

## KEY FACTS

Project: Crop Fed Anaerobic Digestion plant

Client: Ingenious

Location: Tornagrain nr Inverness, Scotland

Facility footprint: 1 hectare

Purpose: Upgrades to site performance –  
Enhancement project

Cost: 1.4-million-pound sterling

Commencement: June 2022

Time frame: 6 months

Contract type: Operational and expansion

Output: 500 m<sup>3</sup>/h biomethane

Tornagrain is a crop-fed Anaerobic Digestion (AD) plant currently operated and maintained through a contractual agreement with Agrivert.

This site presently has insufficient clamp storage to accommodate all the feedstock required throughout the year. Currently, Ag-Bags are used for storage that are kept in a nearby field to supplement the storage capacity. Ag-Bags are not the best solution for silage storage. The silage tends to degrade fast if the bags are damaged. They can be difficult to de-bag and the unit cost of storage and the additional associated transport is more than clamp storage.

## OBJECTIVES

The project aims to build a new U-shaped clamp to accommodate the annual feedstock requirement. However, planning and designing the new clamp was more challenging than usual due to restraints from existing gas pipes and electric cables on either side of the build area.

### The main objectives of the project are to:

- Reduce unit cost of operations
- Improve the quality of silage through better storage
- Reduce silage wastage
- Improve environmental protection by operating with SSAFO clamps reducing leaching risk
- Improve environmental credential of the plant by reducing plastic use and reducing tractor movements associated with double handling silage from Ag bags

## EXPERTISE

Agrivert provides expert engineering, consultancy, and technical and operating solutions to the organic waste treatment and renewable energy industry in the UK and internationally. Agrivert offers a full range of services to solve organic waste management challenges with proven innovative solutions.

Since 1994, Agrivert has been a niche player focused on designing, building, enhancing and operating facilities to recycle organic wastes, produce high-quality organic fertilisers and generate renewable energy.

## CONSTRUCTION

The clamp will be 75.5m long with an area of 5,472m<sup>2</sup> divided by a central wall and capable of holding an additional 14,000 tonnes.

The clamp will meet the requirements of Silage, Slurry and Agricultural Fuel Oil (SSAFO) regulations 2010, which require:

- The clamp to be impermeable and corrosion resistant
- The clamp to be at least 10 metres clear of inland freshwater and the base to have drainage collection channels around the outside
- To have a purpose-built leachate tank that will collect any runoff leachate through designated drainage pipes

Lastly, Agrivert is to conduct works without interrupting the current plant operations.

## CURRENT STATUS

The anticipated completion date is October 2022.

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