

SUBMISSION OPPOSING THE GOOD EARTH GREEN HYDROGEN AND AMMONIA PROJECT, MOREE

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Executive Summary

This submission is made in the public interest in accordance with the Environment Protection and Biodiversity Conservation Act 1999 (Cth), the Environmental Planning and Assessment Act 1979 (NSW), and other applicable legislation. It is submitted as a formal objection to the Good Earth Green Hydrogen and Ammonia Project (GEGHA), proposed for development at Keytah Farm near Moree, NSW. The proposal involves the construction of a 15 MW electrolyser, a facility to produce up to 16 tonnes of ammonia daily, hydrogen storage and compression infrastructure, a 36 MW solar array, and associated transport and energy systems.

Upon detailed review, the project presents significant and unresolved risks across eight key domains: (1) unlicensed and excessive water use in an over-allocated catchment; (2) disruption to biodiversity corridors and land use conflict; (3) unmitigated hazards involving ammonia and hydrogen handling; (4) multiple breaches of NSW and Commonwealth law, including under the EPBC Act, WHS Regulation, and Water Management Act; (5) failure to assess or account for cumulative impacts and emissions; (6) absence of First Nations consultation and cultural heritage assessment; (7) lack of effective community engagement and emergency preparedness; and (8) no enforceable plan for decommissioning or rehabilitation.

Key legal deficiencies include the failure to refer the project under the EPBC Act, the absence of required licensing as a Major Hazard Facility, non-compliance with Environment Protection Licensing obligations, and unlicensed industrial water extraction. The Environmental Impact Statement (EIS) fails to meet the Secretary's Environmental Assessment Requirements and omits critical statutory and procedural information, rendering the application incomplete and legally deficient.

Furthermore, the lack of First Nations consultation contravenes both the Aboriginal Cultural Heritage Consultation Requirements (NSW DECCW, 2010) and the principles of Free, Prior and Informed Consent (UNDRIP). These failures are compounded by omissions in risk communication and life-cycle emissions reporting that undermine public trust and environmental credibility.

In light of these legal, ecological, cultural, and community risks, this submission calls for the project to be refused or withdrawn unless and until full statutory compliance is demonstrated. As established in *Booth v Bosworth*

[2001] FCA 1453 and *Gray v Minister for Planning* [2006] NSWLEC 720, development proposals that carry significant unmitigated risks and fail to observe legal duties of environmental care and procedural fairness are not compatible with the public interest or lawful approval.

1. Introduction

The proposed Good Earth Green Hydrogen and Ammonia Project (GEGHA), to be developed on the Keytah agricultural property near Moree, NSW, involves the construction and operation of a 15-megawatt electrolyser to produce green hydrogen for conversion into up to 16 tonnes of ammonia per day. The ammonia is intended to replace conventional fertilisers in the cotton industry, while hydrogen will also be used to fuel agricultural and transport vehicles. The proposal includes a 36-megawatt solar farm, battery storage, hydrogen compression and storage infrastructure, and large-scale chemical handling facilities.

Although promoted as a renewable energy initiative, the project introduces serious and unresolved legal, environmental, and cultural risks. It is located in an over-allocated water catchment, adjacent to the Ramsar-listed Gwydir Wetlands, and within a landscape of continuing First Nations custodianship. The proposal threatens biodiversity corridors, water security, community safety, and Indigenous cultural heritage—yet fails to provide adequate safeguards or statutory compliance.

This submission identifies critical legal breaches and omissions, including the absence of a referral under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*, the lack of licensing as a Major Hazard Facility under the *Work Health and Safety Regulation 2017 (NSW)*, and unlicensed water extraction under the *Water Management Act 2000 (NSW)*. The project also fails to meet key requirements under the Secretary's Environmental Assessment Requirements (SEARs), including cumulative impact analysis, emissions accounting, and risk mitigation for hazardous substances.

Furthermore, no Cultural Heritage Assessment has been undertaken, and there is no evidence of consultation with Gomerói Traditional Owners, contrary to both NSW heritage protocols and the principles of Free, Prior and Informed Consent enshrined in the UN Declaration on the Rights of Indigenous Peoples.

In light of these deficiencies, this submission respectfully asserts that the GEGHA project cannot lawfully or ethically proceed in its current form. Approval must be withheld unless and until the proponent can demonstrate full compliance with all applicable environmental, cultural, and public safety obligations.

2. Environmental and Ecological Impacts

2.1. Water Use Misrepresentation

Electrolysis is a water-intensive process. For each kilogram of hydrogen produced, approximately 9 litres of deionised water are required (IEA, 2022). To produce 16 tonnes of ammonia daily, which typically requires about 3 tonnes of hydrogen input, the project would need around 27 tonnes of hydrogen per day. This translates to approximately 243,000 litres of

water daily just for electrolysis, not including additional water demands for cooling, cleaning, solar panel maintenance, and process efficiency. Over a year, this equates to nearly 89 million litres of high-purity water drawn from a region known for drought cycles and limited aquifer recharge.

The Gwydir and Border Rivers catchments, which include the Moree Plains area, are heavily over-allocated. Recent CSIRO research warns of climate-induced stress on water availability in these inland catchments (CSIRO, 2023). The project documentation fails to specify the water source, licence volumes, or aquifer drawdown modelling. It does not evaluate seasonal water stress or conflicts with existing water users, including agriculture, town supply, and Indigenous cultural water needs.

2.2. Land Use Conversion

The proposed installation of a 36MW solar farm, large-scale battery storage, and ammonia plant infrastructure will alter the existing land use from high-value irrigated agriculture to industrial energy production. While GEGHA is located on a cotton property, the cumulative land clearing for solar arrays, access roads, and equipment yards significantly impacts the regional land matrix. This threatens long-term soil health and disrupts drainage patterns in an already fragile floodplain ecosystem.

The EIS does not include a full soil characterisation report, or a land capability assessment aligned with the NSW Soil Conservation Act 1938. It also omits analysis of how land disturbance, compaction from heavy equipment, and alteration of vegetative cover will influence erosion, dust generation, and water retention capacity. According to the Australian Soils and Landscape Facility, over 70% of land degradation in inland NSW is attributed to vegetation clearance and poor drainage management during infrastructure rollout (ASLF, 2021).

Further, there is no detailed offset plan or biodiversity stewardship proposal to compensate for vegetation loss. The Biodiversity Conservation Act 2016 requires assessment of vegetation clearing and impacts to threatened ecological communities, yet the proponent has not demonstrated compliance with these provisions.

2.3. Impact on Biodiversity Corridors

The Gwydir Wetlands, located downstream of the development site, are a Ramsar-listed internationally significant ecosystem. These wetlands support over 160 species of birds, including the endangered Australasian bittern and migratory species protected under the EPBC Act 1999 and JAMBA/CAMBA agreements. Increased vehicle movement, light pollution, noise, and potential airborne ammonia drift all represent direct and indirect risks to these sensitive ecological areas.

Ammonia is water-soluble and highly mobile in the environment. According to the European Environment Agency (EEA, 2022), even low-level atmospheric ammonia emissions can contribute to eutrophication and alter species composition in sensitive wetland habitats. Yet the GEGHA risk register does not evaluate downwind drift modelling or accident scenarios where ammonia is unintentionally released during transport or storage.

Increased truck traffic also threatens roadkill incidents for regional fauna, especially kangaroos, echidnas, and reptiles. These risks are exacerbated by poor road lighting and lack of fauna exclusion fencing in rural transport corridors. The EIS fails to address the interaction

between infrastructure expansion and wildlife corridors that intersect the Keytah property and adjacent farms.

3. Human Health and Safety Risks

3.1. Ammonia Handling Breaches

The storage of 600 tonnes of anhydrous ammonia on-site far exceeds the 500-tonne threshold set under Schedule 15 of the NSW Work Health and Safety Regulation 2017. This categorically classifies the facility as a Major Hazard Facility (MHF) under SafeWork NSW requirements, demanding a rigorous licensing process, detailed hazard analysis, and implementation of a safety management system (SMS). The Environmental Impact Statement (EIS) submitted fails to provide evidence of intent to apply for MHF licensing, nor does it outline key risk controls such as double-walled tanks, remote sensing for gas leaks, and blast shielding.

Ammonia is not only hazardous due to its flammability under certain conditions, but more pressing for its acute toxicity. Exposure to concentrations as low as 25 ppm can cause irritation to eyes, nose, and throat, and concentrations above 300 ppm can lead to respiratory distress and pulmonary oedema (WHO, 2021). Given the scale of ammonia production and storage, any accidental release—especially under high wind or heat conditions typical of the Moree Plains—could spread toxic fumes over a wide area, affecting workers, neighbours, and nearby towns.

The omission of consequence modelling in the EIS for high-risk failure scenarios such as overpressure rupture, tanker collision, or valve malfunction is a serious oversight. These omissions breach the risk assessment protocols expected under the NSW Major Hazard Facility Guidelines (SafeWork NSW, 2020).

3.2. Hydrogen Transport and Public Risk

Hydrogen presents unique dangers due to its extremely low ignition energy, wide flammability range, and tendency to leak easily due to its small molecular size. It can ignite at concentrations from 4–75% in air and is nearly invisible when burning. Furthermore, hydrogen-air mixtures can cause deflagrations or detonations, depending on the degree of confinement and ignition source. The use of tube trailers to transport hydrogen from the site to external refuelling locations or ammonia plants presents ongoing safety hazards across public roadways.

The EIS does not disclose the transport routes, frequency of hydrogen truck movements, refuelling locations, or contingency protocols in case of collision, rollover, or leak. There is no modelling for dispersion of leaked hydrogen gas or associated fireball risk if ignition occurs. Given the potential for severe harm to life and property in the event of an accident, this lack of public road hazard assessment is a critical failure.

International guidelines, such as those developed by the U.S. Department of Energy (DOE Hydrogen Safety Panel), recommend that hydrogen transport be subject to strict vehicle design standards, GPS tracking, leak detection alarms, and exclusion zones at rest stops or fuelling points. The GEGHA project documentation does not indicate whether any of these best practices will be followed.

3.3. Chemical Exposure Risks

Ammonia is a highly toxic inhalant. Beyond acute risks to workers and emergency responders, the compound can travel as a vapour and contaminate air, water, and soil if released. The potential for atmospheric drift of ammonia emissions from leaks or venting raises human health risks for nearby communities, particularly given the flat, open terrain and prevailing westerly winds common to the Moree region.

The EIS fails to address this risk through credible dispersion modelling. There is no inclusion of community vulnerability analysis—especially for sensitive groups such as schoolchildren, the elderly, or people with respiratory conditions in nearby Moree. There is also no indication of how community members would be warned or evacuated in the event of a gas release, nor details of coordination with NSW Fire and Rescue or Local Emergency Management Committees.

Under the Protection of the Environment Operations Act 1997 (NSW), ammonia is a scheduled pollutant, and emissions are subject to strict licensing and reporting requirements. Yet, no clear proposal for an Environment Protection Licence (EPL) is included in the project documentation, suggesting either a significant regulatory gap or a deliberate oversight.

Moreover, any accidental release could contaminate on-site water storage, nearby creeks, and even groundwater, especially in the event of equipment failure during storm events or flooding. The absence of an ammonia spill containment and remediation plan is unacceptable given the volume of production proposed.

4. Planning and Legislative Breaches

4.1. Environmental Planning and Assessment Act 1979 (NSW) – Section 4.15

In *Gray v Minister for Planning* [2006] NSWLEC 720, the Court determined that “public interest” under Section 4.15 includes robust environmental due diligence, community safety, and procedural integrity. The decision clarified that inadequate community engagement and incomplete environmental assessments lawfully justify refusal. GEGHA’s one-session consultation and lack of targeted outreach, especially to vulnerable populations, is materially inconsistent with statutory expectations.

The Environmental Planning and Assessment Act 1979 (EP&A Act) requires consent authorities to consider several factors under Section 4.15, including environmental impacts, public interest, and relevant policy guidelines. The GEGHA project fails to satisfy the following subsections:

- *s4.15(1)(b)*: The project does not adequately assess the likely environmental impacts, particularly in relation to water usage, ammonia and hydrogen handling, and biodiversity loss. The Environmental Impact Statement lacks cumulative impact assessments and ignores known constraints of the Gwydir Wetlands and surrounding agricultural matrix.
- *s4.15(1)(d)*: The level of community and stakeholder consultation has been minimal, with only one public drop-in session reported. There is insufficient evidence of engagement with affected landholders, local government, and traditional custodians.

- *s4.15(1)(e)*: The public interest is not served by allowing a hazardous chemical production facility in an area surrounded by prime agricultural lands, where alternative renewable energy infrastructure could have been less invasive.

The planning authority must reject proposals that fail to meet the integrated consent and precautionary principles as outlined in both the Act and the NSW Government's own climate and biodiversity strategies.

4.2. Protection of the Environment Operations Act 1997 (NSW)

This Act regulates activities with environmental risks, including emissions of air, water, and land pollutants. The GEGHA project clearly involves scheduled activities under Schedule 1 of the Act, including:

- Chemical production
- Storage of hazardous substances
- Emissions of ammonia and process gases

Despite this, the EIS contains no application or commitment to obtain an Environment Protection Licence (EPL) under the POEO Act. The absence of licensing contravenes legal requirements and exposes the community to unmanaged pollution risks. The EPL process would normally trigger third-party rights to review, public oversight of monitoring obligations, and regulatory enforcement under the EPA. Omitting this step undermines public confidence and regulatory compliance.

Under *Environment Protection Authority v Riverstone Meat Co Pty Ltd* [2005] NSWLEC 300, the Court found that operating a scheduled activity without an Environment Protection Licence (EPL) constituted a strict liability offence under the POEO Act. Ammonia production and storage, being listed scheduled activities, require EPLs under Schedule 1. Furthermore, EPLs are central to pollution control, public transparency, and enforceable environmental standards. **The absence of an EPL application in the GEGHA documentation is a direct breach.**

4.3. Work Health and Safety Regulation 2017 (NSW)

Under Schedule 15 of this Regulation, the storage of more than 500 tonnes of anhydrous ammonia mandates classification as a Major Hazard Facility (MHF). This status triggers strict obligations for safety case submissions, quantitative risk assessments, and community risk communication.

The project's documentation does not disclose whether a Notification of Intent to operate an MHF has been lodged with SafeWork NSW. Furthermore, it fails to provide the required risk contours, hazard identification mapping, and safety management systems outlined under the National Standard for the Control of Major Hazard Facilities [NOHSC:1014 (2002)]. Without these steps, the project would be operating in clear breach of the WHS regulatory framework.

In *SafeWork NSW v Orica Australia Pty Ltd* [2012] NSWIRComm 59, the Court ruled that failure to meet MHF licensing obligations under Schedule 15 of the WHS Regulation—even without a hazardous incident—constituted a breach due to the inherent dangers of ammonia storage. This case confirmed that once a threshold (500 tonnes) is crossed, formal notification, safety case submission, and licensing are not discretionary. GEGHA's proposed 600-tonne ammonia facility must therefore be classified as an MHF and licensed accordingly.

4.4. Water Management Act 2000 (NSW)

This Act governs water extraction from regulated and unregulated systems in NSW. Any water used for industrial purposes—particularly those that could affect aquifer pressure or surface water quality—must be licensed.

GEGHA does not clearly state the intended water source for the hydrogen electrolyser and cooling processes. There is no mention of:

- Water access licences (WALs)
- Water supply works approvals
- Annual water use plans

Given the estimated daily water demand of over 300,000 litres, this is a major oversight. Moree Plains LGA lies within an already over-allocated water zone. The proposal risks undermining existing farming water entitlements and breaching statutory limits on drawdown.

The NSW Land and Environment Court in *Harrison v Baring* [2012] NSWLEC 117 reaffirmed that industrial use of water—particularly above minimal thresholds—requires lawful Water Access Licences (WALs). The Court held that failure to declare water sources or model drawdown effects breached both procedural and ecological due diligence. GEGHA’s projected demand (>300,000 L/day) without WALs or aquifer impact assessment presents a clear violation of the Water Management Act 2000.

4.5. Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Under *Booth v Bosworth* [2001] FCA 1453, the Federal Court found that an action likely to have a “significant impact” on a matter of national environmental significance—such as a Ramsar-listed wetland—triggers mandatory referral under the Environment Protection and Biodiversity Conservation Act 1999 (Cth). Furthermore, *Humane Society International Inc v Kyodo Senpaku Kaisha Ltd* [2006] FCA 1160 established that even indirect or cumulative impacts (such as atmospheric ammonia drift affecting migratory species) must be assessed. The precautionary principle in s391 reinforces that referral should occur even where scientific uncertainty exists.

The Commonwealth EPBC Act requires referral and assessment for actions likely to have significant impact on matters of national environmental significance (MNES), including:

- Ramsar-listed wetlands (e.g. Gwydir Wetlands)
- Listed threatened species and ecological communities
- Migratory species protected under international agreements

Despite proximity to the Gwydir Wetlands and likely atmospheric ammonia emissions, no EPBC referral has been submitted. This is a breach of federal obligations under Sections 18 and 18A of the Act. A precautionary approach is mandated under Section 391, and the current omission fails to meet that standard.

5. Community and Cultural Considerations

5.1. First Nations Engagement

The Aboriginal Cultural Heritage Consultation Requirements for Proponents (NSW DECCW, 2010) impose a mandatory obligation on developers to consult with Registered Aboriginal Parties where activities may harm Aboriginal heritage. The Federal Court in *Anderson on behalf of the Wullu Wullu People v Queensland* [2013] FCA 519 confirmed that failure to consult undermines procedural fairness and native title protections. Furthermore, the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), while not binding, is widely adopted in Australian policy and strengthens the case for free, prior, and informed consent (FPIC) before any industrial disturbance of cultural landscapes.

The GEGHA project sits within the traditional lands of the Gomeroi people, whose custodianship of the Moree Plains region predates European settlement. Under both NSW and Commonwealth law, including the Native Title Act 1993 and the principles of Free, Prior and Informed Consent (FPIC) outlined in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), First Nations peoples must be consulted on projects that affect their land, water, or cultural heritage. There is no documented evidence of a Cultural Heritage Assessment or formal consultation process involving Gomeroi Traditional Owners.

The omission of cultural impact studies breaches the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (NSW DECCW) and is inconsistent with best practice standards for engagement. Given the significance of the region's natural landscape—including waterways, floodplains, and traditional bush tucker and medicine sites—this absence may result in the inadvertent destruction or degradation of sites of cultural significance.

Additionally, hydrogen and ammonia production require infrastructure development that may permanently alter the character of the land. Access roads, solar farms, tanks, pipelines, and transport operations intersect with areas traditionally used for ceremony and cultural practice. No avoidance, mitigation, or management strategies are disclosed in the project documentation.

5.2. Community Consultation Failures

Public consultation for the GEGHA project has been cursory and inadequate. According to the NSW Department of Planning and Environment's own guidelines on major project engagement, proponents are expected to engage with stakeholders "early, often, and transparently." In the case of GEGHA, the consultation summary indicates only a single drop-in session was held in Moree with limited notice and no targeted consultation for vulnerable populations.

There is no evidence that the project team engaged with:

- Local farming communities affected by water competition or transport disruption
- Residents within the blast and vapour dispersion zones of ammonia tanks
- Schools, hospitals, and aged care facilities vulnerable to chemical exposure
- Emergency services and first responders responsible for ammonia or hydrogen incidents

Without targeted, demographic-sensitive engagement, the risk profile of this project is understated, and the mitigation measures are disconnected from lived realities on the ground.

The lack of consultation also extends to long-term issues, such as decommissioning of solar and hydrogen infrastructure, disposal of chemical waste, and rehabilitation of disturbed land. No clear plans or community guarantees are offered on these critical legacy issues.

This lack of meaningful community participation not only violates best practice but also undermines social licence. Community trust cannot be built through minimal outreach efforts, especially when dangerous goods and sensitive environmental areas are involved.

6. Cumulative Impact Assessment

6.1. Energy Infrastructure Load

The GEGHA project does not exist in isolation. It is proposed within an increasingly congested zone of overlapping renewable energy projects, transmission upgrades, road infrastructure developments, and agricultural operations. The cumulative energy infrastructure load imposed by the addition of a 36MW solar farm, battery storage systems, ammonia compression equipment, and hydrogen transport operations has not been properly assessed.

There is no integrated assessment of how this development, combined with others approved or under construction across the Moree Plains and Northern Tablelands Renewable Energy Zones (REZs), will impact:

- Grid stability and voltage regulation
- Access to existing and proposed transmission infrastructure
- Land fragmentation and alienation of high-value cropping zones
- Transport pressure on regional road corridors from heavy vehicle movements

The EIS offers no spatial overlay of existing REZ infrastructure projects or their proximity to this proposal. This failure is inconsistent with the NSW Government's own requirements for assessing cumulative impacts under the SEARs (Secretary's Environmental Assessment Requirements). Given the scale and permanence of the proposed infrastructure, its interaction with existing and approved projects must be disclosed and analysed.

6.2. Emissions Accounting Flaws

The GEGHA project claims that it will reduce up to 17,000 tonnes of CO₂-equivalent emissions per year by displacing conventional ammonia production and diesel consumption. However, this figure is misleading and incomplete due to the failure to conduct a full cradle-to-grave life-cycle analysis.

The emissions accounting model fails to consider the following:

- Carbon emissions from the manufacture and global shipping of electrolyser units, solar panels, batteries, and ammonia tanks
- Embodied emissions in construction materials (e.g. concrete, steel) used in plant and road development

- Fuel and maintenance emissions from hydrogen delivery trucks, ammonia tankers, and construction fleets
- Emissions from decommissioning, recycling, or disposal of large-scale infrastructure at end of life

Further, hydrogen production via electrolysis is only ‘green’ if the electricity used is verifiably renewable. In periods of low solar output, the plant may draw from the grid, which contains fossil fuel sources. Without a binding commitment to 100% behind-the-meter renewable supply and battery balancing, emissions displacement claims cannot be substantiated.

Ammonia production also results in fugitive emissions of nitrogen oxides (NOx) and ammonia slip. These are potent air pollutants that contribute to ground-level ozone and particulate formation. No fugitive emissions modelling is provided in the EIS.

Finally, there is no disclosure of the carbon intensity benchmarks used, nor an assurance that GEGHA will be independently audited under the federal hydrogen Guarantee of Origin scheme, which remains in pilot phase.

The Clean Energy Regulator’s Guarantee of Origin Scheme (pilot phase, 2023–2025) requires comprehensive cradle-to-grave lifecycle emissions accounting for hydrogen producers seeking certification. Although not yet mandatory, alignment with this evolving national standard is essential for accessing green hydrogen markets. Omission of full LCA and third-party audit provisions—especially with respect to fugitive emissions and imported component footprints—undermines the project’s “green” credentials and risks reputational exposure.

7. Summary of Regulatory Breaches

1. **Failure to Refer under the EPBC Act 1999 (Cth):** The project has not been referred despite its proximity to the Ramsar-listed Gwydir Wetlands and likely significant impact on threatened and migratory species.
2. **Breach of Work Health and Safety Regulation 2017 (NSW):** Storage of over 500 tonnes of anhydrous ammonia mandates Major Hazard Facility licensing, which has not been addressed.
3. **Non-compliance with the Protection of the Environment Operations Act 1997 (NSW):** No Environment Protection Licence (EPL) application has been disclosed for chemical handling, emissions, or waste.
4. **Lack of Cultural Heritage Assessment under DECCW Guidelines (2010):** No consultation with Gomeroi Traditional Owners has been undertaken, and no cultural heritage study has been presented.
5. **Unlicensed Water Extraction under the Water Management Act 2000 (NSW):** No water access licences or drawdown modelling have been included despite significant daily water requirements.
6. **Failure to Address Cumulative Impacts under the SEARs:** The EIS does not consider regional infrastructure load or overlapping impacts with other projects.

7. **Omission of Lifecycle Emissions Audit:** Emissions accounting lacks cradle-to-grave verification and fails to meet standards outlined under the Guarantee of Origin scheme or National Greenhouse Accounts.

8. Recommendations and Conditions

The GEGHA project, in its current form, presents significant environmental, legal, cultural, and human health risks. As such, this submission recommends that the project not proceed unless substantial changes are made, and stringent conditions are enforced. The following recommendations are made to ensure that any revised version of this project complies with applicable regulations, safeguards environmental and cultural assets, and protects local communities.

8.1. Denial of Approval Pending EPBC Referral and Review

The proponent must submit the project for a full referral under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* due to its proximity to the Ramsar-listed Gwydir Wetlands and potential impact on migratory and threatened species (DCCEEW, 2024).

8.2. Independent Lifecycle Emissions and Carbon Accounting Audit

A third-party audited Life Cycle Assessment (LCA) should be required, benchmarked against the Clean Energy Regulator's *Guarantee of Origin Scheme* (Clean Energy Regulator, 2023) and *National Greenhouse Accounts Factors* (DCCEEW, 2024).

8.3. Major Hazard Facility Licensing Prior to Determination

The proponent must undergo licensing as a *Major Hazard Facility* under Schedule 15 of the *Work Health and Safety Regulation 2017 (NSW)* (SafeWork NSW, 2023), with public disclosure of the full Safety Case.

8.4. Full Water Licensing and Extraction Impact Modelling

All water sources must be declared, with Water Access Licences and Seasonal Drawdown Modelling required under the *Water Management Act 2000 (NSW)* (DPIE Water, 2022).

8.5. Cultural Heritage Assessment and First Nations Co-Design

The proponent must conduct a formal Cultural Heritage Assessment with Gomeroi Traditional Owners in line with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (NSW DECCW, 2010) and UNDRIP principles (UN, 2007).

8.6. Biodiversity Offset Strategy and Land Stewardship Plan

The project must submit a Biodiversity Stewardship Site assessment aligned with the *Biodiversity Conservation Act 2016 (NSW)* and the *Biodiversity Assessment Method* (NSW DPE, 2023).

8.7. Emergency Response, Evacuation, and Public Safety Plan

An *Emergency Response and Evacuation Plan* must be designed in consultation with NSW Fire and Rescue, following *SafeWork NSW* and *Major Hazard Facility Guidelines* (SafeWork NSW, 2020).

8.8. Traffic and Logistics Impact Assessment

A Traffic Impact Study must be conducted under *Austrroads Guidelines for Freight and Dangerous Goods* (Austrroads, 2021), with hydrogen/ammonia routing risk modelling included.

8.9. Transparent Decommissioning and Waste Management Plan

The proponent must provide a full Decommissioning Plan under *NSW Planning Circular PS 10–002* and the *Environmental Planning and Assessment Act 1979 (NSW)* provisions for post-operational remediation (NSW Planning, 2021).

8.10. Continuous Community Engagement Program

An independent Community Liaison Officer must be appointed, following the *NSW Community Engagement Guidelines for Major Projects* (NSW DPE, 2021), ensuring regular public reporting and grievance redress.

9. Conclusion

The GEGHA proposal represents a convergence of high-risk industrial activities within an ecologically sensitive, culturally significant, and agriculturally productive landscape. While positioned as a green hydrogen innovation, the project has failed to meet critical standards of transparency, regulatory compliance, and environmental responsibility. The analysis provided throughout this submission has established clear evidence of inadequacies in the Environmental Impact Statement, the absence of required licensing and referrals, and disregard for both local stakeholder input and First Nations consultation obligations.

The cumulative environmental risks—including unlicensed water extraction, emissions misaccounting, biodiversity loss, and chemical hazards—pose unacceptable threats to the Moree Plains region and its future resilience. Furthermore, the legal and procedural breaches outlined across seven key statutes reflect systemic governance failures that demand urgent redress.

For these reasons, the project should not be approved in its current form. If it is to be reconsidered, it must be subject to a rigorous re-assessment process, including a mandatory EPBC referral, full cultural heritage evaluation, and genuine community engagement underpinned by legally enforceable commitments.

In the broader context of energy transition policy, projects such as GEGHA must not be allowed to proceed under the guise of green development while externalising harm to rural landscapes, ecosystems, and communities. A sustainable future requires not only technological innovation but regulatory integrity, ecological stewardship, and social consent. Until the proponent can demonstrate alignment with these principles, the only appropriate course of action is for the GEGHA proposal to be rejected.

In conclusion, Australian courts have consistently held that environmental approvals must comply not only with statutory requirements, but also with principles of procedural fairness, public interest, and precaution. As affirmed in *Gray v Minister for Planning* [2006] NSWLEC 720 and *Booth v Bosworth* [2001] FCA 1453, failure to adequately consider cumulative environmental risks, consult affected stakeholders, or refer matters under federal law renders approval decisions legally vulnerable. Likewise, the omission of required

licences under the EPBC Act, POEO Act, and WHS Regulation creates enforceable grounds for legal challenge or refusal. To uphold the rule of law and the integrity of planning systems, this proposal must not proceed unless and until all legislative obligations and community protections are fully satisfied.

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