MURCHISON GREEN HYDROGEN

Version 2.0 | February 2025

Mitigating impacts through project design and feedback

Looking back at the Environmental Approval Process

The Murchison Green Hydrogen (MGH) project was referred to Federal and State environmental regulators in early 2022.

The proposal was referred to the Environmental Protection Authority (EPA) under Part IV of the Environmental Protection Act 1986 (EP Act, Assessment No. 2339) and to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act, Assessment no. EPBC 2022/09217).

In May 2022, the EPA – in agreement with MGH's request – determined the project required formal assessment with the highest level of environmental impact assessment: Public Environmental Review (PER).

Since that time, the project has undertaken a wide range of environmental surveys and studies, engaged with a variety of community members, and industry and government stakeholders, and continued to refine and amend the project design to minimise impacts.

What comes next?

The findings from the surveys and feedback received from community and stakeholders will be included in the Environmental Review Document (ERD), which will be submitted to the EPA for assessment in 2025.

However, before the ERD is submitted, the project will be lodging a request to amend the proposal being assessed, under section 43A (s 43A) of the EP Act and section 156A (s 156A) of the EPBC Act.

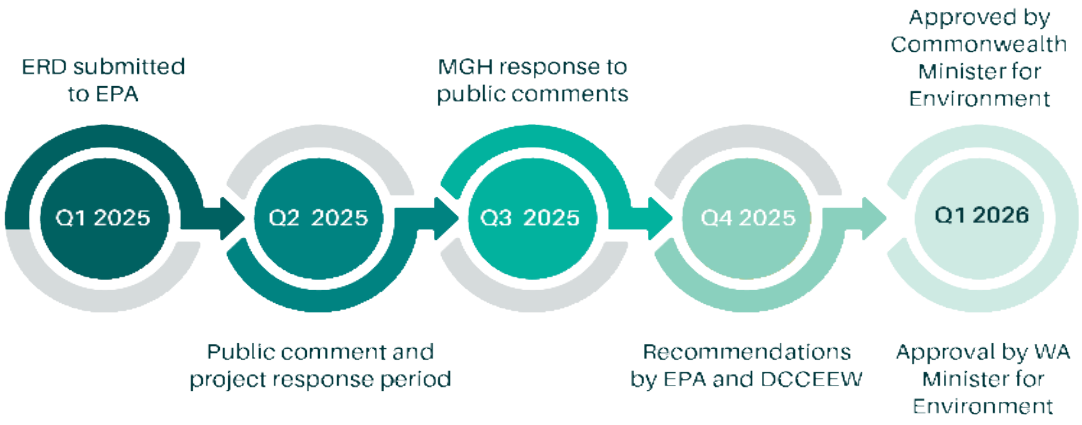


Figure 1 - The Environmental Approval Process. Last updated February 2025.

Why is the Project proposal changing?

The project is finalising the planning and concept development stage. During this stage, environmental, heritage and engineering studies were undertaken, together with community and stakeholder engagement. As a result of these, changes have been made to the design and layout of the project to avoid and minimise impacts, in accordance with MGH's mitigation hierarchy.

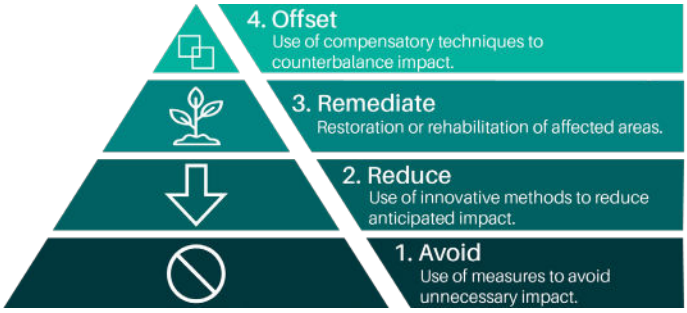
The mitigation hierarchy is as follows (in decreasing order of strategy preference, demonstrated in the below):

i) Avoid environmental impacts.

ii) Minimise environmental impacts

iii) Rehabilitate cleared areas

iv) Offset packages to reduce any significant residual impacts to an acceptable level



MGH is now seeking to inform the Federal and State environmental regulators of these changes, by amending the Project Proposal referred to them in 2022.

What about community and stakeholder feedback?

The project has been engaging with the local community, the Mid West region, government agencies, ministerial offices, and industry stakeholders.

Ongoing engagement with the Traditional Owners of the land on which the project is proposed, the Nanda People, is also ongoing.

The feedback received has been used by the project team to inform the design and layout of the facilities where practicable.

Losing track of all the acronyms? Let us help you!

MGH	Murchison Green Hydrogen
EPA	Environment Protection Authority
EP Act	Environmental Protection Act 1986
PER	Public Environmental Review
ERD	Environmental Review Document
PtA	Power-to-Ammonia
SCF	Support Craft Facility
MEF	Marine Export Facility
Ha	Hectare

What has changed on the Project?

The changes detailed in the amendment to the proposal under assessment will result in reduced impacts on native vegetation and a decreased terrestrial footprint. Overall, the reduction in impacts means improved environmental outcomes.

MGH's redesign of the project will result in:

- Less permanent clearing
- Less temporary clearing
- Less impact on flora
- Less impact on vegetation
- Less impact on terrestrial fauna through habitat loss
- Less impact on more productive benthic habitats
- Less impact on visual amenity caused by the marine export and support craft infrastructure

Additional changes include the expansion of the development envelope to accommodate the revised marine area, additional wind turbines in the east and revised access road; incorporation of larger turbines to increase efficiency and reduce atmospheric impacts; incorporation of required power transmission infrastructure; revised footprint to incorporate refined project design and inclusion of a bushfire protection area; required lengthening and widening of main access road; additional tunnelling to accommodate the extended pipeline; and inclusion of infrastructure flare and vent components.

	Referred Proposal	Revised Proposal	Reason behind the change
Project site access road	Central to project site	Realigned to the north	Avoid fauna impacts and steep topography
Development envelope (DE)	Original development envelope	Reduction of southern extent of the	Buffer creation between the project and heritage sites
PtA plant	Coastal location	Moved 7km inland	Avoid coastal and visual
Marine area	Original	Enlargement of marine area	Accomodate design changes and reduce marine impacts
Support Craft Facility (SCF)	Two options for SCF location	Removal of Murchison River option	Environmental, social and operational feedback
Wind Turbines	700 wind turbines	522 wind turbines	Tech improvements resulting in reduced environmental/social (visual) impact
Solar farm	Up to 10,000ha	Up to 7,000ha	Technology improvements and layout optimisation to reduce environmental impacts

Table 1 - Revised proposal summary

Reduction in the number of wind turbines and smaller footprint

The project was initially designed with a wind farm of approximately 700 wind turbines. As a result of advancements in renewable energy production, improved engineering capacity and emerging turbine technology, this number has since been reduced to 522 wind turbines.

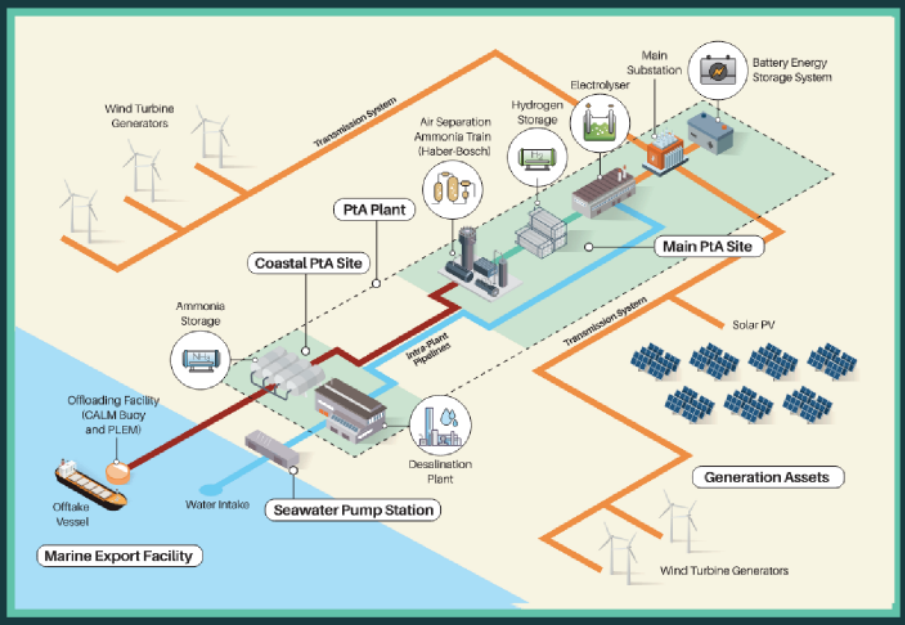
Reduction in the number of wind turbines and smaller footprint

The solar panels in the original farm design covered up to 10,000ha. As with the turbines, improvements in renewables technology and ongoing layout optimisation have allowed for a small solar farm of up to 7,000ha without impacting solar generation capacity.

Relocation and redesign of the Marine Export Facility (MEF)

The MEF was relocated 2,600m from the shore as a result of marine environmental studies as well as feedback from local fisheries associations.

The MEF has undergone redesign and optimisation to reduce benthic habitat disturbance by 3ha.



Moving the production plant further inland

The PtA plant has been relocated further inland. The redesign was made to avoid coastal and visual impacts.

Removal of the SCF from the Murchison River

Original plans for the project included an option to have the Support Craft Facility (SCF) located in the Murchison River. From this facility tugboats would have travelled to the project area to facilitate the loading of ships. After a comprehensive environmental, social and operational review, this SCF option has been removed from the proposal.

Change in pipeline construction methods

After marine benthic communities and habitats were surveyed, the construction method of the subsea cryogenic pipeline was amended to reduce impacts.

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