

Amendments to original permit application in red for ease of reference.

This installation is part of a previous dairy expansion project at Much Fawley Farm. Slurry from the dairy cows is moved by a weir system into a storage tank before being pumped into the Digester tanks. The other feedstocks as listed in the waste category list will either be stored in the Clamps (Solids) or the slurry storage tank prior to being added to a static diet feeder which automatically charges the solid fraction into the Anaerobic Digester. **At the time of varying this permit there are no dairy cows adjoining the Much Fawley Farm AD permitted site and the feedstocks are all grown on the farm or received as accepted EWC coded wastes.**

This bespoke permit is to cover the importation of the above waste material because the location of the installation is within 500 metres of the River Wye, a SSSI, AONB, and SAC designated area.

Anaerobic Digestion is the placement of imported wastes and grown energy crops into closed oxygen free tanks to facilitate microbial degradation producing biogas. This is run through one of **two** gas engines to run a generator producing electricity for onsite use and export to the electricity grid. **A second CHP engine has been included on the site to cover the main engine service periods and breakdowns. This will ensure there are no issues with gas emissions from the site.** Heat will also be produced from the cooling and exhaust system on the engine and will be used on site.

The end product of the process will be digestate; slurry-like material which **will be stored in a liquid digestate lagoon before being used as an agricultural fertiliser. In order to comply with Environment Agency permitted site rules and Nitrate Vulnerable Zone requirements an additional 25 % storage capacity is required to ensure compliance of the closed periods and sympathetic applications immediately following the end of the closed period. This has now been provided in a 20m diameter by 3.6m high above ground slurry store. Additional land has been required to be added to the permitted area to allow this additional storage to be integrated into the bunded containment area already found on the site. Both of these storage structures comply with CIRIA Reports C736 and C759.** This material will be spread to land within the control of the business and will comply with all relevant legislation, including Nitrate Vulnerable Zones and Codes of Best Agricultural Practice.

Equipment used in this process includes:

- Slurry storage tank
- 1 static diet feeder
- 2 Digester tanks
- **1 Liquid Digestate Storage Lagoon**
- **1 Liquid Digestate Circular Above Ground tank**
- 1 Gas storage Holder
- 1 Combined Heat and Power (CHP Engine 1) unit offering heat recovery from the exhaust and cooling system integrated into the process building.

- 1 Combined Heat and Power (CHP Engine 2) unit offering heat recovery from the exhaust and cooling external to the process building.
- 1 Emergency Flare (Boiler and incinerator)