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REMEDIAL OPTIONS AND ESTIMATED COSTS FOR THANE DEVELOPMENTS LIMITED SITE IN THE TOWN OF GEORGINA

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated September 29, 2011, from the Commissioner of Environmental Services subject to Recommendation 1 being amended to include “ and Regional Council request a meeting with the Premier of Ontario.”

1. RECOMMENDATIONS

It is recommended that:

1. The Regional Clerk forward this report to the Premier of Ontario and the Minister of the Environment.
2. The Regional Clerk circulate this report to the Clerk for the Town of Georgina.

2. PURPOSE

The purpose of this report is to provide information regarding associated environmental issues or impacts at the Thane Smelter Site and further information on agencies responsible for clean up.

3. BACKGROUND

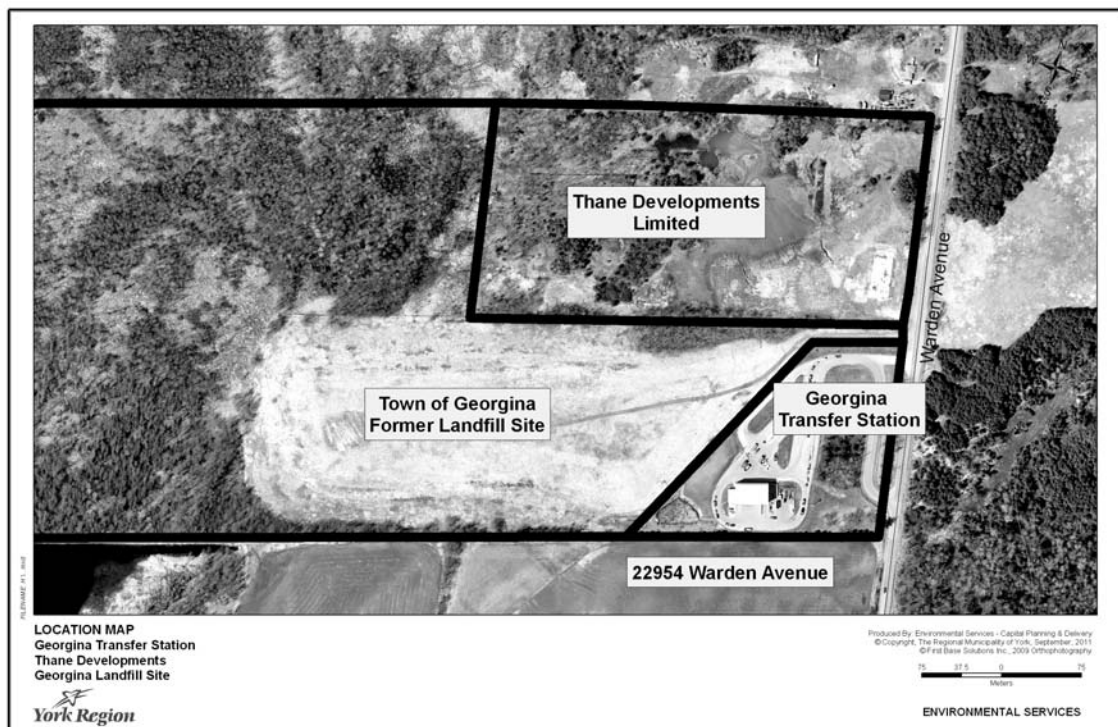
The property owned by Thane Developments Limited is contaminated

The property at 23078 Warden Avenue, Georgina is owned by Thane Developments Limited (Thane Site). Thane Developments Limited operated the site as a secondary aluminum smelter between 1973 and 1997. The secondary aluminum smelting operations included the use of rock salt to process aluminum skimmings, foundry sand, scrap aluminum, and dross, which is a by-product of primary aluminium refining. The processing generated a salt slag as a waste by-product. When operations ceased in 1997, large piles of unprocessed dross and waste salt slag were left on the property.

Soil and groundwater at the site are impacted by the remaining unprocessed aluminum dross and waste salt slag. These materials have resulted in on-site metals, salt and ammonia contamination and off-site migration of some salt impacts. Off-site contaminant migration is also occurring onto the neighbouring property to the south, which was a

former landfill site (Figure 1/*Attachment 1*). Lands to the west of the Thane Site form part of the Town of Georgina's landfill contaminant attenuation zone. The Maskinonge River is 400 metres west of the property and these contaminants are considered a risk by Ministry of the Environment staff to the on-site wetland complex.

Figure 1
Map of Thane Site in the Town of Georgina



Despite several Provincial Orders, the site has not been remediated

Since December 2000, the Ministry of the Environment has issued several orders to the site owner to remove the piles of unprocessed dross and waste salt slag, to hire a qualified consultant to conduct an assessment report and to submit an economic analysis of the company. The Ministry of the Environment conducted a review of the company and owner's financial resources and concluded neither had financial means for a clean-up of the Thane Site.

In January 2003, the Associate Medical Officer of Health issued an order under section 13 of the *Health Protection and Promotion Act*. The company was ordered to secure the property to deter public access to the site as there was a potential safety and health concern. In July 2003, the Town of Georgina subsequently contracted completion of the necessary work to obtain compliance with the Town's outstanding Building Code Orders.

In 2009, the Ministry of the Environment created the Thane Public Liaison Committee to provide a forum for stakeholder consultation and engagement in the evaluation of remedial options. The committee is chaired by the Ministry of the Environment and members include staff from York Region, the Town of Georgina and the Lake Simcoe Region Conservation Authority, the site owner, local elected officials, local residents and representatives from local environmental non-governmental organizations. York Region staff has been actively participating on this committee since its inception.

The Thane Site remains contaminated as key issues to resolve this matter revolve around ownership, funding for clean-up, ongoing financial and legal liabilities and appropriate end-use for the property.

York Region respectfully requests the Province to provide necessary technical and financial resources to restore the environmental integrity of the site

In April 2011, Council adopted a recommendation by the Environmental Services Committee to send a letter to the Premier, Minister of the Environment, and local members of the Provincial Legislature to ask them to address environmental concerns and fund the clean-up of the Thane Site. A letter was sent in August 2011 (see *Attachment 2*).

4. ANALYSIS AND OPTIONS

Remedial options proposed in 2008 range from \$1.5 to 4 million with annual operating costs up to \$37,500

As the property owner was unable to comply with requirements of the Director's Orders, the Ministry of the Environment issued a "Notice of Intent to cause things to be done" to carry out the requirements. The Ministry of the Environment retained XCG Consultants Ltd. in 2007 to conduct an environmental site assessment to examine the nature and extent of the contamination. The report, submitted in June 2008, on the work carried out by XCG provided a characterization and assessment of the waste salt slag; delineation of contamination and evaluation of impacts to groundwater, surface water and soil affecting the property and the vicinity of the property; and remedial options and costs to prevent the migration of contaminated groundwater and surface water from the property. Table 1 lists proposed remedial options and associated estimated costs to prevent the migration of contaminated groundwater and surface water from the Thane Site as identified in the XCG Report. These estimates were provided in 2008 and actual costs have likely increased since then.

Table 1
Proposed Remedial Options and 2008 Estimated Costs

Option	Estimated Cost	Estimated Annual Operating Costs
1. Excavate and remove slag pile and impacted soil	\$3,900,000	N/A
2. Complete entombment with leachate collection	\$2,700,000	\$37,500
3. Composite cover (engineered) and surface water control	\$1,500,000	\$32,500

Option 1 consists of removing the contaminated material from the site and disposing it off-site at a properly licensed landfill. Option 2 involves constructing a containment area consisting of a composite cover, including a foundation layer, a barrier layer, a drainage layer, and an organic layer with vegetation. Option 3 uses engineered controls and includes consolidating the slag and high impacted soil from the site into a compact mound and constructing a low permeability cover over it.

With the latter two options, constructed drainage ditches will convey surface water around and away from the contaminated material and a stormwater management pond will reduce peak flows and improve water quality discharged to the natural area of the site. Ongoing annual monitoring of groundwater and surface water to monitor performance of these options would be required at an estimated annual cost ranging from \$32,500 to \$37,500. Furthermore, it is expected that either of these options would be considered a waste disposal site and require an environmental approval from the Ministry of the Environment. York Region does not currently own or operate any waste disposal sites.

Other remedial options have been presented to the Thane Public Liaison Committee, however, these would still require funding for implementation. Broader requests for information in terms of possible remedial solutions are reliant on the Ministry of the Environment's internal processes for procurement.

Environmental liability associated with site ownership/occupation is largely unknown

Given the presence of on-site and off-site contamination at the site, any party that becomes an owner or occupant of the Thane Site faces the potential prospect of remedial orders and prosecution under federal and provincial environmental laws.

If the contamination should ultimately impact the Maskinonge River, an owner or occupant of the site may be the subject of an order and/or prosecution under the federal *Fisheries Act* due to the discharge of contamination that has the potential to harm aquatic organisms and aquatic habitat. This liability can arise regardless of fault and would likely

require a party to take all necessary measures to prevent contamination from impacting aquatic organisms and aquatic habitat, up to and including remediation of the source of contamination. There is also the potential for a private prosecution under the *Fisheries Act* to be initiated by a private citizen.

Provincially, if the contamination should ultimately impact the Maskinonge River, and similar to the exposure to liability under the federal *Fisheries Act*, an owner or occupant of the site may be the subject of an order and/or prosecution under the *Ontario Water Resources Act* due to the discharge of contamination that has the potential to harm water quality. In addition, under the *Environmental Protection Act*, an owner or occupant faces the potential risk of being ordered to remediate the contamination at the site if it is shown to be or may be causing an adverse effect or be ordered to take preventative measures, up to and including remediation of the contamination present at the site, to prevent the potential for the contamination to cause an adverse effect. This liability can arise regardless of fault and in the case of a preventative order, can arise merely because of the status of a party as an owner or occupant of the site. Any order issued would likely require remediation of the source of contamination and the prevention of adverse effects to the natural environment. If a discharge is known to be occurring and continuing, then a party also faces the potential prospect of prosecution under the *Environmental Protection Act* as well. If a party fails to comply with the terms and conditions of any order issued, then a risk of prosecution results.

Contamination from the Thane Site does not pose an immediate threat to drinking water sources based on Ministry of the Environment sampling

The contamination from the Thane Site does not pose a threat to municipal drinking water as the property is not within a protected wellhead area, significant recharge area, intake protection zone or highly vulnerable aquifer area as defined by the *Clean Water Act, 2006*.

In 2000, the Ministry of the Environment conducted tests on private wells in the area and did not identify contamination attributable to former Thane operations although some well construction, road salt and agricultural impacts were encountered. These results were reconfirmed in 2004 when some of these private wells were resampled as well as in 2008 when the private well north of the Thane site was resampled. Based on Ministry of the Environment sampling, it is York Region staff's understanding that private drinking water supplies have not been impacted by the Thane Site.

Soil and groundwater at the site are impacted by the remaining unprocessed aluminum dross and waste salt slag. These materials have resulted in on-site metals, salt and ammonia contamination and off-site migration of some salt impacts to the closed landfill south of the Thane Site. The remaining contaminating materials continue to be a potential threat to the Maskinonge River.

Substantial debt owed to date

Debt is owed to the Town of Georgina and the Province by the site owner for work performed on its behalf after the company ceased operations. In 2003, the Town of Georgina paid approximately \$300,000 to grade the site and secure the property with fencing to prevent public access to the contaminated material. The cost of the environmental site assessment study paid for by the Ministry of the Environment in 2008 was approximately \$200,000. Property taxes of approximately \$800,000 also remain outstanding. The property value is currently estimated at between \$300,000 and \$400,000 exclusive of any liens, arrears or remediation costs.

Appropriate end-use of the Thane Site has not been determined

Current capital plans for Regional services do not support a potential use for this site. Staff have considered the site's suitability for upcoming capital projects such as the Source Separated Organics facility and the Community Environmental Centre and have concluded the site's size would be insufficient for design and operational flexibility of either facility. It was also determined that use of the site would not be fiscally responsible. Furthermore, since the site is zoned for General Industrial (M2) uses, any use other than those permitted would require the Town of Georgina to re-zone the site or allow an exception.

At least two private proposals have been presented to the landowner for remediation and end-use of the site. Given the lack of suitable public uses, it is preferable that private funds be used to remediate the site if at all possible.

5. FINANCIAL IMPLICATIONS

Provincial funding is not available for remediation of contaminated sites

The Province does not offer a funding program to assist communities in the remediation of contaminated sites by providing funding or grants. However, the Province of Ontario has expressed renewed commitment to environmental cleanup as outlined in the Province's Long-Term Infrastructure Plan, *Building Together: Jobs & Prosperity for Ontarians*. The Plan notes that, "environmental cleanup is often linked to past industrial activities. Under the authority of the *Environmental Protection Act*, the Province can order those responsible for the contamination to clean up the site. Once an order is issued, the Province works to ensure those responsible for violations are held accountable. If required, the Province may step in to undertake the cleanup, recovering the costs where possible."

The Federation of Canadian Municipalities offers the Green Municipal Fund for three types of environmental initiatives: plans, studies and projects. Grants are available for sustainable community plans, feasibility studies and field tests, while a combination of

grants and loans are available for capital projects. Funding is allocated in five sectors of municipal activity: brownfields, energy, transportation, waste and water. However, applications are not currently accepted due to the high volume of applications received to date.

The Lake Simcoe Clean-up Fund was established by the federal government to provide support for priority projects in the Lake Simcoe watershed. The Thane Public Liaison Committee has put forward two applications for this fund but were unsuccessful as the proposals did not meet the specific goal of removing phosphorus.

A review of funding opportunities by Planning and Development Services has confirmed the Green Municipal Fund and Lake Simcoe Clean-up Fund outlined above are the only relevant funding programs available at this time.

6. LOCAL MUNICIPAL IMPACT

York Region recognizes the importance of the Lake Simcoe watershed. Through close partnerships with local municipalities and the Lake Simcoe Region Conservation Authority and by working with the Provincial and Federal governments, York Region has consistently demonstrated a commitment to protecting Lake Simcoe and its watershed. To this end, staff remain committed through active participation on the Thane Public Liaison Committee to see a satisfactory resolution to the clean-up of this property.

Town of Georgina Council passed a resolution at its August 22 meeting to forward a letter to all candidates for the York-Simcoe Member of Provincial Parliament in the upcoming provincial election on October 6, 2011. The letter to candidates will ask each candidate to state their position regarding the Thane Site.

7. CONCLUSION

Given the complexity associated with the liability of this site, several conditions would have to be addressed before any private party would purchase and/or remediate this site. These conditions include securing funds, accepting potential ongoing financial and legal liabilities and determining an appropriate end use for the site.

Regional staff continue to participate in a process to develop feasible solutions to clean-up the Thane Site in the Town of Georgina. Staff remain committed to working with the Thane Public Liaison Committee, which was created and is chaired by the Ministry of the Environment to examine options to restore the site to an environmentally acceptable condition.

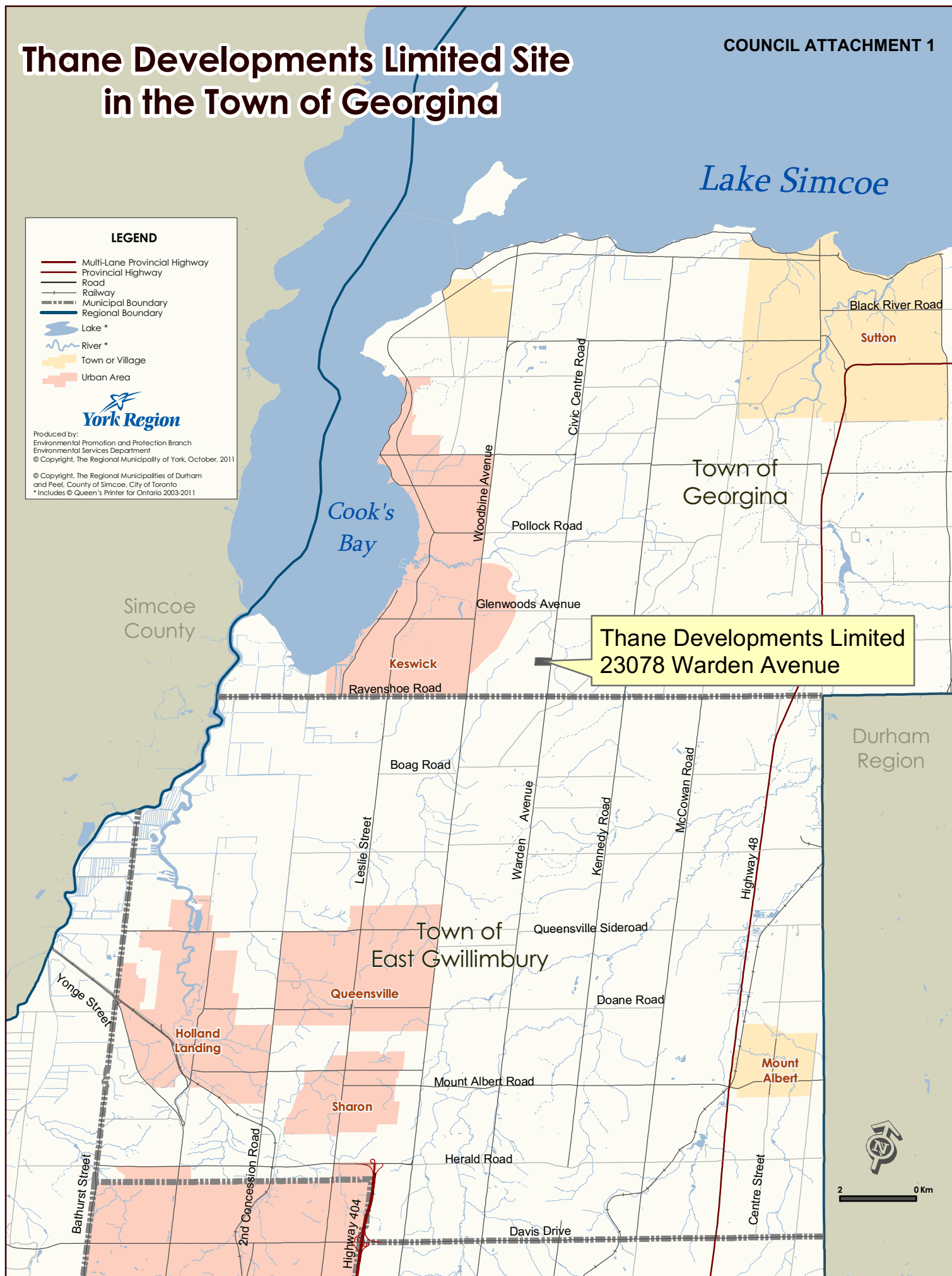
For more information on this report, please contact Laura McDowell, Director, Environmental Promotion and Protection at 905 830-4444 Ext. 5077.

The Senior Management Group has reviewed this report.

(The two attachments referred to in this clause are attached to this report.)

Thane Developments Limited Site in the Town of Georgina

COUNCIL ATTACHMENT 1





Bill Fisch, B.Com., LL.B., J.D.
Chairman and CEO



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August 29, 2011

The Honourable Dalton McGuinty
Premier
Office of the Premier
Legislative Building, Room 281
Queen's Park
Toronto, ON M7A 1A1

Dear Premier McGuinty,

Re: Remediation of the Former Thane Aluminum Smelter Site, Town of Georgina

I am writing to you in response to a request by The Regional Municipality of York Environmental Services Committee to advocate to the Province for the necessary funding to remediate the former Thane Aluminum Smelter.

The contaminated site is located in York Region at 23078 Warden Avenue in the Town of Georgina. It is owned by Thane Developments Limited. This parcel of land was used for secondary aluminum smelter operations between 1973 and 1997 and operated under Certificates of Approval (Air) issued by the Ministry of the Environment (MOE). When operations ceased in 1997, a substantial amount of unprocessed materials, including dross and waste salt slag, were left on the property and exposed to the elements.

Despite several MOE Director's Orders issued since December 2000, the site has not been remediated. The MOE conducted a review of both the company and owner's financial resources, concluding there were insufficient resources to fund the remediation.

Soil and groundwater at the site have been impacted by metals, salts and ammonia. Off-site contaminant migration is also occurring onto the neighbouring property, which is a closed landfill site. The Maskinonge River is located approximately 400 metres west of the property and the site contamination is considered by MOE staff to be a risk to the on-site wetland.

In July 2008, the MOE commissioned an environmental site assessment. The report included remedial options and costs to address the on-site wastes and prevent migration of contaminated groundwater and surface water from the property. Three remedial options were identified and the estimated remediation costs ranged from \$1.5 million to \$3.8 million.

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In January 2009, the MOE created a public liaison committee consisting of representatives from the MOE, Thane Developments Ltd., local elected officials, York Region, the Town of Georgina, the Lake Simcoe Conservation Authority and the community, including a member of Save the Maskinonge. The committee's purpose was to provide a forum for stakeholder consultation and engagement in evaluating remedial options. While the committee met on several occasions to discuss the remediation options, there were no financial resources identified for cleanup of this site.

The Thane Aluminum Smelter contaminated site provides an opportunity to demonstrate the Province of Ontario's renewed commitment to environmental cleanup as outlined in the Province's Long-Term Infrastructure Plan, *Building Together: Jobs & Prosperity for Ontarians*, which states "the Province will continue to lead numerous environmental cleanup activities over the next 10 years and to invest in environmental assets."

The Plan also notes that, "environmental cleanup is often linked to past industrial activities. Under the authority of the *Environmental Protection Act*, the Province can order those responsible for the contamination to clean up the site. Once an order is issued, the Province works to ensure those responsible for violations are held accountable. If required, the Province may step in to undertake the cleanup, recovering the costs where possible."

Unfortunately, in this case, those responsible have not been held accountable for these violations, despite several MOE Orders being issued since November 2000. In December 2000, the MOE determined the responsible parties did not have the financial means to comply with Orders to remove the waste salt/slag. Consequently the contaminating material remains on site. While the MOE continues to be involved with remediation opportunities and are working with the Town of Georgina to ensure ongoing monitoring, York Region believes it is now necessary for the Province to remediate the site and remove the impact on the on-site wetland and the potential threat to the Maskinonge River. Efforts to date have been unsuccessful in accomplishing this goal.

York Region agrees with stakeholders, including the Ministry of the Environment, that this contaminated site requires remediation. With this in mind, York Region remains committed to actively participating on the public liaison committee to evaluate options. However, based upon the wording of the *Environmental Protection Act*, York Region believes it is the Province's responsibility to pay for the required remediation, if the polluter is unable to do so.

York Region respectfully requests the Province provide the necessary technical and financial resources to restore the environmental integrity of the site and prevent any further harm to the on-site wetland and any potential impacts to the nearby watercourse.

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York Region appreciates the involvement of the Province on this site to date, and hopes the Province will act now to bring the right resources to bear and complete the cleanup. We look forward to your positive review of this important request to protect the environment from future impacts resulting from the contaminated Thane Smelter site.

Yours truly,



Bill Fisch
Chairman and CEO

Attachment

Copy to: Hon. John Wilkinson, Minister of the Environment
Hon. Michael Chan, Member of Provincial Parliament (Markham-Unionville)
Dr. Helena Jaczek, Member of Provincial Parliament (Oak Ridges-Markham)
Mr. Greg Sorbara, Member of Provincial Parliament (Vaughan)
Mr. Reza Moridi, Member of Provincial Parliament (Richmond Hill)
Mr. Frank Klees, Member of Provincial Parliament (Newmarket-Aurora)
Mrs. Julia Munro, Member of Provincial Parliament (York-Simcoe)
Mr. Peter Shurman, Member of Provincial Parliament (Thornhill)



Clause No. 6 in Report No. 4 of the Environmental Services Committee was adopted, as amended, by the Council of The Regional Municipality of York at its meeting on April 21, 2011.

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THANE SMELTER SITE, WARDEN AVENUE, TOWN OF GEORGINA

The Environmental Services Committee recommends:

- 1. Receipt of the deputation from Ms. Debbie Gordon, member of Save the Maskinonge;**
- 2. Referral to staff for more information regarding associated environmental issues or impacts at the Thane Smelter Site and further information on agencies' responsibility for clean-up; and**
- 3. Regional Council send a letter to the Premier, Minister of the Environment, local members of the Provincial Legislature and local municipalities to ask them to address environmental concerns and fund the clean-up of the Thane Smelter Site on Warden Avenue, Georgina.**