Sally Munk

From: Greg Woodhams <Greg.Woodhams@mpsc.nsw.gov.au>
Sent: Thursday, 25 May 2023 2:01 PM
To: Sally Munk
Subject: RE: Good Earth Green Hydrogen and Ammonia Project - Request for Input to SEARs

Dear Ms Munk,
Thank you for the opportunity to provide a response to the Applicant's scoping report in support of the request for SEARs.
The Scoping Report appears to deal with the main issues and potential planning and environmental risks of the project as a basis to determine the SEARs.

I would suggest that the SEARs should require particular attention to the safety measures to minimise risks associated with accidental leaks or release of ammonia into the atmosphere. The scoping report identifies these potential hazards however the SSD application will need to specify all of the measures to be put in place to minimise and mitigate this risk during production and transport of the ammonia.

The only other matter that has not been addressed in the scoping report and for which we request be addressed through the SEARs is in regard to the provision of accommodation for the construction phase and operational workforce. Moree has a significant shortfall in temporary and long-term housing and the area surrounding the development site has little if any vacant accommodation. This may require the provision of appropriate accommodation nearby or on-site during construction and to meet housing needs of any long-term employees that will be required to operate the facility.

There are no other matters that we would request be included in the SEARs that are not already covered in the Applicant's scoping report.
Please do not hesitate to contact me if you have any queries regarding this email and I request that Council continue to be kept informed of the progress of the application.

Kind Regards
Greg Woodhams
Moree Plains Shire Council
Acting Planning and Development Director
0466360199

DOC23/452859-6

Department of Planning, Industry & Environment
By email at: Sally.Munk@planning.nsw.gov.au

Attention: Sally Munk

07 June 2023

Dear Sally Munk

Secretary's Environmental Assessment Requirements - Good Earth Green Hydrogen & Ammonia (GEGHA) Project - Hiringa Sundown Project Trust (HSPT)- Gwydir Highway, Moree (SSD-58694960)

I refer to the email from the Department of Planning and Environment to the Environment Protection Authority (**EPA**) dated 25 May 2023, seeking the EPA's Secretary's Environmental Assessment Requirements (**SEARs**) for the preparation of an Environmental Impact Statement (**EIS**) for the proposed Good Earth Green Hydrogen & Ammonia (**GEGHA**) Project on behalf of Hiringa Sundown Project Trust (the **Proponent**).

Based on the information provided, the EPA understands that the Proponent is seeking to submit a state significant development (**SSD**) application for the construction of a green hydrogen and green ammonia production and storage facility. The planned infrastructure is proposed to be located on Sundown's Keytah property at Wathagar, approximately 33km south west of Moree, New South Wales. The proposal seeks approval for:

- 12 MW hydrogen electrolysis, allowing for material production of green hydrogen
- 10-13 tonne per day ammonia plant, to convert green hydrogen feedstock into green ammonia
- Up to 3 tonnes of hydrogen storage to balance local fuel supply and demand
- Up to 600 tonnes of ammonia storage capacity to buffer the overall process against seasonal ammonia demand and renewable energy variability

It is understood that an EIS is required for the approval process. The EPA has considered the proposal and provides in **Attachment A** the information required for an EIS. The EPA's key EIS considerations for the proposal must include, but not limited to, an adequate description and assessment of:

1. Dangerous goods management
2. Hazardous chemicals and waste management
3. Noise and vibration mitigation controls
4. Air quality controls
5. Surface & ground water management
6. Storage and use of fuels/ chemicals
7. Incident management

Phone 131 555 **TTY** 133 677 PO Box 2111 L1, 48-52 Wingewarra Street **info@epa.nsw.gov.au**
Phone +61 2 6883 5333 **ABN** 43 692 285 758 DUBBO NSW 2830 DUBBO NSW 2830 **www.epa.nsw.gov.au**
Australia Australia

8. Monitoring programs

9.Cumulative impacts

The EPA has also provided the appropriate guidance material to be considered (but not limited to) in **Attachment B.**

It is important that all assumptions and conclusions made in the EIS are supported by adequate data.

Please note that this response does not cover biodiversity or Aboriginal cultural heritage issues, which are the responsibility of DPE Environment & Heritage.

The Proponent should be made aware that any commitments made in the EIS may be formalised as approval conditions and may also be placed as formal licence conditions.

If you have any questions about this matter, please contact Teigan Cummins on 0472 814 898 or by email to info@epa.nsw.gov.au .

Yours sincerely

MATTHEW QUINN
Unit Head
Regulatory Operations Regional West

Encl: Attachment A – EPA's Recommended Secretary's Environmental Assessment Requirements

Attachment B – Guidance Materia

ATTACHMENT A – EPA's Recommended Secretary's Environmental Assessment Requirements – Good Earth Green Hydrogen & Ammonia (GEGHA) Project - Hiringa Sundown Project Trust - Gwydir Highway, Moree (SSD-58694960)

How to use these requirements

The EPA requirements have been structured in accordance with relevant guidelines, as follows. It is suggested that the EIS follow the same structure:

A. Executive summary

B. The proposal

C. The location

D. List of required approvals and licences

E. Identification and prioritisation of all issues

F. The environmental issues

G. The mitigation measures

H. Justification for the proposal and conclusion

The EIS should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines/standards at **Attachment B**.

A Executive summary

The document's executive summary should include a discussion of the proposed development, the key environmental risks, the identified mitigation measures, and an overall conclusion and justification for the proposal.

B The proposal

The proposed development must be adequately described and should clearly state and refer to:

a) the type, the nature and size of the proposed development, including proposed average and maximum annual production rates that are expected to occur;

b) the type, the nature and amount of the processes and the products to be used, including the plant and equipment proposed for use, fuel and chemicals required and proposed methods for their transportation, storage, use and their emergency management provisions, including relevant process flow diagrams;

c) the by-products produced and/or wastes produced, including the fate of such products;

d) the staging and timing of the proposal, including any construction works and any plans for potential future expansion plans and the proposed construction and operational hours, including and heavy vehicle movements;

e) the anticipated benefits to relevant industry, community, etc; and

f) the proposal's relationship to any other facility or industry both locally and abroad.

C The location

Provide an overview of the setting in which the proposed development is to take place in its local and regional environmental context including:

a) the location of the proposed facility, its layout, including plant and equipment, and details of the surrounding environment, including land use zoning with appropriate maps/diagrams;

b) the topography;

c) meteorological data (e.g. temperature, wind (prevailing wind direction and strength), rainfall, evaporation, etc);

d) surrounding land uses, including ownership details of any residence and/or land likely to be affected by the proposed facility with appropriate maps/diagrams;

e) ecological information (vegetation, fauna, waters) with appropriate maps/diagrams; and

f) availability of services and the accessibility of the site for passenger and freight transport.

D List of approvals and licences

Identify all approvals, licences or permits required to undertake the proposed development as well as those already obtained and those to be obtained.
The EPA is the Appropriate Regulatory Authority for environmental pollution matters under the POEO Act by virtue of clause 92 of the of the *Protection of the Environment Operations (General) Regulation 2009* (Regulation).

E Identification and prioritisation of issues / scoping of impact assessment

Identify a scoping risk assessment methodology, undertake a risk assessment, and identify and prioritise key issues.

F The environmental issues

1. Dangerous Goods

- Identify and demonstrate compliance with all relevant Australian Standards and other guidelines for dangerous goods storage and handling;
- Identify and demonstrate appropriate separation and segregation, including bunds, to prevent risks;
- Identify and demonstrate risk control measure(s), systems or procedures; and
- Identify and demonstrate how ground water pollution will be prevented, with particular attention to ammonium nitrate and other nitrates, in particular but not limited to:
  → Siting to minimise ground water pollution, recognising that solid ammonium nitrate (and calcium
  nitrate) are readily dissolved into water;
  → Design of water capture systems to prevent polluted water entering the environment, while ensuring that drainage systems do not increase the risk of explosion through confinement

Note: this will require a risk assessment be completed for all dangerous goods at the site.

2. Noise

- Identify the existing noise environment (including any relevant noise assessment groupings) and identify applicable noise goals in line with relevant guidance/standards;
- Identify potential noise and vibration sources and impacts during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to be incorporated for both stages to minimise noise and vibration emissions/impacts (with proposed timing), including validation monitoring, in line with relevant guidance/standards; and
- Propose representative noise monitoring locations for determining compliance with applicable noise goals and where relevant noise goals would be set as representative limits.

Note: this will require a detailed Noise Impact Assessment to be completed.

3. Air

- Identify the existing air quality environment and identify applicable air quality goals (i.e. ground level concentrations for pollutants and odour assessment criteria) in line with relevant guidance/standards; and
- Identify potential air quality and odour sources and impacts (including point source emissions from any site-based plant and equipment and/or fugitive dust or other emissions) during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to minimise point and/or fugitive and/or odour emissions/impacts (with proposed timing), including monitoring, in line with relevant guidance/standards; and
- Include an emission inventory of all sources of air emissions.

Note: this will require a detailed Air Quality Impact Assessment to be completed.

4. Water

- Identify the condition of the local catchment and those immediate areas on and around the proposed development e.g. soils, erosion potential, vegetation cover, etc; and

- Identify nearby water resources, the background water conditions (including river flow data, water flow/direction and quality data, the depth to groundwater, groundwater flow/gradient and quality data, reliance on water resources by surrounding users and by the environment) and relevant water quality objectives in line with relevant guidance/standards; and
- Identify existing impacts to water resources (including other industrial discharges); and
- Identify any water intakes, intake frequency and volumes related to the proposed development; and
- Identify any expected discharges (including stormwater), discharge quality, discharge frequency and volumes related to the proposed development; and
- Identify all practical measures that can be taken to prevent any expected discharges or an explanation of why any specific discharges cannot be prevented; and
- Identify potential impacts to surface and groundwater during both construction and operational stages and identify best practice mitigation measures (pollution control) and strategies to protect surface and groundwater resources, particularly erosion and sediment controls during the construction stage and the rehabilitation stage and the inclusion of permanent erosion and sediment controls where required and applicable; and
- Include a detailed water balance and discharge inventory; and
- Include an assessment of any mixing zones; and
- Include any proposed discharge limits.

Note: this will require a detailed Water Assessment to be completed.

5. Land

- Identify if the soils in the area of the Proposal are contaminated or are acid forming (i.e. acid sulphate soils) and if so, identify best practice mitigation measures (pollution control) and strategies or remedial and/or disposal actions that will be required/undertaken if applicable in accordance with relevant guidance/standards; and
- Identify potential impacts to soils/land resources as a result of the proposed development and identify best practice mitigation measures (pollution control) and strategies that will be required/undertaken if applicable in accordance with relevant guidance/standards.

6. Waste

- Identify all waste types that will be generated as a result of the proposed development during both construction and operation, their classification and the ways in which they will be legally handled, stored, transported, reused, recycled or disposed of, including sampling/monitoring, record keeping, waste tracking, contingency measures and any other verification practices, in accordance with relevant guidance/standards; and
- Identify options and strategies for waste minimisation; reuse and recycling across all activities and processes during both construction and operational stages.

7. Storage and use of fuels / chemicals etc

- Identify all fuels/chemicals/products/dangerous goods to be stored/used onsite; and
- Identify adequate handling, storage, control and usage requirements for any fuels/chemicals/products/dangerous to be stored/used onsite.

8. Incident Management

Identify adequate incident management procedures to be established including notification requirements to the Appropriate Regulatory Authority and other relevant authorities for incidents that cause or have the potential to cause material harm to the environment (Part 5.7 of the POEO Act).

9. Cumulative impacts

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute; and
- Identify the cumulative impacts of the proposed development in a local context.

10. Monitoring Programs

Include a detailed proposal of any noise, air, water, land, waste, meteorological etc monitoring during construction and operation to ensure and assumptions, predictions, goals, criteria etc are achieved. The proposal should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.

G. Compilation of mitigation measures

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under EPA licences or approvals (e.g. outline of an environmental management plan).
- Include any Statement of Commitments to be made by the Proponent.

H. Justification for the proposed development and conclusion

Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.

ATTACHMENT B – EPA's Guidance Material (not exhaustive)

Legislation	
Environmental Planning and Assessment Act 1979	https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1979-203
Environmental Planning and Assessment Regulation 2000	https://www.legislation.nsw.gov.au/view/html/inforce/current/sl-2000-0557
Protection of the Environment Operations Act 1997	https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1997-156
Protection of the Environment Operations (Noise Control) Regulation 2017	https://www.legislation.nsw.gov.au/view/html/inforce/current/sl-2017-0449
Protection of the Environment Operations (Clean Air) Regulation 2010	https://www.legislation.nsw.gov.au/view/html/inforce/current/sl-2010-0428
Protection of the Environment Operations (Waste) Regulation 2014	https://www.legislation.nsw.gov.au/view/html/inforce/current/sl-2014-0666
Waste Avoidance and Resource Recovery Act 2001	https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2001-058
Contaminated Land Management Act 1997	https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1997-140
Licensing	
Licensing Requirements	https://www.epa.nsw.gov.au/licensing-and-regulation/licensing
Noise/Vibration	
Interim Construction Noise Guideline (DECC, 2009)	https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/construction-noise
Assessing Vibration: a technical guideline (DEC, 2006)	https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/assessing-vibration
Noise Policy for Industry (2017) and Implementation and Transitional arrangements for the Noise Policy for Industry (2017)	https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)
NSW Road Noise Policy (DECCW, 2011)	https://www.epa.nsw.gov.au/your-environment/noise/transport-noise
Air/Odour	
Approved methods for the Modelling and Assessment of Air Pollutants in NSW (2016)	https://www.epa.nsw.gov.au/your-environment/air/industrial-emissions/modelling-assessing-air-emissions
Approved methods for the Sampling and Analysis of Air Pollutants in NSW (2007)	https://www.epa.nsw.gov.au/your-environment/air/industrial-emissions/modelling-assessing-air-emissions/approved-methods-modelling-assessing-air-pollutants
National Environment Protection (Ambient Air Quality) Measure	http://www.nepc.gov.au/nepms/ambient-air-quality
No EPA specific guidance material exists for the control of dust from construction	http://www.epa.nsw.gov.au/air/lgaqt.htm

sites. Consideration should be given to the POEO Act and the Local Government Air Quality Toolkit (DECC, 2007)	
Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006) and Technical Notes - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)	https://www.epa.nsw.gov.au/your-environment/air/industrial-emissions/managing-odour/technical-framework-odour
Water/Soils	
ANZECC Guidelines for Fresh and Marine Water Quality (2018)	https://www.waterquality.gov.au/guidelines/anz-fresh-marine
NSW Water Quality and River Flow Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
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)	https://www.epa.nsw.gov.au/your-environment/water/polices-guidelines-and-programs
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)	No longer online
Managing urban stormwater: soils and construction, vol. 1 (Landcom, 2004) and Addendum Publications (Various)	https://www.environment.nsw.gov.au/research-and-publications/publications-search/managing-urban-stormwater-soils-and-construction-volume-1-4th-editon
Landslide Risk Management (2007)	http://www.australiangeomechanics.org/resources/downloads/
Site Investigations for Urban Salinity (DLWC, 2002)	https://www.environment.nsw.gov.au/research-and-publications/publications-search/site-investigations-for-urban-salinity
Dryland Salinity Resources (Various)	https://www.environment.nsw.gov.au/topics/land-and-soil/soil-degradation/salinity
Contaminated Sites Assessment and Remediation	
Contaminated Land – EPA website	https://www.epa.nsw.gov.au/your-environment/contaminated-land
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.epa.nsw.gov.au/clm/planning.htm
Guidelines for the NSW Site Auditor Scheme – 3rd Edition (EPA, 2017)	https://www.epa.nsw.gov.au/publications/contaminatedland/17p0269-guidelines-for-the-nsw-site-auditor-scheme-third-edition
Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000)	https://www.epa.nsw.gov.au/your-environment/contaminated-land/site-auditor-scheme
Sampling Design Guidelines (EPA, 1995)	https://www.epa.nsw.gov.au/your-environment/contaminated-land/statutory-guidelines
National Environment Protection (Assessment of Site Contamination) Measure	http://www.nepc.gov.au/nepms/assessment-site-contamination
Waste	
NSW Waste Avoidance and Resource Recovery Strategy 2014-2021	http://www.epa.nsw.gov.au/wastestrategy/warr.htm

Waste Classification Guidelines – 4 Parts (EPA, 2014)	http://www.epa.nsw.gov.au/wasteregulation/classify-waste.htm
Chemical and Fuel Storage	
Storage and Handling of Dangerous Goods – Code of Practice (WorkCover, 2005)	http://www.safework.nsw.gov.au/__data/assets/pdf_file/0005/50729/storage-handling-dangerous-goods-1354.pdf

Our ref: DOC23/514704
Your ref: SSD-58694960

Title Sally Munk
Principal Planning Officer
Department of Planning and Environment
sally.munk@environment.nsw.gov.au

Dear Sally

Good Earth green hydrogen and ammonia project

I refer to your email dated 25 May 2023 seeking input into the Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the Good Earth green hydrogen and ammonia project (SSD-58694960).

The Biodiversity, Conservation and Science Directorate (BCS) has considered your request and provides SEARs for the proposed development in **Attachments A** and **B**.

BCS recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Water and soils
3. Flooding

If you have any questions about this advice, please do not hesitate to contact me, via liz.mazzer@environment.nsw.gov.au or (02) 6883 5325

Yours sincerely,

Liz Mazzer
A/Senior Team Leader Planning North West
Biodiversity, Conservation and Science Directorate

13 June 2023

Attachment A - Environmental Assessment Requirements

Attachment B - Guidance Material

Standard Environmental Assessment Requirements

BCS	Biodiversity, Conservation and Science Directorate of the NSW Department of Planning and Environment
The Department	NSW Department of Planning and Environment
NPWS	National Parks and Wildlife Service

Ancillary development components
The assessment should include all components of the proposal, including any ancillary activities such as road/track widening to enable transport of infrastructure components, connecting pipelines and transmission lines etc.

Category 1 – exempt land

Clearing of native vegetation on land that meets the definition of Category 1 - Exempt Land (as defined under the Local Land Services Act 2013 (LLS Act)) does not require assessment or offsetting under the Biodiversity Conservation Act 2016. Prescribed impacts as outlined in chapter 6 of the Biodiversity Assessment Method (2020) must still be considered on Category 1 - Exempt Land. In addition, potential impacts to Matters of National Environmental Significance under the Environment Protection and Biodiversity Conservation Act 1999 on Category 1 – exempt land must be considered.

Section 60F of the LLS Act provides the transitional arrangements that are in place until a comprehensive NVR Map is published. During the 'transitional period' assessors can make a reasonable approximation of land categorisation for unpublished layers, in consultation with the landholder.

Where a reasonable approximation is required, it is recommended that:

- assessors first identify whether land meets criteria for Category 2 - Regulated Land, prior to Category 1 - Exempt Land.
    - In some circumstances, land may meet multiple map criteria i.e. criteria for Category 2 - Regulated Land, AND Category 1 - Exempt Land
    - In most circumstances' Category 2 - Regulated Land criteria will determine the categorisation of the land, rather than Category 1 - Exempt Land criteria.

Section 60I of the LLS Act and cl.113 of the LLS Regulation defines the criteria in which land can be classified as Category 2 Regulated Land, this includes land which:

- was not cleared of native vegetation as at 1 January 1990;
- was unlawfully cleared of native vegetation after 1 January 1990 and 25 August 2017;
- contains native vegetation that was grown or preserved with the assistance of public funds (other than funds for forestry purposes);
- contains grasslands that are not low conservation grasslands (or low conservation value grassland beneath the canopy or drip line of woody vegetation satisfying the criteria for Category 2);
- is (or was previously) subject to a private native forestry plan approved under Part 5B of the LLS Act
- is subject to a private land conservation agreement;
- is a 'set aside' under a Land Management (Native Vegetation) Code;

- is an offset under a property vegetation plan or a set aside under the former native vegetation laws;
- is subject to an approved conservation measure that was the basis for other land being biocertified;
- is required to be set aside for nature conservation, revegetation or as an offset under an EP&A Act consent or approval
- is identified as coastal wetlands or littoral rainforest;
- is identified as koala habitat;
- is a declared Ramsar wetland; or
- is mapped as containing Critically Endangered species of plants or a Critically Endangered Ecological Community (CEEC)
- is a Travelling Stock Route (outside of the Western Division)

In areas which have the potential to contain CEECs, native grasslands or habitat for a Critically Endangered species of plant, land categorisation assessments should be supported by evidence from a site-based floristic assessment to demonstrate presence or absence.

Where an assessor identifies land that does not meet the criteria for Category 2 Vulnerable Regulated Land or Category 2 - Sensitive Regulated land, the assessor should then assess whether or not the land meets the definition of Category 1 – Exempt Land. Where the assessor identifies land as Category 1 – Exempt Land it must be adequately demonstrated that the identified land meets the criteria as set out in section 60H of the LLS Act. Multiple pieces of evidence should be used to demonstrate a Category 1 – Exempt Land designation. This might include:

- Publicly available data sets on the SEED data portal, such as:
    - Land use mapping – used to identify and map existing and historical agricultural land use in NSW – see *NSW Landuse 2017*
    - Woody vegetation extent – used to identify and map native vegetation extent – see *NSW Native Vegetation Extent 5m Raster v1.2*
    - State-wide Landcover and Tree Survey (SLATS) clearing for NSW – used to identify detectable clearing events since January 1990 – *available here*
- Published information on the Native Vegetation Regulatory Map, including Category 2-Sensitive Regulated, Category 2-Vulnerable Regulated, and Excluded Land - *available here*
    - Site-based information and records, including current and historical high-resolution aerial photography
    - current and historical photographs of the subject land
    - historical land management records maintained by the landowner
    - vegetation survey data collected on the subject land
    - documentation demonstrating history of authorised clearing and/or development.

The published *Native Vegetation regulatory map: method statement* should be reviewed to determine how the datasets can be best interrogated to support any identification of Category 1 – Exempt Land. Additional guidance for determining native vegetation land categorisation for application in the Biodiversity Offsets Scheme is also available on the NSW Department of Planning and Environment *website*.

Where there is uncertainty or datasets/information are conflicting, a precautionary approach should be applied and the land should be categorised as Category 2 – Regulated Land.

Where Category 1 – Exempt Land is likely to be present on a development site, early engagement with BCS is encouraged. Prior to the Biodiversity Development Assessment Report being submitted to the consent authority, the accredited assessor should submit a proposed land categorisation method to the BCS North West Planning team at *rog.nw@environment.nsw.gov.au* for endorsement.

Controlled Actions under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

If the proposed development is likely to be a 'Controlled Action' under the EPBC Act, the accredited assessor should contact the BCS North West Planning team at *rog.nw@environment.nsw.gov.au* prior to submission of the EIS. The BCS North West Planning team can provide guidance on the minimum information requirements for the EIS for any entities that have been or are likely to be deemed a 'Controlled Action'.

Biodiversity

1. Biodiversity impacts related to the proposed project are to be assessed in accordance with *Section 7.9 of the Biodiversity Conservation Act 2016* the *Biodiversity Assessment Method 2020* 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 2020*, unless the Department determines that the proposed development is not likely to have any significant impacts on biodiversity values.
2. The BDAR must document the application of the avoid, minimise, and offset framework; including assessing all direct, indirect, uncertain and prescribed impacts in accordance with the *Biodiversity Assessment Method 2020*.
3. The BDAR must include details of the measures proposed to address the offset obligation as follows:
    a. The total number and classes of biodiversity credits required to be retired for the development/project;
    b. The number and classes of like-for-like biodiversity credits proposed to be retired;
    c. The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;
    d. Any proposal to fund a *biodiversity conservation action*;
    e. Any proposal to conduct ecological rehabilitation (if a mining project);
    f. 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 submitted with all spatial data associated with the survey and assessment as per Appendix K of the BAM.
5. 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*.

NOTE – A BDAR template and guidance document has been created to assist accredited assessors to prepare a BDAR. It has been developed in accordance with best practice, the minimum information requirements, and to support BDAR reviewers. The BDAR Template can be found *here* and the Guidance for the BDAR Template can be found *here*.

Residual Prescribed Impacts within the BAM 2020

Prescribed impacts can be difficult to quantify as they may result in discrete impacts, spatially undefined impacts, ecological regime shifts and/or impact cascades over time. Consequently, avoiding or minimising such impacts is critical and will likely be a key consideration for the consent authority in determining conditions of approval for relevant proposals.

If avoidance and mitigation measures are not applicable or will not result in the complete reduction of prescribed impacts occurring, the assessor and proponent will need to consider options to compensate for unavoidable residual prescribed impacts.

The BAM-C does not calculate biodiversity credits to offset a prescribed impact. However, the consent authority has the discretion to increase the number of biodiversity credits to be retired (or other conservation measures to be undertaken), under a planning approval.

The assessment and calculation of a predicted offset obligation for any prescribed impacts must be presented prior to project determination and any impact occurring, in accordance with Section 7.14 of the Biodiversity Conservation Act 2016. The purpose of this requirement is to ensure:

- commitments to proposed mitigation measures for residual prescribed impacts are described and can be captured in the projects consent conditions; and
- the total offset obligation can be embedded in the project approval

It is recommended that the proponent and assessor consult with BCS during the assessment process on prescribed impact assessment and calculation, when required.

Water and soils

6. The 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, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method*);*
    c. Wetlands as described in s4.2 of the Biodiversity Assessment Method;
    d. Groundwater;
    e. Groundwater dependent ecosystems;
    f. Proposed intake and discharge locations.

7. 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*) 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.*

8. The EIS must assess the impacts of the project on water quality, including:
    a. 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;
    b. Identification of proposed monitoring of water quality.
9. 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.

Flooding

10. The EIS must map the following features relevant to flooding as described in the *Floodplain Development Manual 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);
    d. Flood hazard.
11. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.
12. 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 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
13. Modelling in the EIS must consider and document:

a. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies;

b. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood;

c. 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, hazard categories and hydraulic categories;

d. Relevant provisions of the NSW *Floodplain Development Manual 2005*.

14. The EIS must assess the impacts on the proposed project on flood behaviour, 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. Consistency with any Rural Floodplain Management Plans;

d. Compatibility with the flood hazard of the land;

e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land;

f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site;

g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses;

h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council;

i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council;

j. 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 NSW SES;

k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

ATTACHMENT B

Guidance Material

Title	Web address
Relevant Legislation	
Biodiversity Conservation Act 2016	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2016-063*
Environment Protection and Biodiversity Conservation Act 1999	*https://www.legislation.gov.au/Details/C2014C00140/Download*
Environmental Planning and Assessment Act 1979	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1979-203*
Fisheries Management Act 1994	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1994-038*
National Parks and Wildlife Act 1974	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1974-080*
Protection of the Environment Operations Act 1997	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1997-156*
Water Management Act 2000	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2000-092*
Wilderness Act 1987	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1987-196*
Biodiversity	
Biodiversity Assessment Method (OEH, 2020)	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020*
Changes to the Biodiversity Assessment Method from 2017 to 2020	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/changes-to-the-biodiversity-assessment-method-from-2017-to-2020*
Biodiversity Development Assessment Report Template	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-development-assessment-report-template-220210.docx?la=en&hash=1A4829C7ACA5A51ECE414A767C27361893706CEC*
Guidance for the Biodiversity Development Assessment Report Template	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-for-the-biodiversity-development-assessment-report-template*
BAM 2020 Operational Manual Stage 1	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-manual-2020-operational-manual-stage-1*
BAM 2020 Operational Manual Stage 2	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-assessment-method-operational-manual-stage-2-230164.pdf*
BAM 2020 Operational Manual Stage 3	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-operational-manual-stage-3*

Title	Web address
BAM Calculator User Guide	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-user-guide*
Serious and irreversible impacts of development on biodiversity	*https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme/serious-and-irreversible-impacts*
Practice Note - Guidance for assessors and decision makers in applying modified benchmarks to assessments of vegetation integrity: Biodiversity Assessment Method	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-assessors-decision-makers-applying-modified-benchmarks-to-assessments-vegetation-integrity*
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/guidance-decision-makers-determine-serious-irreversible-impact-190511.pdf*
Accreditation Scheme for Application of the Biodiversity Assessment Method Order 2017	*https://www.legislation.nsw.gov.au/view/pdf/asmade/sl-2017-471*
Ancillary rules: Biodiversity conservation actions	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-biodiversity-conservation-actions-170496.pdf*
Ancillary rules: Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-reasonable-steps-like-for-like-biodiversity-credits-170498.pdf*
Ancillary rules: Impacts on threatened species and ecological communities excluded from application of variation rules	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-impacts-on-threatened-entities-excluded-from-variation-170497.pdf?la=en&hash=C38840BFF49F012433532DF72E3D90C741E4DAC1*
The Department's Threatened Species Website	*https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species*
NSW BioNet (Atlas of NSW Wildlife)	*https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/nsw-bionet*
Surveying Threatened Plants and their Habitats - NSW Survey Guide For The Biodiversity Assessment Method (DPIE 2020).	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/surveying-threatened-plants-and-their-habitats-survey-guide-for-the-biodiversity-assessment-method*
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - November 2004	*https://www.environment.nsw.gov.au/surveys/BiodiversitySurveyGuidelinesDraft.htm*
Threatened species survey and assessment guidelines: field survey methods for fauna – amphibians	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/threatened-species-field-survey-methods-for-fauna-amphibians*

Title	Web address
NSW Survey Guide for Threatened Frogs	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/nsw-survey-guide-for-threatened-frogs*
Surveying 'species credit' threatened bats and their habitats – NSW survey guide for the Biodiversity Assessment Method	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/species-credit-threatened-bats-nsw-survey-guide-for-biodiversity-assessment-method*
Bat calls of NSW - region-based guide to the echolocation calls of Microchiropteran bats	*https://www.environment.nsw.gov.au/surveys/Batcalls.htm*
Community Biodiversity Survey Manual	*https://www.environment.nsw.gov.au/surveys/CommunityBiodiversitySurveyManual.htm*
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	*www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm*
The Departments Data Portal (access to online spatial data)	*http://data.environment.nsw.gov.au/*
Determining native vegetation land categorisation for application in the Biodiversity Offsets Scheme	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/determining-native-vegetation-land-categorisation-for-application-in-the-biodiversity-offsets-scheme*
Fisheries NSW policies and guidelines	*https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation*
List of national parks	*https://www.nationalparks.nsw.gov.au/conservation-and-heritage/national-parks*
Revocation, recategorisation and road adjustment policy (OEH, 2012)	*https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-policies/revocation-recategorisation-and-road-adjustment*
Guidelines for consent and planning authorities for Developments adjacent to National Parks and Wildlife Service Land (NPWS, 2020)	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Development-guidelines/developments-adjacent-npws-lands-200362.pdf*
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	*https://datasets.seed.nsw.gov.au/dataset/acid-sulfate-soils-risk0196c*
Acid Sulfate Soils Manual (Stone et al. 1998)	*https://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.

Title	Web address
Flooding	
Floodplain development manual	*https://www.environment.nsw.gov.au/topics/water/floodplains/floodplain-manual*
Floodplain Risk Management Guidelines	*http://www.environment.nsw.gov.au/topics/water/coasts-and-floodplains/floodplains/floodplain-guidelines*
NSW Climate Impact Profile	*http://climatechange.environment.nsw.gov.au/*
Climate Change Impacts and Risk Management	*https://www.environment.gov.au/climate-change/adaptation/publications/climate-change-impact-risk-management*
Water	
Water Quality Objectives	*http://www.environment.nsw.gov.au/ieo/index.htm*
ANZECC & ARMCANZ (2000) Water Quality Guidelines	*https://www.waterquality.gov.au/anz-guidelines/resources/previous-guidelines/anzecc-armcanz-2000*
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*

5/06/2023

Record Number: 23/00113#40

Planning Number: SSD-58694960

Good Earth Hydrogen and Ammonia Project

The Department of Planning and Environment – Crown Lands has reviewed the proposal.

No Crown land, roads or waterways are contained within the project footprint, however two parcels of Crown land adjoin the project footprint, to the South.

Lot 7300 DP 1161855 (Reserve 31046) is a reserve for the purpose of travelling stock and camping. Crown Lands notes as per Section 3.4 of the GEGHA Project Scoping Report, legal access is provided to the proposal site by an existing, sealed entrance through this parcel. As there are no substantial changes to the use of this parcel, Crown lands has no comments at this time.

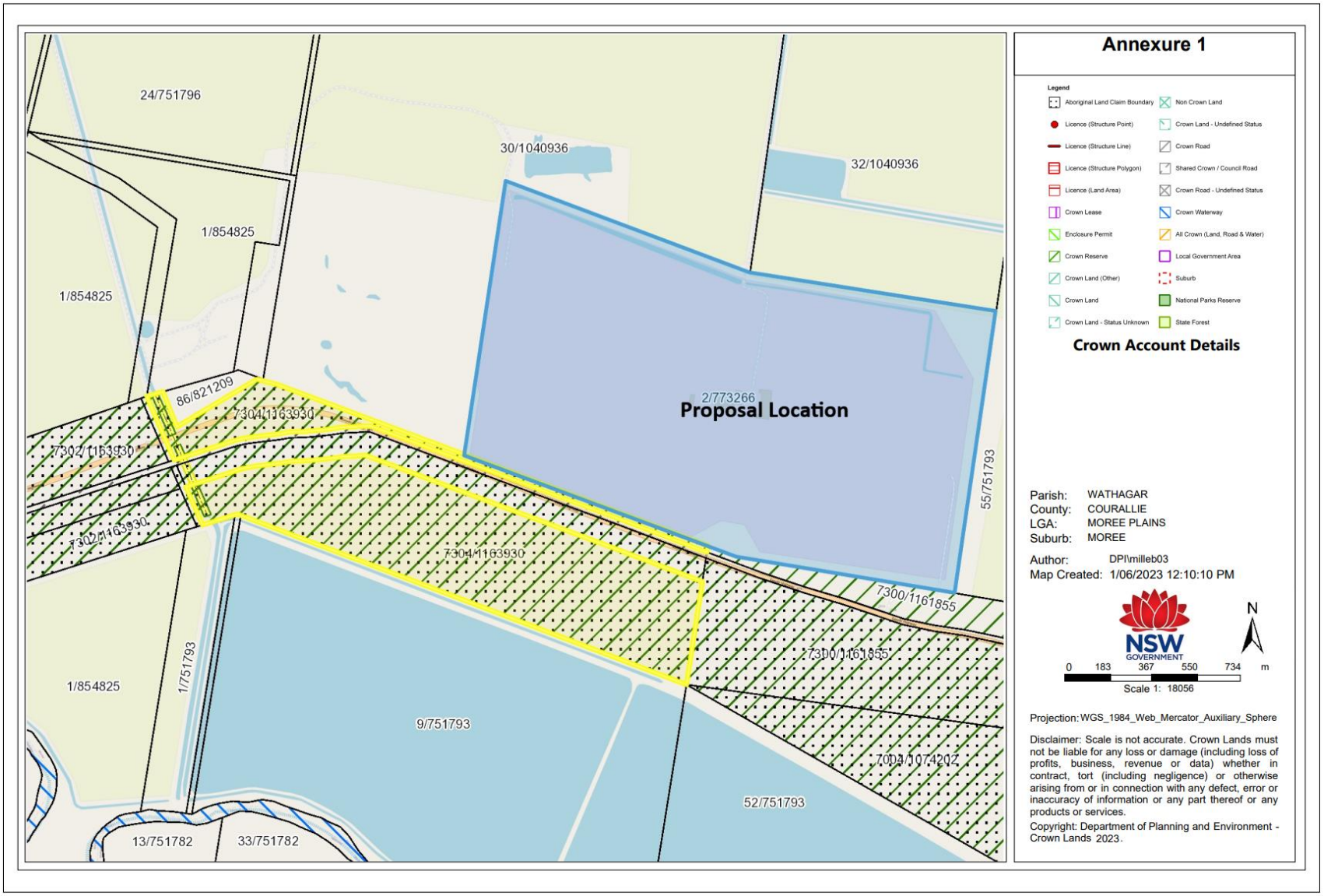
Lot 7304 DP 1163930 (Reserve 33572) is a reserve for the purpose of travelling stock. This parcel adjoins the proposed site area as shown in Annexure 1. It is noted that this land is currently the subject of an undermined Aboriginal Land Claim. If at any stage this parcel is required or will be impacted by the proposal, tenure may be necessary for authorisation. However, the potential use will be limited. Further information regarding Aboriginal Land Claims can be found at the following link: https://www.industry.nsw.gov.au/lands/what-we-do/our-work/aboriginal-land-claims

If the proponent requires further information, or has any questions, please contact Bonnie Miller in Crown Lands, on 0477 483 545 or at bonnie.miller@crownland.nsw.gov.au.

Yours sincerely

Warren Martin
A/Group Leader Armidale/Moree
T 02 67703118 | E warren.martin@crownland.nsw.gov.au

NSW GOVERNMENT



PO Box 2185 Dangar NSW 2309
LAM.projects@crownland.nsw.gov.au ABN: 20 770 707 468

Department of Planning and Environment

Our ref: OUT23/7863

Sally Munk

Planning and Assessment Group
NSW Department of Planning and Environment

Email: sally.munk@planning.nsw.gov.au

25 May 2023

Subject: **Good Earth Green Hydrogen & Ammonia Project (SSD-58694960)**

Comment on the Secretary's Environmental Assessment Requirements (SEARs)

Dear Sally,

DPE Water has developed standard SEARs for quarry SSD and SSI projects. Please see Attachment A for detailed requirements.

If any of the requirements do not apply to this project, the proponent should describe why in a short statement.

Should you have any further queries in relation to this submission please do not hesitate to contact DPE Water Assessments at water.assessments@dpie.nsw.gov.au or to the following coordinating officer within DPE Water:

Simon Francis, Senior Project Officer
E: simon.francis@dpie.nsw.gov.au

Yours sincerely

Simon Francis
Senior Project Officer, Assessments, Knowledge Division
Department of Planning and Environment: Water

Attachment A

Water Take and Licensing

No.	Assessment Requirement	Relevant Policy/Guideline/Legislation
1	A detailed and consolidated site water balance.	
2	Description of all works/activities that may intercept, extract, use, divert or receive surface water and/or groundwater. This includes the description of any development, activities or structures that will intercept, interfere with or remove groundwater, both temporary and permanent.	NSW Aquifer Interference Policy, section 3 & 5 of the *Water Management Act 2000*, Water Sharing Plans Clause 24 of the *Water Management (General) Regulation 2018* Groundwater Guidelines- https://www.industry.nsw.gov.au/water/licensing-trade/major-projects
3	Details of all water take for the life of the project and post closure where applicable. This is to include water taken directly and indirectly (including through inflow and seepage), and the relevant water source where water entitlements are required to account for the water take. If the water is to be taken from an alternative source confirmation should be provided by the supplier that the appropriate volumes can be obtained.	Section 3 & 5 of the *Water Management Act 2000*, Water Sharing Plans Section 2 of the NSW Aquifer Interference Policy provides explanation of water take for aquifer interference activities
4	Details of Water Access Licences (WALs) held to account for any take of water where required, or demonstration that WALs can be obtained prior to take of water occurring. This should include an assessment of the current market depth where water entitlement is required to be purchased. Any exemptions or exclusions to requiring approvals or licenses under the *Water Management Act 2000* should be detailed by the proponent.	Water Sharing Plans Sections 3, 5, 60A & 60I of the *Water Management Act 2000* WAL must nominate a work to satisfy s60D of the *Water Management Act 2000* and this is completed by a dealing application under s71W of the *Water Management Act 2000* Exemptions or exclusions information: ○ ○ Clause 21-23, 34-50, sch.1 and 4 *Water Management Regulation 2018* ○ Sections 4.41 and 5.23 of the *EP&A Act 1979* ○ FAQs - Where can I take water without a water access licence?

Water Impacts

No.	Assessment Requirement	Relevant Policy/Guideline/Legislation
5	A description of groundwater conditions that provides an understanding of groundwater level across the site under a range of wet and dry conditions.	NSW Aquifer Interference Policy Groundwater Guidelines
6	The development of a thorough groundwater conceptual model with supporting cross section and extraction mining depth supported by field data.	NSW Aquifer Interference Policy Groundwater Guidelines
7	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, groundwater dependent ecosystems, and ground water levels; including measures proposed to reduce and mitigate these impacts.	*Water Management Act 2000* Part 1, Division 1, Section 5(2d; 4c) & Part 3 Div 2 Sect 97 *Water Management Act 2000* Part 1, Division 1, Section 5(4a;5a; 6a; 7a; 8a)) NSW Aquifer Interference Policy Groundwater Guidelines
8	Proposed surface and groundwater monitoring activities and methodologies and details of a proposed water management plan.	Groundwater Guidelines NSW Water Quality and River Flow Objectives Australian and New Zealand fresh and marine water quality guidelines (ANZG 2018)

Assessment against Policy and Guidelines

No.	Assessment Requirement	Relevant Policy/Guideline/Legislation
9	Identification and impact assessment of all works/activities located on waterfront land including an assessment against Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).	Guidelines for Controlled Activities on Waterfront Land (NOW 2012)
10	Assessment of project against relevant policies and guidelines	Water Sharing Plans, Floodplain Management Plans, NSW Aquifer Interference Policy, Guidelines for Controlled Activities on Waterfront Land (NOW 2012), Groundwater Guidelines

Department of Primary Industries – Agriculture
Department of Regional NSW

OUT23/8146

Sally Munk
Principal Planning Officer
Department of Planning and Environment
C/o Major Projects Portal

Sally.munk@planning.nsw.gov.au

Secretary's Environmental Assessment Requirements –Good Earth Green Hydrogen and Ammonia Project SSD-58694960

Dear Ms Munk

Thank you for your correspondence of 25 May 2023 and the opportunity to provide input into the Secretary's Environmental Assessment Requirements (SEARs) for the Good Earth Green Hydrogen and Ammonia Project.

NSW Department of Primary Industries (DPI) Agriculture collaborates with our stakeholders to protect and enhance the productive and sustainable use and resilience of agricultural resources and the environment.

NSW DPI Agriculture has reviewed the scoping report for the Good Earth Green Hydrogen and Ammonia Project.

I note that the proposed facility will be located on the site of the Wathagar Cotton Gin and that the locality includes areas of extremely productive agricultural land mapped as Class 2 land by the Land and Soil Capability Assessment Scheme. Potential impacts on limited agricultural resources and the ability to rehabilitate the land to enable continued agricultural investment are important issues requiring careful consideration and assessment.

To assess the potential impacts of the proposed development on the agricultural production of surrounding land, NSW DPI Agriculture requests that the following matters be included in the SEARs for the Good Earth Green Hydrogen and Ammonia Project:

- A Land Use Conflict Risk Assessment (LUCRA) should be undertaken for the proposed development. The LUCRA should detail any potential impacts from the proposed development on neighbouring agricultural land uses and potential impacts of neighbouring agricultural land uses on the operation of the proposed development. The LUCRA should detail the consultation undertaken with neighbouring landowners to identify potential impacts. For the identified impacts the LUCRA should detail mitigation measures to reduce the potential risk. The consideration of impacts should include those during operation of the facility and not just construction.
- A biosecurity management (pests, weeds, and disease) risk assessment should be prepared to detail the likely plant, animal, and community risks the proposed development may pose to agricultural land uses in the locality. The relevant weed or pest animals for a region are addressed in the regional plans or strategies issued by NSW

Local Lands Services. The risk assessment should include details of how the proposal will deal with identified biosecurity risks as well as contingency plans for any failures. The document should also include monitoring and mitigation measures for weed and pest management.

- A Decommissioning and Rehabilitation Management Plan should be prepared which describes the final land use and landform and details how to return of the land back to agricultural production at the end of the life of the facility. The plan should detail an expected timeline for the decommissioning and rehabilitation program. The plan should also include a commitment to remove all infrastructure above and below ground, to a depth of 500mm to enable future agricultural production to be undertaken on the site.

Industry guidelines and resource information (Attachment A) should also be provided to the proponent for their consideration when preparing the Environmental Impact Statement.

Should you require clarification on any of the information contained in this response, please do not hesitate to contact me on 0429 864 501 or by email at landuse.ag@dpi.nsw.gov.au

Sincerely

Paul Garnett
Agricultural Land Use Planning Officer
Ag Strategic Initiatives
New England and North West Region

1 June 2023

Encl: Attachment A: Industry guidelines and resource information

Attachment A: Industry guidelines and resource information

Title	Website link
Land Use Conflict Risk Assessment Guide	https://www.dpi.nsw.gov.au/agriculture/lup/development-assessment2/lucra
Infrastructure Proposals on Rural Land	https://www.dpi.nsw.gov.au/agriculture/lup/development-assessment2/infrastructure-proposals
The land and soil capability assessment scheme: second approximation 2012 (OEH)	https://www.environment.nsw.gov.au/research-and-publications/publications-search/land-and-soil-capability-assessment-scheme
Australian Soil and Land Survey Handbook (CSIRO)	https://ebooks.publish.csiro.au/content/australian-soil-and-land-survey-field-handbook
Guidelines for Surveying Soil and Land Resources (CSIRO)	https://ebooks.publish.csiro.au/content/guidelines-surveying-soil-and-land-resources
Biosecurity Risk Management in Land Use Planning and Development	https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0018/1271241/managing-biosecurity-risks-in-land-use-planning-and-development-guide.pdf

File Ref. No: FRN23/1818 BFS23/2798 8000028442
TRIM Doc. No: D23/49328
Contact: Station Officer Lynden Moyes

5 June 2023

Sally Munk
NSW Department of Planning and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Sally,

Re: Advice on Secretary's Environmental Assessment Requirements (SEARs) – Good Earth Green Hydrogen & Ammonia Project - SSD-58694960

Fire and Rescue NSW (FRNSW) acknowledge correspondence received on 25 May 2023, requesting input into the preparation of the SEARs for the Good Earth Green Hydrogen & Ammonia Project - SSD-58694960. FRNSW have reviewed the SEARs along with the Scoping Report and appendices and make the following comments:

There is currently insufficient information available regarding the fire safety and emergency response management aspects of the project. FRNSW requests to be consulted and given the opportunity to review and provide comment regarding the proposed fire and life safety systems at the preliminary and final design phases of the project.

For further information please contact the Operational Liaison and Special Hazards Unit, referencing FRNSW file number BFS23/2798. Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Yours sincerely,

A/ Superintendent Aaron Ross
Manager
Operational Liaison and Special Hazards Unit

Cc: sally.munk@planning.nsw.gov.au

Hunter New England Local Health District
Hunter New England Population Health
Direct Contact Details
Phone: (02) 67648020 Fax: (02) 67663003
Email: fidelis.jaravani@health.nsw.gov.au

NSW GOVERNMENT | Health
Hunter New England
Local Health District

6 June 2023

Ms Sally Munk
Principal Planner
Department of Planning & Environment
Locked Bag 5022
Parramatta NSW 2124

Dear Ms Sally

RE: State Significant Project – Good Earth Green Hydrogen and Ammonia Project, Moree - Request for Input to SEARs

Thank you for the opportunity to provide input into the SEARs for the **Good Earth Green Hydrogen and Ammonia Project, Moree** proposal.

Hunter New England Local Health District (HNELHD) has reviewed the Applicant's Scoping Report concentrating on water quality, noise, waste management and air quality.

The comments provided are contingent on confirmation by the NSW EPA that the methods employed to assess water quality, noise and air quality are appropriate and should be considered in light of any methodological issues identified by the NSW EPA.

Further, HNELHD notes that there are unique risks associated with hydrogen and ammonia production and storage in the proposal. We defer to the relevant regulators to assess and manage these risks.

Water quality

Provision of a reticulated water and sewerage supply to alleviate environmental and public health concerns is recommended. The reticulated water supply must be of sufficient quantity and quality for the population size. An increase in population reinforces the need for the water supply to meet water quality standards that are presented in the Australian Drinking Water Guidelines.

The EIS should ensure that there is minimal impact from the proposed development on the water quality of surrounding natural waterways, particularly for downstream water users.

Businesses or facilities that supply drinking water from an independent water supply (i.e. not town water) need to follow the NSW Health Private Water Supply Guidelines (2014). The Public Health Act 2010 and the Public Health Regulation 2022 require drinking water suppliers, including private water suppliers, to develop and adhere to a Quality Assurance Program (or drinking water management system). The completed Quality Assurance Program needs to be submitted to HNELHD.

Hunter New England Local Health District
ABN 63 598 010 203

Hunter New England Population Health
Locked Mail Bag 9783
NEMSC NSW 2348
Phone (02) 6764 8000 Fax (02) 6766 3003
Email HNELHD-PHEnquiries@health.nsw.gov.au
www.hnehealth.nsw.gov.au/hneph

NSW Health recommends regular testing of drinking water at facilities with a private supply. If a private water supply is contaminated, or is not monitored or not treated then consumers should be warned.

Further information and templates can be found at:

http://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx

Legionella Control

Any warm water systems must comply with the requirements of the Public Health Act 2010 and Public Health Regulation 2022. They must be installed and maintained to prevent the growth of Legionella.

https://www.health.nsw.gov.au/environment/legionellacontrol/Pages/legionella-guidelines.aspx

An air conditioning and ventilation system other than a cooling tower with water circulation is recommended. If a cooling tower system is installed, the system must comply with the requirements of the Public Health Act 2010 and Public Health Regulation 2022. NSW Health recommends that the system should be managed in accordance with the Legionella Control in Cooling Water Systems - NSW Health Guidelines.

https://www.health.nsw.gov.au/environment/legionellacontrol/Pages/guidelines-legionella-control.aspx

Vectors

A mosquito risk assessment should be included in the EIS. An assessment should be undertaken of the project terrain features to ensure any potential mosquito breeding sites are identified. A mosquito management plan should also be developed incorporating artificial wetlands in recycled water projects. A mosquito management plan should also address the potential impacts of the collective detention area and individual site detention areas discussed in the Applicant's Scoping Report. Mosquito management will reduce both nuisance biting and disease transmission to the local population.

Environmental Management Plan, Operations and Maintenance Plan and Decommissioning Plans will be developed for the project. HNELHD has no further comments provided the NSW EPA and Moree Plains Shire Council requirements are complied with.

Air Quality, Noise and Waste management

On matters relating to air quality, noise and waste management (including old and damaged solar panels), HNELHD defer to the relevant regulators, NSW EPA and Moree Plains Shire Council.

Should you wish to discuss this matter further, please contact Fidelis Jaravani, Environmental Health Officer on 67648020, email: fidelis.jaravani@health.nsw.gov.au.

Yours sincerely,

Dr David Durrheim
Director Health Protection
Hunter New England Population Health

From:	Nicole Davis
To:	Sally Munk
Subject:	Heritage NSW - ACH - Advice on SEARs - Good Earth Green Hydrogen & Ammonia Project (SSD-58694960) (Moree Plains Shire)
Date:	Monday, 29 May 2023 7:30:00 AM
Attachments:	..datacontentImagerteImageslogo1644468813661.png image001.png

Dear Sally,

Heritage NSW recommends that the following SEAR be included with respect to Aboriginal cultural heritage (ACH).

Aboriginal Cultural Heritage

- Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR), prepared in accordance with relevant guidelines, identifying, describing and assessing any impacts to Aboriginal cultural heritage sites or values associated with the site.

Please contact me directly if you require any further information.

Kind Regards
Nicole Davis

Nicole Davis
Manager Assessments
Heritage NSW
Department of Planning and Environment
E nicole.davis@environment.nsw.gov.au
Locked Bag 5020 Parramatta 2124

NSW GOVERNMENT

From: no-reply@majorprojects.planning.nsw.gov.au <no-reply@majorprojects.planning.nsw.gov.au>
Sent: Thursday, 25 May 2023 10:51 AM
To: Tanya Pelz <tanya.pelz@environment.nsw.gov.au>; OEH HD Heritage Mailbox <HERITAGEMailbox@environment.nsw.gov.au>
Cc: Sally Munk <Sally.Munk@planning.nsw.gov.au>
Subject: Major Projects – New Request for Advice - Good Earth Green Hydrogen & Ammonia Project (SSD-58694960) (Moree Plains Shire)

The Department has sent you a request for advice in relation to the Good Earth Green Hydrogen & Ammonia Project.The due date for this request is 07/06/23.

Please sign in to your account to view the details of this request and to upload your advice.

If you have any enquiries, please contact Sally Munk on 9274 6431 /at sally.munk@planning.nsw.gov.au.

To sign in to your account click here or visit the Major Projects Website.

Please do not reply to this email.

Kind regards

The Department of Planning and Environment

Subscribe to our newsletter

Sally Munk

From: Grace Lee <Grace.Lee6@health.nsw.gov.au>
Sent: Tuesday, 6 June 2023 9:58 AM
To: Sally Munk
Cc: Kishen Lachireddy; Suhasini Sumithra
Subject: RE: Good Earth Green Hydrogen and Ammonia Project - Request for Input to SEARs

Dear Sally,

Thank you for the opportunity to provide input into the SEARs for the Good Earth Green Hydrogen & Ammonia Project. The scoping report identified a comprehensive range of potential direct, cumulative and perceived impacts relating to the construction and operation of the project. We understand that a full assessment of the identified potential impacts will be undertaken during the EIS process. We may further appraise the EIS and provide a response on the likelihood of risk to human health posed by project.

Many thanks.

Regards

Grace Lee

Senior Policy Analyst | **Surveillance and Risk Unit**
Environmental Health Branch, Health Protection NSW
1 Reserve Road, St Leonards, New South Wales 2065
Tel (02) 9391 9863 | grace.lee6@health.nsw.gov.au
www.health.nsw.gov.au

Visit the NSW Health website for the latest information on COVID-19.

NSW GOVERNMENT | Health

From: Sally Munk <Sally.Munk@planning.nsw.gov.au>
Sent: Thursday, 25 May 2023 11:16 AM
To: DPE PSVC Hazards Mailbox <hazards@planning.nsw.gov.au>; network.planning@essentialenergy.com.au; HSSG-EHBSurveillance <HSSG-EHBSurveillance@health.nsw.gov.au>; CL LAM Projects Mailbox <LAM.projects@crownland.nsw.gov.au>
Cc: Carolyn Herlihy (Hunter New England LHD) <Carolyn.Herlihy@health.nsw.gov.au>; Fidelis Jaravani (Hunter New England LHD) <Fidelis.Jaravani@health.nsw.gov.au>; Glenn Pearce (Hunter New England LHD) <Glenn.Pearce@health.nsw.gov.au>; Rebecca McAuley <rebecca.mcauley@lls.nsw.gov.au>; Greg Woodhams <Greg.Woodhams@mpsc.nsw.gov.au>; paul.sio@mpsc.nsw.gov.au; Damien Rose <Damien.Rose@epa.nsw.gov.au>; Michael Howat <Michael.Howat@epa.nsw.gov.au>; Jon Stone <Jonathan.Stone@planning.nsw.gov.au>; Georgia Weallans <georgia.weallans@planning.nsw.gov.au>; Paul Garnett <paul.garnett@dpi.nsw.gov.au>; Allyn Purkiss

<Allyn.Purkiss@rfs.nsw.gov.au>; Liz Mazzer <Liz.Mazzer@environment.nsw.gov.au>; Troy Stephens <Troy.Stephens@safework.nsw.gov.au>; Aaron Ross <Aaron.Ross@fire.nsw.gov.au>; Alexandra Power <alexandra.power@transport.nsw.gov.au>; Harit.Jani@safework.nsw.gov.au; joe.lim@safework.nsw.gov.au; Andrew McIntyre <andrew.mcintyre@transport.nsw.gov.au>; Peter.Murray@fire.nsw.gov.au; Doris Yau <doris.yau@planning.nsw.gov.au>
Subject: Good Earth Green Hydrogen and Ammonia Project - Request for Input to SEARs

The Department of Planning and Environment has received a request for the Planning Secretary's Environmental Assessment Requirements (SEARs) for the Good Earth Green Hydrogen & Ammonia Project. The proposed development is a State Significant Development under the *Environmental Planning and Assessment Aact 1979.*

Your organisation is invited to provide input into the SEARs for the proposal including details of any key issues and assessment requirements by **Wednesday 7 June 2023.**

The Applicant's scoping report can be found at the project page - https://www.planningportal.nsw.gov.au/major-projects/projects/good-earth-green-hydrogen-ammonia-project

Where possible, please submit your response on the Major Projects portal via your dashboard. Alternatively, please send to me directly by email.

If you have any enquiries, please let me know

Kind regards
Sally

Sally Munk
Principal Planner
Industry Assessments
Department of Planning and Environment

T (02) 9274 6431 **E** sally.munk@planning.nsw.gov.au

4 Parramatta Square, 12 Darcy Street, Parramatta | Locked Bag 5022, Parramatta NSW 2124

dpie.nsw.gov.au

Department of Planning and Environment

NSW GOVERNMENT

I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

Views expressed in this message are those of the individual sender, and are not necessarily the views of NSW Health or any of its entities.

Sally Munk

From: Harit Jani <Harit.Jani@safework.nsw.gov.au>
Sent: Tuesday, 6 June 2023 4:57 PM
To: Sally Munk
Cc: Joe Lim; Troy Stephens; Michele Stromquist
Subject: RE: Good Earth Green Hydrogen and Ammonia Project - Request for Input to SEARs

Hi Sally,

Please find the following comments from SafeWork NSW.

1. Ensure the applicant has a detailed consequence and likelihood assessment for catastrophic failure of ammonia and hydrogen vessels due to various credible failure mechanisms. Consequence assessment needs to assess carefully for the validity of toxic cloud extent from the site.
2. The applicant is advised to evaluate the location of ammonia and hydrogen storage vessel location carefully. Pay special attention to bushfire threats. Request applicant to document such assessment as part of EIS application.
3. Ensure hazardous area classification is performed as per relevant Australian standards. Ensure all instrumentation are fit for purpose (from a hazardous area classification point of view). Request applicant to develop hazardous area dossier before commissioning of the operations.
4. During the presentation, there was mention of heat recovery for cotton drying. Ensure appropriate hazard identification and assessment are performed for such operations.
5. Ensure for all storage vessels applicant maintains the following reports:
    a. Commission report
    b. Initial approval report
    c. Any non-destructive testing performed
6. The applicant is advised to perform appropriate non-destructive testing for hydrogen and ammonia vessels before the operation begins. Request the applicant to consult SafeWork NSW during or before commissioning it.
7. Ensure the applicant has appropriate security arraignment (physical and cyber) for the MHF operations of the facility.
8. Assess fire from the cotton gin to MHF operations.
9. Request applicant to perform assessment for static electricity discharge risk for the whole facility.

Please ignore my last email requesting extension for comment deadline.

Regards,
Harit

Dr Harit R Jani BEng(Chemical), PhD, MIEAust CPEng, TUV FS Engineer ID 5237/12, MIChemE, Professional Process Safety Engineer
Senior Safety Analyst | Major Hazard Facilities
SafeWork NSW
T (02) 8867 2842 **E** harit.jani@safework.nsw.gov.au
www.safework.nsw.gov.au

From: Sally Munk <Sally.Munk@planning.nsw.gov.au>
Sent: Thursday, 25 May 2023 11:16 AM
To: DPE PSVC Hazards Mailbox <hazards@planning.nsw.gov.au>; network.planning@essentialenergy.com.au; HSSG-EHBSurveillance <HSSG-EHBSurveillance@health.nsw.gov.au>; CL LAM Projects Mailbox <LAM.projects@crownland.nsw.gov.au>

Cc: Carolyn Herlihy (Hunter New England LHD) <carolyn.herlihy@health.nsw.gov.au>; Fidelis Jaravani (Hunter New England LHD) <fidelis.jaravani@health.nsw.gov.au>; Glenn Pearce (Hunter New England LHD) <Glenn.Pearce@health.nsw.gov.au>; Rebecca McAuley <rebecca.mcauley@lls.nsw.gov.au>; Greg Woodhams <Greg.Woodhams@mpsc.nsw.gov.au>; paul.sio@mpsc.nsw.gov.au; Damien Rose <Damien.Rose@epa.nsw.gov.au>; Michael Howat <Michael.Howat@epa.nsw.gov.au>; Jon Stone <Jonathan.Stone@planning.nsw.gov.au>; Georgia Weallans <georgia.weallans@planning.nsw.gov.au>; Paul Garnett <paul.garnett@dpi.nsw.gov.au>; Allyn Purkiss <Allyn.Purkiss@rfs.nsw.gov.au>; Liz Mazzer <Liz.Mazzer@environment.nsw.gov.au>; Troy Stephens <Troy.Stephens@safework.nsw.gov.au>; Aaron Ross <Aaron.Ross@fire.nsw.gov.au>; Alexandra Power <alexandra.power@transport.nsw.gov.au>; Harit Jani <Harit.Jani@safework.nsw.gov.au>; Joe Lim <joe.lim@safework.nsw.gov.au>; Andrew McIntyre <andrew.mcintyre@transport.nsw.gov.au>; Peter Murray <Peter.Murray@fire.nsw.gov.au>; Doris Yau <doris.yau@planning.nsw.gov.au>
Subject: Good Earth Green Hydrogen and Ammonia Project - Request for Input to SEARs

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Your organisation is invited to provide input into the SEARs for the proposal including details of any key issues and assessment requirements by **Wednesday 7 June 2023.**

The Applicant's scoping report can be found at the project page - https://www.planningportal.nsw.gov.au/major-projects/projects/good-earth-green-hydrogen-ammonia-project

Where possible, please submit your response on the Major Projects portal via your dashboard. Alternatively, please send to me directly by email.

If you have any enquiries, please let me know

Kind regards
Sally

Sally Munk
Principal Planner
Industry Assessments
Department of Planning and Environment

T (02) 9274 6431 **E** sally.munk@planning.nsw.gov.au

4 Parramatta Square, 12 Darcy Street, Parramatta | Locked Bag 5022, Parramatta NSW 2124

dpie.nsw.gov.au

I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

Transport for NSW

WST23/00068/02| SF2023/102999

Energy Assessments
Department of Planning & Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: Sally Munk

9 June 2023

SSD-58694960: Request for Secretary's Environmental Assessment Requirements (SEARs) for Good Earth Green Hydrogen and Ammonia Project for Moree Plains Shire Council

Dear Sally,

Thank you for referring the abovementioned request for SEARs via the NSW Major Projects Planning Portal on 24 May 2023 inviting comment from Transport for NSW (TfNSW).

TfNSW has reviewed the Scoping Report, prepared by Approved Consulting Company, dated 24 May 2023 prepared for the prospective Good Earth Green Hydrogen & Ammonia development comprising of the following:

- 2 MW hydrogen electrolysis, allowing for material production of green hydrogen.
- 10-13 tonne per day ammonia plant, to convert green hydrogen feedstock into green ammonia.
- Up to 3 tonnes of hydrogen storage to balance local fuel supply and demand.
- Up to 600 tonnes of ammonia storage capacity to buffer the overall process against seasonal ammonia demand and renewable energy variability.
- Ancillary power and water pump/ connections, water treatment, telemetry, security camera system, switch room and control room.
- Protective perimeter fencing
- HGV loading/ unloading bays adjacent to storage vessels
- Car park and site office

TfNSW key interests are the safety and efficiency of the transport network, the needs of our customers and the integration of land use and transport in accordance with the *Future Transport Strategy 2056*.

To ensure that TfNSW's key interests are addressed, TfNSW requests that any future application be submitted with an Environmental Impact Assessment (EIA) containing a Traffic Impact Assessment (TIA), prepared by a suitably qualified person/s in accordance with the Austroads Guide to Traffic Management Part 12, Australian Standards and any complementary TfNSW Supplements, and *Roads and Maritime Guide to Traffic Generating Developments*. The TIA should contain information listed in Attachment A: Traffic Impact Assessment (TIA).

In addition to the requested TIA, due to the significant scope of the transport logistics for OSOM transit, a concept-level route analysis is required to be provided with the SSD application based on high-level 3D swept path analysis to generally indicate locations where civil works are likely to be required. The route analysis is to include at a minimum the following:

- Identify the OSOM route to be utilised and any indicative pinch points within the network vertically, horizontally and laterally and the potential civil works required to accommodate the OSOM vehicles.
- The logistics assessment is to highlight each at-risk road structures that the haulage route crosses including bridges, traffic signals, signage, major culverts, and minor culverts that may not meet the desirable cover to cater for proposed axle loads.
- Pull-over Bay locations for the design vehicle or identification of any long haulage segments of the route where overtaking cannot be achieved.
- The design vehicle templates used with the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN).
- Provide the following measurements parameters of the OSOM components / materials to be moved:
  - Identify all the types of OSOM vehicles proposed to be used for the project.
  - Overall combination length, width, height and mass
  - Maximum component length
  - Maximum component widths
  - Maximum load heights (clearance to overhead obstructions such as structures, utilities and vegetation),
  - Wheelbase dimensions,
  - Maximum trailer articulation angle(s),
  - Minimum overhang heights above the road surface,
  - Axle loads and axle group loads in terms of both tonnes and Equivalent Standard Axles (refer to Austroads Guide to Pavement Technology).

TfNSW encourages early discussions with proponents regarding the traffic and network matters associated with State Significant Development. If you wish to discuss this matter further, please contact Hayley Sarvanandan on ph. 02 9983 2372.

On determination of this matter, please forward a copy of the final SEARs to TfNSW at development.west@transport.nsw.gov.au.

Yours faithfully,

Alexandra Power
Team Leader Development Services (Renewable Resources)
West Region | Community and Place
Regional and Outer Metropolitan

Attachment A: Traffic Impact Assessment (TIA)

The purpose of the TIA is to address the impact of traffic generation on the public road network and measures employed to ensure traffic efficiency and road safety during construction, operation and decommissioning of the project.

The requested TIA should be tailored to the scope of the proposed development and include, but not be limited to, the following:

- Identify the timeframe for the schedule of works (commencement year and completion year) overlapping timeframe of components during construction (to capture worst case scenario) and identify the construction hours for the project.
- Identify the worst-case scenario of the operational traffic during the AM/PM peak.
- Detailed plans identifying the proposed location of any:
  - Project-related infrastructure within and outside of the project boundary.
  - Pipeline and transmission line infrastructure, or any other project-related structures, within a road reserve. Include demarcation of local and classified road reserves.
  - Identify the key access roads with the classified road network required for the project (including any access required from classified road network for components being constructed outside of the project area) and justification of additional access required to a classified road in accordance with section 2.119 of *State Environmental Planning Policy (Transport and Infrastructure) 2021*
  - Structures on the road network that could be sensitive to blasting (e.g. bridges, pump stations, etc.). Note, if any structures are likely to be affected, an assessment of the impact must ensure that the peak particle velocity is limited to an acceptable level to TfNSW.
  - For any proposed ancillary infrastructure and/or temporary on-site facilities, the TIA should identify the source for input materials and quantify the traffic generation associated with the haulage of the source materials.
- Cumulative impacts:
  - An assessment should be undertaken as a part of the EIS and TIA to identify the projects that will have overlapping construction periods and assess the cumulative traffic impacts with emphasis on the following:
  - The cumulative impacts from traffic generated from the construction workforces in terms of the origin-destination routes, access, AM/PM peaks where there is overlap with other projects.
  - The cumulative impacts of heavy vehicle movements in terms of AM/PM peaks and routes where there is an overlap with other projects.
  - Cumulative impacts and consideration in relation to the timing of movements of OSOMs where other projects will be utilising the same routes as proposed for this development.
- Heavy vehicle and OSOM routes:
  - Identify the return routes for OSOMs.
  - National Heavy Vehicle Regulator (NHVR) approved routes identified on the Restricted Access Maps (RAV MAP) are to be utilised for the heavy vehicle routes for the proposed development.
  - Further include details on the number of OSOM movements, the intended time for OSOM movements to occur, and GPS coordinates along the proposed routes for pinch points, traffic management measures and pull-over bays / rest areas along the OSOM routes.
  - Identifying road and rail projects occurring along the OSOM route within the anticipated schedule for the movement of the OSOM components. Inclusive of any impacts (e.g civil works or obstructions) that could

impede the movement of the OSOM components due to the concurrent road and rail projects occurring along the nominated OSOM route(s).

- Project schedule:
  - Hours and days of work, number of shifts and start and end times,
  - Phases and stages of the project, including construction, operation and decommissioning.
- Traffic volumes including:
  - Existing background traffic,
  - Project-related traffic for each phase or stage of the project inclusive of operational phase,
  - Projected cumulative traffic at commencement of operation, and a 10-year horizon post-commencement.
- Traffic characteristics including:
  - Number and ratio of heavy vehicles to light vehicles,
  - Peak times for existing traffic,
  - Peak times for project-related traffic including commuter periods,
  - Proposed hours for transportation and haulage,
  - Specify the design vehicles for the project (identifying all relevant types of heavy / OSOM / specialist vehicles and shuttle buses)
  - Interactions between existing and project-related traffic.
- Capacity analysis using SIDRA or other relevant application, to identify an acceptable Level of Service (LOS) at intersections with the classified (State) road/s, and where relevant, analysis of any other intersections along the proposed transport route/s.
- The origins, destinations and routes for:
  - Commuter (employee and contractor) light vehicles and pool vehicles,
  - Heavy (haulage) vehicles,
  - OSOM vehicles.
- Road safety assessment of key haulage route/s.
  - Where road safety concerns are identified at a specific location along the proposed haulage routes, TfNSW suggests that the TIA be supported by a targeted Road Safety Audit undertaken by suitably qualified persons in accordance with the *Austroads Guidelines.*
- Identify the necessary road network infrastructure and access upgrades required to cater for and mitigate the impact of project related traffic on both the local and classified road network for the development (for instance, road widening, hardstand areas, pullover bays, site access upgrades, intersection treatments etc).

  In this regard, a strategic design drawing/s should be submitted with the SSD application for any identified road infrastructure and access upgrades. It should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of TfNSW and Council. Works must be appropriately designed in accordance with *Austroads Guide to Road Design* for the existing posted speed limit, including provision of Safe Intersection Sight Distance (SISD).

  Note: The design needs to comply with *TfNSW Strategic design requirements for DAs*. To assist you in preparing the designs, please refer to the link: https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/documents/planningprinciples/strategic-design-fact-sheet-02-2022.pdf

- Consideration of the local climate conditions that may affect road safety during the life of the project (e.g. fog, wet and dry weather, icy road conditions).
- The layout of the internal road network, parking facilities and infrastructure.
- Impact on rail corridors and level crossings detailing any proposed interface treatments. Note, the rail authority for rail corridors in the vicinity of the site and likely OSOM route is ARTC.
- Impact on public transport (public and school bus routes) and consideration for alternative transport modes such as carpooling and shuttle buses during construction.
- Identification and assessment of potential environmental impacts of the project, such as blasting, lighting, visual, noise, dust and drainage on the function and integrity of all affected public roads.
- Controls for transport and use of any dangerous goods in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*, the *Australian Dangerous Goods Code* and *AS4452 Storage and Handling of Toxic Substances*.
- A draft Traffic Management Plan (TMP) that could be implemented following approval of the EIS, in consultation with relevant Councils and TfNSW. The TMP is to address the construction, operation and decommission phases of the proposed development and be prepared and implemented in accordance with *Australian Standard 1742.3* and the *Work Health and Safety Regulation 2017*.

30 March 2023

Contact: *Alison Kniha*
Telephone: *0407 088 372*
Our ref: *D2023/42401*

Sally Munk
Department of Planning & Environment
4 Parramatta Square
12 Darcy Street
PARRAMATTA NSW 2150

Dear Ms Munk,

Good Earth Green Hydrogen & Ammonia Project (SSD-58694960)

Thank you for your Major Projects Planning Portal referral dated 25 May 2023, requesting WaterNSW's advice in relation to the above SEARs request.

Please note that as the subject site is not located close to any WaterNSW land or assets, and as an SSD any flood works or licensing approvals will be assessed by others, the risk to water quality is considered to be low and WaterNSW has no comments or particular requirements.

WaterNSW requests that the Department continues to notify us of all developments that may impact on our assets, infrastructure or land, using the email address Environmental.Assessments@waternsw.com.au. If you have any questions regarding this letter, please contact me at alison.kniha@waternsw.com.au.

Yours sincerely

ALISON KNIHA
Catchment Protection Planning Manager