

Wheatland County

Request for Decision

Municipal Planning Commission

July 14, 2020

Report prepared by: Suzanne Hayes



DP 2020-040

File Number:	DP 2020-040	Division:	3
Proposal:	Composting Facility		
Location:	South of Hwy 901 on the access road into Carseland (RR 260)		
Legal Description:	Plan 131 2179, Block 3, Lot 2, NE-24-22-26-4		
Title Area:	6.16 ha (15.23 Acres)		
Existing Land Use:	Industrial General		
Proposed Parcels:	n/a		

Report

The applicants are proposing to operate a Composting Facility on an established Industrial General parcel utilizing the existing buildings and infrastructure. The facility will be composting used disposable diapers including children, adult, compostable and regular used diapers combined with other “green bin” organic materials, and pre-packaged food waste (non-compostable material to be separated after the composting process).

The facility will not utilize traditional windrow composting methods, but will use in-vessel composting technology which involves the following process: feed materials (used disposable diapers and mixed organics) will be brought to the facility and placed into a feed hopper with wood chips to be used as a bulking agent. Material will move to a grinder and then into an infeed hopper. From the hopper, the material will move to a reactor vessel which will maintain optimum composting conditions such as stirring each hour, air injections, and moisture and temperature monitoring. As air is injected in, excess air is removed and passed through a bio-filter to remove any odor prior to exhausting to the environment. No leachate is produced as the vessel is completely enclosed, if excess moisture is present, additional airflow is utilized to dry the material. The compost will exit the reactor after 10-12 days and will then be screened to remove the non-compostable parts of the diapers. The non-compostable materials will be bagged and stored inside and will be sent for recycling or to a landfill for disposal.

The operating capacity of the facility will be 5 tonnes per day initially, growing to 7.5 tonnes per day within 1 year (approximately 10 cubic yards of material per day). An anticipated 3 day supply of infeed material will be stored inside the facility building, with approximately 3 trucks per day delivering product to the site.

Pending sale, the finished compost will be stored in a 75' x 20' outdoor storage area (separated into 2-3 bunkers). Maximum pile height will be 10ft with a maximum storage capacity of 80 cubic yards of material. Customers may visit the site to pick up compost or it may be delivered to retail and wholesale customers. It is estimated that 30 customers will visit the site weekly from Monday to Saturday 8:00 AM to 5:00 PM during spring and summer with shorter hours in the fall and winter. Customer parking will be located on the east end of the building. The applicant anticipates 6 employees will be required.

The company also operates as a service offering compostable diapers for sale and pick-up, and collection of disposable diapers. The applicant has confirmed that this branch of the company has collected some shipping containers of diapers awaiting composting. In 2018, the company contacted Wheatland County along with several other municipalities find out the requirements for setting up a facility, however no applications were made because until now, they could not get the composting equipment. This is the first application they have made for a development permit.

Recommendation from Administration

THAT Municipal Planning Commission approve DP 2020-040 for a Composting Facility subject to the following conditions:

1. This Development Permit is issued solely for the purpose of an Indoor, In-Vessel Composting Facility – Defined as a Composting Facility.
2. No variances have been granted.
3. Development shall proceed according to Industrial General District requirements and the applicant must comply with all applicable provisions of the Wheatland County Land Use Bylaw.
4. No permanent development shall occur on or over any utility right of way or easement.
5. Any future modifications or development on or to the lands will require the appropriate development permits in accordance with the Wheatland County Land Use Bylaw.
6. Development to remain consistent with submitted application, Letter of Intent, and all approved plans and procedures which form the application and have been deemed to be appropriate.
7. Dimensions of outdoor finished compost storage area not to exceed 75' x 20' with a maximum pile height of 10' as indicated in the Letter of Intent.
8. The outdoor storage area for wood chips used as a bulking agent not to exceed 10' x 10' with a maximum pile height of 7' as indicated in the Letter of Intent.
9. At no time will the infeed material be stored outside.
10. Indoor storage of infeed material not to exceed a 3 day supply based on 10 cubic meters/day as stated in the Letter of Intent.
11. At no time will the non-compostable material which remains after the composting process is complete be stored outside including while it is awaiting transport to a recycling facility or landfill.
12. Any intensification of the operation which causes an identifiable change to traffic, dust, noise, odour, or any other adverse impact will require an amendment of this Development Permit.
13. Signage to be installed providing direction for traffic flow, parking, loading, and delivery areas.
14. Applicant to establish a complaint hotline with the phone number to be advertised on the company website, social media, and posted on signage at the facility.
15. The Development Permit issued for this Composting Facility shall be time-limited for a period of one (1) year. Subsequent approvals may be re-issued by a Development Officer if the following conditions have been met:
 - a. The applicant is applying for a renewal of its Development Permit prior to the expiry date;
 - b. There have been no changes to the Composting Facility from the previous application;
 - c. There are no enforcement orders or complaints related to the Composting Facility.
 - d. Time limits for subsequent approvals to be determined and specified by the Development Authority as a condition of approval for the renewed Development Permit.

16. Prior to Operation, applicant to provide documentation confirming Alberta Environment and Parks approval has been obtained for the Composting Facility.

Policy Analysis

CALGARY METROPOLITAN REGIONAL BOARD (CMRB): The application falls outside of the plan area.

MUNICIPAL DEVELOPMENT PLAN (MDP):

- 3.7.1. 1) Commercial and Industrial Development Objectives as it allows for the expansion and diversification of the County's commercial and industrial base.
- 3.7.2 1) Commercial and Industrial Development Policies states that new commercial and industrial development is to be directed to designated areas, and separation or buffering from residential sites is encouraged.
- 3.7.2 4) Commercial and Industrial Development Policies states that the County shall require that commercial and industrial development applications demonstrate that they will cause no significant adverse impacts on the natural environment, including but not limited to, ground and surface water, soil quality, air quality, wildlife and vegetation. If impacts are expected, the application must demonstrate how these will be mitigated.

LAND USE BYLAW:

Composting Facility is a Discretionary Use in the Industrial General District.

Definition:

Composting Facility means a development used to collect and process organic matter into compost. Such a facility may include the storage of uncomposted organic matter, sorting and packaging facilities and sales of compost.

- 4.7.6** The Development Authority may approve a time-limited Development Permit for a specified limited time period where it is the opinion of the Development Authority that the use is of a temporary nature, or should only be approved on a temporary basis.

Considerations:

- This application meets the provisions of the MPD in most respects; however, it is in close proximity to two residences and there are many acreages in the area.
- The infeed materials have the potential to cause odors even if stored inside.
- There is potential for piles of finished compost, bulking agents or other materials stored outside to exceed the limits proposed by the applicant and specified in the conditions, however having the specific conditions allows us to enforce if the pile heights exceed those volumes.
- No examples of a similar infeed product and composting method were provided by the applicant or found online, so there is no data to use for comparison.
- Due to the non-traditional composting process being used, and that a relatively small amount of infeed material will be stored inside the building, also that the pile heights of all materials being stored outside will be 10 feet in height or less (specified in the Letter of Intent), the applicant proposes that the measures taken are adequate to mitigate adverse impacts.
- The business previously operating onsite had a considerably higher amount of traffic than this business proposes to produce and the Transportation and Infrastructure Department had no concerns.
- Staff are recommending that the permit be issued for a 1 year term to determine if there are any adverse affects.

Technical Review

This business will utilize well and septic currently on the site.

The business will be accessed via RR260 which is an existing paved road.

Circulation Comments

AGENCY CIRCULATION	
Alberta Environment and Parks	<ul style="list-style-type: none"> The company has applied for a Registration under EPEA. At this time, and there are no concerns with the application. The finished storage capacity of the facility would determine the amount of finished material he can store at the site. If the amount of storage at the site causes any concerns, AEP would request that the concerns be addressed immediately. Concerns would include any odour or environmental concerns that the public may call in. If the application has stated a storage limit for finished product, then you must hold them to that limit. The registration that AEP issues, usually has no limit specified, however, the proponent is bound to stay within the proposed application.
AHS	<p>Comment:</p> <ul style="list-style-type: none"> There are not many concerns if there is a registration and monitoring by AEP. Comments regarding odor mitigation, groundwater management, what are the optimal composting conditions to destroy pathogens? <p>Follow Up:</p> <ul style="list-style-type: none"> All process air will be processed through a bio-filter to remove odors. The condensate will be collected into containers for proper disposal. Please note that the condensate is essentially just water. <p>Comment:</p> <ul style="list-style-type: none"> The manufacturer's specifications indicate that the process will produce a relatively stable compost product, however it is outlined that the product may require some passive maturation prior to use or final testing. Final composition should be tested by AEP or County. <p>Follow Up:</p> <ul style="list-style-type: none"> The reactor will stir the compost hourly and inject air into the compost to provide the oxygen needed by the bacteria. Moisture will also be monitored and added as necessary. With the correct mix of Nitrogen and carbon providing feedstock, the machine will run at 60-65 degrees C, which will destroy the pathogens. The requirements for finished compost are set by the Canadian Council of Ministers of the Environment (CCME). These specifications set the requirements for pathogens in the compost. See the attached document (CCME Guidelines for Compost Quality).
INTERNAL CIRCULATION	
Internal File Review	<p>Environmental Coordinator, Wheatland County</p> <p>Summary:</p> <ul style="list-style-type: none"> Have minimal environmental concerns with this application, so long as nuisance factors such as odour, migrating garbage and dust are controlled. Appears to be an innovative means of reducing the amount of waste that human's landfill. <p>Comment:</p> <ul style="list-style-type: none"> Questions regarding leachate as the leachate section of the equipment specs says that "HotRots produce a small amount of condensate which

can be used for irrigation, wetting maturation piles, or discharged to sewer.” There may be incentive based on costs of energy to not fully dry material. I suggest we ask the applicant for a plan for it even if it as simple as disposing through the sewage system onsite.

Follow-Up:

- Applicant reported that the machines do not produce leachate. Leachate is water that has percolated through a pile and dissolved some of its constituents. This does not occur in enclosed machines. A small amount of moisture may condense out in the ventilation pipes since the compost is moist and the process air will evaporate some of the moisture. This is simply condensed water and is collected and may be added back into the machine or added to the completed compost as it dries, or, since it is only water, it can also be disposed of through the sewer system.

Comment:

- Confirmation that the non-compostable material will not accumulate onsite if the operator is dis-incentivized by landfill cost to get rid of it, lest it pile up to unmanageable levels.

Follow-Up:

- A condition has been included specifying the non-compostable material may not be stored outside at any time.

Comment:

- The comparable Vancouver facility example given, if true, offers some confidence in this approach. Hopefully decision-makers can see merits in this application and the applicant can effectively incorporate and explain mitigations of nuisance risk, so that innovation in waste management as a business can be supported by our municipality.

Follow-Up:

- The example given of the Vancouver facility used this technology to compost food waste, not diapers. They are no long operating and the applicant purchased their composting machinery.

Planner, Wheatland County

Comment:

- Concern about how much finished product they can store on site, and whether we have the capability to accurately measure how much is in a pile.

Follow-Up:

- The Letter of Intent indicates an area and height of the piles, this has been placed as a condition as the max amount of finished compost stored onsite.

Comment:

- Two houses are quite near by, though the applicant is sure odor won’t be an issue, we do have to keep these two residents in mind.

Follow-Up:

- We have placed a condition for a complaint hotline, also we are recommending approval of a temporary permit with conditions we can enforce if odor complaints come in.

Comment:

- Where the composting machines will be inside a shop, is there risk of a build up of CO? Or is the “exhaust” released outside the building?

AGENCY CIRCULATION	
	<p>Follow-Up:</p> <ul style="list-style-type: none"> The machines do not produce any Carbon monoxide. Carbon Monoxide is a product of incomplete combustion of fossil fuels, not a product of the bacterial action which produces compost. The exhaust is vented outside through bio-filters to remove any odors. <p>Comment:</p> <ul style="list-style-type: none"> With so many different uses/businesses on this parcel, is there a blanket emergency response plan needed to ensure all the different employees and anyone visiting the site are safe in the case of an incident? <p>Follow-Up:</p> <ul style="list-style-type: none"> This will not be a requirement of this applicant but may be a follow-up issue with the landowner. <p>Deputy Regional Fire Chief</p> <ul style="list-style-type: none"> From a fire perspective, no concerns.
NEIGHBOUR CIRCULATION	
To adjacent neighbors within 1 mile	Several letters in opposition were received at the time of this report.

Response Options

Option 1: THAT MPC accepts/approves the recommendation as proposed.

Option 2: THAT MPC does not accept/approve the recommendation as proposed.

Option 3: THAT MPC accepts/approves an alternate recommendation of MPC's choosing.

Follow-up Action / Communications

Advise Applicant of the Decision.

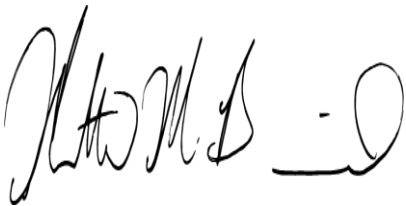
Report Approval Details

Document Title:	DP 2020-040.docx
Attachments:	- Appendix DP 2020-040.docx
Final Approval Date:	Jun 24, 2020

This report and all of its attachments were approved and signed as outlined below:

A handwritten signature in black ink, appearing to read "Sherry Baers". The script is cursive and fluid.

Sherry Baers

A handwritten signature in black ink, appearing to read "Matthew Boscarol". The script is cursive and fluid.

Matthew Boscarol