



Permit Number: AB3092ZE

Operator: Bryn Power Limited

Facility: Gelliargwellt Farm Anaerobic Digester Facility

Form Number: WaterUsage1 / 10/06/21

Reporting of Water Usage for the year 20.01.22 to 20.01.23

Water Source	Usage (m ³ /year)	Specific Usage (m ³ /unit output)
Mains water	1,042.7	0.00013608
TOTAL WATER USAGE		

Operator's comments:

See end.

Signed
(authorised to sign as representative of Operator)

Date.....14.02.2023.....



Permit Number: AB3092ZE

Operator: Bryn Power Limited

Facility: Gelliargwellt Farm Anaerobic Digester Facility

Form Number: Energy1 / 10/06/21

Reporting of Energy Usage for the year 20.01.2022 to 20.01.23

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity *	MWh	277 (own produced)	0.04
Natural Gas	MWh	n/a	
Gas Oil	tonnes	n/a	
Recovered Fuel Oil	tonnes	n/a	
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

See end.

Signed

(Authorised to sign as representative of Operator)

Date.....14.02.2023.....



Permit Number: AB3092ZE

Operator: Bryn Power Limited

Facility: Gelliargwellt Farm Anaerobic Digester Facility

Form Number: Air 1 / 17/08/22

Reporting of emissions to air for the period from 20/01/2022 to 20/01/2023

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
A1 CHP Exhaust (Jenbacher Engine) ^[5]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500mg/m ³	Hourly mean	347	BS EN 14792	12.01.23 12:02-12:53 14:45-15:09	15
	Carbon monoxide	1400mg/m ³	Hourly mean	1141	BS EN 15058	12.01.23 12:02-12:53 14:45-15:09	44
	Sulphur dioxide	350mg/m ³	Hourly mean	53.3	BS EN 14791	12.01.23 12:02 -13:02	3.2
	VOC's	2000mg/m ³	Hourly mean	1670	BS EN 12619	12.01.23 12:02-12:53 14:45-15:09	67
A2 Flare Stack ^{[5],[6]}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set	Hourly mean	n/a	BS EN 14792		
	Carbon monoxide		Hourly mean	n/a	BS EN 15058		
	Sulphur dioxide		Hourly mean	n/a	BS EN 14791		
	VOC's		Hourly mean	n/a	BS EN 12619		

Emission Point	Substance / Parameter	Emission		Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
		Limit Value	Reference Period				
A5 CHP Exhaust (Edina Engine) ^[5]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	500mg/m ³	Hourly mean	453	BS EN 14792	12.01.23 13:30 – 14:30	19
	Carbon monoxide	1400mg/m ³	Hourly mean	908	BS EN 15058	12.01.23 13:30 – 14:30	35
	Sulphur dioxide	350mg/m ³	Hourly mean	55.1	BS EN 14791	12.01.23 13:30 – 14:30	3.3
	VOC's	2000mg/m ³	Hourly mean	1051	BS EN 12619	12.01.23 13:30 – 14:30	42
A6 Carbon filter on the processing liquid tank	Ammonia (NH ₃)	20 mg/Nm ³	-	<0.089	EN ISO 21877	19.08.22 09:05 – 10:05	0.016
	Hydrogen sulphide (H ₂ S)	No limits set	-	3.0	US EPA Method 11 (Impinger method) or CEN TS 13649 (Charcoal tube), US EPA Method 15	19.08.22 10:15- 11:15	0.27
A7 Biofilter serving the waste reception building	Ammonia (NH ₃)	20 mg/Nm ³	-	<0.088	EN ISO 21877	19.08.22 12.25-13.25	0.016
	Hydrogen sulphide (H ₂ S)	No limits set	-	3.4	US EPA Method 11 (Impinger method) or CEN TS 13649 (Charcoal tube), US EPA Method 15	19.08.22 13:30-14:30	0.31
A9 Covered digestate lagoon vents	Ammonia (NH ₃)	20 mg/Nm ³		-Not tested, unavailable to access	EN ISO 21877		
	Hydrogen sulphide (H ₂ S)	No limits set	-	-Not tested, unavailable to access	US EPA Method 11 (Impinger method) or CEN TS 13649 (Charcoal tube), US EPA Method 15		

- [1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.
- [5] The measurement uncertainty specified in LFTGN08 v2 2010 shall apply
- [6] Monitoring of flare emissions is only necessary when the flare operated in excess of 10% of the time

A handwritten signature in black ink, appearing to be "JLH".

Signed

(Authorised to sign as representative of Operator)

Date.....14.02.2023.....



Permit Number: AB3092ZE

Operator: Bryn Power Limited

Facility: Gelliargwellt Farm Anaerobic Digester Facility

Form Number: Performance 1 / 17/08/22

Reporting of other performance indicators for the period 20.02.2022 to 20.02.2023 effective from 17 August 2022

Parameter	Units	
Total raw material used	n/a	tonnes
Total amounts of waste treated	29,270	tonnes
Biogas produced by AD Facility	3252813	m ³
Power output - electricity	7662.5	MWh
Energy efficiency	0.002	MWh/m ³ biogas
Electrical energy exported to the grid	4541	MWh
Electrical energy drawn from the grid	13.4	MWh
Operational time of emergency flare	0.003	%
Amount of gas sent to emergency flare	166.67	m ³
Generation of residue waste	387.2	tonnes
Generation of wastewater	n/a	m ³

Operator's comments:

Increased electricity produced by 534.5 Mwh and lower electrical demand on site saw an increase of 584Mwh exported.

Signed
(Authorised to sign as representative of Operator)

Date.....14.02.2023.....