

**Ministry of the Environment
2 St. Clair Avenue West
Floor 12A
Toronto, ON M4V 1L5**

City of Elliot Lake Waste Management Plan Environmental Assessment Terms of Reference

Prepared by:

Earth Tech Canada Inc. doing business as AECOM

Date: October 2008

105 Commerce Valley Drive West
Markham, Ontario
L3T 7W3

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Appendices

- A. City of Elliot Lake Waste Management Expansion Study - Glossary of Frequently Used Terms and Abbreviations
- B. Preliminary Evaluation Criteria for “Alternatives to the Undertaking” (i.e. Alternative Technologies)
- C. Preliminary Screening and Evaluation Criteria for “Alternative Methods for Carrying Out the Undertaking” (i.e. Alternative Sites)
- D. Government Review Team
- E. First Nations Distribution List

1. Introduction

In 2002, the City of Elliot Lake commissioned a study regarding the current status of their waste management efforts. The report suggested a number of waste management options to create an efficient and sustainable waste system for the City of Elliot Lake. With the expectation that the community will continue to grow and attract tourism activities, the City is now considering a number of options to manage future waste. Alternative methods of waste management and facility site selection will be examined to establish a long term waste management plan including waste diversion.

The City of Elliot Lake is located in Northeastern Ontario, north of Lake Huron in the Algoma District. Access is by Highway 108, 26 km north of the Trans Canada highway (Highway 17E), mid way between Sudbury and Sault Ste. Marie. The study area is limited to the official boundaries of the City of Elliot Lake, which exceeds 75,000 ha. Figure 1-1 illustrates the geographical study area.

The existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake in the Township of Esten and began operation on October 12, 1982.¹ The site consists of a 7.41 ha fill area within a total approved site of 15.7 ha. Based on an April 2002 survey and an annual fill rate of 12,000 m³, the remaining site volume as of April 2007, is estimated to be 214,000 m³. The remaining site life in April 2007 was estimated to be 10 years.

The City of Elliot Lake's landfill began operating in 1982 and was originally constructed as a natural attenuation site. In 1998, a leachate collection and sand filter treatment system was installed to provide additional treatment of leachate. Leachate from the landfill is collected and then filtered through a 1500 m² sand filter bed. The treatment system is effective in reducing concentrations of metals, suspended solids, ammonium and nitrate before being discharged into a wetland.

The recycling services offered by the City meet and exceed Ontario Regulation 101/07. The regulation, made under the *Environmental Assessment Act*, requires any northern community with a population of over 15,000 to provide a blue box program for the collection of recyclables. Recycling services offered by the City of Elliot Lake includes a curbside pickup program and depots for multi-residential units. Curbside pick up is provided bi-weekly for all household paper waste, newsprint and fine paper, telephone books and magazines; box board, corrugated cardboard, aluminum and poly food containers, PET 1, HDPE 2 containers, aluminum foil and clear and colored glass. On average, the City of Elliot Lake generates 7,350 tonnes of waste annually. Approximately, 700 tonnes of waste was diverted in 2006-07 and this number is expected to increase to 1000 tonnes in 2008-09.

At present the City does not have a specific plan to expand its recycling services, but they are committed to continue to meet or exceed MOE waste diversion requirements for the municipal solid waste stream. Potential waste diversion programs which will be identified in developing the City of Elliot Lake Waste Management Plan include increased curbside/depot recycling, composting (backyard and central), waste

¹ "City of Elliot Lake – 2006 Monitoring Report", Earth Tech (Canada) Inc., April 3, 2007.

reduction programs and special waste diversion programs for tires, white goods/scrap metals, etc. Disposal capacity is being sought for only those wastes remaining after diversion.

A Glossary of Terms and Abbreviations that are expected to be frequently used over the course of the EA Study is included in Appendix A. Attached to the Glossary is a comment sheet that the public or agencies can use to request clarification on certain terms or to request additional terms be added. As such, the Glossary will be continually updated over the course of the study.

Figure 1-1. Study Location

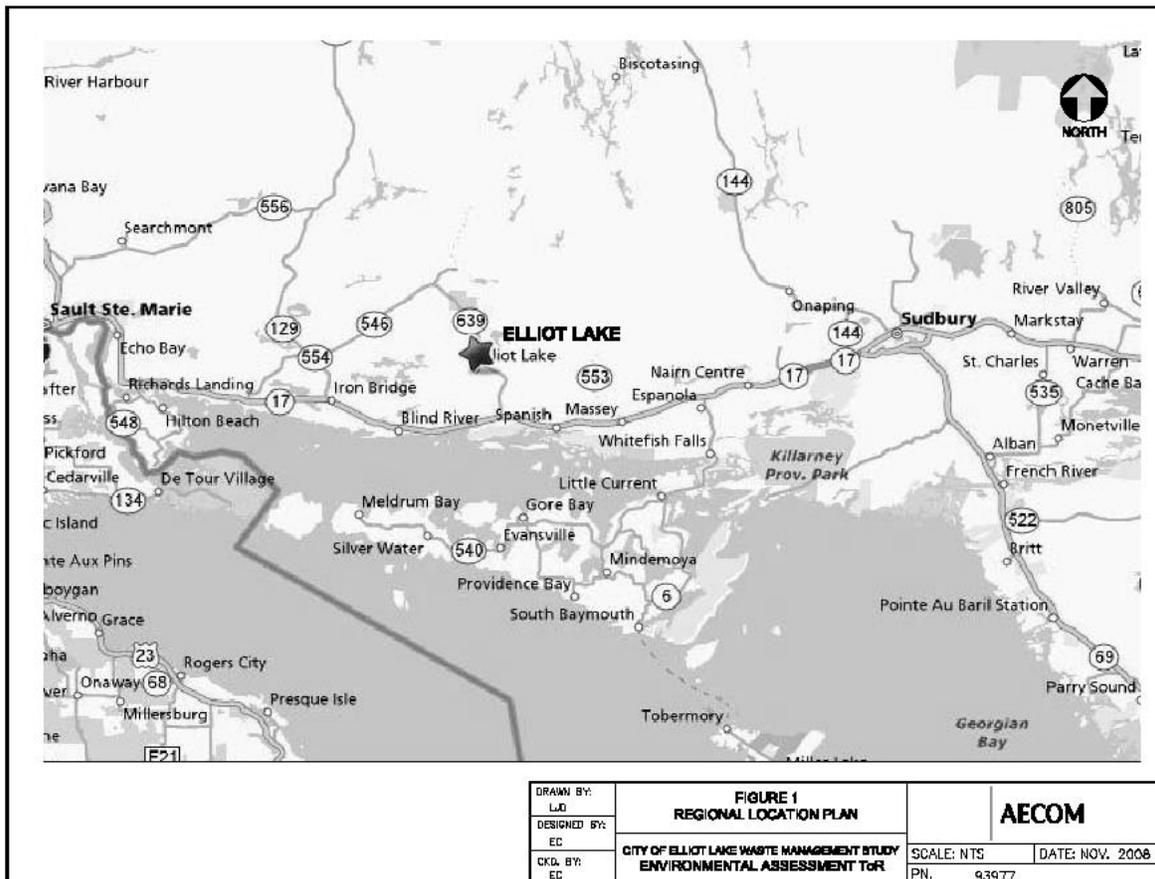
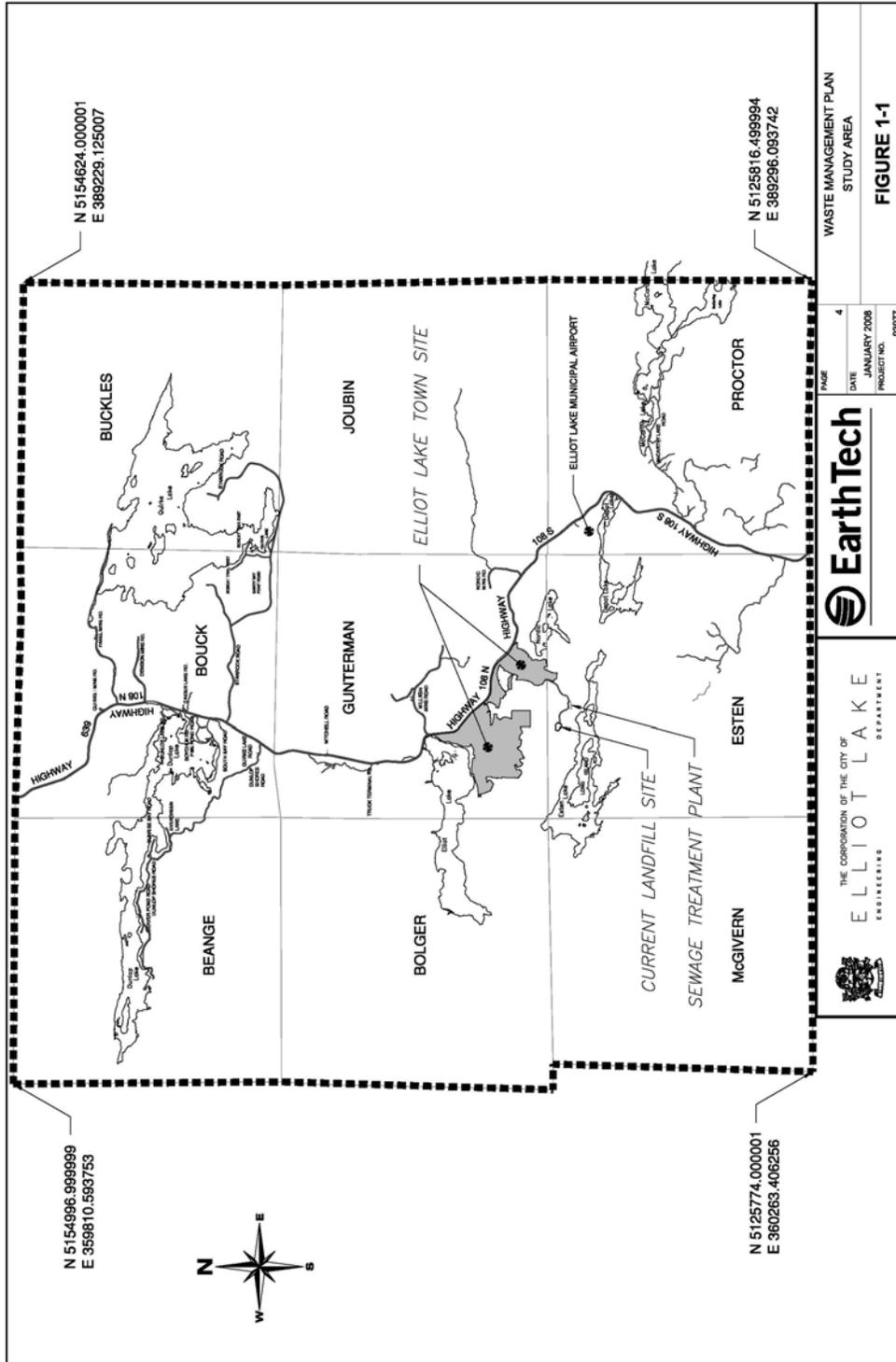


Figure 1-2. Study Area



	PAGE 4 DATE JANUARY 2008 PROJECT NO. 80977
	WASTE MANAGEMENT PLAN STUDY AREA FIGURE 1-1
	THE CORPORATION OF THE CITY OF ELLIOT LAKE DEPARTMENT OF ENGINEERING

2. Environmental Assessment (EA) Planning Process

The *Environmental Assessment Act* (EAA) planning process applies to most waste disposal facilities established in Ontario. The process requires a proponent to evaluate a reasonable range of alternatives for the purpose of establishing required disposal capacity through what is called an environmental assessment (EA) study. The EA Study involves the evaluation of alternatives - potential solutions - and resulting in the identification of a preferred solution considering a comparison of the advantages and disadvantages to the environment (natural, social, economic) and screening criteria established by the City of Elliot Lake. The EAA requires that two types of alternatives be considered in an EA Study:

1. "Alternatives to" or alternative approaches/technologies and systems to manage residual waste and,
2. "Alternative methods" of carrying out the undertaking (i.e. facility siting).

The scope of these alternatives, which are considered reasonable and which will be evaluated in the EA study, are initially defined in an EA Terms of Reference (ToR). Prior to commencing with the EA Study the City of Elliot Lake's EA ToR must be developed in consultation with the public and requires the approval of the Minister of the Environment. .

2.1 Scope of EA Terms of Reference

This Environmental Assessment Terms of Reference (EA ToR) has been prepared in accordance with the following sections of the Environmental Assessment Act (EAA):

- 6.(1) *Terms of Reference - The proponent shall give the Ministry [of the Environment] proposed terms of reference governing the preparation of an environmental assessment for the undertaking.*
- 6.(2) *Same - The proposed terms of reference must,*
 - (a) *indicate that the environmental assessment will be prepared in accordance with the requirements set out in subsection 6.1(2);...Subsection 6.1(2) states with regards to the content of an environmental assessment:*
- 6.1(2) *Contents - the environmental assessment must consist of,*
 - (a) *a description of the purpose of the undertaking;*
 - (b) *a description of and a statement of the rational for,*
 - (i) *the undertaking,*

- (ii) *the alternative methods of carrying out the undertaking and*
- (iii) *the alternatives to the undertaking;*
- (c) *a description of,*
 - (i) *the environment to be affected or that might reasonably be expected to be affected, directly or indirectly,*
 - (ii) *the effects that will be caused or that might reasonably be expected to be caused to the environment, and*
 - (iii) *the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment, by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;*
- (d) *an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and,*
- (e) *a description of any consultation about the undertaking by the proponent and the results of the consultation.*

This EA ToR has been organized considering the above requirements and the Ministry of the Environment's code of practice document entitled "*Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario, June, 2007*". Accordingly, the EA ToR document includes the following:

- Section 1 - Introduction;
- Section 2 - EA Planning Process including Scope of EA Terms of Reference;
- Section 3 - Identification of the Proponent;
- Section 4 - Purpose and Description of the Proposed Undertaking;
- Section 5 - Range of Alternatives to be evaluated in the EA Study;
- Section 6 - Existing Environment and Potential Effects of the undertaking;
- Section 7 - Required Information to start the study;
- Section 8 - Description of the Evaluation Criteria and Methodologies;
- Section 9 - Commitments and Monitoring Strategy;

- Section 10 - Consultation Plan for the Environmental Assessment;
- Section 11 - Study Schedule;
- Section 12 - Modifications to this Terms of Reference;
- Section 13 - Identification of Other Approvals Required; and,
- Section 14 - Environmental Assessment Report and Submission.

Included with this EA ToR, as separate documents, are the results of public consultation undertaken as part of developing the draft EA ToR development.

During the EA process a series of *Background Documents* will be developed in support of the ToR. These background documents will contain the rationale supporting the development of this ToR and the public and agency consultation that the City of Elliot Lake has already undertaken to date. The Background Documents do not form part of the ToR submitted for review and approval by the Minister.

The background documents will include the following:

- Purpose and Need for the Undertaking;
- Consideration of “Alternatives to” the Undertaking;
- Consideration of “Alternative Methods of Carrying Out” the Undertaking;
- Description of Environment Potentially Affected; and,
- Approvals, Policies, Guidelines and Practices Related to the Proposed Undertaking.

3. Identification of the Proponent

The proponents for the proposed ToR and the corresponding EA study are as follows:

The official Proponent lead name is:

The City of Elliot Lake

45 Hillside Drive N.

Elliot Lake, ON

P5A 1X5

Tel: 705-461-7219

Fax: 705-461-7244

Email: publicworks@city.elliottlake.on.ca

Contact: Rob deBortoli, Director of Operations

4. Purpose and Description of the Proposed Undertaking

The purpose of the proposed undertaking is to create a long-term (20 - 25 year) waste management master plan, to commence no later than 2010, that will guide the management of wastes that remain after the application of the at-source waste diversion (reduction, reuse, recycling and composting) programs.

The development of the Master Plan will be guided by the preparation of population and waste generation projections which in turn will be used for waste diversion projections and waste management facility sizing. At-source programs refer to those initiatives undertaken at the source of waste generation (e.g. at home) to eliminate the generation of waste or to divert wastes to an appropriate diversion facility (e.g. separation of recyclable materials from the waste stream by the home owner and placement of the recyclable material in a blue box for curb-side collection).

The following description of the proposed undertaking is for the purpose of initiating the environmental assessment only. It may be refined or altered depending on the findings of the various EA studies. The final description of the proposed undertaking will be included in the EA document submitted for approval of the Minister in accordance with the requirements of Section 6.1(2) (a) of the EA Act.

The proposed undertaking that would be the subject of an EAA approval in accordance with this EA ToR would be a waste management facility or facilities which, at a minimum, would be capable of managing the projected residual wastes that will remain for disposal over the 25-year planning period (starting in 2010 and ending in 2035) after achievement of the municipal diversion objectives.

It should be noted that any policies or programs that support diversion identified for implementation as a result of the "Alternatives to" (i.e. Identification of the Technology) evaluation could be implemented without the need for EAA approval and therefore do not form part of the undertaking description included in this EA ToR. To date, there have been no alternative processing approaches or technologies identified that would totally eliminate the need for landfill capacity within the subject planning period.

4.1 Potential Consideration of Contingency or Surplus Disposal Capacity

After the evaluation of the "Alternatives to" (alternative technologies) and during development of the minimum site size requirement, the need to include excess disposal or processing capacity for future contingencies will be reviewed. At that time, a detailed assessment of the potential of at-source diversion will have been completed and the City will have a better understanding of the performance of their diversion programs. If the addition of capacity to the proposed undertaking is needed, it will be considered in consultation with the public. If, however, it is determined that the preferred alternative may not provide adequate long term disposal or processing capacity, a contingency plan will be developed.

5. Range of Alternatives to Be Evaluated in EA Study

5.1 “Alternatives To” the Undertaking (Alternative Technologies)

5.1.1 Component Approaches and Technologies

During development of the EA ToR a ‘long list’ of all potentially available ways to manage the waste remaining after diversion, or “alternatives to”, were screened for reasonableness and identification in the EA ToR for consideration during the EA. The alternatives identification and screening process were undertaken in consultation with the public. A background document will be provided to explain the rationale for the “alternatives to” that have been included for consideration in the EA Study and for those that have been removed from consideration. The following “alternatives to” the undertaking have been identified for consideration during the EA study:

Table 5-1. Alternatives to the Undertaking

Alternative	Rationale for Inclusion in EA Evaluation:
Thermal Processing	Based on recent industry activity in Ontario (e.g. responses to requests for expressions of interest) and facilities operating in other jurisdictions it is evident that this alternative is reasonably available to address the purpose of the undertaking from both a commercial and technical perspective. This alternative offers best potential for a minimal landfill system.
Biological Processing	This approach is being applied elsewhere including other parts of Canada for a mixed waste stream. This approach offers the potential for a relatively stable landfill with a reduced contaminating lifespan (i.e. length of time that landfill leaches contaminants and therefore generates leachate after closure). Considering proportion of organics remaining in residual waste stream, this alternative may be applicable to addressing the purpose of the undertaking.
Physical Processing	May be considered for the pre-landfill processing of residual waste to remove recyclable materials not captured by curbside programs. This equipment has been applied for a long time in different contexts to increase the capture rate of recyclable materials. May also be considered to pre-process wastes to be managed by biological or thermal processing alternatives to capture recyclable content and improve consistency and mixture of materials for processing.
Landfill	Capable of managing the entire residual waste stream, and is the most common and readily available form of waste disposal.

Alternative	Rationale for Inclusion in EA Evaluation:
Additional At-Source Diversion (the 3R's)	Public consultation regarding this option would be necessary to gauge interest in program participation. A zero waste system is not included with this alternative. This level of diversion is considered not reasonably available to the municipality within its planning timeframe as there are no jurisdictions elsewhere achieving a zero waste system. The municipality also does not have jurisdiction over packaging, which is a significant policy area that can reduce waste.
Export	If waste management facilities and programs can not adequately manage waste within the study area, or if more preferable means of waste management than can be reasonably developed within the study area exist in close proximity, export of waste may be considered.
Do Nothing	Maintain status quo, and allow waste generation to increase. The "Do Nothing" alternative constitutes a baseline alternative to the EA. Its evaluation will contribute to the establishment of the rationale for the undertaking, as required under Section 6.1(2)(b) of the Environmental Assessment Act (EAA).

5.1.2 Consideration of Waste Management Systems

To ensure that all alternatives are considered in the context of cumulative impacts and life-cycle impact analysis, waste management systems will be evaluated rather than independent components. This approach recognizes that municipal waste management solutions require integrated strategies to effectively manage solid waste. For example a landfill component may be added on the back end of the programs and facility(ies) to manage residual wastes. Other examples include the addition of more diversion, by way of other at-source measures or by the addition of physical processing equipment at the front-end or back-end of the facility to capture those materials.

5.2 “Alternative Methods” of Carrying Out the Undertaking (Alternative Sites)

Once the preferred ways of managing the waste or “Alternatives to” are determined, facility sites or “Alternative Methods” may be identified and evaluated in the EA study. This component of the study will consider a range of sites for the purpose of locating a processing and/or disposal facility. A background document will provide the rationale for the process that is proposed for the purpose of locating a processing and/or disposal facility. Siting requirements for a disposal facility will differ from the requirements of a processing facility (thermal, biological or physical processing). For simplicity both processing and disposal facilities will be referred to as waste management facilities for the remainder of the section.

The process of identifying these siting alternatives for a waste management facility will not seek to consider all lands within the study area, but rather, will focus on those unconstrained lands considered

reasonably available and accessible to the City of Elliot Lake. Accordingly, the following types or categories of sites will be considered at the EA evaluation:

- Publicly owned lands that meet the minimum site size and configuration requirements for the type of facility being pursued and that are located in areas that are unconstrained from a land use perspective; and,
- Lands offered by a willing host property owner that exhibit the minimum site size and configuration requirements for the type of facility being pursued and that are located in areas that are unconstrained from a land use perspective.

The only circumstances that would lead to the consideration of privately owned lands not being offered by the property owner (i.e. expropriation) would be a determination, in consultation with the public and MOE, that the first two categories of sites do not present a reasonable range of siting alternatives.

5.3 Waste Management Site Selection Process

The process to select the waste management site(s) will be completed based on a seven-level process. A level represents the term used to describe a major step in the process. Seven levels are proposed and Level One is the development of the waste management site selection process. The product of Level One is the waste management site selection methodology document (WMSSMD) which will be approved by the City of Elliot Lake and the Ministry of the Environment. The following outlines the purpose of each level and the product resulting from that level. The site selection process begins by examining all of the City of Elliot Lake study area. As shown below, the process progressively narrows until one site is identified. The level of effort required at each level of the selection process will be based upon the purpose and potential impacts of the waste management facility / site.

Table 5-2. Waste Management Site Selection

Level	Purpose	Product
Level One	<ul style="list-style-type: none"> Establishes the waste management site selection process 	<ul style="list-style-type: none"> WMSSMD
Level Two	<ul style="list-style-type: none"> Excludes unsuitable lands 	<ul style="list-style-type: none"> Candidate Waste Management Areas
Level Three	<ul style="list-style-type: none"> Identifies boundaries of candidate sites 	<ul style="list-style-type: none"> “Long List” Candidate Waste Management Sites
Level Four	<ul style="list-style-type: none"> Compares “long list” sites to identify more suitable sites 	<ul style="list-style-type: none"> “Short List” Candidate Waste Management Sites
Level Five	<ul style="list-style-type: none"> Obtains more detailed information on the “short list” sites 	<ul style="list-style-type: none"> Results of the Preliminary Field investigation and a Social Impact Assessment, as well a Stage 1 Archaeological Assessment
Level Six	<ul style="list-style-type: none"> Compares “short list” sites to identify the most suitable site(s) for waste management 	<ul style="list-style-type: none"> Preferred Waste Management Site
Level Seven	<ul style="list-style-type: none"> Document the results of the entire process including the public consultation program 	<ul style="list-style-type: none"> Waste Management Site Selection Report

Constraint Mapping involves identifying areas in the study area not suitable for certain waste management facilities, such as areas which comprise Aboriginal land, provincially significant natural communities etc. Constraint mapping is used at Level Two to identify suitable areas and at Level Three to define the boundaries of candidate sites. Candidate sites are then systematically evaluated using qualitative and quantitative evaluation methodologies based on a net effects analysis.

Natural environment field investigations, where appropriate, will be conducted to aid in the evaluation of the “short list” sites with the intent of avoiding significant areas/species and proposed mitigation. Methodology descriptions will be included in the WMSSMD.

As a result of the evaluation and consultation, it may be determined that multiple facilities may be the best solution to the City of Elliot Lake Waste Management Plan. Multiple facilities could, for example, include more than one landfill, processing facility, or transfer station. If multiple facilities are proposed, each facility location would be subject to site specific studies to confirm suitability with the criteria established in the waste management master plan process.

6. Description Of Environment Potentially Affected

The environment that may be affected by a proposed City of Elliot Lake waste management facility is briefly described as follows. The EA will include a detailed description of the environment in the study area, potential environmental impacts to the described environment and methods to manage or mitigate these impacts.

6.1 Natural Environment

Elliot Lake is located on the Canadian Shield and is surrounded by forests and a number of lakes. The local forest is a transitional forest typically comprised of sugar maple, yellow birch, white birch, trembling aspen, white and red pine, white spruce and balsam fir. Moose, black bears, white tailed deer and transitional forest bird species are prominent in the area. Other species present include fur bearers such as beaver, mink and otter, and other predator species such as wolves, and lynx.

The land surrounding Elliot Lake is primarily managed by the Ministry of Natural Resources. There are pockets of land classified as conservation or forest reserve. No Conservation Authorities have jurisdiction within the study area.

6.2 Economic / Financial

The City of Elliot Lake was established in the early 1950's based on serving a large deposit of uranium. For 40 years the municipality thrived on the success of the mining industry until the closure of the mines in the mid 1990's. In order to maintain the City the area has been marketed as a retirement centre and tourism destination. The recreation and cottage industry are growing and are significantly stabilizing the City population and economy.

6.3 Technical / Infrastructure

Elliot Lake is located 26 km north of the TransCanada Highway (Hwy 17) on Highway 108. A local airport provides landing and terminal facilities for charter flights and private aircraft usage. The city is cellular serviced and is connected to a fibre optic cable enabling high speed broadband access for business and residential users. Municipal services include water, sewer, roads and waste management.

6.4 Social / Cultural

The City of Elliot Lake has a population of approximately 11,549 people according to 2006 Census Canada data². The median age is 55 years with 89% of the population over 15. This is a reflection of the number of retirees in the community. Community programs are largely focused on retirement and leisure activities. The Lester B. Pearson Civic Centre offers residents access to community theatre, fine arts and includes the Elliot Lake Nuclear and Mining Museum. Main employers include government agencies, health care, the retail industry and emerging tourism/recreation. The community has a high percentage of bilingual residents (26.6%) compared to the national average (17.7%). Approximately 7% of the population identify themselves as Aboriginal.

6.5 Legal / Jurisdictional

The City of Elliot Lake is governed by an elected mayor and city council.

² Statistics Canada. 2007. *Elliot Lake, Ontario (table). 2006 Community Profiles*. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007.
<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E> (accessed February 13, 2008).

7. Data Collection

The following presents a list of required information to start the plan:

Table 7-1. Data Collection

Requested Information		Availability
A.	Aerial Photo Base	
1.	Up-to-date electronic aerial photo base	Aerial photographs are available through NRCanada http://airphotos.nrcan.gc.ca/index_e.php .
2.	Outline of vegetation and place names for significant land use features	Digital boundary information for some significant wetlands, terrestrial areas and wildlife sensitive areas are available through the Ministry of Natural Resources.
3.	Same as above for topographic mapping including contours, watercourses.	Digital Ontario Base Maps (scale 1:20,000 are available.
B.	Certificates of Approval	
4.	Certificates of Approval for all waste management facilities/systems	The CofA for the current landfill is available through the City of Elliot Lake.
C.	Other Facilities and Firms	
5.	Prepare list based on determined distance from City: <ul style="list-style-type: none"> - Landfills - Recycling Centres - HHW Depots 	Information to complete this task can be collected via a variety of sources (i.e. Request For Information).
6.	Same as above for waste management firms.	Same as above.

Table 7-2. Secondary Sources

Category	Information Sources	Table of Contents
Landfill Site		
	Design Report and Environmental Monitoring Program Contingency Plan for Leachate. M.J. Perkins, City of Elliot Lake Engineer. February 1984.	<ul style="list-style-type: none"> o Introduction o Site Preparation o Scheduling o Operation o Closure <p>Appendices</p> <p>Figure 1: Annual Cell No. 1</p> <p>Figure 2: Annual Cell No. 2</p> <p>Figure 3: Annual Cell No. 3</p> <p>Figure 4: Annual Cell No. 4</p> <p>Figure 5: Annual Cell No. 5</p> <p>Figure 6: First Five Year Cell</p> <p>Figure 7: Final Contours Closure Plan Total Volume</p> <p>Environmental Monitoring Program</p> <ul style="list-style-type: none"> o Introduction o Gas Movement o Groundwater o Drainage Stream - Surface Water
	1993-1994 Monitoring Report Sanitary Landfill Site City of Elliot Lake. Trow Consulting Engineers Ltd. June 1995	<ul style="list-style-type: none"> o Background and Study Scope o Monitoring Station Summary o Groundwater Chemistry o Surface Water Chemistry o Impact Assessment o Summary and Recommendations o Observation Well Locations <p>Appendices</p> <p>A: Water Chemistry Data</p> <p>B: Groundwater and Leachate Chemistry Summary</p> <p>C: Background and Surface Water Chemistry Summary</p> <p>D: Policy 15-08 Analysis</p> <p>E: Geochemical Trend Analysis</p>
Landfill Site		
	2005 Annual Monitoring Report City of Elliot Lake. Earth Tech Canada, June 2006.	<ul style="list-style-type: none"> o Introduction Background o Physical Site Setting o Water Quality Monitoring Program o Groundwater Quality o Surface Water Quality o Conclusions o Recommendations <p>Appendices</p> <p>A: Certificate of Approval</p> <p>B: Site Design and Operations Plan</p> <p>C: Site Hydrogeological Investigation</p> <p>D: Analytical Reports</p> <p>E: Summary of Ground and Surface Water Quality Data</p> <p>F: Sampling Protocol</p> <p>G: Groundwater, Leachate and Surface Water Monitoring Parameters</p>
Zoning & By-Law and Official Plan for the City of Elliot Lake		

Category	Information Sources	Table of Contents
Provincial Policy Statement (2005)		
	Provincial Policy Statement (2005). Ontario. Ministry of Municipal Affairs and Housing	<ul style="list-style-type: none"> ○ Specifically Section 1.6.8. Waste Management
Certificates of Approval		
	Provisional Certificate of Approval, Waste Disposal Site MOE, September 1982.	<ul style="list-style-type: none"> ○ No. A560810 Notice No. 1
Waste Management Studies		
	The City of Elliot Lake Waste Management Study, Earth Tech Canada, December 2002	<ul style="list-style-type: none"> ○ Introduction ○ Municipal Waste Profile ○ Waste Collection ○ Recycling Services ○ Organic Waste Stream ○ Special Waste Collection/Disposal/Recycling ○ Waste Disposal ○ Waste Management Funding ○ Conclusions ○ Recommendations <p>Appendices:</p> <ul style="list-style-type: none"> A: Request for Proposal B: Certificates of Approval - Existing Waste Disposal Sites C: Design Report - February 1984 D: 1993-1994 Monitoring Report - Trow Consulting Engineers Ltd. E: Geophysical Survey of Elliot Lake Landfill F: Post-Closure Care Costs
Geophysical Studies		
	Letter from MOE (June 22, 1998) summarizing Geophysical survey of Elliot Lake Landfill	<ul style="list-style-type: none"> ○ Introduction ○ Survey Results ○ Conclusions <p>Appendices:</p> <ul style="list-style-type: none"> Figure 1: EM Conductivity Survey (1-2m) Figure 2: EM Conductivity Survey (3m) Figure 3: EM Conductivity Survey (6m)
Hydrogeological Studies		
	Hydrogeological Investigation of Proposed Town of Elliot Lake Landfill. Morrison Beatty Limited, February, 1980.	<ul style="list-style-type: none"> ○ Introduction ○ Investigations and Site Instrumentation ○ Physical Setting ○ Water Resources ○ Landfill Impacts ○ Summary and Conclusions ○ Recommendations <p>Appendices:</p> <ul style="list-style-type: none"> A: Observation Well Logs and Construction Details B: Grain-Size Curves
Noise Guidelines		
	Noise Guidelines for Landfill Sites. Ontario, Ministry of the Environment. October 1998.	<ul style="list-style-type: none"> ○ Scope ○ References ○ Technical Definitions ○ Measurements ○ Sound Level Limits ○ Off-Site Vehicles ○ Required Information

Category	Information Sources	Table of Contents
	NPC-205 – Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban). Ontario, Ministry of the Environment. October 1995. (*)	<ul style="list-style-type: none"> ○ Scope ○ References ○ Technical Definitions ○ Establishment of Limits – Objective ○ Background Sound Levels ○ Sound Levels Due to Stationary Sources ○ Procedures ○ Sound Level limits – General ○ Sound Level limits – Specific Impulsive Sounds ○ Sound Level limits – Pest Control Devices ○ Pre-Emption ○ Exclusion Appendices: A.1. General A.2. Application A.3. Stationary Sources A.4. Predictable Worst Case Impact A.5 Definitions
	NPC- 232 - Sound Level Limits for Stationary Sources in Class 3 Areas (Rural). Ontario, Ministry of the Environment. October 1995. (*)	<ul style="list-style-type: none"> ○ Scope ○ References ○ Definitions ○ Establishment of Limits – Objective ○ Background Sound Levels of the Natural Environment ○ Sound Levels Due to Stationary Sources ○ Procedures ○ Sound Level limits – General ○ Sound Level limits – Specific Impulsive Sounds ○ Sound Level limits – Pest Control Devices ○ Pre-Emption ○ Exclusion Appendices: A.1. General A.2. Application A.3. Stationary Sources A.4. Predictable Worst Case Impact ○ A.5 Definitions

*Note – These documents should be references for any stationary noise source such as any non-landfill alternative, along with some ancillary activities which might take place at a landfill operation including:

- Facilities for reception, storage and processing of waste,
- Equipment used in the processing of the waste (e.g. crushers, grinders),
- Ventilation equipment utilized in the subject buildings,
- Off-site source vehicles while on site.

8. Evaluation Methodologies and Criteria

8.1 Comparative Evaluation of “Alternatives To” the Undertaking

The evaluation of the ways to manage the waste remaining after diversion (“alternatives to” the undertaking) will be a comparison of the advantages and disadvantages associated with each alternative which, in turn, will be defined using a net effects analysis. The step-by-step methodology for use of a net effects analysis of “alternatives to” in the City of Elliot Lake Waste Management Plan is described as follows:

- Step 1 - The component alternatives will be assembled into a range of alternative proposed waste management systems with each system being capable of managing all of the residual waste stream;
- Step 2 - Data collection will be undertaken to apply each of the comparative evaluation criteria to the alternative proposed waste management systems. The proposed system comparative evaluation criteria are included in Appendix “B” of this EA ToR. Suggested indicators and data sources will be included in the background documents and may be adjusted at the initiation of this EA evaluation based on input received from agencies and the public.
- Step 3 - The evaluation criteria will be applied to each of the proposed waste management systems and potential impacts will be identified.
- Step 4 - Each of the potential effects identified at Step 3 will be considered with respect to the availability of measures to mitigate (i.e. measures that may be applied to reduce or eliminate impacts) or enhance (measures that may be applied to improve or increase the magnitude of a benefit or positive effect) the effects, and to identify the residual or ‘net effects’.
- Step 5 - The net effects associated with each proposed waste management system under each comparative criterion will be compared and a list of relative advantages and disadvantages associated with each alternative proposed waste management system will be developed; and,
- Step 6 - The relative advantages and disadvantages of each alternative proposed waste management system in the context of priorities established in consultation with the public will be examined and the preferred system will be selected. The preferred system will exhibit the preferred balance of advantages and disadvantages accounting for the significance of environmental categories and criteria established by the public.

The background documents to be developed will provide additional information on the development of the proposed “alternatives to” evaluation methodology and it’s development.

8.1.1 Review of Proposed “Alternatives to” Evaluation Methodology and Criteria

Prior to initiation of the evaluation of “Alternatives to” the undertaking, the proposed evaluation methodology and criteria will again be reviewed in consultation with the public and government review agencies. This review will again seek input on the proposed evaluation steps and evaluation criteria presented in the EA ToR and will seek to confirm the priorities to be considered during the evaluation.

8.2 Screening and Comparative Evaluation of Alternative Methods of Carrying Out the Undertaking

The evaluation of “alternative methods” of carrying out the undertaking will be comprised of a facility site selection process. Site selection will start with a review of the entire study area to identify those areas considered un-constrained from the stand-point of locating a processing and/or disposal facility. These available areas will then be systematically evaluated to identify a long-list of sites followed by additional screening and comparative steps to narrow that list down to a preferred siting option. The following describes the major steps in this evaluation process:

- Step 1- Apply siting constraints to entire study area and identify those lands considered un-constrained for the siting of a processing and/or disposal facility. The proposed siting constraints are included in Appendix “C” – Table C-1. Lands within the study area which are constrained by any of the exclusionary criteria would be screened out for the purpose of moving forward in the site selection process.
- Step 2 - Identify a minimum site size requirement for the type of facility to be sited based on the preferred alternative selected.
- Step 3 - Identify a “long-list” of siting opportunities in the un-constrained lands through a review of publicly owned lands and the issuance of a request for “willing host” properties. Review the “long-list” of sites to ensure that a reasonable range of alternatives are included on the list (e.g. sites in both municipalities, sites in both an urban and rural setting, etc.).
- Step 3(b) - *Optional.* If it is determined that there is not a reasonable range of siting opportunities on the “long-list”, then a review of privately owned lands in the study area would be undertaken to identify additional siting opportunities with the same or better attributes than those publicly owned and “willing host” sites on the list. The owners of identified properties would be approached to determine if a negotiated acquisition of the property is feasible.
Review the “long-list” of sites to ensure that a reasonable range of alternatives are included on the list.

- Step 3(c) - *Optional.* If it is still determined that there is not a reasonable range of siting opportunities on the “long-list”, then the constraints applied at Step 1 would be reviewed and relaxed in consultation with the public and government agencies. Steps 2 and 3 and, if necessary, 3(b) would then be re-applied. Step 3(c) would be repeated, as required, to arrive at a reasonable “long-list”.
Only if absolutely necessary, the expropriation of privately held lands would be considered. This would be the approach of last resort for the purpose of siting a facility.
- Step 4 - As a rule-of-thumb, a “long-list” site evaluation will be carried out if there are more than three (3) sites remaining after the application of siting constraints and consideration of available siting opportunities. The purpose of this level of evaluation is to eliminate less preferred sites from the list of sites under consideration using broad-based technical, economic and social criteria. The proposed “long-list” evaluation criteria are included in Appendix “C” - Table C-2. Their application would result in the identification of a “short-list” of alternative sites.
- Step 5 - Evaluate the “short-list” of alternative sites using the same net effects analysis methodology described in Section 7.1 for the evaluation of “Alternatives to” resulting in the identification of a siting preference. The “short-list” comparative evaluation criteria are included in Appendix “C” - Table C-3.

The background document that will be developed will provide additional information on the development of the proposed “alternative methods” of carrying out the undertaking evaluation methodology and its development.

8.2.1 Review of Proposed “Alternatives Methods” Evaluation Methodology and Criteria

Prior to initiation of the evaluation of “Alternatives Methods” and after a preferred approach (“alternative to”) has been identified by the EA study, the proposed evaluation methodology and criteria will again be reviewed in consultation with the public and government review agencies. This review will seek input on the proposed evaluation steps and evaluation criteria presented in the EA ToR and will seek to confirm the priorities to be considered during the evaluation.

8.3 Application of a Competitive Request for Proposal (RFP) Process

An RFP process may be used to select a vendor to the preferred technology (“Alternative To”) following the selection of a preferred site. This RFP will request firm price proposals for a facility to be developed on the identified site. In addition to this “base bid” proposal request, vendors may be offered the option of proposing their technology on their own site. Any site offered at this stage would have to meet certain minimum specified requirements such as being located in Ontario. If any additional acceptable sites were offered at this stage in the process they would be compared with the preferred site using the comparative process set out in section 7.2. Following this comparison an overall preferred vendor and site would be selected.

8.4 Confirmation of the Proposed Undertaking

When screening alternatives at the EA stage, broad criteria will be used to short list projects. To determine the preferred alternative from the short listed projects, technical analysis will be used to allow the proponent to make an informed selection. The level of study required will be determined by the complexity of the alternatives, the potentially impacted environment, and the comparability of the alternatives.

To establish and operate a solid waste management facility, the Environmental Protection Act (EPA) requires that a Provisional Certificate of Approval be obtained. Detailed investigations will be completed at the preferred site, once selected, to satisfy the requirements of the EPA, to obtain a Certificate of Approval, and to confirm the suitability of the proposed facility on the proposed site. The requirements of Section 53 Ontario Water Resources Act (OWRA) should also be considered for the establishment of stormwater management facility and leachate collection, treatment, and disposal facility.

The scope of detailed studies to be undertaken will depend on the type of facility being established and the nature of the site location and its conditions. A detailed work program will be developed once the preferred site is selected and will be prepared in consultation with the public and relevant government agencies. The background document will identify a potential scope of studies that could be completed at the preferred site.

9. Commitments to Address Identified Issues and Prepare a Monitoring Strategy

During the course of developing and approval of the ToR, any commitments made, and how these commitments will be met, will be summarized for inclusion in the EA. The EA will also include a comprehensive list of commitments made during the development of the EA, that may include:

- Impact management measures;
- Additional works and studies to be carried out;
- Monitoring;
- Public consultation and contingency planning;
- Documentation and correspondence.

Over the course of the study and the application of evaluation criteria, potential effects and mitigative requirements will be identified for the proposed undertaking. It is noted that these considerations will be defined based on supporting EA studies. Accordingly, over the course of completing the EA study, the City of Elliot Lake will review the current monitoring strategy and schedule to assess potential effects and the performance of mitigative measures. Under the EA a monitoring framework will be developed that considers all phases of the identified undertaking, and may include monitoring to ensure compliance and/or effects on the environment.

10. Consultation Plan for the Environmental Assessment

This section describes a general consultation plan which is intended to guide the consultation process over the course of the EA Study. It includes reference to the types of parties to be consulted over the course of the study and the scope of consultation to be undertaken at various milestones during the study. Provision is also made for issues resolution which could be applied during the study.

10.1 Parties to be Consulted during EA Study

In general, there are three types or categories of parties to be consulted over the course of the EA Study. These are:

- **Government and Agencies** which represent the interests and mandate of various governmental departments, ministries and agencies potentially affected by the outcome of the EA Study. A Government & Agency Review List has been established for the study and is included as an appendix of this EA ToR.
- **General Public** which includes all residents, landowners and businesses within the study area which may have a broad or general interest in the study or that may be directly affected by the study outcome. Over the course of the EA ToR development, a contact list of those individuals and groups expressing interest in the study will be compiled and will be updated as the study proceeds. The general public will be contacted through means of media, website and public notices. The list of media to be used for public notice will be included in the Consultation Record supporting the EA.
- **Aboriginal Peoples** potentially impacted or interested in the undertaking will be identified through contact with the agencies listed on the MOE's website³, including such agencies as Department of Indian and Northern Affairs, Ministry of Aboriginal Affairs, local bands and tribal councils. All public documents will be circulated to the interested aboriginal groups, including the ToR for their review and comment. All comments will be recorded and addressed in the Consultation Record supporting the EA.

By way of a Communications Strategy developed for the study (see Section 10.2) and future study consultation events, the above lists of parties to be consulted will be continually updated over the course of the EA Study.

³ "Government Review Team List for Aboriginal Information"
http://www.ene.gov.on.ca/envision/env_reg/ea/english/General_info/GRTLlist.htm

10.2 Scope of Consultation at Study Milestones

Over the course of the EA Study, it is anticipated that the scope of consultation events will move from initiatives and events addressing and seeking input from the larger community to a program that is more focused on the individuals and community with the greatest potential to be impacted by the proposed undertaking. The following outlines the minimum scope of consultation associated with the various study milestones.

Table 10-1 - Consultation Activities

Study Milestones	Minimum Scope of Consultation Activities
<ul style="list-style-type: none"> ➤ Prepare ToR 	Newsletter to the public to initiate the development of the ToR. Open houses for the general public, municipal elected official and City staff. Circulation of the ToR to the Government Review team (GRT) for comment. Posting of the ToR on the City's Web site with instructions on how to submit secure comments.
<ul style="list-style-type: none"> ➤ Initiate EA Study 	General Public Notices and Website to inform general public and agencies on overall scope of Study with instructions on how to submit secure comments.
<ul style="list-style-type: none"> ➤ Identify Alternative Waste Diversion Strategies and Waste Disposal Options 	Open houses for the general public and intended to obtain input on alternative waste diversion strategies and waste disposal options. Meeting notices and notes to be posted on website for information.
<ul style="list-style-type: none"> ➤ Evaluate Alternative Waste Diversion Strategies ➤ Select Preferred Approach to Manage Residual Wastes ➤ Evaluate Long List of Disposal Options and Reduce to a Short List 	Focused events such as workshops or 'step-specific' open houses open to the general public will inform and receive input about the evaluation process. Meeting notices and notes to be posted on website for information.
<ul style="list-style-type: none"> ➤ Evaluate Short List of Waste Disposal Options and Select Preferred Option 	<p><u>At Identification of Short List:</u></p> <p>Open House / Public Meeting type events open to the general public and intended to notify and receive input on the process leading to selection of the short list sites (i.e. study area to suitable areas to long list to short list).</p> <p><u>At Evaluation of Short List:</u></p> <p>Open House or Public Meeting type events open to the general public but focused on the communities surrounding the short list sites for the purpose of identifying community-specific issues and information regarding the respective sites.</p> <p><u>At Identification of Preferred Site:</u></p> <p>Focused information sessions with community / residents potentially impacted by site to inform and exchange information regarding site specific issues, next steps in process, and opportunities to discuss / resolve concerns.</p> <p>General public notice of selected preferred site. Meeting notices and minutes to be posted on website for information.</p>

Study Milestones	Minimum Scope of Consultation Activities
<ul style="list-style-type: none"> ➤ Complete Site Specific Studies to Confirm Suitability and Documentation to Support Approvals 	<p>Provision of opportunity to form a Site Liaison Committee consisting of resident, agency and other interest representatives to review and provide input on site specific studies.</p> <p>Focused information sessions with community / residents potentially impacted by site to obtain input on study methodologies and to inform and exchange information regarding study results, design and operational implications, and supporting documentation.</p> <p>Meeting notices and notes to be posted on website for information.</p>

10.2.1 Communications Strategy

To effectively disseminate information on the study and to provide opportunities for the public and agencies to provide specific or general input to the study, the City of Elliot Lake have developed this communications strategy. Elements of the Communications Strategy will include the development and issuance of public advisories including a newsletter series, press releases, website, and the provision of a range of avenues for communication between the public and study representatives. A special effort will be provided to communicate with the Aboriginal community. The communication strategy will be maintained and updated, as required for the entirety of the study.

10.2.2 City of Elliot Lake Waste Management Newsletter

A City of Elliot Lake Waste Management newsletter series will be developed and circulated (assessment roll mailing list and others) and posted on the web site during study milestones. The content will include:

- Details on the Initiation of Consultation for the ToR
- Announcement of EA study;
- Problem/opportunity statement - justification for project;
- Identification and evaluation of diversion and disposal options and strategies;
- Study schedule, upcoming consultation activities; and
- Who to contact for more information/provide update.

The newsletter will be mailed out upon project initiation, upon completion of draft ToR, prior to all Public Information Centres (PICs) and at the notice of completion stage. In addition, information posters announcing the study and upcoming consultation activities will be strategically placed throughout the

communities using municipal offices, community centres, local businesses, post offices and the library. All information distributed in the community will also be available on the City's web site.

10.2.3 Public Information Centre

A series of up to four (4) PIC's will be convened in the City of Elliot Lake. Presentation materials at the PICs may include display panels and PowerPoint presentations to clearly communicate information on the issues/topics that the public is being asked to provide feedback on. The PIC content will be guided by the technical work program task and potential workshop outputs. The input received from the PICs will be documented in a report format that can be provided to participants and will facilitate the use of public feedback in the study process.

10.2.4 Meetings/Presentations

It is proposed that up to seven (7) meetings will be held with the Public Services Committee to review the information obtained based on the completion of all work program tasks and the results of the PICs. The Public Services Committee is composed of three councilors and the mayor, as well as a member of the administration as who acts as a resource and committee secretary.

10.2.5 Project Website

A project website will be developed during the ToR stage as a part of the City of Elliot Lake's existing website. This site will be used to disseminate information regarding up coming meetings, meeting minutes, public communications and documents related to the project. It will host the ToR and other approved documents with instructions of how to submit secure responses.

10.3 Issues Resolution

Over the course of the study it is expected that issues will arise that require resolution either before moving from one step to the next or prior to the issuance of approvals. It will be the City of Elliot Lake's preference to resolve issues as they arise and without the assistance of an outside party. However, should this approach not work, the use of a facilitator to negotiate a resolution or use of the EAA's mediation provisions will be considered. It is recognized that unresolved issues could be referred to the Province's Environmental Review Tribunal which would make a decision on approval of the undertaking and that unresolved issues could have a bearing on that decision and that conditions of approval could be imposed to deal with certain issues.

11. Estimated Study Schedule

The following presents an estimated study schedule from the time of this EA ToR preparation to implementation of a proposed undertaking. This schedule will be updated as study steps and implementation activities are completed.

Table 11-1 - Study Schedule

Project Milestone	Estimated Timeframe
➤ Prepare EA Terms of Reference	June 2006 to October 2007
➤ Submit EA ToR to MOE for Approval	November 2008 to March 2009
➤ Initiate EA Study	April 2009
➤ Evaluate "Alternatives to" the Undertaking (i.e. Technologies)	April 2009 to October 2009
➤ Select Preferred Approach to Manage Residual Wastes	November 2009 to March 2010
➤ Evaluate "Alternative Methods" of Carrying Out the Undertaking (Landfilling/Processing)	April 2010 to October 2010
➤ Select Preferred Site	November 2010 to April 2011
➤ Complete Site Specific Studies to Confirm Suitability and Documentation to Support Approvals	May 2011 to October 2011
➤ Submit EAA Application to Minister for Approval	December 2011
➤ EA Review and Approval	January 2012 to June 2012
➤ Additional Approvals and Implementation	2012+

12. Modifications to This Terms of Reference

In the course of carrying out the work contemplated by this ToR, the City of Elliot Lake may determine that minor modifications to the approaches and methodologies described herein are necessary or appropriate. Minor modifications may include additional information, studies or consultation methods/events to address concerns expressed by the public as study results become available or adjustments to the sequence / overlap of study events which may become available depending on study results and circumstances.

These modifications may include, but are not limited to, the following:

- Additional partnerships;
- Additional problems and opportunities;
- Additional alternatives;
- Revisions to the study area;
- Additional evaluation criteria;
- Additional evaluation methodologies utilized to select the preferred planning alternatives and/or alternative method;
- Additional and/or expanded studies to ensure that the nature and magnitude of potential effects area accurately identified and mitigated;
- Additional consultation activities; and
- Examination of additional environmental effects.

This ToR is written based on current information and is meant as guideline of methods and steps to be followed in the EA process based on the intent or purpose of the undertaking. As new information arises and circumstances change during the course of the EA, significant changes to the presented methodology may be necessary, and will be discusses with the Minister. Details with regards to the methods or steps to be followed to achieve the intent or purpose of the consideration will be included in the background documentation which is not approved by the Minister. For example, data sources and specific indicators for the evaluation criteria are not included in the ToR but may be reviewed in the background documents if a party is interested in the types of considerations for application of the evaluation criteria.

Where minor modifications are contemplated, such modifications will be undertaken at the direction of the City of Elliot Lake and in consultation with the public and relevant agencies, and the MOE.

13. Identification of Other Approvals Required

EAA and EPA approvals required for each alternative will be identified as appropriate. Also, any further approvals for the preferred undertaking will be identified in the EA. For example, these could include:

- a) Fisheries Act - Department of Fisheries and Oceans
- b) Federal/Provincial EA Co-ordination
- c) Lakes and Rivers Improvement Act - Ministry of Natural Resources
- d) Permit to Take Water - Ministry of Environment
- e) Section 53 Ontario Water Resources Act (OWRA) Certificate of Approval to Construct Sewage Works for stormwater and leachate management - Ministry of the Environment
- f) Certificate of Approval for Air - Ministry of the Environment
- g) Certificate of Approval for Noise - Ministry of the Environment
- h) Local Approvals (noise bylaws, road closures, tree removals, site alterations, etc.) - local municipalities
- i) Ontario Realty Corporation (ORC) Class EA - ORC
- j) Easement over ORC managed lands - ORC

13.1.1 Federal/Provincial EA Coordination

The proposed undertaking is subject to the requirements of the Ontario EA Act. The requirements of the Canadian Environmental Assessment Act (CEAA) may also apply. As a result, the proponent will work in a coordinated way with the provincial and federal governments to satisfy both levels of environmental legislation pursuant to the Canadian-Ontario Agreement on EA Cooperation (November, 2004).

In order to ensure an effective and efficient coordination of the provincial and federal EA processes, a project description will be prepared in a timely fashion for circulation to federal authorities to determine if there is trigger under CEAA.

The intent is to produce a single EA body of documentation on environmental effects to meet all of the information needs of both the federal and provincial governments. To the extent practical, federal/provincial information requirements regarding potential factors to be assessed in the context of this study have been integrated. General information requirements under CEAA will be found in Supporting Documents.

14. Environmental Assessment Report and Submission

An EA Report will be prepared at the conclusion of the individual EA to document the environmental assessment undertaken in accordance with the approved ToR. At a minimum, the EA report will fulfill the requirements set out in subsection 6.1(2) of the EA Act.

A draft of the EA Report will be made available for agency/public review prior to formal submission to the Ministry of the Environment (MOE). The purpose of the pre-submission review is to obtain comments on the contents of the EA report before submitting it formally to the Minister for review and approval. Similar to the ToR, the draft EA will be available for public review at the proponent's offices, area municipal offices and libraries, and on the project website.

Subsequent to the pre-submission review and incorporation of any comment received, the EA Report will be formally submitted to the Minister for review and approval. MOE will then undertake a formal public and agency review process for the EA report.

Appendix A

The City of Elliot Lake Waste Management Plan Glossary of Frequently Used Terms and Abbreviations

GLOSSARY OF FREQUENTLY USED TERMS

A7 Air Emission Guidelines: Air emission guidelines developed by the Ministry of the Environment (MOE) to govern combustion and air pollution control requirements for new municipal waste incinerators in the Province of Ontario.

Aerobic Treatment: Treatment of organic waste with access to/addition of oxygen (e.g. windrow composting).

Air Emissions: for stationary sources, the release or discharge of a pollutant from a facility or operation into the ambient air either by means of a stack or as a fugitive dust, mist or vapour.

Alternative Disposal Technology (ADT): Technologies, other than landfill, capable of disposing municipal waste (e.g. incineration, EFW, gasification, pyrolysis, etc.).

Anaerobic Treatment: Treatment of organic waste without access to/addition of oxygen (e.g. anaerobic digestion)

Anaerobic Decomposition: Reduction of the net energy level and change in chemical composition of organic matter caused by microorganisms in an oxygen-free environment.

Anaerobic Digestion (AD): See definition for anaerobic treatment. Anaerobic treatment method for waste through which biogas is formed from the decomposition of the organic stream.

Approved Site or facility: A landfill site or waste management facility with a valid Certificate of Approval.

Ash: The mineral content of a product remaining after complete combustion (see 'bottom ash' and 'fly ash').

'At-Source': referring to a waste minimization or management activity at the source of waste generation (e.g. at the household, at the business, etc.)

Baling: Compacting solid waste into blocks to reduce volume and simplify handling.

Biocell: A cell in which organic waste is decomposed biologically in an aerobic process and landfill gas is extracted.

Biodegradable: Capable of decomposing under natural conditions.

Biogas: Gas formed during the anaerobic decomposition of organic material, mainly consisting of methane and carbon dioxide.

Biological Treatment: A treatment technology that uses bacteria to consume organic waste.

Bottom Ash: The non-airborne combustion residue from burning pulverized coal in a boiler; the material which falls to the bottom of the boiler and is removed mechanically; a concentration of non-combustible materials, which may include toxins.

Briquetting: The compaction of waste into small bricks to be burned in an incinerator. Bricks are easier to manage and have a higher calorific value than regular uncompacted waste.

British Thermal Unit (BTU): Unit of heat energy equal to the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit at sea level.

Buffer Area: That part of a landfilling site that is not a waste fill area.

Bulky Waste: Large items of waste materials, such as appliances, furniture, large auto parts, trees, stumps.

Calorific Value: The amount of heat produced by a specific material type when combusted under specific conditions. Calorific Value is usually expressed in Calories or Joules per kilogram (ie. Cal/Kg or J/Kg).

Candidate Site: Property identified as suitable for consideration as a potential site for a waste management facility.

Carbon Monoxide (CO): A colorless, odorless, poisonous gas produced by incomplete fossil fuel combustion.

Carcinogenic: Capable of causing the cells of an organism to react in such a way as to produce cancer.

Catalyst: A substance that changes the speed or yield of a chemical reaction without being consumed or chemically changed by the chemical reaction.

Cells: Holes where waste is dumped, compacted, and covered with layers of dirt on a daily basis.

Certificate of Approval: A license or permit issued by the Ministry of the Environment for the operation of a waste management site/facility.

Class Environmental Assessment (EA): A planning process for an approved group of projects that are carried out routinely and have predictable and mitigatable effects.

Cogeneration: The consecutive generation of useful thermal and electric energy from the same fuel source.

Combustion: 1. Burning, or rapid oxidation, accompanied by release of energy in the form of heat and light. 2. Refers to controlled burning of waste, in which heat chemically alters organic compounds, converting into stable inorganics such as carbon dioxide and water.

Combustion Chamber: The actual compartment where waste is burned in an incinerator.

Combustion Product: Substance produced during the burning or oxidation of a material.

Commercial Waste: All solid waste emanating from business establishments such as stores, markets, office buildings, restaurants, shopping centers, and theatres.

Compactor: Tracked vehicle used to crush and compact waste at a landfill, to reduce volume.

Compost: The relatively stable humus material that is produced from a composting process in which bacteria in soil mixed with garbage and degradable trash break down the mixture into organic fertilizer.

Composting Facilities: 1. An offsite facility where the organic component of municipal solid waste is decomposed under controlled conditions; 2. an aerobic process in which organic materials are ground or shredded and then decomposed to humus in windrow piles or in mechanical digesters, drums, or similar enclosures.

Composting: The controlled biological decomposition of organic material in the presence of air to form a humus-like material. Controlled methods of composting include mechanical mixing and aerating, ventilating the materials by dropping them through a vertical series of aerated chambers, or placing the compost in piles out in the open air and mixing it or turning it periodically.

Construction and Demolition Waste (C&D): Waste building materials, dredging materials, tree stumps, and rubble resulting from construction, remodeling, repair, and demolition of homes, commercial buildings and other structures and pavements. May contain lead, asbestos, or other hazardous substances.

Contingency Plan: A plan developed to be implemented should some aspect of the project need to be altered or some aspect of the operation fail (i.e. "Plan B").

Cover Material: Material used to cover compacted solid waste in a sanitary landfill, typically soil. Alternatives to soil are now being investigated, including non-hazardous ash from incinerator facilities.

Design and Operation (D&O): A document (plan/report), required for obtaining a Certificate of Approval, which describes in detail the function, elements or features of a landfill site/facility, and how a landfill site/facility would function including its monitoring, and control/management systems.

Digestion: The biochemical decomposition of organic matter, resulting in partial gasification, liquefaction, and mineralization of pollutants.

Disposal: Final placement or destruction of wastes. Disposal is typically accomplished through use of approved sanitary landfills or incineration with or without energy recovery.

Disposal Facilities: Repositories for solid waste, including landfills and combustors intended for permanent containment or destruction of waste materials. Excludes transfer stations and composting facilities.

Diversion Rate: The percentage of waste materials diverted from traditional disposal such as landfilling or incineration to be recycled, composted, or re-used.

Dump: A site used to dispose of solid waste without environmental controls.

Ecological/Environmental Risk Assessment (ERA): A scientific method used to examine the nature and magnitude of risks from the exposure of plants and animals to contaminants in the environment.

Economies of Scale: The reduction in operation and administrative staffing costs and reduction in redundancy of positions and equipment through implementing larger scale undertakings.

Electrostatic Precipitator (ESP): A device that removes particles from a gas stream (smoke) after combustion occurs. The ESP imparts an electrical charge to the particles, causing them to adhere to metal plates inside the precipitator. Rapping on the plates causes the particles to fall into a hopper for disposal.

Emissions: gases released into the atmosphere.

Emissions Trading: The creation of surplus emission reductions at certain stacks, vents or similar emissions sources and the use of this surplus to meet or redefine pollution requirements applicable to other emission sources. This allows one source to increase emissions when another source reduces them, maintaining an overall constant emission level. Facilities that reduce emissions substantially may "bank" their "credits" or sell them to other facilities or industries.

Energy-from-waste (EFW): The recovery of useful energy in the form of heat and/or power from the thermal treatment of waste. Generally applied to incineration, pyrolysis, gasification but can also include the combustion of landfill gas and gas produced from anaerobic digestion.

Energy Recovery: The recovery of useful energy in the form of heat and/or power from the thermal treatment of waste. Generally applied to incineration, pyrolysis, gasification but can also include the combustion of landfill gas and gas produced from anaerobic digestion.

Environment (as it relates to the Environmental Assessment Act): Environment is defined under the Environmental Assessment Act as follows:

- (a) air, land or water,
- (b) plant and animal life, including human life,
- (c) the social, economic and cultural conditions that influence the life of humans or a community,
- (d) any building, structure, machine or other device or thing made by humans,
- (e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
- (f) any part or combination of the foregoing and the interrelationships between any two or more of them.

Environmental Assessment (EA): A systematic process that is conducted in accordance with applicable laws or regulations aimed at assessing the effects of a proposed undertaking on the environment. Includes evaluation of need, alternatives, impacts, and mitigative, remedial, monitoring and/or compensatory measures.

Environmental Assessment Act (EAA): An Ontario Act to provide for the protection; conservation; and, wise management of Ontario's environment. To achieve this, the EAA ensures that environmental problems or opportunities are considered and their effects are planned for before development or building takes place.

Environmental Protection Act (EPA): An Ontario Act to provide for the protection and conservation of the natural environment.

Environmental Assessment Terms of Reference (EAToR): An Environmental Assessment Terms of Reference outlines the work plan for the study to be undertaken in an Environmental Assessment.

Environmental Site Assessment (ESA): A systematic process of determining whether a specific property is or may be subject to actual or potential contamination.

Exports: In solid waste programs, municipal solid waste and recyclables transported outside the municipal jurisdiction or locality where they originated.

Expression of Interest (EOI): A preliminary document prepared by an outside source documenting their interest in a proposed project and a very general set of qualifications they possess that would make them eligible to participate further in the project.

Ferrous Metals: Magnetic metals derived from iron or steel; products made from ferrous metals include appliances, furniture, containers, and packaging like steel drums and barrels. Recycled products include processing tin/steel cans, strapping, and metals from appliances into new products.

Flue Gas: The air coming out of a chimney after combustion in the burner it is venting. It can include nitrogen oxides, carbon oxides, water vapor, sulfur oxides, particles and many chemical pollutants.

Fluidized Bed Incinerator: An incinerator that uses a bed of hot sand or other granular material to transfer heat directly to waste. Used mainly for destroying municipal sludge.

Fly Ash: Non-combustible residual particles expelled by flue gas.

Fugitive Emissions: Emissions not caught by a capture system.

Gasification: Conversion of solid material such as coal or waste into a gas for use as a fuel.

Gigajoule (GJ): A measurement of Energy. A typical single family household (approx. 2000 sq. ft.) uses approximately 60 to 90 GJ annually for heating (NRCAN).

Greenhouse Effect: The warming of the Earth's atmosphere attributed to a buildup of carbon dioxide or other gases; some scientists think that this build-up allows the sun's rays to heat the Earth, while making the infra-red radiation atmosphere opaque to infra-red radiation, thereby preventing a counterbalancing loss of heat.

Greenhouse Gas: A gas, such as carbon dioxide or methane, which contributes to potential climate change.

Hazardous Waste: By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Household Hazardous Waste (HHW): See Household Special Waste (HSW).

Household Special Waste (HSW): Hazardous products used and disposed of by residential as opposed to industrial consumers. Includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react or explode, or that are corrosive or toxic.

Household Waste (Domestic Waste): Solid waste, composed of garbage and rubbish, which normally originates in a private home or apartment house. Domestic waste may contain a significant amount of toxic or hazardous waste.

Hydrolysis: Decomposition of a chemical compound by reaction with water, such as the dissociation of a dissolved salt or the catalytic conversion of starch to glucose.

Impact Studies: Studies that predict negative consequences (if any) of a proposed undertaking. Air, visual, environmental, traffic, hydrogeological, noise, health risk, land use and hydrological Impact Studies are required under the Environmental Protection Act.

Imports: In solid waste programs, municipal solid waste and recyclables transported into the municipal jurisdiction or locality for processing or final disposition (but that did not originate in that jurisdiction or locality).

Incineration: A treatment technology involving destruction of waste by controlled burning at high temperatures with the overall aim of reducing the volume of waste; e.g., burning waste to remove the water and reduce the remaining residues to a safe, non-burnable ash that can be disposed of safely on land, in some waters, or in underground locations.

Incinerator: A furnace for burning waste under controlled conditions.

Industrial, Commercial & Institutional (IC&I) Waste: Combination of wastes generated by industrial, commercial and institutional sectors that are not typically picked up at the curb or accepted at public drop-off facilities as part of the municipal waste collection process. These wastes are primarily managed by way of contract with private waste management service providers.

Industrial Waste: Unwanted materials from an industrial operation; may be liquid, sludge, solid, or hazardous waste.

Institutional Waste: Waste generated at institutions such as schools, libraries, hospitals, prisons, etc.

Integrated Waste Management System: The combination of reduction, diversion and disposal alternatives comprising one waste management system. For example – home composting, blue box recycling, source-separated organics composting, incineration, and landfilling could all form part of an integrated waste management system.

Landfills: Sanitary landfills are disposal sites for non-hazardous solid wastes spread in layers, compacted to the smallest practical volume, and covered by material applied at the end of each operating day.

Leachate: Water that collects contaminants as it trickles through wastes, pesticides or fertilizers. Leaching may occur in industrial sites, farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, ground water, or soil.

Leachate Collection System: A system that gathers leachate and pumps it to the surface for treatment.

Lift: In a sanitary landfill, a compacted layer of solid waste and the top layer of cover material.

Limestone Scrubbing: Use of a limestone and water solution to remove gaseous stack-pipe sulfur before it reaches the atmosphere.

Liner: A relatively impermeable barrier designed to keep leachate inside a landfill. Liner materials include plastic, dense clay and composites.

Magnetic Separation: Use of magnets to separate ferrous materials from mixed municipal waste stream.

Mass Burn Incineration: The incineration of waste without any initial pre-treatment or separation of wastes.

Materials Recovery Facility (MRF): A facility that processes residentially collected mixed recyclables into new products available for market.

Mechanical Separation: The separation of wastes by material type using trammels, cyclones, and various screens.

Mediation: An attempt to bring about a peaceful settlement or compromise between disputants through the objective intervention of a neutral party.

Mitigation: Measures taken to reduce adverse impacts on the environment.

Mixed Municipal Waste: Solid waste that has not been sorted into specific categories (such as plastic, glass, yard trimmings, food waste, etc.)

Modular Facility: A facility designed to allow for an expansion by adding new capacity with very little changes to the existing facility.

Moisture Content: The percentage of a material that is water.

Monitoring: Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals.

Municipal Solid Waste (MSW): Common garbage or trash generated by industries, businesses, institutions, and homes.

Non-combustible Waste: Waste which cannot be incinerated even if energy is added. (e.g. stone and metals).

Non-Ferrous Metals: Nonmagnetic metals such as aluminum, lead, and copper. Products made all or in part from such metals include containers, packaging, appliances, furniture, electronic equipment and aluminum foil.

Ontario Regulation 101 (O. Reg. 347): a regulation under the Environmental Protection Act that specifies standards and approval requirements for waste management sites and systems in Ontario.

Operating and Maintenance Costs: Usually expressed annually, operation and maintenance costs are a sum of money to operate and maintain the facility in operating order (ie, labour, utilities, equipment repairs, materials, supplies, etc.).

Open Burning: Uncontrolled fires in an open dump.

Open Dump: An uncovered site used for disposal of waste without environmental controls.

Organic: Referring to or derived from living organisms. In chemistry, any compound containing carbon.

Organic Matter: Carbonaceous waste contained in plant or animal matter and originating from domestic or industrial sources.

Pelletizing: The compaction of waste into small pellets to be burned in an incinerator. Pellets are easier to manage and have a higher calorific value than regular uncompacted waste.

Pilot Tests: Testing a waste management technology under actual site conditions to identify potential problems prior to full-scale implementation.

Plasma-Arc Reactor: An incinerator that operates at extremely high temperatures and that is generally used to treat highly toxic wastes that do not burn easily.

Pollutant: Generally, any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

Pollution: Generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects.

Post-Closure: The time period following the shutdown of a waste management or manufacturing facility; for monitoring purposes.

Potable Water: Water that is safe for drinking and cooking.

Precipitator: Pollution control device that collects particles from an air stream.

Proponent: Proponent means a person/persons who: 1) carries out or proposes to carry out an undertaking, or 2) is the owner or person having charge, management or control of an undertaking.

Putrescible: Able to rot quickly enough to cause odours and attract flies.

Pyrolysis: Decomposition of waste and its constituent chemicals by extreme heat.

Receptor: The person, plant or wildlife species that may be affected due to exposure to a contaminant.

Recycle/Reuse: Minimizing waste generation by recovering and reprocessing usable products that might otherwise become waste (i.e. recycling of aluminum cans, paper, and bottles, etc.).

Refuse Derived Fuel (RDF): Waste that has been processed to remove non-combustible materials. RDF can be compacted or compressed through processes such as pelletizing or briquetting. Pelletized or Bricked RDF is easy to manage and handle, and also usually has a higher calorific value because of the increased density and reduced moisture content.

Refuse Reclamation: Conversion of solid waste into useful products; e.g., composting organic wastes to make soil conditioners or separating aluminum and other metals for recycling.

Reserve Capacity: Extra treatment capacity built into solid waste and wastewater treatment plants and interceptor sewers to accommodate flow increases due to future population growth.

Residential Waste: Waste generated in single and multi-family homes, including newspapers, clothing, disposable tableware, food packaging, cans, bottles, food scraps, and yard trimmings other than those that are diverted to backyard composting.

Residual: Amount of a pollutant remaining in the environment after a natural or technological process has taken place; e.g., the sludge remaining after initial wastewater treatment, or particulates remaining in air after it passes through a scrubbing or other process.

Resource Recovery: The process of obtaining matter or energy from materials formerly discarded.

Scrubber: An air pollution device that uses a spray of water or reactant or a dry process to trap pollutants in emissions.

Self Hauled Wastes: Wastes that are delivered to a waste management facility by the waste generator.

Siting: The process of choosing a location for a facility.

Source Reduction: Reducing the amount of materials entering the waste stream from a specific source by redesigning products or patterns of production or consumption (e.g., using returnable beverage containers). Synonymous with waste reduction.

Source Separated Organics (SSO): Organics separated by the household or business that include food wastes and leaf and yard wastes. Source separated organics are collected by a separate collection vehicle and sent for processing/composting.

Source Separation: Segregating various wastes at the point of generation (e.g., separation of paper, metal and glass from other wastes to make recycling simpler and more efficient).

Special Waste: Items such as household hazardous waste, bulky wastes (refrigerators, pieces of furniture, etc.) tires, and used oil.

Stack: A chimney, smokestack, or vertical pipe that discharges used air.

Stakeholder: Any organization, governmental entity, or individual that has a stake in or may be impacted by a given approach to environmental regulation, pollution prevention, energy conservation, etc.

Terms of Reference: refer to Environmental Assessment Terms of Reference.

Thermal Treatment: Use of elevated temperatures to treat wastes.

Tipping Fee: A monetary fee paid to dispose of waste at a disposal facility.

Toxic Waste: A waste that can produce injury if inhaled, swallowed, or absorbed through the skin.

Transfer Station: Facility where solid waste is transferred from collection vehicles to larger trucks or rail cars for longer distance transport.

Undertaking: is defined in the Environmental Assessment Act as follows:

1. An enterprise or activity or a proposal, plan or program in respect of an enterprise or activity by or on behalf of Her Majesty in right of Ontario, by a public body or public bodies or by a municipality or municipalities,
2. A major commercial or business enterprise or activity or a proposal, plan or program in respect of a major commercial or business enterprise or activity of a person or persons other than a person or persons referred to in clause (1) that is designated by the regulations, or
3. An enterprise or activity or a proposal, plan or program in respect of an enterprise or activity of a person or persons, other than a person or persons referred to in clause (a), if an agreement is entered into under section 3.0.1 in respect of the enterprise, activity, proposal, plan or program; ("enterprise")

User Fee: Fee collected from only those persons who use a particular service, as compared to one collected from the public in general.

Venturi Scrubbers: Air pollution control devices that use water to remove particulate matter from emissions.

Volume Reduction: Processing waste materials to decrease the amount of space they occupy, usually by compacting, shredding, incineration, or composting.

Waste: Unwanted materials left over from a manufacturing process. Refuse from places of human or animal habitation.

Waste Characterization: The process of identify the various components, including quantities, and materials found within a waste stream.

Waste Exchange: Arrangement in which companies exchange their wastes for the benefit of both parties.

Waste Feed: The continuous or intermittent flow of wastes into an incinerator.

Waste Generation: The weight or volume of materials and products that enter the waste stream before recycling, composting, landfilling, or combustion takes place. Also can represent the amount of waste generated by a given source or category of sources.

Waste Generator: The individual, household, establishment or business engaged in an activity that generates a specific waste or wastes.

Waste Management Facility / Site: A facility or site utilized in as a part of the waste management system.

Waste Management System: Any facilities or equipment used in, and any operations carried out for, the management of waste including the collection, handling, transportation, storage, processing or disposal of waste, and may include one or more waste disposal / processing sites.

Waste Minimization: Measures or techniques that reduce the amount of wastes generated during industrial production processes; term is also applied to recycling and other efforts to reduce the amount of waste going into the waste stream.

Waste Reduction: Using at-source reduction, reuse, or composting to prevent or reduce waste generation.

Waste Stream: The total flow of solid waste from homes, businesses, institutions, and manufacturing plants that is recycled, burned, or disposed of in landfills, or segments thereof such as the "residential waste stream" or the "recyclable waste stream."

Waste-to-Energy Facility/Municipal-Waste Combustor: Facility where recovered municipal solid waste is converted into a usable form of energy, usually via combustion.

White Goods: Usually large household appliances such as washing machines, dishwashers, and refrigerators/freezers.

Yard Waste: The part of solid waste generated at the household in the yard composed of grass clippings, leaves, twigs, branches, and other garden refuse.

Appendix B

Preliminary Evaluation Criteria for “Alternatives to the Undertaking”

(i.e. Alternative Technologies)

Table B-1: Preliminary Evaluation Criteria for “Alternatives to the Undertaking”

Environmental Category	Proposed Evaluation Criteria
Natural Environment	<ul style="list-style-type: none"> ✓ Environmental burden at a global or macro-environmental scale. ✓ Consumption / preservation of non-renewable environmental resources. ✓ Potential for destruction or disruption of sensitive terrestrial and/or aquatic habitats at an eventual site. ✓ Potential to increase diversion rate from disposal and/or make best use of residual (post-diversion) waste materials. ✓ Potential air quality and noise impacts - related to Haul Routes and Sites.
Economic / Financial	<ul style="list-style-type: none"> ✓ Net system costs per tonne of waste managed including facility costs, residual disposal, etc. ✓ Sensitivity of system costs and affordability to external financial influences.
Technical	<ul style="list-style-type: none"> ✓ Technical risks associated with waste management alternative.
Social / Cultural	<ul style="list-style-type: none"> ✓ Potential for land use conflicts from siting of facilities required for alternative.
Legal	<ul style="list-style-type: none"> ✓ Legal / contractual risks associated with waste management alternative.

Appendix C

**Preliminary Screening and Evaluation Criteria for
“Alternative Methods for Carrying Out the
Undertaking”**

(i.e. Alternative Sites)

Table C-1: Preliminary Exclusionary Criteria for the Consideration of Suitable Lands on which to Locate a Waste Disposal Facility.

- ✘ Designated Residential Areas and areas within 400 meters of these designations.**
- ✘ Designated Institutional Areas and areas within 400 meters of these designations.**
- ✘ Designated Natural Heritage Areas and areas within 400 meters of these designations.**
- ✘ Prime Agricultural Lands (Class 1).**
- ✘ Designated Tourism Areas and areas within 400 meters of these designations.**
- ✘ Park / Recreational Lands.**
- ✘ Areas around federally regulated airports as per Transport Canada Guidelines subject to further discussions with Transport Canada.**
- ✘ Aboriginal Reserves (Lands will only be considered if Aboriginals intend to participate).**
- ✘ Where possible, areas with less than 1 metre (subject to further consideration) of overburden in the base of the potential landfill.**
- ✘ Where possible, areas less than 50 metres from a permanent watercourse.**
- ✘ Land which would prevent the efficient expansion of settlement areas, on sites adjacent of close to settlement area.**
- ✘ Land containing significant habitat of endangered species and/or threatened species; or that “Natural Heritage Feature” be defined in the Terms of Reference to be consistent with the term used in the Provincial Policy Statement, 2005**.**
- ✘ Land known/identified as a mineral, mineral aggregate or petroleum resource, where development would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact.**
- ✘ Lands where there are natural and human made hazards that cannot be mitigated (e.g. flooding, mine hazards).**

Notes: **Criteria for exclusion used for waste management facilities other than disposal to be developed based on the nature of the facility.*

*** Provincial Policy Statement, 2005. Ontario. Ministry of Municipal Affairs and Housing.*

Table C-2: Preliminary Evaluation Criteria for a “Long-List” of Alternative Sites.

- ✓ **Proximity to required infrastructure (dependent on technology selected).** Example Consideration: Maximum distance from electrical connection if a facility that generates or uses electricity is to be sited.
- ✓ **Site Accessibility.** Example Consideration: Maximum distance from Provincial highway (i.e. existing public road).
- ✓ **Potential impact of the haul route.** Example Consideration: Length and nature of haul route from highway and types of land uses along haul route, avoid potential impacts such as littering of Right-of-Way and subsequent clean-up.
- ✓ **Property size.** Example Consideration: Amount of surplus land available beyond minimum site size requirement.
- ✓ **Land Use surrounding site.** Example Consideration: Existence of designated industrial or industrial type land use in proximity to site.
- ✓ **Availability of site.** Example Consideration: Requirement to acquire site through expropriation.
- ✓ **Proximity of Site to Regulated Aerodromes and Certified Airports.** Example Consideration: Site exists within the vicinity of an aerodrome or airport and is subject to Transport Canada guidelines. Wildlife management practices must be enabled to decrease risk of bird hazards.

Table C-3: Preliminary Comparative Evaluation Criteria for a “Short-List of Alternative Sites.

Environmental Category	Proposed Evaluation Criteria
Public Health & Safety and Natural Environment	<ul style="list-style-type: none"> ✓ Potential air quality and noise impacts - related to Haul Routes and Sites. ✓ Potential ground water and surface water quality and quantity impacts. ✓ Potential impacts on environmentally sensitive areas and species, and other areas and species where there is a likelihood of impact. ✓ Potential impacts on vegetation.
Economic / Financial	<ul style="list-style-type: none"> ✓ Capital cost for development of facility. ✓ Operation and Maintenance costs for facility. ✓ Potential disruption to business on-site and along haul routes (noise impacts, traffic, etc...).
Technical	<ul style="list-style-type: none"> ✓ Compatibility with existing infrastructure. ✓ Design & operational flexibility provided by site.
Social / Cultural	<ul style="list-style-type: none"> ✓ Potential for conflicts with existing and/or proposed land uses (noise impact, traffic, etc...). ✓ Potential impacts on residential areas (noise, traffic, etc...). ✓ Potential impacts on parks and recreational areas. ✓ Potential impacts on institutional facilities or areas. ✓ Potential impacts on archaeological and cultural resources. ✓ Potential traffic impacts, including avian impact on local airports.
Legal	<ul style="list-style-type: none"> ✓ Type of property acquisition required. ✓ Complexity of required approvals.

Appendix D

Government Review Team

Name and Address	Status	Explanation
FEDERAL AGENCIES		
Canadian Environmental Assessment Agency		
Louise Knox, Regional Director Ontario Region Canadian Environmental Assessment Agency 55 St. Clair Avenue East, 9th Floor Toronto ON M4T 1M2	included	
Canadian Nuclear Safety Commission		
Henry Rabski, Director Process Facilities and Technical Support Division Canadian Nuclear Safety Commission P.O. Box 1046, Station B Ottawa ON K19 5S9	included	
Department of Indian and Northern Affairs		
Fred Hoskings, Ontario Research Team Lead Specific Claims Branch Department of Indian and Northern Affairs 10 Wellington St. Room 1310 Gatineau QU K1A 0H4	included	Maps of study area only
Marc-Andre Millaire, Litigation Team Leader Litigation Management and Resolution Branch Department of Indian and Northern Affairs 10 Wellington St. Room 1310 Gatineau QU K1A 0H4	included	Maps of study area only
Sean Darcy, Manager Assessment and Historical Research Department of Indian and Northern Affairs 10 Wellington St. Room 1310 Gatineau QU K1A 0H4	included	Map of study area only
Mr. Gregg Dahl Senior Policy Analyst Office of the Federation Interlocutor for Metis and non- status Indians 66 Slater Street – Room 1218 Ottawa, ON K1A 0H4	included	Maps of study area only.
Environment Canada		
Sheila Allan, (A) Head EA Section, Ontario Region Environment Canada P.O. Box 5050, 867 Lakeshore Road Burlington ON L7R 4A6	included	All EAs (particularly those affecting an area of federal interest or responsibility).
Fisheries and Oceans Canada		
Lyndon Kivi, Fish Habitat Biologist Department of Fisheries and Oceans Northern Ontario District, Great Lakes Area Central and Arctic Region P.O. Box 649 Kenora, ON P9N 3X6	included	Navigable waters within the study boundaries.
Health Canada		
Ms. Kitty Ma Regional Environmental Assessment Coordinator Health Canada, Ontario Region 180 Queen Street West Toronto, ON M5V 3L7	included	Any human health related issues other than air.

Name and Address	Status	Explanation
Transport Canada		
Ms. Monique Mousseau, Regional Manager Environnemental Affairs, Programs Branch Transport Canada - Ontario Region 4900 Yonge Street, Suite 300 Toronto, ON M2N 6A5	included	Transport Canada has already responded to the Draft ToR with their position on adjacent airport buffers and guidance for navigable waters.
PROVINCIAL AGENCIES & MINISTRIES		
Hydro One Inc.		
Charles S. Esendal, Sustainment Manager Hydro One Inc. 483 Bay Street, TCT15-A11 North Tower Toronto, ON M5G 2P5	included	
Ministry of Aboriginal Affairs (MMA)		
Pam Wheaton, Director Aboriginal and Ministry Relationships Branch Ministry for Aboriginal Affairs 720 Bay Street, 4th Floor Toronto ON M5G 2K1 and Technical Contact Francois Lachance, Senior Policy Advisor Aboriginal and Ministry Relationships Branch Ministry for Aboriginal Affairs 720 Bay Street Toronto ON M5G 2K1	included	If land claim has been established.
Attorney General-Litigation Information		
Ria Tzimas Counsel, Crown Law Office-Civil Ministry of the Attorney General 8th Floor, 720 Bay Street Toronto ON M5G 2K1	included	- Instructed to directed all future communications to the Ministry of Aboriginal Affairs.
Ministry of Culture		
Mr. Andrew Hinshelwood Heritage Planner/Archaeologist Heritage Operations Section, Heritage& Libraries Branch Ministry of Culture 435 South James Street, Suite 334 Thunder Bay ON P7E 6S7	included	
Ministry of Education		
Huron-Superior Catholic District School Board 90 Ontario Avenue Sault Ste Marie ON P6B 6G7	included	Waste facilities (especially rural locations).
Algoma District School Board 644 Albert Street East Sault Ste Marie ON P6A 2K7		
Conseil Scolaire Catholique du Nouvel-Ontario 201 Joques Street Sudbury ON P3C 5L7		
Conseil Scolaire Public du Grand Nord de L'Ontario 296 Van Horne Street Sudbury P3B 1H9		

Name and Address	Status	Explanation
Ministry of Economic Development and Trade		
<p>Mr. Fernando Traficante, Director Sector Competitiveness Branch Ministry of Economic Development and Trade 900 Bay St., 7th Floor, Hearst Block Toronto ON M7A 2E1</p> <p>and</p> <p>Mr. Gregory Wootton, Director (A) Investment Branch Ministry of Economic Development and Trade 900 Bay St., 7th Floor, Hearst Block Toronto ON M7A 2E1</p>	included	-EAs which involve investments in large scale manufacturing facilities, co-generation projects and investment into large-scale expansions of existing manufacturing or co-generation facilities.
Ministry of Energy		
<p>Alan Jenkins Senior Policy Adviser Renewable Energy Supply Ministry of Energy 880 Bay Street, 3rd Floor Toronto, ON Canada M7A 2C1</p> <p>and</p> <p>Kevin Pal, Manager, Strategic Policy Branch Conservation & Strategic Policy Division Ministry of Energy 6th Floor, 880 Bay St. Toronto, ON M7A 2C1</p>	included	
Ministry of Health and Long-Term Care		
<p>Brenda Mitchell, Director Environmental Health Branch Public Health Division 5700 Yonge St, 2nd Floor Toronto ON M2M 4K5</p> <p>and</p> <p>Marshal Chow Algoma Health Unit Box 194 Blind River, ON P0R 1B0</p>	included	Types of projects reviewed - Sewage, water-works, waste facilities - anything with health implications.
Ministry of Municipal Affairs and Housing		
<p>Ms. Heather Robertson, Manager Community Planning and Development Northeastern Municipal Services Office Ministry of Municipal Affairs and Housing 159 Cedar Street, Suite 401 Sudbury ON P3E 6A5</p>	included	
Ministry of Natural Resources		
<p>Att: Environmental Assessment Contact Sault Ste. Marie District Ministry of Natural Resources 64 Church Street Sault Ste. Marie, ON P6A 3H3</p>	included	All EAs.

Name and Address	Status	Explanation
Ministry of Northern Development and Mines		
Herb Shields EA Coordinator Corporate Policy Secretariat Ministry of Northern Development and Mines Rm. 5630, Whitney Block, 99 Wellesley St. W Toronto, ON M7A 1C3	included	All EAs. Those EAs containing geological resources and mineral rights information should consult MNDM at pre-submission stages of the study and ensure contact /submission of the draft EA as well as formal EA submission. Please note that the Ministry of Northern Development and Mines should be circulated for projects in Northern Ontario (North Bay, Sudbury, etc.) where there may be tourism issues involved.
Ministry of Agriculture, Food and Rural Affairs		
David Cooper Manager – Environmental and Land Use Policy 3 rd Floor 1 Stone Road West Guelph, ON N1G 4Y2	included	
Office of the Fire Marshal		
Fire Chief Elliot Lake Fire Department 45 Hillside Drive North Elliot Lake, ON, P5A 1X5	included	
Ministry of Transportation		
Northwestern Region Paul F. Marleau Engineering Office, Ministry of Transportation Ontario Government Bldg, Suite 301 447 McKeown Ave. North Bay ON P1B 9S9	included	EAs for Waste Management Plans, Municipal Road/Sewage, Rail, Shipping/Dry Docks, Water Projects, and EAs for Transit Projects.
LOCAL AGENCIES		
Serpent River Region Environment Committee		
Serpent River Region Environment Committee 45 Hillside Drive N. Elliot Lake, On P5A 2T1		

Appendix E

First Nations Distribution List

Name and Address
Wikwemikong Unceded Indian Reserve Chief Robert Corbiere P.O. Box 112 19A Complex Drive Wikwemikong, ON P0P 2J0
M'Chigeeng First Nation Chief Isadora Bebamash P.O. Box 333 M'Chigeeng ON P0P 1G0
Mississauga #8 First Nation Chief Fidele Jokinen P.O. Box 1299 66 Park Rd. Blind River ON P0R 1B0
Thessalon First Nation Chief David Giguere P.O. Box 9, RR#2 Thessalon ON P0R 1L0
Sagamok Anishnawbek First nation Chief Paul Eshkakogan P.O. Box 610 Massey ON P0P 1P0
Aundeck Omni Kaning First Nation R.R #1, Box 21 Little Current, ON P0P 1K0
Sheguindah First Nation P.O. Box 101 Sheguindah, ON P0P 1W0
Zhiibaahaasing First Nation General Delivery Silverwater, ON P0P 1Y0

Name and Address
Sheshewaning First Nation P.O. Box 1 Sheshewaning, ON P0P 1Y0
Serpent River First Nation Chief Isadore Day P.O. Box 14 195 Village Road Cutler, ON P0P 1B0
Garden River First Nation 7 Shingwauk Street Garden River, ON P6A 6Z8
Historic Sault Ste. Marie Steve Leffler, President 26 Queen Street East Sault Ste. Marie, ON P6A 1Y3
North Shore Metis Council Art Bennet, Interim President P.O. Box 160 Bruce Mines, ON P0R 1C0
Temagami First Nation and Teme-Augama Anishnaba Chief Jim Twain Bear Island Post Office Temagami, ON P0H 1C0
Moose Deer Point First Nation Chief Edward Williams P. O. Box 119 3719 Twelve Mile Bay Rd MACTIER, ON P0C 1H0