

DATE:	08 June 2026	CONFIDENTIALITY:	Public
SUBJECT:	EPR/FP3132UE/V013 Duly Making Request for Further Information		
PROJECT:	UK0040997.6005 - UK-Palm Paper AD Plant Variation	AUTHOR:	Conor Lyons
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INTRODUCTION

On 23/02/2026 Palm Paper Limited submitted an application to vary their Environmental Permit (EPR/FP3132UE/V013). On 14/05/2026, a request for further information from the regulator was received and the response is detailed below. This request was made as the information is required to support the duly making process prior to determination.

APPLICATION CHARGE

Unfortunately, the application payment you sent is incorrect. The correct application charge is £15,166.22 (1.16.2.1 £13,064.27 + 1.19.2 £808.60 + 1.19.6 £1,293.35). This leaves a balance of £1,182.22 to pay.

Applicant Response

As part of the initial application, a charge of £13,984 has been paid. Following further clarification from the Regulator, the correct fee is £15,166.22 and this leaves an outstanding balance of £1,182.22 which has been paid with payment reference PSCAPPINSTPALMP262. This additional fee is to account for the requested Odour Management Plan, and Habitat Assessment, both of which are detailed below.

Biogas recovery and cleaning prior to combustion

Provide confirmation that the biogas recovered is cleaned up with sulphur levels comparable to natural gas. And confirmation you can achieve current ELVs set for natural gas combustion.

As stated in your application the recovered biogas is going to be used as fuel by injecting it into the current gas supply. You need to confirm that the biogas recovered is cleaned enough to be comparable to natural gas. You also need to demonstrate that the current ELVs can still be achieved.

Applicant Response

The biomethane must be at a standard that can be injected into the gas supply for the site. Therefore, the system is equipped with a multi-stage desulphurisation system with a guaranteed purity of > 50 mgS/m³(n) and H₂S of <5 mg/m³(n) This meets the Gas Safety (Management) Regulations 1996 (GS(M)R) requirements. The system includes 2 alkaline scrubbers with biological caustic regeneration and sulphur removal, 2 activated carbon filters (duty and standby to ensure continuous availability and a membrane separation process. The sulphur content is measured after each stage process and if it does not meet the required specifications, it is directed to the flare. See Appendix A for the offer document – although cost information has been redacted, please treat this as commercially confidential information. As the biomethane injected into the grid supply will be of the specified standard for (bio)methane then there will be no change to emission gases upon combustion and the ELV's for combustion plant on site will still be achieved.

Characterisation of the Anaerobic Digestion effluent

Provide a full characterisation of the effluent to be treated through the anaerobic digestion (AD). This is required to characterise the waste water going into the AD treatment process and the waste water post AD treatment, prior to treatment through the ETP, as the anaerobic digestion treatment process will change the characteristics of the



emission through the AD process and potentially through use of raw materials.

BAT 3(ii)(a)(b)(c) of the Waste Treatment BATC requires the waste water to be treated to be fully characterised.

BAT 3. In order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the following features:

(ii) information about the characteristics of the waste water streams, such as:

(a) average values and variability of flow, pH, temperature, and conductivity;

(b) average concentration and load values of relevant substances and their variability (e.g. COD/TOC, nitrogen species, phosphorus, metals, priority substances/micropollutants);

(c) data on bioeliminability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge)) (see BAT 52);

Applicant Response

The below table includes the Effluent Treatment Plant Inlet Data from 2025 and there will be no changes to the incoming effluent to the ETP plant as a result of the addition of the AD plant.

	UNIT	AVERAGE
Flow	m ³ /h	470
pH	n/a	6.85
Temperature	°C	37.97
COD	mg/l	1,744
COD Load	kg/day	20,068
Total N	mg/l	67.41
N Load	kg/day	762
Total P	mg/l	7.19
P Load	kg/day	81
BOD	mg/l	1,129
BOD Load	kg/day	12,754
BOD:COD	ratio	0.67

Surface Water Pollution Risk Assessment

Provide a surface water risk assessment showing assessment of the change in emission.

The addition of the anaerobic digestion treatment process will change the characteristics of the emission through the AD process and potentially through use of raw materials. You must provide a H1 assessment in line with SW pollution risk assessment guidance for the addition of biological treatment. You can use actual or estimated data as detailed in the link below.

Applicant Response

A Surface Water Pollution Risk Assessment (SWPRA) has been prepared in accordance with Gov.UK Guidance¹. A report summarising the results of this have been included in Appendix B and indicate that 22 substances were likely to be included in the effluent. 4 of these 22 substances could not be screened out and may require further monitoring by the Regulator. As part of Palm Paper's environmental management system, and in line with BAT 3 (stated above), the effluent will be further monitored and characterised to maintain an inventory of waste water once the Anaerobic Reactors are operational.

Application Form: Part C6

Provide Form C6

Form C6 needs to be completed and included in your application.

Applicant Response

Application Form: Part C6 has been completed and included in Appendix C.

Proposed Secondary Containment

Provide tank specifications and containment design required to assess the secondary containment proposed.

The application needs to detail each tank within the process, spill modelling and containment design demonstrating 25%/110% rule has been achieved.

Applicant Response

The 4 x reactor tanks are designed to meet BS EN 14015:2004 '*Specification for the design and manufacture of site built, vertical, cylindrical, flat-bottomed, above ground, welded, steel tanks for the storage of liquids at ambient temperature and above*²'. Detailed tank specifications are provided in Appendix G.

The drainage design slopes the AD plant foundation northwards towards the road, with the road also graded to contain run-off between the road and the foundation. This forms a channel that collects run-off and directs it to road drains and gullies at low points. Where the road does not adjoin the foundation, a kerb will be installed to contain liquids. Drainage from these low points flows to a sewer and is pumped to the ETP machinery hall for treatment through the existing aeration lanes and secondary clarification processes.

This drainage catchment contains no chemical storage that could contaminate run-off through mixing. Rainwater and road run-off will be collected by gullies and pumped to the aerobic treatment distribution chambers. As a result, all collected water will be treated, and any spills or tank leaks will be captured and returned to the effluent treatment plant.

The maximum resulting additional hydraulic load on the aerobic treatment and secondary clarifiers from rainwater run-off is maximum 47.58 l/s (181 m³/h) which was investigated in an initial assessment and shown to not pose any issues for the existing plant.

A plan showing the conceptual drainage design is included in Appendix D. This drainage design ensures that leaks and spills within the AD plant area are treated within the ETP plant.

Should a catastrophic tank failure occur and the drainage be overwhelmed then any liquid overtopping would be picked up by the site drainage system and contained within the large drainage basins on-site, (the site drainage and the drainage basins are below the level of the river). In the event that this occurs the shift supervisor isolates the basins by shutting off the penstocks and therefore there is no discharge to the river, the effluent would be diverted and

¹ Surface water pollution risk assessment for your environmental permit - GOV.UK

² BS EN 14015:2004 - Specification for the design and manufacture of site built, vertical, cylindrical, flat-bottomed, above ground, welded, steel tanks for the storage of liquids at ambient temperature and above

contained in Drainage Basin 3 (outside the Raw Material Waterhouse) this is sized accordance with CIRIA 736 Guidance and the '110 per cent' and '25 per cent' rules³ which state:

"Where two or more tanks are installed within the same bund, the recommended capacity of the bund is the greater of:

1. 110 per cent of the capacity of the largest tank within the bund.
2. 25 per cent of the total capacity of all tanks within the bund, except where tanks are hydraulically linked in which case they should be treated as if they were a single tank."

The tanks and storage capacity of the Drainage Basin 3 (outside the Raw Material Warehouse) are detailed below. The total capacity of Drainage Basin 3 is 43.68 percent of the total storage capacity.

TANK	QUANTITY	CAPACITY (M ³)	TOTAL CAPACITY (M ³)
Econvert-IRC®	4	1004	4016
Gas Tank	1	500	500
Econvert-Dsulph® 1.0-20	2	20	40
IC Reactors	1	5.2	5.2
Nutrients mix for biology	1	0.2	0.2
Lubricating oil compressors	1	0.5	0.5
BGTS	1	0.06	0.06
BGTS	1	1	1
Activated Carbon	1	16	16
Total Storage Capacity			4578.96
25% of the total			1144.74
110% of the largest tank			1104.4
Capacity of the Drainage Basin in the		2000 (43.68% of the total storage capacity)	

Habitat Assessment

Include an assessment of the potential impacts to the relevant habitat sites from your sites emissions and pay the habitats fee of £808.60 ref 1.19.2 in our charging guidance.

Your application includes habitats sites; these sites need to be assessed as part of a HRA in line with the guidance below. You must include the impacts on these sites as part of your risk assessments where applicable to air and water.

Applicant Response

A Habitat Assessment has been prepared in accordance relevant EA Guidance⁴ and included in Appendix E. The additional application fee has been included in the payment detailed above. This assessment indicated that the expected outcome to relevant habitat sites from the emissions to be low.

³ Containment systems for the prevention of pollution C736F

⁴ Habitats regulations assessments: protecting a European site - GOV.UK

Odour Management Plan

Provide an odour management plan (OMP) and pay the relevant fee of £1,293.35 ref. 1.19.6 in our charging guidance.

In line with our guidance below on control and monitor your emissions, you must write an odour management plan that explains how you will prevent or minimise odour if your site causes odour pollution, or if you carry out:

- anaerobic digestion

AD sites will nearly always require a comprehensive odour management plan. While a particular feedstock material may not be odorous, the process inherently generates odorous intermediate organic acids from sugars and carbohydrates which are being metabolised.

Applicant Response

An Odour Management Plan has been prepared for the site in accordance with Gov.uk Guidance⁵. This has been included in Appendix F. This will be reviewed regularly and updated upon commissioning of the anaerobic digestion plant. As part of this review, the performance of the Site's odour control measures will be assessed. These reviews can be provided to the Environment Agency upon request

Technical Competency

Provide evidence of technical competency

Your application includes AD, which is a regulated biological waste treatment activity, for which you are applying to accept waste. We have not received evidence that the operator has the required technical competence for the AD activity.

Please provide:

- The name of the Technically Competent Manager (TCM), and
- Evidence that the TCM holds an appropriate qualification under an approved technical competence scheme relevant to AD, or
- Evidence that the operator is enrolled on a suitable qualification, including details of any applicable transitional or grace arrangements.

Applicant Response

Sludge from another paper mill AD plant will be accepted and imported to seed and commission the AD plant. Sludge may be required in the future to reseed the AD plant in the event of abnormal operating conditions or process upsets. Following AD plant commissioning, and under normal operating conditions, no waste will be accepted, and the only AD plant feed will be the wastewater effluent from the paper mill itself. Subsequently, it has been agreed with the Environment Agency that a TCM is not required to manage the AD process.

⁵ Odour management: comply with your environmental permit - 6. Writing an odour management plan - Guidance - GOV.UK



APPENDIX A: OFFER DOCUMENT



APPENDIX B: SURFACE WATER POLLUTION RISK ASSESSMENT



APPENDIX C: APPLICATION FORM PART C6



APPENDIX D: DRAINAGE CONCEPT



APPENDIX E: HABITAT ASSESSMENT



APPENDIX F: ODOUR MANAGEMENT PLAN



APPENDIX G: TANK SPECIFICATION
