

Our ref: JHC/ 29351

18th December 2024

Acorn Bioenergy Ltd
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Head Office

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For the attention of Charlie Lywood

Dear Charlie,

www.ggpconsult.co.uk

Re: Spring Grove – Technical Response to EA Letter 15th October 2024

GGP Consult have read the letter provided by the Environment Agency dated 15th October 2024 and prepared a technical response the points raised by the Land & Water team as outlined below,

1. The applicant specified that an environmental permit will be obtained. Can the applicant confirm if any parts of the site are not intended to be subject to the environmental permit (this could be the lagoon or clamps)?

The full site shall form part of the environmental permit inclusive of the lagoons, clamps, buildings, tanks, drainage and containment system.

2. CIRIA 759f specifies a depth of 1m (1000mm) is required whereas the proposed lagoon drawings state the lagoon will be lined with 100mm of excavated clay material. Can you please state why you are not following the CIRIA 759f specification? Is this adequate as the area is a SPZ3.

Each lagoon shall be double lined with 2no layers 1.0mm HDPE (Primary & Secondary) A lined floating cover shall be provided.

All liners shall be fixed into a perimeter anchor trench in accordance with CIRIA C736 & 759

3. Can the applicant confirm if leak detection will be installed around lagoons?

Leak detection shall be provided between the primary and secondary liner.

4. Can the applicant confirm how they will monitor the rising main to identify potential leaks or a burst?

All pump systems shall be linked to the site SCADA system with flow metering. A potential leak within the rising main shall provided a pressure drop resulting in the pump run increasing. In addition, the volume transfers will not be match at the outflow to receiving end. All connections shall be level controlled via the SCADA system.

Daily walkover of the raising routes shall be conducted providing a visual check.

5. Surface water drainage in the vicinity of the clamps presents a potential pathway for dirty water to enter the clean water system. It must be demonstrated that contamination of the clean water system will be prevented.

All clean water drainage from building roofs shall be direct connection below ground with no above ground inlets following the industry standard for developments within a SPZ. All chambers shall be double sealed lids with a final penstock isolation valve before the end release.

This isolation valve will be accessible from ground level to provide system isolation in the event of any emergency. Visual check shall also be performed on the outfall daily, during rainfall events to ensure the system is performing as designed.

As part of the environmental permit, additional water quality sampling measures by also be requested.



Constructionline

6. Dirty water drainage from the eastern part of the site passes to a package pumping station. Is there a contingency plan in the event of pumping station failure or mains power failure which would prevent dirty water from being pumped to the bund holding tanks? If this coincide with a rainfall event there would be a large amount of dirty water to manage.

The package pump system shall run standby, duty, assist with full telemetry data recording linked to the SCADA system. The pumps will form part of the site emergency standby power enabling the pump systems to continue to operate.

The site operators shall have a submersible pump on site provide a backup in the event the full package pump system is out of operation.

Finally, the wider site shall be designed to contain a level of runoff of above ground in compliance with CIRIA C736. This will provide contingency timing to allow runoff to be pumped via a submersible to the storage tanks.

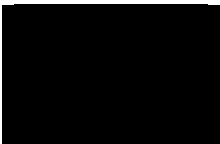
7. We note there is a pump in the tank bund which pumps to either the clean system or dirty water holding tanks. How will this be managed?

The containment area shall be considered dirty unless proven otherwise by water quality sampling / testing. Clean water shall only be pumped over into the clean system in emergency. The plant requires the rainwater to be harvested all year round to provide the yearly water demand.

We trust the above provide the required technical explanation to the questions raised. Full details shall be developed to comply with the required design documentation and environmental permitting requirements.

The plant shall be inspected during the construction phase with an appropriately qualified engineer carrying out the construction quality assurance role before providing an overall sign off report confirming the compliance to the design drawings & standards.

Yours sincerely
For GGP Consult



J.H.Collins
BSc, (Hons), MCIWEM
Director

Appropriately Qualified Person Statement:

This report has been prepared and written by Jeremy Collins BSc (Hons) MCIWEM, Civil Engineer. Who has Over 18 year's industry experience across reinforced concrete, water retaining structures, building & structures, SuDS & Highway design and detailing. In addition, Jeremy has designed and detailed over 30 Anaerobic Digestion plants been fully compliant to CIRIA C736 & EA (BAT) Guidance.

