

Helen Wass
Cambridgeshire County Council
Transport
Shire Hall
Cambridge
Cambridgeshire
CB3 0AP

Our ref: AC/2023/131802/02-L01
Your ref: CCC/23/110/FUL
Date: 01 February 2024

Dear Helen

**FARM-BASED ANAEROBIC DIGESTION RENEWABLE ENERGY FACILITY,
CONSTRUCTION OF VEHICULAR ACCESS/ROAD TO A1307, ASSOCIATED
INFRASTRUCTURE AND LANDSCAPING
LAND AT STREETLY HALL FARM WEBBS ROAD WEST WICKHAM CAMBRIDGE
CAMBRIDGESHIRE CB21 4RP**

Thank you for referring the amendments to the above application which were received on 12th January 2024.

Documents Reviewed

We have reviewed the following documents for this consultation:

- Plandescil. Addendum to Drainage Design Strategy and Philosophy Statement. OAJ/27951. 19 Dec 2023
- Plandescil. Flood Risk Assessment Surface Water Drainage Strategy Addendum A. MJH/CES/27951. 15 Dec 2023
- Plandescil. Proposed AD Plant Risk Assessment Report. 27951/Rev 0. Dec 2023.
- Plandescil. Proposed Site Layout Drainage Sheets. 27951/009 and 27951/010. Dec 2023.

Environment Agency Position

We **maintain our objection** to the proposed development. We do not have enough information to know if it can meet our requirements to prevent, minimise and/or control pollution. This approach is supported by paragraphs 180 and 189 of the National Planning Policy Framework.

Groundwater and Contaminated Land Technical Comments

Our comments as they relate to controlled waters are as follows:

1. The applicant has advised “*We believe you have reviewed an old layout within the groundwater risk assessment, we have asked the consultant to update this.*” However, the site layout appears unchanged from previous proposals. Please provide clarification on this point, and supply up-to-date plans if the site layout has been revised.
2. In respect of the proposed digestate lagoon:

Environment Agency
Bromholme Lane, Brampton, Huntingdon, PE28 4NE.
Customer services line: 08708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

Cont/d..

- i. The applicant proposes 2 no. HDPE liners and a Bentomat AS5000-1 geosynthetic clay liner. However, CIRIA C736 advises “... *in all cases the ground and soil conditions should comply with the impermeability, stability and durability criteria..... Where impermeable linings and leakage detection systems are required these are as an additional level of protection and not to compensate for inadequate ground and soil conditions*” where adequate ground and soil conditions are defined as “*a minimum one metre thickness of soil with a permeability of no greater than 1×10^{-9} m/s*”. Please therefore submit assessments of whether natural ground and soil conditions are adequate, and whether the geosynthetic clay liner would afford a level of protection at least equivalent to a 1m thick soil layer with a permeability no greater than 1×10^{-9} m/s;
 - ii. The applicant has advised that there will be “...*three layers of prevention and three warnings of any leak detection*”. Please provide full details of the leak detection proposals;
 - iii. Please provide a digestate lagoon construction details schematic that reflects current proposals;
 - iv. The December 2023 Risk Assessment Report advises that the dirty water and clean water lagoons will be constructed to the same standard as the digestate lagoon. If this is not the case then please confirm how the proposed construction details differ.
3. In respect of the proposed underground leachate tank:
- i. The applicant has not addressed our request to consider whether above ground storage would be possible. We do not look favourably on below-ground storage and do not see why below ground storage is inevitable or unavoidable for this development. Please provide clarification on this point. If the applicant wishes to pursue underground storage in this sensitive location they should demonstrate that the infrastructure design method meets best available technology;
 - ii. Notwithstanding the preceding point, the applicant has not addressed our concerns about the effectiveness of the proposed leak detection system. It seems likely that an underground tank as proposed would be installed into the unsaturated zone, with groundwater at significant depth. External monitoring pipes as proposed are unlikely to intercept groundwater. If the leak detection strategy relies upon monitoring of groundwater via such pipes it is therefore unlikely to be effective. It is not clear how the pipes would otherwise allow detection of leaks. Please provide proposals for effective leak detection;
 - iii. Please provide a tank construction details schematic;
4. Please clarify whether above ground or below ground pipework is proposed for leachate, digestate and dirty water runs outside of bunded/concreted areas. We do not look favourably on below-ground transmission of pollutants and do not see why it would be inevitable or unavoidable for this development. If the applicant wishes to pursue underground transmission of pollutants they should demonstrate that the infrastructure design method meets best available technology and includes adequate leak detection.
5. In respect of the bund, the applicant has advised “*The secondary containment bund, sized in accordance with CIRIA C736 recommendations, will be able to hold 25% of the total volume of all of the tanks within the bund*”. However, CIRIA C736 advises “... *the 25 per cent rule is based on the assumption that it is unlikely that more than one tank will fail at any one time. This may be reasonable in circumstances where the contents escape from a primary tank as a result of, for example, tank corrosion or operator error, which is likely to affect only one tank at any one time. However, there may be credible scenarios such as fire or*

explosion or acts of vandalism that could affect all of the tanks within a bunded area.” Please give further consideration to the credible scenarios that apply to this site and the containment capacities appropriate for these. Our understanding is that fire and explosion scenarios are both credible.

6. In respect of site drainage proposals:
 - i. We understand that infiltration drainage is proposed for the ancillary structures area, please clarify why the drainage plan shows a pumped route to the surface water lagoon. Please also detail the pollution prevention measures for any storage of oil/fuel/chemicals in this area, and provide a risk assessment demonstrating that infiltration drainage in this area does not pose a pollution risk to groundwater;
 - ii. We understand that infiltration drainage is proposed for the access road. Please demonstrate that the proposed scheme will provide adequate quality treatment for the protection of groundwater;
 - iii. The drainage plan shows separate non-dirty and dirty water drainage infrastructure for the bunded area. Please clarify how this area has been designed to ensure contaminants will not enter the non-dirty infrastructure, and explain how the scheme delivers on proposals to collect surface water within a sump pit and test it to determine which lagoon (clean or dirty) it should be pumped to.
7. The applicant has advised that groundwater on the site will be subject to testing. Please provide clarification on this point. As noted above, groundwater beneath the site is likely to be at significant depth and therefore accessible only via deep monitoring installations.
8. The CIRIA Risk Assessment in the December 2023 report does not consider groundwater and the nearby protected public water supply abstraction as receptors, and makes no mention of the site being located within source protection zones SPZ1 and SPZ2. The groundwater resource is extremely sensitive and vulnerable in this location and the risk assessment should be revised to reflect this.

Further advice for the applicant is available in Appendix 1 to this letter.

We hope this information is of assistance. If you have any queries, please do not hesitate to contact us.

Yours sincerely

Alison Craggs
Sustainable Places Planning Advisor

Direct dial 020 847 45242

Direct e-mail planning.EastAnglia@environment-agency.gov.uk

Appendix 1 - General Advice to Applicant

1. Land Contamination Assessments

We expect land contamination assessments to follow the tiered approach laid out in our Land contamination risk management (LCRM) guidance. The preliminary risk assessment (PRA) should include historical plans of the site, an appraisal of the environmental setting (including geology, hydrogeology, groundwater and surface water receptors, potential contaminants of concern and source areas), an initial conceptual site model (CSM) describing possible pollutant linkages for controlled waters, and identification of potentially unacceptable risks. Land contamination investigations should be undertaken by suitably qualified and experienced professionals and in accordance with BS 5930: Code of practice for ground investigations and BS 10175: Investigation of potentially contaminated sites – code of practice. Soil and water analysis should be fully MCERTS accredited. Investigation, demolition, remediation, or construction works must not create new pathways or linkages to controlled waters. Clean drilling techniques may be required for boreholes that penetrate contaminated ground.

2. Sustainable Drainage System (SUDs)

Soakaways and other infiltration SUDs must comply with statements G1 and G9 to G13 of our Groundwater Protection Position Statements and should be constructed in line with good practice and guidance documents including the CIRIA C753 SuDS Manual and the Susdrain website. They must not be constructed in contaminated ground where infiltration could re-mobilise contaminants to pollute groundwater. All infiltration SuDS should be designed to maintain a minimum 1.2m clearance above peak seasonal groundwater levels. We do not consider deep infiltration systems (>2.0m below ground level) to be routinely acceptable. Only clean roof water can be directly discharged to infiltration SuDS or watercourses; systems for the discharge of surface water from hard-standing, roads and impermeable vehicle parking areas must incorporate appropriate pollution prevention measures and a suitable number of SUDs treatment components in line with the environmental sensitivity of the receiving waters. An oil separator/interceptor (or equivalent device) may be required to remove oil from water draining off hard surfaces with a risk of oil contamination.

3. Management of Waste during Development

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically, and that the permitting status of any proposed on site operations are clear. Excavated materials recovered via a treatment operation can be re-used on-site under the CL:AIRE Definition of Waste: Development Industry Code of Practice subject to certain conditions being met. However, contaminated materials that are / must be disposed of are waste and therefore subject to waste management legislation which includes: Duty of Care Regulations 1991, Hazardous Waste (England and Wales) Regulations 2005, Environmental Permitting (England and Wales) Regulations 2010, The Waste (England and Wales) Regulations 2011. If the total quantity of waste material to be produced at or taken off site is hazardous waste and is 500kg or greater in any 12 month period the developer will need to register with us as a hazardous waste producer.

We recommend that developers:

- Refer to our Groundwater Protection webpages, which include our Groundwater Protection Position Statements
- Refer to our Land Contamination Technical Guidance, including our Land contamination risk management (LCRM) guidance, when dealing with land affected by contamination and for the type of information required in order to assess the risks to controlled waters. The Local Authority can advise on management of risks to human health.

- Consider using the National Quality Mark Scheme for Land Contamination Management which involves the use of competent persons to ensure that land contamination risks are appropriately managed.
- Refer to British Standards BS 5930 Code of practice for ground investigations and BS 10175 Investigation of potentially contaminated sites – code of practice
- Refer to our Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination National Groundwater & Contaminated Land Centre Project NC/99/73. The selected method, including environmental mitigation measures, should be presented in a Foundation Works Risk Assessment Report, guidance on the production of which can be found in Table 3 of Piling Into Contaminated Sites
- Refer to Position Statement on the Definition of Waste: Development Industry Code of Practice
- Refer to our Good Practice for Decommissioning Boreholes and Wells
- Refer to our Dewatering building sites and other excavations: environmental permits guidance when temporary dewatering is proposed.
- Refer to our environmental permitting guidance Check if you need an Environmental Permit