

GREEN HYDROGEN SITE SELECTION

The hydrogen plant will comprise several components including an electrolyser, water treatment, compressor and cooling units. These units will be contained within a specially designed agricultural-style building to reduce noise and visual impact.

In the site selection process, the hydrogen plant’s impact on the environment, local communities and the landscape has been given careful consideration, as summarised within the matrix to the right:

LEGEND

Proposed Firlough Wind Farm Site

Proposed Firlough Wind Turbine Locations

Original Proposed Hydrogen Plant Site

Preferred Proposed Hydrogen Plant Site

Approximate Areas of Consideration

A summary matrix of each sites suitability to accommodate the hydrogen plant is shown in the graphic below. This is based on local knowledge, community feedback, environmental impact assessment and review of County policies.

	Preferred Proposed Hydrogen plant site	Original Proposed Hydrogen plant Site	Culleens	Carra	Shanaghy	Bonniclon East
Distance to Wind Farm Score calculated based on distance to the wind Farm < 1km 1<3km 3<7km 7<10km >10km						
Proximity to Houses & Sensitive Receptors Score calculated on distance to closest house and or other sensitive building such as a school >200m 150m-200m 100m-150m 50m-100m 50m						
Hydrogen Transportation Route Suitability Score based on local knowledge and review of local road network and national road proximity to show the suitability of the hydrogen trailer route and the impact on local traffic.						
Visibility & Screening Based on overview assessment of topography, natural screening from trees and other vegetation, set back from roads, houses and other sensitive receptors.						
Sensitive Landscape Areas, Features & Viewpoints Score based on overview assessment of Mayo/Sligo Sensitive landscape types/ areas and proximity to scenic routes, viewpoints and high scenic amenity areas.						
Habitats & Ecology Score based on type of habitat and proximity to conservation areas and areas with protected species. Proximity to special areas of conservation and special protected areas (internationally protected conservation areas known as European sites), Natural Heritage areas, Salmonid waters (protected areas for salmon), ancient woodland, bird watch sensitivity areas, Annex I Habitats. Type of habitat and proximity to conservation areas and areas with protected species.						
Water Source Data at the Preferred Proposed Hydrogen Plant Site and the Original Proposed Hydrogen Plant Site is from hydrological site investigations which include drilling to test water volume, quality and potential impacts of abstraction. Where not available a score was calculated looking at the type of aquifer in the area regionally/locally, presence of a gravel aquifer and locality of wells/karst features which suggests groundwater supply.						
Cabling Route Suitability Score based on the suitability of the cabling route between the wind farm and hydrogen production facility. Includes a review based on local knowledge and mapping software. A lower score is given where the route will need to go through towns/busy areas as this could cause disruption.						
Flood Risk Flood risk score based on the environmental protection agency flood risk maps.						
Commercial Suitability Score based on a combination of factors that contribute to the viability of the location from a commercial aspect, this includes size of land available, access rights, suitable distance from overhead lines and other limiting infrastructure, the landowners being open to the project, the cost of the cabling route.						
Total Scores	35	30	26	22	22	19