

## 11. CONCLUSIONS

1. According to the Amended Development Plan (November 2002), the approved 3.3-hectare landfill footprint has been designed to be developed through a series of Cells commencing in the northeast portion of the approved fill area (i.e., Cell 1). Cell 1 covers an area of 5,826 m<sup>2</sup> (or 0.583 ha) and has capacity for approximately 28,590 m<sup>3</sup> of waste and daily cover.
2. Based on information provided in the Amended Development Plan (November 2002), the old waste footprint encompasses an area of approximately 0.6 ha and contains an estimated 24,500 m<sup>3</sup> of waste and interim cover. As noted in the PDO prepared by Fletcher Associates (2000), it was estimated that the Egremont Landfill had reportedly accepted 18,000 m<sup>3</sup> of waste to date (i.e., circa 2000) in this area.
3. Based on the landfill capacity of approximately 28,590 m<sup>3</sup> in Cell 1 for waste and daily cover, and the annual fill volumes reported to date, Cell 1 as designed in the Amended Development Plan (November 2002) has been filled to capacity.
4. At the five-year average fill rate of  $\pm 3,280$  m<sup>3</sup>/year, it is estimated that the 3.3 ha fill area, which has an approved capacity of 350,000 m<sup>3</sup> for waste and interim cover, will provide for greater than 80 years of additional site life.
5. Continued attention to compaction and the application of daily cover at the active face of the landfill will help maintain an aesthetically acceptable site. In addition, continued application of daily cover and progressive closure, as final contours are reached, will reduce leachate production at the site.
6. At the surface water sampling locations, no impacts to surface water quality above PWQO and/or trigger levels are attributed to landfill activities. Contingency measures outlined for the surface water trigger mechanisms do not need to be implemented at this time.
7. Based on the groundwater quality and the inferred groundwater flow direction at the site, no evidence of impacts related to landfilling above the RUC are noted beyond the established compliance boundaries.

## 12. RECOMMENDATIONS

### 1) Operational Considerations – Existing Fill Areas

The closed and capped old fill area should continue to be inspected on a semi-annual basis to ensure the integrity of the cover material. A 300 mm thick interim cover should be applied in areas where landfilling has been temporarily suspended for 6 months or more (i.e., the Cell 1 area). Placement of waste and daily cover material should continue within Cell 2.

### 2) Application to Amend the ECA (as the Opportunity Arises)

In consideration of the maximum daily quantity of waste that can be received for disposal of 28.5 tonnes per day and the increasing population trend recently being experienced by the Township, it is recommended that the Township request an increase in the maximum allowable daily quantity of waste that can be received at the Site in conjunction with the next application to amend the ECA, when the opportunity arises.

### 3) Commence Waste Re-location Efforts (Old Fill Area)

As outlined in the PDO Addendum No.1 for the Site (April 2018), there is an estimated 24,500 m<sup>3</sup> of waste and interim cover within the old fill area that will need to be relocated to effectively prepare the Site to the approved base contour of 411.5 masl. Based on the anticipated volumes and budgetary considerations, a phased approach to the waste re-location efforts has been considered. At this time, it is recommended that the Township commence the waste relocation works required to facilitate future site operations. As indicated in the operations and mitigation plan provided in the PDO Addendum, it is recommended that a qualified consultant provide the appropriate layout, topographic survey and grade stakes within the fill area to provide direction to the contractor throughout the relocation process.

### 4) Compost Sampling Frequency

In order to satisfy the requirements outlined in the Ontario Compost Quality Standards, it is recommended that the Municipality collect a minimum of 2 compost samples per year for analysis.

### 5) On-going Monitoring as per Schedule B of the ECA

The annual monitoring program conducted in the spring and fall should continue to meet the requirements specified in Schedule B of the ECA. At this time, it is recommended that in 2023 monitoring wells OW21, OW22 and OW23 be sampled twice in conjunction with the established monitoring program for the Site. Starting in 2024, it is recommended that monitoring wells OW21 and OW22 be sampling once annually in the Fall. Therefore, it is proposed that only wells OW21 and OW22 be added to the required groundwater sampling locations listed in Table B-1 of the ECA.

Respectfully submitted,

GM BLUEPLAN ENGINEERING LIMITED

Per:



A.H. Nelson, M.Sc.

Per:



Alen Bringleson, B.E.S., C.E.T.











FILE: C:\p1\20\Projects\012706 AMR Figures.dwg LAYOUT: 3-9a  
 LAST SAVED BY: Doherty, 2/20/2023 2:02:24 PM PLOTTED BY: M. Stearns - CM BluePlan 3/1/2023 10:03:32 AM

**BENCHMARK 1 ELEV. - 412.10m**  
 TOP OF SIB LOCATED AT THE SOUTH EAST CORNER OF BASELINE ROAD AND WILDER LAKE ROAD.

**212298**  
**Township of Southgate**  
**Egremont Landfill Site**



**LEGEND**

-  LIMITS OF MUNICIPAL LANDS
-  APPROXIMATE CELL 1 AREA
-  CONTAMINANT ATTENUATION ZONE
-  SUPPLEMENTAL CONTAMINANT ATTENUATION ZONE
-  PROPERTY LIMIT
-  SURFACE WATER SAMPLE LOCATION
-  EXISTING GROUND CONTOUR (MASL)
-  WATERCOURSE
-  MONITORING WELL LOCATION
-  MONITORING WELL LOCATION (DECOMMISSIONED 2003)

SCALE 1:2,000  
 FEBRUARY 2023

**SITE PLAN WITH MONITORING WELL LOCATIONS**

**Egremont Landfill Site**  
**413013 Sideroad 41**  
**Township of Southgate**

Figure No. 3

