Non-Technical Summary for a new Bespoke Installation Permit application – Devon Anaerobic Digestion (AD) Plant at Hide Market Road, Willand, Devon, EX15 2FP

On behalf of: Acorn Bioenergy Operations Limited

ETL981/2026

Prepared by:

Earthcare Technical Ltd
Manor Farm
Chalton
Waterlooville
Hants PO8 0BG

Tel: 02392 290 488

Office@earthcaretechnical.co.uk

20 July 2026

Document Control

Document Title:	**Non-Technical Summary for a new Bespoke Installation Permit application – Devon AD Plant, Hide Market Road, Willand, Cullompton, EX15 2FP**
Document Reference:	ETL981_DGPL_NTS_V1.0
Prepared For:	Acorn Bioenergy Operations Limited
Project Reference:	ETL981/2026
Copyright:	Earthcare Technical Ltd. © 2026

Version Control

Version	Date	Author	Technical reviewer	Approved by
Version 1.0	20 Jul 2026	A Trelawny	A Becvar	A Becvar

Terms of use: This report has been prepared by Earthcare Technical Ltd on behalf of the Client, considering the agreed scope of works. Unless otherwise agreed, this document and all other Intellectual Property Rights remain the property of Earthcare Technical Ltd.

In preparing this report, Earthcare Technical Ltd has exercised all reasonable skill and care, considering the objectives and the agreed scope of works and any contract between Earthcare Technical Ltd and the Client. Earthcare Technical Ltd does not accept any liability in negligence for any matters arising outside of the agreed scope of works. When issued in electronic format, Earthcare Technical Ltd does not accept any responsibility for any unauthorised changes made by others. This document may not be copied in whole or in part without the prior written consent of Earthcare Technical Limited.

No AI Training: Without in any way limiting the author's [and client's] exclusive rights under copyright, any use of this publication to "train" generative artificial intelligence (AI) technologies to generate text is expressly prohibited. The author reserves all rights to license uses of this work for generative AI training and development of machine learning language models.

CONTENTS

ABBREVIATIONS **6**
1 INTRODUCTION **8**
2 SITE DESCRIPTION **8**
3 PLANNING **8**
4 PERMITTING **9**
5 SITE DETAILS **10**
5.1 Location 10
5.2 Environmental Sensitivities 10
5.2.1 Geology 10
5.2.2 Hydrogeology 11
5.2.3 Groundwater 11
5.2.4 Surface Water 11
5.2.5 Flood Risk 11
5.2.6 Human Receptors 12
5.2.7 Ecological Receptors 13
5.2.8 Scheduled Monuments 14
5.2.9 Air Quality Management Areas 14
5.3 Process Summary 14
5.3.1 Overview 14
5.3.2 Feedstock Acceptance, Preparation and Loading 15
5.3.3 Anaerobic Digestion 15
5.3.4 Digestate Treatment 16
5.3.5 Biogas Management and Processing 16
5.4 Infrastructure list 17
5.5 Requested feedstock material waste codes 19
6 MANAGEMENT **21**
7 CONTROL OF EMISSIONS TO LAND AND WATER **22**
7.1 Overview 22
7.2 Primary Containment 22
7.2.1 Silage Clamps 22
7.2.2 Process Water Lagoon 22
7.2.3 Ancillary Tanks 23
7.2.4 Digesters 23

7.2.5 Storage of Oils & Chemicals 24
7.3 Secondary Containment 25
7.3.1 Secondary Containment System for Tanks 25
7.4 Drainage description 25
7.4.1 Overview 25
7.4.2 Dirty Areas 25
7.4.3 Condensate 26
7.4.4 Clean Areas 26
7.4.5 Secondary Containment Drainage 26
7.4.6 Pipework 27
7.5 Control of Emissions to Land & Water under Abnormal Operations 27
8 CONTROL OF EMISSIONS TO AIR 28
8.1 Overview 28
8.2 Control of Emissions from the Manure Reception Building 28
8.3 Control of Emissions from Liquid Feedstock Tanks 29
8.4 Control of emissions from the Process Water Lagoon 29
8.5 Displaced air from the pasteurisers 29
8.6 Control of Emissions of Raw Biogas 29
8.7 Control of Fugitive Emissions of Biogas 30
8.8 Control of Combustion Emissions 30
8.9 Control of Emissions from the BUU 30
8.10 Control of Emissions from the CO_2 Recovery Unit 30
8.11 Control of Emissions from Digestate Storage & Off-take 31
8.12 Control of Emissions to Air under Abnormal Operations 31
9 CONTROL OF AMENITY IMPACTS 31
9.1 Odour 31
9.2 Noise 32
9.3 Pests 32
9.4 Dust 33
9.5 Bioaerosols 33
10 CONTROL OF CLIMATE CHANGE IMPACTS 34
11 BEST AVAILABLE TECHNIQUES (BAT) ASSESSMENT 34
FIGURES 36
APPENDIX A – MEDIUM COMBUSTION PLANT INFORMATION 46

APPENDIX B - NATURE AND HERITAGE CONSERVATION SCREENING REPORT & MAPS..... 47

APPENDIX C - PROCESS FLOW DIAGRAM..... 53

Abbreviations

AD	Anaerobic Digestion/er
AQMA	Air Quality Management Area
AQIA	Air Quality Impact Assessment
AW	Ancient woodland
BAT	Best Available Techniques
BUU	Biogas upgrading unit
CHP	Combined heat and power engine
CO_2	Carbon dioxide
COMAH	Control of Major Accident Hazards
CQA	Construction Quality Assurance
EA	Environment Agency
ELV	Emission limit value
EMS	Environmental Management System
EP	Emission Point
ETL	Earthcare Technical Limited
EWC	European Waste Catalogue
EVCS	Electric Vehicle Charging Station
GSM	Grams per square metre
H_2S	Hydrogen sulphide
HDPE	High density polyethylene
HRA	Hot rolled asphalt
HSE	Health and Safety Executive
kWthi	Kilowatts of thermal input
LDPE	Low-density polyethylene
LWS	Local Wildlife Site
MCP	Medium Combustion Plant
MCPD	Medium Combustion Plant Directive
n/a	Not applicable
NGR	National Grid Reference
NMP	Noise Management Plan
NTS	Non-technical Summary
NVZ	Nitrate Vulnerable Zone
PHI	Priority Habitat Inventory
PVRV	Pressure and vacuum relief valve
PRV	Pressure relief valve
PVC	Polyvinyl chloride

SAC	Special Area of Conservation
SSAFO	The Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010
SCADA	Supervisory Control and Data Acquisition
SCR	Site Condition Report
SPA	Special Protection Area
SPZ	Source Protection Zone (for groundwater)
SR	Standard Rules
SSSI	Site of Special Scientific Interest
TPA	Tonnes per annum

1 Introduction

This Non-Technical Summary (NTS) has been prepared by Earthcare Technical Ltd (ETL) on behalf of Acorn Bioenergy Operations Limited 'ABL' in support of an application for a new bespoke Installation Environmental Permit for an anaerobic digestion (AD) plant including the use of resultant biogas for Devon AD Plant, at Hide Market Road, Willand, Cullompton, EX15 2FP, centred on National Grid Reference (NGR): ST 02980 11201, herein termed 'the Site'. The plant will be operated by Acorn Bioenergy Operations Limited, herein termed 'the Operator'.

This NTS highlights the key control measures that are proposed to minimise any potential environmental impacts from the site operations and signposts the reader to the key supporting documents for the permit application, which contain further detail.

The bespoke permit application has been compared to criteria within *SR2021 No.6: anaerobic digestion facility, including use of the resultant biogas – installations*[1] (SR2021 No6) since although feedstock materials are principally agricultural in nature additional non-hazardous waste codes to be used as feedstock materials are requested.

2 Site Description

The facility will treat around 100,780 tonnes per annum (TPA) of liquid and solid feedstocks comprising livestock manures (poultry litter, pig and cattle slurry), energy crops and crop residues; as well as dirty water and non-hazardous liquid wastes to supplement process water use. The 3.3 ha of site area was previously developed brownfield and farmland. An AD plant has been operated on the Site since 2018.

The site will produce 20.382.803Nm^3/y of biogas which will be used on site to generate heat and power and upgraded to biomethane for injection to the National Gas Grid via the Grid Entry Unit with carbon dioxide captured and liquified for use or sequestration. In addition, around 39,631 tpa of separated solid fibre digestate and 54,488 tpa of separated liquid digestate will be produced to be used as a biofertiliser on local farms.

3 Planning

Planning permission for the site was granted by Devon County Council on 26 May 2015 (ref. DCC/3725/2014). The consent permitted the construction and operation of a 2 MW anaerobic digestion facility together with associated infrastructure, including digesters, storage tanks, feedstock handling areas, a new access road, weighbridge and associated silage storage facilities.

Since the original approval, a number of subsequent planning applications have been approved relating to amendments to plant design, site layout and operational parameters, including changes to feedstock throughput and associated vehicle movements. The site has therefore developed over time

[1] Environment Agency (2021) *SR2021 No.6: Anaerobic Digestion Facility Including Use of the Resultant Biogas Installations*. Available at: SR2021 No.6: Anaerobic Digestion Facility Including Use of the Resultant Biogas Installations (Accessed: 22 May 2026).

through a series of approved modifications whilst remaining in use as an anaerobic digestion facility consistent with the original planning consent.

On 12/05/2020 Conditional approval was granted to vary Condition 7 of DCC/4074/2018 to alter the restriction on road delivery tonnage from 55,000 tonnes per annum to 120,000 tonnes per annum (Reference DCC/4153/2019).

The most recent planning application was for the construction and operation of a covered agricultural silage clamp with a capacity of up to 21,500m^3 together with all ancillary services and infrastructure, landscaping, vehicular access and ecological enhancements (Reference DCC/4447/2025) which was granted conditional approval 30/04/2026.

4 Permitting

A permit was previously issued for the site to Willand O & M Limited 18/09/2017 Reference: EPR/WP3533AJ/A001. A Regulation 61 Notice was sent to Operator 19/07/2019 and an application was made to increase the annual throughput of waste from 55,000 to 75,000 tonnes (total throughput of 100,000 tonnes), and for the addition of new site infrastructure as well as a storage and loading area for solid wastes. The Environment Agency initiated a Statutory review of the permit occasioned by Waste Treatment BAT Conclusions published on 17 August 2018. A varied and consolidated permit was issued for V002 and V003 as one notice 24/03/2021. The permit was disclaimed 04/07/2024 by the administrators of Willand O & M Limited.

The operation now requires a new bespoke Installation permit, as the AD plant will treat waste and have a treatment capacity of over 100 tonnes per day which constitutes a listed activity under Part 2 to Schedule 1 of the Environmental Permitting Regulations 2016.

The operation cannot benefit from the appropriate Standard Rules (SR) permit SR2021 No.6 given:

- The location criteria under permit condition 2.2.4 cannot be met, namely there are areas of Priority Habitat Inventory (PHI) - Coastal and Floodplain grazing marsh depicted as present along the northwestern boundary of the AD site, bordering the Process water lagoon.
- Under Activity 3 of SR2021 No.6 (gas combustion to produce heat and power) the total aggregated rated thermal input for appliances must be less than 5 megawatts. This threshold will be exceeded. The net rated thermal input figures of the proposed plant are shown in Appendix A.
- It is proposed that the Combined Heat and Power Engines (CHPs) are fitted with heat exchangers which reduce the exit temperature of the exhaust gas. The Standard Rules Installation permits stipulate that the "*(ii) the gas exit temperature shall be no less than 200°C*". The heat exchangers may introduce a non-compliance to the Standard Rules permit.

Enhanced pre-application advice was initially sought from the Environment Agency (EA) with respect to this permit application in February 2026 (Reference: EPR/GP3825ML/P001). The site was historically located within Groundwater Source Protection Zones (SPZ1 and SPZ2) associated with the former Lloyd Maunder boreholes. However, the Environment Agency confirmed that the abstraction licence associated with the four Lloyd Maunder boreholes is no longer active and that the associated SPZ designations will therefore be removed. The Site is therefore no longer considered to be within an SPZ1 or SPZ2.

The Nature and Heritage Conservation Screening Reports are included as Appendix B.

The potential environmental impacts relevant to the bespoke installation permit application have been fully considered in supporting documents to this permit application, and specifically within:

- The Air Quality Impact Assessment (AQIA)[2]; and
- The site-specific Environmental Risk Assessment (Appendix A of the Environmental Management System (EMS) Manual **(ACD 014b**), which also includes the control measures that will be employed.

Details in relation to the proposed Medium Combustion Plant (MCP) are shown in Appendix A. The calculations for net rated thermal input of plant are detailed in Appendix B of the EMS Manual **(ACD 014B).**

5 Site Details

5.1 Location

Site Address: Devon AD Plant, Hide Market Road, Willand, Cullompton, EX15 2FP

National Grid Reference (approx. centre of Site): ST 02980 11201

Local Authorities: Mid Devon District Council

The Site Location is shown in Figure 1 - Site Location Plan.

The site permitted area is 3.3 hectares in extent. Devon AD Plant is an anaerobic digestion facility located at Hide Market Road, Willand, Cullompton, Devon, EX15 2FP. The site lies within a mixed-use area on the edge of Willand, characterised by a combination of established industrial operations and surrounding agricultural land. Immediately to the south is the 2 Sisters Food Group (2SFG) poultry processing facility, with the 2SFG effluent treatment works located directly to the north. To the east, the site is bounded by the main Bristol-Exeter railway line, with residential areas of Willand beyond, and the M5 motorway located further east. Land to the west and parts of the north and south beyond the adjacent operational uses remains in agricultural use.

The site will be accessible to vehicles from the north-eastern corner of the site boundary from a network of local roads.

5.2 Environmental Sensitivities

Environmental sensitivities have been assessed through a Groundsure Enviro+Geo Insight Report[3] obtained 5 February 2026 and verified via publicly available data sources accessed February 2026.

5.2.1 Geology

[2]Earthcare Technical Ltd. (2026) *Devon AD Plant Air Quality Impact Assessment. Ref. ETL981_DGPL_AQIA_V1.1.* July 2026.

[3] Groundsure, *Enviro+Geo Insight Report – Devon Green Power*, obtained 05 February 2026.

Site soils are classified as slightly acid loamy and clayey soils with slightly impeded drainage[4] over superficial geology of Head gravel of quaternary age with moderate to potentially very high permeability. Underlying bedrock geology is Aylesbeare Mudstone of early Triassic age. Bedrock permeability is low.

The site has an overall Agricultural Land Classification of Grade 3/4[5]. Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. A proportion of the site sits at Grade 4 which is poor quality land with severe limitations which restrict the range of crops and or level of yields.

5.2.2 Hydrogeology

The site is underlain by a Secondary bedrock aquifer classified as having high vulnerability. The combined classification indicates the presence of both a productive superficial aquifer and a productive bedrock aquifer. This, together with the moderate to very high permeability of the superficial deposits, contributes to an overall high groundwater vulnerability.

As stated previously the Environment Agency has confirmed that the Site is no longer considered to be within an SPZ1 and SPZ2.

The closest Abstraction is a historical surface water abstraction 234m north of the site (license no: 14/45/002/0514). There is an additional active surface water abstraction point at Slough Farm (license no: 14/14/45/002/2348).

5.2.3 Groundwater

There is a high risk to groundwater given the moderate to high permeability of superficial deposits above the underlying bedrock aquifer.

The site overlies the Central Devon and Exe - Aylesbeare Mudstone Groundwater body but is no longer within a Groundwater Source Protection Zone and is not within a Drinking Water Safeguard Zone (Groundwater) (England).

The site is within the Mid Devon Nitrate Vulnerable Zone (NVZ), designated for groundwater.

5.2.4 Surface Water

The site is within the Clyst and Culm Catchment, there is a watercourse 4.5m northwest of the Site boundary (Spratford stream) which feeds into the Lower Culm Water Body which was classified as having a 'moderate' overall rating in terms of water quality under the Water Framework Directive.

The site is not within a Drinking Water Safeguard Zone for Surface Water.

5.2.5 Flood Risk

[4] National Soil Resources Institute (2026) *Soilscapes Viewer*. Available at: https://www.landis.org.uk/soilscapes (Accessed: February 2026).

[5] DEFRA (2026) *MAGiC Map Application*. Available at: https://magic.defra.gov.uk (Accessed: February 2026).

The site is situated within a Flood Risk Zone 1, which means it has low probability of flooding from rivers and the sea[6]. There is a high risk of flooding within 50m of the site (Flood Zone 2 and 3). There is 1 in 1000-year risk of flooding via surface water on site (0.3-1.0m). There is a low to negligible risk of flooding onsite from groundwater.

5.2.6 Human Receptors

Human receptors within 1 km of the site are captured in Table 1 below and are shown in Figure 6 – Human Receptor Plan.

Table 1 Human receptors within 1km of the site

ID	Receptor Name	Type of receptor	NGR X	NGR Y	Distance from site boundary (m)	Direction from site
R1	Two Sisters Food Group, (Lorry Park E)	Commercial	302997	111160	15	S
R2	Two Sisters Food Group, (Lorry Park W)	Commercial	302925	111103	40	S
R3	Wastewater treatment works	Sewage Treatment	302999	111300	40	N
R4	Burn Rew Farm, Willand, Cullompton,	Residential	302664	110990	100	SW
R5	Properties off Lloyd Maunder Road (opposite 2 Sisters Entrance)	Residential	303153	111106	100	SE
R6	Two Sisters Food Group, Lloyd Maunder Rd, Willand, Cullompton EX15 2PJ	Commercial (Abattoir)	303023	111088	105	SW
R7	Bagsters Cottages, Willand Cullompton, EX15 2PJ	Residential	302843	110957	130	SW
R8	Dwellings off Park Street (Willand Village)	Residential	303328	111217	210	E
R9	Barnes Close	Residential	303310	111115	220	E
R10	Agricultural Barn	Agriculture	302617	110826	255	SW
R11	Park Farm Estate	Commercial	303300	111441	265	NE
R12	Station Road	Residential	303370	111325	270	NE

[6] Environment Agency (2026) *Flood Map for Planning*. Available at: Flood Map for Planning (Accessed: February 2026).

ID	Receptor Name	Type of receptor	NGR X	NGR Y	Distance from site boundary (m)	Direction from site
R13	South View Estate	Commercial	303385	111359	300	NE
R14	Properties off Willand Road (south)	Residential	302861	111658	415	N
R15	Tamarind Road	Residential	303205	110812	450	SE
R16	Woodhayes Farm	Residential	302687	111661	450	NW
R17	Withy Field (Properties behind Tiverton Substation)	Residential	303008	111703	450	N
R18	Meadow Park	Residential	303211	110745	500	SE
R19	Willand School	School	303606	110908	580	E
R20	Dean Hill Farm	Farm	302746	110451	600	S
R21	Slough Farm	Farm	302621	111846	635	NW
R22	Gerston Farm, Dean Hill Road, Willand, Cullompton, Mid Devon, Devon, EX15 2PG	Residential/farm buildings	302420	110247	810	S
R23	Fisher's Bridge Farm	Residential	302014	111595	845	NW
R24	Braddons Farmhouse	Residential	303813	111755	860	NE
R25	Properties off Willand Road (north)	Residential	302459	112135	950m	NW
R26	Yeo Farm	Farm	303367	112468	1,205m	NE
R27	Five Bridges (Village)	Residential	302548	109541	1520m	S

5.2.7 Ecological Receptors

Details on nearby ecological receptors are provided below.

5.2.7.1 Statutory Designated Sites

There are no statutory designated sites within 2km of the proposed permitted boundary. The following statutory designated sites are located within 10km:

- Tidcombe Lane Fen SSSI, just over 5km to the east;
- Maiden Down SSSI, over 6km to the northeast;
- Lower Whipcott SSSI, approximately 7.9km to the northeast; and
- Blackdown and Sampford Commons SSSI, around 8km to the northeast.

5.2.7.2 Priority Habitats & Species

An area of Priority Habitat (PHI) Coastal and Floodplain Grazing Marsh is present along the northwestern boundary of the AD site, within which the Process water lagoon is located. Additional areas of PHI Coastal and Floodplain Grazing Marsh are depicted approximately 695m to the southwest and 1,255m to the southeast respectively. Owing to the nature of this habitat, these areas are connected to the same river system, even though they occur in separate clusters along the watercourse.

Several areas of PHI Deciduous Woodland are also present within 2km of the site boundary, with the closest located approximately 460m to the northeast. In addition, an area of PHI Traditional Orchard is situated approximately 505m to the northwest.

There is a Local Nature Reserve (Grand Western Canal Country Park), its closest point is approximately 1,920m to the northwest. Blackdown Hills National Landscape sits over 5km to the east.

There are no records of Ancient Woodland within 2km of the site, the closet Ancient Woodland is over 4km to the west (Canal Wood).

The Grand Western Canal, which is designated as a Local Wildlife Sites is within 2km of the site.

The Nature and Heritage Conservation Screening Report is included as Appendix B.

5.2.8 Scheduled Monuments

There are two Roman forts and two Roman camps at St Andrew's Hill approximately 3.4km south of the AD site.

5.2.9 Air Quality Management Areas

The site is not within an Air Quality Management Area (AQMA). The nearest AQMA is 2.3km south of the site starting at the north of Cullompton town and encompassing the entirety of the town area.[7]

5.3 Process Summary

5.3.1 Overview

The process description is fully detailed within Section 5 of the EMS Manual **(ACD 014B)** and depicted as a Process Flow Diagram (Appendix C). A Site Layout and Permit Plan is also provided (Figure 3). An Infrastructure list is provided in Section 5.4 of this NTS.

The feedstocks for the AD plant are energy crops primarily maize and wholecrop silage, straw and livestock manures, supplied by local farms. Oat pellets and cereal grain also form part of the feed plan. The AD plant will treat around 100,780 tonnes per year of feedstock. The proposed feedstocks in accordance with the Permitted Activities document[8] which supports this permit application includes several non-hazardous liquid wastes which are requested to future proof the operation in terms of

[7] DEFRA (2026) *UK Air Information Resource: AQMA Maps*. Available at: UK Air AQMA Maps (Accessed: February 2026).

[8] Earthcare Technical Ltd. (2026) *Permitted Activities*. Doc. Ref. ETL981_DGPL_Permitted_Activities_V1.0.

provision of supplementing liquid process water supply. These waste streams are not part of the current mass balance however; this would be adjusted in accordance with feedstock testing if these waste types were to be used. A full list of requested wastes is provided in section 5.5 of this NTS.

5.3.2 Feedstock Acceptance, Preparation and Loading

The solid manures are stored in a dedicated Manure reception building (MRB) fitted with bespoke emissions abatement plant. A front loader is used to load chicken manure into the dedicated internal feed hopper associated with Feed System FS3 located within the Manure Reception Building. FS3 comprises a pre-mix and maceration system, incorporating progressive cavity pumps and in-line macerators, to produce a homogenised feedstock slurry suitable for pumping into the primary digesters.

The permit application also includes a request to take in EWC 02 01 99 – wastes not otherwise specified (Only spent mushroom compost or discarded mushrooms from commercial mushroom cultivation)). This material does not form part of the current feedstock mix and there are no immediate plans to accept it. Should this waste be accepted in the future, it would be stored within the enclosed Manure Reception Building, which benefits from odour extraction and treatment, and the site's Environmental Management System and Odour Management Plan would be updated accordingly prior to acceptance.

Slurry and other liquid feedstocks are delivered by tanker and discharged at the dedicated liquid feedstock reception points associated with Liquid Feedstock Tanks 1 and 2. The imported liquid feedstocks pass through an inline macerator prior to being pumped into the reception tanks

Energy crops are grown under contract with local farms and are either ensiled on site within the Silage Clamp and covered with an impermeable cover or stored at supplier farms and delivered to site as required throughout the year. Crop feedstocks are fed into the process via two external feed hoppers. The associated Feed systems; FS1 and FS2 incorporate Vogelsang premix macerators, progressive cavity pumps and secondary in-line macerators designed to reduce particle size to below 12 mm and produce a homogenised feedstock slurry suitable for pumping into the primary digesters.

Cereal straw is stored temporarily within the silage clamp area before being processed within the I-GRIND Tub grinder equipment and loaded into the external feed hoppers (FS1 and FS2). The I-GRIND 2.0 HD mobile hammer mill system positioned on the silage clamp area, mechanically shreds and breaks down straw into a more homogeneous material using rotating hammers and screens, and mixing with process water to improve handling and digestion.

Oat pellets and cereal grain is delivered to the Silage clamp on a just-in -time basis prior to loading into the external feed hoppers.

5.3.3 Anaerobic Digestion

The digesters operate in the mesophilic temperature range at 38-45°C. The AD process comprises three primary digesters operating in parallel, followed by a series of post-digesters utilising Biogest PowerRing technology, comprising an outer and inner tank. Feedstocks are introduced into Primary Digesters 1, 2 and 3 where anaerobic digestion and biogas production commence before being transferred to the post-digestion stage for further retention and biogas generation.

Digesters 1, 2 and 3 operate as parallel process streams, providing operational flexibility and redundancy. Feedstocks may be directed to individual digesters depending on the daily feed plan, digester performance and operational requirements.

The 2 No. PowerRing tanks (Digesters 4 and 5) comprise of Post Digesters 1, 2 (Outer and inner ring of Digester 4) and 3 (outer ring of Digester 5) and operate predominantly operated in series, Digestate is transferred from one tank to the next via a combination of overflow arrangements and dedicated transfer pumps, with transfer rates and tank levels controlled through the SCADA system. The remaining inner tank of Digester 5 is used as a separated Liquid digestate storage tank for separated digestate liquor.

5.3.4 Digestate Treatment

Currently it is proposed that the whole digestate is taken from Post Digester 3 and pumped to the 2 No. Börger RC75 mechanical separators mounted on a gantry above a concrete panel-walled digestate storage bunker housed within the Separation Hall of the Manure Building. The expected daily process requirement is to separate approximately 258m^3tonnes per day.

Separated fibre digestate falls directly into the concrete digestate storage bunker below the separators, whilst separated liquor is pumped to the Separated Liquid storage tank for cooling, storage and onward management.

A dedicated batch pasteurisation system is included within the permitted plant design which, although not currently installed, is requested to be permitted.

When implemented, whole digestate would be intercepted from Post Digester 3 and batch pasteurised, (heated to over 70°C for a minimum of one hour).

The site is designed such that pasteurisation may be installed to comply with the requirements of BSI PAS110: 2014 Specification for whole digestate, separated liquor and separated fibre derived from the anaerobic digestion of source-segregated biodegradable materials. Prior to this only crop, manure and by-product feedstocks will be accepted to ensure the digestate can be applied as being consistent with a farm waste.

Both the separated liquor and fibre digestate are to be used as a biofertiliser on nearby farms. Digestate will be removed from site either to on farm storage locations or delivered to be spread directly to land for agricultural benefit to meet crop need when appropriate. There is sufficient dedicated digestate storage available to provide in excess of six months' storage capacity, as demonstrated within the *Acorn Bioenergy Storage Contingency Plan*[9]. The plan identifies a total storage capacity of 28,508 tonnes, comprising 1,508 tonnes (c.a. 3 weeks) within the Separated liquid digestate storage tank onsite and a further 27,000 tonnes of storage within dedicated off-site lagoons. This exceeds the six-month digestate production requirement of 27,244 tonnes.

5.3.5 Biogas Management and Processing

The biogas will be upgraded into biomethane for injection to the National Gas Grid via the Grid Entry Unit. In addition, carbon dioxide (CO_2) from the biogas will be captured and upgraded to 99.9% purity. The

[9] Acorn Bioenergy (2026) *DGPL AD Storage Contingency Plan*. Version 1.0. 11 June 2026.

treated CO_2 is suitable for almost all industrial and commercial applications in the UK. Upgraded CO_2 will be liquefied and transported by road to end users.

There are 2 No. Combined Heat and Power (CHP) engines. CHP1 is a Quanto 1200 1,200 kWe unit fuelled by natural gas only. CHP2 is a Flexi 530 dual fuel 499 kWe unit fuelled by either natural gas or biogas. Subject to the site power management settings and the availability of natural gas, CHP2 is fitted with a battery-assisted ignition and control system which enables the unit to restart following a mains power interruption.

Both CHP units are fitted with exhaust gas heat exchangers to recover thermal energy for use within the AD process. The recovered heat is used to maintain operational digester temperatures and to supply heat to the pasteurisation system (when installed).

Provision is also made within the permitted plant design for installation of a Vitoplex 200 dual fuel emergency boiler (599 kW). The emergency boiler may be installed at a later stage following permit issue and would be capable of operating on biogas or natural gas to provide supplementary heat to the AD process if one or more of the CHP units is unavailable.

5.4 Infrastructure list

The site infrastructure is listed in Table 2 below.

Table 2 List of site infrastructure

Item.	Working capacity
1 No. Silage clamp	21,500 m^3
1 No. Process water lagoon	1,150 m^3
1 No. Manure Reception Building (MRB) with separation hall	Chicken manure reception building: 6,500 m^3 Separation hall: 2,555 m^3 Volume stored at any given time: Manure reception building: 500 m3 Separation hall: 500 m^3 (Length: 40m, width: 17.3m, height: 12.3m to eaves)
I-Grind Straw processing mobile plant	Approx. Capacity 4000 kg
3 No. Primary Digesters	Primary digester 1 = 4,618 m^3 Primary digester 2 = 4,618 m^3 Primary digester 3 = 4,455 m^3 Gas storage volumes: Digester 1: 1,738 m^3 Digester 2: 1,738 m^3 Digester 3: 1,642 m^3

2 No. Post Digesters each comprising an inner and outer ring (PowerRing technology)	Digester 4: Post Digester 1 (outer ring) - 2,172 m^3 Post Digester 2 (inner ring) - 1,508 m^3 Digester 5: Post Digester 3 (outer ring) – 2,172 m^3 Separated liquid storage tank (inner ring) 1,508 m^3
Odour Abatement System	
Oxygen injection	
2 No. Digestate separators	2 x 75 m^3/hr
1 No. Liquid feedstock tank 1	400m^3
1 No. Liquid Feedstock tank 2	400 m^3
1 No. Process water tank	100 m^3
1 No. Existing Tank (redundant, with any accumulating rainwater used for contingency fire water storage).	600 m^3
Pasteurisation tanks	TBC on installation
3 No. Feed hoppers serving 3 No. feed systems (FS)	FS1 - 170 m^3 (external) FS2 - 115 m^3 (external) FS3 - 85 m^3 (inside MRB)
1 No. Tietjen BMS 1500 biomass shredder mill / Wangen Biomix system associated with FS1	
2 No. Vogelsang premix macerators associated with FS2 and FS3	
1 No. Liquid feedstock loading area	
1 No. Digestate offtake bay	
Underground rainwater cellular storage crates	Area: 594 m^2, depth: 1.6 m, volume: 902 m^3 at 95% voids
2 No. CHPs	CHP 1 – Quanto 1200, electrical output 1,200kWe natural gas (NG) (TEDOM) CHP 2 - Flexi 530, electrical output 499 kWe Dual Fuel biogas (BG)/ NG (TEDOM)
1 No. emergency boiler	VITOPLEX 200 – 599 kWe Dual Fuel
1 No. Emergency generator	770 kVA
1 No. Emergency flare	2,500 Nm^3/hr (BG) and 1,300 Nm^3/hr (biomethane)
Biogas upgrader (Bright BUU)	2,200 m^3/hr
Bright CO_2 Liquefaction	14.774 t/a, designed capacity 2000 kg/hr
2 No. CO_2 storage tanks	100 m^3 each
1 No. Propane storage tank	24 (tonne)

1x propane vaporiser	
1x Grid Entry Unit	1,150 Nm^3/hr Propanated biomethane
Dispensers	
Pump room	
Secondary containment bund	
Parking area	
Access road	
SCADA Alarm monitoring system	
Weighbridge	
Site office / Site welfare	
Site workshop	

5.5 Requested feedstock material waste codes

A list of proposed permitted waste codes to be treated is provided in Table 3 below.

Table 3 Proposed permitted waste types for anaerobic digestion

Waste code	Description
02 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	
02 01 Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing	
02 01 01	Sludges from washing and cleaning – vegetables, fruit and other crops
02 01 03	Plant-tissue waste
02 01 06	Animal faeces, urine and manure (including spoiled fully biodegradable animal bedding)
02 01 99	Wastes not otherwise specified – spent mushroom compost from commercial mushroom growing only
02 03 Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation	
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation
02 03 04	Materials unsuitable for consumption or processing
02 03 05	Sludges from on-site effluent treatment
02 04 Wastes from sugar processing	
02 04 03	Sludges from on-site effluent treatment

Waste code	Description
02 05 Wastes from the dairy products industry	
02 05 01	Materials unsuitable for consumption or processing – biodegradable wastes derived from the processing of dairy products only
02 05 02	Sludges from on-site effluent treatment
02 06 Wastes from the baking and confectionery industry	
02 06 01	Materials unsuitable for consumption or processing
02 06 03	Sludges from on-site effluent treatment
02 07 Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)	
02 07 01	Wastes from washing, cleaning and mechanical reduction of raw materials
02 07 02	Wastes from spirits distillation
02 07 04	Materials unsuitable for consumption or processing
02 07 05	Sludges from on-site effluent treatment
16 Wastes not otherwise specified in the list	
16 10	Aqueous liquid waste destined for off-site treatment
16 10 02	Untreated wash waters from cleaning fruit and vegetables on farm only
16 10 02	Sludges from washing and cleaning fruit and vegetables on farm only
16 10 02	Milk and dairy waste milk from agricultural premises only
16 10 02	Liquor or leachate from a composting or anaerobic process that accepts waste input types listed in these standard rules or composting and anaerobic digestion standard rules only, and in compliance with Animal By-Products Regulations
19 Wastes from waste management facilities, off-site wastewater treatment plants and preparation of water intended for human consumption/industrial use	
19 06 Waste from the anaerobic treatment of waste	
19 06 03	Liquor from anaerobic treatment of municipal waste (from a process that accepts wastes listed in these standard rules or anaerobic digestion standard rules only) and made up of previously pasteurised and stabilised batches only
19 06 04	Digestate from anaerobic treatment of source segregated biodegradable waste (from a process that treats wastes which are listed in these standard rules only and pasteurised)
19 06 05	Liquor from anaerobic treatment of animal and vegetable waste (from a process that accepts wastes which are listed in this table only) and made up of previously

Waste code	Description
	pasteurised and stabilised batches only
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste
19 06 06	Unpasteurised digestate from anaerobic treatment of animal and vegetable waste (for seeding purposes only)

6 Management

The site is operated by ABL, who are in the process of developing several AD plants nationwide. The AD plants will be managed by ABL, supported by the management team. There will be a Site Manager, who will be responsible for the day-to-day operation of the AD plant and who will act as the Technically Competent Manager (TCM). The Site Manager will manage Site Operatives to assist in day-to-day operations. The Regional Operations Manager is a TCM who will also provide cover until a Site Manager with the relevant qualifications is in place.

The Site Manager will be managed and supported by the wider ABL management team. Roles and responsibilities are summarised in the Staff Organogram (Appendix D of the EMS Manual **(ACD 014B)** and are detailed in Section 10 of the EMS Manual **(ACD 014B)** and associated Acorn Controlled Procedures (ACP), Acorn Controlled Documents (ACD) and Work Instructions (WI).

Contracts will be in place for the supply of feedstocks and offtake of all digestate produced to be applied to land for agricultural benefit.

7 Control of Emissions to Land and Water

7.1 Overview

There are no emissions to land.

Dirty water from the silage clamps, digestate offtake point and areas designated as 'dirty' within the containment bund including; the feeder loading area, and MRB is collected and reused in the process. Water collecting within the remainder of the secondary containment system is used within the AD process under normal operating conditions.

Clean rainwater from the designated clean areas of the site including vehicle access and movement areas (collected via a full retention separator) and roofs may be discharged to the below ground cellular storage crate system before being either discharged via a pump chamber into the watercourse to the north of the site at the approved 2.8l/s or being harvested to the Liquid feedstock tanks for reuse within the process (preferred route). The discharge of clean water to the watercourse is not an emission to water per se as this is clean rainwater only. However, it has been given an emission point reference of W1 - Clean surface water pumped discharge to the watercourse. See Figure 2: Site Emissions Plan.

7.2 Primary Containment

7.2.1 Silage Clamps

The silage clamp, which stores ensiled crop feedstocks, is constructed of a concrete base and three reinforced concrete retaining walls in a U-shaped configuration. The clamp is a tapered triangular shape approximately130 m on its longest side and 49 m wide at the eastern end where a concrete loading apron is provided. The clamp has a storage capacity of approximately 21,500 m^3 and is covered during operation to minimise rainfall ingress and reduce the potential for odour generation.

The silage clamp has been designed in accordance with the requirements of the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (SSAFO) and relevant CIRIA guidance, including CIRIA C736. The clamp incorporates dedicated drainage infrastructure to collect silage effluent and contaminated surface water arising from the stored feedstocks.

Perimeter drainage channels are provided around the clamp and convey silage effluent and contaminated surface water to the Process Water Lagoon. The Process Water Lagoon is lined and covered and forms part of the site's process water management system. Collected liquids are retained within the lagoon and subsequently pumped back into the AD process for reuse.

The silage clamps are inspected annually when empty, and repairs will be made as necessary, to be signed off by a suitably qualified engineer.

7.2.2 Process Water Lagoon

Silage effluent and contaminated surface water arising from the silage clamp drainage system are collected within the covered Process Water Lagoon (1,150 m^3 capacity). The lagoon forms part of the site's process water management system and provides storage of silage effluent and collected surface

water prior to reuse within the anaerobic digestion process via being pumped to the Process water tank (100m^3) or one of the Liquid feedstock tanks (400m^3).

The Process Water Lagoon is designed and constructed in accordance with the requirements of the Water Resources (Control of Pollution) (Silage, Slurry and Agricultural Fuel Oil) (England) Regulations 2010 (SSAFO) and CIRIA C736 guidance. The lagoon incorporates a double-lined containment system with leak detection measures together with level monitoring linked to the SCADA system to minimise the risk of loss of containment and pollution of land or groundwater.

The condition of the lagoon and associated infrastructure is inspected routinely and recorded on the Limble, Computerized Maintenance Management System (CMMS) hereafter abbreviated to 'Limble'.

7.2.3 Ancillary Tanks

There are 4 No. above ground ancillary tanks namely:

- 2 No. Liquid feedstock tanks (400 m^3 each)
- 1 No. Process water Tank (100 m^3)
- 1 No. Existing Tank (600m^3) (redundant)

The first 3 no. tanks are for the storage of slurry, non-hazardous liquid waste, leachate, separated liquor or water for the process. The Liquid feedstock tanks are glass lined steel tanks, and the Process water tank is of concrete construction. They are all sited within the secondary containment system.

Both liquid feedstock tanks receive feedstock via an inline shredder and transfer pump from the delivery tanker.

The Pasteurisation Tanks (not yet installed) would be made from stainless steel and located within the secondary containment system.

All tanks will be inspected during installation and by a suitably qualified engineer every 5 years.

The existing concrete tank is redundant, with any accumulating rainwater used for contingency fire water storage).

The ancillary tanks all benefit from level sensors linked to SCADA.

7.2.4 Digesters

The AD process comprises 5 No. digesters of varying construction and configuration, including 3 No. conventional concrete digesters and 2 no. original Biogest PowerRing digesters (See EMS, Table 5 for Section 5.8 for details). The digesters operate as a series of primary and post-digestion tanks with separated liquid digestate storage incorporated within the inner section of Digester 5.

Digesters 1 and 2 are 28 m diameter by 8 m high precast concrete panel tanks manufactured by A Consult. Digester 3 is a 27.5 m diameter by 8 m high cast in situ concrete tank manufactured by Wolf. These digesters are fitted with double membrane gas holder roofs fully bolted to the tank circumference. The inner and outer membranes of the covers are PVC coated, and the outer membrane is resistant to UV. Digesters 1 and 2 double membrane heights are: inner membrane is 6.19m and outer membrane 7.04m, Digester 3 inner membrane is 6.8m and outer membrane 6.91m.

Digesters 4 and 5 are original Biogest PowerRing digesters comprising inner and outer concrete tank configurations with fixed concrete roofs, external cladding and integrated containment arrangements.

The inner section of Digester 5 is used as the Separated liquid storage tank for management of separated liquid digestate.

The digesters and associated infrastructure form part of the site primary containment system and are designed, operated and maintained in accordance with CIRIA C736 guidance to minimise the risk of loss of containment and pollution to ground and controlled waters.

Following refurbishment, all digester tanks will be hydrostatically tested, and Construction quality assurance (CQA) validated by a suitably qualified engineer to ensure they are fit for use.

All tanks will be inspected by a suitably qualified engineer every 5 years as part of a scheduled tank inspection and de-grit programme. Digesters 4 and 5 have grit channels within the tank bases to facilitate the periodic removal of grit and stones.

The digesters all benefit from level sensors and overfilling / foaming prevention sensors linked to SCADA.

7.2.5 Storage of Oils & Chemicals

Fresh oil and waste oil associated with the operation of the CHPs are stored in bunded tanks. sulphuric acid (for Manure reception building emissions abatement plant) is also stored within a bunded tank.

Diesel and Ad-Blue are housed within bunded on-site stores. The emergency generator has an integral bunded diesel tank (200 m^3).

Ferric hydroxide powder is kept undercover in the integrally bunded chemical store.

Glycol and anti-foam are kept in a bunded area in the chemical store.

An Inventory of Substances will be maintained within Appendix A of the Accident Management Plan Manual (**ACD 008f**) [10].

[10] Earthcare Technical Ltd. (2026) *Accident Management Plan Manual, Devon AD*. ACD 008f. Version 1.0. July 2026

7.3 Secondary Containment

7.3.1 Secondary Containment System for Tanks

The secondary containment infrastructure on Site has been reviewed and redesigned by a suitably qualified Chartered engineer. Infrastructure has been improved and maintained in accordance with CIRIA C736 guidance and will provide sufficient containment capacity for the tanks and associated process infrastructure located within the bunded area.

The AD plant secondary containment system comprises impermeable concrete surfacing and concrete bund walls designed to contain spills and prevent loss of containment to ground and controlled waters.

The containment capacity is designed in accordance with CIRIA C736, with the calculations in the report demonstrating 25% of the combined tank volume to be a greater volume than 110% of the largest tank volume.

Pipework has been revised and will not penetrate the containment walls or floor / Pipework, drainage infrastructure and associated containment measures within the bunded area is designed to minimise the risk of uncontrolled releases.

The primary and secondary containment infrastructure is checked on a daily basis and recorded electronically on Limble.

The secondary containment sump is inspected daily in accordance with the Work Instruction for Secondary Containment Checking & Emptying **(WI 011f).**

7.4 Drainage description

7.4.1 Overview

The drainage system is redesigned by GGP Consult and described in their Site Wide Drainage Strategy.[11]

This section provides a summary of the drainage which should be read in conjunction with the Drainage Impact Assessment, the Drainage Process Flow Diagram (page 9 of the Site Wide Drainage Strategy), Figure 4: Drainage Layout and Figure 5: Drainage Catchment Plan.

The entire impermeable surfacing and drainage system is subject to an inspection, maintenance, and repair schedule.

7.4.2 Dirty Areas

Dirty water arising from the silage clamp, including silage effluent, contaminated rainfall and runoff from designated dirty hardstanding areas, is collected via a dedicated network of drainage channels, pipes and chambers and conveyed to the covered Process Water Lagoon (1,150 m^3 capacity).

The Process Water Lagoon provides intermediate storage for these liquids prior to transfer by submersible pumps to the above-ground Process Water Tank or one of the Liquid Feedstock tanks

[11] GGP Consult (2026) *Site Wide Drainage Strategy: Devon Green Power AD. Ref. 60273-GGP-XX-XX-RP-C-9100-03-DVGP. June 2026.*.

located within the secondary containment bund. Process water is subsequently reused within the AD process for feedstock dilution and process water requirements.

The Process Water Lagoon has been sized to accommodate contaminated runoff from the silage clamp and associated hardstanding together with the anticipated volume of silage leachate. Hydraulic modelling demonstrates that the lagoon provides sufficient capacity to contain the 1 in 100-year, 7-day rainfall event with a 45% allowance for climate change, whilst retaining adequate storage for reuse of collected process water within the AD process. The Process Water Lagoon is described in Section 7.2.2.

Both the liquid feedstock reception tanker point, and liquid digestate tanker off-take point are located on hardstanding along the eastern side of the site next to one another. Drainage from the tanker area will be collected via a sump and directed into the secondary containment system and stored within either the Process Water Tank or a Liquid Feedstock tank prior to reuse within the AD process.

FS3 is located within the enclosed Manure Reception Building. Washdown drainage arising within the building is collected via a dedicated segregated drainage system and local sump before being pumped to the Process Water Tank or one of the Feedstock tanks for reuse within the anaerobic digestion process.

7.4.3 Condensate

Condensate from Digesters 1, 2 and 3 is collected within 2 No. condensate pots, and from the Upgrader and Bright CO_2 Liquefaction system is collected in a separate Condensate pot and then recirculated for treatment within the nearest digester.

7.4.4 Clean Areas

In accordance with the site drainage strategy, clean surface water from building roofs together with runoff from designated clean hardstanding areas is collected via a dedicated clean water drainage network. Runoff from trafficked hardstanding passes through a full retention separator to remove hydrocarbons and suspended solids before entering a below-ground attenuation tank constructed using cellular storage crates.

As described in section 7.1 the clean water attenuated within the below ground cellular storage crate system will either be pumped to one of the liquid feedstock tanks for reuse within the process or when the crate system is full during a storm event discharged via a pump chamber into the watercourse to the north of the site at the approved 2.8l/s for the site.

The system has been sized to accommodate up to a 1:100-year storm event with a 45% allowance for climate change. The Site Wide Drainage Strategy should be referred to for full calculations.**Error! Bookmark not defined.**

Penstocks are incorporated within the clean surface water drainage system to enable runoff to be isolated in the event of an accidental spill prior to discharge from site.

7.4.5 Secondary Containment Drainage

Water collecting within the secondary containment area is quality assessed daily in accordance with the Work Instruction: Secondary Containment Checking & Emptying (**WI 011d**).

Within the secondary containment bund, the area surrounding the external feed systems (FS1 and FS2) is designated as a permanently dirty area due to the increased potential for contamination during feedstock handling operations. This area is segregated from the wider bund by a 150 mm kerb upstand and drains to a dedicated sump from where collected liquids are pumped back into the anaerobic digestion process for reuse via the Process water tank or a Liquid feedstock tank.

Rainwater collecting within the remainder of the secondary containment system has the potential to remain clean, provided no spillages or contamination have occurred. Prior to any release, collected water is subject to the inspection, sampling and testing procedures detailed within the Work Instruction: Secondary Containment Checking & Emptying (**WI 011d**). Where testing confirms the water is uncontaminated, it may be discharged to the clean surface water drainage network, passing via the below-ground attenuation tank. Water stored within the attenuation tank is largely required for site process water. If not reused with the process, for example under storm conditions, it may be discharged to the receiving watercourse at the approved controlled discharge rate. Where contamination is identified, or where the required water quality criteria are not met, the collected water is retained within the containment system and pumped back into the AD process for reuse. Any evidence of contamination is investigated immediately in accordance with the Emergency Scenarios document **(ACD 008b)**, including the Spill Control / Use of Spill Kit Procedure, and appropriate corrective actions implemented.

The secondary containment system has been designed in accordance with CIRIA C736. Rainfall storage has been calculated using a worst-case 12-hour duration, 1 in 100-year storm event with a 45% allowance for climate change. In the event of abnormal excess water levels due to an extreme rainfall event, clean water may only be released from the secondary containment system following pre-determined checks detailed within the Emergency Scenarios document (Discharge of Flood Water Procedure). Release will only be permitted where the prescribed visual, olfactory and water quality checks confirm that the water is uncontaminated.

7.4.6 Pipework

Above ground substrate pipework is stainless steel, designed for longevity and visible for daily inspection, which is recorded on Limble.

Underground pipework has been avoided except for drainage pipework. Drainage pipework will be made of suitable material e.g., Poly Vinyl Chloride (PVCu) and sealed, and pressure tested (water & air) prior to completion. Underground pipework will benefit from secondary containment.

7.5 Control of Emissions to Land & Water under Abnormal Operations

Control of emissions to water and land under abnormal operating conditions are detailed in the Accident Management Plan Manual (**ACD 008f**) and associated procedures including the Discharge of Flood Water Procedure within the Emergency Scenarios document (**ACD 008b).**

8 Control of Emissions to Air

8.1 Overview

The emission points to air A1 to A22 inclusive are shown on Figure 2 – Site Emissions Plan and are shown in Table 4 below:

Table 4: Emission Points to Air

Emission Point Reference	Source
A1	Combined Heat and Power Engine stack 1
A2	Combined Heat and Power Engine stack 2
A3	Emergency Flare stack
A4	Emergency Boiler stack
A5	Emergency Generator stack
A6	Emissions abatement plant stack
A7	Biogas upgrade unit Pressure Relief Valve (PRV)
A8	Biogas upgrade unit CO_2 vent
A9	Carbon dioxide recovery plant unit CO_2 vent
A10	Carbon dioxide recovery plant PRV1
A11	Carbon dioxide recovery plant PRV2
A12	Pressure and Vacuum Relief Valve (PVRV) on Primary Digester 1
A13	PVRV on Primary Digester 2
A14	PVRV on Primary Digester 3
A15	PVRV on Post digester 1
A16	PVRV on Post digester 2
A17	PVRV on Post digester 3
A18	PVRV on Separated liquid storage tank
A19	Vent on covered Process water lagoon
A20	Grid entry unit PRV
A21	Vent on Process water storage tank (100m^3) vent
A22	Liquid Digestate off-take point

8.2 Control of Emissions from the Manure Reception Building

Air extracted from the Manure Reception Building and Separation Hall is directed to a dedicated OCU supplied by Exeon. The OCU treats extracted air from the chicken manure reception area, digestate separation area and 2 No. Liquid feedstock reception tanks.

The building extraction system is designed to maintain negative pressure within the manure reception and digestate separation areas. Air is extracted both directly from process equipment and from within the building itself, with all extracted air directed to the odour control system for treatment prior to release. Fresh air enters the building via louvres positioned adjacent to the roller shutter doors.

Extracted air passes through:

- a dust removal filter;
- a sulphuric acid scrubber for ammonia removal; and
- 2 No. activated carbon filters for removal of hydrogen sulphide, VOCs and residual odorous compounds, prior to discharge via the main emissions stack.

The OCU incorporates airflow monitoring together with sampling points to allow periodic monitoring of temperature as well as odour, ammonia and hydrogen sulphide emissions in accordance with permit requirements.

8.3 Control of Emissions from Liquid Feedstock Tanks

Displaced air from Liquid Feedstock Tanks 1 and 2 is captured via dedicated extraction ductwork connected to the site odour control system, with dedicated monitoring points ensuring continual air extraction is maintained. Extracted air is treated via the Manure Building's acid scrubber and activated carbon filtration system prior to discharge through the main stack.

8.4 Control of emissions from the Process Water Lagoon

The covered Process Water Lagoon incorporates a gas collection ring beneath the cover with collection points located around the perimeter of the lagoon. The gas collection system connects to a single 100 mm diameter vent discharge point which vents to atmosphere to allow pressure equalisation and venting of displaced air during storage of process water (A19). Potential emissions have been considered within the Site's AQIA[5].

No emissions abatement is proposed for the Process Water Lagoon as the stored liquids comprise dilute process waters and a small volume of silage effluent. All liquid will be rapidly reused within onsite processes.

8.5 Displaced air from the pasteurisers

There will be no emissions from the pasteurisers when operational; displaced air from the pasteurisers will be routed to the main gas line.

8.6 Control of Emissions of Raw Biogas

Biogas pressure is measured by gas pressure sensors within the gas storage infrastructure, and is controlled by SCADA, to ensure process parameters are optimised such that gas production meets demand, and storage capacity is not exceeded (see EMS Section 12.2 Process Monitoring), preventing a release to atmosphere via PVRVs.

If, due to equipment or system failure, excess biogas is produced the emergency flare will automatically and immediately ignite to burn the biogas to ensure it is not released to the atmosphere.

The emergency flare is a ground enclosed BAT compliant flare which is sized appropriately; it can burn 2,500 Nm^3hr of biogas and 1,300 Nm^3hr of biomethane.

The predicted maximum production of biogas is 2,327 Nm^3/hr. Given that the CHP plant will also consume biogas, the expected maximum production of biomethane from the BUU is around 1,218 Nm^3/hr. Any reject Biomethane will be recirculated for reprocessing within the upgrading system.

The setting on SCADA will dictate that the emergency flare will automatically start before the PVRVs will release gas, meaning that they are only in place for unforeseen emergency use.

8.7 Control of Fugitive Emissions of Biogas

There will be a Leak Detection and Repair (LDAR) Programme in place for the operational site which will be used to measure levels of VOCs, including methane from a number of prescribed locations around the site as identified through the DSEAR risk assessment and LDAR programme (**ACD 014g**).

LDAR inspections will be carried out by a third party annually, as a minimum as well as routinely internally. LDAR reports including tracking of required actions will be retained onsite.

8.8 Control of Combustion Emissions

Biogas treatment is carried out to reduce H_2S, VOCs and ammonia (NH_3) levels within the biogas as described in the EMS Process Description Sections 5.12 & 5.13. The removal of these trace gases reduces the potential for emissions when the biogas is combusted.

Emissions from combustion plant; CHPs (A1 & A2), emergency flare (A3), emergency boiler (A4), and emergency generator (A5) are controlled through a planned preventative inspection and maintenance regime.

The use of the emergency flare is minimised through the control of gas pressures and volumes through process monitoring.

8.9 Control of Emissions from the BUU

Under normal operating conditions there will be no emissions from the BUU. There is a PRV on the BUU (A7) which will only operate under abnormal operating conditions. If the CO_2 recovery plant is not operating, then CO_2 is released from the CO_2 vent on the BUU (A8) as is normal practice when CO_2 capture equipment is not installed.

8.10 Control of Emissions from the CO_2 Recovery Unit

Under normal operating conditions there are no routine emissions from the CO_2 recovery unit.

The CO_2 recovery plant incorporates pressure relief valves (A10 and A11) together with a dedicated CO_2 vent (A9). The vent and pressure relief valves are not intended to operate during normal operation and are provided for abnormal operating conditions.

The A9 vent may release small volumes of non-condensable gases separated during the CO_2 liquefaction process where required to maintain safe and effective operation of the plant.

8.11 Control of Emissions from Digestate Storage & Off-take

The digestate separators and fibre digestate storage bunker are located within the enclosed Separation Hall, with extracted air directed to the site odour control system for treatment prior to discharge.

The use of a multi-stage digestion process and extended retention times (54 days) reduces residual biogas potential to produce a stable low odour separated liquid digestate. Effective process monitoring and management of the AD process further ensure emissions are minimised (see Sections 12.2 and 12.3 of the EMS on Process Monitoring & Management)

The over-pressure relief vent (A18) is not intended to operate under normal operating conditions and may release under abnormal operating or over-pressure conditions only.

Separated liquid digestate is loaded into sealed tankers via the dedicated digestate off-take point (A22) for export from site to destination farms and storage locations. Emissions have been modelled to be at acceptable levels to nearby sensitive receptors.

8.12 Control of Emissions to Air under Abnormal Operations

Control of emissions to air under abnormal operating conditions are further detailed in the Accident Management Plan Manual **(ACD 008f)** and associated procedures.

9 Control of Amenity Impacts

9.1 Odour

Odour emissions will be minimised through:

- Ensuring exposed silage clamp faces are kept tidy and to a minimum, when receiving energy crops, in accordance with the Work Instruction: Feedstock Loading & Management (**WI 009b**).
- Minimisation of Manure reception building fast acting roller shutter door opening times in accordance with the Work Instruction: Feedstock Loading & Management (**WI 009b**).
- Digestate separation and fibre storage being within the enclosed Separation hall within the manure reception building with roller shutter door, openings controlled in accordance with the Work instruction: Digestate Handling (**WI 011f**).
- Process monitoring to ensure production of stable digestate with low odour potential in accordance with the Work Instruction: Process Monitoring (**WI 011e**).
- Regular inspection and maintenance of abatement measures including those associated with the odour control unit (OCU) for the Manure Reception Building in accordance with manufacturers recommendations and the Compliance Matrix (**ACD 007o**) which includes maintenance requirements

Predicted odour concentrations are well below the previously used criterion of 3ouE/m^3 for moderately offensive' odours and are below the criterion of 1.5ouE/m^3 for 'most offensive' odours.[Error! Bookmark not defined.]

Therefore, the site operation is unlikely to cause an odour impact at human receptors. Odour emissions will be controlled in accordance with the Odour Management Plan (**ACD 014c**).

9.2 Noise

Noise emissions will be minimised through planned preventative maintenance for all equipment including the CHP(s), Emergency Flare and the gas storage dome fans which are potential sources of noise emissions, in accordance with the Compliance Matrix (**ACD 007o**). The Environment Agency's Noise Advisory Tool l (NAT) has been completed for the Site which indicated a Noise Impact Assessment (NIA) was required. This has been undertaken

The NIA Report[12] concludes that operational noise impacts are predicted to be low, with a maximum BS 4142 rating level difference of +4 dB under a conservative worst-case night-time operational scenario. The assessment includes a design recommendation for a short section of acoustic screening adjacent to the CHP and biomethane upgrading area to further reduce noise at the nearest residential receptor. On this basis, the assessment concludes that a Noise Management Plan is not required, and operational noise is not expected to result in significant impacts at nearby sensitive receptors.

If noise emissions are detected off-site then corrective actions will be taken as soon as possible and a Noise Management Plan (NMP) will be developed, submitted to the EA and implemented.

9.3 Pests

The presence of pests will be minimised through:

- Routine pest monitoring and control;
- Use of approved products for pest control products only;
- Development and implementation of a written Pests Management Plan, if required by the EA.

[12] Inacoustic (2026) *Devon AD Plant, Cullompton: BS 4142:2014+A1:2019 Assessment*. Ref. 26-188, Version 2. July 2026.

9.4 Dust

Dust will be minimised through:

- Straw treatment being carried out within the I-GRIND unit which incorporates integral dust suppression measures comprising a water sprinkling system located within the grinding drum and at multiple locations along the covered conveyor system.
- Enforcing the 10 miles per hour (MPH) site speed limit for all vehicles on site.
- Daily clean down procedures in accordance with Management of Premise, Equipment & Machinery Procedures (**ACP 007**).

If checks recorded on Limble identify that dust may be blowing off site, then the Dust Procedure Work Instruction: **(WI 007a)** will be followed.

9.5 Bioaerosols

A site specific bioaerosol risk assessment has been carried out, which is included with the permit application. It concluded:

"*The results of the assessment indicated residual risk from all sources was determined as low or very low. As such, it is concluded that no further control measures, other than those detailed in the assessment, are required in order to reduce the potential for impacts at sensitive locations in the vicinity of the site.*"[13]

[13] Redmore Environmental, Site Specific Bioaerosol Risk Assessment: Devon Anaerobic Digestion Plant, Cullompton. Ref. 10945r2. July 2026.

10 Control of Climate Change Impacts

Climate change impacts and mitigation controls are considered in a separate site-specific Climate Change Adaptation Risk Assessment (**ACD 014j**).

11 Best Available Techniques (BAT) Assessment

A Best Available Techniques (BAT) Assessment has been prepared by ETL on behalf of ABL and is included with the permit application.[14]. The BAT report comprises a review of the operation, activities, infrastructure, management systems, etc. for the site, in comparison to the requirements of indicative BAT as stated in the BREF document 'Best Available Techniques Reference Document for Waste Treatment'[15] to ensure that all relevant areas are included. In addition, the assessment considers the requirements of the Medium Combustion Plant Directive (MCPD).[16] The Environment Agency (EA) guidance 'Appropriate measures for biological treatment' is also referenced where applicable.[17]

The assessment concludes that the proposed Devon Green Power AD Plant is largely compliant with BAT. The principal deviation relates to the absence of dedicated emissions abatement at the digestate off-take point, the Process Water Lagoon vent and the Dirty Water Process Tank vent. These sources are considered to present a low risk of odour emissions due to the nature of the materials handled, enclosed storage, transfer arrangements, and the intermittent nature of operations as well as the low emission potential of the stored liquids.

This approach is supported by the site-specific Air Quality and Odour Impact Assessment, which concludes that:

- The long-term and short-term impacts at all receptors can be screened out as **not significant** and there is no need for further assessment.
- Impacts at locally designated sites, LWSs, can be screened out as **not significant.**
- Predicted odour concentrations are well below the previously used criterion of 3ouE/m3 for moderately offensive' odours and are below the criterion of 1.5ouE/m3 for 'most offensive' odours. On this basis, odour impacts due to Site should not be a constraint to operation.**Error! Bookmark not defined.**

The Site-Specific Bioaerosol Risk Assessment also concludes that residual bioaerosol risks are low or very low and that no additional mitigation measures are required.

[14] Earthcare Technical Ltd. (2026) *Best Available Techniques Assessment, Devon AD*. Doc. Ref. ETL981_DGPL_BAT_V1.0. July 2026

[15] European IPPC Bureau (2018) *Best Available Techniques (BAT) Reference Document for Waste Treatment.*

[16] European Parliament and Council of the European Union (2015) *Directive (EU) 2015/2193 on the limitation of emissions of certain pollutants into the air from medium combustion plants.*

[17] Environment Agency (2022) *Biological waste treatment: appropriate measures for permitted facilities.* Updated 21 September 2022. Available at: https://www.gov.uk/guidance/biological-waste-treatment-appropriate-measures-for-permitted-facilities (Accessed: July 2026).

An Energy Efficiency Plan is currently being finalised by Acorn Bioenergy Operations Ltd and will be implemented as part of the site's Environmental Management System. Both a Sankey Diagram and a Mass Balance and Energy Balance is provided to support the application.

Figures

Figure 1: Site Location Plan (ETL981_DGPL_SiteLocation_EPR01)

Figure 2: Site Emissions Plan

Figure 3: Site Layout & Permit Plan

Figure 4: Proposed Drainage Layout

Figure 5: Drainage Catchment Plan

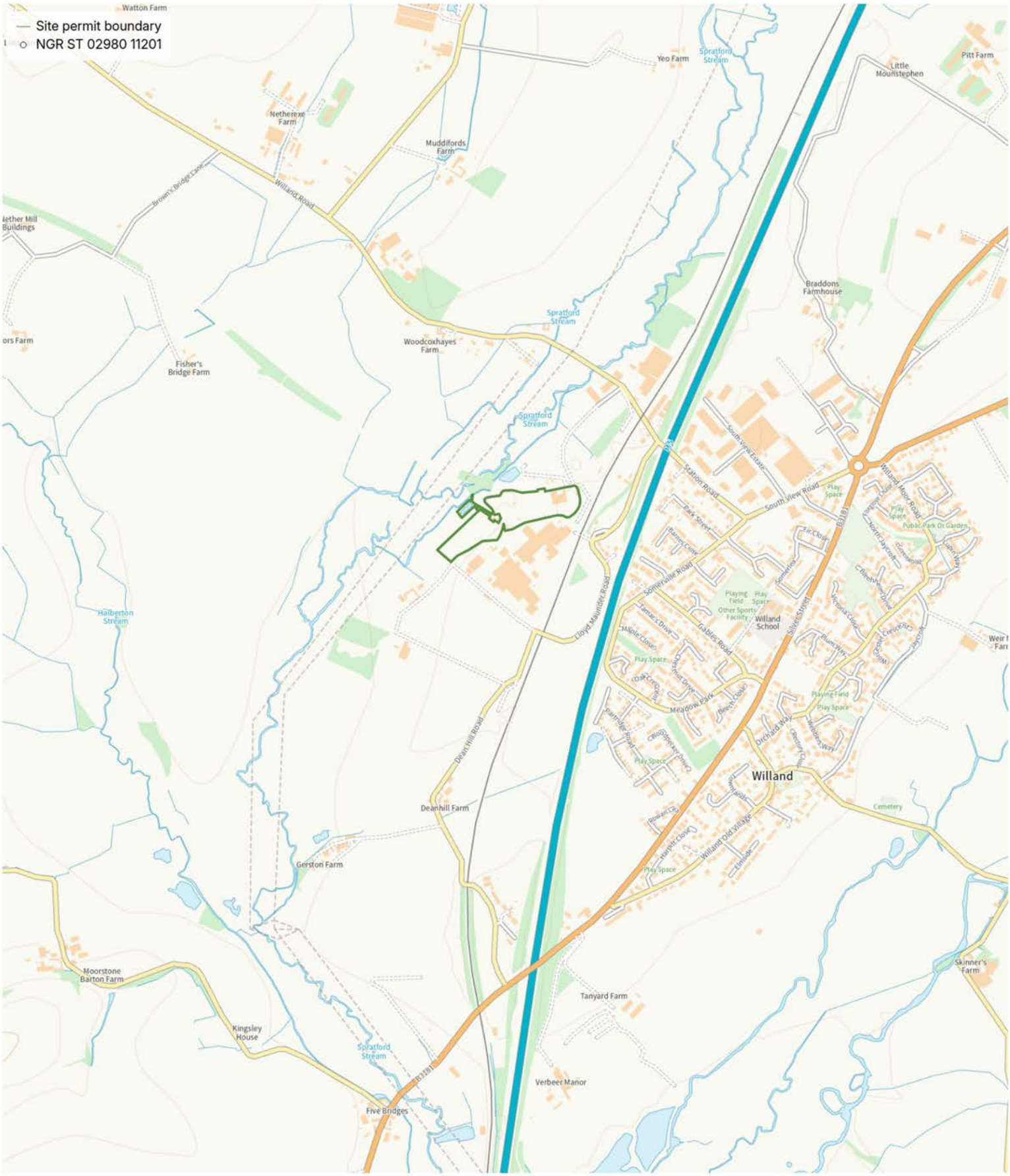
Figure 6: Human Receptor Plan, (ETL981_DGPL_HumanReceptors _EPR02)

Figure 7: Ecological Receptor Plan (2km), (ETL981_DGPL_Eco Receptors_2km_EPR03)

Figure 8: Ecological Receptor Plan (10km), (ETL981_DGPL_Eco Receptors _10km_EPR04)

Earthcare TECHNICAL

Site Location Plan
ETL981_DGPL_Site Location Plan_EPR01



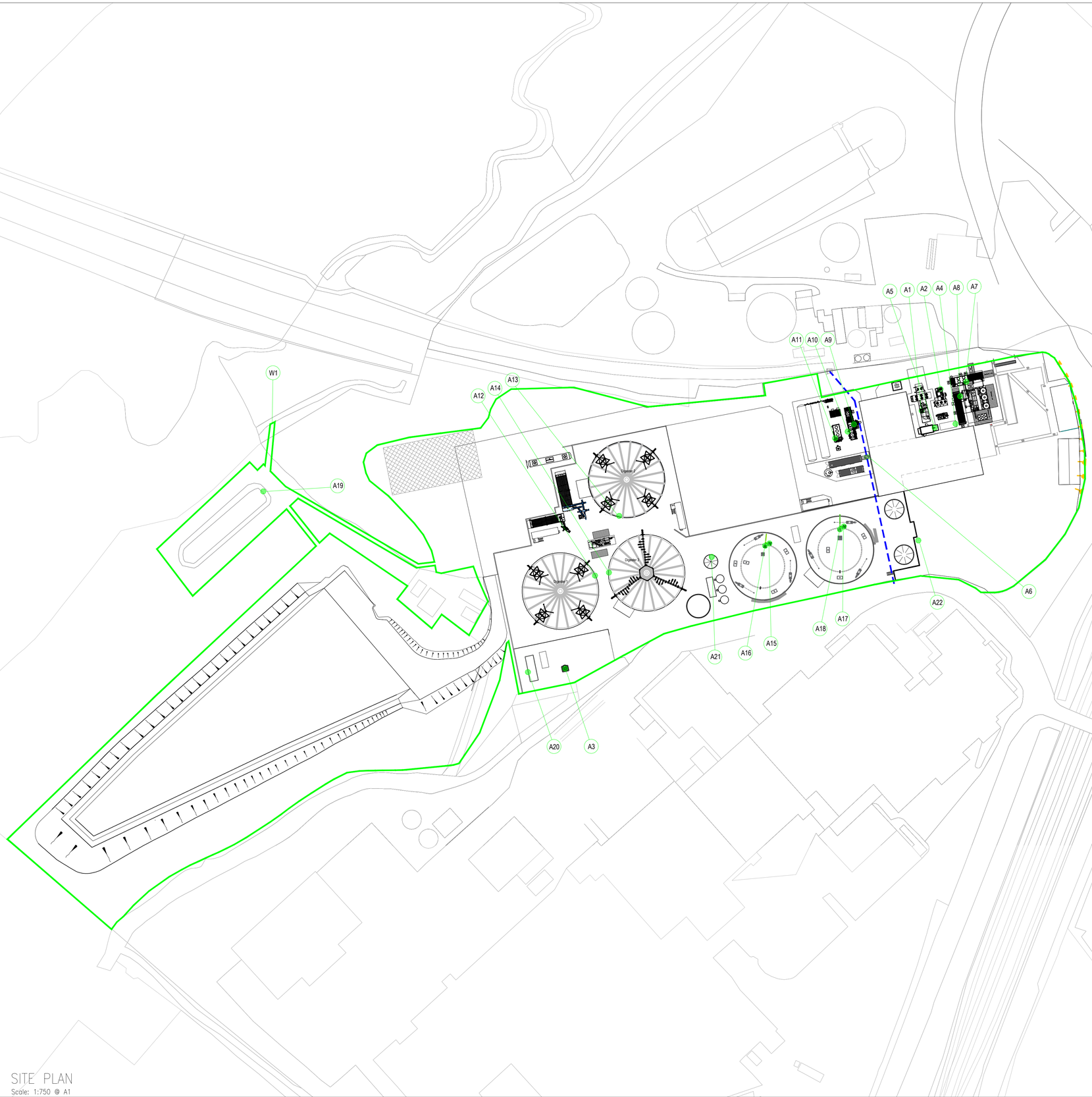
Produced on Land App, Jul 8, 2026.

© Crown copyright and database rights 2026 (Ordnance Survey licence number 100059532)

500 m
Scale 1:14000 (at A4)

N

AS NOTED ON A1 FRAME



Reference Table	
A1	Combined heat and power engine stack 1
A2	Combined heat and power engine stack 2
A3	Emergency flare stack
A4	Emergency boiler stack
A5	Emergency generator stack
A6	Emissions abatement plant stack
A7	Biogas upgrade unit PRV
A8	Biogas upgrade unit CO_2 vent
A9	Carbon dioxide recovery plant unit CO_2 vent
A10	Carbon dioxide recovery plant PRV 1
A11	Carbon dioxide recovery plant PRV 2
A12	PVRV on Primary digster 1
A13	PVRV on Primary digester 2
A14	PVRV on Primary digester 3
A15	PVRV on Post digester 1
A16	PVRV on Post digester 2
A17	PVRV on Post digester 3
A18	PVRV on Separated liquid storage tank
A19	Vent on Covered Process Water lagoon
A20	Grid Entry Unit PRV
A21	Vent for Process Water tank
A22	Liquid Digestate Off-take point
W1	Clean surface water pumped discharge to the watercourse

SITE PLAN
Scale: 1:750 @ A1

NOT FOR CONSTRUCTION

NOTES:-

Permitted Area Boundary (3.34ha)

Emission Release Location

Two Sisters Food Group effluent discharge pipe

N

Rev	Date	Description	DR	CH
E	09/07/26	Issue for Permit	SJC	–
D	26/06/26	Issue for Permit	SJC	–
C	03/06/26	Revised Layout	SJC	–
B	01/05/26	Revised Layout	HG	SJC
A	11/03/26	Preliminary Issue	SJC	–

acorn BIOENERGY

Job Title
AD Plant.
Devon AD Plant

Drawing Title
Devon AD Plant
Site Emissions Plan

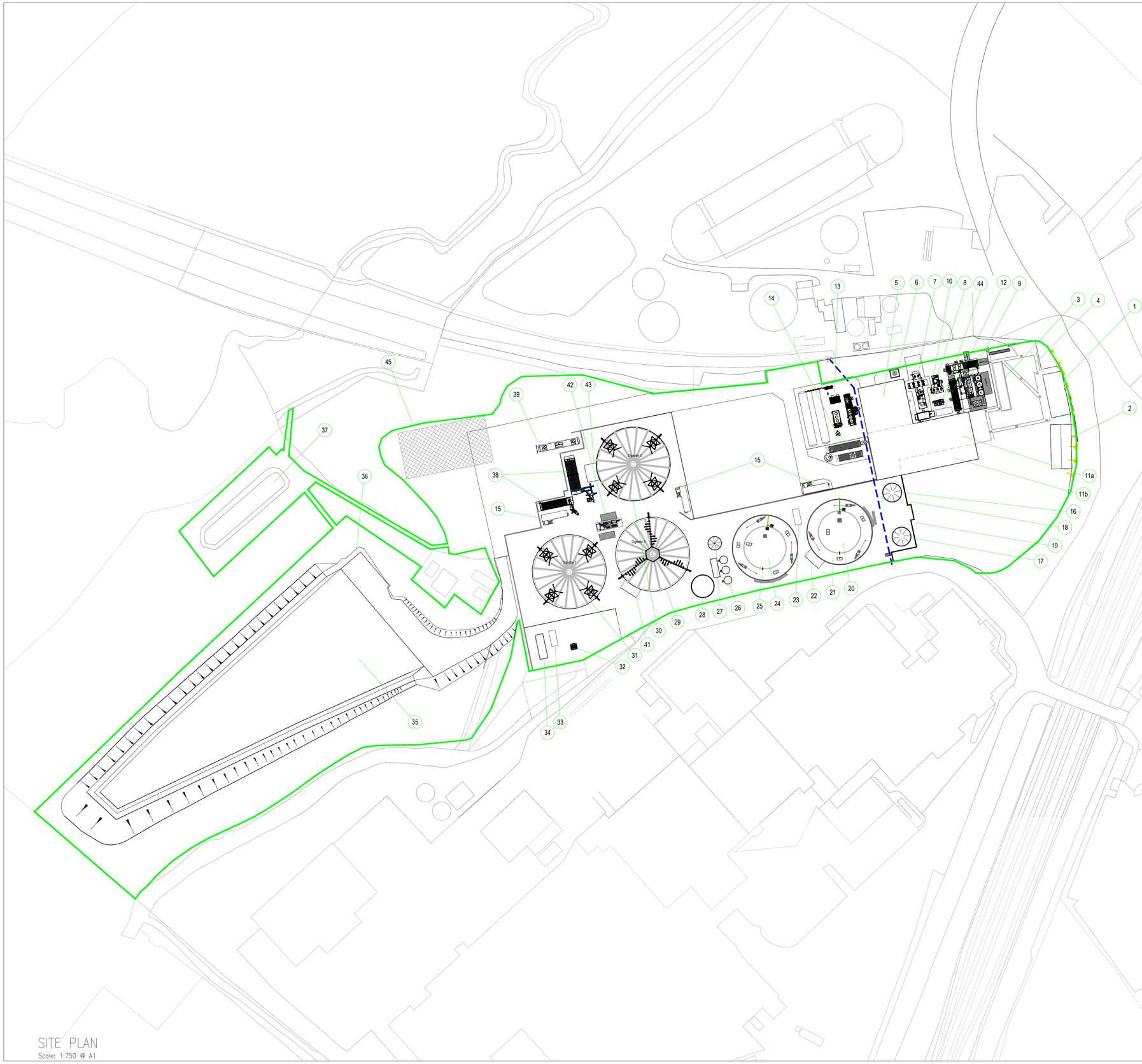
Status: Approval

Scale: As Shown | Date: Mar '26

Drawn By: HGS | Checked: SJC | Approved: –

Drg. No.: DGP–ABE–LAY–111 | Rev: E

AS NOTED ON A1 FRAME



Reference Table	
1	Site Office / Staff Welfare
2	Site Workshop
3	Weighbridge
4	Site Parking
5	Switchgear and site storage section of building
6	DNO Transformer Kiosk
7	CHP No1
8	CHP No2
9	Biogas Upgrade Unit
10	Emergency Generator
11	(a) Manure Reception Building with (b) Separation Hall
12	Emergency Boiler container
13	CO2 Recovery Unit and CO2 tanks
14	Odour Abatement
15	E-Comm containers
16	Liquid Feedstock Tank 1 - Volume 400m³
17	Liquid Feedstock Tank 2 - Volume 400m³
18	Liquid Feedstock Loading area
19	Digestate offtake area
20	Separated Liquid Storage Tank - Volume 1508m³
21	Post Digester 3 - Volume 2172m³
22	Pump Room
23	Pump Room
24	Post Digester 2 - Volume 1508m³
25	Post Digester 1 - Volume 2172m³
26	3 No. Pasteurisation tanks (25m³ each)
27	Process Water Tank - Volume 100m³
28	Existing tank Not in Use
29	Primary Digester 3 Tank - Volume 4455m³
30	Primary Digester 2 Tank - Volume 4618m³
31	Primary Digester 1 Tank - Volume 4618m³
32	Emergency Flare
33	Control Panel Kiosk
34	Grid Entry Unit Kiosk
35	Covered Storage Clamp - Volume 21,500m³
36	Silage Leachate catchment sump
37	Process Water Lagoon - Volume 1150m³
38	Feed Hoppers - 170m³ Volume and 115m³ Volume
39	Propane Tank - Volume 24tonne
40	Oxygen dosing Unit
41	Pump Room
42	Biogas Booster and Chiller
43	Pump Room
44	Gas Treatment System
45	Underground Cellular Storage Crates

SITE PLAN
Scale: 1:750 @ A1

NOT FOR CONSTRUCTION

NOTES:-

Permitted Area Boundary (3.34ha)

Two Sisters Food Group effluent discharge pipe

N

Rev	Date	Description	DR	CH
E	09/07/26	Issue for Permit	SJC	
D	26/06/26	Issue for Permit	SJC	
C	03/06/26	Revised Layout	SJC	
B	01/05/26	Revised Layout	HG	SJC
A	11/03/26	Preliminary Issue	SJC	–

acorn BIOENERGY

Job Title
AD Plant.
Devon AD Plant

Drawing Title
Devon AD Plant
Site Layout & Permit Plan

Status: Approval

Scale: As Shown | Date: Mar '26

Drawn By: HG | Checked: SJC | Approved: –

Drg. No.: DGP-ABE-LAY-112 | Rev: E

A1

N

Storage Tank
CL: 69.150
IL(IN) A: 67.570
IL(IN) B: 67.570
IL(OUT): 66.370
AREA: 610m²
DEPTH: 1.2m
VOLUME: 695m³ @ 95% VOIDS

SWMH.07
Pump Chamber
CL: 69.230
IL: 66.300
1500Ø PCC
FLOW: 2.8l/s

Existing Manhole
Downstream of
pond outfall

Proposed Rising Main connected into existing
Main Plant Dirty Tank.
Pump Rate: 1.5l/s
Designed By Process Manufacturer

New manhole built
over existing pipe
inlet to the lagoon

New Pump Main
to downstream
lagoon chamber

SWMH.06
CL: 69.200
IL: 67.585
1500Ø PCC

PETROL INTERCEPTOR
CL: 69.150
IL(IN): 67.690
IL(OUT): 67.590
KLARGESTER NSFA150
FULL RETENTION SEPARATOR
FITTED WITH HIGH LEVEL SIGNAL &
ALARM

CONMH.01
CL: 65.365
IL: 64.235
1200Ø PCC
OPEN MESH LID

GULLY 1
CL: 65.365

SWMH.04
CL: 69.060
IL: 67.750
1500Ø PCC

SWMH.05
CL: 69.100
IL: 67.695
1500Ø PCC

SWMH.04a
CL: 69.100
IL: 67.720
1500Ø PCC

Diverted Gas Main Route

SWMH.03
CL: 69.050
IL: 67.845
1500Ø PCC

PRMH.01
CL: 68.950
IL: 67.950
1200Ø PCC
Contaminated pumped to holding tanks.
Lift: Circa 9.55m
Length: Circa 205.3m
Pump design by specialist.
Provision to be made for kiosk.

EXSWMH
CL: 69.100
IL: 66.120
Proposed Sampling Point & Package Pump Station Installed
Within Existing Manhole.
Clean pumped Upstream of The Northwestern Storage Tank
During Emergency With Water Tested Prior to Release.
Lift: Circa 1.6m
Length: Circa 31.8m
Discharge: T.B.C By Process Contractor (l/s)
Contaminated pumped to holding tanks.
Lift: Circa 11.38m
Length: Circa 179m
Pump design by specialist.
Provision to be made for kiosk.

600ø @ 1:600 – PVC–U – 1.005
600ø @ 1:600 – PVC–U – 1.004
600ø @ 1:600 – PVC–U – 1.003
300ø @ 1:10 SUIT GROUND
225ø @ 1:225
RISING MAIN
TARMAC FORMED SLAGE CLAMP CHANNEL
Digester 1

Notes

1. All dimensions must be checked on site and not scaled from this drawing.
2. The Contractor shall make a survey of the site and shall be responsible for obtaining all dimensions and levels necessary for the proper fabrication of the structure as indicated.
3. All levels shown on this drawing are relative to Agreed Datum
4. This drawing is to be read in conjunction with 60273 Series Drawings.
5. All existing invert levels are to be confirmed by contractor prior to construction. Connection subject to approval.

- Denotes Road Boundary
- Denotes Approved Planning Boundary
- Denotes Clamp Boundary
- Clean Surface Water Sewer
- Clean Surface Water Chamber
- Contaminated Surface Water Sewer
- Contaminated Surface Water Chamber
- Existing Surface Water Sewer
- Existing Surface Water Chamber
- Match Line 1
- Proposed Rainwater Pipe

All pipes to be encased in concrete.

Existing surface water system shown indicatively.

REV	DATE	BY	DESCRIPTION	APPD
P01	03.06.2026	WB	STAGE 3 - ISSUED FOR APPROVAL	JHC

Suitability
S3 - SUITABLE FOR APPROVAL

Client
acorn BIOENERGY

GGP CONSULT
HULL | YORK | ROTHERHAM
www.ggpconsult.co.uk
info@ggpconsult.co.uk
(01482) 627963

Project
Willand AD Plant
Devon Green Power

Title
PROPOSED DRAINAGE PLAN SHEET 1 OF 2

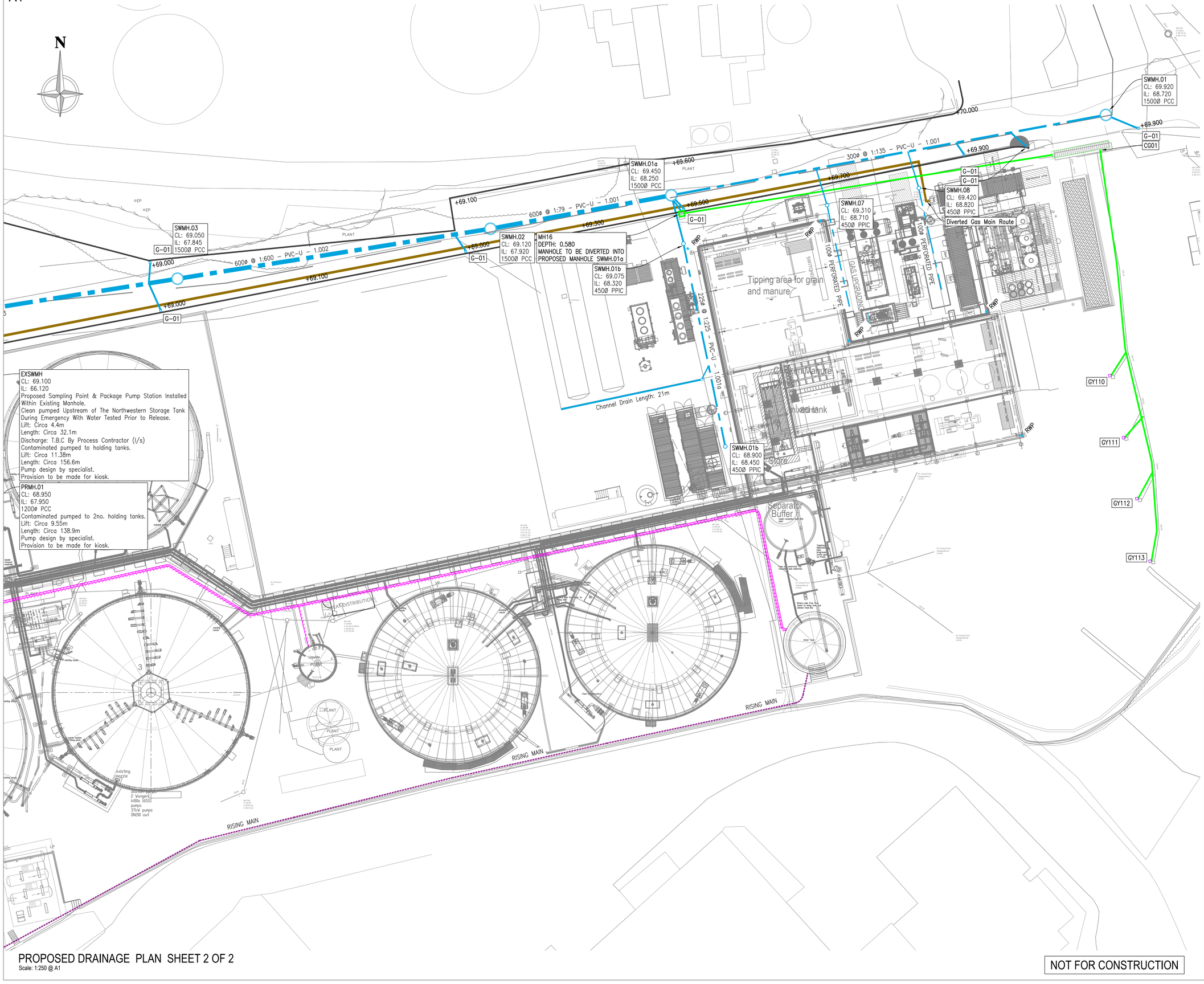
Scale	AS SHOWN @ A1	Date	JUNE 2026	Revision
Drawn	JH	Checked	JHC	Approved JHC	P01

Drawing No.
60273-GGP-XX-XX-DR-C-9101

PROPOSED DRAINAGE PLAN SHEET 1 OF 2
Scale: 1:250 @ A1

NOT FOR CONSTRUCTION

A1



PROPOSED DRAINAGE PLAN SHEET 2 OF 2
Scale: 1:250 @ A1

NOT FOR CONSTRUCTION

Notes

1. All dimensions must be checked on site and not scaled from this drawing.
2. The Contractor shall make a survey of the site and shall be responsible for obtaining all dimensions and levels necessary for the proper fabrication of the structure as indicated.
3. All levels shown on this drawing are relative to Agreed Datum
4. This drawing is to be read in conjunction with 60273 Series Drawings.
5. All existing invert levels are to be confirmed by contractor prior to construction. Connection subject to approval.

- Denotes Road Boundary
- Denotes Approved Planning Boundary
- Denotes Clamp Boundary
- Clean Surface Water Sewer
- Clean Surface Water Chamber
- Contaminated Surface Water Sewer
- Contaminated Surface Water Chamber
- Existing Surface Water Sewer
- Existing Surface Water Chamber
- Match Line 1
- Proposed Rainwater Pipe

All pipes to be encased in concrete.

Existing surface water system shown indicatively.

REV	DATE	BY	DESCRIPTION	APPD
P02	24.06.2026	TN	STAGE 3 - ISSUED FOR APPROVAL	JHC
P01	05.06.2026	JH	STAGE 3 - ISSUED FOR APPROVAL	JHC

Suitability
S3 - SUITABLE FOR APPROVAL

Client
acorn BIOENERGY

GGP CONSULT
HULL | YORK | ROTHERHAM
www.ggpconsult.co.uk
info@ggpconsult.co.uk
(01482) 627963

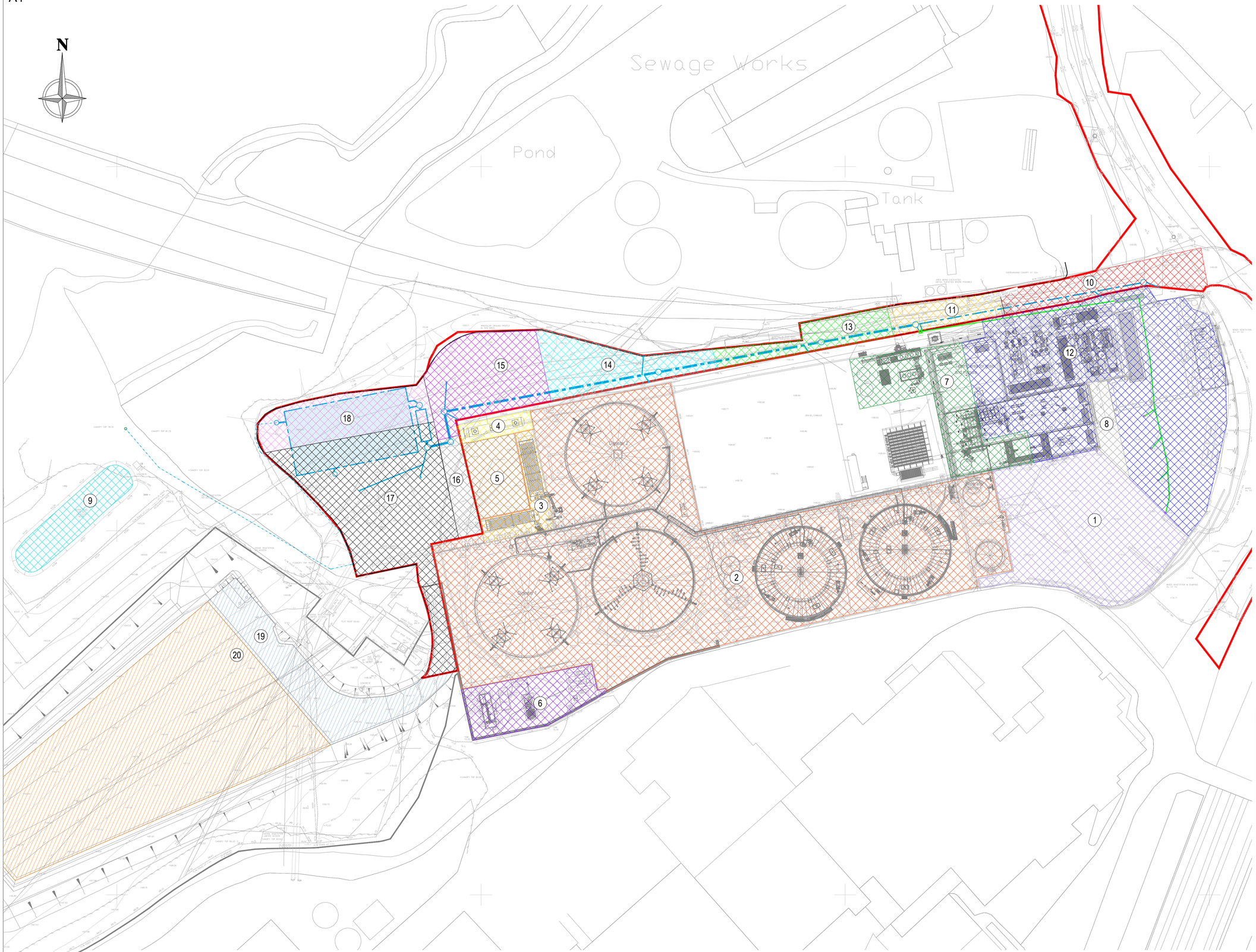
Project
Willand AD Plant
Devon Green Power

Title
PROPOSED DRAINAGE PLAN SHEET 2 OF 2

Scale	AS SHOWN @ A1	Date	JUNE 2026	Revision
Drawn	JH	Checked	JHC	Approved JHC	P02

Drawing No.
60273-GGP-XX-XX-DR-C-9102

A1



Notes

1. All dimensions must be checked on site and not scaled from this drawing.
2. The Contractor shall make a survey of the site and shall be responsible for obtaining all dimensions and levels necessary for the proper fabrication of the structure as indicated.
3. All levels shown on this drawing are relative to Agreed Datum
4. This drawing is to be read in conjunction with 60273 Series Drawings.
5. All existing invert levels are to be confirmed by contractor prior to construction. Connection subject to approval.

- Denotes Site Boundary – 16,580m²
- Denotes Approved Planning Boundary
- Clean Surface Water Sewer
- Clean Surface Water Chamber
- (1) Existing Yard – Clean outfalling to Bund Liquid feed Area – 1,568m²
- (2) Bund – Potential Clean / Dirty Area – 6,973m²
- (3) Bund – Dirty Area – 233m²
- (4) Clean Propane Catchment Area – 100m²
- (5) Yard – Potential Dirty Area – 305m²
- (6) Bund – Clean High Level Area – 481m²
- (7) Clean Roof / Equipment Runoff Area – 766m²
- (8) Dirty area to bund Area – 143m²
- (9) Clamp effluent lagoon Area – 337m²
- (10) SWMH.01 Catchment Area – 430m²
- (11) SWMH.01a Catchment Area (Approved) – 234m²
- (12) SWMH.01a Catchment Area (Proposed) – 2,976m²
- (13) SWMH.02 Catchment Area – 312m²
- (14) SWMH.03 Catchment Area – 506m²
- (15) SWMH.04 Catchment Area – 693m²
- (16) SWMH.04a Catchment Area – 175m²
- (17) SWMH.05 Catchment Area – 1,487m²
- (18) SWMH.06 Catchment Area – 549m²
- (19) Denotes Contaminated Hardstanding Runoff Area – 711m²
- (20) Denotes Dirty Silage Clamp Runoff Area – 3,404m²

REV	DATE	BY	DESCRIPTION	APPD
01	03.06.2026	MK	STAGE 3 - ISSUED FOR APPROVAL	JHC

Suitability
S3 - SUITABLE FOR APPROVAL

Client
acorn BIOENERGY

GGP CONSULT
HULL | YORK | ROTHERHAM
www.ggpconsult.co.uk
info@ggpconsult.co.uk
(01482) 627963

Project
Willand AD Plant
Devon Green Power

Title
DRAINAGE CATCHMENT PLAN

Scale	AS SHOWN @ A1	Date	JUNE 2026	Revision
Drawn	MK	Checked	JHC	Approved JHC	P01

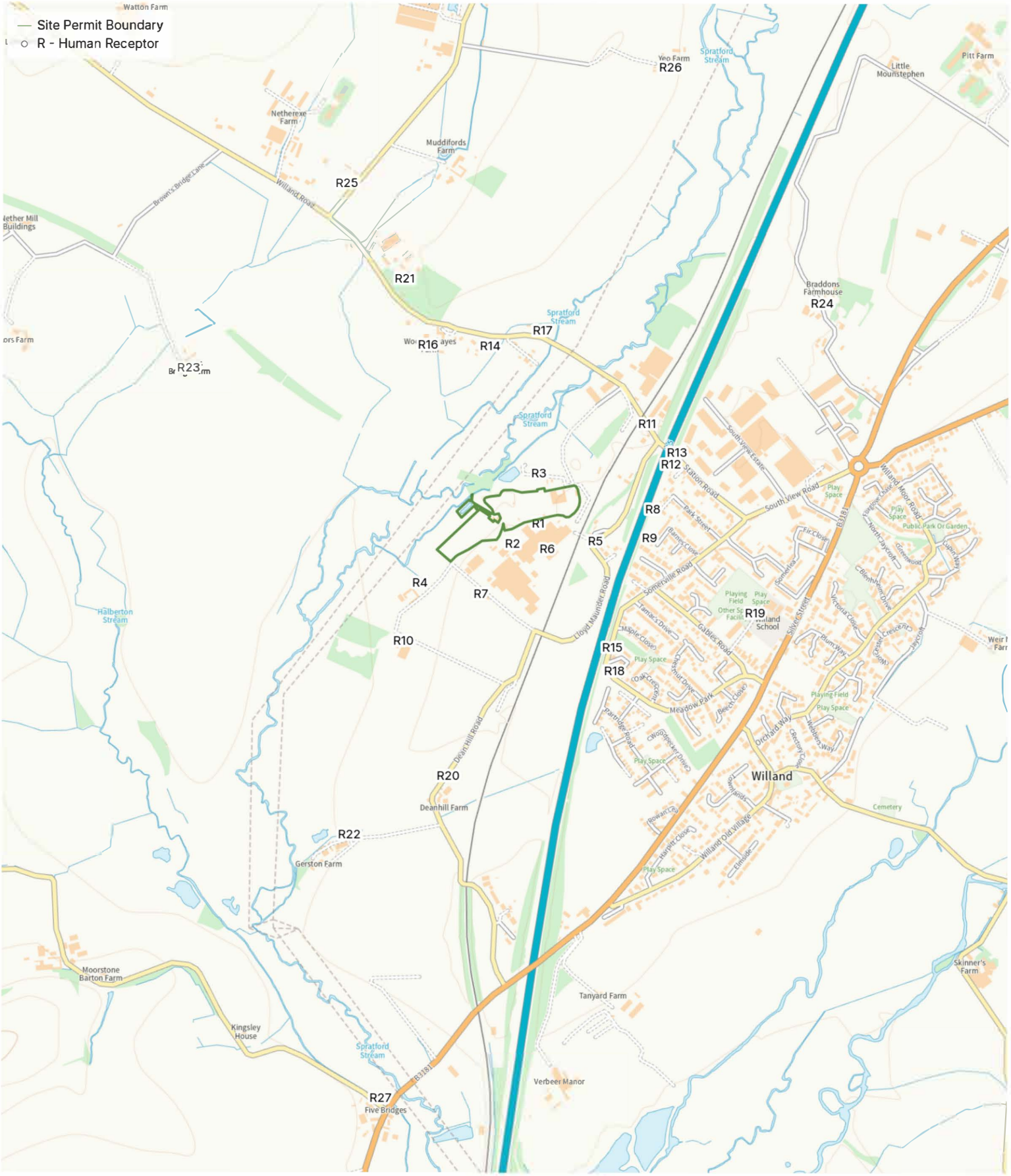
Drawing No.
60273-GGP-XX-XX-DR-C-9100

PROPOSED DRAINAGE CATCHMENT PLAN
Scale: 1:500 @ A1

NOT FOR CONSTRUCTION

Earthcare TECHNICAL

Human Receptor Plan
ETL981_DGPL_HumanReceptors_EPR02



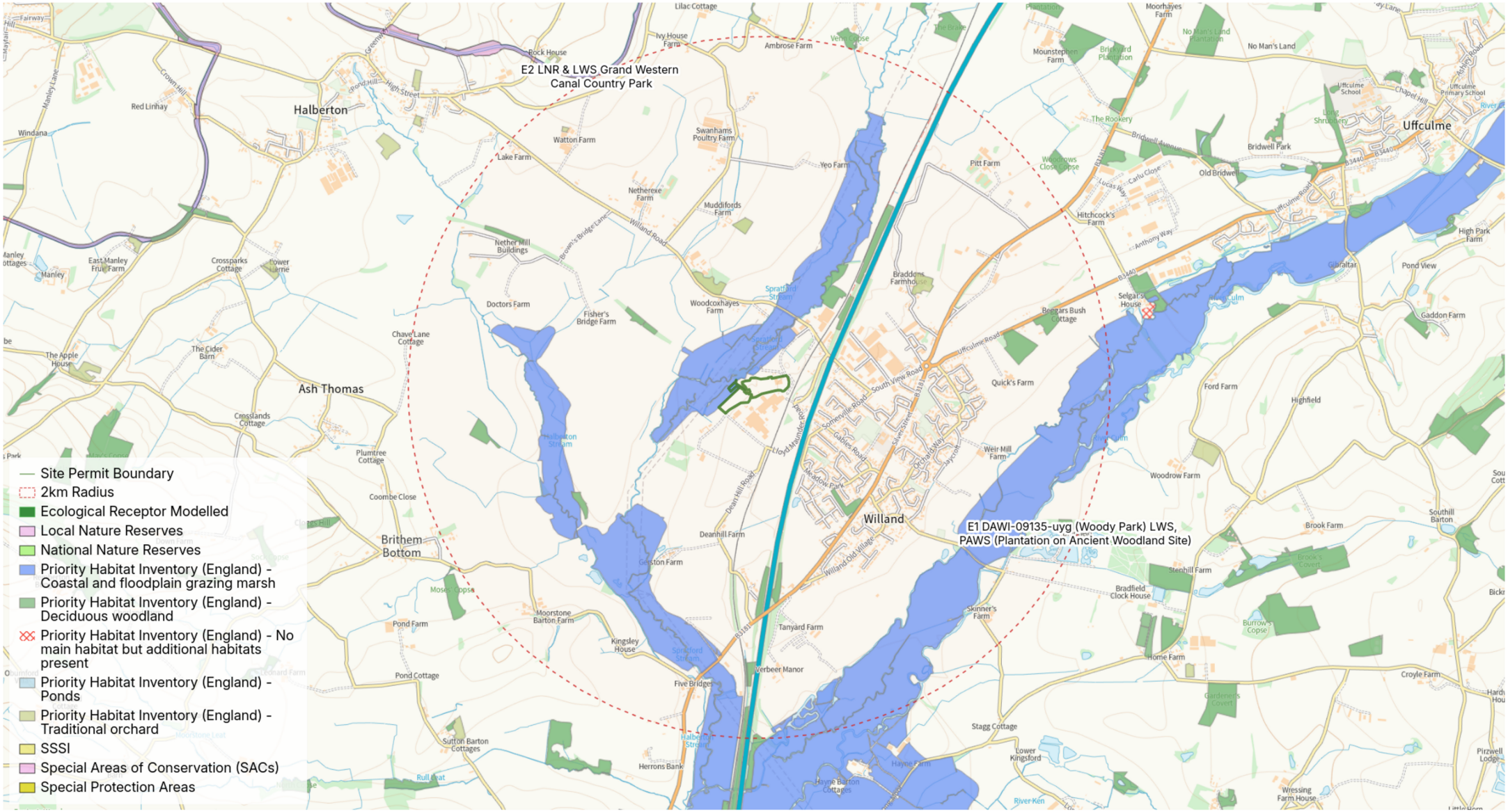
Produced on Land App, Jul 8, 2026.
© Crown copyright and database rights 2026 (Ordnance Survey licence number 100059532)

500 m
Scale 1:14000 (at A4)

N

Earthcare TECHNICAL

Ecological Receptor Plan (2km)
ETL981_DGPL_Eco Receptors_2km_EPR03



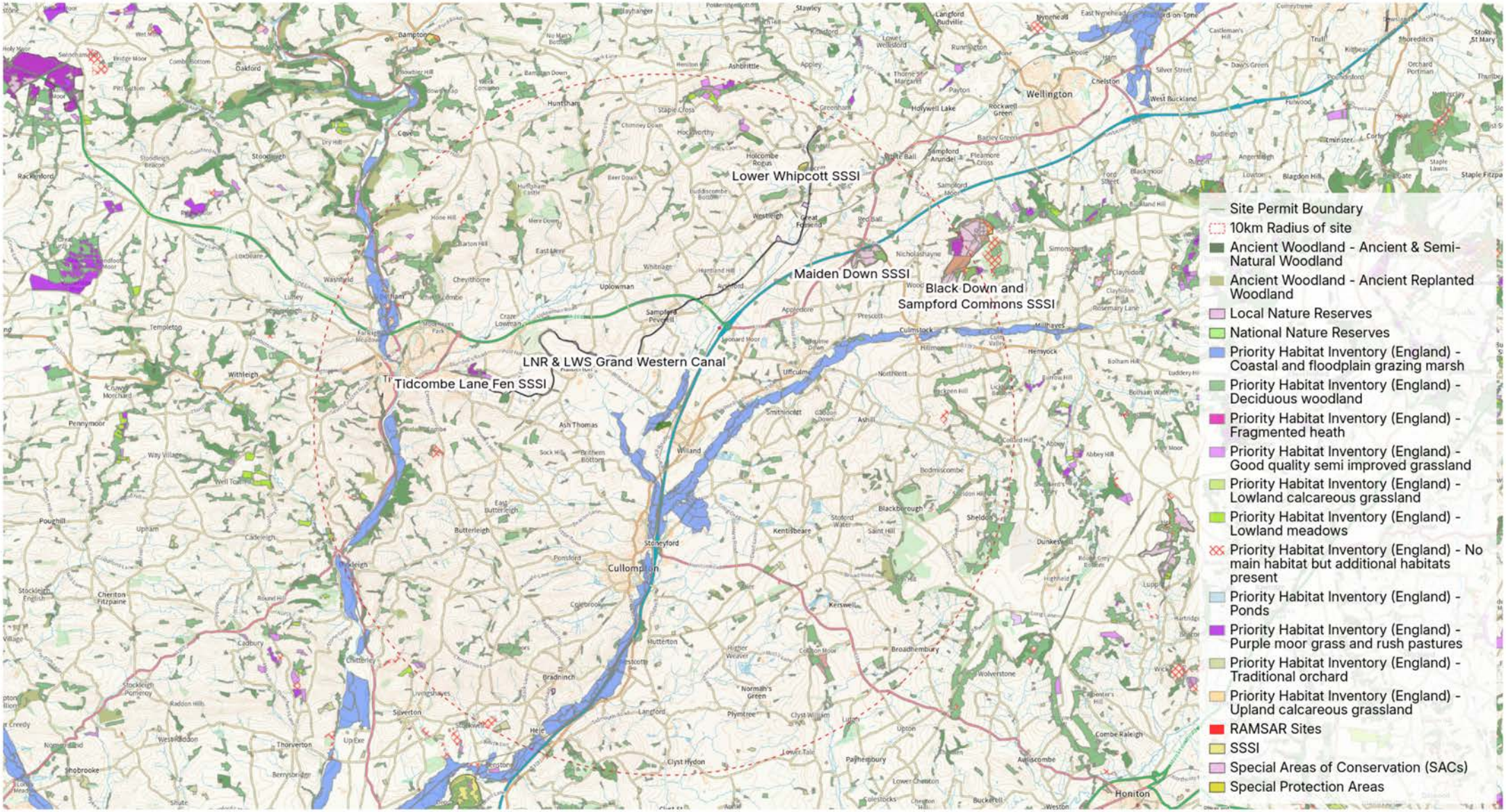
Produced on Land App, Jul 8, 2026.
© Crown copyright and database rights 2026 (Ordnance Survey licence number 100059532)

500 m
Scale 1:30000 (at A4)

N

Earthcare TECHNICAL

Ecological Receptor Plan (10km)
ETL981_DGPL_Eco Receptors_10km_EPR04



Produced on Land App, Jul 8, 2026.

© Crown copyright and database rights 2026 (Ordnance Survey licence number 100059532)

5 km
Scale 1:150000 (at A4)

N

Appendix A – Medium Combustion Plant Information

Item of plant	MCP specific identifier (serial number)	12-digit grid reference	Size (KWth) (rated thermal input)	Type of MCP (technology such as diesel engine, gas turbine, other engine or other MCP)	Type of fuel used	Date first put into operation	Nomenclature of Economic Activities (NACE) code	Expected operating hours
CHP1	**To be confirmed**	303047, 111247	2,817	Other MCP	Natural gas	Not yet commissioned	35.21 Manufacture of gas	8,660
CHP2	**To be confirmed**	303054, 111255	1,248	Other MCP	Natural gas & Biogas	Not yet commissioned	35.21 Manufacture of gas	8,660
Emergency boiler	**To be confirmed**	303059, 111242	609	Other MCP	Natural gas & biogas	Not yet commissioned	35.21 Manufacture of gas	1,314
Emergency generator	**To be confirmed**	303051, 111240	1,867	Diesel engine	Diesel	Not yet commissioned	35.21 Manufacture of gas	Emergency use only

Appendix B - Nature and Heritage Conservation Screening Report & Maps

Nature and Heritage Conservation

Screening Report: Bespoke installation

Reference	**EPR/GP3825ML/P001**
NGR	**ST 02830 11160**
Buffer (m)	**0**
Date report produced	**12/05/26**
Number of maps enclosed	**2**

This nature and heritage conservation report

The nature and heritage conservation sites, protected species and habitats, and other features identified in the table below **must be considered in your application**.

In the further information column, there are links which give more information about the site or feature type and indicate where you are able to self-serve to get the most accurate site boundaries or feature locations.

Most designated site boundaries are available on Magic map. Using Magic map allows you to zoom in and see the site boundary or feature location in detail, Magic map also allows you to measure the distance from these sites and features to your proposed boundary. Help videos are available on Magic map to guide you through.

Where information is not publicly available, or is only available to those with GIS access, we have provided a map at the end of this report.

Sites and Features within screening distance	Screening distance (km)	Further Information
Local Nature Reserve (LNR)	2	Natural England and Magic map
Grand Western Canal Country Park		
Local Wildlife Sites (LWS) (see map below)	2	Appropriate Local Record Centre (LRC) Appropriate Wildlife Trust
Grand Western Canal		

Protected Species within screening distance	Screening distance (km)	Further Information
Protected species	up to 2	Environment Agency. Dial 03708 506 506 for your local Fisheries and Biodiversity team

Protected Habitats within screening distance	Screening distance (km)	Further Information
Coastal and Floodplain Grazing Marsh (see map below)	up to 2	Natural England

Unfortunately, we cannot provide you with the details of protected species. This is because we either have not been given permission by the owner of the species data, or they have asked us not to identify the species as they are vulnerable. In these instances, you must contact the relevant organisation listed above. A small administration charge may be incurred for this service.

Where protected species are present, a licence may be required from Natural England to handle the species or undertake the proposed works.

The relevant Local Records Centre must be contacted for information on the features within local wildlife sites. A small administration charge may also be incurred for this service.

The following nature and heritage conservation sites, protected species and habitats, and other features have been checked for, where they are relevant for the permit type requested, but have not been found within screening distance of your site unless included in the list above.

Special Areas of Conservation (cSAC or SAC), Special Protection Area (pSPA or SPA), Marine Conservation Zone (MCZ), Ramsar, Sites of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Local Nature Reserve (LNR), Local Wildlife Sites (LWS), Ancient Woodland, relevant species and habitats.

Please note we have screened this application for features for which we have information. It is however your responsibility to comply with all environmental and planning legislation, this information does not imply that no other checks or permissions will be required.

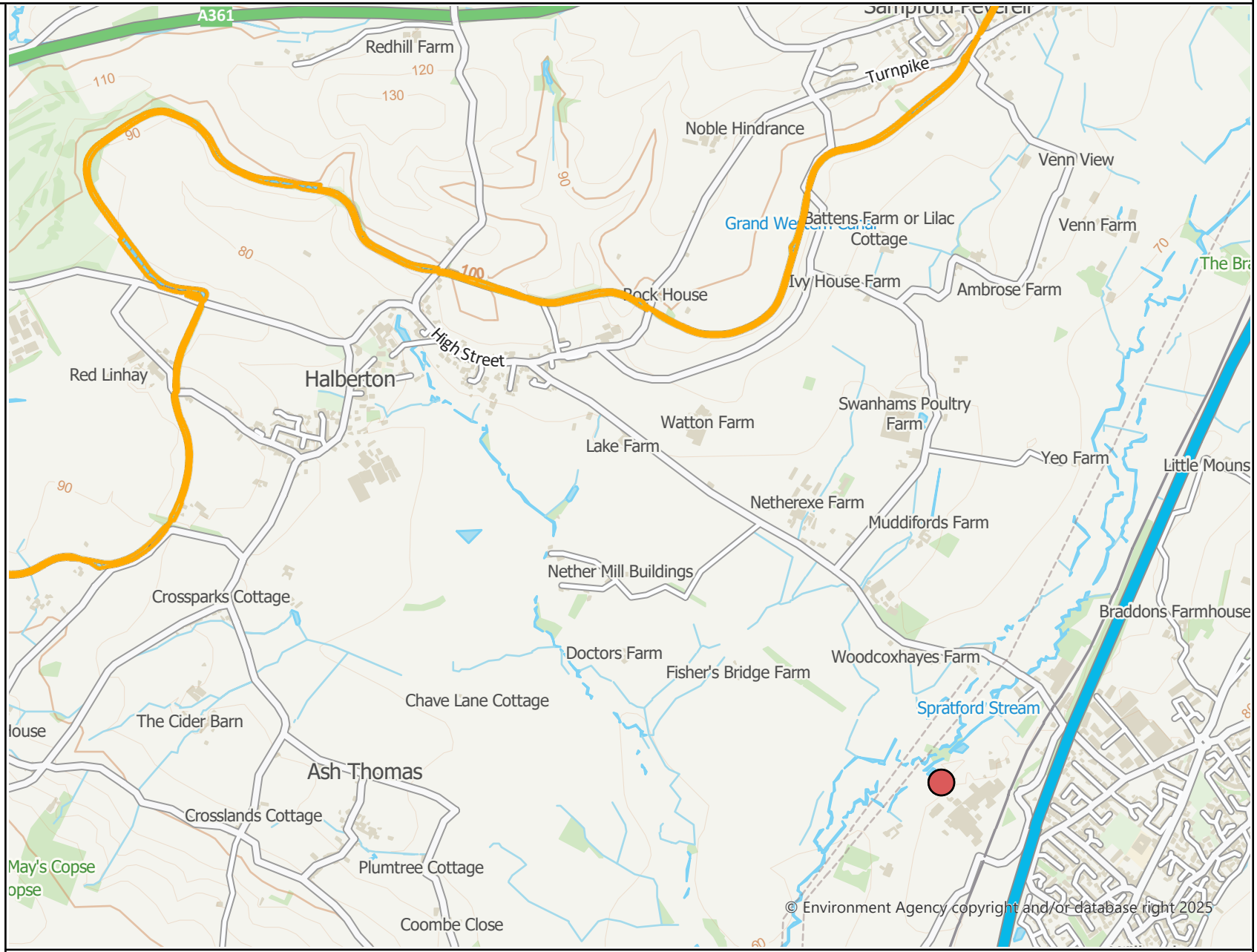
The nature and heritage screening we have conducted as part of this report is subject to change as it is based on data we hold at the time it is generated. We cannot guarantee there will be no changes to our screening data between the date of this report and the submission of the permit application, which could result in the return of an application or requesting further information.

Local Wildlife Sites

Environment Agency

Local Wildlife Sites

Local Wildlife Sites



Scale: 1:22,696

0 0.15 0.3 0.45 0.6 0.75 km

N

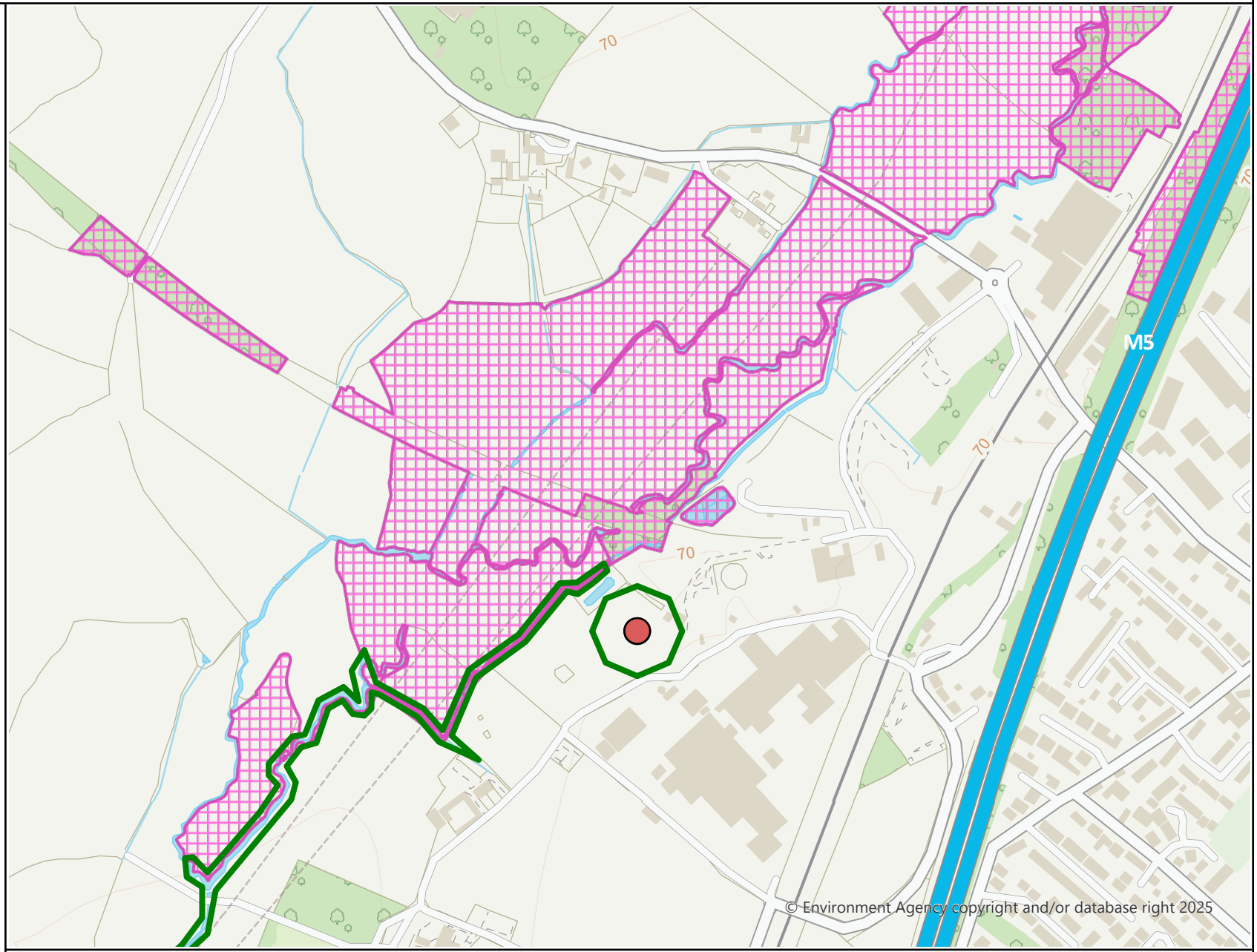
© Ordnance Survey Crown Copyright and Database Rights 2026 AC0000807064

Protected Habitats

Environment Agency

Protected Habitats screened for Environmental Permits

Protected Habitats screened for Environmental Permits



Scale: 1:6,229

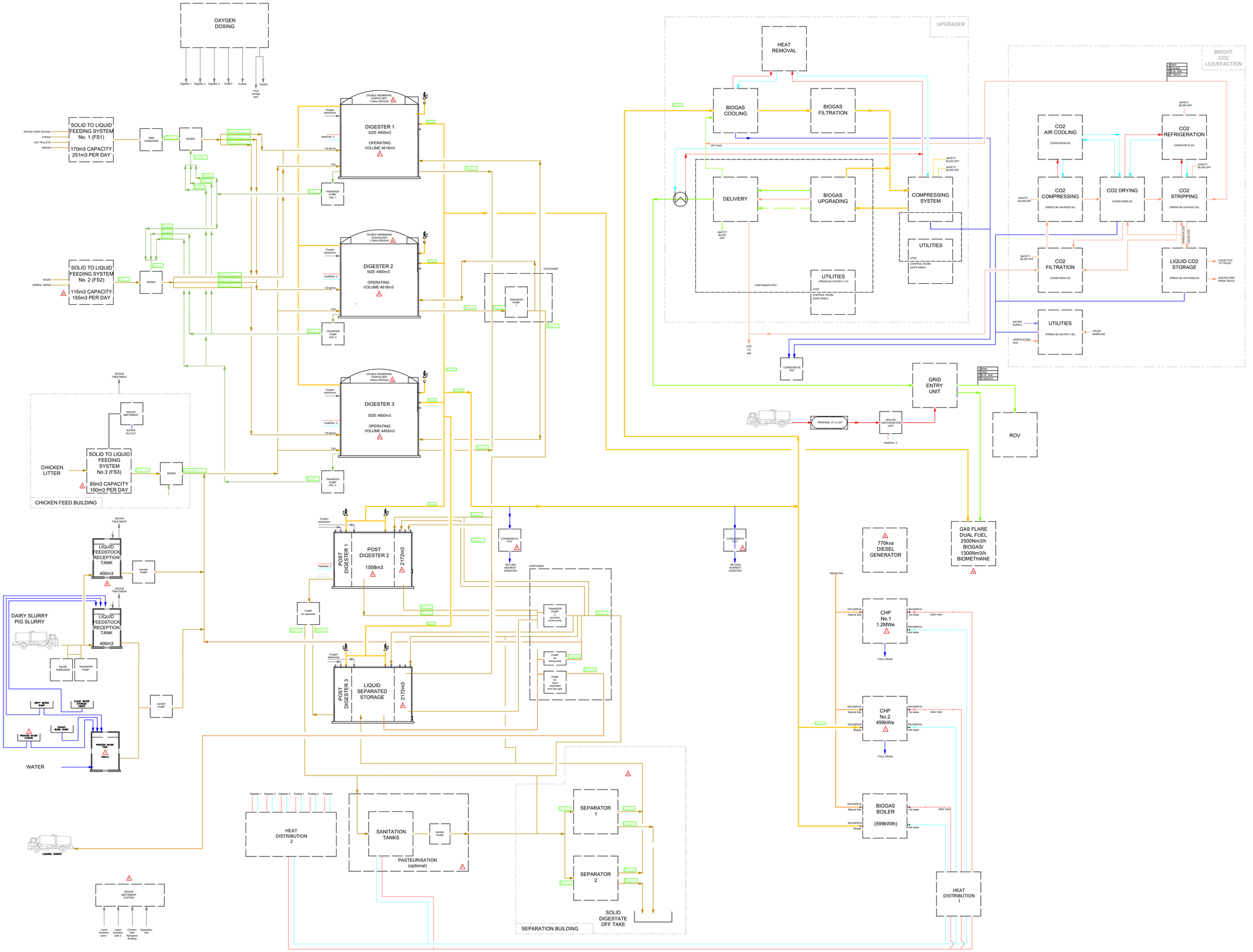
0 50 100 150 200 250 m

N

© Ordnance Survey Crown Copyright and Database Rights 2026 AC0000807064

Appendix C - Process Flow Diagram

AS NOTED ON A1 FRAME



NOTES:-

KEY

- BIOGAS
- BIOMETHANE
- BIOMETHANE REJECT
- NATURAL GAS
- CARBON DIOXIDE
- CONDENSATE
- OXYGEN
- HOT WATER
- COLD WATER
- DIGESTATE
- LIQUID WASTE/SUBSTRATE
- FRESH WATER
- WASTE WATER
- SIGNAL CABLE

PIPE IDENTIFICATION

1	PIPE SIZE
2	MATERIAL
3	DIN/BSEN
4	FLUID NAME

Rev	Date	Description
I	09/07/26	NOTES AMENDED
H	07/07/26	CHP KW AMENDED
G	04/06/26	OPTIONAL KIT REMOVED WITH UPDATES
F	21/05/26	TANK VOLUMES & GENERAL UPDATE
E	27/03/26	UPDATED FOLLOWING DESIGN REVIEW
D	20/01/26	UPDATED FOLLOWING GAIANOVA REVIEW
C	21/11/25	THIRD ISSUE
B	30/09/25	SECOND ISSUE
A	31/07/25	FIRST ISSUE

acorn BIOENERGY

Job Title

AD Plant.
DEVON AD PLANT

Drawing Title

PROCESS FLOW DIAGRAM

Status: PRELIMINARY

Scale: N.T.S.

Date: JuLY '24

Drawn By: NDJ

Checked: –

Drg. No.: DGPL–ABE–PFD–001 I