A. Recommendations

THAT Council receive Staff Report CSPW.18.070, entitled “Disposal Site Leachate Management – September 2018 Status” for information purposes

B. Overview

The purpose of this report is to provide historical context regarding leachate management for the new landfill cell and its current status.

C. Background

A new landfill cell was completed October 2015 at the Solid Waste Disposal Site. This new cell and the proposed next phase of expansion will provide waste disposal capacity for approximately 25 years. In accordance with provincial requirements and environmental protection requirements, the new cell utilizes a liner and leachate collection system.

The Town’s landfill capacity was expanded in 2015. Leading up to that expansion, the Town in 2008 initiated an Environmental Screening Process (ESP) specific to landfill projects which proposed expansion and mining of the landfill site to address capacity limitations and provide a long-term environmentally safe solid waste disposal solution for the Town. The ESP is a comprehensive and environmentally sound planning procedure that incorporates public consultation involving a wide variety of stakeholders. The study involved four main public consultation events: i) Notice of Study Commencement (September 2008); ii) public consultation events (January 2009); iii) public consultation events (April 2010); and, iv) issuance of Notice of Completion and initiating the 60 day review period (June 2012).

During the ESP it was recognized that the Town would need to manage an increase in leachate generated from the new lined cell. However, it also understood that there were viable options available that didn’t have to be resolved at the time but that would be addressed though a separate study process post construction of the new landfill cell. As an interim measure, the Town would haul leachate to an appropriate treatment facility. Collected leachate (rain, snow
and moisture from incoming waste) is currently removed from the cell by tanker truck and hauled for treatment at the Craigleith Wastewater Treatment Plant.

As envisioned in the ESP, the Town initiated a Municipal Class Environmental Assessment (EA) in 2016 as appropriate for the works required manage leachate. Attachment 1 provides the presentation made at the Committee of the Whole meeting on November 14, 2016. Along with notifying the appropriate agencies, Staff contacted key stakeholders and held a Public Information Centre in November 2016. The Staff Report to Committee of the Whole on June 26, 2017 (CSPW.17.072) is provided as Attachment 2. This report sought approval to issue a Notice of Completion which was completed on August 4, 2017 for the mandatory 30 day comment period.

After studying various options, the EA process found the preferred solution to be piping the leachate from the Disposal Site to the Thornbury Wastewater Treatment Plant. On-site treatment and disposal options were considered but due to higher estimated costs, natural environment concerns and regulatory challenges regarding discharge to groundwater via infiltration or surface water bodies nearby, this concept was not preferred.

Following the completion of the EA process, the Town initiated the preliminary design of the forcemain solution in September 2017. Meanwhile, the Town applied for and was successful in securing 90% of legible costs for the design and construction of the forcemain solution in the amount of $2.3 million from the provincial Municipal GhG Challenge Fund. A subsequent transfer payment agreement was executed with the province for the monies. This funding enabled the Town to proceed without having to determine an internal or debt funding source. Construction was planned to commence in early 2019.

The Town received correspondence July 10, 2018 from the Ministry of Environment, Conservation and Parks (the “Ministry”) that the Municipal GhG Challenge Fund program has been cancelled and that the grant monies are now withdrawn however some wind-down funding may be available upon application. On July 31, 2018 Council supported the submission of a proposal to the Ministry for eligible wind-down funding of the Leachate Pumping Station and Forcemain project sufficient to support completion of the design phase as outlined in Staff Report CSPW.18.063.

The Disposal Site will continue to generate leachate in perpetuity and as such the Town has a regulatory obligation to responsibly manage and treat its leachate. In earlier presentations and reports it was identified that within the next 8 to 10 years a second landfill cell could be considered to address expected capacity limitations. Leachate generation will also increase due to the larger landfill footprint. Attachment 3 is a graph of the expected leachate volume to be generated until 2042 based on precipitation. It is estimated based on current leachate volumes that over the next 25 years 330,000 cubic metres of leachate will be generated - equivalent to 16,000 truck trips.
An additional and ongoing issue related to leachate management is odour control. Leachate releases hydrogen sulphide which has a noxious odour and is dangerous in high concentrations. The Town has received complaints from residents neighbouring the Craigleith Pumping Station where the trucked leachate is received. Town Staff implemented a temporary pre-treatment system at the Disposal Site that involves aeration in trailer tankers and chemical treatment. This ad hoc solution has worked effectively to eliminate off-site odours. The process is labour intensive and involves approximately 8 staff hours for tank transfer, dosing and monitoring each week. The current system will also have to be winterized which will increase operational costs and challenges. The Ministry of the Environment, Conservation and Parks has endorsed these temporary measures on a trial basis while the Town implements a permanent leachate management solution. This situation cannot continue for a significant period of time without the Ministry requiring an engineered and documented permanent solution.

Another challenge the Town needs to consider is that the inflow of leachate to a wastewater plant has to be carefully managed. This is done to not shock load or exceed the treatment capacity of the plant to avoid forcing it out of regulatory compliance by “killing” the treatment process. The flow to the Craigleith Wastewater Treatment Plant is restricted to a maximum of 84m$^3$/day. There are though operational constraints at the Disposal Site, the treatment plant and with the haulage contractor that result in the amount of hauled leachate not always being the maximum permitted.

Since this has been a dry summer, the Town is currently able to manage the leachate internally. But during wetter periods of the year when the Craigleith WWTP can’t accept the amount of leachate generated, Staff have arranged to haul leachate to the Collingwood Hauled Waste Receiving Station.

The Town is currently unable to utilize the available capacity at the Thornbury Wastewater Treatment Plant due to regulatory restrictions and lack of receiving facilities. During the final design of the leachate forcemain, these constraints will be addressed and removed. The province has treatment guidelines that state a plant like Thornbury’s can accept approximately 2% of its domestic influent as leachate without causing operational challenges. That figure is close to the amount of leachate produced by the Town’s Disposal Site. That said though, the design consultant was undertaking a treatability study to understand the best means to integrate / flow pace the pumping of leachate to the plant and how operations at the plant may need to be modified. These modifications may include longer blower run times to address an increase in oxygen demand and the addition of more or alternate chemicals to facilitate coagulation and settlement of heavy elements. Odour control would also be studied to determine if its mitigation is best placed at the landfill or within the Headworks Building where all incoming waste is received. The Headworks Building is currently in final design for rehabilitation and expansion so this is an opportune time to integrate enhanced odour control at the headworks.
D. Analysis

The Town is responsible to manage its leachate while at the same time being aware of the financial implications of its choices. Leachate will be generated over the entire life of the landfill including after closure. The cancellation of the Municipal GHG Challenge Fund grant dramatically affected the Town’s financing plan for the project.

Staff will pause any work related to the project until a decision is known from the province regarding wind down funding. At that time Staff will report to Council on next steps. There is no indication on when the status on wind down funding will be known with certainty. Unless the monies come available within the next few weeks, the project is at significant risk of not being constructed in 2019 and as such the Town will incur another year of operating costs for the ad hoc system.

This turn of events has essentially frustrated the Engineering Services Agreement with the Town’s design consultant who will be able to request to be released from their obligations. If the project re-starts at some point, the consultant may be able to provide favourable pricing to resume the works but the value of any previous efforts diminishes with time. Regardless, the Town should expect some lost costs for efforts completed to date during the design phase. Staff will attempt to minimise any lost costs.

Staff will continue to operate the ad hoc leachate treatment and trucking solution currently in place. Although this solution is functional in the short-term, over a longer term (more than a year or so) this solution will raise regulatory challenges if the Town is not advancing a permanent solution. The Ministry is aware of the Town’s temporary efforts to pre-treat leachate at the landfill for odour control while the design and construction of a permanent solution is underway, and thus is willing to allow the Town to manage leachate as it is. If the implementation of a long range solution is delayed, the Town should expect to be required to bring the pre-treatment system into compliance or be ordered to undertake additional works by the Ministry. This will trigger improvements that have unknown costs, however Staff conceptually estimate capital costs to be in the range of $200,000 to $300,000 to satisfy minimal provincial regulatory requirements.

The abilities of the Craigleith WWTP to receive and treat leachate by the truckload is also limited. This becomes a particular problem during wetter periods when the amount of leachate generated exceeds the plant’s treatment capacity. Staff will maximise the amount of leachate stored at the Disposal Site but must remove leachate once on-site storage available within the leachate collection system is exceeded. This excess leachate will be trucked to the Collingwood Hauled Waste Receiving Station. Based on a review of precipitation diurnal curves and year over year data, the Town can expect to haul approximately 2,000m$^3$ annually to Collingwood at a disposal cost of $18.32 / m$^3$. Staff is not aware of an upper limit of the amount of leachate that Collingwood can receive however if their treatment system process is adversely affected, the Town will have to divert excessive leachate to another location.
A detailed costing of continuing with the ad-hoc system is provided in Attachment 4. The annual estimated operating costs of $245,991 will be carried in the 2019 three-year operating budget.

Staff intend to engage the incoming Council in a discussion as part of the 2019 budget review cycle to gain direction on how to proceed with leachate management at the Disposal Site.

E. The Blue Mountains Strategic Plan

Goal #5: Ensure Our Infrastructure is Sustainable
Objective #3 Implement Best Practices in Sustainable Infrastructure
Objective #4 Ensure that Infrastructure is Available to Support Development

F. Environmental Impacts

The provincial funding for this project was predicated on the resulting reductions in GhG associated with switching from truck haulage to electric pumping of leachate. A leachate pumping station and forcemain will eliminate 559 tonnes of eCO2 in the first year of operation and 25,143 tonnes of eCO2 from Town emissions over the life of the project. This is the result of removing over 700 trucks annually from the road network and represents 2% of the Town’s corporate 2025 GhG reduction target.

Over the previous two years a total of 668 and 730 truckloads have occurred in 2016 and 2017 respectively. As of the end of July this year a total of 347 truckloads have been hauled.

G. Financial Impact

At this time the Town requires $263,575 as described in the Town’s GHG Challenge Fund application to complete a tender ready package. To date the Town has received $103,575 in grant funding and through the wind-down funding has requested an additional $160,000 to fully fund the engineering and eligible costs to complete the final design phase.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
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<tr>
<td>Engineering Fees to Complete Design</td>
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<td>Initial Agreement Funding Received</td>
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<td>Wind-Down Funding Request</td>
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</table>
H. In Consultation With

Shawn Everitt, Interim CAO  
Ruth Prince, Director of Finance & IT Services / Treasurer  
Sam Dinsmore, Deputy Treasurer/Manager of Accounting & Budgets  
Jeffery Fletcher, Manager of Solid Waste and Special Projects

I. Public Engagement

The topic of this Staff Report has not been subject to a Public Meeting and/or a Public Information Centre as neither a Public Meeting nor a Public Information Centre are required. Comments regarding this report should be submitted to Reg Russwurm at directoripw@thebluemountains.ca. There was however extensive public consultation during the Environmental Screening Process and during the Municipal Class Environmental Assessment.

J. Attached

1. Presentation re Class Environmental Assessment for Leachate Management at Blue Mountains Landfill Site, November 14, 2016  
2. Staff Report CSPW.17.072 – Leachate Management EA – Notice of Completion, June 26, 2017  
3. Estimated Annual Leachate Generation Rates – Phase 1 and 2  
4. Cost Chart to Continue As Is with Ad Hoc Treatment and Haulage

Respectfully submitted,

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Reg Russwurm  
Reg Russwurm, MBA, P.Eng.  
Director of Infrastructure and Public Works

For more information, please contact:  
Reg Russwurm  
directoripw@thebluemountains.ca  
519-599-3131 extension 260  
or  
Jeffery Fletcher  
managersolidwaste@thebluemountains.ca  
519-599-3131 extension 238
Class Environmental Assessment for Leachate Management at Blue Mountains Landfill Site

Presentation to Committee of the Whole
November 14, 2016
Presentation

1. Background
2. Problem/Opportunity Statement
3. Investigations to Date
4. Possible Solutions
5. Next Steps
# Background

- Environmental Screening Process Initiated at the Landfill Site  | September 2008
- ESR Published by Golder Associates documenting Study Results  | July 2012
  - Scenario 2 (Vertical Expansion and Mining of Former Thornbury/Blue Mountains Landfill) Selected as Preferred Alternative
- Landfill Mining and Leachate Collection System Installed at Former Thornbury Landfill  | 2014 and 2015
- Landfill Wastes directed to Newly Lined Portion of the Landfill  | 2015
- Initiate Municipal Class EA for Leachate Management  | 2016
The Blue Mountains Landfill Site

- Receiving/Composting Area
- Municipal Pit
- Vertical Expansion Area
- Former Thornbury Landfill
- Area that was Mined
- Cover Material
- Indian Brook
Current Conditions

Leachate Collection Chamber

Leachate Transport

Lined Portion of Landfill
Problem/Opportunity Statement

- Leachate volumes estimated as part of the Environmental Screening Process
- High rainfall volumes and low waste volumes (waste will absorb rainfall) resulted in leachate volumes more than originally estimated
- Initial leachate volumes for 2016 estimated to be in the order of 25,000 m3/year
- High cost of trucking leachate to Town Wastewater Treatment Plant provides an opportunity to lower costs by managing leachate through other means
Class EA Investigation

Study Purpose:

- To identify reasonable alternatives to address leachate management at the Town’s landfill site;
- Evaluate various routing alternatives to pump leachate to existing sanitary collection system serving Thornbury;
- Consult with potentially affected property owners located along routes;
- Consider potential impacts associated with all aspects of the environment, including Social, Cultural, Natural, Technical and Economic.
- Define potential impacts with proposed alternatives and evaluate measures to mitigate identified concerns;
- Select a preferred Alternative (Including defining any required mitigation).
Class EA Alternatives

I - Do Nothing – Continue to truck leachate

II - On-Site treatment and infiltration

III- On-Site treatment and discharge to Indian Brook

IV- Pump leachate via forcemain to existing sanitary collection system in Thornbury
Route Alternatives
## Preliminary Evaluation of Alternatives

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
<th>Social</th>
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<th>Economic</th>
<th>Natural</th>
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<tr>
<td>III</td>
<td>On-Site Treatment, Discharge to Indian Brook</td>
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<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
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<td>IV F</td>
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* Scoring: Most Preferred ●  Moderately Preferred □  Somewhat Preferred ○  Least Preferred ○  Not Preferred ☐
## Cost Comparison of Alternatives

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<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
<th>Initial Cost</th>
<th>20 Year O &amp; M Costs</th>
<th>Total Life Cycle Costs</th>
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<tr>
<td>I</td>
<td>Do Nothing—Truck Leachate</td>
<td>0</td>
<td>$245,250/year x 20</td>
<td>$4,988,000</td>
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<tr>
<td>II</td>
<td>On-Site Treatment &amp; Infiltration</td>
<td>$2,350,000</td>
<td>$50,000/year x 20 = $1,000,000</td>
<td>$3,350,000</td>
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<tr>
<td>III</td>
<td>On-Site Treatment, Discharge to Indian Brook</td>
<td>$2,350,000</td>
<td>$50,000/year x 20 = $1,000,000</td>
<td>$3,350,000</td>
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<td>IV A</td>
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Next Steps

- Public Open House and Stakeholder Meetings Scheduled for **November 24, 2016**
- Collect feedback from Public and Stakeholders following the Meetings
- Consult with Aboriginal Communities – SON and HSM
- Confirm cost sharing participants from adjacent apple storage/processing facilities
- Confirm selection of Preferred Alternative
- Prepare Schedule B – Phase 2 Project File
- Publish Notice of Study Completion and Project File for 30 day mandatory review period
This document can be made available in other accessible formats as soon as practicable and upon request

Staff Report
Infrastructure & Public Works

Report To: Committee of the Whole
Meeting Date: June 26, 2017
Report Number: CSPW.17.072
Subject: Leachate Management EA – Notice of Completion
Prepared by: Jeffery Fletcher, Manager of Solid Waste and Environmental Initiatives

A. Recommendations


AND THAT Council approve the issuance of the Notice of Completion for the Landfill Leachate Management Environmental Assessment subject to favorable comments and commitments forthcoming from the Saugeen Ojibway Nation as determined by the Director of Infrastructure and Public Works.

B. Overview

This Report seeks Council’s endorsement to issue a Notice of Completion regarding the Landfill Leachate Management Environmental Assessment for a 30 day period, once Saugeen Ojibway Nation comments have been received and are favorable. This Notice is the final step in the EA process and will result in the ability to proceed with the preferred option – installation of a leachate forcemain.

C. Background

The Town commenced a Landfill Leachate Management Environmental Assessment (EA) process in 2016 to consider alternatives to trucking leachate to the Craigleith WWTP with the potential to reduce costs associated with leachate management. The EA reviewed options for on-site treatment and pipeline conveyance to the Town’s existing waste water treatment plant.

The EA examined 4 main options: continue trucking, on-site treatment with infiltration, on-site treatment with discharge and piping leachate to an existing Town treatment plant. The trucking option has been identified as the highest cost option. A review of on-site treatment included options to install a large filtration bed or discharge to the Indian Brook. Overtime as the leachate strengthens a filter bed alone likely would not have the ability to adequately treat the leachate and additional mechanical treatment (a small wastewater plant) would be required in combination. Also, for the surface water discharge option a plant would need to be constructed. Construction of a plant, staffing and operations drive up costs making these
unfavorable financially. In addition, due to the nature of the subsurface and the sensitivity of the Indian Brook, on-site treatment is viewed as an environmental and technical challenge.

The EA also considered conveying the leachate to the Town’s existing waste water treatment plant in Thornbury via forcemain. Attachment 1 is a map of the potential routes. This option looked in detail at a number of route options. Through the EA it was identified that any of the route options could be considered as preferred. The identified constraints in each route option could be mitigated and all are constructible. The pumping leachate option was also estimated as the lowest 20 year life cycle cost.

Town Staff have had multiple meetings with SON and have discussed the forcemain as the preferred option. SON is in agreement with a forcemain as preferred option and Town Staff is anticipated final comments from SON that are expected to be favourable.

D. Analysis

Leachate conveyance via forcemain will be identified in the EA as the preferred option. Selection of a specific route will form part of the next stage of the project - detailed design. A forcemain solution is preferred over on-site treatment due to the estimated higher cost and concern regarding adequate treatment to allow groundwater or surface water discharge.

The forcemain option is also preferred over the current management option which is tanker truck hauling to the Craigleith waste water treatment plant. Reducing truck traffic was also indicated as benefit with the forcemain option. Trucking is also estimated to be the highest cost option, over the 20 year life cycle analysis conducted.

Next Steps

The final version of the EA report will be completed once SON comments are received a Notice of Completion will be distributed and placed in the local paper that the 30 day period for final comments regarding the project has commenced.

Following the 30 day public review period the Town will consider any submissions and barring any formal requests for review by the Ministry of Environment and Climate Change, the EA will be complete. The Town will then proceed with a request for proposal for detailed design work on forcemain route selection and design.

Town Staff recommends that the release of the Notice of Completion proceed once Saugeen Ojibway Nation (SON) final comments are received. The Town has conducted meaningful consultation with the SON Environment Office throughout this EA. This consultation has generated comments which Town Staff have addressed. The consultation will also result in the establishment of commitments for ongoing consultation with SON during the design phase. Town Staff have verbally discussed SON’s proposed conditions and Town Staff believe they are manageable but also useful and necessary to result in a successful project that will respect environmental concerns and archeological interests. As part of the obligation to consult with First Nations, a second phase of funding will need to be provided to assist SON’s participation in the detailed design and construction phases. This financial capacity will allow for
implementation and monitoring of agreements. The details of this financial capacity are being developed by SON, Town Staff will bring forward the details of the next phase of SON consultation during the Town’s design phase. At this time SON is agreeable to withdrawing any objections to the EA, with a condition that the Town continues to work on mitigating impacts. The Town is anticipating comments and a list of commitments from SON within the month. Town Staff are seeking approval from Council to proceed with the Notice of Completion once the comments are received favourably as determined by the Director on Infrastructure and Public Works. Gaining this approval from Council now will allow this project to continue moving forward. Town Staff will only issue Notice of Completion if the comments and commitments are as anticipated and favorable.

E. **The Blue Mountains Strategic Plan**

This EA works towards ensuring Town infrastructure is sustainable, by identifying the financially preferred option and one that maximizes the potential of existing infrastructure, such as the Thornbury Waste Water Plant.

F. **Environmental Impacts**

Installing a forcemain does have some temporary construction related impacts, however natural environment studies and archeological sampling will be conducted to assist with avoiding and mitigating impacts. A forcemain option will be a reduction in GhG’s compared to trucking.

G. **Financial Impact**

<table>
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<tr>
<th>Alternative</th>
<th>Initial Construction Cost</th>
<th>20 Year Operational and Maintenance Cost</th>
<th>Total 20 Year Life Cycle Cost</th>
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</thead>
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<tr>
<td>Truck Leachate</td>
<td>0</td>
<td>$245,250/yr X 20 yrs</td>
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<tr>
<td>Pump Leachate (4 Route Options)</td>
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<td>$2,450,000 to $2,850,000</td>
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</table>
Within a 20 year lifecycle pumping via forcemain is estimated to be the lowest cost. The lifecycle of the leachate liner system and a future phase to be constructed will be over 100 years. The option selected now is a long term investment.

H. In consultation with

None

I. Attached

1. Map of Proposed Forcemain Routes
2. Draft Notice of Completion

Respectfully submitted,

Jeffery Fletcher
Manager of Solid Waste and Environmental Initiatives

Reg Russwurm
Reg Russwurm, MBA, P.Eng
Director of Infrastructure & Public Works

For more information, please contact:
Jeffery Fletcher
managersolidwaste@thebluemountains.ca
519-599-3131 extension 238
TOWN OF THE BLUE MOUNTAINS
CLASS EA TO ADDRESS LEACHATE MANAGEMENT AT THE BLUE MOUNTAINS LANDFILL
ROUTE OPTIONS

DATE
JAN. 27, 2017
PROJECT No.
16129
SCALE
1 : 20,000
FIGURE No.
1.0

- Wastewater Treatment Plant
- Pumping Station
- Route 1
- Route 2
- Route 3
- Route 4
- Continuation North
- Continuation East
- Affected Parcels (Route 4)
- Landfill Site

0 250 500 1,000 Metres

GEORGIAN BAY
HIGHWAY 26
TOWN OF THE BLUE MOUNTAINS
CLASS ENVIRONMENTAL ASSESSMENT TO ADDRESS
LEACHATE MANAGEMENT AT THE BLUE MOUNTAINS LANDFILL

NOTICE OF COMPLETION

THE PROJECT:
The Town of The Blue Mountains initiated a Class Environmental Assessment (Class EA) process in August 2016 to consider alternatives to address leachate management at The Blue Mountains Landfill site (see key plan). Currently, leachate is collected within the lined waste cell and then trucked to the Town’s Craigleith wastewater treatment facility for treatment and disposal. The study considered a range of alternatives to address long term management of the leachate, including the following: i) Do nothing, continue to truck leachate, ii) On-site treatment and infiltration of leachate, iii) On-site treatment and discharge of leachate to Indian Brook, and iv) Pump leachate via forcemain to the existing sanitary collection system servicing Thornbury. Opportunities to partner wastewater servicing with adjacent commercial/industrial operations was also examined in conjunction with each of the alternatives being considered. The Class EA process investigated and evaluated each of the alternatives described above, including an analysis of life cycle costs for each over a 20 year time frame. From the investigation, the following preferred solution has been selected:

- Pump leachate via forcemain to the existing sanitary collection system servicing Thornbury

THE ENVIRONMENTAL SCREENING PROCESS:
This project is following the planning process established for Schedule ‘B’ activities under the Municipal Class Environmental Assessment (Class EA) document. Schedule B projects are approved subject to the completion of a screening process. The purpose of the screening process is to identify any potential environmental impacts associated with the proposal and to plan for appropriate mitigation of any impacts. The process includes consultation with the public, stakeholders, Aboriginal communities, and review agencies. The environmental assessment process has now been completed. There were no negative impacts identified with the project that could not be mitigated.

PUBLIC INVOLVEMENT:
A Project File documenting the Environmental Assessment process completed for this project is available for public review at The Town of the Blue Mountains municipal office (32 Mill Street, Thornbury ON) during normal business hours. A copy of the report has also been placed on the Town’s website: http://www.thebluemountains.ca. For further information on this project, or to review the Class EA process, please contact the project engineers: B. M. Ross and Associates Ltd., 62 North Street, Goderich, Ontario, N7A 2T4. Telephone (888) 524-2641. Fax (519) 524-4403. Attention: Kelly Vader, Environmental Planner. E-mail: 

If environmental concerns arise regarding the project which cannot be resolved in discussion with the Town of The Blue Mountains, a person or party may request that the Minister of the Environment and Climate Change make an order for the project to comply with Part II of the Environmental Assessment Act which addresses individual environmental assessments. Requests must be received at the address below within 30 calendar days of this Notice. A copy of the request must also be sent to the project engineers and Town at the above addresses. If there is no request received by July 21, 2017, the project will proceed as planned.

The Minister of the Environment and Climate Change
11th Floor, 77 Wellesley St. W., Toronto, ON M7A 2T5
Fax: 416-314-8452

This Notice Issued June 21, 2017
Jeffery Fletcher, Manager of Solid Waste and Environmental Initiatives
Town of The Blue Mountains
The Blue Mountains Landfill - Leachate Generation

- **Actual Annual Leachate Hauled**
- **Estimated Total Leachate Haulage**
- **Estimated Maximum Wet Year Leachate Generation**
- **Estimated Normal Year Leachate Generation**
- **Estimated Minimum Dry Year Leachate Generation**
- **Average Total Annual Precipitation, Thornbury Climate Normals 1981-2005**

Data from Sperling Hansen Associates Report, March 19, 2018

* 2018 figure are based on year to date and climatic norm to year end

- **Actual Leachate Haulage**
- **Dry climate trend**
- **Normal climate trend**
- **Wet climate trend**
- **Actual Precipitation**
- **Climatic Norm Precipitation (1981-2005)**
## Continue As Is - Ad Hoc Treatment and Hauling

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<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Ann. Cost</th>
<th>Lifetime</th>
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<tbody>
<tr>
<td>Haulage to Craigleith WWTP</td>
<td>10,200</td>
<td>m³</td>
<td>$7.00</td>
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<td>m³</td>
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<td>Haulage to Collingwood</td>
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<td>m³</td>
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<td>Chemical Treatment</td>
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<td>MOECP Manifest Fee</td>
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<td>truck load</td>
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**Sub-Total Operating Costs**

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## Capital Cost

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<td>Pre-Treatment System</td>
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**Total Cost**

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<td>$275,991</td>
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Notes:

1. All costs are in 2018 dollars and no allowance has been made for general inflation or specific escalations for haulage or treatment costs.
2. Allowance that on average about 2,000 m³/year of leachate will be disposed of at Collingwood Hauled Waste Receiving Station.
3. Capital cost spread over 10 years based on expected life of equipment.