

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT

REPORT TO: Infrastructure and Recreation
Committee

MEETING DATE: Tuesday, March 19th, 2013

REPORT NO.: EPW.13.019

SUBJECT: Award of Proposal 2012-9-P-
EPW – Detailed Design of The
Blue Mountains Landfill
Expansion

PREPARED BY: Jeffery Fletcher, Manager of Solid
Waste and Environmental Initiatives,
on behalf of Tender/ Proposal
Award Committee

A. Recommendations

THAT Council receive Staff Report EPW.13.019, “Award of Proposal 2012-9-P-EPW – Detailed Design of The Blue Mountains Landfill Expansion”;

AND THAT Council approve the award of the Detailed Design of The Blue Mountains Landfill Expansion (2012-9-P-EPW) to Golder Associates Ltd., in the amount of \$500,245.00 upset fee limit, excluding HST, for the 100% build scenario;

AND THAT an engineering fee contingency budget be established in the amount of \$25,000 for the Detailed Design of The Blue Mountains Landfill;

AND THAT the Mayor and Clerk be authorized to execute the Contract Documents of 2012-9-P-EPW.

B. Background

The purpose of this Report is to receive Council approval to retain consulting engineering services to undertake detailed design of the Town’s Landfill expansion, including construction tender administration and inspection.

The Town’s Solid Waste Disposal Site (Site) is quickly approaching final approved capacity. As calculated in the 2011 Annual Site Report, final capacity will likely be reached by the end of 2015. To address the limited available capacity, the Town has completed (September 2012) an Environmental Screening related to the expansion of the Site. This screening process selected a preferred scenario that is to include a vertical expansion of the existing footprint and mining and lining of the easterly portion of the existing Site. Attachment 1 – “Scenario 2”, Figure ES1 illustrates the proposed areas of mining and vertical expansion.

A preliminary landfill expansion Design and Operation (D&O) Plan has been developed and submitted to the Ministry of the Environment with an application to amend the Site's Environmental Compliance Approval. The next step is the creation of detailed design drawings and specifications for construction.

Scope of Work

The scope of work for this assignment includes creating detailed drawings based on the Design and Operations Plan and the Environmental Compliance Approval. The design must satisfy the elements of the pre-existing approval. The design will be focused around a 100,000 cubic metre vertical expansion and another 100,000 cubic metre expansion gained through waste mining. The design will include a new liner and leachate collection system, and must integrate the intricacies of the existing Site operations. The Consultant will also deliver the final closure specifications and Site conditions.

The assignment will include, but will not be limited to, the following major tasks:

Task 1: Collect and Review Background Information

Task 2: Review and Update The Project Deliverables Schedule

Task 3: Conduct a Detailed Site Survey and Inspection

Task 4: Prepare Final Design Brief

Task 5: Prepare Detailed Financial Analysis

Task 6: Prepare Draft Contract Documents and Closure Specifications and Procedures

Task 7: Consult with Local Aboriginal Groups, General Public and Stakeholders

Task 8: Prepare Contract Documents

Task 9: Contract Administration

Task 10: Conduct Construction Inspections and Monitoring

Task 11: Commissioning of the Completed Works

Task 12: Warranty Administration

Task 13: Prepare Record Drawings and Documentation

Consultant Selection

The consultant selection process was a two-step process. A Request for Letters of Interest was issued on November 14, 2012 and three firms expressed an interest in the project. All three submissions were evaluated by the Town’s Consultant Selection Team and it was determined that all three firms would be sent a Request for Proposal (RFP).

Council has expressed a desire to consider completing the landfill expansion project in two phases as a cost mitigation measure. With this in-mind Staff developed a RFP that incorporated a provision for a phased approach to construction. Within the RFP the consultants were required to provide two work plans: one for a 50% build scenario and a second for a 100% build scenario. The Proposal was to also include two separate associated upset fee estimates for the two scenarios. Both the 50% build and 100% build upset fee estimates were added together for the purpose of fee evaluation.

Each of the three firms sent a RFP submitted a Proposal for evaluation. The Consultant Selection Team, consisting of Reg Russwurm, Jeffery Fletcher, Adam McMullin, Darcy Chapman and a Purchasing representative satisfied themselves that the Proposals were complete.

In the second stage of the proposal process the consultants were evaluated based on the following weighted evaluation factors:

Quality Factors

Firm's Qualifications and Experience on Similar Assignments	5%
Project Team’s Experience	10%
Project Understanding and Approach	15%
Work Plan, Methodology, Communication and Quality Assurance Plan	25%
Project Schedule	20%

Fee Factor 25%

Total **100%**

The Consultant achieving the highest combined weighted quality and fee factors was Golder Associates Ltd (Golder).

During the course of the project upon the completion of initial design work and with the aid of the financial analysis and design brief, Council will make a determination if the project will proceed to a 50% or 100% build scenario. Based on that decision the final upset fee limit will be either \$339,155 (50% build) or \$500,245 (100% build). Without a decision currently on the approach to construction phasing, it is prudent to award the 100% build scenario initially and include wording in the Engineering Services Agreement to reduce the fees to the 50% build scenario figure following a Council decision. Staff feel that it is also appropriate to include a 5% contingency (\$25,000) to provide flexibility to Staff during the delivery of the project to quickly address unknown circumstances.

Therefore the Consultant Selection Team recommends retaining this firm in the amount of \$500,245 excluding HST. As well, the Consultant Selection Team recommends the establishment of a \$25,000 contingency budget based on the 100% construction scenario to be utilized for expenses not included in the original scope of the engineering contract.

Schedule

The existing disposal capacity is anticipated to expire in 2015. The Town must have new capacity in place before the existing landfill space is depleted. The Consultant will play a critical role in ensuring timely completion of new waste disposal infrastructure. This project will require several years to see to completion. A dedication to project deliverable dates by the Consultant will be imperative to ensure the project remains focused.

Golder's engineering proposal includes an attainable project schedule that aims to have new disposal capacity ready for use before the end of 2015 which is also the estimated end of existing capacity. For both the 50% and 100% build approaches the planned start of construction is spring 2014. The 50% build scenario anticipates completion by mid-summer 2015 and the 100% build scenario would extend until the fall of the 2015. Regardless of the completion date, new and uninterrupted disposal capacity will be available from the start to the end of construction. However, it will be important to keep to the proposed project schedule to ensure there is not a significant disruption to waste disposal availability. Town Staff will work to anticipate and overcome threats to the project schedule and ensure the consultant is doing the same.

Site Operations During Construction

Staff recognise that the Site will be both a construction site and an operational municipal landfill facility. This raises unique constructor and liability issues. If the Town has separate contractors with the same area at the same time, the Town can be considered the constructor under the Occupational Health and Safety Act. With advice from the Consultant, Staff will ensure that this issue is carefully reviewed. It is likely that the Contractor will be required to assume all landfill tipping face and compaction operations during the construction period from contract award until completion.

C. The Blue Mountains' Strategic Plan

Completing this project assists with the Town's Strategic Plan Goal #2" Addressing the Town's Municipal Infrastructure needs".

D. Environmental Impacts

The rate at which municipal waste is produced in Canada (777 kg per person per year, according to the Conference Board of Canada) is the highest compared to 17 developed nations in the world. This poor environmental ranking affirms that the Town must continue to strive for increased waste diversion. Unfortunately, despite current and future waste diversion efforts, un-recycled and non-recyclable waste will continue to

require disposal. Expanding the existing landfill will provide safe and sanitary disposal of local waste for years to come. This expansion will also improve the environmental performance of the Site with the addition of an engineered liner and leachate collection systems to the section that is mined. Replacing the section of natural attenuation landfill that is closest to Indian Brook with a new lined landfill will dramatically increase the protection of the Brook through an increased buffer distance and an engineered barrier.

E. Financial Impact

Below is a list of the proposed cost of the engineering fees to design and conduct construction administration on The Blue Mountains Landfill Expansion:

50% Build Scenario

ENGINEERING SERVICES	Upset Fee	\$339,155
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100% Build Scenario

ENGINEERING SERVICES	Upset Fee	\$500,245
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The 2013 Solid Waste Capital Budget contains \$102,000 in 2013 for aspects relating to the creation of a design and operation plan, Environmental Compliance Approval amendment fees, consultant contingencies and detailed design. Of the total 2013 budget, \$40,000 was allocated towards this phase of the project, as well a further \$800,000 was allocated in the 2014 budget for the purpose of Engineering Services for Landfill Expansion Project. It is not expected that the 2013 engineering fees will exceed \$40,000, however if it does happen, a subsequent transfer can occur.

The Engineering Services are expected to be under budget by \$339,755 for the 100% build scenario as demonstrated in the table below.

ENGINEERING BUDGET	AMOUNT
Capital Budget in 2013	\$40,000
Plus Capital Budget in 2014	\$800,000
Less Total Fee Allowance	<u>\$500,245</u>
Expected Unexpended Budget	\$339,755

With this in mind, the creation and subsequent use if necessary of a \$25,000 project contingency will still ensure the overall project is within budget.

The 2013 Capital Budget contained the overall project budget of \$8,332,000 including engineering, construction and contingencies. During the 2014 Capital Budget preparation, the anticipated project budget will be updated based on the expected costs and estimates provided by the Consultant.

F. In Consultation With

Darcy Chapman, Capital Accountant

G. Attached

1. Scenario 2, Figure ES1, Golder Associates Ltd, August 5, 2010

Respectfully submitted,

Jeffery Fletcher

Jeffery Fletcher, Manager of Solid Waste and
Environmental Initiatives

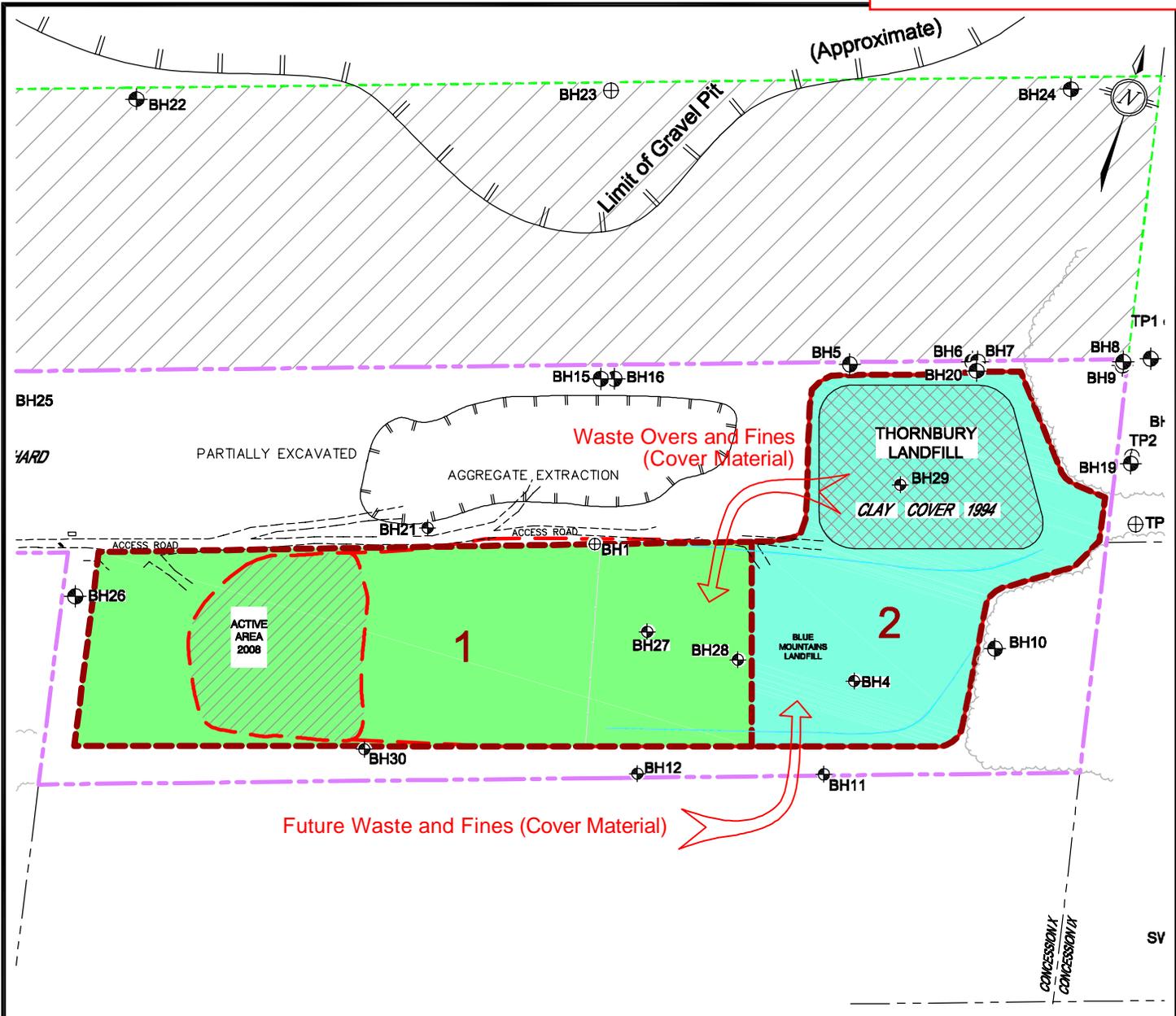
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Tender / Proposal Award Committee

Troy Speck
Troy Speck
CAO

Reg Russwurm
Reg Russwurm
Director of Engineering
and Public Works

Rob Cummings
Rob Cummings
Director of
Finance and IT Services



LEGEND:

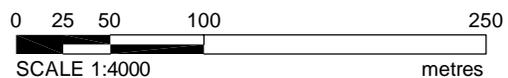
- SITE BOUNDARY
- APPROX. LIMIT OF LANDFILL
- ATTENUATION BOUNDARY
- SURFACE WATER
- SURFACE WATER SAMPLING LOCATION
- EXISTING MONITORING WELL
- ABANDONED MONITORING WELL
- PRIVATE WELL
- FINAL COVER
- ATTENUATION ZONE
- ACTIVE AREA

SCENARIO 1:

- 1 VERTICAL EXPANSION AREA
- 2 MINING AREA

REFERENCES:

1. AutoCAD BASE COURTESY RJ BURNSIDE ASSOCIATES LTD. 2007
2. STOCKPILE LOCATION & OTHER GENERAL FEATURES APPROXIMATE.



PLOT DATE: August 5, 2010
FILENAME: T:\Projects\2008\08-1182-0085 (Blue Mountains Landfill Investigations)\CC-0811820085CCPLAN2.dwg

<p>Golder Associates Barrie, Ontario, Canada</p>	SCALE AS SHOWN	<h1>SCENARIO 2</h1>	
	DATE 05 AUG 2010		
	DESIGN		
	CAD J REGIER		
FILE No. 0811820085CCPLAN2.dwg	CHECK	THE BLUE MOUNTAINS LANDFILL MINING AND EXPANSION ENVIRONMENTAL SCREENING PROCESS	FIGURE
PROJECT No. 08-1182-0085 REV.	REVIEW		ES-1