

Bennett Environmental Inc.
Proposed Kirkland Lake Thermal
Oxidizer Facility

Proposed Terms of Reference

Pursuant to the Environmental Assessment Act

Background Document 5
Rationale for the Site in Kirkland Lake

November 2000

Submitted By:
Bennett Environmental Inc.
220-2560 Matheson Blvd. East
Mississauga, Ontario
L4W 4Y9

Table of Contents

1	SUMMARY	1
2	SITE SELECTION PROCESS	1
	TABLE 1 - PROPOSED SITES	1
3	THE CITIZEN’S ADVISORY COMMITTEE CHOOSES THE PREFERRED SITE.....	2
	TABLE 2. ENVIRONMENTAL, ECONOMIC AND SOCIAL CRITERIA FOR SITE SELECTION	2
	TABLE 3. COLOUR-CODED CRITERIA RANKING SCHEME.....	3
	TABLE 4. PRIORITY CRITERIA FOR SCREENING POTENTIAL SITES	3
4	BEI ADOPTS CAC DECISION	4
5	TOWN OF KIRKLAND LAKE SUPPORTS PREFERRED SITE	4
6	APPENDIX A: LETTER FROM KIRKLAND LAKE CHIEF ADMINISTRATIVE OFFICER TO MR. JOHN BENNETT	5
8	APPENDIX C: ANNOUNCEMENT OF SITE SELECTION BY CITIZEN’S ADVISORY COMMITTEE	11
9	APPENDIX D: LETTER FROM KIRKLAND LAKE CHIEF ADMINISTRATIVE OFFICER SHOWING SUPPORT FOR SELECTED SITE	12
10	APPENDIX E: LETTER FROM KIRKLAND LAKE CHIEF ADMINISTRATIVE OFFICER IN REGARDS TO SALE OF SELECTED SITE PROPERTY	14

1 Summary

BEI selected a site in an industrial area of Kirkland Lake as the location for its proposed facility based on the recommendation of the local Citizens Advisory Committee (CAC).

The CAC evaluation process involved a careful, explicit and traceable decision making process of several sites based on environmental, economic and social criteria. The CAC selected 233 Archer Drive, Kirkland Lake, and BEI then adopted this as its preferred site. The CAC selection was based on the condition that the stack be located towards the south of the property, and that buffering of the site from public view be enhanced.

Public consultation on the site selection process did not reveal any opposition to the process or the preferred site. BEI does not intend to revisit the site selection process or investigate other alternative sites during the environmental assessment process.

2 Site Selection Process

BEI's site selection process began with an invitation from the Town of Kirkland Lake. Morley Bowes, Chief Administrative Officer of the Town of Kirkland Lake, sent a letter to BEI inviting the company to Kirkland Lake in September 1999. The letter stated that, "*Kirkland Lake would be pleased to have Bennett Environmental Inc. select our community as your Ontario location*" (Appendix A).

Based on this invitation, BEI embarked on an investigation to assess the appropriateness of various sites in Kirkland Lake to locate its facility. The site selection process began in November 1999 and ultimately formed part of the development of BEI's EPA application for the approval of the Kirkland Lake facility. This site selection work pre-dates BEI's decision to volunteer to go through an EA approvals process.

A total of eleven sites at nine locations were considered in the site selection process. To assist in the process, the Town of Kirkland Lake identified six potential sites within the Town and provided them to BEI for consideration. As Sites 6a, b and c were simply variations within one area, they were considered as one site. Additionally, two Kirkland Lake residents offered privately owned property for consideration (Sites 7, 8 and 9). All sites considered in the site selection process are listed in Table 1, and maps of all potential sites are included in Appendix B.

Table 1 - Proposed sites

Site #1	Goodfish Road	Site #6b	Archer Drive, behind TCI
Site #2	Goldthorpe Road, 3km West of Government Road	Site #6c	Archer Drive, between 6a, 6b
Site #3	Goldthorpe Road, Macassa Mine Site	Site #7	Swastika, Mining Claim L891856
Site #4	Highway 112	Site #8	Swastika, Mining Claims L16527 & L16528

Site #5 Kirkland South
Site #6a 233 Archer Drive

Site #9 Swastika, Athena Boulevard

BEI held a Public Open House in Kirkland Lake on December 1, 1999, to introduce the BEI technology and proposed sites for the facility. Poster boards depicting each of the sites were available for public review, and discussion among Open House attendees and BEI officials was encouraged. BEI did not receive any negative comments regarding the proposed sites.

3 The Citizen's Advisory Committee Chooses the Preferred Site

A Citizens Advisory Committee (CAC) was formed in November 1999, to advise BEI on local issues of concern, and to act as a liaison between BEI and residents of the area. BEI also gave the CAC a mandate to select the preferred site.

The CAC held a meeting to select the preferred site on December 14, 1999. CAC members, BEI officials and an MOE representative were present. To assist the CAC in the selection of the preferred site, BEI carried out some site reconnaissance in advance of the CAC site selection meeting to provide the Committee with some background information on the attributes of the identified sites.

BEI officials visited the three sites in Swastika (Sites 7, 8 and 9) and Sites 6b and 6c on Archer Drive. BEI found that Site 7 was large enough in acreage, however it was significantly sloped towards the Blanche River. Site 8 was inaccessible by road and had rough terrain. Site 9 did not have appropriate road access to handle B-train trucks safely and was too close to a water body. Sites 6b and 6c were both too small in acreage for the proposed facility. BEI provided this site-specific information to the CAC at a CAC meeting on December 14, 1999.

BEI also brought to the meeting a list of environmental, economic and social criteria, placed on a grid, to provide the Committee members with a starting point in their evaluation of the alternative sites. Table 2 describes the criteria for site selection that BEI provided to the CAC.

Table 2. Environmental, economic and social criteria for site selection

- distance to gas service
- distance to water supply
- truck turning safety
- site stormwater drainage profile
- length of new road construction
- opportunity to share excess heat
- emergency response time
- distance to railroad access
- prevailing wind
- electrical supply reliability
- CCME Guidelines
- land use (industrial zoning)
- adjacent land use
- buffering from public view

- Ontario Regulation 352 (100m from water body)
- soil bearing condition

CAC members reviewed the list of criteria prepared by BEI. The CAC adopted the BEI proposed criteria and added two additional criteria: noise and flood plain issues.

The CAC ranked the criteria in order of importance using a colour-coding scheme as displayed in Table 3. Each member was given three stickers: one red, one blue, and one yellow/green, and ranked each criterion by placing the appropriate sticker beside the criterion.

Table 3. Colour-coded criteria ranking scheme

Sticker	Importance Rank
Red	First
Blue	Second
Yellow/Green	Third

This ranking process determined noise, truck traffic and turning safety, stormwater drainage profile and flood plain, and prevailing wind direction to be the most important issues in the site selection process. These criteria were referred to as ‘the priority criteria’.

The CAC reviewed the BEI analysis of the three sites in Swastika (Sites 7, 8, and 9) and Sites 6b and 6c on Archer Drive. The CAC agreed with the BEI analysis and removed these sites from further investigation.

The CAC evaluated each of the remaining sites, Sites 1 through 6a, against the set of ‘priority criteria’ based on a pass (P) - fail (F) system as described in Table 4. Failure to meet one criterion was sufficient to eliminate a site from further investigation.

Table 4. Priority criteria for screening potential sites

Criteria	Noise	Traffic Safety Issues	Stormwater Drainage Profile / Flood plain	Prevailing Wind Direction
Site #1	P	F	P	P
Site #2	P	P	P	F
Site #3	P	P	P	F
Site #4	P	F	F	P
Site #5	P	P	P	P
Site #6a	P	P	P	P

This screening process led the CAC to eliminate Sites 1 through 4, leaving only Sites 5 and 6a for further investigation. The CAC then carried out a comparative evaluation of the remaining two sites based on all the criteria (Table 2).

The CAC was unable to select a preferred site on this basis, as the analysis did not reveal significant differences between Sites 5 and 6a.

The CAC decided to conduct a site visit to choose between the two remaining sites. Not all members of the CAC visited Sites 5 and 6a, as it was left to each member to visit the sites if the

member was interested, and snow was quite deep at the time. The visit to Site 5 revealed that a creek crossing would be required, whereas Site 6 would not require such a crossing. There were no other significant differences between the two sites.

A vote was held by the CAC in order to choose between the two sites. Robert Macdonald, the CAC Chair, distributed official voting forms to CAC members, who were asked to select a preferred site and return the form to the Chair. Copies were made and sent to BEI officials and the CAC Secretary, Tracey McLeod.

Members of the CAC voted unanimously for Site 6a, with the condition that BEI design the site to locate the stack towards the south of the property and further enhance buffering of the site from public view. BEI agreed to comply with this condition.

4 BEI Adopts CAC Decision

BEI adopted the CAC preferred site. The CAC asked BEI to comply with the condition to locate the stack toward the south end of the property and further enhance the buffering of the site from public view.

BEI announced the selection of Site #6a at 233 Archer Drive in an article published on January 28, 2000 in local Kirkland Lake newspapers, *The Northern Daily News* and *The Kirkland Lake Gazette* (Appendix C). The article provided a detailed account of the site selection process. BEI did not receive any public comments regarding the selected site for the proposed facility.

5 Town of Kirkland Lake Supports Preferred Site

Morley Bowes, Chief Administrative Officer of the Town of Kirkland Lake, expressed the Town's support for the site selection process and selected site in a letter to BEI dated January 18, 2000 (Appendix D).

Mr. Bowes, in a subsequent letter to BEI dated January 28, 2000, stated that town council had agreed to sell the required land for the proposed facility on Archer Drive to BEI (Appendix E).

6 Appendix A: Letter from Kirkland Lake Chief Administrative Officer to Mr. John Bennett



CORPORATION OF THE TOWN OF KIRKLAND LAKE

CHIEF ADMINISTRATIVE OFFICER

PO BAG 1757, KIRKLAND LAKE, ONTARIO, CANADA P2N 3P4
PHONE: 705-567-9361 FAX: 705-567-3535

September 8, 1999

Mr. John Bennett
President and CEO
Bennett Environmental Inc.
200-1130 West Pender Street
Vancouver, BC V6E 4A4

Dear John:

At the in-camera meeting of September 7, 1999, Mayor Denton, Councillor Robert MacDonald and Don Studholme reported to council on their visit to your plant in Quebec. They were very impressed with your Quebec operation.

I am pleased to tell you that council unanimously and fully endorses your project and most definitely want to have you in Kirkland Lake.

I think the next step is for us to help you find a suitable site. As you know we have had some discussions with Tom Obradovich in this regard. We understand that you are interested in what we call the Eastmaque site which, as you may know, was previously used by Eastmaque to remill tailings from the Kirkland Lake basin. The site consists of a mining claim of about 40 acres and several other smaller parcels of land amounting to about five acres. The site was originally serviced with water and sewer. While there is no railway siding into the site, it is adjacent to the Ontario Northland Railway and I am sure a siding could be easily constructed. The property is presently owned by Equinox Resources Canada Inc. whose mailing address is 6500 Mineral Drive, Coeur D-Alene, ID 83815-8788. Their fax number is 208-769-4100.

After having discussed this site with Tom, it was felt that it might be in everyone's best interest if the municipality were to approach the owner for the purchase of the property. In this regard, I faxed a letter to the company expressing the municipality's interest in purchasing the site.

Mr. John Bennett
September 8, 1999
Page 2

An alternative site in Kirkland Lake would be in close proximity to the existing Macassa Mine's milling operation. This site is located just north of the mill and adjacent to the railway. While further investigation needs to be done with respect to servicing, we understand that there is natural gas and water service available to the mill and would, therefore, be near the proposed site.

I will let you know as soon as I have further information about the Eastmaque site. We are looking forward to working with you on this project and we want you to know that all our municipal staff is available to help move this project ahead as quickly as possible.

Yours truly,



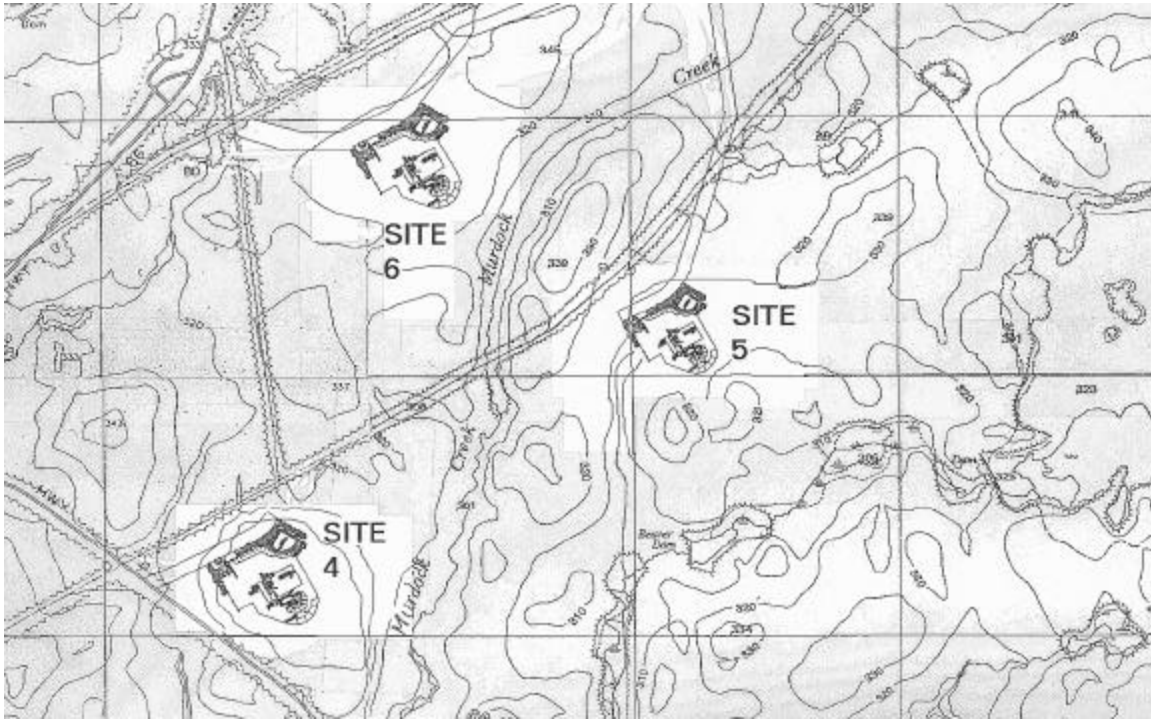
Morley E. Bowes
Chief Administrative Officer

MEB/nm

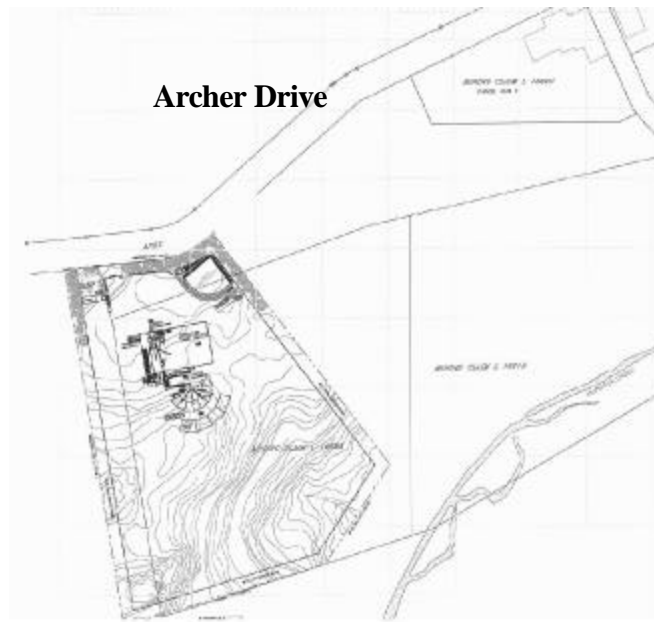
7 Appendix B: Maps of Sites Considered for Site Selection Process



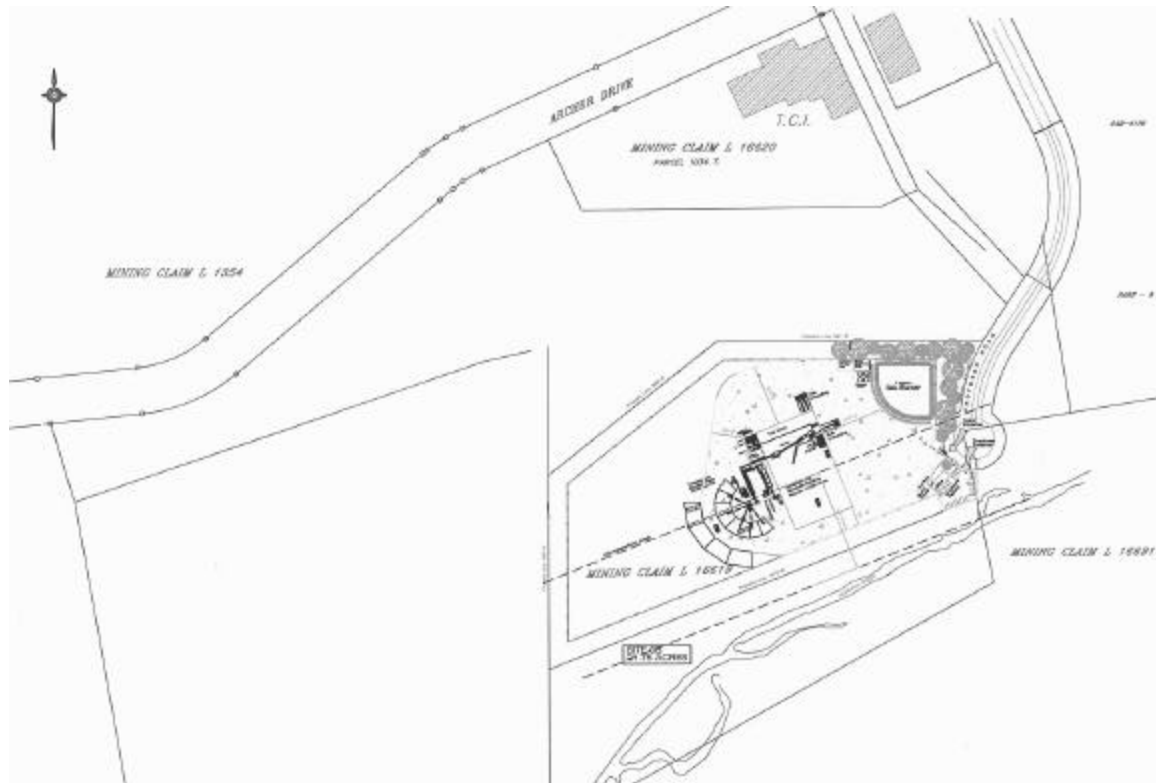
Sites 1, 2 and 3



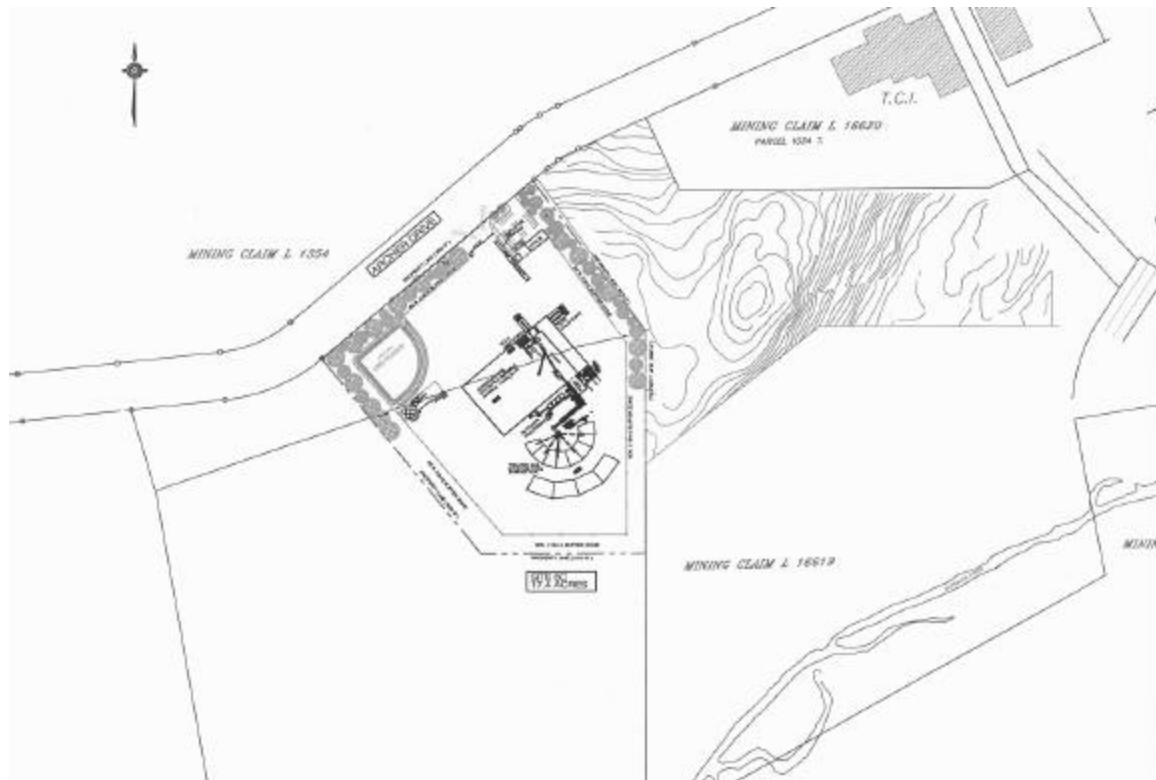
Sites 4, 5 and 6



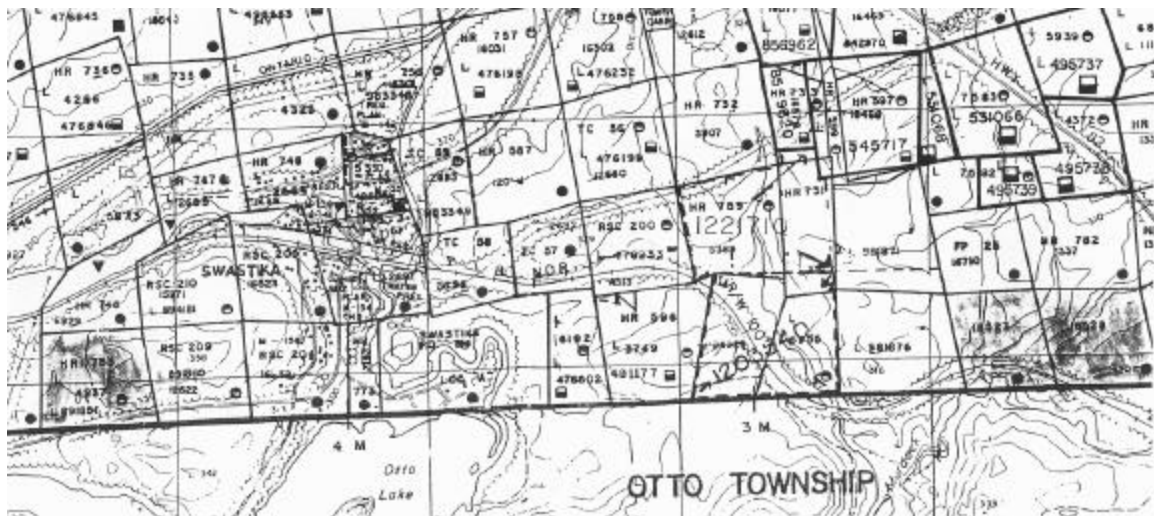
Site #6a



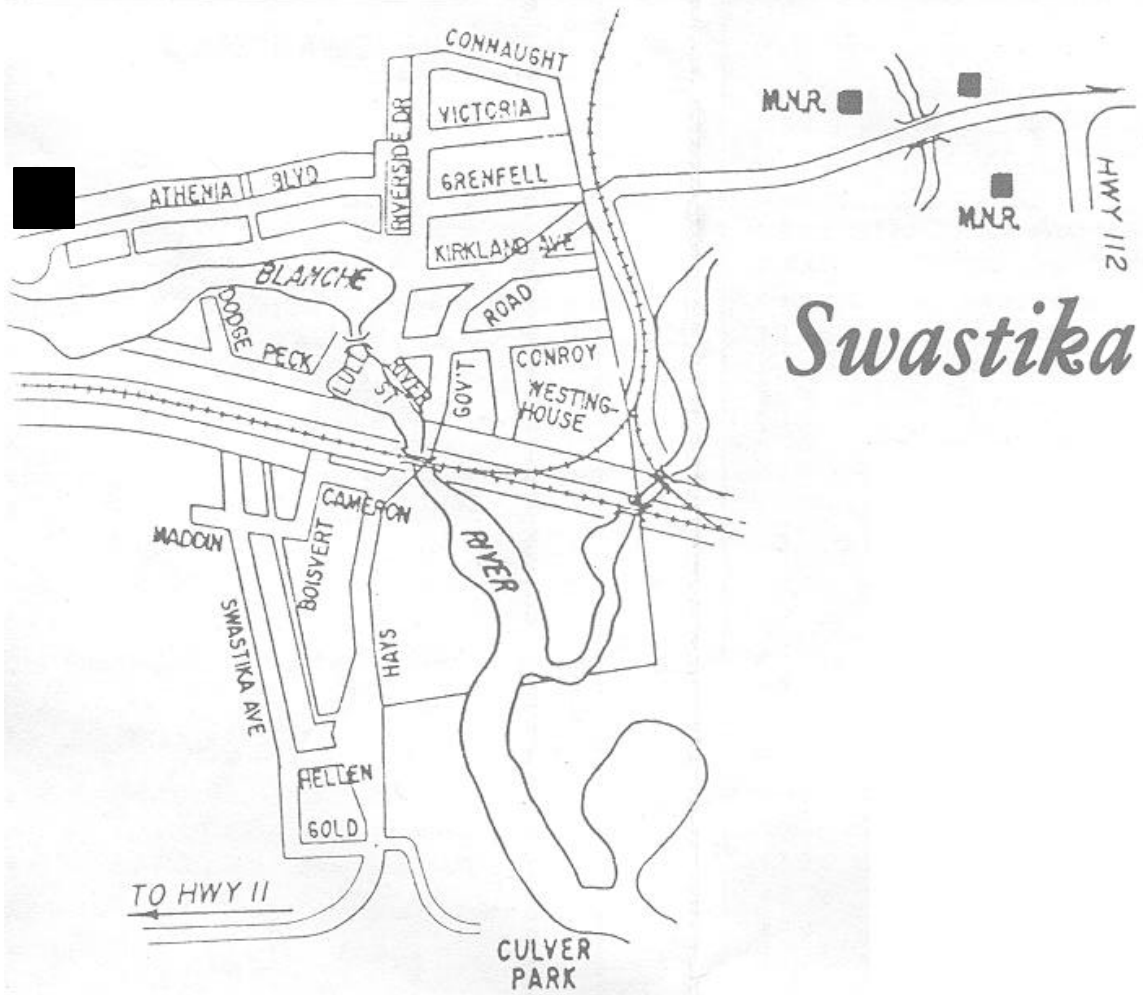
Site #6b



Site #6c



Site 7 and 8



Site 9

8 Appendix C: Announcement of Site Selection by Citizen's Advisory Committee

Citizen's Advisory Committee Chooses Archer Drive as Site for Bennett Environmental Facility

Bennett Environmental is pleased to announce that the company has a proposed site for its high temperature thermal treatment facility in Kirkland Lake. On January 12, 2000, the Citizen's Advisory Committee voted 7-0 in favour of locating the facility on Archer Drive.

The Town Engineering Department had proposed six sites for the Citizen's Advisory Committee to consider:

- Site #1 Goodfish Road
- Site #2 Goldthorpe R. 3km W. of Government Rd.
- Site #3 Goldthorpe Road Macassa Mine Site
- Site #4 Hwy 112
- Site #5 Kirkland South
- Site #6 Archer Drive

In addition, two Kirkland Lake residents suggested privately owned sites for consideration, however these were eliminated because of zoning inadequacy, proximity to water and poor location for heavy traffic.

The Advisory Committee established a set of 16 criteria for evaluating the alternative sites:

- distance to gas service
- length of new road construction
- traffic issues
- prevailing wind
- CCME Guidelines
- Adjacent land use
- Stormwater drainage and flood plain
- Soil bearing conditions
- distance to water supply
- emergency response time
- distance to railroad
- electrical supply
- Land use (industrial zoning)
- Buffering from public view
- Ontario Reg. 352 – 100m from water body
- Noise

The Committee ranked these criteria and identified a set of four priority criteria which would be used as the basis to assess the six sites: noise, truck traffic and turning safety, stormwater drainage profile and flood plain, and prevailing wind direction.

The Advisory Committee eliminated Site 1 based on truck traffic and emergency response time; Sites 2 and 3 because of wind direction; and Site 4 because of unsuitable drainage and traffic safety concerns. The Committee found Sites 5 and 6 to adequately meet the priority criteria and decided to evaluate both remaining sites based on the full set of 16 criteria. Based on this evaluation, the committee determined that Site 6 was preferred.

The Citizen's Advisory Committee hopes to have an office up and running soon. An announcement will be published when the office is ready to open. You can reach the Citizen's Advisory Committee by email at klcommittee@hotmail.com

Bennett Environmental Inc. has extended the date for welcoming comments on the Proposed Study Plans for the Environmental Report and Cantox Risk Assessment until February 8, 2000. You can find the proposed study plans in the January 14, 2000 edition of The Gazette and Northern Daily News, as well as at the Teck Centennial Library and on the Bennett website: www.bennettenv.com/kirkland.html.

9 Appendix D: Letter from Kirkland Lake Chief Administrative Officer Showing Support for Selected Site

DIRECTOR OF ECONOMIC
DEVELOPMENT
PO BAG 1757
KIRKLAND LAKE, ONTARIO, CANADA
P2N 3P4



TEL. 705-567-9361
FAX 705-567-3535

CORPORATION OF THE TOWN OF KIRKLAND LAKE

June 28, 1999

Mr. John Bennett
President and CEO
Bennett Environmental Inc.

John
Dear Mr. Bennett:

As per our telephone conversation of June 23, I would like to indicate that the Kirkland Lake would be pleased to have Bennett Environmental Inc., select our community as your Ontario location.

Kirkland Lake is located 600 km due north of Toronto on Trans Canada Highway 11. Historically, our region has been a gold-mining community, but we are trying to diversify our economy. We are trying to position our community as "Canada's Environmental Solution Centre" and your company and its goals would certainly fit this vision.

Recently we attracted a US company, Trans Cycle Industries (TCI), that recycle electrical components that have been contaminated with PCB's. The community has been very supportive of this industry. TCI opened its doors last December and now has 30 employees on staff.

Another project that we are working on is the Rail Cycle North project. This project aims at bringing Toronto's garbage up to the closed Adams Mine site (open pit iron ore mine) by rail. The proponent, Notre Development, has received its Certificate of Approval from the Ministry of the Environment for a landfill site and is now in the process of tendering the contract for Toronto's garbage. As mentioned, there could be some synergies between the two projects and I would gladly set up a meeting for you and Notre Development. I have enclosed some information on their project for your interest.

The region also has a number of financial aids available to assist you in building your facility in Kirkland Lake. I have enclosed the information in the package that I have couriered to you. There are too many programs to go into detail, but some of the programs will assist you with capital costs, administrative costs, wage subsidies, and training costs. I feel confident in saying that no other community in Ontario will be able to direct you to more funding than we will.

Mr. John Bennett
June 28, 1999
Page 2

I hope this information is helpful and I look forward to working with you to make Kirkland Lake the Ontario home for Bennett Environmental Inc.

Yours truly,



Don Studholme
Clerk/Director of Economic Development

DS/nm

10 Appendix E: Letter from Kirkland Lake Chief Administrative Officer In Regards to Sale of Selected Site Property

OFFICE OF THE
CHIEF ADMINISTRATIVE OFFICER
PO BAG 1757
KIRKLAND LAKE, ONTARIO, CANADA
P2N 3P4



TEL. 705-567-9361
FAX 705-567-3535

CORPORATION OF THE TOWN OF KIRKLAND LAKE

January 24, 2000

Danny Ponn, B.A.Sc., P.Eng.
Vice President and COO
Bennett Environmental Inc.
220-2560 Matheson Blvd. East
Mississauga, Ontario L4W 4Y9

Dear Danny:

Re: Option to Purchase

Enclosed is part of plan A4-9927-97LD-2 showing an area of land that the municipality agrees to give Bennett Environmental an option to purchase.

Council has agreed to sell the land to Bennett Environmental for \$8,000 an acre. We understand that this amount is acceptable to your firm.

Once you have decided to proceed with the offer, we would have the property surveyed at our cost and pay for the legal fees to have the property transferred.

The property is presently serviced with water however it will be necessary to extend the sanitary sewer system from Archer Drive to your site.

Yours truly,

Morley E. Bowes,
Chief Administrative Officer

MEB/nm

c: D. Studholme
G. Elliott

Encl.

