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Accident Management Plan Attleborough Anaerobic Digester
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1 Scope

The scope of the Accident Management Plan (AMP) applies to any incidents or accidents that may affect the environment at Attleborough Anaerobic Digestion (AD) plant (previously Crows Hall AD) at Ellingham Road, Attleborough, Norfolk, NR17 1AE (the site) operated by Eco Verde Energy Limited (the Operator) on behalf of Attleborough Eco Electric Limited. It has been written by Earthcare Technical Limited in collaboration with the Operator.

Whilst the site currently only treats crop feedstocks, it is a permitted site regulated by the Environment Agency under a Standard Rule permit (*Standard Rules 2012 No 9 – On-farm anaerobic digestion facility using farm wastes only, including use of the resultant biogas*) with permit reference EPR/BB3931RA.

The current infrastructure for the on-farm AD plant herein termed the 'Crop-AD Plant', includes silage clamps, two feeders, two primary digesters, a secondary digester, a separator, a covered digestate storage lagoon, dirty water lagoon, a flare and a combined heat and power engine (CHP). The Mississippi Dryer and boiler are being decommissioned. The silage clamps will benefit from new leachate collection tanks and the dirty water lagoon will be replaced with a new covered dirty water lagoon. Secondary containment will be retrofitted to the Crop-AD plant, with the new bunded area also containing a new adjacent food waste anaerobic digestion facility herein termed the 'Waste-AD Plant'.

This revision of the AMP supports a substantial permit variation application to vary the existing permit to a bespoke installation permit to reflect the addition of land to the permitted area the Waste-AD Plant including a building for food waste reception and processing, digestate separation and fibre storage, pasteurisers, three primary digesters and a secondary digester, covered digestate lagoon, surface water lagoon, , gas upgrade equipment, grid entry unit, back-up boiler and a dual fuel flare.

Permit condition 1.1.1 of the Environmental Permit requires the operator to manage and operate the activity in accordance with a written management system that identifies and minimises risks of pollution including those arising from operations, maintenance, accidents, incidents, non-conformances, closure, and those drawn to the attention because of complaints; and using sufficient competent person and resources.

The AMP is a live document that will be updated following any incident or accident and at a minimum at least every four years.

2 Objectives

The aim of the AMP is to:

- Identify the events or failures that could cause damage to the environment;
- Assess the likelihood of occurrence and the potential environmental consequences;
- Take steps to minimise both the potential cause and the consequences of accidents; and
- Identify how to minimise the consequences should accidents occur.

3 Site Information

3.1 Location

Address: Attleborough AD Plant, Ellingham Road, Attleborough, Norfolk, NR17 1AE

National Grid Reference: TM03304 95650

Planning Authority: Breckland District / Norfolk County Council

The site location is shown in Figure 1 - Site Location Plan (Plandescil / 24727 - 150 Rev E)

The new Waste-AD plant is located on an area that was used as part of the adjacent turkey breeding farm and is situated approximately 490m northwest of the town Attleborough, Norfolk. A tributary of the River Thet and the A11 trunk road run between the site and the town. The site is accessed from the north via an approximately 600m trackway which runs adjacent to residential properties and St Lukes Hospital.

3.2 Process Description

3.2.1 Overview

A full process description is provided in the Section 5 of the Environmental Management System (EMS) Manual (ATT-OD-01).

3.2.2 Crop-AD

The feedstocks for the existing Crop-AD plant are energy crops: maize and rye silage produced at local farms. The plant will continue to process in the region 30,295 tonnes per year of agricultural feedstocks, operating in the thermophilic temperature range.

There are two primary digesters (2,000m³ each) which operate in parallel and one after digester (1,500m³).

The biogas is burnt in a 1560kWe combined heat and power engine (CHP) to produce electricity and heat for the AD process (Crop-AD and Waste-AD). Additional excess electricity is exported to the National Grid.

The digestate is stored and spread for agricultural benefit at local farms.

3.2.3 Waste-AD

The Waste-AD plant will process in the region of 90,950 tonnes per annum of solid and liquid food waste. Food waste will be stored and treated inside the new Reception Building.

There will be three primary digesters (3,823m³ each) which operate in parallel and in the mesophilic temperature range. The three primary digesters feed into the Post Fermenter (3,823m³).

Biogas will be upgraded to biomethane and exported to the gas network, via a new grid connection

Digestate will be separated inside the Reception Building and the digestate liquor will be stored in a new covered lagoon and spread.

3.3 Polluting Substances

An Inventory of potentially polluting substances is Appendix C

3.4 Organisation Profile

The current permit application is also to transfer the permit from Attleborough Eco Electric Limited to Eco Verde Energy Limited, the Operator.

The Site Manager is responsible for the day-to-day operation of Attleborough AD plant and is also the Technically Competent Manager. The Site Manager is supported by the Operations Support Manager and the Cluster Operations Director. The Site Manager will manage four Site Operatives and a Weighbridge Operator.

Roles and responsibilities are detailed in Section 10 of the EMS Manual (ATT-OD-01).

3.5 Environmental Sensitivities

3.5.1 Human Receptors

Human receptors within 1km of the site are captured in Table 1 below and are shown on Figure 6 Human Receptor Plan (1km) – ETL573/EPR02.

Table 1: Human Receptors within 1km

ID	Location	NGR X	NGR Y	Distance from Site boundary (m)	Direction from Site
H1	Crowshall Veterinary Services	603479	295790	64	NE
H2	Stuart House	603530	295863	135	NE
Н3	Houses at Cakes Hill	603486	295927	200	NE
H4	Crowshall Lane	603463	296047	320	NE
H5	Ellingham Road	603296	296176	399	N
Н6	Suggit Farm Services	603174	296152	402	N
H7	St Lukes Hospital	603013	296096	408	N
Н8	Cades Hill Farm	602860	296089	492	NW
Н9	Shrugg's Lane	602783	295883	440	NW
H10	Lyng Farm	602487	295286	830	SW
H11	WwTW	602861	295200	527	SW
H12	Houses along West Carr Road, Workhouse Common	603119	294819	720	SW
H13	Carver's Lane, Attleborough 1	603528	294910	623	S
H14	Carver's Lane, Attleborough 2	603583	295146	416	S
H15	Carver's Lane, Attleborough 3	603683	295248	343	S
H16	Chapel Road, Attleborough	603966	295468	375	SE
H17	Houses in Baconsthorpe	604061	295923	550	E
H18	Ash Farm	603151	296756	994	N

3.5.2 Geology & Hydrogeology

The site is on slightly acid loamy and clayey soils with impeded drainage.

The site is situated upon a Secondary A superficial aquifer and a principal bedrock aquifer. Groundwater vulnerability is classified as medium.

The site is not within a Groundwater Source Protection Zone or within a Drinking Water Protected Area or Safeguard Zone.

The site is situated in a location which has a low probability of flooding.

The site is within a Nitrate Vulnerable Zone.

3.5.3 Surface Water

There are watercourses within proximity to the site. There is a drain which runs to the west of the site access road and is within approximately 13m of the permitted site boundary. There is a small watercourse adjacent to the southern boundary of the site which is approximately 35m from the Reception Building. The River Thet runs approximately 200m south of the site in a south westerly direction.

3.5.4 Air Quality Management Areas

Breckland District Council do have designated Air Quality Management Areas (AQMA) however there are none in proximity to the site.

3.5.5 Ecological Receptors

The closest offsite designated environmentally sensitive receptors are:

- Swangey Fens Site of Special Scientific Interest (SSSi) and Norfolk Valley Fens Special Area of Conservation 2.7 km southwest of the site.
- Old Buckenham Fen SSSI 3.7km to the south of the site.

4 Roles & Responsibilities

4.1 Day to Day

It is the responsibility of the Site Manager, who is the Technically Competent Manager (TCM) to ensure that:

- Site staff are adequately trained in the procedures within this Accident Management Plan;
- The requirements of this document are adhered to; and
- That suitable testing of emergency procedures takes place.

The Site Manager has overall responsibility for all activities on the site during normal and abnormal operations. To cover for annual leave, sickness, and unavailability of the Site Manager there will be a requirement to temporarily delegate the duties to other members of staff to cover. They will be known as the Nominated Competent Person (NCP). Necessary hand over information will be delivered verbally where possible and backed up via using the Site Diary (Smartsheet) (ATT-MP-02).

4.2 During an Incident or Accident

On detection of an incident or accident, the Site Manager or NCP becomes the Incident Controller. It is the responsibility of the Incident Controller to:

- 1 Assess danger.
- 2 Assist in the evacuation process by checking specific areas if required (i.e., if not everyone accounted for) ONLY if safe to do so.
- 3 Assess response Decide whether to alert the Emergency Services and / or Environment Agency.
- 4 Take control of an incident until relieved by the Emergency Services.
- 5 Serve as a single point of contact between the Emergency Services and other involved parties.
- 6 Ensure that the correct procedures within the Accident Management Plan are followed.
- 7 Ensure a formal handover takes place if the Incident Controller changes.
- 8 Assist in a full incident / accident root cause analysis, review lessons learnt and recommend any changes to procedures.
- 9 Making a record of the accident and the subsequent investigation using Accident and Incident Report Form (EVE-FT-01) (for actual or potential environmental incidents); and
- 10 Review and update the Accident Management Plan and procedures as necessary.

5 Accident / Incident Prevention & Management Plan

The key events that could lead to a failure in the risk management systems in place are listed in Table 1 below.

Table 1 Accident / Incident Risk Assessment, Prevention & Management Plan

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Spillages					
Crop-AD Spillages of maize or rye when transporting to solids feeder	Low – use of telehandler on concrete apron	Potential contamination of the soil, surface water and groundwater through leaching	Low risk of environmental harm from dry feedstock spillages upon concrete which is in a dirty water drainage area.	 Operate site in accordance with Environmental Management System including: Daily checks for spillage around site to be carried out by Site Manager or NCP. Daily Inspection (ATT-MP-01). Appropriate training of staff with respect to the spillage procedure. 	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Crop AD Spillages of maize or rye during loading of solids feeders	Low – as above	As above	Low risk of environmental harm as area around feeder benefits from an impermeable surface and sealed drainage; dirty water back to process for treatment.	As above	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Spillage of digestate fibre during dispatch from Crop-AD plant	Low – as above	As above	Low risk of environmental harm as area from spillage of dry material on an impermeable surface with sealed drainage.	Fibre is collected into a covered trailer. Operate site in accordance with Environmental Management System as above.	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Waste-AD Spillages of solid waste feedstocks or waste fibre digestate within the Reception Building	Low risk - Materials held within an enclosed building with concrete floor and sealed drainage	As above	Low risk of environmental harm as materials held within a building with concrete floor and sealed drainage. Small risk of materials being tracked out of building by vehicles but wash down procedures in place within a curbed drainage system.	Reception building has been appropriately designed to contain spillages and dirty water. Operate site in accordance with Environmental Management System including: Waste Loading & Management Procedure (ATT-SOP-13) Digestate Handling Procedure (ATT-SOP-06) Daily checks for spillage around site to be carried out by Site Manager or NCP. Daily Inspection (ATT-MP-01). Appropriate training of staff with respect to the spillage procedure.	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Spillages of digestate liquor during collection from the digestate off-take points by Crop-AD lagoon	Medium – could occur as pipework is disconnected.	As above	Low risk of environmental harm— any spillages will be captured within a concrete apron and sump. The sump will then be inspected and emptied when appropriate.	Operate site in accordance with Environmental Management System including: Daily checks for spillage around site to be carried out by Site Manager or NCP. Daily Inspection (ATT-MP-01). Appropriate training of staff with respect to the spillage procedure. Training of tanker drivers with respect to Digestate Handling Procedure (ATT-SOP-06)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Spillages of digestate liquor during collection from the digestate off-take points by Waste-AD lagoon	Medium– could occur as pipework is disconnected.	As above	Low risk of environmental harm— any spillages will be captured within a concrete apron and sump. The sump will then be inspected and emptied when appropriate.	As above	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Spillage during delivery of oil for Combined Heat and Power (CHP) Engine and collection of waste oil from CHP	Low – carried out by trained external contractors	CHP oil tank is inside a container where spill kit is stored. As above	Potential contamination of the soil, surface water and groundwater.	Ensure that collection and delivery of oil is overseen by an employee. Operate site in accordance with the Environmental Management System in particular: • Daily checks for spillage around site to be carried out by Site Manager or NCP. Daily Inspection (ATT-MP-01). • Appropriate training with respect to Spillage Procedure including the location of spill kits.	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Leaks and spillages of oil or fuel from plant and equipment	Low	As above	Potential contamination of the soil, surface water and groundwater.	Operate in accordance with the Environmental Management System in particular: Inspection and maintenance of plant and equipment in accordance with a planned preventative inspection and maintenance programme. Daily checks for spillages of oil or fuel to be carried out by Site Manager or NCP. Daily Inspection (ATT-MP-01)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Overfilling					
Overfilling of digester	Low - The site benefits from secondary containment designed to CIRIA736.	As above	If the high-level sensor is triggered on a digester, then the control system automatically disables the feed system. If there was a spillage it has the potential to contaminate soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: Checks on level sensors in digesters as part of planned preventative inspection and maintenance programme. Daily visual check on tank levels AD Maintenance Planner (ATT-MP-01)	In the event of a telemetry alarm follow Control Panel Alarm Response Procedure (Section 7). In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Overfilling of digestate lagoon(s)	Low	As above	Overtopping of digestate storage lagoon(s) leading to contamination of the soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: The quantity of digestate dispatched to the lagoons is carefully monitored on SCADA. There is a daily visual check on the digestate storage lagoon levels in accordance with Daily Inspection (ATT-MP-01)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Overfilling of dirty water lagoon	Low – As a contingency the dirty water lagoon contents can be pumped to the Crop-AD digestate storage lagoon.	As above	Overtopping of dirty water lagoon storage lagoon leading to contamination of the soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: There is a daily visual check on the dirty water storage lagoon level in accordance with Daily Inspection (ATT- MP-01)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Failure of containment	infrastructure				
Digester spillage or puncture due to impact and release of biogas and digesting material	Low	Potential contamination of the soil and groundwater through leaching. Release of biogas to atmosphere	Release of biogas – risk to personnel. Release of digesting material from tanks, then risk to surface water and / or groundwater.	Operate in accordance with Environmental Management System in particular: Carry out planned preventative inspection and maintenance on primary containment systems. Daily visual check for signs of leaks around tanks AD Maintenance Planner (ATT- MP-01) Daily / weekly inspection of secondary containment system Ensure correct training of staff	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Failure of below ground pipework or infrastructure carrying or holding potentially polluting liquids	Low	As above	Potential contamination of the soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: • The underground pipework was all pressure tested upon commissioning. All pipework to be checked as part of proposed site improvement work. If possible, pipework has been moved above ground as part of site redesign. If pipework to remain below ground, then pressure testing will be carried out as part of ongoing maintenance programme.	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Failure of above ground pipework	Low	As above	Potential contamination of the soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: • Above ground pipework is checked daily and recorded in Daily Inspection (ATT-MP- 01)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens
Failure of pipework carrying biogas	Low	Release of biogas to atmosphere	Release of biogas. Risk to personnel.	All gas pipes were pressure tested upon commissioning. Major leaks would be detected via low gas pressure and CHP tripping. Minor gas leaks detected through leak detection and repair (LDAR) programme.	In the event of a release of biogas plan follow biogas leak response procedure (Section 9)
Failure of digestate storage lagoon(s) infrastructure	Low	Potential contamination of the soil, surface water and groundwater through leaching.	Potential contamination of the soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: Daily check on lagoon integrity – Daily Inspection (ATT-MP-01)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Failure of dirty water lagoon infrastructure	Low – dirty water lagoon being renewed with new liner	Potential contamination of the soil, surface water and groundwater through leaching.	Potential contamination of the soil, surface water and groundwater.	Operate in accordance with Environmental Management System in particular: Daily check on lagoon integrity – Daily Inspection (ATT-MP-01)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07)
Wrong connections made in drains or drainage systems	Low – Drainage system has been surveyed by drainage consultants as part of site upgrade.	As above	Low risk as all water from site is used in the process	Ensure as built plans are consulted and any future changes to the drainage system are fully surveyed to ensure correct connections before use.	Treat all contaminated water as dirty until drainage routes rectified

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens		
Over-Pressure Scenario	Over-Pressure Scenario						
Failure of pressure relief valves leading to explosion	Low – gas pressure is managed through process monitoring and management. Flare used to manage excess gas.	Potential contamination of the soil and water through leaching. Release of biogas to atmosphere.	Digestate spillage has the potential to contaminate water and soil. Biogas release – risk to human health	There is a daily check to ensure that the PRVs are seated correctly and operational. Daily Inspection (ATT-MP-01). Any issues to be noted on the Site Diary (Smartsheet) (ATT-MP-02)	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07). In the event of a release of biogas plan follow biogas leak response procedure (Section 9)		
Fire							
Fire	Low – feedstocks are not readily combustible	Emissions to air from fire. Run off from firefighting water may soak in ground and contaminate groundwater	Harm to human health from smoke. Potential contamination of the soil, surface waters and groundwater.	Ensure that there is only smoking in designated area and that all electricals are regularly inspected.	In the event of a fire carry out fire and explosion response procedure (Section 8)		
Lightning strike causing gas domes to catch fire	Low	Emissions to air from fire. Run off from firefighting water may soak in ground and contaminate groundwater.	Harm to human health from smoke. Potential contamination of the soil, surface water and groundwater.	Lightning design study is being undertaken and works commissioned to install a British Standard compliant lightning protection system.	In the event of a fire carry out fire and explosion response procedure (Section 8)		

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens		
Unexpected reactions	Unexpected reactions or runaway reactions						
Unexpected change to biological process because of a change in feedstock properties or critical controls e.g., temperature or pH	Low – the feedstocks Crop-AD are relatively consistent in their properties and Waste-AD feedstocks are subject to pre- acceptance and acceptance procedures with onsite testing to confirm characteristics.	Requirement to restart process would result in emissions to air (release of low-quality biogas).	There could be a variety of consequences from foaming to the anaerobes performing the process being killed off.	 Operate in accordance with Environmental Management System in particular: Process Monitoring is carried out in accordance with Process Monitoring Procedure (ATT-SOP-03) Daily checks made on surface of digesters for foam. AD Maintenance Planner (ATT-MP-01). 	in accordance with Process Monitoring Procedure (ATT-SOP-03): Increase process monitoring to try to identify issue. Take advice from a specialist biologist In the event of foam being detected then follow the Foam Response Procedure (Section 10)		
Flood							
Failure to contain fire water (the site is located within an area at very low risk of flooding (<0.1%).	Low	Potential contamination of the soil, surface water and groundwater through leaching.	Run off from firefighting water may soak in ground and contaminate groundwater.	Ensure that there is only smoking in designated area and that all electricals are regularly inspected.	Fire water to be contained in accordance with Section 8 Fire & Explosion Response Procedure.		

Possible Accident/incident	Likelihood of occurrence	Pathways & receptors	What would the environmental harm be?	How do we reduce the chances of it happening?	What to do if it happens			
Vandalism	Vandalism							
Unauthorised entry and tampering or malicious damage to property, plant, and equipment	Low	Potential contamination of the soil, surface water and groundwater through leaching. Emissions to air from fire.	Contamination of ground by fuel and or hydraulic oil Fire – fire water As above	Site security measures in place as per Section 9 of EMS Manual (ATT-OD- 01).	In the event of a fire carry out fire and explosion response procedure (Section 8) In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07).			
Power failure								
Mains power failure leading to shut down of CHP. Failure of the CHP Loss of power to AD plant, essential functions not maintained.	Low	Release of biogas to atmosphere. Release of digestate may cause contamination of ground and groundwater.	Harm to individuals on or around site. Potential for release of biogas and or digestate.	Back-up generator which is sized appropriately to maintain all essential functions. Planned preventative inspection and maintenance programme for CHP in accordance with the CHP service contract.	In the event of a power failure initiate main power outage response procedure (Section 11)			
Control Panel system f	Control Panel system failure							
Failure of telemetry between pumps and alarms	Low (connection hardwired)	As above	Contamination of land, drains, groundwater. Release of biogas - Health and safety risk.	In the case of a power failure there are emergency back-up batteries in the control panels	In the event of a spillage follow the Spill Control Procedure (EVE-SOP-07). In the event of a release of biogas follow the Biogas Leak Response Procedure (Section 9)			

6 Reporting of Accidents & Incidents

6.1 Key Emergency Contacts

To aid reporting of accidents and incidents a list of Key Emergency Contacts will be clearly displayed in the Control Room (see Appendix B).

6.2 Incident Reporting & Recording Procedure

In the event of an incident, the Site Manager is responsible for

At the time of the incident:

- 1 Reporting the incident to the Environment Agency incident hotline (0800 807060) as soon as practicably possible and in all cases within 12 hours of the incident or breach of permit to include:
 - Damage or danger to the natural environment;
 - Pollution to water or land;
 - Any incident which is causing or may cause significant pollution including breakdowns or failure of equipment or techniques and accidents.

Following the incident:

- Using the Accident and Incident Record Form (EVE-FT-01) to record the details of the incident, the consequences (pollution/ damage/ breaches etc.), people involved and immediate response activities that were carried out.
- 3 Conducting an investigation using the Accident and Incident Record Form (EVE-FT-01) for incidents with an impact (or potential impact) on the environment finding the root cause(s) of the incident and identifying corrective action(s).
- 4 Ensuring that a regular review of outstanding actions is undertaken, to ensure that the corrective actions are followed through to completion.
- 5 On completion of the corrective actions (where identified), updating the form with completion dates and filing the form for future reference.

Note the iAuditor system is to be used for incidents or accidents with health and safety implications

7 Control Panel Alarm Response

The **Site Manager** or **NCP** is responsible for carrying out the following actions on receiving a critical alarm on mobile phone.

- 1. Investigate conditions on the SCADA either in the Control Room or remotely.
- 2. Assess if the situation can be solved immediately.
- 3. If so, deal with the situation and record the incident on the alarm log page on SCADA. No further action required.
- 4. If not (i.e., is a genuine alarm indicating an emergency), emergency procedures apply including the notification of the Emergency Services and / or Environment Agency as appropriate and Site Manager / Technically Competent Manager.
- 5. Incident reporting in Accident and Incident Report Form **(EVE-FT-01)** which will be reviewed post incident.

8 Fire & Explosion Response Procedure

In the event of a fire/ explosion, it is the responsibility of the **Site Manager** or **NCP** to:

- 1. Call 999 and request the Fire and Rescue Service. Tell the operator:
 - Where the fire is give the full postal address including the postcode.
 - If the access to the fire site will be difficult for the fire engines.
 - If there will be problems accessing water supplies on the fire site.
- 2. If possible, without endanger safety operate emergency shut down switches
- 3. Make sure everyone on site is aware and tell them to evacuate and assemble at the Emergency Assembly Point at the site entrance to the site if it is safe to do so.
- 4. If possible, send someone to the site entrance to direct the Fire and Rescue Service to the fire. They should be wearing high visibility clothing, so they are easy to see and carry a torch if needed.
- 5. Clear access routes to the fire site for the fire engines.
- 6. Only fight the fire if:
 - The Fire and Rescue Service have been notified
 - The fire is small and is not spreading to other areas
 - You have a good clear escape route
- 7. Fire extinguisher (carbon dioxide) located in the Control Room. Use carbon dioxide fire extinguisher for electrical fires and liquid fuels. Switch off power, where possible, before an attempt is made to extinguish an electrical fire.
- 8. If it is safe use the correct Fire extinguisher provided starting at a sensible distance upwind from the fire and then move closer as it is reduced following P.A.S.S.

PULL The Pin

AIM The Hose aim the nozzle, hose or horn (on a CO₂) at the base of any fire

SQUEEZE The Levers or Handle

SWEEP Back and Forth with the extinguisher

- 9. Alert neighbouring properties.
- 10. Notify the Environment Agency pollution incident hotline (0800 80 70 60) as soon as reasonably practical and in any case within 12 hours of the incident.
- 11. It is the responsibility of all staff members and contractor, if notified of a fire or explosion on site to:
 - Ensure that the Site Manager or NCP is aware
 - Leave the area immediately and assemble at the site gate
 - Stay off site until Fire and Rescue Service deem it safe to renter
- 12. Record incident on Accident and Incident Report Form (EVE-FT-01)

9 Biogas Leak Response Procedure

In the event of a suspected major biogas leak:

- 1. Remove yourself from the immediate area of the leak to avoid personal injury. Ensure the correct PPE is being worn including full face respirator.
- 2. Do not operate any electrical equipment, including mobile phones, unless Ex-rated, and do not start any vehicles. Be aware of any equipment that may switch on and off automatically.
- 3. Evacuate all persons from the affected area and assemble at the Emergency Assembly Point at the site entrance to the site, unless this is downwind of the suspected leak.
- 4. Follow the fire evacuation procedure.
- 5. Keep upwind of any gas leak.
- 6. Inform the TCM or NCP for further instructions.
- 7. It is the responsibility of the TCM or NCP to notify the Environment Agency pollution incident on 0800 80 70 60 as soon as reasonably practical but within 12 hours of the incident.
- 8. If there is a fire, always contact the Fire and Rescue Service.

10 Foam Response Procedure

If foam is observed in the Digester through the daily check then:

- 1. Stop feeding immediately.
- 2. Speak to biologist for advice.
- 3. Add defoaming oil as required.
- 4. Start all mixers.
- 5. Monitor tank inside closely.
- 6. If foaming level keeps on rising, it might be necessary to open the PRVs as a last measure to prevent damages at the roof. Attention: This procedure will release gas and needs to be coordinated carefully considering potential explosion zones!

11 Main Power Outage Response Procedure

In the event of an on-site power failure:

- 1. Inform the TCM or NCP.
- 2. Contact the electricity supplier to determine the length of time that the power will be out.
- 3. Start-up back-up generator.
- 4. Once the power has been restored ensure that the equipment is reset, and that all alarms are connected and fully operational. Follow the start-up procedures.

12 Safe Shutdown Procedure

The **TCM** or **NCP** is responsible for ensuring the requirements of this procedure are followed at all times. All Personnel are responsible for reporting any emergency event (actual and potential) to the **TCM** or **NCP**.

- 1. In the case of an emergency or a potential emergency, individuals should only attempt to undertake corrective actions in accordance with their level of training. Individuals should not place themselves or others at risk.
- 2. Sound the fire / emergency alarm.
- 3. Inform the TCM or NCP.
- 4. If it is safe to do so, shut down the plant by activating the e-stop system.
- 5. Ensure the safe evacuation of personnel on site and ensure that staff, visitors, and members of the public do not enter the site.
- 6. NOTE: The plant cannot remain in "safe state" indefinitely biogas will continue to be generated and further measures may be required to ensure conditions are controlled. Frequent reviews of the plant status should be carried out by the **TCM** or **NCP** via remote access to the Control Panel if circumstances permit.
- 7. The **TCM** or **NCP** must ensure that all details of the event are reported and recorded by following the Incident Reporting and Recording Procedure (Section 6.2).

13 Mechanical Failure Procedure

In the event of any mechanical failure that could have an adverse effect on health and safety or the environment please take the following actions;

- 1. Establish what system has failed.
- 2. Shut down / isolate the equipment if safe to do so.
- 3. Inform the TCM or NCP.
- 4. Contact the relevant contractor and arrange repair if required. Ensure that risk assessments and safe systems of work are in place for these repair activities. Consider especially high-risk activities, such as work at height, lone working, confined space entry, etc.
- 5. If required notify the Environment Agency if appropriate in accordance with Section 6.2 Incident Reporting and Recording.

Figures

Figure 1: Site Location Plan (Plandescil / 24727 - 150 Rev E)

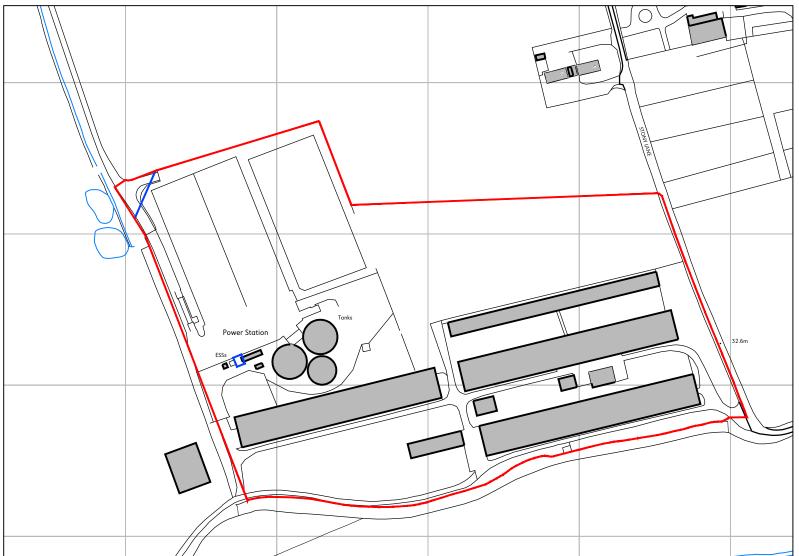
Figure 2: Proposed Permit Boundary Plan (Plandescil / 24727 - 600 Rev 0)

Figure 3: Emission Point Plan (BioConstruct / B202103 / A15)

Figure 4: Proposed Site Overview Layout (Plandescil /24727/010 Rev H)

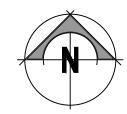
Figure 5: Proposed Drainage Layout (Plandescil /24727/007 Rev C)

Figure 6: Human Receptor Plan (1km) (Earthcare Technical/ ETL573/EPR02)

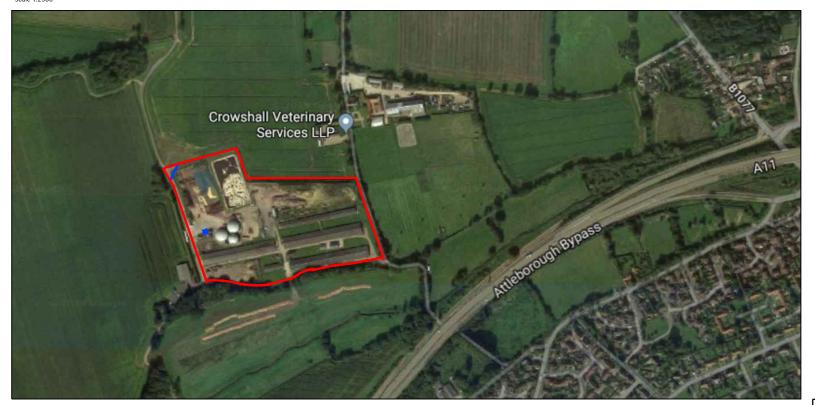


Cananal Nata

- All dimensions noted are in millimetres unless stated otherwi
- All levels to be above Ordnance Survey Datum defined levels (A.O.Dm) unless noted otherwise.
- 3. Do not scale from this drawing, if dimensions are not clear ask.
- This document has been created in accordance with Plandescil Ltd. Terms & Conditions along with the scope of works provided by the client to Plandescil Ltd. Any use of this document other than for its original purpose is prohibited, Plandescil Ltd. accept no liability for any third party uses of this document.
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- This drawing is to be read in conjunction with all other relevant documents relating to the project.
- All setting out to be coordinated by the Contractor and to be checked onsite prior to construction.



 $\underset{\text{Scale 1:2500}}{\text{OS Location Plan}}$



Site Location Plan 1



 $\underset{\text{Not to Scale}}{\text{Site Location Plan 2}}$



Site Boundary (Area - 67,594.50m² / 6.75945 Ha)

Land Registry Land Divisions

APPROVAL & COMMENT

E	22-07-21	AF	OAJ	Site Boundary Amended
D	13-07-21	AF	OAJ	Minor Amendments
С	30-04-21	JHB	OAJ	Minor Amendments
В	13-01-20	MJP	OAJ	Client Name Amended
Α	10-01-20	MJP	OAJ	Second Issue
0	26-07-19	-	OAJ	First Issue
Rev	Date	Rev By	Chkd	Description



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civil / structural / environmental / surveying

Client

Attleborough AD Plant Limited

Project

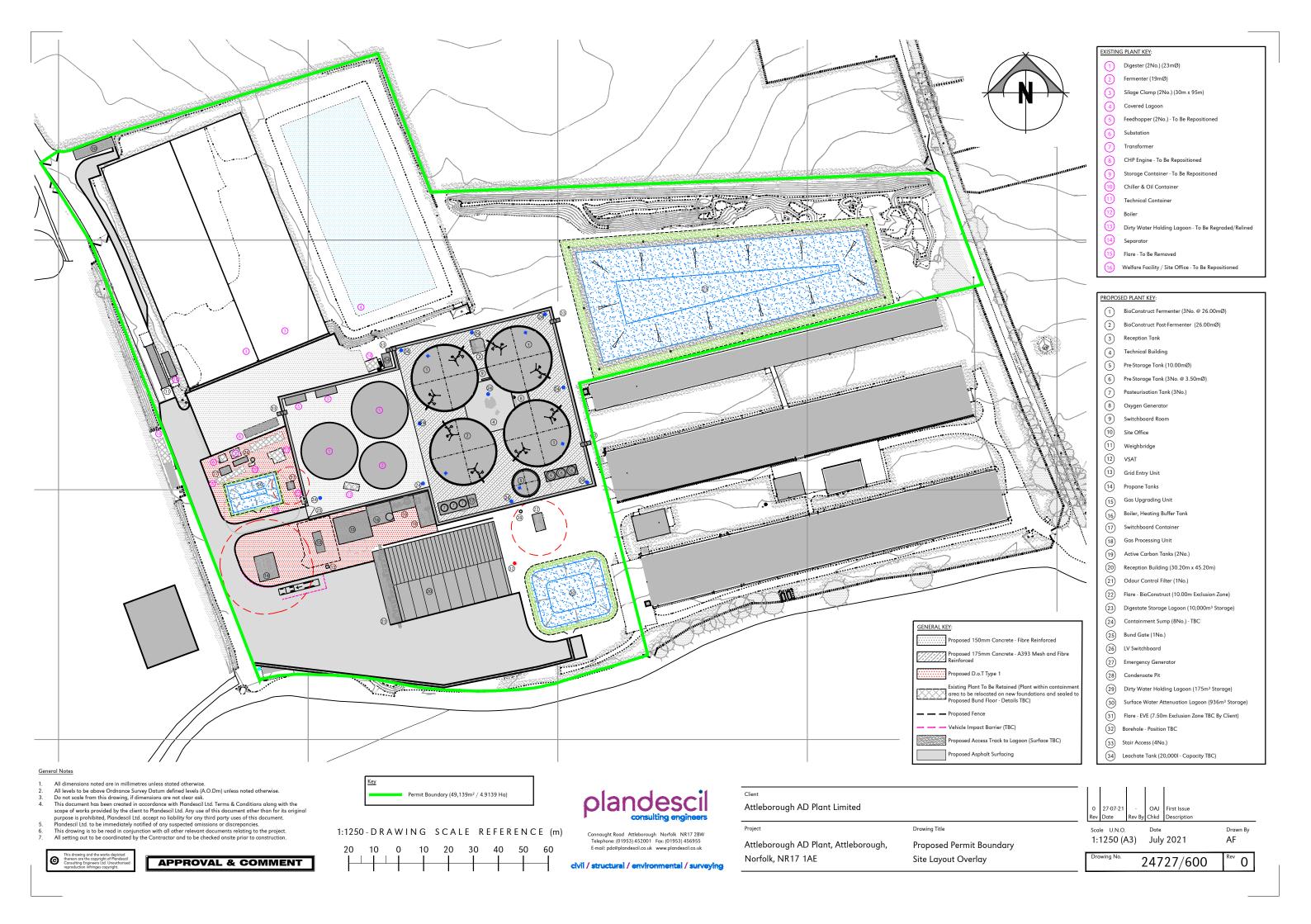
Attleborough AD Plant, Attleborough, Norfolk, NR17 1AE

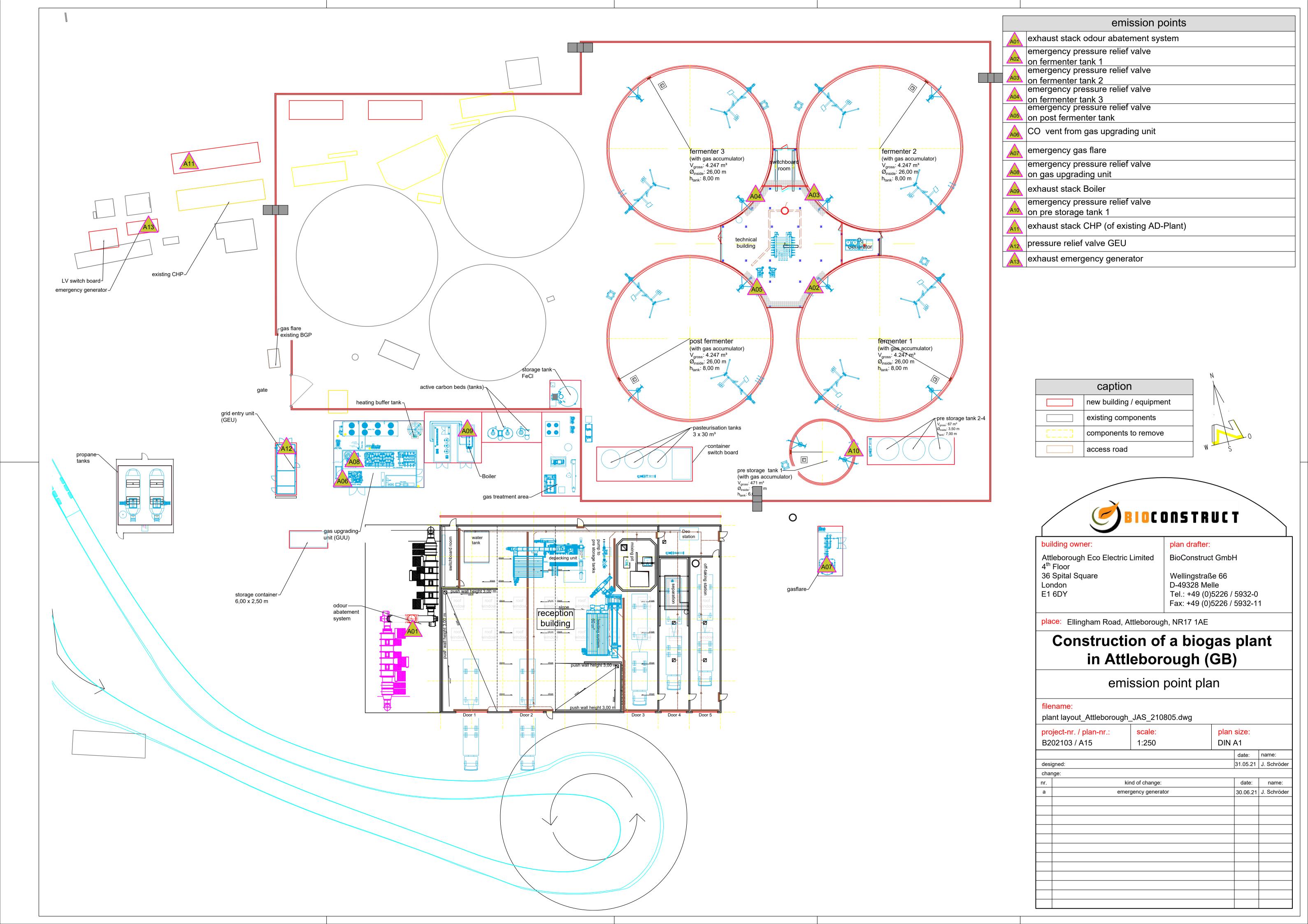
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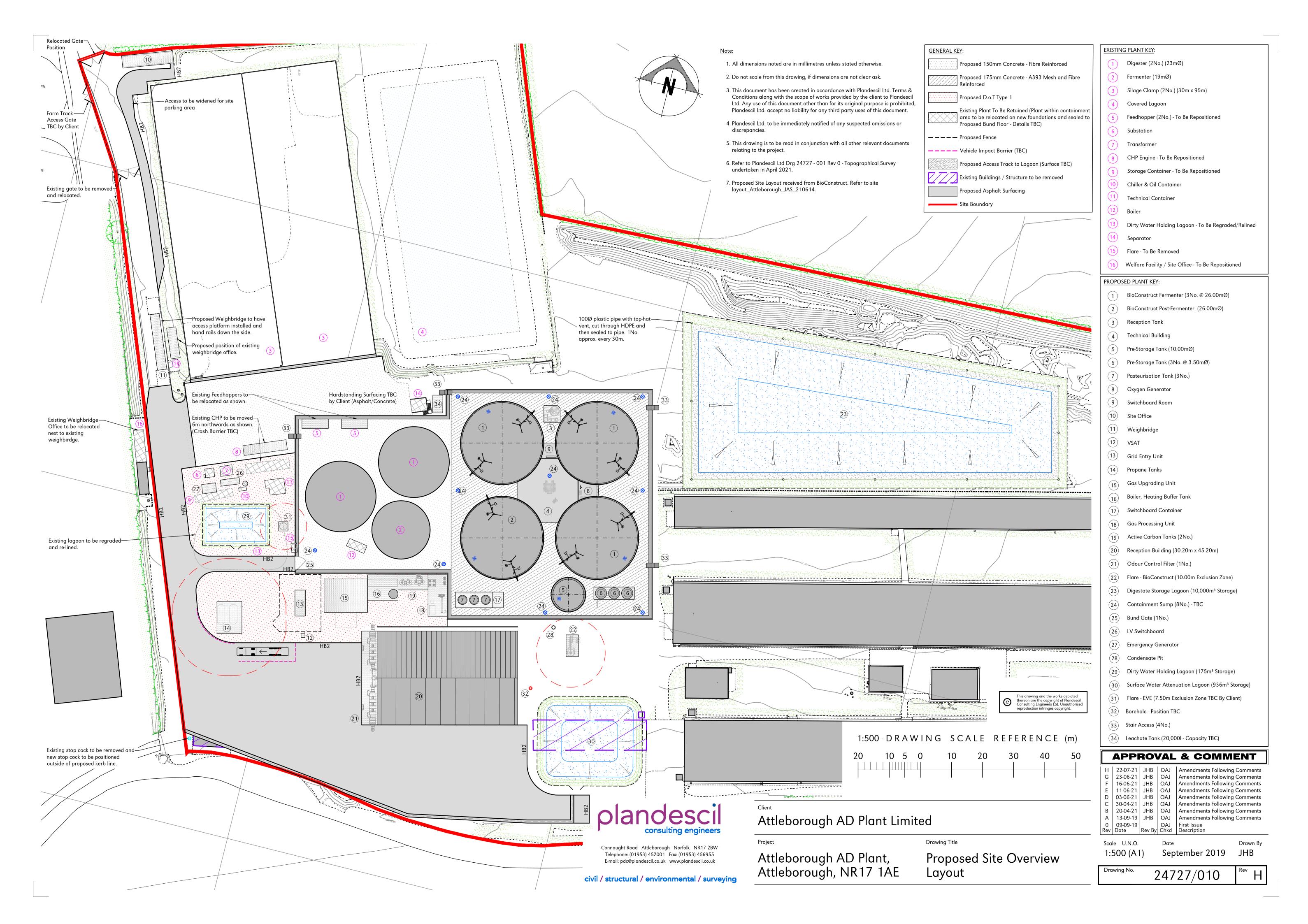
Site Location Plan

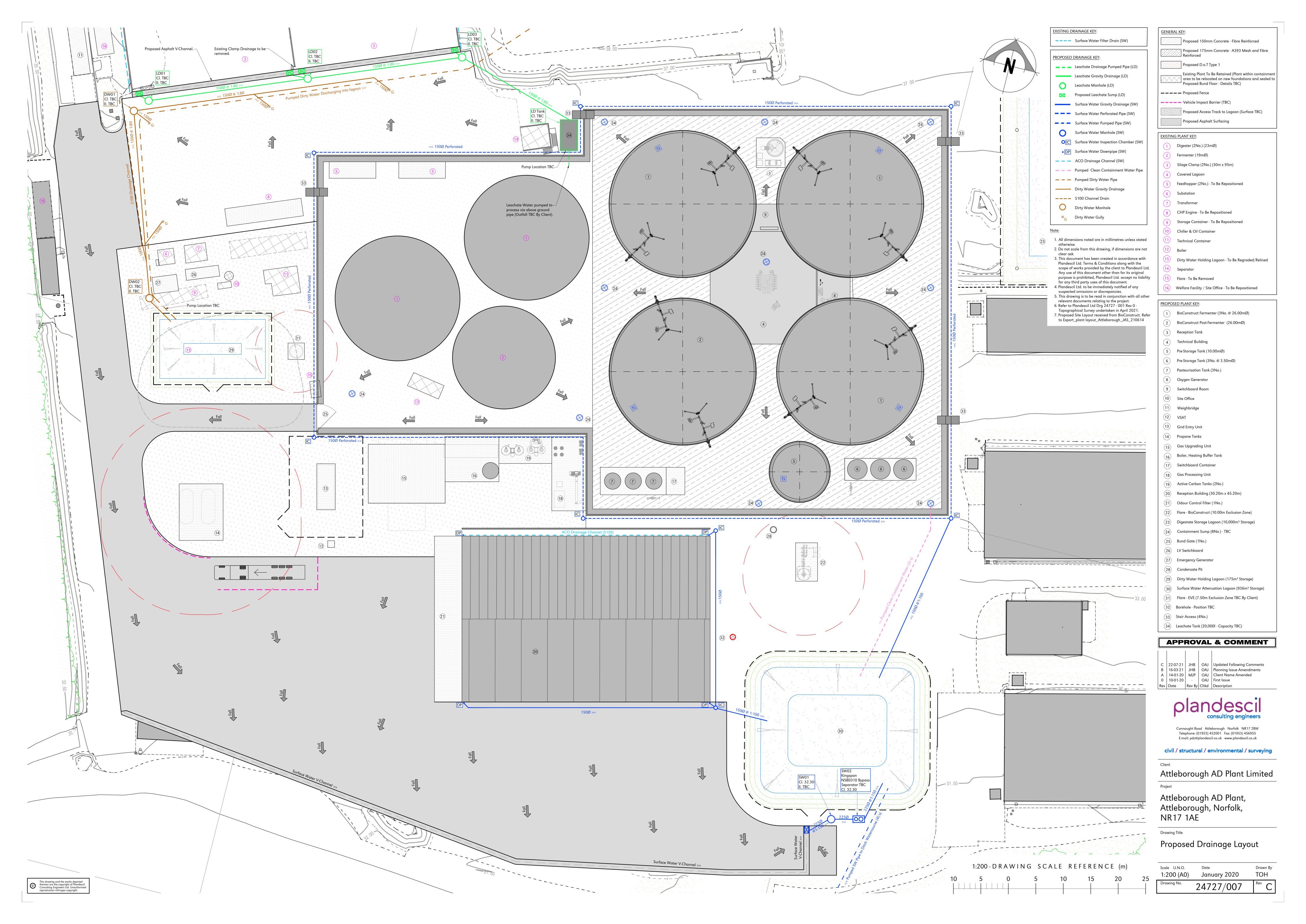
Scale U.N.O.	Date	Drawn By
As Noted (A3) July 2019	MJP
Drawing No.	24727/150	Rev E



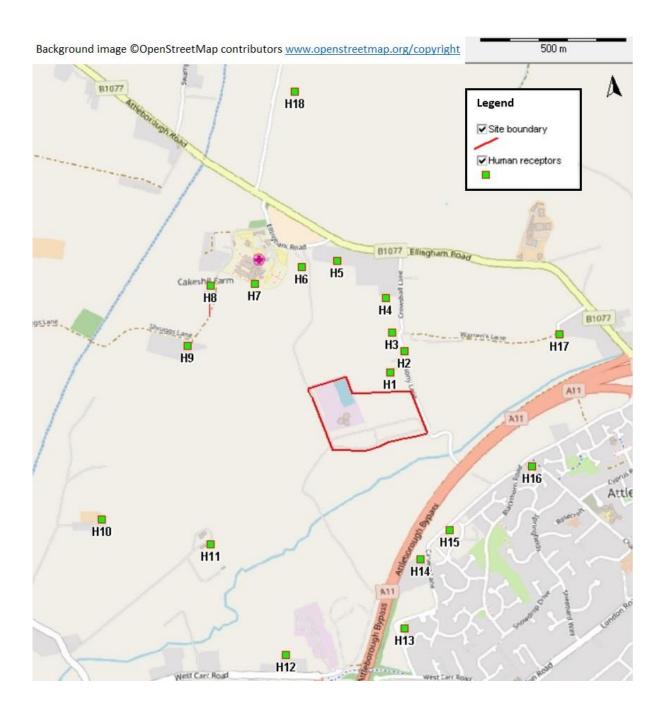








ETL573/EPR02/ Human Receptors (1km)



Attleborough Eco Electric Ltd ATT-OD-05 Accident Management Plan Doc Author: Emily Pitts, Earthcare Technical

Appendix A - Accident & Incident Record Form (EVE-FT-01)

Date and time of the incident	
What happened, what was it about?	
Was anyone else aware of this – other witnesses?	If so, who?
What caused it?	
What action did you take to fix the problem? Were	e external agencies involved?
That decion did you take to like the problem.	c external agencies inverteu.
What have you done to make sure it doesn't happe	en again?
Was there any significant pollution – for examples:	oil entering a surface water drain? If so, what?
If there was then you must notify the	Yes/No/Not applicable:
Environment Agency on 0800 80 70 60 ASAP	
	Time:
	Date:
	EA Incident number:
Please print name.	

Appendix B – Key Emergency Contacts

Key Emergency Contacts Attleborough Anaerobic Digester, Ellingham Road, Attleborough, Norfolk, NR17 1AE					
EMERGENCY CONTACTS					
Emergency Services	999 or	112			
Environment Agency	0800 8	07060 (24-hour)		
Health and Safety Executive (HSE) 0345 300 9923 (Monday to Friday 8.30 am to pm). 0151 922 9235 (Out of hours)					
Company contacts (24-hour)					
Site Manager & Technically Competent Manager	Tom	Thornton	07495 567509		
Nominated Competent Person	ТВС				
Operations Director	Chris	Waters	07477 112143		
Health, Safety & Environment Manager	Chris	tine Mapp	07570 672878		
Utility Contacts (24-hour hotlines)					
Total Gas and Power 0800 111 999					
Other Key Contacts					
CHP engineer GenV (24-hour number) 07960 894606					
Local Tanker Company (24-hour number) 07488 964628					
Highways Agency 030 0123 5000					

Appendix C – Inventory of Substances

Substance	Quantity	Location	Purpose
Gas oil (Diesel)	3500L	Diesel Tank (Bunded)	Fuel for mobile plant
Active carbon	1 bulk	Carbon filter replacement	Clean gas before CHP
	bag		
Ad Blue	200L	Workshop	Tractor emissions
Nutromex Tea	200L	Covered bund between feeders	Tank biology
330			
Sulfuric Acid 0.1	5L	COSHH cabinet (office)	Fos/Tac readings
Bleach	3L	Kitchen cabinet	cleaning
Metha Tec Detox	20bags	container	H2s level in tanks
Zinc Galva	1L	COSHH cabinet (container)	Bolt lube
Special Flex	1 tube	COSHH cabinet (container)	Sealant
Renolit LX EP2	30 tubes	COSHH cabinet (container)	Grease for site
Shell Gadus s5	7 tubes	COSHH cabinet (container)	Grease for mobile plant
Kluberquiet	1 tube	COSHH cabinet (container)	Genset grease
15/40 motor oil	125L	Bunded pallet (laydown)	Engine oil mobile plant
Comma brake	5L	COSHH cabinet (container)	Mobile plant
fluid			
Mobile gear 320	100L	COSHH cabinet (container)and Laydown area	Mixer gearboxes
		bunded	
Nuto H 46	200L	Covered bund between feeders	Mobile plant and feeder
			packs
PH 4.01	2L	COSHH cabinet (office)	Fos/Tac
PH 7.00	2L	COSHH cabinet (office)	Fos/Tac
PH 10.01	2L	COSHH cabinet (office)	Fos/Tac
Exol Taurus	700L	CHP storage tank	CHP oil
40sae			
CHP waste oil	700L	CHP storage tank	CHP old oil
G48 Coolant	1000L	IBC covered bunded area	CHP coolant