

AUGUSTA TOWNSHIP

Anaerobic Digester Information Session – October 5, 2023



INFORMATION SESSION
Anerobic Digester
1336 County Road 2

AGENDA

1. Welcome Remarks (Mayor Shaver)
2. Overview of the Meeting & Protocols/Procedures (CAO)
3. Timeline of Application, Approvals, Legal (CAO)
4. Zoning Confirmation (Planner)
5. Next Steps/ Proposed Site Plan (CAO)
6. Technical Information (Consultant)
7. Question Period (All)
8. Closing Remarks (Mayor Shaver)



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2. Overview of the Meeting & Protocols/Procedures

- This meeting is to inform residents of the process that has been completed regarding the digester proposal at 1336 County Road 2.
- This session is to provide information from the Township as well as the proponents consultants.
- We have allotted time for questions from residents and ask that you put them in the chat so that if we do not have time to answer them all, we will take them away and answer.
- We expect this meeting to be respectful and professional so that everyone has an opportunity to receive the information.

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3. Timeline of Application

- By correspondence date June 2nd, 2021, from the Ministry of the Environment, Conservation and Parks (MECP), the Township was notified of an application from H & D Properties Ltd, for a new Environmental Compliance Approval to operate a waste disposal site anaerobic digestion facility located at 1336 County Road 2 in the Township of Augusta.
- The application was to permit the facility to receive combination organic residuals from source separated organics and commercial and industrial food waste materials to produce renewable natural gas (RNG) for injection into the natural gas grid and digestate (organic fertilizer).
- While the original notice requested comments from the Township within six weeks of the June 2nd letter, discussions with MECP staff resulted in the commenting period for the Township to be extended January 7th, 2022, and then further to January 31st, 2022.



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- In the fall of 2021, the Township retained EVB Engineering of Cornwall to complete a review of the environmental requirements for the biodigester proposal. Included in the review was a literature review, a Council presentation and a site tour.
- H & D Properties Ltd. held a virtual public meeting regarding their proposal on December 7th, 2021. Questions were invited to be submitted prior to the meeting and were responded to as part of the meeting.
- At the December 13th, 2021, meeting of Council, EVB presented an update on their review of biogas facilities and the H & D Properties proposal. The EVB presentation was made available on the Township website as part of the agenda material. The EVB presentation recommended various questions and inquiries for the Township to include in their comments to the MECP. Questions and inquiries from members of Council were submitted to the CAO for inclusion in the Townships' response to the MECP.



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- EVB canvassed other installations for a site tour however it has been determined that there is currently no other facility operating with similar technology to that proposed in this application.
- As part of our due diligence, Township staff reached out to the City of London where the StormFisher facility has been operating for approximately nine years. Based on their experience, London staff shared some of their learnings.
- Detailed comments and questions were submitted to the MECP by the Township by the requested date of January 31st, 2022.



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- MECP approved the Environmental Compliance Approval on August 21, 2023, for the Noise and Air Certificate Number 3234-CKML66 and Waste Certificate Number 0999-C3TJP3.
 - Some of the conditions within the approval is the establishment to maintain a Public Liaison Committee for the site.
 - The owner shall create a website for the Site and shall post the documentation listed in Condition 17.0 (1).
 - The documentation that describes the current operations of the Site; and
 - The documentation to be prepared and kept at the Site or to be prepared and submitted to the Ministry for review, as required by the ECA.

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4. Zoning Confirmation

- The subject site is zoned MP, Industrial Park Zone, which permits a number of listed uses, including “manufacturing”.
- Through the process, the Township had two planning opinions confirming that the property is appropriately zoned to permit this manufacturing use, however, as part of the review undertaken by EVB, it was suggested that a further opinion be obtained to confirm the zoning for the proposed use.
- The Township sought and received an opinion from a Certified Specialist in Municipal Law (Local Government / Land Use Planning) that the proposed use complies with the current zoning of the property.
 - “In our opinion, it is a reasonable interpretation of the process proposed that it fits the definition of “manufacturing” in the Zoning By-Law.... The substance produced is biofuel and digestate (fertilizer).”

5. Next Steps/Proposed Site Plan

- The Township is cognizant that the facilities proposed in this application are approved and regulated by the MECP and Environmental Officers. Beyond the submission of comments, approval of the application is outside of the municipality's control. Approval is through the issuance of an Environmental Compliance Approval which outlines the operating conditions for the facility.
- The facility will require site plan approval which is within the authority of the municipality. Pursuant to By-Law No. 3573-2022 passed due to Provincial amendments under Bill 109, Council delegated the authority for site plan approval to the Chief Administrative Officer.

Site Plan Approval Process

- Upon receipt of a complete application, the Township/staff have 60 days to consider it.
- In the submission, plans showing the location of all buildings and structures to be erected, including locations of parking, refuse storage, road widening, exterior lighting, loading facilities, easements, right of way(s), topography/lot grading and drainage, any outside storage, vehicle access, any pedestrian access, and buffering/landscaping.



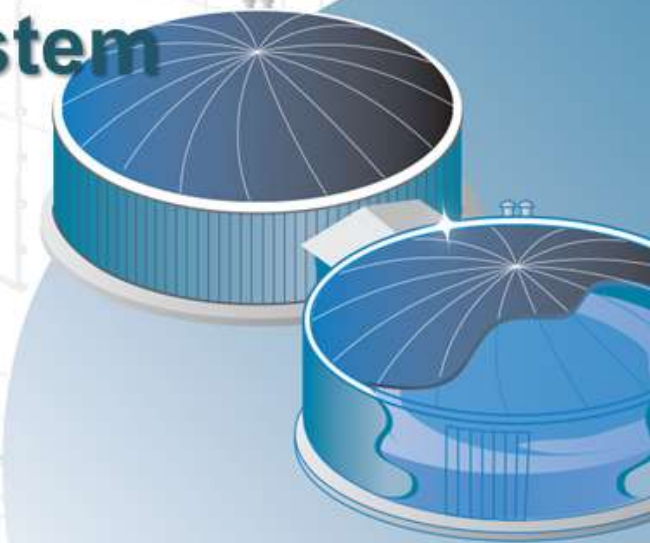
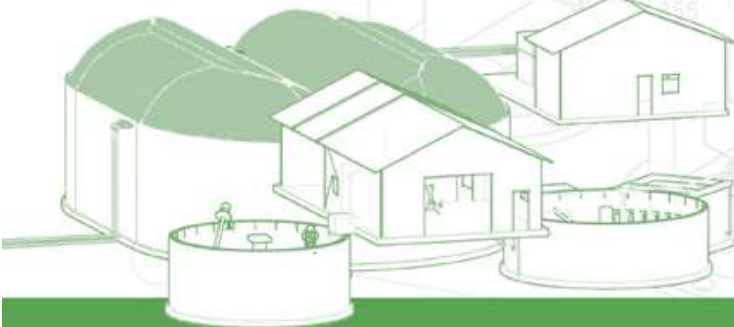
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- The applicant/consultant is currently in the process of finalizing a site plan submission to the Township. The submission includes a Traffic Impact Study, Scoped Environmental Impact Assessment, Stormwater Management Report/Lot Grading & Drainage Plan.
- The Site Plan will be assessed by Township staff to ensure that zoning setbacks, and other provisions related to height maximums, parking, etc. are met.
- Other commenting agencies will be circulated the Site Plan, including South Nation, CN Rail and the Counties. Stormwater management/lot grading and drainage plans will be peer-reviewed by the Township's engineer. The Scoped Environmental Impact Assessment will also be peer-reviewed on behalf of the Township. The Traffic Impact Study will be forwarded to the Counties.
- A Site Plan development agreement will be entered into between the owner and the Township regarding the site development.





H&D Properties Anaerobic Digestion System



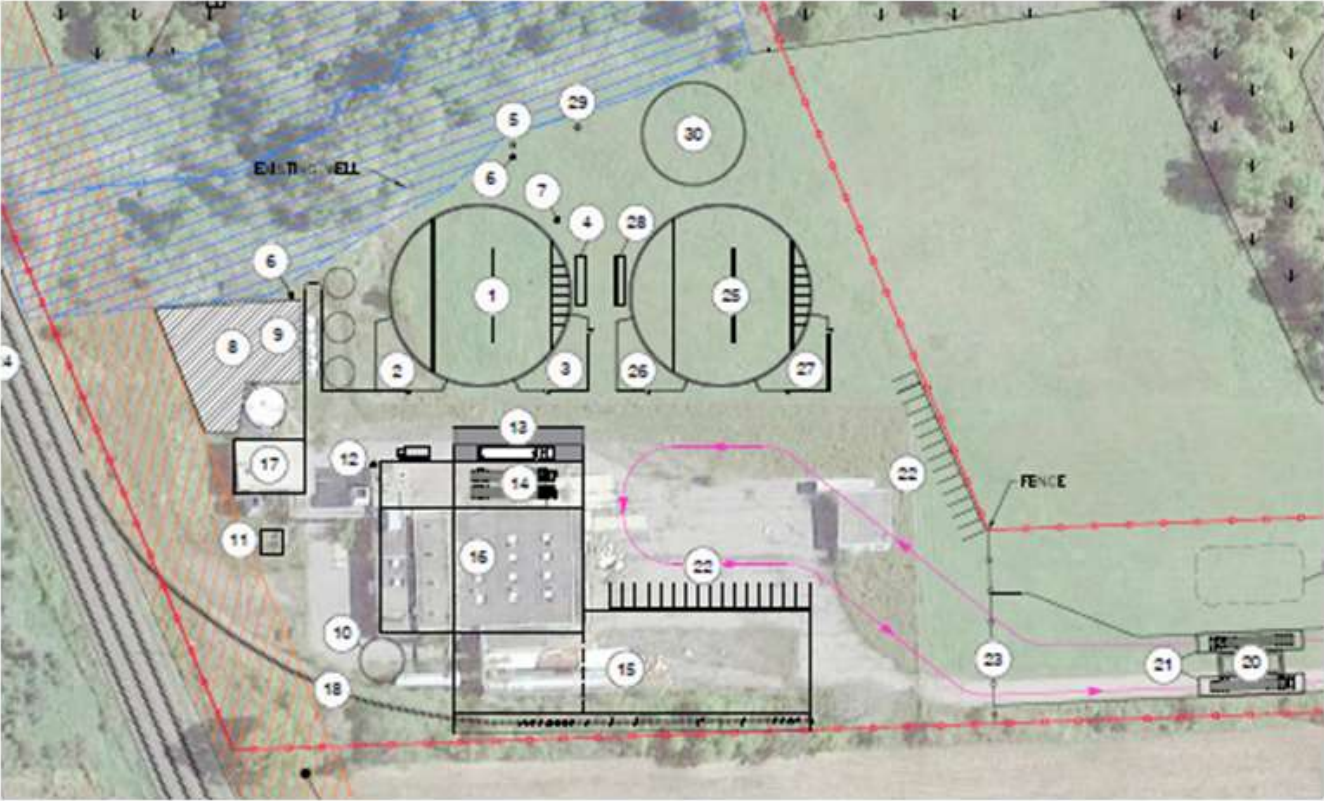
How Does AD Work?

Biomimicry of human/animal digestion

- Organic Reception Building
 - Separate organic from inorganic material
- Hydrolyzer
 - Begins the breakdown of organics
- Anaerobic Digester
 - Generation of biogas and digestate
- Pasteurization
 - Heat treatment of digestate
- Biogas upgrading
 - Cleaning biogas to generate renewable natural gas



Site Plan





Odour Considerations

- Trucking:
 - Only enclosed trucks
 - Tankers with activated carbon filters at vent, all displaced air is filtered before it leaves the truck
 - Storage surge tanks integrated in odour control system
- Receiving building:
 - No outside storage
 - Organics are processed within 24h inside the building
 - Under negative pressure, door only open for trucks to enter
 - Fast acting doors with air curtains
 - Activated carbon filters with redundancy
 - Six (6) air exchanges per hour (every 10 minutes an air exchange)
- Anaerobic Digester:
 - Completely enclosed, gas being captured and sold as main revenue source
 - Biogas gets filtered through activated carbon, only CO₂ exhausted
 - Digested material is practically odour free, gets pumped into truck directly from anaerobic digester.

Odour Control with Biorem

- Designed odour control systems for other organics processing facilities :
 - City of Toronto (X2),
 - City of Montreal (X2),
 - Peel Region (Brampton)
 - City of Guelph
 - Rothsay Rendering
- All of these facilities had very strict odour control requirements and continue to remain in compliance today



Activated Carbon: Overview

- Activated carbon technology is based on a physical removal mechanism: adsorption. Compounds are attracted to the high surface area and chemical structure of the carbon.





Safety Features of the Facility

- SCADA protocol – stop feeding if gas pressure is raising
- Flare – biogas gets destroyed in case of gas storage overpressure
- Safety Pressure Relieve Valves (PRV), required by law, last stage safety feature

- Sensors for different gases at crucial locations
- High degree of automatization, operator training
- Sewer system only for employee services and stormwater management

- No process water released to environment
- No open structure exposing organics, all enclosed
- All processed organics exported as digestate
- No steam on site, hydronic process heating below boiling point
- Low pressure in biogas double membrane holder, no possibility for explosion