

Biogas Plant McDONNELL



Location	Shanagolden, Ireland
Construction Period:	2009/2010
Input substrat:	Cattle slurry, chicken manure, industrial sludge, ABP (animal-by-products)
Fermenter:	reinforced concrete tank: 1,248 m ³
CHP	Gas engine 250 kW
Special Features:	Waste plant, gas holder above the digester and secondary digester, mesophilic operation, pasteurisation, separation of digestate
Cost:	Approximately EUR 1,25 Mio.

The biogas plant MCDONNELL, built and operated by McDonnell Farms Biogas Limited is a waste digestion plant. This biogas plant, with digestate separation, is operated at mesophilic conditions, with cattle slurry, chicken manure, industrial sludge and ABP (Animal by-products) by quasi-continuous centrifugal pumps. The plant consists of sub-surface reception tanks, a pasteurisation unit, a side-stirred digester with a gas-mixing system and a secondary digester. The single-stage operated plant has a pasteurisation according to EN 1774 and EN 1069 (70 °C/ 1 h, no pressure, heating medium: water). The solid and liquid phases are mechanically separated with drum sieve presses. The solids get used as farm fertilizer while the liquid is used to dilute the digestate, when needed. The produced energy is supplied into the public electricity grid, which the owner receives a payment for. An external use of the heat for buildings and a stable is planned and prepared for. The start-up was in 2010.