COMMITTEE REPORT TO COUNCIL: INFRASTRUCTURE & RECREATION COMMITTEE

MEETING DATE: **May 11, 2010**
LOCATION: **Ravenna Hall**
PREPARED BY: **Krista Royal**
Administrative Assistant

A. Recommendations

C.1 EPW.10.049 Contract Extension of TBM-2009-33, Purchase of 5/8" Crushed Gravel

THAT Council extend Contract TBM-2009-33 to Dalton R. Lowe and Sons Construction Ltd, for the supply, crushing, loading, hauling, and applying of approximately 18,000 tonnes of Granular "A" – 5/8" crushed gravel, at a cost $7.34 per tonne to an upset limit of $135,000 including taxes as outlined in Report EPW.10.049 entitled "Contract Extension of TBM-2009-33, Purchase of 5/8" Crushed Gravel".
"CARRIED"

C.2 EPW.10.054 Beaver River Bridge Resurfacing Contract 2 – Award of Tender (2010-21-T-EPW) and Consultant Fee Increase

THAT Council receive Report EPW.10.054 entitled "Beaver River Bridge Resurfacing Contract 2 – Award of Tender (2010-21-T-EPW) and Consultant Fee Increase", and;

THAT Council approve increasing the Capital Budget for the Beaver River Bridge Rehabilitation *by $430,131 from $2,128,200 to $2,558,331, and;*

THAT Council approve the award of Beaver River Bridge Resurfacing Contract 2 (2010-21-T-EPW) *to Miller Paving Ltd. in the amount of $1,457,961.00 excluding GST, and;*

THAT the Mayor and the Clerk be authorized to execute the Contract Documents for Beaver River Bridge Resurfacing - Contract 2 (2010-21-T-EPW)*, and;*

THAT Council approve increasing the upset fee estimate for The Ainley Group to provide final design and contract administrative services for the Beaver River Bridge resurfacing by $54,380.00 from $283,190.00 to $337,570.00.
"CARRIED"

C.3 EPW.10.057 Unsolicited Tabloid Delivery

THAT Council direct Staff to contact local publishers regarding concerns with unsolicited tabloid delivery, together with a request for response to the concerns, as detailed in Staff Report EPW.10.057, entitled "Unsolicited Tabloid Delivery".
"CARRIED"

C.4 EPW.10.058 Use of Landfill Reserve for Inactive Site Study

THAT Council receive Staff Report EPW.10.058 "Use of Landfill Reserve for Inactive Site Study"; and

THAT Council support the completion of a study to review the inactive landfill sites in Thornbury and Clarksburg, which will provide information required for the new Comprehensive Zoning By-law.

AND FURTHER THAT Council approve the consultant costs of $14,000 (excluding GST), plus excavation expenses of $1,000 for a total of $15,000 (excluding GST) for the Inactive Landfill Sites Study from the Landfill Reserve.
"CARRIED"

D.1 Minutes of Museum Advisory Committee

THAT Council receives the Museum Advisory Committee minutes held on March 22, 2010 for their information.
"CARRIED"

D.2 EPW.10.055 Organics Waste Diversion Preliminary Analysis

THAT Council receive Staff Report EPW.10.055 entitled "Organics Waste Diversion Preliminary Analysis" for their information.
"CARRIED"

E.3 EPW.10.059 Receiving Area Construction – Additional Works

THAT Council receive the Staff Report EPW.10.059 "Receiving Area Construction – Additional Works"; and

THAT Council approve the use of $62,344 (excluding GST) for additional works associated with the Receiving Area Construction; and

THAT the amount $57,604 (excluding GST) of additional work associated with the landfill site receiving area be awarded to Seeley and Arnill Construction.
"CARRIED"

B. Staff Reports (Attachments)

C.1 EPW.10.049 Contract Extension of TBM-2009-33, Purchase of 5/8" Crushed Gravel

C.2 EPW.10.054 Beaver River Bridge Resurfacing Contract 2 – Award of Tender (2010-21-T-EPW) and Consultant Fee Increase

C.3 EPW.10.057 Unsolicited Tabloid Delivery

C.4 EPW.10.058 Use of Landfill Reserve for Inactive Site Study

D.1 Minutes of Museum Advisory Committee

D.2 EPW.10.055 Organics Waste Diversion Preliminary Analysis

E.3 EPW.10.059 Receiving Area Construction – Additional Works

C. Background

D. Deputations/Presentations

E. Next Meeting Date

Tuesday, May 25, 2010 at 8:00pm, Ravenna Hall

C.1

STAFF REPORT: Engineering & Public Works Department

REPORT TO: **Infrastructure and Recreation Committee**

MEETING DATE: **May 11, 2010**

REPORT NO.: **EPW.10.049**

SUBJECT: **Contract Extension of TBM-2009-33, Purchase of 5/8" Crushed Gravel**

PREPARED BY: **Jim McCannell, Manager of Roads and Drainage Division on behalf of Tender Award Committee**

A. Recommendations

THAT Council extend Contract TBM-2009-33 to Dalton R. Lowe and Sons Construction Ltd, for the supply, crushing, loading, hauling, and applying of approximately 18,000 tonnes of Granular "A" – 5/8" crushed gravel, at a cost $7.34 per tonne to an upset limit of $135,000 including taxes as outlined in Report EPW.10.049 entitled "Contract Extension of TBM-2009-33, Purchase of 5/8" Crushed Gravel".

B. Background

The Request for Quotation TBM-2009-33 for the supply and place of 5/8" crushed gravel was issued on May 27, 2009, closed on June 18, 2009 and duly awarded to Dalton R. Lowe and Sons Construction Ltd. (Dalton). Within the tender there were provisions to extend the contract for up to 3 years upon receiving favourable pricing.

Staff have negotiated with Dalton to provide a price to supply, load, haul and apply 5/8 maintenance gravel from the Gibraltar gravel pits. The negotiated price for 2010 is $7.34 per metric tonne of gravel. The total is price base on $2.35 per metric tonne to supply the gravel, $2.75 per metric tonne to crush and load and $2.24 to haul and place the gravel. The increase over the price of $6.74 from 2009 is a result of higher prices to purchase raw material, increased fuel cost and wage increases. Refer to the price break-down from Dalton provided as Attachment #1. The Contract extension for 2010 will be the 2nd year of a potential 3 years.

The unit price is comparable with what has been paid in past years as evident in Table 1 below:

TABLE 1 – Cost Comparison

Year	Cost per Metric Ton (T)	Total Cost of 16,000 Tons
2008	$7.84/ T	$125,440
2009	$6.74/ T	$107,840
2010	$7.34/ T	$117,440

Prices are excluding GST

This work is to be funded from the Roads and Drainage Operating Budget G/L 1-308-3001 has $819,756. Within this account the Finance Department has confirmed there is $135,000 allocated to the purchase of maintenance gravel. This leaves a surplus of $17,560. ($135,000 - $117,440)

As of July 1st these works will be subject to the Harmonized Sales Tax (HST). The placement of maintenance gravel will occur in September and will be subject to HST. The Municipality will be able to claim back part of the Ontario component of the HST plus the 5% Federal component of the 13% HST.

Given the surplus and the HST tax rebate Staff wishes to increase the amount of gravel purchased from 16,000 tonnes to 18,000 tonnes. The total cost for the purchase of 18,000 tonnes of the maintenance gravel at $7.34 is $132,120 for a total cost of **$134,445.31** including non-refundable taxes (HST rebate) resulting in a surplus of $1,558.84.

The Tender Award Committee recommends that Contract TBM-2009-33 for the Tender to Supply, Crush, Load Haul, and Apply 5/8 Crushed Gravel as negotiated be extended to Dalton Lowes and Sons Construction Ltd. who had the lowest price meeting all the requirements of the contract documents and has demonstrated a satisfactory construction schedule. The recommendation from the Tender Award Committee is provided as Attachment #2.

This purchasing process is in compliance with the Town's current Purchasing Policies.

C. The Blue Mountains' Strategic Plan

This tender award furthers the Town's Strategic Goal #2, "Addressing the Town's municipal infrastructure needs".

D Environmental Impacts

The crushing and moving of large quantities of gravel require vast amounts of energy. This energy is supplied in the way of diesel fuel. The Contractor will be asked to comply with the Town's anti idling program.

E. Budget Impact

The 2010 Roads & Drainage Operational Budget includes $819,756 for materials including gravel, calcium (for dust control) Asphalt and Tar and Chip. Maintenance gravel will be coded to account 1-308-3065-62000, identified for gravel resurfacing and used by the Finance Department to track for the Municipal Performance Measures. The proposed expense of $134,445.31 for 18,000 tonnes of gravel is therefore accommodated within the 2010 Budget.

Shown below is a partial list of the breakdown of the parent account 1-308.

GL Code	Account Description	Budget Amount
1-308-3001	Road Operation (includes Hardtop Maint., Dust Layer & Gravel)	$819,756
1-308-3030	Hardtop Maintenance	$290,000
1-308-3045	Resurfacing	NIL
1-308-3060	Dust Control	$60,000
1-308-3065	Gravel	$135,000

F. Attached

1. Dalton Lowes and Sons Construction Ltd. for 2010 Quotation, April 15, 2010
2. Tender Award Committee Report recommending extension.

Respectfully submitted,

Jim McCannell
Manager of Roads and Drainage Divisions

Reg Russwurm
Director of Engineering and Public Works

For more information contact:

Jim McCannell
Town of The Blue Mountains
Manager of Roads and Drainage
Office: 519-599-3131 Ext 271
Shop: 519-599-6714
Fax: 519-599-3664
jmccannell@thebluemountains.ca

PHONE (7O5) 428-2635

EPW.10.049
Attachment #1

DALTON R. LOWE AND SONS CONSTRUCTION LTD.

7463 Highway 26, P. O. Box 70, Stayner, Ontario, L0M 1S0
Email: loweconstruction@bellnet.ca

SAND • GRAVEL. • CUSTOM CRUSHING

April 15, 2010

Town of the Blue Mountains
26 Bridge Street East
Box 310
Thornbury, Ontario
N0H 2P0

Attention: Mr. Jim McCannell, Manager of Roads & Drainage

Dear Jim:

RE: TBM-2009-33 Gravel Tender – Renewal

Further to our telephone conversation of today and our previous quote dated March 12, 2010, we confirm that our company would like to renew the contract term for the upcoming season based on the following revised pricing:

Supply	$2.35/mt	X 16,000 =	$ 37,600.00
Crush & Load	$2.75/mt	X 16,000 =	$ 44,000.00
Hauling & Applying	$2.24/mt	X 16,000 =	$ 35,840.00
	$7.34/mt	SUBTOTAL	$117,440.00
		GST	$ 5,872.00
		PST (applies to Supply/Crush)	$ 5,888.00
		TOTAL	$129,200.00

We trust the above pricing is reasonable for the upcoming season and look forward to hearing from you with respect to the renewal of the 2009-33 Gravel Contract.

Yours truly,
DALTON R. LOWE & SONS
CONSTRUCTION LTD.

Per: Bob Lowe/tl

Bob Lowe (Authorized Signing Officer)
/tl
SENT BY EMAIL ONLY (jmccannell@thebluemountains.ca)

EPW.10.049
Attachment #2

MEMORANDUM

DATE: April 15, 2010

FROM: Jim McCannell, Manager of Roads & Drainage

TO: Tender Award Committee

SUBJECT: Award and Extensions of Formal Quotation TBM-2009-33 for the Supply, Crush, Load Haul, and Apply 5/8 Crushed Gravel

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The Purchasing Policy F.S. 08.08 Schedule B, allows the Tender Award Committe to award contracts up to $100,000. Contracts over $100,000 shall be awarded by Council based on the recommendations of the Tender Award Committee.

The Request for Quotation TBM-2009-33 was issued on May 27, 2009 and closed on June 18, 2009 at 2:00 p.m. local time. The bid opportunity was advertised on Town's website and the OPBA website. An advertisement was placed in the Courier Herald and the Enterprise Bulletin. Four bids were returned to the Town meeting all the conditions of the tender. Dalton Lowes and Sons Construction were awarded this work for 2009.

Within the tender there are provisions to extend the contract for up to 3 years upon receiving favorable pricing. Dalton Lowes has provided a unit price of $7.34 per metric tonne to extend the contract for year 2 of the 3 year contract. The Contract Extension for 2010 will be the 2nd year of a potential 3 years.

Staff have negotiated with Dalton R. Lowes and Son to provide a price to supply, load, haul and apply 5/8 maintenance gravel from the Gibraltar gravel pits. The negotiated price for 2010 is $7.34 per metric tonne of gravel. The total is price base on $2.35 per metric tonne to supply the gravel, $2.75 per metric tonne to crush and load and $2.24 to haul and place the gravel. The increase over the price of $6.74 from 2009 is a result of higher prices to purchase raw material, increase fuel cost and wage increases.

The unit price is comparable with what has been paid in past years.

Year	Cost per Metric Tonne (mt)	Total Cost of 16,000 Tons
2008	$7.84/ mt	$125,440
2009	$6.74/ mt	$107,840
2010	$7.34/ mt	$117,440

Prices are excluding GST

Due to increased Budget and the HST tax rebate staff wishes to increase the amount of gravel purchased from 16,000 tonnes to 18,000 tonnes.

The cost for the purchase of 18,000 tonnes of the maintenance gravel at $7.34 is $132,120 for a total cost of $134,445.31 including non-refundable taxes. (HST rebate)

This work is to be funded from the Roads and Drainage Operating Budget G/L 1-308-3001 has $819,756. Within this account **$135,000 is allocated to the purchase of maintenance gravel.**

Staff recommend that Contract TBM-2009-33 for the Supply, Crush, Load, Haul, and Apply 5/8 Crushed Gravel as tendered be extended to Dalton Lowes and Sons Construction who had the lowest price meeting all the requirements of the contract documents and has demonstrated a satisfactory construction schedule.

This purchasing process is in compliance with the Town's current Purchasing Policies

Recommended By:

Jim McCannell

APPROVED BY:

Sherri Adams, Manager of Purchasing

Reg Russwurm, Director of Engineering and Public Works

J.P. (Paul) Graham, CAO

C.2

STAFF REPORT: Engineering and Public Works Department

REPORT TO:	**Infrastructure and Recreation Committee**
MEETING DATE:	**May 11, 2010**
REPORT NO.:	**EPW.10.054**
SUBJECT:	**Beaver River Bridge Resurfacing Contract 2 – Award of Tender (2010-21-T-EPW) and Consultant Fee Increase**
PREPARED BY:	**Tom Gray, Engineering Design Technologist on behalf of Tender Award Committee**

A. Recommendations

THAT Council receive Report EPW.10.054 entitled "Beaver River Bridge Resurfacing Contract 2 – Award of Tender (2010-21-T-EPW) and Consultant Fee Increase", and;

THAT Council approve increasing the Capital Budget for the Beaver River Bridge Rehabilitation by $430,131 from $2,128,200 to $2,558,331, and;

THAT Council approve the award of Beaver River Bridge Resurfacing Contract 2 (2010-21-T-EPW) to Miller Paving Ltd. in the amount of $1,457,961.00 excluding GST, and;

THAT the Mayor and the Clerk be authorized to execute the Contract Documents for Beaver River Bridge Resurfacing - Contract 2 (2010-21-T-EPW), and;

THAT Council approve increasing the upset fee estimate for The Ainley Group to provide final design and contract administrative services for the Beaver River Bridge resurfacing by $54,380.00 from $283,190.00 to $337,570.00.

B. Background

Consultant Fee Increase

The Town retained The Ainley Group in July 2008 to complete the design and contract administrative engineering services related to the resurfacing of the Beaver River Bridge. The upset fee estimate was approved at $177,130 within report EPW.08.75.

During the design period a detailed inspection of the structure of the bridge revealed further deficiencies that necessitated work outside of the original project scope as contemplated by the Ainley Group and Staff. The following work was recommended to be completed in addition to the original work:

- Replacement of bearing pads
- Abrasive blast cleaning and re-coating of steel girders and piers
- Repair structural damage to pier cross member
- Repairs to concrete on abutments

In October 2008, the Town applied for funding to the Ministry of Transportation as part of their Connecting Link Program. The application included addressing the additional deficiencies. In July 2009, the MTO approved the funding including the additional structural work. Due to the late announcement of the MTO Connecting Link funding, it was not possible to complete the design and tender all the bridge works to be completed for the 2009 construction season. In discussions with MTO Staff on how to carry over the funding to next year's construction season, it was recommended to issue two separate tenders. One tender for the underside of deck work was prepared for construction within the MTO's 2009 financial year end reporting deadline of February 2010, and another tender has been issued to construct the top of deck works within the MTO's 2010 financial year. When Council approved Report EPW.09.095, the engineering and contract administration fee was increased from **$177,130** to **$283,190** for additional engineering and contract administration fees related to the need to provide two separate contracts and the above noted deficiencies.

During the construction of Contract 1 for the underside of deck works, it was determined that the west bridge deck was in extremely poor condition. The condition was so poor that partial depth concrete removal and repair was deemed not feasible and a detailed inspection found that full depth removal and replacement of concrete and rebar was required. This work could not be carried out as part of Contract 1 as it would require lane closures with proper traffic controls including concrete barriers. Furthermore, the construction timelines were too tight to permit completion of works by February 2010 as required within the funding criteria. The majority of the west deck would require replacement and the most cost effective option would be to replace the entire west deck as part of Contract 2. The incorporation of the west deck replacement has significant impacts on the structural design and traffic staging design. It will also require additional onsite inspection. This additional design work and contract administration was not included in the Consultant's scope of work and therefore additional fees are warranted.

These additional engineering costs and construction inspection costs were included in the most recent funding application to the M.T.O. and are therefore fully funded. The Town has received confirmation that the full amount applied for, including increased engineering fees, has been approved.

The Ainley Group provided a revised engineering fee increase of **$54,380** for the additional design and contract administration of the Beaver River Bridge Rehabilitation for Contract 2. A breakdown for the fee increase is shown in Table 1 below.

TABLE 1	
Additional Engineering	**Amount**
Contract #2 Design	$38,490
Contract #2 Inspection (3 weeks)	$11,250
Contract #2 Contract Administration	$4,640
Total Increase in Engineering/CA Fees	**$54,380**

The revised Fee Schedule submitted by Ainley Group for their Engineering and Contract Administration Fees for the overall project is as follows:

TABLE 2				
Service Provided	**Original Amount**	**Previously Revised Amount EPW.09.095**	**Fee Increase**	**Revised Amount EPW.10.052**
2009 Contract #1 Design Fee		$39,435		$39,435
2009 Contract #1 -Contract Administration		$43,750		$43,750
Sub-Total (Contract #1)		**$83,185**		**$83,185**
2008/2009 Contract #2 Design Fee		$105,175	$38,490	$143,665
2010 Contract #2 - Contract Administration		$79,830	$15,890	$95,720
Sub-Total (Contract #2)	**$167,130**	**$185,005**	**$54,380**	**$239,385**
Sub-Total Engineering/Contract Administration Fee	**$167,130**	**$268,190**	**$54,380**	**$322,570**
Total Contingency	$10,000	$15,000		$15,000
Total Engineering/CA Fee	**$177,130**	**$283,190**	**$54,380**	**$337,570**

Engineering cost as a percentage of construction costs.

TABLE 3		
Total Cost of Project	**Original Scope**	**Revised Scope**
Total Construction Cost (Contract 1 plus Contract 2)	$1,378,903	$ 2,079,634
Total Engineering/Contract Administration Fees	$ 177,130	$ 337,570
Total Cost	**$1,556,033**	$ 2,417,204
Engineering as Percentage of Construction Cost	13%	16%

The design and contract administration of bridge work carriers a higher degree of difficulty and requires a higher level of expertise than a typical road reconstruction, therefore the engineering component of bridgework can be expected to be higher than the 10-12% usually experienced. The original Engineering Agreement worked out to be approximately 13% engineering fees as a percent of capital and therefore the 16% engineering component for this bridge work is not unreasonable given the multiple contracts, revisions and the degree of difficulty with the deteriorating structure. Staff recommend the increase in fees to The Ainley Group.

Construction Contract

The tender for "Beaver River Bridge Resurfacing – Contract 2 (2010-21-T-EPW)" was closed on Thursday, May 6, 2010 and a public tender opening took place on the same day. Twelve (12) companies obtained tender documents and 2 tenders were received. The bids included the required tender deposit cheque of $150,000, Agreement to Bond, signed and sealed copy of Addendum #1 and #2 and tender documents. The received bids were reviewed for accuracy by The Ainley Group to ensure they were mathematically correct.

The list of contractors and tender pricing is provided in Table 4 below:

Table 4
Beaver River Bridge Resurfacing – Contract 2 (2010-21-T-EPW)

No.	Bidders Name	Tendered Amount (not incl. GST)
	Engineering Estimate	$1,536,332.00
1.	Miller Paving Ltd.	$1,457,961.00
2.	Looby Builders Ltd.	$1,516,491.00

The Ainley Group have reviewed and recommend awarding the lowest compliant tender received was from Miller Paving Ltd. in the amount of $1,457,961.00 excluding GST. (Attachment #1)

The tender and award of this project is in compliance with the Town's Purchasing Policy. The award is endorsed by the Tender Award Committee consisting of the CAO, Director or Engineering and Public Works, and Manager of Purchasing or designates.

C. The Blue Mountains' Strategic Plan

Town's Strategic Plan Goal # 2 "Addressing the Town's Municipal Infrastructure needs" is in part satisfied by the recommended action.

D. Environmental Impacts

Green house gases will be produced as part of the construction activities. The Contractor will be required to participate in the Town's anti-idling initiative and appropriate measures will be taken to protect the river.

E. Budget Impact

In March 2007, the Town received a grant of $720,000 from the Ministry of Transportation (MTO) Connecting Link Program for use towards the final design and construction of the works. The Town applied for and received all funds for costs for works completed in 2009 under Contract 1 and for earlier design work. The Town applied for and received top up funding for 2010 works in the amount of $1,029,000. The total funding available for the works in 2010 is $1,950,400 as developed in Table 5 below. Included in this amount is Town contribution for banner poles, flag poles, river illumination/laser lighting, pedestrian railing and similar solely Town cost works to enhance the bridge.

Funding available for the 2010 works (Contract #2) is as follows:

TABLE 5	
2010 MTO Connecting Link funding (MTO)	$1,029,000
2007 MTO Lump Sum Contribution (MTO)	$ 720,000
2010 Beaver River Bridge Capital Budget (from Roads Capital Reserves)	$ 201,400
Total Funding/Contributions For 2010 Works	**$1,950,400**

Construction Cost for the 2010 works (Contract #2) is as follows:

TABLE 6	
Contract 2 Construction Cost (MTO's share)	$ 1,382,661
Contract 2 Construction Cost (Town's share)*	$ 75,300
Materials Testing	$ 30,000
Engineering**	$ 205,000
Advertising	$ 5,000
Contingency	$ 50,000
Total 2010 Construction Costs	**$ 1,747,961**

*Note: A portion of this cost will be submitted for MTO funding.
**Note: Approximately $133,000 of the $337,570 Engineering Costs have already been reimbursed through the MTO funding program.

2010 budget impact summary:

TABLE 7	
Total 2010 Funding/Contributions	$ 1,950,400
Total 2010 Construction Costs	$ 1,747,961
Surplus	**$ 202,439**

OVERALL MULTI-YEAR BUDGET IMPACT

TABLE 8	
2009 & 2010 Construction Costs (Contract 1as refunded by MTO)	$810,370
2010 Construction Costs (Contract 2)	$ 1,747,961
Total Construction Costs	**$2,558,331**
2009 Budget	$347,600
2010 Budget	$1,780,600
Total Beaver River Bridge Budget	**$2,128,200**
Multi-Year Budget Deficit	**$430,131**

Since the multi-year budget deficit is fully fundable by MTO, Staff recommend that the Capital Budget for the Beaver River Bridge Rehabilitation be increased by $430,131 from $2,128,200 to $2,558,331.

Any additional monies required to complete the works, should they be needed, are recommended to be frontend by the Town and will be applied for through a 2011 Connecting Link Funding request.

F. Attached

1. Beaver River Bridge Rehabilitation – Contract 2 Tender Report prepared by The Ainley Group, dated May 7, 2010.

Respectfully submitted,

Tom Gray
Engineering Design Technologist
Engineering and Public Works
Office: 519-599-3131 Ext 277
Fax: 519-599-3664
tgray@thebluemountains.ca

Tender Award Committee

Paul Graham CAO	Reg Russwurm Director of Engineering & Public Works	Sherri Adams Manager of Purchasing

EPW.10.054
Attachment #1

Ainley GROUP
CONSULTING ENGINEERS PLANNERS

Ainley & Associates Limited
280 Pretty River Parkway, Collingwood, Ontario L9Y 4J5
Tel: (705) 445-3451 • Fax: (705) 445-0968
E-mail: collingwood@ainleygroup.com

"By E-mail (Original By Mail)"

May 7, 2010

File No. 108093

Mr. Thomas Gray, C.E.T.,
Senior Engineering Technologist
Engineering & Public Works Department
Town of The Blue Mountains
26 Bridge Street, P.O. Box 230
Thornbury, Ontario
N0H 2P0

Ref: Town of The Blue Mountains
Beaver River Bridge Rehabilitation Contract 2
Contract No. TBM-2010-21-T-EPW

Dear Tom:

Tenders for the above noted project were closed at 2:00 p.m. on Thursday, May 6, 2010. Twelve (12) companies (General Contractors, Sub-contractors and Suppliers) obtained tender documents for the project. Two (2) tenders were received and opened publicly at the municipal office in the presence of Town staff, Ainley and Associates and representatives from several Contractors.

Following the tender opening, all bids were checked for accuracy. There were minor mathematical errors in one of the Tenders but this did not change the order of standing. A copy of the List of Plan Takers and Tender Summary showing the tender amount is enclosed for reference. All bids included a tender deposit cheque ($150,000), an Agreement to Bond, Addendum 1 and Addendum 2.

The low tender was received from Miller Paving Ltd. from Markham, Ontario at a total of $1,530,859.05, which includes GST.

In summary, based on the Contractor's work experience and our favorable work experience on similar projects, it is recommended that the Town accept the low bid of Miller Paving Ltd. and award the contract to them at their tender price bid of $1,530,859.05, which includes GST.

We trust this is satisfactory. However, if you have any questions, please do not hesitate to call.

Yours truly,

AINLEY & ASSOCIATES LIMITED

Mike Neumann, P.Eng.
Vice-President, Transportation Engineering

c.c Reg Russwurm, MBA, P.Eng.
Director of Engineering & Public Works Department -Town of the Blue Mountains

STAFF REPORT: Engineering & Public Works Department

REPORT TO:	**Infrastructure & Recreation Committee**
MEETING DATE:	**May 11, 2010**
REPORT NO.:	**EPW.10.057**
SUBJECT:	**Unsolicited Tabloid Delivery**
PREPARED BY:	**Jim McCannell, Manager of Roads and Drainage Division**

A. Recommendations

THAT Council direct Staff to contact local publishers regarding concerns with unsolicited tabloid delivery, together with a request for response to the concerns, as detailed in Staff Report EPW.10.057, entitled “Unsolicited Tabloid Delivery”.

B. Background

At some point in time, the unsolicited, free delivery of tabloid newspapers and advertising flyers began within the former Town of Thornbury, former Township of Collingwood and subsequently the Town of The Blue Mountains.

Concerns began to be expressed by residents regarding accumulation of refuse and litter, particularly at weekend and seasonal residences. Further concerns were expressed by residents and operators regarding damage to snowblowers from unsolicited and buried tabloids placed in driveways and parking areas during the winter season. The tabloids are also found in roadside ditches and on municipal sidewalks, which result in blocked drainage, and damage to and downtime for municipal snow clearing equipment.

On January 8, 2001, The Blue Mountains Council considered the following Motion:

Moved By: *R.B. Waind* *Seconded By:* *Duncan R. McKinlay*

THAT this Council hereby confirms and declares that the unsolicited and negligent delivery and deposit of newspapers, tabloids and circulars by way of drive-by drop-off and / or the throwing or dropping onto any property within The Blue Mountains shall be considered to be littering and henceforth such activity will be actively pursued by agents of the municipality for the prosecution and conviction of those persons so littering.

In speaking to the Motion, it was suggested publishers be first written and the concerns of the Town made known, as such dialogue might prove to solve the situation. Council concurred with this proposal and the matter was tabled. Correspondence was then sent to the publishers of the Collingwood Enterprise-Bulletin This Week and Collingwood Connection expressing the concerns of Council, shown as Attachment 1.

Council minutes of January 22, 2001, show correspondence was received from the publisher of the Collingwood Enterprise-Bulletin This Week and considered by Council. The minutes indicate Council noted the publisher appeared sincere in efforts to avoid nuisance delivery.

Council minutes of February 5, 2001, show correspondence was received from the publisher of the Collingwood Connection and considered by Council. The minutes indicate Council concurred the matter continue to be monitored for any concerns.

Copies of these two correspondence items could not be located.

The former Clerk noted it was his understanding the publishers stated they would direct delivery contractors to deliver to a front door where a mailbox did not exist. The publishers further stated they would request delivery contractors to cease delivery to any address where the resident contacted the publisher with such a request.

Town solicitor Paul Shaw was asked on January 10, 2001, to review Town By-law 99-10, being a By-law to prohibit littering, regarding enforcement and conviction in the case of unsolicited delivery. There is no evidence of a response from Mr. Shaw in the Littering By-law file. The former Clerk noted it was his understanding the publishers considered delivery personnel to be private contractors responsible for delivery practices, rather than the publisher.

There are no other records in the matter until the following advertisement for the newspapers prepared on December 4, 2002. A similar ad may have been placed in 2001 following Council's previous consideration of the matter, but it cannot be found in individual computer records.

Unsolicited Newspaper Delivery

Those residents who do not wish to receive unsolicited newspaper delivery or who wish to cancel delivery for the winter may call the following numbers for such service:

Collingwood Connection	*Doug Rowe, 444 1875*
Enterprise-Bulletin This Week	*April McLean, 445 4617, ext 36*

Snow blower operators should request residents to call directly for cancellation of delivery, or obtain authorization to do so on their behalf.

The next record in the matter is a 2006 e-mail from a resident to the Town, requesting the unsolicited delivery cease. Staff notes indicate the delivery concerns appeared to have been mitigated for a period but perhaps the situation had regressed, depending on the contractor.

Council might direct Staff to contact local publishers regarding concerns with unsolicited tabloid delivery, together with a request for response to the concerns.

C. The Blue Mountains' Strategic Plan

Reduction or elimination of unsolicited delivery of tabloid newspapers and advertising flyers would represent efforts to further the Town's Strategic Goal#3, "Preserving and enhancing natural and environmental features and cultural heritage of the community".

D. Environmental Impacts

Efforts to reduce unsolicited distribution would lessen the appearance of refuse and litter in the community.

E. Budget Impact

None

F. Attached

1. Correspondence from the Town to tabloid publishers, January 10, 2001.

Respectfully submitted,

Jim McCannell
Manager of Roads and Drainage Division
Engineering and Public Works
Office: 519-599-3131 Ext 271
Fax: 519-599-3664
jmccannell@thebluemountains.ca

Reg Russwurm
Director of Engineering and Public Works

EPW.10.057 Attachment #1

AH.1

January 10, 2001

The Enterprise-Bulletin
77 St. Marie Street
P.O. Box 98
Collingwood, ON
L9Y 3Z4

Attn: John Park, Circulation Manager

Re: Unsolicited Delivery of Newspapers, Tabloids and Circulars

I am writing with regard to the above-noted and following Council discussion of same at the regulary scheduled meeting of January 8, 2001. There have been complaints lodged with the municipality, in the past and this year, as to unsolicited and negligent delivery and deposit of newspapers, tabloids and circulars by way of drive-by drop-off and / or the throwing or dropping onto property within The Blue Mountains.

Previous concerns were with regard to littering, but during this winter season complaints have also been received from snow removal operators, with such material being drawn into and causing failure of snowblowers. Given the substantial snowfall this season, failure of such equipment is of importance to residents and operators, and therefore Council. Council has noted previous concern about such material gathering in roadside ditches as litter.

Prior to engaging by-law enforcement procedures under By-law No. 99-10, being a By-law to prohibit the littering of private or municipal property, Council has directed that you be contacted and requested to provide a solution in this matter.

Should you have any questions please feel free to contact this office.

CORPORATION OF THE TOWN OF
THE BLUE MOUNTAINS

Stephen Keast, Town Clerk

cc Members of Council

January 10, 2001

Collingwood Connection
25 Second St.
Collingwood, ON
L9Y 1E4

Attn: Doug Rowe, Circulation Manager

Re: Unsolicited Delivery of Newspapers, Tabloids and Circulars

I am writing with regard to the above-noted and following Council discussion of same at the regulary scheduled meeting of January 8, 2001. There have been complaints lodged with the municipality, in the past and this year, as to unsolicited and negligent delivery and deposit of newspapers, tabloids and circulars by way of drive-by drop-off and / or the throwing or dropping onto property within The Blue Mountains.

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Prior to engaging by-law enforcement procedures under By-law No. 99-10, being a By-law to prohibit the littering of private or municipal property, Council has directed that you be contacted and requested to provide a solution in this matter.

Should you have any questions please feel free to contact this office.

CORPORATION OF THE TOWN OF
THE BLUE MOUNTAINS

Stephen Keast, Town Clerk

cc Members of Council

C.4

STAFF REPORT: ENGINEERING & PUBLIC WORKS SOLID WASTE DIVISION

REPORT TO:	**Infrastructure & Recreation Committee**
MEETING DATE:	**May 11, 2010**
REPORT NO.:	**EPW.10.058**
SUBJECT:	**Use of Landfill Reserve for Inactive Site Study**
PREPARED BY:	**Jeffery Fletcher, Manager of Solid Waste and Environmental Initiatives**

A. Recommendations

THAT Council receive Staff Report EPW.10.058 "Use of Landfill Reserve for Inactive Site Study"; and

THAT Council support the completion of a study to review the inactive landfill sites in Thornbury and Clarksburg, which will provide information required for the new Comprehensive Zoning By-law.

AND FURTHER THAT Council approve the consultant costs of $14,000 (excluding GST), plus excavation expenses of $1,000 for a total of $15,000 (excluding GST) for the Inactive Landfill Sites Study from the Landfill Reserve.

B. Background

The Town Planning and Building Services Department reported to Council in December 2009 and March 2010 regarding Town Official Plan setback provisions related to known landfill sites. The Official Plan stipulates that no development shall occur within 500 metres of an existing or known landfill without a study being completed in accordance with the provisions of the Ministry of Environment's Guideline D-4, "Land Use On or Near Landfills and Dumps". As a Zoning By-law must be consistent with the direction of the Official Plan, this provision is typically implemented by way of placing the lands within the 500 metre radius into a Holding "h" Zone. Given that the County of Grey is the approval authority as it relates to local Official Plans, Town Staff consulted with County Planning Staff as to the implementation of this provision.

The County advised Town Planning Staff to conduct a study that could better define a potential area of influence and effectively reduce the default 500 metre radius setback. Reduction of the 500 metre Holding Zone will reduce the requirement for lot specific D-4 studies by individual property owners within the 500 metre radius of the inactive landfill sites.

Following a meeting with Planning, Engineering and Financial Service's Staff, it was determined that use of the Landfill budget would be an appropriate source of funding for this study.

After the request for quotation process, outlined below, the actual cost of the work was realized to be $14,000, much higher than originally estimated and requiring Council's approval.

The Planning Department developed and issued a request for quote for the study of the known inactive landfill sites in Thornbury and Clarksburg. This study will inform the decision making process for the proposed zoning by-law and is primarily a "desk top" exercise – reviewing existing geological, water table and topographic information.

Three engineering firms were invited to submit a proposal related to this work on the two inactive sites. R.J. Burnside and Associates Limited (Burnside) was selected as the firm to undertake this work. The Staff selection committee determined that Burnside had the best combination of price and ability to perform the work. Burnside's quote totalled $14,000 excluding GST. Staff is recommending that Council support the use of landfill reserves to cover the cost this study.

C. The Blue Mountains' Strategic Plan

Town's Strategic Plan Goal #1 "Managing growth to ensure the ongoing health and prosperity of the community".

D. Environmental Impacts

This study is a beneficial start to an investigation into the extent and condition of these known but largely undocumented inactive landfill sites. Following this initial study a program of site monitoring may be put into place to further examine the Sites' influence on the adjacent environment on a continual basis.

E. Budget Impact

R.J. Burside and Associates Limited have been retained at a cost of $14,000.00 (exclusive of GST). In addition, the use of a contract excavation service for test pits will be required at a cost of $1,000.00. This project was un-budgeted for 2010 and Town Staff are proposing to utilize funds from the Landfill Site Reserve. As of the end of 2009 the balance in the Landfill Site Reserve was $194,474. Based on the 2010 budget process the Landfill Site Reserve was to be used as follows for the Landfill Disposal Capacity Addition project:

2010	$0
2011	$50,000
2012	$50,000
2013	$50,000
2014	$50,000

F. Attached

None

Respectfully submitted,

Jeffery Fletcher	Reg Russwurm
Manager of Solid Waste and Environmental Initiatives	Director of Engineering and Public Works

For more information, please contact:
Jeffery Fletcher
jfletcher@thebluemountains.ca
(519) 599-3131 x238

Minutes - Museum Advisory Committee

MEETING DATE: **March 22, 2010 11:00am**

LOCATION: **Town Office - Committee Room**

PREPARED BY: **Jody Hodgkinson, Administrative Assistant, Recreation**

A. Call to Order

- Chair Bob Waind called the meeting to order.
- In attendance; Suzanne Purdy, Rob Potter, Bob Waind, Jody Hodgkinson and Eleanor Pask

- Approval of Agenda

  Moved by: Rob Potter Seconded by: Eleanor Pask

  THAT the Agenda of March 22, 2010 be approved as amended. Carried.

- Declaration of Pecuniary Interest – None at this time
- Previous Minutes

  Moved by: Eleanor Pask Seconded by: Rob Potter

  THAT the Minutes of February 23rd, 2010 be adopted as amended, Carried.

B. Deputations / Presentations

N/A

C. Staff Reports

N/A

D. Correspondence

N/A

E. New and Unfinished Business

- Depot Publications – Suzanne is working on obtaining quotes for printing. Charles Garrad has declined as Editor for the publication. – Bob Waind noted that perhaps we could sell ad space. – There was some discussion on copyright. Suzanne noted that this publication should be in print by Christmas.
- Clarksburg Sesquicentennial – moving along – Rob Potter did discuss a float with SMT and there is no funding for a float – Rob noted that perhaps the volunteers could organize a float.
- Newsletter - Rob Potter is working on more articles and would like 3 or 4 pictures. Eleanor and Suzanne will complete articles on the volunteers and the lecture series. Bob Waind to prepare a president's message.
- Volunteer Program – Eleanor noted that more signage has been prepared by the volunteers along with corresponding cue cards. Volunteer Tea – **Note** that the date for the tea has been changed from March 27th to April 24th. Suzanne has booked the school house
- Front Foyer - There was some discussion on bringing the mantel up from storage downstairs and placing it somewhere near the donor plaque. Committee Members should meet at the Depot and have a look at placement of the mantel.
- Lilac Festival - Proposed date of May 29th, 2010. Suzanne mentioned folk singer, Kevin Moyse – songs about shipwrecks – he would sing free of charge. Rob Potter – noted that we should start small – no formal speeches, just cookies and tea and coffee. There was some discussion on getting vases with Depot logo for sale – It was also mentioned that perhaps lilac seedlings could be sold by donation.

Eleanor is going to draft up a plan for the Volunteer Tea.

Suzanne is hosting the Museum Network on April 19th, 2010 at the Craigleith School House from 9:30 am until 3pm Committee members are invited should they wish to attend.

Suzanne noted that the ad for the new Museum Advisory Committee Members would be going out in the paper for August as per Shawn Everitt. Bob Waind strongly objected to it going out in the paper so early. Bob suggested that we wait until the new council is in place.

There was some discussion on correspondence that Suzanne had received from Bev and Bob Drexler and their request to put a concession truck at the Depot for 2010 summer season. Jody put forth a copy of By-law 2008-60 regarding parklands, trails, open space properties and other public facilities owned and or leased by the Town. Suzanne felt that this would be a great idea but would discuss further with Shawn Everitt.

F. Next Meeting Date

April 20, 2010 @ 11:00 am – Committee Room Town Hall

G. Adjournment

Moved by: Rob Potter Seconded by: Eleanor Pask

THAT this meeting do now adjourn, Carried.

D.2

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT

REPORT TO:	**Infrastructure and Recreation Committee**
MEETING DATE:	**May 11, 2010**
REPORT NO.:	**EPW.10.055**
SUBJECT:	**Organics Waste Diversion Preliminary Analysis**
PREPARED BY:	**Adam McMullin, Environmental Initiatives Coordinator**

A. Recommendation

THAT Council receive Staff Report EPW.10.055 entitled "Organics Waste Diversion Preliminary Analysis" for their information.

B. Background

The purpose of this Staff Report is to present the preliminary work to date on the Organic Waste Diversion business case project and receive feedback on all the potential scenarios and elements considered in the analysis ahead of the public information centre scheduled May 13, 2010. This report is based upon a preliminary business case document completed by the consulting firm 2CG Inc.

Moving forward, Staff will revise and modify the business case based on feedback from the Infrastructure and Recreation Committee, Council and the public to present a finalized business case with a preferred solution.

Introduction

In June of 2007 Town Staff prepared and submitted a funding application to the Federation of Canadian Municipalities' (FCM), Green Municipal Fund (GMF). That application was accepted by the FCM selection committee and approved for the full amount of the grant request for $253,500.

The application was in support of two main studies:

- An Integrated Community Sustainability Plan and Greenhouse Gas Emissions Plan and;
- A Long Term Solid Waste Plan, including a organics collection feasibility study and organics waste diversion business case.

In July 2008, the Town completed the Long Term Solid Waste Plan to address the challenge of ensuring that adequate waste management capacity is available for the Town's residential, agricultural, industrial, commercial and institutional, construction and demolition sectors for the next 20 to 30 years.

As of January 2010, the Town's landfill site has approximately 2 years of remaining capacity based on current disposal rates. The plan identifies opportunities to improve waste diversion through the optimization of the current system and expansion of additional diversion opportunities with a focus on organic waste. Aligning with the provincial government's targets, the Town has aimed to divert 60% of the residential waste from landfill. Diverting organic materials from the waste stream will help the Town achieve this goal.

Within the GMF application, funding was approved to initiate a curbside collection organics feasibility study and complete a comprehensive business case to assess the feasibility of diverting the organic waste stream from landfill.

Organics Curbside Collection Feasibility Study

The Town commenced the study on June 8th, 2009 with a pilot organics collection program to run for nine months until February 5th, 2010. The objective of the pilot was to acquire data and information relating to the operational and logistical requirements of providing curbside organic waste collection services for the community. A Business Case analysis is to be undertaken to consider cost, equipment needs, contract obligations, organic waste processing and handling techniques, staff requirements and so forth. Additionally, the study provided an opportunity to assess the public perception relating to the green bin program and to gauge the level of resident desire to offer such as service in the future.

Study Details

In total, the pilot program included 589 participants; with 278 in Thornbury (including 25 businesses), 225 in Craigleith and 86 condominium units (24 in Bayside Villa in Thornbury and 62 Hertiage Corners in Craigleith).

The Town provided each participant with an organic waste kit that included the following items:

- Roll-out green bin
- Kitchen catcher waste bin
- Town waste management brochure
- Paperbag liners
- Greenbin start-up fact sheet/green bin sticker

The participating condominium developments, Heritage Corners (GCC#38) & Bayside Villa (GCC #11), received large totes for their common waste storage areas. Each resident within the condominiums received a kitchen catcher waste bin.

Organic collection services were provided for the selected areas that correspond with regular garbage and recycling pick-up. Craigleith was serviced on Monday and Thornbury on Thursday. Miller Waste was contracted to provide collection services for the duration of the pilot.

Organic waste was processed at the Town's waste disposal site by Town staff using the compost pad. Collected and delivered organic waste was mixed with carbonaceous materials (woodchips) and composted using an open windrow technique. The windrow was monitored daily to ensure the materials were composting properly.

Town Staff held a Public Information Centre May 28 for study participants, interested citizens and neighbouring landowners to the landfill site. Additionally, a survey was distributed to participants in late December to gather feedback on the pilot project.

Study & Survey Results

In total, 18,665 kg of curbside organic waste was collected during the pilot study, 6,750 kg and 11,915 kg from the Craigleith and Thornbury pilot areas respectively. On average, 102 setouts were collected weekly, 36 in Craigleith and 66 in Thornbury.

Survey's were distributed to 503 participants (condo participants were excluded) and 162 were returned completed. The following summarizes the responses of the returned, completed surveys:

- 51% and 48% surveys were returned by Thornbury and Craigleith participants respectively
- 66% of survey participants identified themselves as fulltime residents
- 72% of survey participants indicated they were participating in the pilot
- 71% of survey participants indicated that they were satisfied with the pilot program, while 14% were unsatisfied with the program
- 76% of survey participants indicated that the service should be made available to everyone and 10% indicating otherwise

Overall, throughout and following the pilot, public response to the service was generally positive. There were complaints relating to odour, nuisance animals, and other issues typically encountered by new users of a green bin pilot program. However, once the program was underway, the frequency of these complaints reduced as participants either employed mitigation techniques or discontinued participation.

Business Case

A business case exercise will examine the feasibility of implementing organics collection and processing services for the community. A number of different scenarios will be considered to provide a comprehensive overview of the potential avenues for the Town to pursue. There are four scenarios being considered;

1. Baseline: business-as-usual (BAU)
2. Off-site Waste Disposal: exportation of residential waste for landfilling at a third party site
3. Community Based Service: collection and processing of residential organic waste at the Town's waste disposal site
4. Expanded Service: providing community based service (scenario three) and importing locally generated commercial, institutional and industrial organic waste

The following summarizes the preliminary results of the efforts.

Scenario 1: Business-As-Usual (Baseline, BAU)

This scenario represents the current situation. The Town would continue to collect waste from the curb for disposal at the Town's landfill. There would be no separate collection and composting of organic waste.

In total the Town processed approximately 7,400 tonnes of waste in 2009. This tonnage is comprised of the following type:

- 1,900 tonnes residential waste, containing an estimated 600 tonnes of organic waste materials
- 2,900 tonnes of commercial and construction/demolition waste
- 900 tonnes of yard waste
- 850 tonnes of blue box materials
- 850 tonnes of other diverted materials (asphalt, hazardous waste, electronics, tires, etc.)

Table 1.1 summarizes the current waste management cost associated with each waste stream processed at the waste disposal site.

Table 1.1: Waste Management Cost

Item	Tonnes/year	Annual Cost	$/tonne
Residential Waste Collection	*Note	$249,809	$131
Landfill Operation	4,800 (1,900 residential, 2,900 commercial)	$267,175	$56
Composting (leaf & yard waste)	**900	–	–
Blue Box	850	$248,047	$292
Other Waste Diversion	850	$46,191	$54
	7,400	**$811,222**	**$110**

*Note: 1,900 tonnes of residential waste was collected in 2009. Line item is included to separate collection costs from landfill operation.

**Note: Composting costs are included in landfill operation costs.

Revenues from the landfill operation and blue box have been imbedded in the annual cost calculations. Table 1.2 summarizes revenue sources from the various waste streams processed at the waste disposal site. Lawn and yard waste costs are embedded within the landfill operation cost, but is estimated at $20,000. The cost associated with potential landfill expansion has not been included in the BAU scenario. However, costing relating to expansion scenarios is assessed under Section D: Budget Impact of the report.

Table 1.2: Revenue Stream Summary

Revenue Streams			
Item	**Tonnage**	**Revenue**	**$/Tonne**
Collection (bag tags)	1900	$9,000	$4.74
Landfill Operation (tipping fee)	4800	$258,000	$53.75
Waste Diversion (WDO grant, WEE, composter sales, other,)	1700	$103,500	$60.88
Blue Box Program (commodities)	850	$72,450	$85.24

This business-as-usual (BAU) scenario will be used as a baseline to compare with the other scenarios. Under the BAU scenario, residential waste diversion will remain under 50%, and the goal of 60% will not be achieved.

Sensitivity Analysis
Each scenario analysis considers various options that influence the cost. Landfill operating expenses are split between fixed and variable costs. Waste diversion from the landfill will decrease the quantity of tonnage processed that will impact the variable costs of operation. To consider these impacts, a basic sensitivity analysis has been included within each costing scenario. This analysis produces two separate costs, one that assumes the landfill operating cost remains fixed, regardless of the quantity of waste processed at the landfill. This method provides a conservative cost estimate. The other sensitivity analysis output assumes that the current landfill operating cost per tonne remains fixed, regardless of the quantity of tonnage processed.

The sensitivity analysis provides the high and low cost scenarios relating to landfill operating cost. All calculations in this report are based on the conservative method, the sensitivity analysis calculates the less conservative estimate and is expressed in brackets in the tables.

Scenario 2: Off-Site Waste Disposal

Within this operating scenario, residential waste is not disposed of at the Town's landfill (commercial waste will still be received for disposal on site). Residential waste is either directly hauled for disposal at another location, or the landfill site is utilized as a transfer station. Three options have been considered; one-steam collection and disposal at the proposed Biowaste Treatment Technologies facility; two-stream collection and disposal at a regional landfill site; three-stream collection and disposal at a regional landfill site. In all scenarios it is assumed that the landfill remains open for commercial use and waste diversion activities (hazardous depot days).

Three options within the scenario are summarized as follow:

2.1) Single Stream Collection and Disposal

All residential waste is collected curbside in a single stream (all materials including recyclables, excluding leaf and yard waste) and transported and disposed of at a single stream facility such as the proposed Biowaste Treatement Technologies facility in Dundalk.

For this scenario only the costing for the direct hauling option has been included. Table 2.1 summarizes collection and transfer costs associated with this scenario:

Table 2.1: Cost Summary

	Biowaste Direct Haul
Collection	$130
Transfer Cost	$46
Tipping Cost	$50
Residual Tipping Fee (revenue)	-$10
$/tonne (2,800)	**$216**
Total Annual Cost	**$604,333**

Scenario assumptions:

- 2,800 tonnes/year of residential waste (1,900 tonnes of waste and 900 tonnes of recyclable materials)
- assume current quantities, 2,900 tonnes/year, of commercial waste and subsequent revenue are received at the Town's waste disposal site
- collection cost is $130/tonne
- transfer cost of $46/tonne based on the following:
    - 2.5 hour round trip to Biowaste facility in Dundalk (including weighing and unloading) for direct haul in waste packer
    - $110/hour rate for direct haul (6 tonne loads) of waste to Biowaste facility
- $50/tonne tipping fee
- Assume 20% residual waste sent back to landfill for $50/tonne (paid by offsite facility manager to Town)

Table 2.1.A compares costs associated with Scenario 2.1. and the BAU scenario.

Table 2.1.A: BAU vs. Scenario 2.1. Cost Comparison

Item	Business As-Usual (Baseline)			Scenario 2.1 (Biowaste)		
	Tonnes / year	**Annual Cost**	**$/tonne**	**Tonnes / year**	**Annual Cost**	**$/tonne**
All Waste Collection, Transfer and Tipping	1,900	$249,809	$131	2,800	$604,333	$216
Landfill Operation	4,800	$267,175	$56	2,900	$267,175	$92
Composting (leaf and yard waste)	900	-	-	900	-	-
Blue Box	850	$248,047	$292	0	$0	$0
Other Waste Diversion	850	$46,191	$54	850	$46,191	$54
Scenario Annual Cost	-	-	-	***7,450**	**$917,700**	**$123**
Sensitivity Analysis	-	-	-	***7,450**	**$811,943**	**$109**
Current Annual Costs	**7,400**	**$811,222**	**$110**			
% difference (cost)			n/a			13.1% (0.09%)

*Note: number higher due to rounding. Value in brackets represents less conservative cost sensitivity estimate.

Under this scenario, all revenues and cost associated with the blue box are eliminated. Revenue from the residual waste received from offsite facility offsets the operating cost of collection, transfer and tipping.

2.2) Two Stream Collection and Disposal

This scenario would entail collecting wastes in two streams (waste and blue/grey box) and exporting both streams for final disposal or processing. Option 1 (direct haul) assumes that wastes would be exported to a third party transfer station and disposed in another landfill. Option 2 (transfer station) assumes that the Town's landfill will act as a transfer station, where waste will be transferred by a third party to a third party landfill for disposal. Recyclables would be collected and processed as currently practiced within the Town.

Tables 2.2.A & 2.2.B summarizes the cost associated with this scenario, considering both direct haul and the transfer station options.

Table 2.2.A: Summary of Costs Direct Haul

Item	**Option 1 Direct Haul**
Collection	$130
Transfer Cost	$9
Tipping Cost	$120
$/tonne	**$259**
Total Annual Cost	**$492,417**

Table 2.2.B Summary of Costs Transfer Station

Item	**Option 2 Transfer Station**
Collection	$130.00
Capital Cost	$10.32
Loading Cost	$1.50
Transfer Cost	$88.00
Tipping Cost	$70.00
$/tonne	**$299.82**
Total Annual Cost	**$569,658**

Assumptions:

- 1,900 tonnes/year of residential waste generated for disposal
- assume current quantities, 2,900 tonnes/year, of commercial waste and subsequent revenue are received and disposed at the Town's landfill
- Collection cost is $130/tonne
- 0.5 hour one-way trip to third party transfer facility in Owen Sound for direct haul in waste packer
- $110/hour rate for direct haul (6 tonne loads) of waste to transfer facility
- $120/tonne tipping fee at third party transfer facility
- Transfer of waste to landfill takes approximately 8 hours (return trip).
- $110/hour rate for transfer in roll-off (10 tonne loads)
- Tipping fee at landfill is $70/tonne
- Capital cost associated with equipment and site modification to enhance current sawtooth design for larger capacity transfer station.

Table 2.2.C Compares costs associated with Scenario 2.2 versus BAU scenario.

Table 2.2.C: BAU vs. Scenario 2.2. Cost Comparison

Item	Business As-Usual (Baseline)			Scenario 2.2 (option #1) Direct Haul to Third Party Transfer Station			Scenario 2.2 (option #2) TBM Landfill Utilized as a Transfer Station Option		
	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne
Waste and Organics (Green Bin) Collection, Transfer and Tipping	1,900	$249,809	$131	1,900	$492,417	$259	1,900	$569,658	$299
Landfill Operation	4,800	$267,175	$56	2,900	$267,175	$92	2,900	$267,175	$92
Composting (leaf and yard waste)	900	-	-	900	-	-	900	-	-
Blue Box	850	$248,047	$292	850	$248,047	$292	850	$248,047	$292
Other Waste Diversion	850	$46,191	$54	850	$46,191	$54	850	$46,191	$54
Scenario Cost	-	-	-	**7,400**	**$1,053,830**	**$142**	**7,400**	**$1,131,071**	**$153**
Sensitivity Analysis	-	-	-	**7,400**	**$948,073**	**$128**	**7,400**	**$1,025,314**	**$139**
Current Costs	**7,400**	**$811,222**	**$110**	**-**	**-**	**-**	**-**	**-**	**-**
% difference [1]	n/a			**29.9% (16.9%)**			**39.4% (26.4%)**		

[1]Value in brackets represents less conservative cost sensitivity estimate.

2.3) Three Stream Collection and Disposal

Under this scenario, three waste streams (household waste, organic waste and blue/grey box materials) are each collected. The household waste and organics are transported to the Town's transfer station. Organic waste is then transferred to a processing centre and the waste is sent to a disposal facility (location assumed in Southwest Ontario). Recyclables would be collected and processed as currently practiced within the Town. Table 2.3 summarizes the cost associated with this scenario.

Table 2.3: Summary of Cost

	Scenario 2.3
	$/Tonne
Co-Collection (Waste & Organics)	$140
Waste (1,300 tonnes)	
Transfer and Tipping	$171
Organics (600 tonnes)	
Transfer and Tipping	$186
Overall Transfer and Tipping	**$176**
$/tonne	**$316**
Total Annual Cost	**$600,417**

Assumptions:
- 1,900 tonnes/year of waste and organics
- assume current quantities, 2,900 tonnes/year, of commercial waste and subsequent revenue are received and disposed at the Town's waste disposal site
- 1,300 tonnes/year or 25 tonnes/week of residential waste generated for disposal
- 600 tonnes or 11.5 tonnes/week of residential organics waste generated for composting
- Assume co-collection of waste and organics at a cost of $140/tonne
- Transfer of waste to landfill takes approximately 8 hours (return trip)
- Transfer of organics to compost facility takes approximately 4 hours (return trip)
- $110/hour rate for transfer in roll-off (6 tonne loads)
- $70/tonne tipping fee at landfill
- $100/tonne tipping fees for organics

Table 2.3.A Compares costs associated with Scenario 2.3 versus BAU scenario.

Table 2.3.A - Comparison with Baseline

Item	**Business As-Usual (Baseline)**			**Scenario 2.3 – Three Stream Collection TBM Landfill Site Utilized as a Transfer Station**		
	Tonnes / year	**Annual Cost**	**$/tonne**	**Tonnes / year**	**Annual Cost**	**$/tonne**
Waste and Organics (Green Bin) Collection, Transfer and Tipping	1,900	$249,809	$131	1,900	$600,417	$316
Landfill Operation	4,800	$267,175	$56	2,900	$267,175	$92
Composting (leaf and yard waste)	900	–	–	900	–	–
Blue Box	850	$248,047	$292	850	$248,047	$292
Other Waste Diversion	850	$46,191	$54	850	$46,191	$54
Scenario Cost	-	-	-	**7,400**	**$1,161,830**	**$157**
Sensitivity Analysis	-	-	-	**7,400**	**$1,056,073**	**$143**
Current Costs	**7,400**	**$811,222**	**$110**	-	-	-
% difference[1]	n/a			**43.2% (30.2%)**		

[1]Value in brackets represents less conservative cost sensitivity estimate.

Scenario 2 Cost Comparison and Summary
Table 2.4 summarizes the costs associated with each sub-scenario within Scenario 2 and the BAU scenario.

Table 2.4 Scenario 2 Costing Comparison

	BAU	Scenario 2.1	Scenario 2.2 (option 1)	Scenario 2.2 (option 2)	Scenario 2.3
Annual Cost	$811,222	$917,700	$1,053,830	$1,131,071	$1,161,830
Sensitivity Cost	n/a	$811,943	$948,073	$1,025,314	$1,056,073
$ / Tonne	$110	$123 ($109)	$142 ($128)	$153 ($139)	$157 ($143)
Difference $	n/a	$106,478 ($721)	$242,608 ($136,851)	$319,849 ($214,092)	$350,608 ($244,851)
Difference %	n/a	13.1% (0.09%)	29.9% (16.9%)	39.4% (26.4%)	43.2% (30.2%)

Value in brackets represents less conservative cost sensitivity estimate.

These sub-scenarios are included in the business plan evaluation to assess the costs related to transportation and transfer of waste, while considering different potential obstacles or opportunities (ie Biowaste facility) by the Town. Note that these scenarios do not consider the total closure of the landfill site. The calculations have assumed the continued operation and reception of commercial waste with corresponding revenue to offset the cost associated with other aspects of waste management. It is unlikely that scenario 2.1 (Biowaste) will be a feasible option in the near future since the project remains in the preliminary planning stage. Scenarios 2.2 & 2.3 are viable options, however, at an additional cost.

These scenarios significantly reduce the quantities of waste disposed of in the landfill site and thus, extend the lifespan of the current landfill. This is discussed further under Section D – Budget Impact.

Scenario 3: Community Based Service

Within Scenario 3 the Town would maintain current services levels and include organic curbside collection to all residences within the community. Collected organic waste would be processed and composted at the Town's landfill site, in conjunction with current organic composting efforts (delivered leaf and yard waste). No commercial organic waste would be accepted. The landfill site would continue to accept commercial and demolition/construction waste.

All collected organic waste would be composted at the Town's compost facility. Currently the Town has a 95m by 60m composting area (0.6 ha or 1.5 acre) it uses for composting leaf and yard wastes. On this area there is approximately 0.27 ha or 0.7 acres of asphalt pad space. The pad was designed to accommodate approximately 1,000 tonnes/year of feedstock. However, it was estimated that the pad could accommodate up to 2,000 tonnes/year. This assumes all feedstocks will be on the pad for up to one year.

On average, 500 tonnes/year of leaf and yard waste are managed on site. It is estimated that 600 tonnes/year of residential green bin waste can be captured. This would total 1,100 tonnes/year.

There are three technologies that have been considered to compost the materials:

1) Outdoor receipt and open windrow composting of organic waste;
2) Transform Envirotech Inc. – Small batch composting system
3) GORE Cover Systems – On floor composting system

Assumptions:

- 1,900 tonnes/year of waste and organics;
- Assume co-collection of waste and organics and co-collection cost is $140/tonne;
- 1,300 tonnes/year or 25 tonnes/week of residential waste generated for disposal;
- 600 tonnes/year or 11.5 tonnes/week of residential organic waste generated for composting;
- Assume that 500 tonnes of leaf and yard waste are received at the composting facility;
- Existing compost pad an asset and all costs have been paid;
- Site will require amendment of Certificate of Approval and may require Certificate of Approval (Air and Noise) and Ontario Water Resources Act (OWRA) approval;
- The current costs to manage leaf and yard waste are $20,000 (these are embedded within the landfill operations costs). These costs are subtracted from new costs to process green bin waste;
- The site would be operated by a part-time operator (16 hours/week) with management support (2 hours/week);
- Use existing landfill loader for composting operations (i.e. 50% of available loader time);
- Assume that approximately 1,093 m^3/year of compost would be produced;
- Assume value of compost at $5/yard or $5 per 0.76$m^3$
- Cost of green bins, promotions and education

Option 3.1: Open Windrow

The green bin waste would be received outdoors. It would immediately be mixed with leaf and yard waste in a mixer on a 1:1 weight basis. On a volume basis it would be 1 part green bin waste to 3 or 4 parts leaf and yard waste. The mixed wastes would be formed into part of a windrow. It is assumed that the Landfill's current loader would be used to pre-process (i.e. place wastes into Mixer) and process green bin wastes (i.e. turn windrows). The composting facility would continue to be managed by a part-time facility operator. Tasks would include receipt of material, mixing and incorporation into a windrow, turning windrows and collecting process data (e.g. temperatures). The composting process would be over one year from start to finish.

The estimated capital cost (permitting, mixer, 50% of loader) is about $28,000/year and the annual operating cost is estimated to be about $62,000 for a total of about $90,000/year. Table 3.1 summarizes the capital and operating cost for the proposed open windrow operation.

Table 3.1: Option 3.1 Cost Summary

	Cost / Tonne	Cost / Year
Capital[1]	$46	$27,709
Operating	$104	$62,480
	$150	**$90,189**

[1]Twenty-five percent of the capital cost (permitting) is deferred over a twenty year period and the remaining (equipment) 75% is deferred over eight years, with an allowance for new equipment after 8 years.

Option 3.2: Small Batch Composting

The small batch composting system typically handles an annual input of 1,500 tonnes of a blend of foodwaste and leaf and yard waste (750 tonnes of foodwaste and 750 tonnes of leaf and yard waste). This system allows users to process material in batches and in an enclosed environment.

Materials are initially processed and then placed in one of six aerated concrete bins that are 3.65 m wide and 7.62 m long. Each of the bins has an aerated floor and a separate blower system with timer and temperature feedback. The process includes preparing the compost blends, loading the aerated concrete channels to a depth of 2.13 m, adding 0.3 m of compost overs (oversized screenings) or woodchips as a biofilter on top of the bins, aerating the bins for 21 days, unloading the bins and reloading the material into another of the aerated bins for the final 21 days of composting. The product is then removed from the aerated bins, cured, and screened. The screened overs can be recycled into the composting process.

The key components of this system include:

• A stationary vertical auger mixer for blending the food waste and bulking agent;
• Six (6) aerated concrete bins that are 3.65m wide, 7.62 m long and 2.43 m high;
• Aeration system consisting of AirFloor in the concrete floor of the bins;
• Computer control of aeration system to maintain temperatures required for pathogen kill;
• A full leachate collection system to collect any excess moisture from the composting material;
• A 19.1 m^3 per hour stationary screening system to screen the overs for recycling;
• A corrosion resistant building to house the receiving area, composting area and screening area in one building; and
• A biofilter for secondary odor control from the building.

This processing system would be placed at the western edge of the current composting pad. It is estimated that a 605 square metre building (22 by 27.5 metres) will be required to accommodate receiving, pre-processing and processing activities. The composting pad would continue to be used for curing and product storage.

The estimated capital cost of technology, excluding the loader, is $1,100,000. The annual capital cost is estimated to be $108,000 over a twenty year-period and the annual operating cost is estimated to be about $63,000 for a total of about $171,000/year. Table 3.2 summarizes the cost associated with implementing the small batch composting system.

Table 3.2: Option 2 Cost Summary

	Cost / Tonne	**Cost / Year**
Capital	$180	$107,981
Operating	$106	$63,480
	$286	**$171,461**

Option 3.3: GORE Cover Systems

The GORE cover systems are based on windrow composting techniques, but include aeration and the use of a membrane to enhance control and condition of the windrows.

The system proposed is a two heap 2,000 tonne/year facility. Each heap (batch) (15m x 8m x 3m) would be placed on the existing composting pad. Mixed feedstocks would be covered and aerated for a minimum of 28 days.

An “on floor” system design includes a GORE™ Cover, aeration blowers, oxygen and temperature sensors, controllers, computers, software, training, engineering, guidance, and installation. The end user is responsible for local supply of 160mm HDPE piping for delivery of air to the windrows.

Manual handling of the covers and and some extra care by the operator is required with an "on-floor" system design. The GORE™ Cover System is designed with minimal moving parts and packaged so that components can be replaced immediately or repaired on site to ensure minimal to zero downtime to operations. The key components of this system include:

- Receiving/Pre-processing building with biofilter (465 square metre);
- Composting and curing pad (current pad);
- A stationary vertical auger mixer for blending the food waste and bulking agent;
- Two (2) covers suitable for 15m x 6m x 2.5m pile dimensions;
- On floor aeration blowers;
- Oxygen and temperature sensors;
- Computers;
- Controllers;
- Software;
- Training;
- Engineering;
- Guidance and installation.

The estimated capital cost is $445,000. Three-hundred thousand of the capital cost is allotted for composing technology and permitting, and is defrayed over a 20 year period. The remaining capital cost of $145,000 for equipment (mixer, 50% of the loader cost) is defrayed over an 8-year period.

The annual capital cost is estimated to be $50,000 and the annual operating cost is estimated to be about $63,000 for a total of about $113,000/year. Table 3.3 summarizes the cost associated with installing the GORE Cover system.

Table 3.3: Option 3.3 Cost Summary

	Cost / Tonne	Cost / Year
Capital	$83	$49,658
Operating	$106	$63,580
	$189	**$113,238**

Scenario Cost Comparison and Summary

Table 3.4 summarizes the costs associated with each sub-scenario of Scenario 3 and the BAU scenario.

Table 3.4: Scenario 3 Costing Comparison (On-site Composting Scenario)

Item	Option 3.1: Windrow			Option 3.2: Batch Process			Option 3.3: GORE Cover		
	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne
Garbage and Green Bin Collection	1,900	$266,000	$140	1,900	$266,000	$140	1,900	$266,000	$140
Composting (Green bin program)	600	$90,000	$150	600	$171,461	$286	600	$113,238	$189
Landfill Operation	4,200	$267,175	$64	4,200	$267,175	$64	4,200	$267,175	$64
Composting (Leaf & Yard Waste)	900	–	–	900	–	–	900	–	–
Blue Box	850	$248,047	$292	850	$248,047	$292	850	$248,047	$292
Other Waste Diversion	850	$46,191	$54	850	$46,191	$54	850	$46,191	$54
Scenario Totals	**7,400**	**$917,413**	**$124**	**7,400**	**$998,874**	**$135**	**7,400**	**$940,651**	**$127**
Sensitivity Analysis	**7,400**	**$884,016**	**$119**	**7,400**	**$965,477**	**$130**	**7,400**	**$907,254**	**$123**
Current Costs	**7,400**	**$811,222**	**$110**	**7,400**	**$811,222**	**$110**	**7,400**	**$811,222**	**$110**
% difference[1]	**13.1% (8.9%)**			**23.1% (19.0%)**			**16.0% (11.8%)**		

[1]Value in brackets represents less conservative cost sensitivity estimate.

Option 3.1 is the least costly scenario as there are minimal capital requirements relative to the other options, and limited technological needs. Additionally, the Town already has the necessary infrastructure to accommodate an enhanced composting operation.

Scenario 4: Expanded Organic Waste Processing Centre

Within Scenario 4, the Town would provide the community based service described in Scenario 3 while accepting additional sources of organic waste for a fee. Two options are considered. One option, Scenario 4a, evaluates accepting a modest amount of organic waste from local institutional, commercial and industrial sources and/or neighbouring municipalities. The other option, Scenario 4b, considers expanding the scale of the operation to act as a regional organic waste processing centre.

Scenario 4a: Community Based Service and Local Institutional, Commercial and Industrial (ICI) Services

This scenario would entail the co-collection of wastes and green bins wastes. Green bin waste would be composted at the Town's compost facility. All other wastes would be managed as described in Scenario 1. This Scenario would also see the receipt of commercial and agricultural organic wastes for a tipping fee.

This Scenario is exactly the same as Scenario 3 except that a modest amount of imported municipal and/or commercial waste is contemplated. This waste would generate a tipping fee. Currently about 500 tonnes/year of leaf and yard waste are managed on-site. It is estimated that 600 tonnes/year of residential green bin waste can be captured. This would total 1,100 tonnes/year. Up to 2,000 tonnes/year can be received at this composting facility in its present configuration. It is important that green bin and commercial food wastes be mixed with adequate leaf and yard wastes (1:1) on a weight basis. On this basis an additional 450 tonnes of green bin or commercial organic waste could be received at the facility. This would need to be matched with an additional 450 tonnes of leaf and yard wastes or other suitable amendment material. In both cases the Town would need to attract these wastes to the composting facility through a marketing program.

Assumptions:

• 1,900 tonnes/year of waste and organics;
• Assume co-collection of waste and organics and co-collection cost is $140/tonne;
• 1,300 tonnes/year or 25 tonnes/week of residential waste generated for disposal;
• 600 tonnes/year or 11.5 tonnes/week of residential organic waste generated for composting;
• Assume that 500 tonnes of leaf and yard waste are received at the composting facility;
• Assume that 450 tonnes/year of imported green bin waste or commercial organic waste is received and that the tipping fee for this waste is $85/tonne;
• Assume that 450 tonnes/year of imported leaf and yard waste or other suitable amendment is received and that the tipping fee for this waste is $40/tonne;
• In total 2000 tonnes of organic waste is processed annually;
•Existing compost pad an asset and all costs have been paid;
• Site will require amendment of Certificate of Approval and may require Certificate of Approval (Air and Noise) and Ontario Water Resources Act (OWRA) approval;
• The current costs to manage leaf and yard waste are $20,000. These costs are subtracted from new costs to process green bin waste (as they are already accounted for within the landfill operations cost);
• The site would be operated by a part-time operator (20 hours/week) with management support (4 hours/week);
• Use existing landfill loader for composting operations (i.e. 50% of available loader time);
• Assume that approximately 2,000 m^3/year of compost would be produced; and
• Assume value of compost at $5/yard or $5 per 0.76$m^3$

Table 4.1 Summarizes the cost associated with each composting system, for a 2,000 tonne / year operation.

Table 4.1: Composting System Cost Comparison

	Option 4a.1 Open Windrow	**Option 4a.2 Transform Small Batch Composting System**	**Option 4a.3 GORE™ Cover Systems On Floor System**
Capital Costs	$14	$54	$25
Operating Costs	$17	$17	$18
$/tonne	**$31**	**$71**	**$43**
Total Annual Cost	**$61,289**	**$142,561**	**$85,214**

Scenario Cost Comparison and Summary
Table 4.2 summarizes the costs associated with each option and the BAU scenario.

Table 4.2: Costing Comparison (Commercial and Residential Composting Scenario)

Item	**Option 4a.1: Windrow**			**Option 4a.2: Batch Process**			**Option 4a .3: GORE Cover**		
	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne
Garbage and Green Bin Collection	1,900	$266,000	$140	1,900	$266,000	$140	1,900	$266,000	$140
Composting (all operations)	2,000	$61,289	$31	2,000	$142,561	$71	2,000	$85,214	$43
Landfill Operation	4,200	$267,175	$64	4,200	$267,175	$64	4,200	$267,175	$64
Blue Box	850	$248,047	$292	850	$248,047	$292	850	$248,047	$292
Other Waste Diversion	850	$46,191	$54	850	$46,191	$54	850	$46,191	$54
Scenario totals	**7,900**	**$888,702**	**$112**	**7,900**	**$969,974**	**$123**	**7,900**	**$912,627**	**$116**
Sensitivity Analysis	**7,900**	**$856,727**	**$108**	**7,900**	**$937,999**	**$119**	**7,900**	**$880,652**	**$111**
Current Costs	**7,400**	**$811,222**	**$110**	**7,400**	**$811,222**	**$110**	**7,400**	**$811,222**	**$110**
% difference[1]			**9.5% (5.6%)**			**19.6% (15.6%)**			**12.5% (8.6%)**

[1]Value in brackets represents less conservative cost sensitivity estimate.

Operating costs are reduced significantly as revenue defrays costs. Revenue is mainly generated from tipping fees. Option #1 (Open Windrow) is the least costly driven by the simplicity of the technology and due to the current infrastructure capacity at the waste disposal site.

Scenario 4b: Regional Importation Based Operation

The Regional Scenario would necessitate an expansion of the current composting pad.

This Scenario is exactly the same as Scenario 4a except that a greater amount of imported municipal and/or commercial waste is contemplated. This waste would generate a tipping fee.

Currently about 500 tonnes/year of leaf and yard waste are managed on-site. It is estimated that 600 tonnes/year of residential green bin waste can be captured within the Town. This would total 1,100 tonnes/year. For Scenario 4b, it is envisioned that up to 5,000 tonnes/year will be received at the compost facility. It is important that green bin and commercial food wastes be mixed with adequate leaf and yard wastes (1:1) on a weight basis. On this basis an additional 1,950 tonnes of green bin or commercial organic waste could be received at the facility. This would be matched with an additional 1,950 tonnes of leaf and yard waste or suitable amendment material. In both cases the Town would need to attract these wastes to the composting facility through a marketing program. Because a greater tonnage of organic waste is to be received windrow composting is no longer considered. However, as is standard practice, compost curing will take place outdoors in windrows. Two options were examined:

1. Transform Envirotech Inc.-Small batch composting system;

2. GORETM Cover Systems- On floor composting system

Information received from some other composting technology providers had much higher capital costs than noted in the above options and were not considered further. While high quality technology providers, they are better suited to much larger facilities.

Assumptions:

- 1,900 tonnes/year of waste and organics;
- Collection cost is $140/tonne;
- 1,300 tonnes/year or 25 tonnes/week of residential waste generated for disposal;
- Assume co-collection of waste and organics;
- 600 tonnes/year or 11.5 tonnes/week of residential organic waste generated for composting;
- Assume that 500 tonnes of leaf and yard waste are received at the composting facility;
- Assume that 1,950 tonnes/year of imported green bin waste or commercial organic waste is received;
- Assume that the tipping fee for this waste is $85/tonne;
- Assume that 1,950 tonnes/year of imported leaf and yard waste or other suitable amendment is received;
- Assume that the tipping fee for this waste is $40/tonne;
- Existing compost pad an asset and all costs have been paid;
- Site will require approximately 0.68 hectares (conservative) of pad space and receiving building;
- Site will require amendment of Certificate of Approval and may require Certificate of Approval (Air and Noise) and Ontario Water Resources Act (OWRA) approval;
- The current costs to manage leaf and yard waste are $20,000. These costs are subtracted from new costs to process green bin waste;
- The site would be operated by a full-time operator (40 hours/week); part-time labourer (20 hours/week) with management support (16 hours/week);
- The site would have a dedicated loader for composting operations;
- Assume that approximately 4,970 m^3/year of compost would be produced; and
- Assume value of compost at $5 per 0.76 m^3.

Option 4b.1: Small Batch Composting System

The same type of system as used for Scenario 3 and Scenario 4a would be utilized with an expanded scope to process the increased tonnage. The proposed composting system is design based on an annual input of 5,000 tonnes of a blend of foodwaste and leaf and yard waste (2,500 tonnes of foodwaste and 2,500 tonnes of leaf and yard waste). The facility would be sized to accommodate 10% more capacity, for a total of 5,500 tonnes.

The system has essentially the same design as previously described, with some components modified to accommodate the larger scale. The main difference involved is the size of the aerated concrete bins, from 7.62 m in length to 13.71 m.

This processing system would be placed at the eastern edge of an expanded composting pad. It is estimated that a 930 square meter building (21.9 m x 44.1 m) will be required to accommodate receiving, pre-processing and processing activities. An expanded composting pad (0.68 hectares) would continue to be used for curing and product storage.

The estimated capital cost of the technology, excluding the loader, is $2,000,000. The estimated capital cost of expanding the pad is $400,000. The annual capital cost is estimated to be $246,000 and the annual operating cost is estimated to be about $2,500 (i.e. tipping fees offset operating cost) for a total of about $249,000/year.

Option 4b.2: GORE Cover Systems

The same type of system as used for Scenario 3 and Scenario 4a would be used except that it would be expanded to process the increased tonnage.

The system has essentially the same design as previously described, with some components modified to accommodate the larger scale. The main difference involved is the size of the cover systems, from two (2) covers suitable for 15m x 6m x 2.5m pile dimensions to four (4) covers suitable for 25m x 8m x 3m pile dimensions.

This processing system would be placed on an expanded composting pad. It is estimated that a 464.5 square meter building (21.3 m x 21.3m) will be required to accommodate receiving and pre-processing activities. The expanded composting pad (0.8 hectares) would continue to be used for curing and product storage.

The annual capital cost is estimated to be $138,000 and the annual operating cost is estimated to be about $4,000 for a total of about $142,000/year.

Scenario 4.b Cost Comparison and Summary

Table 4.3 compares the cost between the two options.

Table 4.3: System Cost Comparison

	Option 4b.1 Transform Small Batch Composting System	**Option 4b.2 GORE™ Cover Systems On Floor System**
Capital Costs	$49.30	$27.68
Operating Costs	$0.49	$0.81
$/tonne	**$49.79**	**$28.49**
Total Annual Cost	**$248,936**	**$142,445**

Table 4.4 Summarizes the costs associated with each Scenario 4b option and the BAU scenario.

Table 4.4: Scenario 4b Costing Comparison (Regional Composting Scenario)

Item	**Option 4b.1: Batch Process**			**Option 4b.2: GORE Cover**		
	Tonnes / year	Annual Cost	$/tonne	Tonnes / year	Annual Cost	$/tonne
Garbage and Green Bin Collection	1,900	$266,000	$140	1,900	$266,000	$140
Composting (all operations)	5,000	$248,936	$50	5,000	$142,445	$28
Landfill Operation	4,200	$267,175	$64	4,200	$267,175	$64
Blue Box	850	$248,047	$292	850	$248,047	$292
Other Waste Diversion	850	$46,191	$54	850	$46,191	$54
Scenario totals	**10,900**	**$1,076,349**	**$99**	**10,900**	**$969,858**	**$89**
Sensitivity Analysis	**10,900**	**$1,044,374**	**$96**	**10,900**	**$937,883**	**$86**
Current Costs	**7,400**	**$811,222**	**$110**	**7,400**	**$811,222**	**$110**
% difference[1]		**32.7% (28.7%)**			**19.6% (15.6%)**	

[1]Value in brackets represents less conservative cost sensitivity estimate.

The GORE Cover system is the less expensive option, due to the difference in capital requirements between the systems. In each option, revenue significantly defrays operating costs. Both scenarios would require the construction of large structures at the disposal site to accommodate the volume of materials.

Public Consultation

Through the development of the Town's Waste Diversion Strategy, staff conducted a number of public consultation activities. Through this process, diversion of organic waste was identified as an ideal approach to enhance residential waste diversion, and reach the goal of 60% diversion for the community.

Public Information Centre #1
To solicit additional input from the public regarding the future direction of organic waste diversion within community, Staff held a public information centre Thursday March 25th at the Waste Disposal Site. Two separate sessions were held, from 6:30 – 7:30 for adjacent residents and another from 7:30 – 8:30 for members of the public and local businesses.

The PIC presented potential options relating to providing curbside organic collection for local residents and accepting organic waste from local commercial, institutional and industrial operations. The PIC was lightly attended, however, representatives of local businesses expressed interest in shipping organic waste to a local processor rather than a regional site. Residents noted a desire for the green bin service, but concerned were raised regarding the scale of any potential processing site, especially relating to nuisance odour or noise.

Public Information Centre #2
Town Staff have scheduled another public consultation session to convey details of the business case, and solicit further comment on the initiative and the options available to the Town. The PIC is scheduled for Thursday May 13, 6:30 – 7:30pm at The Beaver Valley Community Centre.

C. The Blue Mountains' Strategic Plan

Enhancing organic waste diversion will assist with Strategic Goal #2 "Addressing the Town's municipal infrastructure needs" and more specifically, Strategic Action 2.5, to "Develop a waste management strategy to meet diversion targets and address landfill capacity".

D. Budget Impact

There are two major considerations when evaluating the cost of implementing curbside organic waste collection services and processing capacity. One is the budget impact associated with the cost of the capital and operating expenses of the service. The second is the landfill capacity savings that the waste diversion effort will produce. Extending the life of the landfill through waste diversion allows the Town to defer the costs associated with constructing additional landfill capacity.

See attachment #1- Table 5 provides a summary of all the scenarios costs, compared to the BAU. All scenarios increase the cost of the waste disposal operation. Except for the single stream option, Scenario 2 is most costly as the additional transportation requirements and tipping fees escalate expenses when utilizing the Town's landfill site as a transfer station.

Windrow processing options, Scenarios 3.1 and 4a.1, are least costly as the simplicity of the technology requirements, and the current infrastructure assets of the landfill site reduce the additional capital and operating cost burdens associated with this scenario.

Table 6 demonstrates the additional landfill capacity gained and the potential cost deferral under each scenario. These calculations are based on the data derived from the Environmental Screenings conducted for the disposal site, outlined in Staff Report EPW.10.044 entitled 'Landfill Expansion Strategy'. Specifically, the costing and capacity calculations have considered all four proposed landfill expansion scenarios.

Scenario 2 provides the greatest landfill extension benefits under all of the proposed landfill expansion scenarios as residential and organic wastes are diverted from the landfill. Scenarios 3 and 4 modestly extend the landfill lifespan as only organics are diverted from landfill.

E. Environmental Impacts

Organic waste diversion and composting has a number of positive environmental impacts; reduces the quantities of waste land filled, reduces landfill leachate and methane production, recycles organic waste materials into a reusable soil amendment, etc.

F. Attached

1. Tables 5 – Scenario Comparisons & Table 6 – Impact of Organic Waste Diversion on Landfill Lifespan.

Respectfully submitted,

Adam McMullin

Adam McMulllin	Reg Russwurm
Environmental Initiatives Coordinator	Director, Engineering & Public Works

For more information, please contact:
Adam McMullin
amcmullin@thebluemountains.ca
519-599-3131 x.264

EPW.10.055
Attachment #1

Attachment #1

Table 5: Scenario Comparisons

Item	BAU	Scenario 2.1	Scenario 2.2 (option 1)	Scenario 2.2 (option 2)	Scenario 2.3	Scenario 3.1	Scenario 3.2	Scenario 3.3
Annual Cost	$811,222	$917,700	$1,053,830	$1,131,071	$1,161,830	$917,413	$998,874	$940,651
Sensitivity Cost	n/a	$811,943	$948,073	$1,025,314	$1,056,073	$884,016	$965,477	$907,254
Difference $	n/a	$106,478 ($721)	$242,608 ($136,851)	$319,849 ($214,092)	$350,608 ($244,851)	$106,191 ($72,794)	$187,652 ($154,255)	$129,429 ($96,032)
Difference %	n/a	13.1% (0.09%)	29.9% (16.9%)	39.4% (26.4%)	43.2% (30.2%)	13.1% (9.0%)	23.1% (19.0%)	15.9% (11.8%)

Table 5: Scenario Comparisons (continued)

Item	BAU	Scenario 4a.1	Scenario 4a.2	Scenario 4a.3	Scenario 4b.1	Scenario 4b.2
Annual Cost	$811,222	$888,702	$969,974	$912,627	$1,076,349	$969,858
Sensitivity Cost	n/a	$856,727	$937,999	$880,652	$1,044,374	$937,883
Difference $	n/a	$77,480 ($45,505)	$185,752 ($154,255)	$101,405 ($96,032)	$265,127 ($233,152)	$158,636 ($125,661)
Difference %	n/a	9.5% (5.6%)	19.6% (15.6%)	12.5% (8.6%)	32.7% (28.7%)	19.6% (15.6%)

Value in brackets represents less conservative cost sensitivity estimate.

Table 6: Impact of Organic Waste Diversion on Landfill Lifespan

Landfill Expansion Scenario	Total Cost	Cost / Tonne	Landfill Expansion Capacity Addition (Tonnage)	SCENARIO LANDFILL DIVERSION DATA	Residential & Organic Waste Diversion Scenario 2	Organic Waste Diversion Scenario 3 & 4
				Tonnes diverted per year	1,900	600
Scenario 1: Northern Expansion and Mining of Thornbury & TBM East Landfill	$8,709,680	$97	89,790	Total tonnage diversion (17 years)	32,300	10200
				Annual Deferred Capital Expansion Cost Savings	$184,300	$58,200
				Total Deferred Capital Expansion Cost Savings	$3,133,100	$989,400
				Landfill Lifespan Extension (years)	6.1	1.9
Scenario 2: Vertical Expansion of TBM and Mining of Thornbury & TBM East Landfill	$7,549,920	$84	89,880	Total tonnage diversion (17 years)	32,300	10,200
				Annual Deferred Capital Expansion Cost Savings	$159,600	$50,400
				Total Deferred Capital Expansion Cost Savings	$2,713,200	$806,400
				Landfill Lifespan Extension (years)	6.1	1.9
Scenario 3: Vertical Expansion and Mining of Only Thornbury Landfill	$3,670,800	$49	74,917	Total tonnage diversion (11 years)	20,900	6,600
				Annual Deferred Capital Expansion Cost Savings	$60,241	$19,024
				Total Deferred Capital Expansion Cost Savings	$1,024,100	$323,400
				Landfill Lifespan Extension (years)	3.1	1.0
Scenario 4: Northern Expansion	$1,304,240	$26	50,163	Total tonnage diversion (7 years)	13,300	4,200
				Annual Deferred Capital Expansion Cost Savings	$49,400	$15,600
				Total Deferred Capital Expansion Cost Savings	$345,800	$109,200
				Landfill Lifespan Extension (years)	1.9	0.6

E.3

STAFF REPORT: ENGINEERING & PUBLIC WORKS SOLID WASTE DIVISION

REPORT TO:	**Infrastructure & Recreation Committee**
MEETING DATE:	**May 11, 2010**
REPORT NO.:	**EPW.10.059**
SUBJECT:	**Receiving Area Construction - Additional Works**
PREPARED BY:	**Jeffery Fletcher, Manager of Solid Waste and Environmental Initiatives**

A. Recommendations

THAT Council receive the Staff Report EPW.10.059 "Receiving Area Construction – Additional Works"; and

THAT Council approve the use of $62,344 (excluding GST) for additional works associated with the Receiving Area Construction; and

THAT the amount $57,604 (excluding GST) of additional work associated with the landfill site receiving area be awarded to Seeley and Arnill Construction.

B. Background

Award of the construction of a new waste receiving area at the Town Landfill Site was approved by Council on April 26, 2010. As outlined in the associated Staff Report "Award of The Waste Receiving Area Construction", EPW.10.043, following the review of the contract costs the project budget was identified as being in a surplus position. The surplus totals $62,338.00.

During the design phase a number of potential features were deleted to find savings. Town staff is recommending that a selection of items be reintroduced into the project to make use of the remaining funding.

The project engineer from C.C.Tatham, developed a request for quotation to obtain prices from the project contractor Seeley and Arnill Construction. The table below outlines the additional items and the proposed costs as received by way of request for quotation from Seeley and Arnill Construction.

Item	Description	Cost Quotation
Concrete Aprons	Installation of concrete pads under the location of waste bins	$21,844.00
Paving Receiving Area	Addition of pavement to the receiving area deck and bulk storage areas	$25,830.00
Paving Laneway	Paving of Laneway from County Road to the easterly limit of receiving area	$29,232.00
Tree Planting	Addition of trees on the westerly berm for visual screening of new receiving area	$1,680
Guard Rail	Addition of post and wire guard rail on the laneway to the east of the compost area	$8,250
Total		$86,836.00

If concrete bin aprons are added, the waste bins will require the addition of castors to protect the concrete surface from damage. This option will add an additional $1,440 on to the price of 6 bins ($240.00/bin).

Tree stock will be purchase separate from the above table. The Town will acquire 16 Spruce at 12 feet each. These trees will be added to the westerly berm to assist with visual screening for the adjacent homes and landowners.

C. The Blue Mountains' Strategic Plan

This activity will assist in meeting the Town's Strategic Plan Goal#2, addressing the Town's municipal infrastructure needs.

D. Environmental Impacts

The provincial policy for municipal waste diversion is 60% by 2008. This new infrastructure will assist the Town in realizing that diversion target. The Town has developed a Waste Diversion Plan (July 2008) and 60% has been developed as a waste diversion goal. An increased focus on waste sorting, which will be achieved by the new receiving area, will move the Town closer to the 60% goal.

E. Budget Impact

Currently the project is in a positive financial situation with a surplus of $62,338. This project is provincially funded to a total of $410,483 from both the Municipal Infrastructure Investment Initiative ($320,352) and Gas Tax ($90,131) and is not tax base funded.

This report proposes to use the surplus funds of $62,338 and just over $10,000 of the construction contingency to fund $62,344 in additional works. The tables below detail the use and allocation of funds:

Item	Initial Costs	Additional Costs	Description
Engineering	$64,448	$1,000	C.C. Tatham Fee
Construction	$209,597	$9,930	Plantings and Guarding
		$25,830	Paving Receiving Area
		$21,844	Concrete Aprons
		NA	Lane Paving
Contingency	$30,000		
Equipment	$44,100	$1,440	Bin Rollers
Trees	$0	$2,300	Supply and Delivery
Total	**$348,145**	**$62,344**	
(Surplus)	**($62,338)**		

Item	Total Project Cost
Initial Costs (minus contingency)	$318,145
Additional Costs	$62,344
Total Project Costs	$380,489
Total Available Funds	$410,483
Remaining contingency	$29,994

F. Attached

None

Respectfully submitted,

_____ _____

Jeffery Fletcher
Manager of Solid Waste and Environmental Initiatives

Reg Russwurm
Director of Engineering and Public Works

For more information, please contact:
Jeffery Fletcher
jfletcher@thebluemountains.ca
(519) 599-3131 x238