees)
- § Visual Impact Assessment Report

10. Traffic

a) General

- § The applicant should refer to Chapter E3 – Car Parking, Access, Servicing/ Loading Facilities and Traffic Management of WDCP 2009.
- § A Traffic Impact Assessment needs to be prepared by a suitably qualified consultant in accordance with Table 2.1 of the RTA Guide to Traffic Generating Development.

b) Traffic Generation and Access

- Construction- The applicant will need to provide an assessment of the proposed traffic generation based on the expected construction/delivery requirements, vehicle capacities etc. The different types of heavy vehicle and passenger vehicles need to be identified and quantified as part of the assessment.
- Operation - The analysis should determine the peak operating hours of the development and provide details of the split of vehicle types, as well as a multi modal analysis across a 24-hour period for both weekdays and weekends. If changes are proposed to the access arrangements, the proposed access design must comply with the AS2890 series and be designed for the largest anticipated vehicle to enter the site with adequate clearances.

c) Network Analysis

- Where possible construction deliveries should be sent by rail freight to reduce heavy vehicle impacts on the surrounding road network.
- For road access, heavy vehicle routes are to be outlined ensuring that construction traffic is directed to the State Road Network, and not Council's local roads.
- The applicant will need to assess the capacity of the existing road network/access to and from the site and the capacity and level of service at relevant intersections under baseline conditions and a future 10-year scenario with background traffic growth.
- The applicant needs to provide details of likely traffic impacts at all relevant intersections and provide details of any required upgrades that are required to ensure an acceptable level of service. The applicant will need to demonstrate acceptable management of any potential safety and capacity impacts as a result of the expected traffic increase.
- Details of required upgrades to the road network will need to be put forward by the applicant to ensure that the network is able to accommodate future background traffic growth as well as development-generated traffic. The applicant will also need to demonstrate how the safety of all road users will be maintained i.e. a review of relevant pedestrian and cyclist infrastructure.

d) Internal Layout

- The applicant must provide all internal access dimensions on the site plan, including grades, access widths, parking aisle widths which comply with AS2890.1 and AS2890.2.
- Car parking, bicycle parking and motorcycle parking must be in accordance with Schedule 1 of Chapter E3 of WDCP 2009.
- Disabled car parking also needs to be provided in accordance with BCA requirements and the design specification must meet the requirements of AS2890.6.
- A series of vehicle movement plans will be required to demonstrate that the internal road network is able to accommodate all sizes of vehicles likely to enter the site and access all areas with forward ingress and egress. As per the requirements of AS2890.1, a B99 vehicle must be shown passing a B85 vehicle on all critical corners. A service vehicle must also be shown passing a B85 vehicle throughout the development.
- The applicant will need to clarify emergency access arrangements.

e) Loading, Servicing and Waste Collection

- § Loading and servicing arrangements must comply with Chapter E3 of WDCP 2009.
- § AS2890.2 requires a maximum grade of 15.4% for service vehicles which should also be taken into consideration.

11. Geotechnical

a) The power station is situated on reclaimed land at Port Kembla. Geotechnical advice will be required to support the design of foundation systems and for the full extent of roadworks and excavation for the project.

This letter is authorised by

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