

Welcome

Introducing Tagdale Green Ammonia

We are here to share our initial plans for an exciting new project.

Our plans are still at the early stage of development. We will be holding a second consultation next year to show our detailed plans.

We hope to submit our planning application to Shetland Islands Council in 2026.

About Statkraft

Operating in the UK since 2006

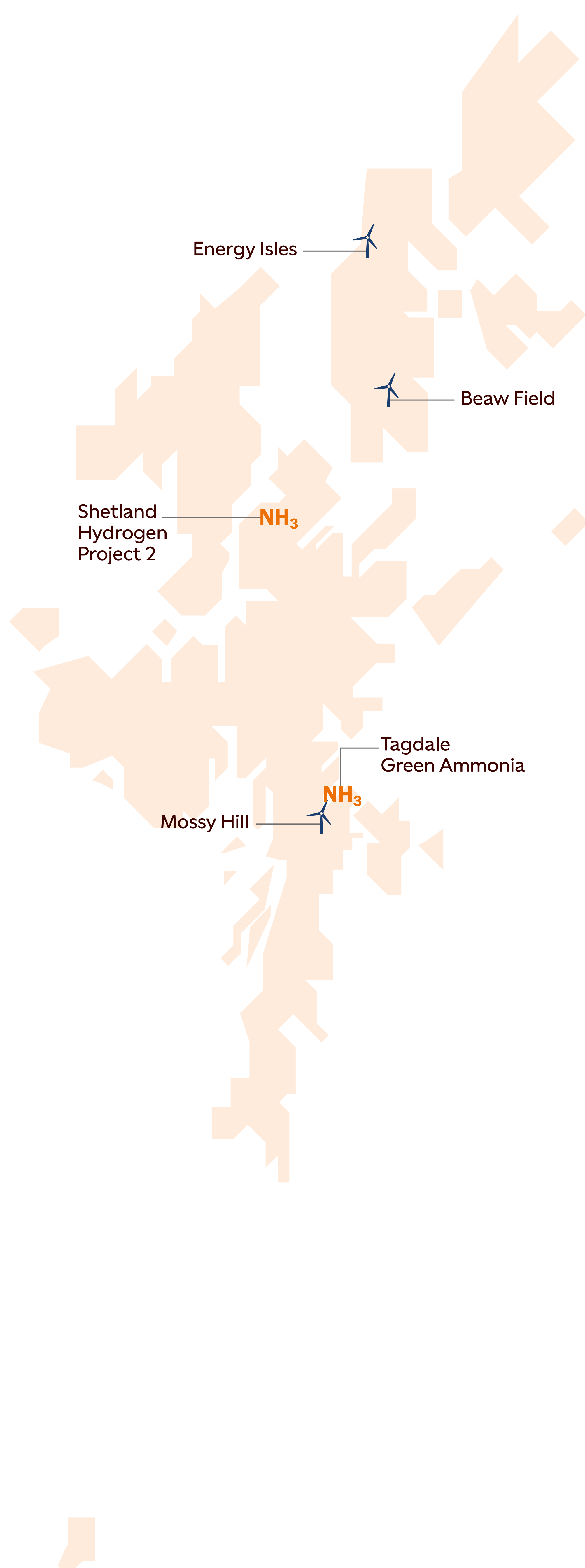
Owners of 3 consented wind farms in Shetland

More than 40 projects in development, construction or operation across the UK

A state owned utility, with origins in Norwegian hydropower over 130 years ago

7,000 employees in over 20 countries

The largest generator of renewable energy in Europe

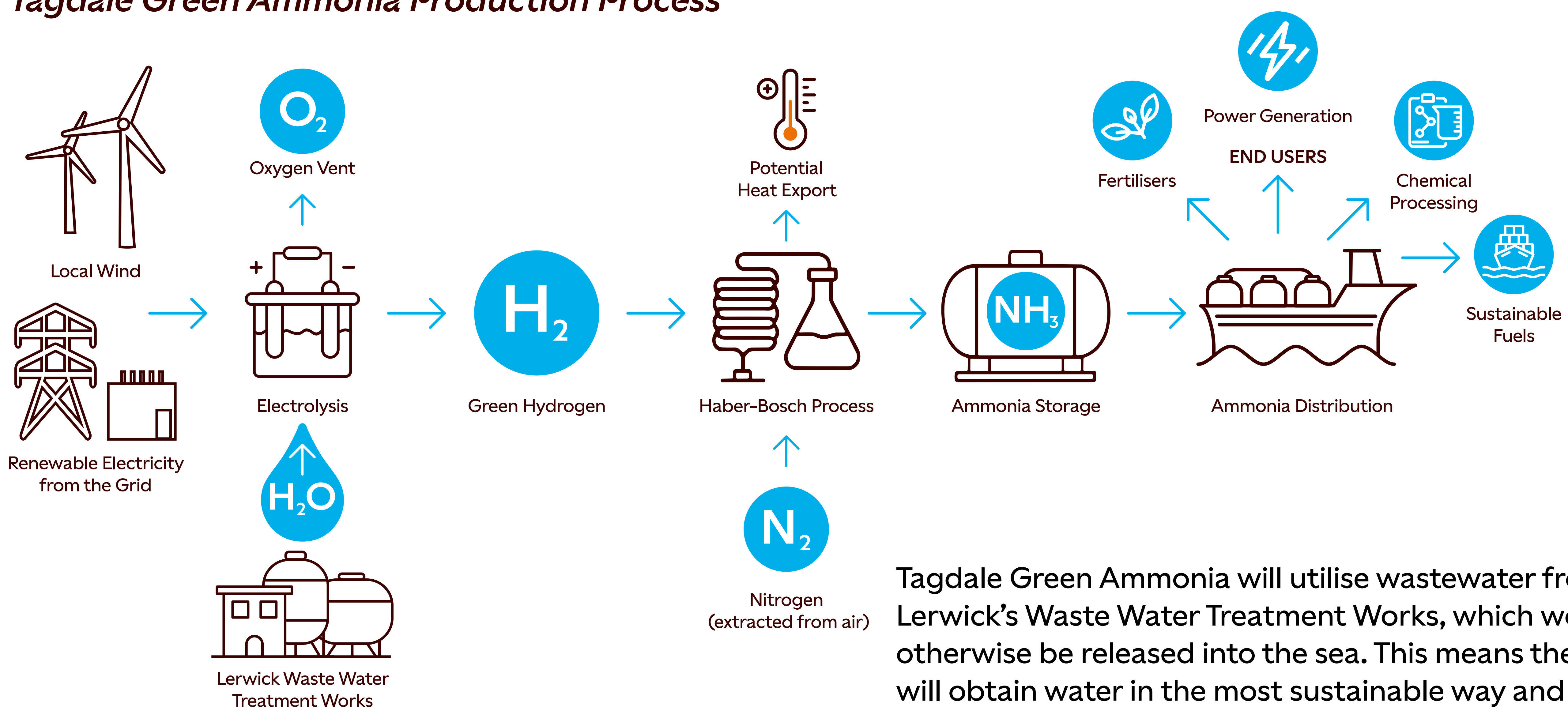


About Tagdale Green Ammonia

By generating carbon-free green ammonia on Shetland, we can use Shetland's renewable energy to its full potential.

Tagdale Green Ammonia will produce ammonia from wastewater, atmospheric nitrogen and renewable energy, helping to secure Britain's independent supply of an important chemical. The project will produce up to 150 tonnes of green ammonia per day. Power will come from the consented substation to the south, which will ensure minimal new infrastructure is required to power the project.

Tagdale Green Ammonia Production Process

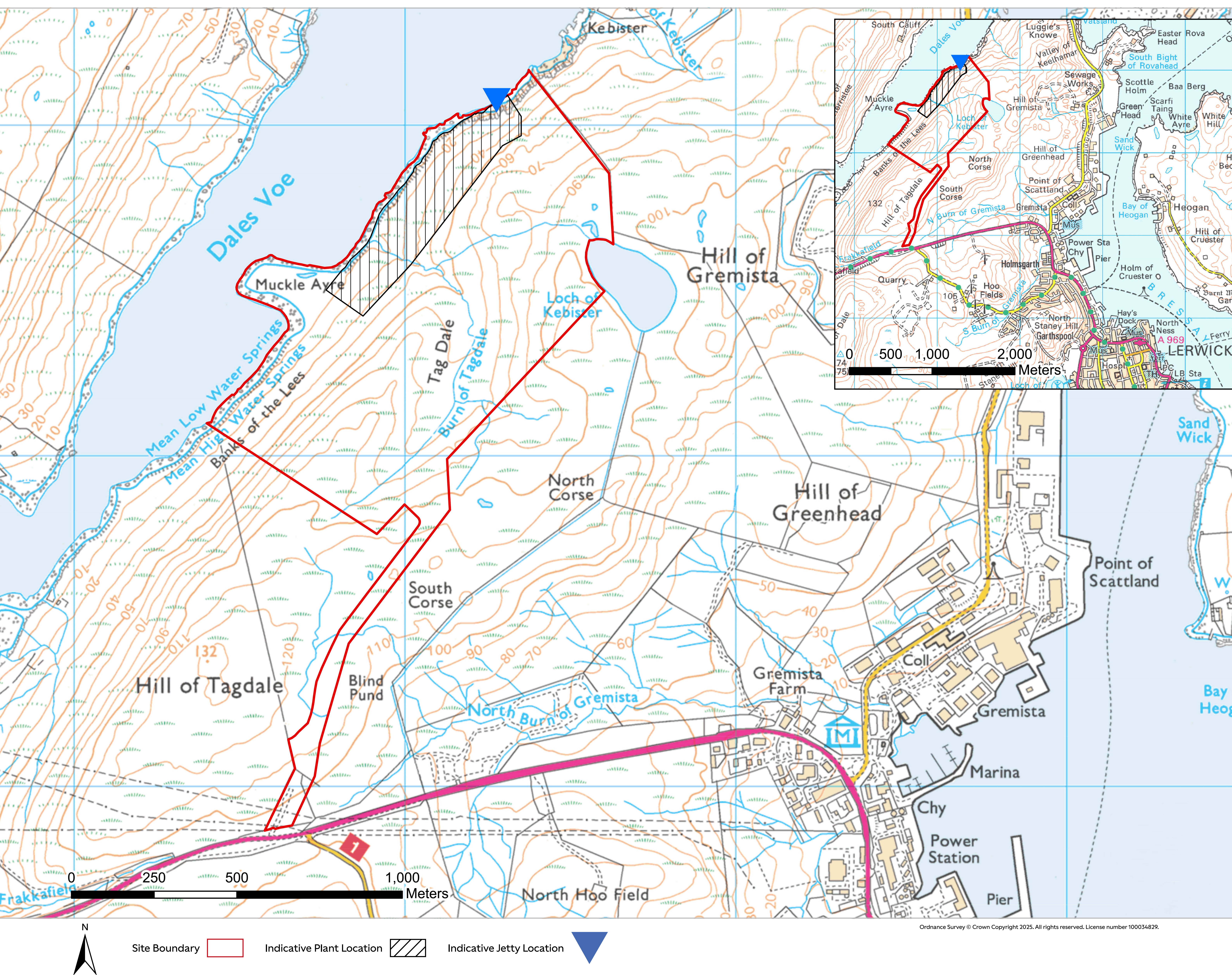


Tagdale Green Ammonia will utilise wastewater from Lerwick's Waste Water Treatment Works, which would otherwise be released into the sea. This means the project will obtain water in the most sustainable way and will not be placing new demands on Shetland's fresh water supply.

The green ammonia produced will be transferred via pipeline to a private jetty in Dales Voe for export via marine cargo carriers. We expect that the ships will visit the site every 3-4 months to collect the green ammonia. A Marine Consent will be progressed for the proposed jetty site separately. Further details of the jetty design will be available at the next consultation event.



Site Location

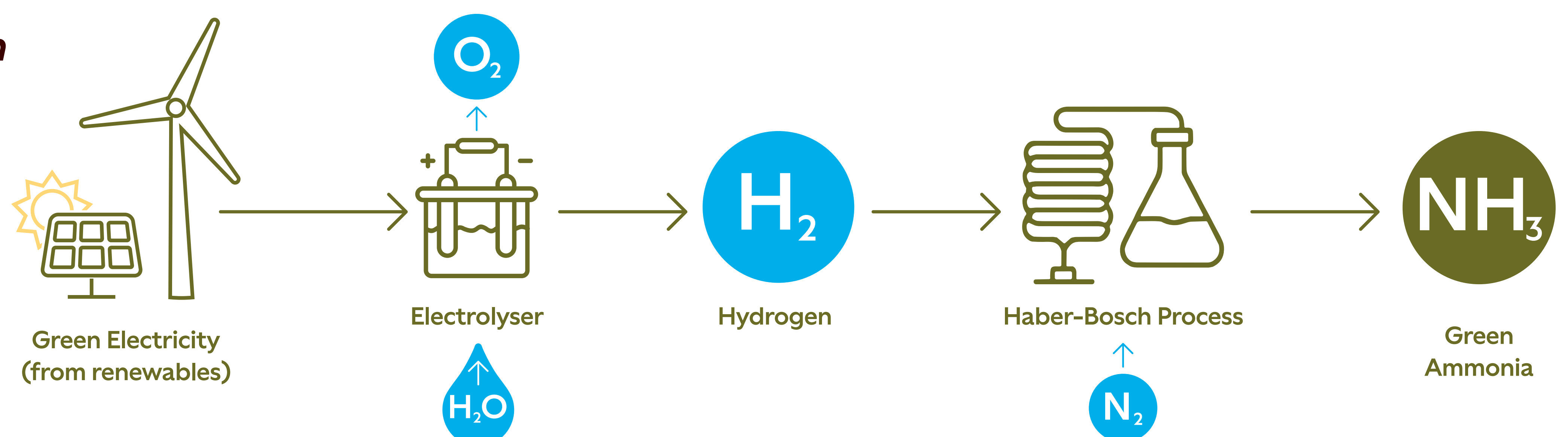


About Green Ammonia

Ammonia is produced using the Haber-Bosch process, a method that has been used on an industrial scale for over a century.

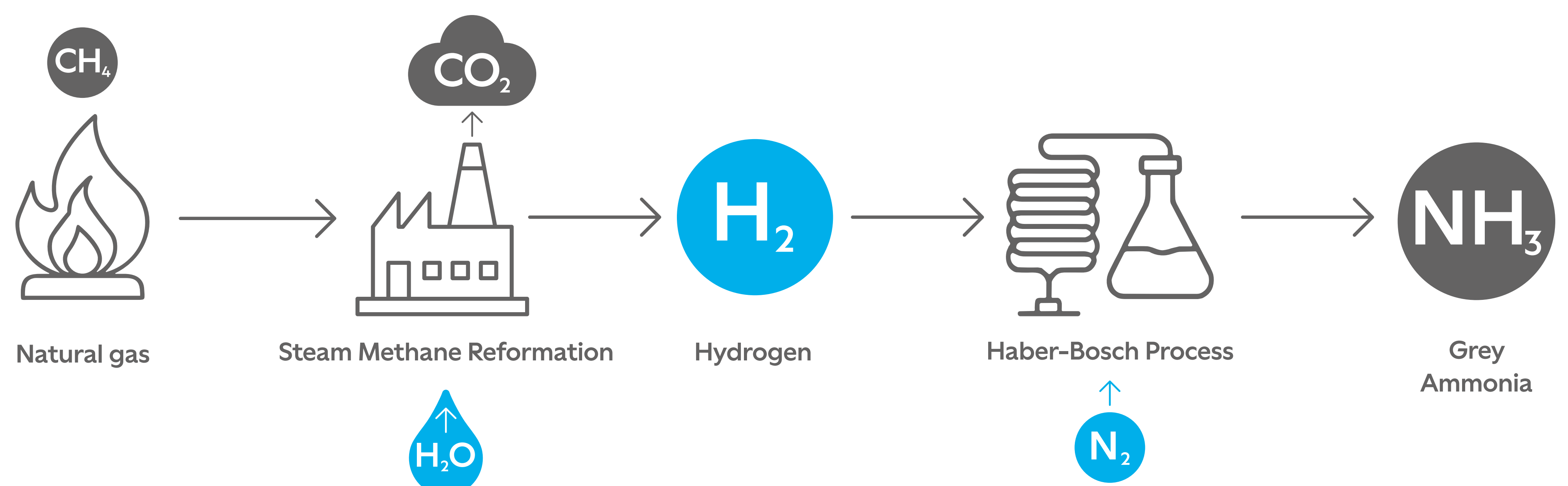
The hydrogen for 'green' ammonia is produced using renewable energy through a process called electrolysis to split water molecules (H_2O) into hydrogen (H_2) and oxygen (O_2) elements. Electrolysis is a common process that involves passing an electric current through water and separating the resulting hydrogen and oxygen. Oxygen produced will be released into the atmosphere and there will be no direct carbon dioxide emissions.

Green Ammonia Production



Historically, most of the hydrogen used in the Haber-Bosch process has been extracted from natural gas in a process that releases substantial volumes of carbon dioxide into the atmosphere – ammonia produced this way is known as 'grey' ammonia.

Grey Ammonia Production



Why Green Ammonia?

Ammonia is a strategic resource – and will become more important. Up until 2020, the UK had a production capacity of 1.2m tonnes / year. Now, there is none.

For over a century, ammonia has been essential for modern agriculture and industry. Today, green ammonia is emerging as a unique solution to decarbonise our food chain, chemical and marine fuels, and to accelerate the energy transition.

What is ammonia currently used for?

- Fertiliser
- Industrial chemicals
- Plastics
- Dyes
- Synthetic fibres

What are the growing and new uses for green ammonia?

- Fuel, in engines or fuel cells – especially maritime fuel / shipping
- Energy carrier
- Chemical energy storage
- Power generation

Food Security

Without domestic production of ammonia, the UK will be reliant on US or Middle East imports for key fertiliser supply chain input.

Energy Security

Flexible domestic green ammonia can be used for power generation, which reduces reliance on gas imports from overseas supply chains.

Fuel Security

Green ammonia for the domestic production of marine fuel will protect the UK's access to fuels in a crisis.

Economic Growth

Green ammonia will create transition jobs, new infrastructure and supply chain development that will help to grow the UK economy – relying on imports will grow other countries' economies.



Why Here?



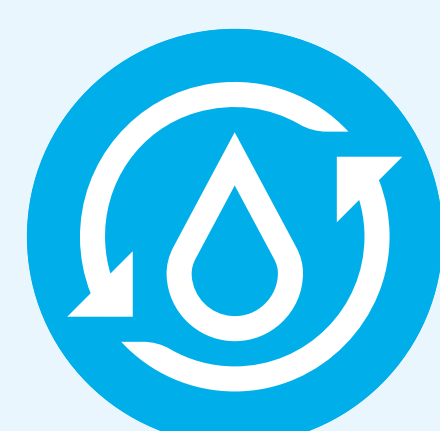
Tagdale has direct access to Dales Voe, which offers an excellent opportunity for the construction of a private jetty for the purposes of transporting the green ammonia off site by marine vessel.



Tagdale is conveniently located within close proximity to a consented substation on the opposite side of the A970. This will be the energy source for the site and will ensure minimal new infrastructure is required to power the project.



Dales Voe Base is situated next to Tagdale. Tagdale Green Ammonia would be viewed as an expansion of the existing marine industrial environment in this area.



Tagdale is located within close proximity to Lerwick's Waste Water Treatment Works, which enables the project to access a sustainable water source that would otherwise be released into the sea and will not place pressure on Shetland's supply of fresh water.

How Could it Look?

Whilst each green ammonia production facility is unique and developed on a site-by-site basis, this image gives an idea of how Tagdale Green Ammonia could look.

Ammonia has been produced at an industrial scale for over a century, but the concept of producing it using renewable energy is much newer. Tagdale Green Ammonia will be one of the first green ammonia production sites in the UK.

The world's first green ammonia facility is in Ramme, in western Denmark. The facility is powered by 50MW of solar panels and 12MW of wind turbines.

The project has been jointly developed by Skovgaard Energy, Topsoe and Vestas, and has received funding from the Danish Energy Technology Development and Demonstration Program (EUDP).





Protecting the Environment

We are committed to limiting and, where possible, avoiding any adverse environmental impacts and these assessments will help inform the design of the project.

Surveys and assessments are being undertaken by a team of specialist environmental and technical consultants. The results and findings will be detailed in an Environmental Impact Assessment (EIA) Report, which will be publicly available as part of our planning application to Shetland Islands Council.

The survey findings will help to establish where mitigation measures will be required to minimise and, where possible, negate any adverse effects.

Consultation with Shetland Islands Council and statutory bodies is ongoing to determine the scope of the environmental assessments. These bodies will use the EIA Report to inform their determination of our application.

The environmental topics being examined include:

- Landscape and Visual
- Ecology and Ornithology
- Hydrology and Peat
- Historic Environment
- Traffic and Transport
- Noise and Vibration
- Air Quality
- Water and Flood Risk
- Greenhouse Gases

At this stage we are building up a picture of the existing environmental conditions on site to understand the existing baseline. An assessment will then be undertaken for each of the above environmental topics to establish if the project is likely to have a beneficial or adverse impact upon the existing site conditions.



Operating Safely

Ammonia has been widely and safely traded for decades. This means there are already established supply chains, transport vessels, handling procedures and storage terminals across the world.

We are committed to ensuring the safe operation and construction of our projects. Tagdale Green Ammonia will be subject to a number of regulations and consenting regimes to ensure the production, transport and storage of the green ammonia is conducted safely.

Tagdale Green Ammonia will be required to obtain a range of permits and consents to ensure it is developed and operated safely and in line with all relevant regulations. These are inclusive of:

- Environmental Permit, which regulates activities that could impact the environment and is issued by the Scottish Environmental Protection Agency; and,
- Hazardous Substances Consent, to ensure that hazardous materials are managed safely and with proper oversight.

The Tagdale Green Ammonia site will also be subject to Control of Major Accident and Hazards (COMAH) regulations, which are designed to prevent and mitigate the effects of major accidents involving dangerous substances at industrial sites within the UK. These regulations require operators to take measures to prevent major accidents, limit their consequences to people and the environment, and to have internal and external emergency plans in place.

The project team are committed to early and ongoing engagement with the local community and statutory bodies throughout the permitting process, to ensure transparency and address any concerns. All permits will be applied for in accordance with statutory requirements and best practice.





Thank you for visiting



We are working to refine our proposal and complete the environmental studies for our comprehensive EIA to be submitted with a future application. You can find out more about what is included within the EIA on our project website, www.tagdale.co.uk

We plan to submit a planning application to Shetland Islands Council in 2026.

When the proposal is submitted, interested parties and statutory consultees will have the opportunity to formally comment on the application to Shetland Islands Council. All of the information will be available to view on the Shetland Islands Council’s planning portal and our project website at the time of submission.

Local Suppliers

Shetland businesses have a long history of supporting energy developments. Join our Shetland supplier register to express your interest in working with our projects on the Islands.

Register your interest by scanning the QR code.



Contact us



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