



Oaktree Environmental Limited

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NON-TECHNICAL SUMMARY

Mona Industrial Park, Gwalchmai, Isle of Anglesey, LL65 4RJ

Grays Biogas Ltd

Version:	1.0	Date:	2 February 2016	Doc. Ref:	3407-819-B
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Application Type: **Variation to Installation permit ERP/AP303HY**

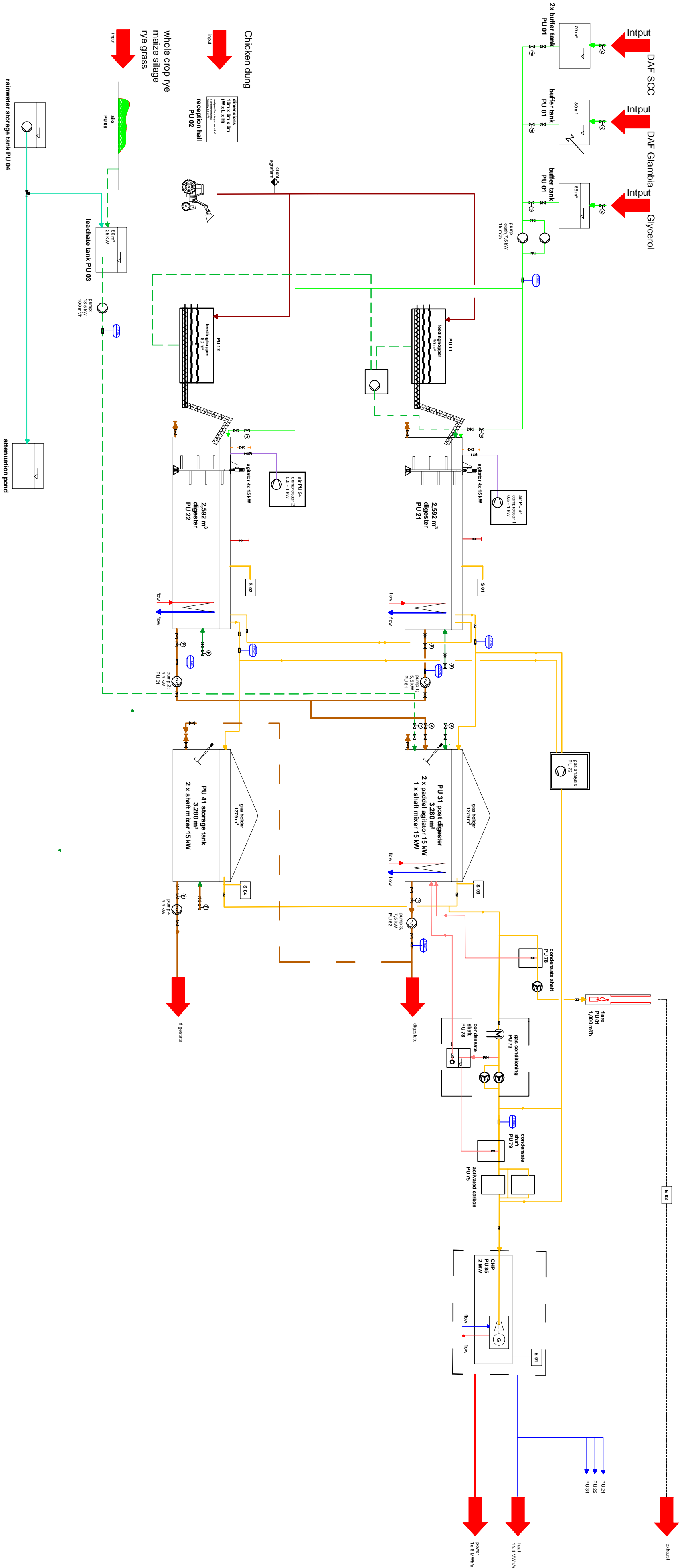
Applicant: **Grays Biogas Ltd**

- 1.1 This Non-Technical Summary accompanies the PERMIT VARIATION application at the above site.
- 1.2 This document represents the Written Management System for the Anglesey Biogas Plant (Anaerobic Digestion facility) **Phase 1**, operated by Grays Biogas Ltd and has been prepared in accordance with best practice current at the time of writing. It is submitted as part of an application to Natural Resources Wales (NRW) for the **variation** of Environmental Permit AP3033HY to operate an installation under Schedule 7 of the Environmental Permitting (England and Wales) Regulations 2010 ('the Regulations'). This variation is required due to the change of technical specification and feedstock associated with the AD plant. The variation also includes increasing the permit boundary.

- 1.3 The site is situated approximately 3 miles west of Llangefni, Anglesey SH419 755 and is part of the Mona Industrial Estate. The site is located at the northern boundary of the industrial estate and is accessed via the estate road, which runs past the western site boundary. Within the industrial estate the site is located next to a poultry farm and a council run gritting yard, a waste transfer station (operated by Grays Waste Management Ltd) and RAF Mona Training Centre beyond.
- 1.4 The site has already been awarded full planning permission.
- 1.5 The AD plant is defined as a system for the generation, storage and utilisation of biogas. The biogas is generated through the microbiological formation of methane during the decomposition of organic substances. The result of these processes is the production of biogas, which consists predominantly of methane (CH₄) and carbon dioxide (CO₂) and a useable digestate product which has environmental benefits when used in place of fertilisers. It is proposed to utilise the biogas to power internal combustion engines for the production of electricity and heat. The electricity produced will be exported to the National Grid.
- 1.6 The Application is to allow anaerobic digestion (AD) with a plant capacity of >100 tonnes per day and will therefore be regarded as an installation activity under Schedule 2 Section 5.4 Part A(1) b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 100 tonnes per day involving biological treatment.
- 1.7 **Phase 1** The applicant will carry out anaerobic digestion of wastes and use the biogas in compression and spark ignition engine. The main feedstocks proposed include Biomass (maize and rye), chicken litter from neighbouring broiler sheds, DAF sourced from two local dairies and glycerol. The digestate will be produced to PAS 110 and will be landspread. ***This variation application is for Phase 1.***
- 1.8 **Phase 2** which will be submitted as a second variation will involve the introduction of a drying process which will result in the production of compost and solid fertilizer.

- 1.9 A copy of the Flow Diagram_A2529UK_MONA_Flowsheet is attached to this document.





- loading**

 - PU 06 silo
 - PU 02 reception hall
 - PU 11-12 feedinghopper 1-2
 - PU 01 buffer tanks 1-4
 - PU 03 leachate tank
 - PU 04 rainwater storage tank
- emissions**

 - E 01 exhaust CHP PU 85
 - E 02 exhaust flare PU 81
- safety devices**

 - S 01 overpressure device digester PU 21
 - S 02 overpressure device digester PU 22
 - S 03 overpressure device gas holder PU 31
 - S 04 overpressure device gas holder PU 41
- fermentation**

 - PU 21 digester
 - PU 22 digester
 - PU 31 post digester
 - PU 41 storage tank
- desulfurisation**

 - PU 94 air 1
- gas technic and storage**

 - PU 73 gas conditioning
 - PU 72 gas analysis
 - PU 75 activated carbon
 - PU 78 condensate shaft 1
 - PU 79 condensate shaft 2
- energy using**

 - PU 81 flare
 - PU 85 CHP
- fluids**

 - pressurised air
 - biogas
 - leachate
 - substrate
 - digestate
 - Metomex
 - fluid substrate
 - rainwater
 - condensate
 - heating return
 - heating flow

C					
B					
A	03.03.2016	J.Weyer			
Rev.	Date	Drawn	Checked	Approved	Revision

Client:

Project: 2529UK_Mona

Drawing Title: flowsheet diagram Part 1

Drawing No.: 2529UK_MONA_Flowsheet diagram_Part

Scale:

Drawn	Date	Name
Chkd	24.08.15	J. Weyer

Plan Author:

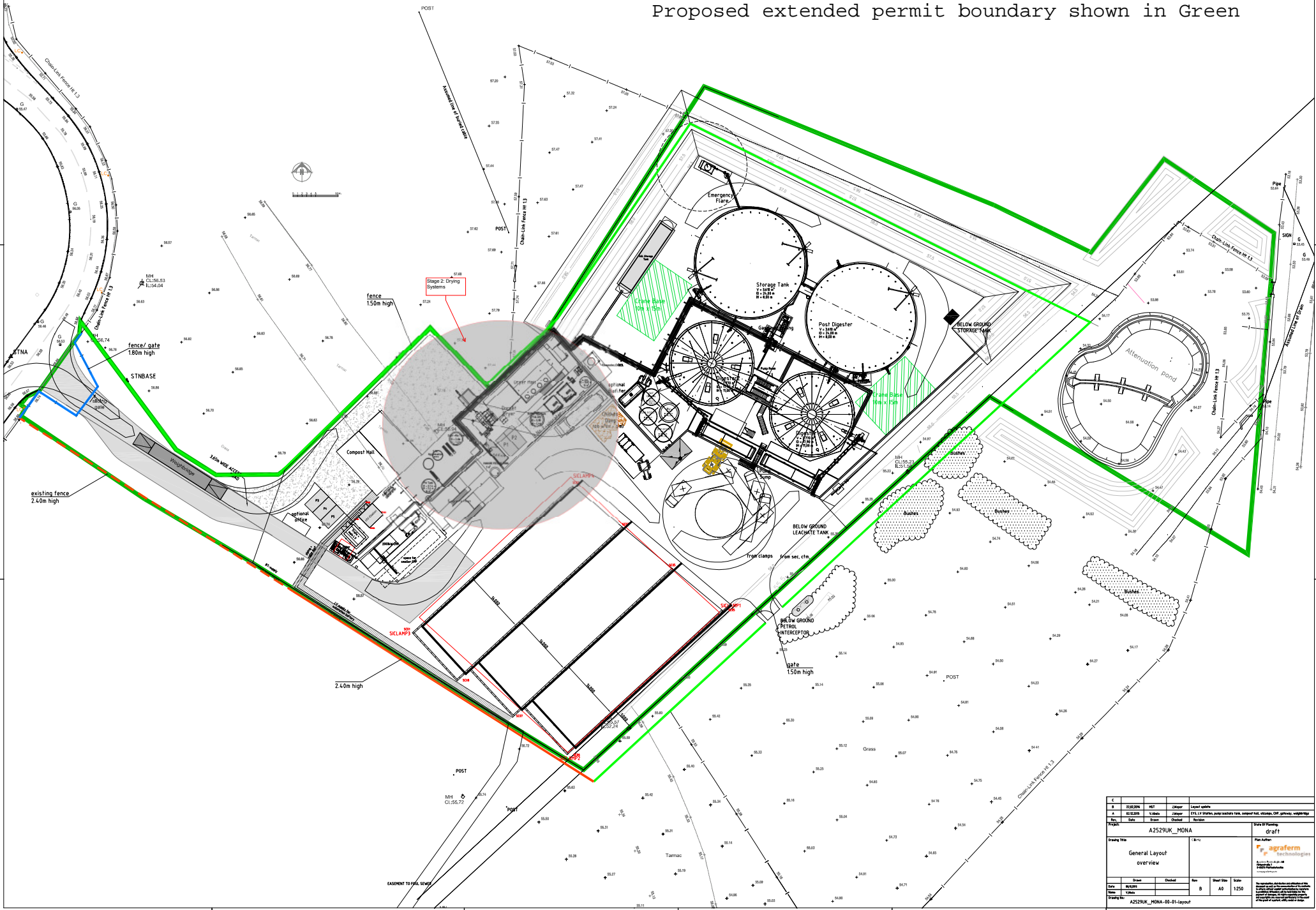
State Of Planning:

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Proposed extended permit boundary shown in Green



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Site Layout Plan

CURRENT PERMIT BOUNDARY IN GREEN

