

NEW BESPOKE WASTE INSTALLATION ENVIRONMENTAL PERMIT APPLICATION FOR THE ANAEROBIC DIGESTION FACILITY

at

**BRYN QUARRY, GELLIARGWELLT FARM, GELLIGAER
ROAD, GELLIGAER, CAERPHILLY**

ENVIRONMENTAL RISK ASSESSMENT

Prepared for:

BRYN POWER LIMITED

Part of the



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Submitted by:-

JPCE Limited

(John Perkins Consulting Engineers)
Bronhaul Abernant Road
Aberdare
Mid-Glamorgan
CF44 0PY

1 INTRODUCTION

Bryn Power Ltd are seeking consent to begin accepting food waste in a new Anaerobic Digestion Facility (AD). This management plan has been drawn up to mitigate all identified potential fugitive emissions from on-going site operations.

JPCE Limited is acting consultants for Bryn Power who have commissioned JPCE to produce an Environmental Risk Assessment in line with operational activities associated with the recovery of waste to land for a construction project.

Bryn Power are proposing to accept a number of non-hazardous wastes to apply to land as outlined in the Non-Technical Summary. The table below presents the identified risks on site, the potential linkages from source, pathway and receptor, and provides an assessment of the residual risk following the proposed risk management strategy.

Operator	Bryn Power Ltd.
Operational Site	Bryn Power Ltd Gelliargwellt Farm Gelligaer Hengoed Mid Glamorgan Wales CF82 8FY
Assessment Date	February 2015
Carried Out By	Beth Jones
	JPCE Ltd
Approved By	Alun Price

			Judgement				Action	
Source	Pathway	Receptor	P	C	M	Justification of Magnitude	Risk Management	Residual Risk
Airborne dust particulates.	Deposition from air	Human Health	Med	Low	Med	Potential for frequent and long term exposure for people working close to the site (apart from licence holder/operator and employees).	- Most waste inputs will have high moisture content so the production of dust will be minimal. - Shredding from crops will take place in the solid feeder only. - The site will be kept clean and dust suppression will be used as and when needed. - Daily site inspections	Low
Airborne particulates generated during recovery process and by the movement of vehicles onsite.	Inhalation and ingestion.	Human Health	Med	Low	Low	Potential for frequent and long term exposure if anyone is living or working close to the site (apart from licence holder/operator and employees).	- Most waste inputs will have high moisture content so the production of dust will be minimal. - Shredding from crops will take place in the solid feeder only. - The site will be kept clean and dust suppression will be used as and when needed. - Daily site inspections	Low
Noise from plant	Noise through air	Human Health	Med	Low	Med	Local residents and neighbouring business often sensitive to noise and likely to complain.	- Machinery maintenance schedule. - Machinery movements not to occur outside of working hours. - Regular checks on noise and vibration levels. - Bunding and landscaping surrounding the site.	Low

			Judgement				Action	
Source	Pathway	Receptor	P	C	M	Justification of Magnitude	Risk Management	Residual Risk
Fugitive releases of litter.	Air transport.	Human Population	Low	Low	Med	Local residents/local farmers/local businesses sensitive to litter and likely to complain.	- Waste arrives on site having gone through a screening operation at the adjacent IVC to remove litter. - Daily inspection of site and removal of litter - Good Housekeeping.	Low
Fugitive releases waste, litter and mud on local roads.	Vehicles entering and leaving site.	Human Population	Med	Low	Low	Local residents often sensitive to mud on roads and likely to complain.	- Daily inspection of site roads for debris - Hire of a sweeper as required. - Good Housekeeping.	Low
Odour from operations	Air transport Inhalation	Human Population	Med	Med	Med	Local residents and businesses often sensitive to odour and likely to complain	- All AD tanks are sealed, minimising release of odours - Housekeeping and removal of spillages and debris.	Low
Accidental fire	Air transport, spillages	Personnel Local human population and local environment	Med	Med	Med	Risk of accidental combustion of waste is moderate environment	- Permitted activities do not permit burning of waste. - Accident Management Plan detail consequences and control of fires. - Monitoring of any stockpiles of feedstocks and dry digestate. - Housekeeping controls. - Adherence to Management System.	Low
Scavenging birds and animals.	Air transport and over land	Personnel Human Population	Low	Low	Low	Scavenging birds and vermin attracted to site and affecting neighbouring businesses.	- Fugitive Emissions Management Plan details process for dealing with source. - Hire of professional pest controllers as required.	Low

			Judgement				Action	
Source	Pathway	Receptor	P	C	M	Justification of Magnitude	Risk Management	Residual Risk
Pests e.g. flies.	Air transport and over land.	Personnel Human Population	Low	Low	Low	Insect pests can multiply on some feedstocks particularly in summer months.	- Fugitive Emissions Management Plan details process for dealing with source. - Control of pests through a pest control contractor as required. - Housekeeping controls	Low
All on site hazards particularly relating to waste handling and storage activity	Direct physical contact.	Local human population	Med	Med	Med	Waste types are non-hazardous therefore only low risk.	- Signs outlining onsite risks. - Adherence to Management System. - All wastes to be accepted are non- hazardous.	Low
Spillage of liquid food waste or digestate with high organic content.	Surface runoff.	All surface waters close to and downstream of the site	Med	Low	Med	Waste types are non-hazardous therefore only moderate risk. Potential leachate spill into low flow watercourse. Harm is temporary and reversible.	- All materials stored on an impermeable pavement and sealed drainage. - Accident management plan and emergency procedures outline a methodology for loss of site liquid wastes/leachate to surface waters.	Low
Spillage of liquid food waste or digestate with high organic content.	Permeate flow through soil.	Groundwater	High	High	High	Site located outside groundwater source protection zones.	- All materials stored on an impermeable pavement and sealed drainage. - Accident management plan and emergency procedures outline a methodology for loss of site liquid wastes/leachate to surface waters.	Low

			Judgement				Action	
Source	Pathway	Receptor	P	C	M	Justification of Magnitude	Risk Management	Residual Risk
Spillage of liquid food waste or digestate with high organic content.	Indirect run-off from site across ground surface, via the soil layer	SSSI Nelson Bog	Low	High	High	Potential for spillage from plant on site to sensitive habitat 1km south of the site location.	• Adherence to Management Systems. • Plant maintenance schedule. • All fuelling and maintenance to take place off site. • Good Housekeeping. • Accident Management Plan.	Low
Fire on site leading to run off from polluted fire fighting waters.	Direct and indirect run off.	Groundwater	Med	High	Med	Fires can be deliberate or accidental.	• Impermeable pavement • Sealed drainage system • No point emissions • Excess liquid management procedures • Accident management plan	Low
P = Possibility C = Consequence M = Magnitude								