PATERSON GROUP

Landfill Impact Assessment

3317 Navan Road
Ottawa, Ontario

Prepared for Renfoe Land Management

Report PG6556-2 dated June 6, 2023

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1.0 Introduction

Paterson Group (Paterson) was commissioned by Renfoe Land Management to conduct a landfill impact assessment for the proposed development at 3317 Navan Road, in the City of Ottawa, Ontario. A landfill impact assessment is required when a sensitive land development, such as a residential development, is proposed within 500 m of a proposed or existing landfill.

The following report has been prepared specifically and solely for the aforementioned project which is described herein. It contains our findings and includes environmental concerns as they are understood at the time of writing this report.

This study has been conducted according to the Government of Ontario Guidelines D-4 Standards: Land Use On or Near Landfills and Dumps.

2.0 Proposed Development

It is understood that the proposed development will consist of three (3) four storey residential buildings. Associated walkways, driveways, and landscaped areas are further anticipated.

3.0 Background Information

It is understood that an environmental monitoring report that is prepared every year for the neighbouring landfill by Golder Associates (Golder). Paterson requested a copy of the most recent annual landfill monitoring report from both Waste Connections of Canada and the City of Ottawa. Both requests were rejected, and Paterson was informed to request the monitoring results through the Freedom of Information (FOI) request. Paterson issued a FOI on December 7, 2022, and Paterson is still waiting for the results of this search.

Reviewing internal documentation, Paterson was able to secure a Buffer Study report prepared by Golder Associates (Golder). The Buffer Study entitled: "Claridge Homes Spring Valley Trails Development - Phase 3 – Buffer Study in Relation to the BFI Navan Waste Recycling and Disposal Facility - Report Number 07-1121-0232 (2000)" was prepared by Golder Associates for Claridge Homes and dated December of 2013. The report was submitted to the City of Ottawa for review and comment and was accepted in 2014.

The intention of this document is to outline the concerns for development immediately west of the existing landfill. It is noted that although 3317 Navan Road is located north of the existing landfill, the results for this study can be extrapolated to provide a general review of how the existing landfill will impact the proposed development. Until the previously requested report can be provided for review, this Buffer Study report issued in 2013 is the most recent and relevant data Paterson can review.

4.0 Buffer Study Update

4.1 Introduction

Paterson is adapting the information previously provided in the report prepared by Golder in 2013 which was considered acceptable for the lands west of the existing landfill. The subject land is located at 3317 Navan Road (subject site) which is north of the Navan Road and northwest of the existing waste disposal facility. The subject site is located approximately 320 m from the edge of the existing landfill and is therefore within the 500 m radius of the Waste Connections Canada Navan Waste Recycling and Disposal Facility (WCC Waste Facility) which is a solid waste disposal site. WCC Waste Facility is the current owner which was previously BFI Canada Inc.

The initial buffer study was accepted in 2014 by the City of Ottawa for residential development for the Spring Valley Trails development, which is located to the west of the existing landfill, and at a closer radius than the subject site at 3317 Navan Road.

The accepted buffer study in 2014 addressed the potential for impact from the waste disposal facility possibly due to contamination by leachate, surface water runoff, ground settlement, visual impact, air (dust), odour, noise, soil contamination and landfill gas migration. No potential issues were identified, and the buffer study was deemed acceptable.

4.2 Existing Waste Disposal Facility

The WCC Waste Facility is owned and operated under the Environmental Compliance Approval (ECA) for performing the following:

- Landfilling
- Processing/recycling of solid, non-hazardous industrial, commercial, and institutional waste including construction and demolition waste.
- Asbestos waste
- Dry non-putrescible domestic waste (non-organic)
- Impacted soil

Composting of leaf and yard material was previously performed and has not been accepted since 2009.

The western and northern edges of the WCC Waste Facility are located approximately 320 m from the subject land. In 2009, the waste facility obtained approval for the expansion design for an estimated 10 years beyond 2012. According to WCC, it's our understanding that the remaining life of the WCC waste facility is based on the remaining permitted air space represented by the final waste grades and contours. Since the underlying silty clay deposit is being consolidated by the weight of the landfill, on-going settlement will allow for fill to be placed in the western portion related to this settlement. Therefore, the remaining life of the landfill may be extended to 2026-2027 or longer.

4.3 Local Geology

Local geology in the area of the subject site and the WCC Waste Facility consists of a thick silty clay deposit overlain by silty sands of varying thickness. An escarpment which runs east-west through the subject site and the WCC Waste Facility was once covered by such silty sand deposits, which were mostly eroded below the escarpment. Above the escarpment, silty sand deposits are found to be 0.6 to 2 m thick. A thick (20 to 35 m) marine silty clay deposit underlies the entire area. Bedrock in the area consists of a shale from the Billings Formation.

4.4 Surface Runoff

Surface runoff from the east side of the WCC Waste Facility site drains to Bearbrook drainage basin, which is part of the South Nation River watershed. The west side of the WCC Waste Facility and the subject site drain into Mud Creek drainage basin, which in turn drains into Green's Creek, part of the Ottawa River and Rideau River watershed. The Mer Bleue bog, a unique and recognized ecological feature, is located south of both sites. Studies performed during the approved process for the expansion of the WCC Waste Facility found that surface water runoff is not having adverse effects on surface water receptors downstream of the landfill. The existing approved surface water management system at the WCC Waste Facility comprises a network of drainage ditches and roadside swales to intercept runoff generated on-site and direct it to either the east or west stormwater management pond. As the WCC Waste Facility is an engineered landfill, potential contamination from the leachate releases would be apparent in groundwater prior to surface water. Furthermore, surface water monitoring is performed to assess surface water flow and quality of the WCC Waste Facility. Therefore, surface water on the subject site will not be impacted by the WCC Waste Facility.

4.5 Local Groundwater Flow

The local groundwater flow in the area is from north to south, from the escarpment towards the edge of the Mer Bleue bog. The thick clay deposit acts as an aquitard or hydraulic barrier to groundwater movement, such that lateral flow occurs only through the surficial silty sand deposit and the upper weathered desiccated silty clay crust zone, which have a total thickness of only a few metres. The water table is between 1 to 2 m below ground surface north of the escarpment and near ground surface south of the escarpment. There is also the possibility of a perched groundwater condition in water trapped in the silty sand deposit overlying the impervious silty clay deposit.

4.6 Hydrogeological Review

The infiltration of rain water into the landfill and decomposing waste creates a liquid called leachate which, if not managed properly, has the potential to impact groundwater in the vicinity of a landfill. In assessing the potential for groundwater contamination by leachate, the local geology and hydrology, approved engineering controls, and continued groundwater monitoring programs were considered. The natural hydrogeological aquitard imposed by the thick silty clay deposit, that underlies the area, impedes the flow of groundwater, which flows from north to south, hydraulically cross-gradient to the subject site.

4.7 Engineering Controls

Engineered controls include a leachate collection system below the northeast and central area of the waste footprint, and a perimeter collection trench along the west and south edges of the waste footprint. The leachate collection system is designed such that the groundwater elevation within the landfill is maintained at a lower level than the groundwater elevation in the surrounding area, creating a hydraulic trap, which causes groundwater to flow towards the landfill, rather than away from it. In addition, the 100 m wide west buffer between the landfill footprint and the WCC Waste Facility property boundary is occupied by a berm of compacted silty clay which adds a further level of redundancy in mitigating the potential westward migration of leachate.

Collected leachate is pumped to the City's sewer system via a forcemain and can also be pumped to tanker trucks as a contingency measure. An additional leachate management system was constructed to accommodate the approved horizontal expansion area of the landfill to the east.

Groundwater monitoring is currently performed on an 18 month basis, such that potentially impacted groundwater would be detected prior to any migration off-site. In summary, there is no mechanism by which landfill leachate can affect groundwater quality beneath the subject site.

4.8 Ground Settlement

Ground settlement on the subject site is not expected to occur as a result of landfilling activities. Significant drawdown of the water table can cause ground settlement in silty clay deposits. Water table drawdown as a result of the excavations during the landfill construction and the hydraulic trap design of the leachate collection system is limited in lateral extent due to the low permeability of the thick silty clay deposit. Therefore, ground settlement on the subject site will not be caused by operations of the WCC Waste Facility, as confirmed by on-going monitoring of the groundwater levels within 10 m of the landfill on the WCC Waste Facility site.

4.9 Visual Impact

Potential visual impact from the WCC Waste Facility expansion was assessed during the expansion approval process. Though additional mitigation of visual impact was not deemed necessary along the north side of the WCC Waste Facility, existing mitigation measures provide an adequate visual barrier from viewpoints west of the WCC Waste Facility. Continued growth of vegetation will further decrease the landfill visibility with time. Furthermore, in the longer term, the waste mound will be landscaped with plantings so as to blend into the escarpment, which will occur early on in the lifespan of the landfill due to phasing of the vertical expansion beginning on the north and west side of the WCC Waste Facility site and moving eastward away from the subject site.

4.10 Air Quality, Dust, Odour, and Noise

The predictive modelling of potential off-site impacts related to air quality, dust, odour and noise carried out as part of the approvals processes for the WCC Waste Facility expansion included potential receptor locations with the subject site. The modelling prediction results indicated that the site operations were expected to meet Provincial requirements and not cause adverse effects off-site. There are a number of design and operation mitigation measures to control and minimize the potential for off-site atmospheric impacts. Ongoing monitoring programs demonstrate that the WCC Waste Facility is performing acceptably as expected based on predictions. Considering that operations on the landfill are progressively moving eastward, away from the subject site, it's expected that the subject site will not experience unacceptable atmospheric effects from the WCC Waste Facility site.

4.11 Contaminated Soil

Contamination of soil at the subject site is not expected to occur as a result of the WCC Waste Facility. Furthermore, hazardous waste is not accepted at the WCC Waste Facility in Navan.

4.12 Landfill Gas

In studies performed during the approval process for the WCC Waste Facility expansion, the migration of landfill gas generated by the WCC Waste Facility landfill is impeded by the naturally occurring geology and engineered controls for the landfill site. Landfill gas migrates through the path of least resistance, as such, the thick silty clay layer, which underlies the area, does not favour methane migration and gas would preferentially migrate towards the atmosphere through the waste and sand unit. Methane generated by the landfill is expected to be intercepted by the leachate collection perimeter trench or blocked by the perimeter clay berms before it would travel off-site. Using a generally accepted approximation that significant methane migration may extend for a distance equal to ten times the depth of the landfill between the ground surface and the water table, the maximum distance of significant methane migration would be expected to be 20 m from the toe of the waste footprint, approximately one fifth the distance between the western waste limit of the WCC Waste Facility and the eastern property boundary of the subject site. A proposed landfill gas collection system was approved as part of the expansion of the WCC Waste Facility and the interim landfill gas management system which is currently in place. It's expected that the proposed landfill gas collection has been installed since then.

Furthermore, landfill gas monitoring is performed at a large number of locations on the WCC Waste Facility site and indicates that off-site lateral migration of landfill gas has not occurred. Based on the above, the combination of the natural geological setting and engineered features mitigate the potential migration of landfill gas in the subsurface from the WCC Waste Facility.

5.0 Geotechnical Information and Long Term Dewatering

Long Term Dewatering

Based on the information provided by WCC for the WCC Waste Facility in Navan, the proposed site is at least 350 m from the toe of the landfill slope. The invert of the leachate collection system along the northern and western boundary of the WCC Waste Facility ranges from elevation 68.7 m (southern portion) to approximately 70 m (northern portion). A clay cut-off trench along the western limit of the WCC Waste Facility is used as a hydraulic barrier to prevent horizontal migration of any below grade leachate from migrating within the silty sand layer overlying the silty clay deposit.

Due to the proximity of the proposed development to the existing landfill, in combination with the existing residential housing and municipally owned roadway between the proposed development and the landfill, there is minimal impact of any long term dewatering at the subject site impacting the landfill.

6.0 Conclusion

In conclusion, the WCC Waste Facility will not have any adverse effects on the proposed development and will not pose any risks to human health and safety. Furthermore, the completion of the proposed development will have no adverse effects to the neighbouring WCC waste facility including the leachate collection system, the clay cut-off barrier located along the northern and western limits of the waste facility and the slope stability of the existing landfill side slopes.

7.0 Statement of Limitations

The recommendations made in this report are in accordance with our present understanding of the project. Our recommendations should be reviewed when the project drawings and specifications are complete.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Renfoe Land Management or their agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

Paterson Group Inc.

Yolanda Tang, M.A.Sc. Stephanie A. Boisvenue, P.Eng.

Report Distribution:

- ❑ Renfoe Land Management (email copy)
- ❑ Paterson Group (1 copy)

APPENDIX 1

Government of Ontario Guidelines D-4 Standards

Navan Landfill Expansion

Ontario (https://www.ontario.ca/page/government-ontario)

D-4 Land Use On or Near Landfills and Dumps

A guide for land use planning authorities on how to decide what types of land uses are appropriate near landfilled waste.

Legislative Authority:
Environmental Protection Act, RSO 1990, Part V, Sections 27and 46
O. Reg. 347, General -- Waste Management
Planning Act, RSO 1990, Sections 2(a)(b)(c)(f)(g)(h), 17(9),22(3), 41(4) and 51(3)
Condominium Act, RSO 1990, Section 50(3)
Environmental Assessment Act, RSO 1990, Section 5(3)

Responsible Director:
Director, Environmental Planning Branch

Last Revision Date:
April, 1994

Synopsis

This guideline specifies restrictions and controls on land use that the Ministry wishes to see implemented in the vicinity of landfills and dumps, in order to protect the health, safety, convenience and welfare of residents near such facilities. It complements existing ministry abatement programs for landfills and dumps, and is a direct application of Guideline D-1: "Land Use Compatibility."

Application of the guideline extends to all proposals for land use on, or near, operating and non-operating landfills, (as defined in O. Reg. 347) and dumps which contain municipal solid waste, industrial solid waste and/or sewage sludges. The guideline applies to all such facilities regardless of ownership. It does not apply to lands certified as organic soil conditioning sites under O. Reg. 347.

Ministry staff shall use the guideline when they are reviewing land use proposals, including official plans and amendments, and plans of subdivision/condominium:

a. at the request of the responsible Ministry or the delegated approving authority, under the Planning Act or the Condominium Act;

b. for land use requests subject to Section 46 of the Environmental Protection Act; and

c. for undertakings subject to the Environmental Assessment Act.

Introduction

This guideline protects the health, safety, convenience and welfare of residents from the potential adverse effects of landfills and dumps, by restricting or controlling land use in their vicinity. It complements the Ministry's existing abatement programs, and Ministry staff shall refer to it when they review land use proposals.

The principles of Guideline D-4 shall also be considered when looking for locations to establish a landfill in Ontario.

Procedure D-1-1: "Land Use Compatibility: Procedure for Implementation" discusses various implementation approaches and tools. Procedure D-1-3: "Land Use Compatibility: Definitions" provides definitions of terms, in addition to those included in Section 2.0 of this guideline.

Definitions

Note: Additional definitions are provided in Procedure D-1-3:"Land Use Compatibility: Definitions".

Fill Area
The area of a waste disposal site set aside for landfilling or dumping (see Conceptual Diagram No. 1. below).

Land Use
Any existing or proposed activity, structure, service, facility, or natural feature, either at, above, or below grade, which conforms to an approved municipal plan.

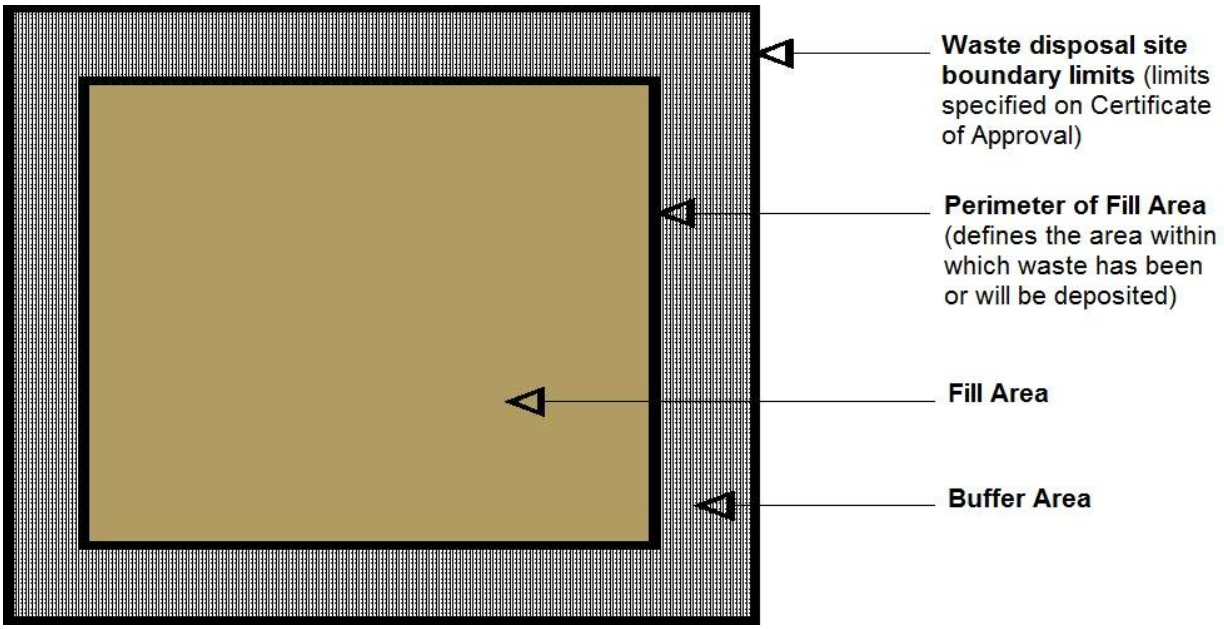
Land Used for Waste Disposal Purposes
The land comprising the fill area, where landfilling or dumping has occurred, and the land which is being used or is to be used for the leachate buffer area and/or

the gas buffer area; the land may be on- or off-site, (see Conceptual Diagram No. 1 below).

Peripheral Area
The area controlled by the site owner/operator between the boundary of the waste disposal site and the fill area; together, the peripheral area and the fill area make up the waste disposal site; the peripheral area will contain the buffer areas required to be on-site (see Conceptual Diagram No. 1 below).

Vectors and Vermin
Disease-carrying organisms, insects, rodents, birds (especially gulls) and other harmful creatures (e.g., bears).

Conceptual diagram no. 1 (plan view)



Application

3.1 General

This guideline applies to all proposals for land use on or near any landfill or dump which contains municipal solid waste, industrial solid waste and/or sewage sludges. It does not apply to lands certified as organic soil conditioning sites under O. Reg. 347.

3.2 Liquid industrial and hazardous waste

For proposals in the vicinity of landfills and dumps that have accepted liquid industrial, toxic or hazardous waste, the Ministry shall expect proponents to undertake further investigations and provide a report to the approving authority.

Where there is evidence of off-site migration of contaminants, the Ministry shall require abatement measures beyond those discussed in this guideline.

Environmental considerations

Environmental considerations shall be considered by all parties involved in the production, review and approval of a study/evaluation report.

4.1 Operating sites

Factors to be considered when land use is proposed near an operating site include: landfill-generated gases, ground and surface water contamination by leachate, odour, litter, contaminant discharges from associated vehicular traffic, visual impact, dust, noise, other air emissions, fires, surface runoff, and vectors and vermin. Particular attention shall be given to the production and migration of methane gas.

4.2 Non-operating sites

Factors to be considered when land use is proposed on or near anon-operating site include: ground and surface water contamination by leachate, surface runoff, ground settlement, visual impact, soil contamination and hazardous waste, and landfill- generated gases. Particular attention shall be given to the production and migration of methane gas.

4.3 Assessment

The adverse effects of the factors listed in Sections 4.1 and 4.2of this guideline may create:

a. a hazard or health/safety risk;

b. a nuisance to man; and/or

c. degradation of the natural environment.

The overall extent, number, degree and frequency of contaminant discharges and visual problems can vary with each site. Consideration must be given to the nature of proposed land use(s).

Reference should be made to Reference (a) (Section 7.0), if particular site conditions warrant obtaining further information with respect to methane gas.

4.4 Buffering techniques

One or a combination of buffers, as defined in GuidelineD-1: "Land Use Compatibility", may be employed in a given situation.

4.5 Hydrogeologic/engineering studies

4.5.1 Responsibility

Where the hydrogeologic and geologic setting of the proponent's property and the inter-relationship with gas and/or leachate from the fill area are unknown, Ministry staff shall recommend to the approving authority that the proponent engage a qualified hydrogeologist and/or engineer to determine the subsurface conditions and, where necessary, propose remedial measures.

4.5.2 Exceptions

The Ministry shall not normally recommend a formal site investigation, as recommended in Section 4.5.1, when its staff is satisfied that the evaluation of existing data indicates the absence of a problem.

4.6 Controls and monitoring for adverse effects

Where appropriate, Ministry staff shall recommend, as a condition of approval, that a proponent include controls to deal with adverse effects or risks to health or safety and that the approving authority monitor contaminant migration and carry out inspections of control facilities.

In the event that the approving authorities lack the expertise or resources to perform such inspections, they shall employ qualified consultants to do so.

4.7 Monitoring on private property

Where the approving authority requires monitoring and inspections on private property, Ministry staff shall recommend that a contract be executed between the proponent and the municipality, in the form of, or as part of an agreement that may be registered on title and run with the land. Documents which are able to be registered on title are identified in References (b) and (c) (see Section 7.0).

Land use considerations

5.1 Sensitive land use

The Ministry will normally recommend against proposals for sensitive land use (see Section 5.1.1. for details) adjacent to operating landfills, and on land used for waste disposal purposes where there are completed or partially completed fill areas.

Where land uses are proposed for approval on non operating landfills and dumps under Section 46 of the Environmental Protection Act, the Ministry normally shall not permit residential or other sensitive land use. Further details are provided in Reference (d) of Section 7.0.

5.1.1 Sensitive land uses for landfills currently in operation

Any existing or committed land use which includes:

a. a permanent structure used in animal husbandry; or

b. agricultural land used for pasturing livestock; or

c. a permanent structure where:

i. a person sleeps, or

ii. a person is present on a full time basis;

but not including food or motor vehicle service facilities adjacent to a highway, utility operations, scrap yards, heavy industrial uses, gravel pits, quarries, mining or forestry activities; or

d. cemeteries

5.1.2 Compatible land uses for landfills currently in operation

Compatible land uses may include:

a. utilities and above grade transportation routes except major highways;

b. fences;

c. wood harvesting and other forestry activities;

d. certain farming activities;

e. industrial uses, including incinerators permitted to operate under O. Reg. 347;

f. gravel pits and quarries, and other mining activities(provided the landfill water table is not affected); or

g. such land uses which would not be threatened by any hazard to public health or safety and would not be impaired by nuisance effects.

5.2 Land use within 30 metres of a fill area

5.2.1 Operating sites

No land use may take place within 30 metres of the perimeter of a fill area. This is a minimum distance.

Each operating landfill shall have an on-site operational/maintenance buffer area identified on the Certificate of Approval. This buffer shall be no less than 30 metres; it is normally 60-100 metres.

5.2.2 Non-operating sites

Where technical controls for leachate, or leachate and gas are required surrounding a fill area, no land use may take place within 30 metres of its perimeter. This distance maybe reduced to 20 metres in cases where only gas controls are necessary.

5.3 Land use within 500 metres of a fill area

The Ministry considers the most significant contaminant discharges and visual problems to be normally within 500 metres of the perimeter of a fill area. Accordingly, the Ministry recommends this distance be used as a study area for land use proposals. Ministry staff shall ensure that the proponent has evaluated the presence and impact of any adverse effects or risks to health and safety and that necessary remedial measures are taken when land use proposals are within this distance. This assessment shall be based on the nature and knowledge of the disposal site, and the nature of land use(s) proposed.

Actual influence areas for the considerations listed in Section4.1 and 4.2 of this guideline will vary with the individual landfill or dump. Where the actual influence area of a site has been determined to be less than the 500 metre study area set out in this section, the study area for land use proposals can be reduced to coincide with the actual influence area.

5.4 Land use beyond 500 metres of a fill area

Where significant impacts are encountered at or beyond 500 metres, the study area within which an assessment for any change in land use is recommended, shall

be extended beyond the 500 metre area set out in Section 5.3. Historical evidence in Ontario has shown that the maximum distance within which adverse effects could be experienced while a landfill is operating is up to 3 kilometres.

In exceptional hydrogeologic situations, such as areas of fractured rock or sand, where it is anticipated that leachate or gas from a non-operating landfill or dump could migrate beyond 500 metres and pose a problem, Ministry staff shall recommend that proponents carry out hydrogeologic and/or engineering studies for land use proposals beyond 500 metres of a fill area (see Section 4.5 for more details).

5.5 Significant impacts

The Ministry shall recommend against land use proposals where proponents have not incorporated feasible remedial measures to prevent or minimize adverse effects (as discussed in Section4.3).

5.6 Sequential development

In considering long-range planning, the Ministry may recommend that proponents delay or phase certain types of land use to coincide with closure of sections of a landfill, or the operation itself, as nuisance effects are reduced or eliminated. This approach shall only be permitted in cases where no risks to health or safety are present.

Responsibilities

6.1 Operators and/or owners of landfills or dumps

The Ministry shall require operators and/or owners of operating landfills and non operating landfills and dumps to comply with the Environmental Protection Act and O. Reg. 347 (Waste Management) requirements for the control of adverse effects caused by these facilities.

6.2 Proponents/consultants

Ministry staff shall recommend to the approving authority that the proponent provide a report on environmental considerations(see Section 4.0) and, where necessary, propose and implement appropriate control measures. These measures shall include design details and specifications for any control device or facility.

6.3 Municipalities

The local municipal authority is responsible for ensuring that proponents implement and monitor proper control measures associated with new, sensitive developments. It also shall ensure that periodic inspections of operating landfills and non-operating landfills and dumps for contaminant migration and potential hazards are carried out.

6.4 Ministry

With respect to its mandate for landfills and dumps, the Ministry shall exercise the following responsibilities:

6.4.1 Near land used or to be used for waste disposal purposes

Ministry staff will expect proponents and municipalities to fulfill their responsibility to protect public health and safety in areas of land use near a landfill or dump, and to prevent significant impacts from difficult-to-control nuisance effects which may extend beyond the lands under the Certificate of Approval for an operating landfill.

6.4.2 On land used for waste disposal purposes

Where a proponent submits a land use proposal for approval under Section 46 of the Environmental Protection Act, the proponent must assure Ministry staff and the municipality that the proposal contains adequate measures for the protection of public health and safety, in order to facilitate the Minister making a decision on approval.

Where an approval under EPA Section 46 is not required from the Minister, Section 6.4.1 of this guideline applies.

Reference documents

a. Procedure D-4-1: "Assessing Methane Hazards from Landfill Sites"

b. Ministry of Consumer and Commercial Relations Bulletin No.91003: "Environmental Warnings/Restrictions"

c. Ministry of Consumer and Commercial Relations Bulletin No.80023: "Registration of Certificates & Provisional Certificates"

d. Guideline D-7: "Requests for Land Use Approval Under EPA, Section 46" (under development)

e. Procedure D-1-1: "Land Use Compatibility: Procedure for Implementation"

f. Procedure D-1-3: "Land Use Compatibility: Definitions"

g. Guideline D-1: "Land Use Compatibility"

Updated: July 13, 2021
Published: March 02, 2016

Ontario (https://www.ontario.ca/page/government-ontario)

Navan Landfill Expansion

Project information about this environmental assessment.

Introduction

Proponent

Waste Services (CA) Inc.

Location

3354 Navan Road, Ottawa

Type

Waste

Reference Number

06029

Contact

Environmental Approvals Branch, 416-314-8001

Toll free 1-800-461-6290

Current Status

Environmental assessment: approved, August 2, 2007

Project Summary

The purpose of the undertaking is for the expansion of the existing landfill site located in Notre Dames-des-Champs on Navan Road in the eastern end of the City

of Ottawa.

Project History

- Environmental assessment: approved
    - Date submitted: May 25, 2007
    - Expiry of public comment period: April 20, 2007
    - Expiry of public comment period for ministry review: June 29, 2007
    - Decision date: August 2, 2007
- Terms of reference: approved
- Date submitted: June 16, 2006
- Expiry of public comment period: July 21, 2006
- Decision date: October 6, 2006
- Decision date: May 30, 2006
- Designation: voluntary agreement granted

Environmental Assessment

Proposed Undertaking

Waste Services (CA) Inc. proposed an expansion of its existing landfill site located in Notre Dames-des-Champs on Navan Road in the eastern end of the City of Ottawa. The existing 31.9 hectare landfill footprint will be expanded easterly by 8.5 hectares. The total capacity will increase by an estimated 3.6 million cubic metres of additional waste. The annual waste tonnage accepted at the site will continue to be 234,750 tonnes of waste per year which will extend the life of the landfill by approximately 11 years past its currently estimated closure date of 2011. It is proposed that the site will continue to accept solid non-hazardous Industrial, Commercial and Institutional (IC & I) waste including construction and demolition waste. The approved area for the receipt of waste for disposal will continue to be the province of Ontario, excluding IC&I waste from the City of Toronto.

Waste diversion will continue at the site related to the recovery of metal for recycling and wood for chipping.

The EA considered five potential expansion alternatives in accordance with the approved Terms of Reference. Alternative 3 was chosen as the preferred alternative.

The comment period on the EA was from March 2, 2007 to April 20, 2007. A Notice of Completion of Review was published on May 25, 2007. A five week comment period on the Review was provided from May 25, 2007 to June 29, 2007. During this time period any person could provide comments about the proposed undertaking, the EA, and the ministry's Review. The Minister with Cabinet's concurrence approved the Navan landfill expansion subject to conditions of approval. The Minister imposed conditions of approval that will provide assurance of environmental protection for the surrounding watershed, air quality, the Mer Bleue Bog, and the surrounding community. The ministry is satisfied that the proposed conditions of approval will address any issues and concerns that were raised with the ministry. All comments received during the two public comment periods were considered prior to a decision being made to approve the landfill expansion. Approvals are also required under the Environmental Protection Act, the Ontario Water Resources Act and the Planning Act. Those who provided comments on the EA or the ministry's Review will receive notice of the Minister's decision.

Terms of Reference

The Proposal

Waste Services (CA) Inc. (WSI) is proposing to expand their existing landfill site. The current approved footprint for the landfill, processing and composting occupies 31.9 hectares within a total owned property of 90 hectares. The site is licensed to receive solid, non-hazardous industrial and commercial waste (including construction and demolition waste), dry non-putrescible domestic waste, asbestos waste, and impacted soils. A total of 234,750 tonnes of waste is permitted to be received for disposal in the landfill annually. The approved area for receipt of waste for disposal is the Province of Ontario. In addition to accepting waste for disposal, the site undertakes significant diversion activities through recovery of metal for recycling, wood for chipping and composting and leaf and yard waste composting.

The proposed expansion alternatives under consideration would increase the approved capacity of the site by between approximately 3.6 and 5.5 million cubic meters to provide approximately 2.4 to 3.6 million tonnes of additional waste disposal capacity. At the approved annual disposal rate this would provide approximately 10 to 15 years of additional disposal capacity at the landfill, which is expected to reach its currently approved capacity in 2011.

Purpose of the Undertaking

WSI has determined that there is an ongoing demand for its waste disposal services in Ottawa and that it has the opportunity to continue to provide environmentally sound waste management services for disposal of solid, non-hazardous Industrial, Commercial and Institutional as well as Construction and Development wastes. The purpose of the expansion is to address that demand and opportunity.

Approval of the Terms of Reference

As provided for by Section 6(4) of the Environmental Assessment Act, the Terms of Reference submitted for approval to the Ministry of the Environment on June 16, 2006, to govern the preparation of an environmental assessment for the above-noted undertaking, are hereby approved with the following amendments:

Section 4.4 of the ToR be amended by adding the following:

- “Mer Bleue Bog
- The environmental assessment will contain a description of the effects that will be caused or may be reasonably expected to be caused to the Mer Bleue Bog by each alternative method of carrying out the undertaking.
- The environmental assessment will contain a description of the measures that will prevent, change, mitigate or remedy the effects that will be caused or may be reasonably expected to be caused to the Mer Bleue Bog by each alternative method of carrying out the undertaking.”

Section 5.3 of the ToR be amended by adding the following:

- “Aboriginal Consultation" The Aboriginal communities that may be affected by or have an interest in the Navan Landfill Expansion EA, will be provided with sufficient opportunity to participate in the development of the EA.”

Designation (Voluntary Agreement)

Waste Services (CA) Inc. (WSI) is proposing to expand their existing landfill site. The current approved footprint for the landfill, processing and composting occupies 31.9 hectares within a total owned property of 90 hectares. The site is licensed to receive solid, non-hazardous industrial and commercial waste (including construction and demolition waste), dry non-putrescible domestic waste, asbestos waste, and impacted soils. A total of 234,750 tonnes of waste is permitted to be received for disposal in the landfill annually. The approved area for receipt of waste for disposal is the Province of Ontario. In addition to accepting waste for disposal, the site undertakes significant diversion activities through recovery of metal for recycling, wood for chipping and composting, and leaf and yard waste composting.

The proposed expansion alternatives under consideration would increase the approved capacity of the site by between approximately 3.6 and 5.5 million cubic meters to provide approximately 2.4 to 3.6 million tonnes of additional waste disposal capacity. At the approved annual disposal rate this would provide approximately 10 to 15 years of additional disposal capacity at the landfill, which is expected to reach its currently approved capacity in 2011.

Related

Updated: July 08, 2021
Published: March 20, 2014

APPENDIX 2

FOI Request

ERIS 2020

Claridge Homes Spring Valley Trails Development - Phase 3 – Buffer Study in Relation to the BFI Navan Waste Recycling and Disposal Facility - Report Number 07-1121-0232 (2000)

Ontario

Ministry of the Environment, Conservation and Parks

Freedom of Information Request for Property Information

Instructions

Use this form to:

- submit and pay for a new FOI request for access to records/information about a property
- pay for a deposit or a final fee on an existing FOI request

Fields marked with an asterisk (*) are mandatory.

Are you: *

☑ Submitting a new FOI Request for Property Information

☐ Paying a deposit or final fee for an existing FOI Request for Property Information

Section 1 – Description of Records Requested

Time Period for Records Requested

From (yyyy/mm/dd) * 2019/01/01

To (yyyy/mm/dd) * 2022/12/07

Type of Record(s) *

☐ All environmental records relating to the identified property/site exclusive of Environmental Approvals and Registrations

☐ Environmental Approvals and Registrations (e.g. Environmental Compliance Approvals; Certificate of Approval; Renewable Energy Approvals; Environmental Activity and Sector Registry Registrations)

Select only if you are seeking access to an Approval or Registration that is not publicly available or if you are also seeking supporting documents relating to the Approval or Registration.

Operator and vendor Pesticide Licenses from September 4, 2018, final Approvals and Registrations are publicly available on the Access Environment website at:
https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en.

Records of Site Condition (RSC) records are publicly available on the Brownfields Environmental Site Registry (BSER).

- RSC records between 2004 to June 30, 2011 are available at: https://www.lrcsde.lrc.gov.on.ca/besrWebPublic/generalSearch
- RSC records filed after July 2011 are available at: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/earchFiledRsc_search?request_locale=en

☑ Other Specific Document(s)

Specific Documents

List of Documents. Please list the specific documents you are asking for and be as detailed as possible in your description. *

Waste Connections of Canada Ottawa (Navan Road) Landfill Monitoring and Operating Report (Most Recent). This report would include on and off-site monitoring of groundwater and surface water quality on the landfill and neighboring properties. The report would have been completed by a third party consultant.

List any record(s) that should be excluded from the scope of your request (e.g. email correspondences; records originating from your organization/business; records already in your possession, prior year(s) annual reports for approvals)

Please provide the most recent annual monitoring report for the above mentioned landfill.

Please provide any additional relevant information relating to your request. For example, does your request relate to any other ministry business? Please note that this information is being requested only in order to provide contextual information to the Access and Privacy Office and will not in any way affect or expedite the status of any related ministry business identified.

Section 2 – Requester Information

Last Name * | First Name * | Middle Initial

Berube | Samuel |

Business/Organization Name (if applicable or indicate “N/A”) *

Paterson Group Inc.

Project/Reference Number (if applicable)

PE4588

Are you submitting this request on behalf of a client? *

☐ Yes ☑ No

Mailing Address

Unit Number | Street Number * | Street Name *

| 9 | Auriga Drive

PO Box | City/Town * | Province * | Postal Code *

| Ottawa | ON | K2E 7T9

Telephone Number * | ext. | Email Address *

613-226-7381 | | sberube@patersongroup.ca

Is there an alternate contact (e.g. office admin)? *

☐ Yes ☑ No

Section 3 – Current Property Address Information

Is the property a:

☐ Park ☐ Lake ☐ First Nation Band ☐ Wind Farm ☐ Federal Land ☐ Island ☐ Unsurveyed Land

Are you requesting information about multiple addresses? *

☐ Yes ☑ No

Property Address

Unit Number

Street Number: 3354

Street Name: Navan Road

Full Lot Number

Concession

Geographic Township

City/Town/Village *: Ottawa

Closest Intersection

Section 4 – Previous Property Address Information

Do you want the ministry to search all prior historical addresses for this property/site for the time period of the records requested? *

☐ Yes ☑ No

Section 5 – Supporting Documents

Please upload any documents (e.g. Maps) that are relevant to your FOI request.

The total size of all attachments must not be more than 8 MB.

1. File Name

   Total File Size

Payment confirmation number: 24900013

ENVIRONMENTAL RISK INFORMATION SERVICES

DATABASE REPORT

Project Property:	*PE4588* *3252 Navan Road* *Navan ON K4B 1H9*
Project No:	*PE4588/PO#27770*
Report Type:	*Quote - Custom-Build Your Own Report*
Order No:	*20200501079*
Requested by:	*Paterson Group Inc.*
Date Completed:	*May 6, 2020*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:	*PE4588* *3252 Navan Road Navan ON K4B 1H9*
Project No:	*PE4588/PO#27770*

Order Information:

Order No:	*20200501079*
Date Requested:	*May 1, 2020*
Requested by:	*Paterson Group Inc.*
Report Type:	*Quote - Custom-Build Your Own Report*

Historical/Products:

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Boundary to 0.25km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AST	Aboveground Storage Tanks	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	1	1
CA	Certificates of Approval	Y	0	10	10
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Register	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	5	5
ECA	Environmental Compliance Approval	Y	0	18	18
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	4	4
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EPAR	Environmental Penalty Annual Report	Y	0	0	0
EXP	List of Expired Fuels Safety Facilities	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FED TANKS	Federal Identification Registry for Storage Tank Systems (FIRSTS)	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FST	Fuel Storage Tank	Y	0	0	0
FSTH	Fuel Storage Tank - Historic	Y	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	0	26	26
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	1	1
HINC	TSSA Historic Incidents	Y	0	0	0
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	Fuel Oil Spills and Leaks	Y	0	2	2

Database	Name	Searched	Project Property	Boundary to 0.25km	Total
LIMO	Landfill Inventory Management Ontario	Y	0	1	1
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0
NDFT	National Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBP	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	13	13
OGWE	Oil and Gas Wells	Y	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PES	Pesticide Register	Y	0	0	0
PINC	Pipeline Incidents	Y	0	1	1
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0
PTTW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	1	1
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	4	4
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	27	27
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	0	3	3
	Total:		0	117	117

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
1	WWIS		lot 4 con 4 ON ***Well ID:*** 1516095	ENE/214.0	4.84	33
2	ECA	Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	ESE/101.1	-2.18	36
2	ECA	Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	ESE/101.1	-2.18	37
2	ECA	Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	ESE/101.1	-2.18	37
2	ECA	Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	ESE/101.1	-2.18	37
3	CA	HUNEAULT WASTE MANAGEMENT LTD.	NAVAN RD., LEACHATE EFF. P.S. GLOUCESTER ON	E/249.9	2.63	37
3	CA	HUNEAULT WASTE MANAGEMENT LTD.	NAVAN RD.,LEACHATE EFF. P.S. GLOUCESTER ON	E/249.9	2.63	38
3	SPL	TRANSPORT TRUCK	3354 NAVIN RD. MOTOR VEHICLE (OPERATING FLUID) GLOUCESTER CITY ON	E/249.9	2.63	38
3	CA	HUNEAULT WASTE MANAGEMENT LTD.	3354 NAVAN RD.,HUNEAULT L-FILL GLOUCESTER CITY ON	E/249.9	2.63	39
3	CA	3354 Navan Road, Navan	3354 Navan Road Ottawa ON	E/249.9	2.63	39
3	WDS	Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	39
3	WDS	943162 Ontario Inc.	3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	40

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	WDS	HUNEAULT WASTE MANAGEMENT	GLOUCESTER, TOWNSHIP OF ON	E/249.9	2.63	41
3	WDS	HUNEAULT WASTE MANAGEMENT LTD.	GLOUCESTER, TOWNSHIP OF ON	E/249.9	2.63	41
3	WDS	HUNEAULT WASTE MANAGEMENT LTD.	3354 NAVAN ROAD, GLOUCESTER GLOUCESTER, TOWNSHIP OF ON	E/249.9	2.63	42
3	WDS	HUNEAULT WASTE MANAGEMENT	GLOUCESTER, TOWNSHIP OF ON	E/249.9	2.63	43
3	WDS	HUNEAULT WASTE MANAGEMENT	GLOUCESTER, TOWNSHIP OF ON	E/249.9	2.63	43
3	WDS	HUNEAULT WASTE MANAGEMENT	3354 NAVAN ROAD, GLOUCESTER GLOUCESTER, TOWNSHIP OF ON	E/249.9	2.63	44
3	EBR	Waste Services Inc.	Part of lot 2, 3 & 4, conc 4; 3354 Navan Road Ottawa Ontario K4B 1H9 Ottawa ON	E/249.9	2.63	45
3	EHS		3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	45
3	GEN	HUNEAULT WASTE MANAGEMENT LTD.	3354 NAVAN ROAD GLOUCESTER ON K4B 1H9	E/249.9	2.63	45
3	GEN	WASTE SERVICE INC.	3354 NAVAN ROAD GLOUCESTER ON K4B 1A9	E/249.9	2.63	46
3	GEN	Capital Environmental Resource Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	46
3	GEN	Waste Services (CA) Inc.	3354 Navan Road Ottawa (Navan) ON	E/249.9	2.63	47
3	NPRI	WASTE SERVICES INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	47

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	NPRI	WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	49
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	50
3	NPRI	WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	51
3	EHS		3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	52
3	NPRI	WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	52
3	NPRI	WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	54
3	SPL		3354 Navan Rd Ottawa ON	E/249.9	2.63	55
3	NPRI	WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	56
3	CA	BFI Canada Inc.	3354 Navan Rd Ottawa ON	E/249.9	2.63	57
3	CA	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON	E/249.9	2.63	58
3	CA	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON	E/249.9	2.63	58
3	CA	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON	E/249.9	2.63	58
3	CA	943162 Ontario Inc.	3354 Navan Road Gloucester ON	E/249.9	2.63	58

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	CA	943162 Ontario Inc.	3354 Navan Road Gloucester ON	E/249.9	2.63	59
3	WDS	Capital Environmental Resource Inc.	3354 Navan Road Ottawa ON L7L 6Z8	E/249.9	2.63	59
3	WDS	Waste Services (CA) Inc.	3354 Navan Road Ottawa ON L7L 6Z8	E/249.9	2.63	60
3	WDS	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	60
3	WDS	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	61
3	WDS	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	62
3	WDS	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	63
3	NPRI	WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	63
3	WDS	BFI Canada Inc.	3354 Navan Rd Ottawa ON L4K 0C3	E/249.9	2.63	64
3	LIMO	WSI - Ottawa - Navan Road	3354 Navan Road; Lots 2-4, Concession 4 ON	E/249.9	2.63	65
3	INC		3354 NAVAN ROAD, NAVAN ON K4B 1H9	E/249.9	2.63	66
3	NPRI	BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	67
3	GEN	Waste Services (CA) Inc.	3354 Navan Road Ottawa (Navan) ON	E/249.9	2.63	68

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON	E/249.9	2.63	69
3	WDS	BFI Canada Inc.	3354- Navan Rd Ottawa ON	E/249.9	2.63	70
3	EHS		3354 Navan Rd Ottawa ON	E/249.9	2.63	70
3	WDS	BFI Canada Inc.	3354- Navan Rd Ottawa ON K1B 1H9	E/249.9	2.63	71
3	NPRI	BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	71
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON	E/249.9	2.63	73
3	GEN	BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON	E/249.9	2.63	73
3	GEN	BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON	E/249.9	2.63	74
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON	E/249.9	2.63	75
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	76
3	GEN	BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	76
3	WDS	BFI Canada Inc.	3354- Navan Rd Ottawa ON L4K 0C3	E/249.9	2.63	77
3	SPL	BFI Canada Inc.	3354 Navan Rd Ottawa ON	E/249.9	2.63	78

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	NPRI	BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	78
3	GEN	GPM (12) GP Inc.	3354 Navan Road Ottawa ON	E/249.9	2.63	80
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON	E/249.9	2.63	81
3	GEN	BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON	E/249.9	2.63	81
3	EBR	BFI Canada Inc.	3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	E/249.9	2.63	82
3	NPRI	BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	83
3	EBR	BFI Canada Inc.	3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	E/249.9	2.63	85
3	ECA	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON L4K 0C3	E/249.9	2.63	85
3	WDS	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K4B1H9	E/249.9	2.63	85
3	WDS	BFI Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	E/249.9	2.63	86
3	NPRI	PROGRESSIVE WASTE SOLUTIONS CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	87
3	EBR	Progressive Waste Solutions Canada Inc.	3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	E/249.9	2.63	89

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	ECA	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON L4K 0E3	E/249.9	2.63	89
3	WDS	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	E/249.9	2.63	89
3	WDS	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON L4K 0C3	E/249.9	2.63	90
3	WDS	BFI Canada Inc.	3354- Navan Rd Ottawa ON M9W 6V1	E/249.9	2.63	91
3	WDS	Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	92
3	ECA	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	92
3	ECA	943162 Ontario Inc.	3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	93
3	ECA	943162 Ontario Inc.	3354 Navan Road Ottawa ON	E/249.9	2.63	93
3	ECA	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	93
3	ECA	BFI Canada Inc.	3354 Navan Rd Ottawa ON M9W 6V1	E/249.9	2.63	93
3	ECA	Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	E/249.9	2.63	94
3	ECA	Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	94
3	GEN	Waste Connections of Canada	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	94

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	95
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	96
3	GEN	Progressive Waste Solutions Canada Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	97
3	GEN	city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	97
3	GEN	BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	98
3	GEN	city of ottawa Solid Waste	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	99
3	GEN	Waste Connections of Canada	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	100
3	NPRI	Progressive Waste Solutions Canada Inc.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	E/249.9	2.63	101
3	WDS	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	E/249.9	2.63	103
3	SPL	Waste Connections of Canada Inc.	3354 Navan Rd Ottawa ON K4B 1H9	E/249.9	2.63	104
3	GHG	Navan Landfill	3354 Navan Road Ottawa ON K4B1H9	E/249.9	2.63	104
3	GEN	Waste Connections of Canada	3354 Navan Road Ottawa (Navan) ON K4B 1H9	E/249.9	2.63	105
3	GEN	city of ottawa Solid Waste	3354 Navan Road City of Ottawa ON K4B 1H9	E/249.9	2.63	106

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
3	WDS	Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	E/249.9	2.63	107
3	WDS	Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	E/249.9	2.63	107
4	ECA	Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	SSW/199.0	-9.16	108
4	ECA	Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	SSW/199.0	-9.16	108
4	ECA	Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	SSW/199.0	-9.16	109
4	ECA	Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	SSW/199.0	-9.16	109
5	EBR	Ashcroft Homes Inc.	3323 Navan Road, Ottawa, Ontario. CITY OF OTTAWA ON	NNE/185.2	4.87	109
6	RSC	1561976 Ontario Inc.	3317 NAVAN RD, GLOUCESTER, ON, K4B 1H9 GLOUCESTER ON K4B 1H9	N/81.5	3.87	110
6	EHS		3317 Navan Rd Ottawa ON	N/81.5	3.87	110
7	WWIS		lot 5 con 4 OTTAWA ON ***Well ID:*** 7254951	NNW/24.4	3.87	110
8	ECA	Ashcroft Homes - Eastboro Inc.	3253 Navan Rd part 4 , 4 Ottawa front Ottawa ON K2E 1A9	NNW/79.3	3.87	112
9	INC		278 ROLLING MEADOWS CRES, OTTAWA ON	WNW/216.8	2.87	112
10	PINC		6230 Renaud Road, Ottawa ON	NNW/249.6	3.87	113

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
11	WWIS		lot 4 con 4 ON ***Well ID:*** 1501523	NW/245.0	3.87	114
12	BORE		ON	NW/245.2	3.87	116
13	WWIS		lot 4 con 4 ON ***Well ID:*** 1501526	NNW/250.3	3.87	118

Executive Summary: Summary By Data Source

BORE - Borehole

A search of the BORE database, dated 1875-Jul 2018 has found that there are 1 BORE site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	ON	245.2	12

CA - Certificates of Approval

A search of the CA database, dated 1985-Oct 30, 2011* has found that there are 10 CA site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
HUNEAULT WASTE MANAGEMENT LTD.	NAVAN RD., LEACHATE EFF. P.S. GLOUCESTER ON	249.9	3
HUNEAULT WASTE MANAGEMENT LTD.	NAVAN RD.,LEACHATE EFF. P.S. GLOUCESTER ON	249.9	3
HUNEAULT WASTE MANAGEMENT LTD.	3354 NAVAN RD.,HUNEAULT L-FILL GLOUCESTER CITY ON	249.9	3
3354 Navan Road, Navan	3354 Navan Road Ottawa ON	249.9	3
943162 Ontario Inc.	3354 Navan Road Gloucester ON	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON	249.9	3

Site	Address	Distance (m)	Map Key
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON	249.9	3
943162 Ontario Inc.	3354 Navan Road Gloucester ON	249.9	3
BFI Canada Inc.	3354 Navan Rd Ottawa ON	249.9	3

EBR - Environmental Registry

A search of the EBR database, dated 1994-Mar 31, 2020 has found that there are 5 EBR site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
BFI Canada Inc.	3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	249.9	3
Waste Services Inc.	Part of lot 2, 3 & 4, conc 4; 3354 Navan Road Ottawa Ontario K4B 1H9 Ottawa ON	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	249.9	3
BFI Canada Inc.	3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	249.9	3
Ashcroft Homes Inc.	3323 Navan Road, Ottawa, Ontario. CITY OF OTTAWA ON	185.2	5

ECA - Environmental Compliance Approval

A search of the ECA database, dated Oct 2011-Mar 31, 2020 has found that there are 18 ECA site(s) within approximately 0.25

kilometers of the project property.

Site	Address	Distance (m)	Map Key
Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	101.1	2
Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	101.1	2
Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	101.1	2
Ashcroft Homes - Eastboro Inc.	Renaud Road Ottawa ON K2E 1A9	101.1	2
BFI Canada Inc.	3354 Navan Rd Ottawa ON M9W 6V1	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3
Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3
943162 Ontario Inc.	3354 Navan Road Ottawa ON	249.9	3
943162 Ontario Inc.	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3

Site	Address	Distance (m)	Map Key
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON L4K 0C3	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON L4K 0E3	249.9	3
Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	199.0	4
Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	199.0	4
Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	199.0	4
Claridge Homes (Carson) Inc.	Ottawa ON K2P 0Y6	199.0	4
Ashcroft Homes - Eastboro Inc.	3253 Navan Rd part 4 , 4 Ottawa front Ottawa ON K2E 1A9	79.3	8

EHS - ERIS Historical Searches

A search of the EHS database, dated 1999-Jan 31, 2020 has found that there are 4 EHS site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	3354 Navan Rd Ottawa ON	249.9	3
	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3

Site	Address	Distance (m)	Map Key
	3317 Navan Rd Ottawa ON	81.5	6

GEN - Ontario Regulation 347 Waste Generators Summary

A search of the GEN database, dated 1986-Jan 31, 2020 has found that there are 26 GEN site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
Waste Connections of Canada	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3
BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3
city of ottawa Solid Waste	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
Waste Connections of Canada	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3

Site	Address	Distance (m)	Map Key
city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
Waste Connections of Canada	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3
city of ottawa Solid Waste	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
HUNEAULT WASTE MANAGEMENT LTD.	3354 NAVAN ROAD GLOUCESTER ON K4B 1H9	249.9	3
WASTE SERVICE INC.	3354 NAVAN ROAD GLOUCESTER ON K4B 1A9	249.9	3
Capital Environmental Resource Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3
Waste Services (CA) Inc.	3354 Navan Road Ottawa (Navan) ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
Waste Services (CA) Inc.	3354 Navan Road Ottawa (Navan) ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON	249.9	3
BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON	249.9	3

Site	Address	Distance (m)	Map Key
BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON K4B 1H9	249.9	3
BFI Canada Inc.	3354 Navan Road Ottawa (Navan) ON K4B 1H9	249.9	3
GPM (12) GP Inc.	3354 Navan Road Ottawa ON	249.9	3
city of ottawa	3354 Navan Road City of Ottawa ON	249.9	3

GHG - Greenhouse Gas Emissions from Large Facilities

A search of the GHG database, dated 2013-Dec 2017 has found that there are 1 GHG site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
Navan Landfill	3354 Navan Road Ottawa ON K4B1H9	249.9	3

INC - Fuel Oil Spills and Leaks

A search of the INC database, dated Feb 28, 2017 has found that there are 2 INC site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	3354 NAVAN ROAD, NAVAN ON K4B 1H9	249.9	3

Site	Address	Distance (m)	Map Key
	278 ROLLING MEADOWS CRES, OTTAWA ON	216.8	9

LIMO - Landfill Inventory Management Ontario

A search of the LIMO database, dated Feb 28, 2019 has found that there are 1 LIMO site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
WSI - Ottawa - Navan Road	3354 Navan Road; Lots 2-4, Concession 4 ON	249.9	3

NPRI - National Pollutant Release Inventory

A search of the NPRI database, dated 1993-May 2017 has found that there are 13 NPRI site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
PROGRESSIVE WASTE SOLUTIONS CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
Progressive Waste Solutions Canada Inc.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3

Site	Address	Distance (m)	Map Key
BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
BFI CANADA INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3
WASTE SERVICES (CA) INC.	3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	249.9	3

PINC - Pipeline Incidents

A search of the PINC database, dated Feb 28, 2017 has found that there are 1 PINC site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	6230 Renaud Road, Ottawa ON	249.6	10

RSC - Record of Site Condition

A search of the RSC database, dated 1997-Sept 2001, Oct 2004-Mar 2020 has found that there are 1 RSC site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
1561976 Ontario Inc.	3317 NAVAN RD, GLOUCESTER, ON, K4B 1H9 GLOUCESTER ON K4B 1H9	81.5	6

SPL - Ontario Spills

A search of the SPL database, dated 1988-Aug 2019 has found that there are 4 SPL site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
Waste Connections of Canada Inc.	3354 Navan Rd Ottawa ON K4B 1H9	249.9	3
BFI Canada Inc.	3354 Navan Rd Ottawa ON	249.9	3
	3354 Navan Rd Ottawa ON	249.9	3
TRANSPORT TRUCK	3354 NAVIN RD. MOTOR VEHICLE (OPERATING FLUID) GLOUCESTER CITY ON	249.9	3

WDS - Waste Disposal Sites - MOE CA Inventory

A search of the WDS database, dated Oct 2011-Mar 31, 2020 has found that there are 27 WDS site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON L4K 0C3	249.9	3
BFI Canada Inc.	3354- Navan Rd Ottawa ON M9W 6V1	249.9	3

Site	Address	Distance (m)	Map Key
Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	249.9	3
Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
Waste Services Inc.	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
943162 Ontario Inc.	3354 Navan Road Ottawa ON K4B 1H9	249.9	3
HUNEAULT WASTE MANAGEMENT	GLOUCESTER, TOWNSHIP OF ON	249.9	3
HUNEAULT WASTE MANAGEMENT LTD.	GLOUCESTER, TOWNSHIP OF ON	249.9	3
HUNEAULT WASTE MANAGEMENT LTD.	3354 NAVAN ROAD, GLOUCESTER GLOUCESTER, TOWNSHIP OF ON	249.9	3
HUNEAULT WASTE MANAGEMENT	GLOUCESTER, TOWNSHIP OF ON	249.9	3
HUNEAULT WASTE MANAGEMENT	GLOUCESTER, TOWNSHIP OF ON	249.9	3
HUNEAULT WASTE MANAGEMENT	3354 NAVAN ROAD, GLOUCESTER GLOUCESTER, TOWNSHIP OF ON	249.9	3

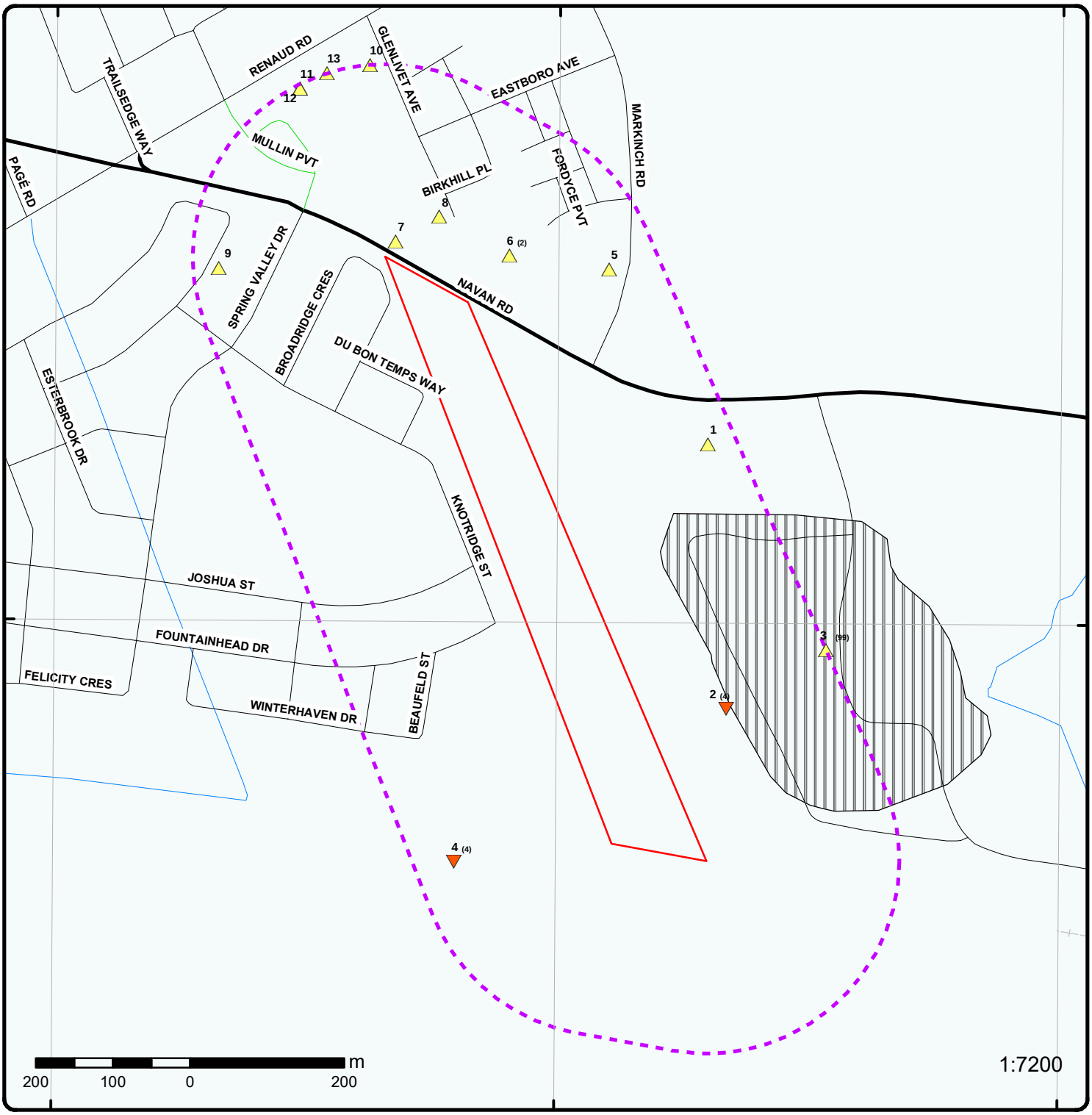
Site	Address	Distance (m)	Map Key
Capital Environmental Resource Inc.	3354 Navan Road Ottawa ON L7L 6Z8	249.9	3
Waste Services (CA) Inc.	3354 Navan Road Ottawa ON L7L 6Z8	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3
Waste Services (CA) Inc.	3354 Navan Rd Ottawa ON L7L 6Z8	249.9	3
BFI Canada Inc.	3354 Navan Rd Ottawa ON L4K 0C3	249.9	3
BFI Canada Inc.	3354- Navan Rd Ottawa ON	249.9	3
BFI Canada Inc.	3354- Navan Rd Ottawa ON K1B 1H9	249.9	3
BFI Canada Inc.	3354- Navan Rd Ottawa ON L4K 0C3	249.9	3
Progressive Waste Solutions Canada Inc.	3354 Navan Rd Ottawa ON K4B1H9	249.9	3

Site	Address	Distance (m)	Map Key
BFI Canada Inc.	3354 Navan Rd Ottawa ON K1B 1H9	249.9	3

WWIS - Water Well Information System

A search of the WWIS database, dated Feb 28, 2019 has found that there are 4 WWIS site(s) within approximately 0.25 kilometers of the project property.

Site	Address	Distance (m)	Map Key
	lot 4 con 4 ON ***Well ID:*** 1516095	214.0	1
	lot 5 con 4 OTTAWA ON ***Well ID:*** 7254951	24.4	7
	lot 4 con 4 ON ***Well ID:*** 1501523	245.0	11
	lot 4 con 4 ON ***Well ID:*** 1501526	250.3	13



Map : 0.25 Kilometer Radius

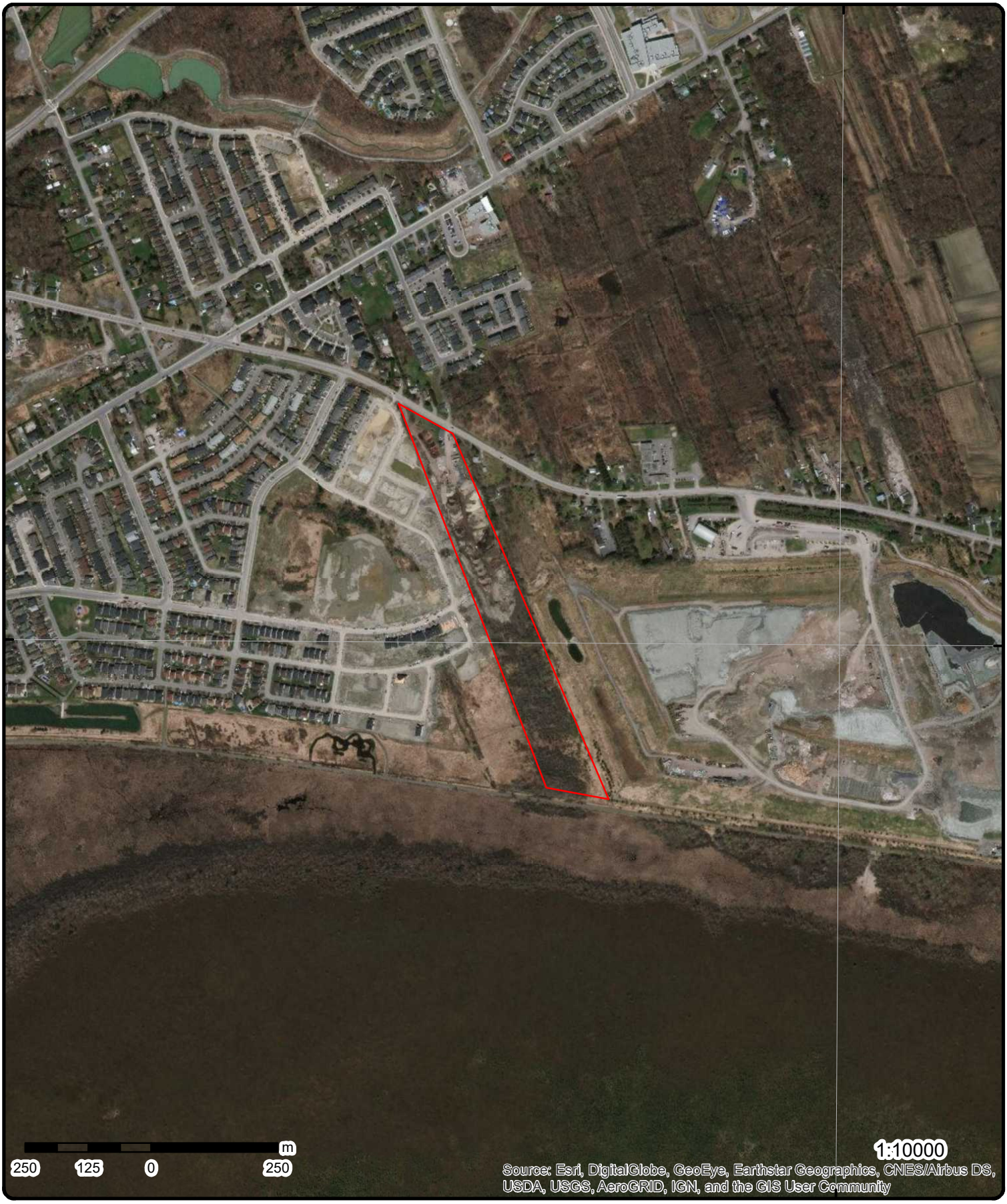
Order Number: 20200501079

Address: 3252 Navan Road, Navan, ON

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Expressway
- Principal Highway
- Secondary Highway
- Major Road
- Local road
- Trail
- Proposed Road
- Ferry Route/Ice Road
- Industrial and Resource - Regions
- Main Line
- Sidetrack
- Transit Line
- Abandoned Line
- National Park
- Provincial or Territorial Park
- Other Park
- Golf Course or Driving Range
- Park or Sports Field
- Other Recreation Area

Source: © 2015 DMTI Spatial Inc.



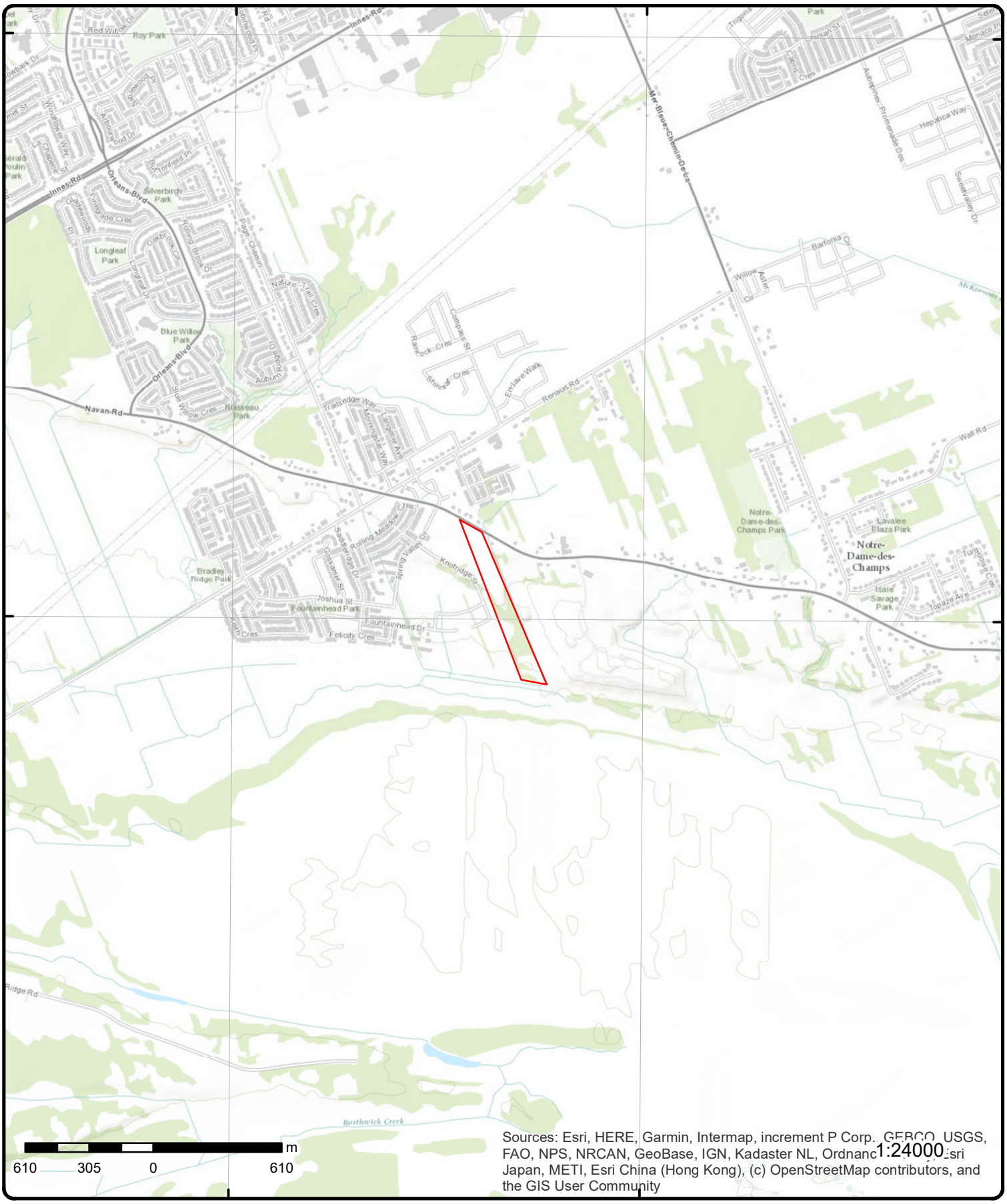
Aerial **Year: 2019**

Address: 3252 Navan Road, Navan, ON

Source: ESRI World Imagery

Order Number: 20200501079

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES



Topographic Map

Address: 3252 Navan Road, ON

Source: ESRI World Topographic Map

Order Number: 20200501079

ENVIRONMENTAL RISK INFORMATION SERVICES

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 1	ENE/214.0	81.8 / 4.84	lot 4 con 4 ON	WWIS

Well ID:	1516095	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Domestic	**Date Received:**	8/16/1977
Sec. Water Use:	0	**Selected Flag:**	Yes
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	1517
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	OTTAWA-CARLETON
Elevation (m):		**Municipality:**	GLOUCESTER TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	004
Well Depth:		**Concession:**	04
Overburden/Bedrock:		**Concession Name:**	OF
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10038030	**Elevation:**	83.483276
DP2BR:	142	**Elevrc:**	
Spatial Status:		**Zone:**	18
Code OB:	r	**East83:**	460429.8
Code OB Desc:	Bedrock	**North83:**	5030521
Open Hole:		**Org CS:**	
Cluster Kind:		**UTMRC:**	4
Date Completed:	5/2/1977	**UTMRC Desc:**	margin of error : 30 m - 100 m
Remarks:		**Location Method:**	p4
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	931031143
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	02
Most Common Material:	TOPSOIL
Mat2:	
Other Materials:	
Mat3:	

Other Materials:
Formation Top Depth: 0
Formation End Depth: 2
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931031146
Layer: 4
Color: 2
General Color: GREY
Mat1: 11
Most Common Material: GRAVEL
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 112
Formation End Depth: 120
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931031147
Layer: 5
Color: 8
General Color: BLACK
Mat1: 09
Most Common Material: MEDIUM SAND
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 120
Formation End Depth: 142
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931031148
Layer: 6
Color: 8
General Color: BLACK
Mat1: 19
Most Common Material: SLATE
Mat2: 12
Other Materials: STONES
Mat3:
Other Materials:
Formation Top Depth: 142
Formation End Depth: 150
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 931031145
Layer: 3
Color: 3

General Color:	BLUE
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	15
Formation End Depth:	112
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	931031144
Layer:	2
Color:	5
General Color:	YELLOW
Mat1:	08
Most Common Material:	FINE SAND
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	2
Formation End Depth:	15
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	10586600
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930066969
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	142
Casing Diameter:	6
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	991516095
Pump Set At:	
Static Level:	35
Final Level After Pumping:	70
Recommended Pump Depth:	125

Pumping Rate:	10
Flowing Rate:	
Recommended Pump Rate:	8
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	2
Water State After Test:	CLOUDY
Pumping Test Method:	2
Pumping Duration HR:	1
Pumping Duration MIN:	20
Flowing:	N

Draw Down & Recovery

Pump Test Detail ID:	934379248
Test Type:	Draw Down
Test Duration:	30
Test Level:	55
Test Level UOM:	ft

Draw Down & Recovery

Pump Test Detail ID:	934101637
Test Type:	Draw Down
Test Duration:	15
Test Level:	45
Test Level UOM:	ft

Draw Down & Recovery

Pump Test Detail ID:	934898246
Test Type:	Draw Down
Test Duration:	60
Test Level:	70
Test Level UOM:	ft

Draw Down & Recovery

Pump Test Detail ID:	934640344
Test Type:	Draw Down
Test Duration:	45
Test Level:	63
Test Level UOM:	ft

Water Details

Water ID:	933472326
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	142
Water Found Depth UOM:	ft

2	***1 of 4***	***ESE/101.1***	***74.8 / -2.18***	***Ashcroft Homes - Eastboro Inc.*** ***Renaud Road*** ***Ottawa ON K2E 1A9***	***ECA***

Approval No:	8786-8BATXA	**MOE District:**	Ottawa
Approval Date:	2010-11-18	**City:**	
Status:	Approved	**Longitude:**	-75.5055
Record Type:	ECA	**Latitude:**	45.424

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Renaud Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/7369-88PM5X-14.pdf
Geometry X:
Geometry Y:

2	2 of 4	ESE/101.1	74.8 / -2.18	**Ashcroft Homes - Eastboro Inc.** **Renaud Road** **Ottawa ON K2E 1A9**	ECA

Approval No: 2240-8ERLQE
Approval Date: 2011-03-14
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Renaud Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/8886-8ECJJL-14.pdf
MOE District: Ottawa
City:
Longitude: -75.5055
Latitude: 45.424
Geometry X:
Geometry Y:

2	3 of 4	ESE/101.1	74.8 / -2.18	**Ashcroft Homes - Eastboro Inc.** **Renaud Road** **Ottawa ON K2E 1A9**	ECA

Approval No: 1462-8E5P3N
Approval Date: 2011-02-23
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Renaud Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/6570-8E5HXP-14.pdf
MOE District: Ottawa
City:
Longitude: -75.5055
Latitude: 45.424
Geometry X:
Geometry Y:

2	4 of 4	ESE/101.1	74.8 / -2.18	**Ashcroft Homes - Eastboro Inc.** **Renaud Road** **Ottawa ON K2E 1A9**	ECA

Approval No: 7226-6GLJQM
Approval Date: 2011-06-24
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Renaud Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/4039-8ECJQZ-14.pdf
MOE District: Ottawa
City:
Longitude: -75.5055
Latitude: 45.424
Geometry X:
Geometry Y:

3	1 of 99	E/249.9	79.6 / 2.63	**HUNEAULT WASTE MANAGEMENT LTD.** **NAVAN RD., LEACHATE EFF. P.S.** **GLOUCESTER ON**	CA

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Certificate #: 3-0111-98-
Application Year: 98
Issue Date: 3/3/1998
Approval Type: Municipal sewage
Status: PE0
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	2 of 99	E/249.9	79.6 / 2.63	HUNEAULT WASTE MANAGEMENT LTD. NAVAN RD.,LEACHATE EFF. P.S. GLOUCESTER ON	CA

Certificate #: 3-0111-98-
Application Year: 98
Issue Date: 7/23/1998
Approval Type: Municipal sewage
Status: PE0
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	3 of 99	E/249.9	79.6 / 2.63	TRANSPORT TRUCK 3354 NAVIN RD. MOTOR VEHICLE (OPERATING FLUID) GLOUCESTER CITY ON	SPL

Ref No: 144952
Site No:
Incident Dt: 8/11/1997
Year:
Incident Cause: OTHER CONTAINER LEAK
Incident Event:
Contaminant Code:
Contaminant Name:
Contaminant Limit 1:
Contam Limit Freq 1:
Contaminant UN No 1:
Environment Impact: CONFIRMED
Nature of Impact: Soil contamination
Receiving Medium: LAND
Receiving Env:
MOE Response:
Dt MOE Arvl on Scn:
MOE Reported Dt: 8/11/1997
Dt Document Closed:
Incident Reason: DAMAGE BY MOVING EQUIPMENT
Site Name:
Site County/District:
Site Geo Ref Meth:
Incident Summary: SEWER-A-MATIC -50L DIESEL TO GROUND.CONTAINED CLEANED.

Discharger Report:
Material Group:
Health/Env Conseq:
Client Type:
Sector Type:
Agency Involved:
Nearest Watercourse:
Site Address:
Site District Office:
Site Postal Code:
Site Region:
Site Municipality: 20105
Site Lot:
Site Conc:
Northing:
Easting:
Site Geo Ref Accu:
Site Map Datum:
SAC Action Class:
Source Type:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Contaminant Qty:					

3	4 of 99	E/249.9	79.6 / 2.63	**HUNEAULT WASTE MANAGEMENT LTD.** **3354 NAVAN RD.,HUNEAULT L-FILL** **GLOUCESTER CITY ON**	CA

Certificate #: 3-0010-99-
Application Year: 99
Issue Date: 2/19/1999
Approval Type: Municipal sewage
Status: Preliminary approval
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

3	5 of 99	E/249.9	79.6 / 2.63	**3354 Navan Road, Navan** **3354 Navan Road** **Ottawa ON**	CA

Certificate #: 6141-59XKF9
Application Year: 02
Issue Date: 5/10/02
Approval Type: Industrial air
Status: Approved
Application Type: New Certificate of Approval
Client Name: Waste Services Inc.
Client Address: 3354 Navan Road
Client City: Gloucester
Client Postal Code: K4B 1H9
Project Description: Application for certificate of approval (air) for the operation of a movile wood grinder at the composting site to process wood waste received at the landfill.
Contaminants:
Emission Control:

3	6 of 99	E/249.9	79.6 / 2.63	**Waste Services Inc.** **3354 Navan Road** **Ottawa ON K4B 1H9**	WDS

Approval No:	A460702	**Total Area (ha):**	1
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Revoked and/or Replaced	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2000-10-25	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:	Gloucester	**Latitude:**	45.424

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Prop Postal:		**Longitude:**	-75.5055
Prop Phone:		**Geometry X:**	-75.5055
Serial Link:		**Geometry Y:**	45.424
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:	Waste Services Inc.		
Prop Address:	3354 Navan Road		
Proponent County/District:	Regional Municipality Of Ottawa-Carleton		
Full Address:	3354 Navan Road		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:	Administrative Name Change from Huneault Waste Management Ltd. to Waste Services Inc.		
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:	https://www.accessenvironment.ene.gov.on.ca/instruments/6071-4Q8NY9-14.pdf		

3	7 of 99	E/249.9	79.6 / 2.63	**943162 Ontario Inc.** **3354 Navan Road** **Ottawa ON K4B 1H9**	**WDS**

Approval No:	A460702	**Total Area (ha):**	1
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Revoked and/or Replaced	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2000-10-04	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:	Gloucester	**Latitude:**	45.424
Prop Postal:	K4B 1H9	**Longitude:**	-75.5055
Prop Phone:		**Geometry X:**	-75.5055
Serial Link:		**Geometry Y:**	45.424
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:	Waste Services		
Prop Address:	3354 Navan Road		
Proponent County/District:	Regional Municipality Of Ottawa-Carleton		
Full Address:	3354 Navan Road		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:	Administrative Name Change for C of A # A 460702 FROM: Huneault Waste Management Ltd. TO: Waste Services Inc.		
Municipalities Served:	admin name change		

Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/2607-4PHTCE-14.pdf

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3 | ***8 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***HUNEAULT WASTE MANAGEMENT*** | ***WDS***

GLOUCESTER, TOWNSHIP OF ON

Approval No:	A460702	***Total Area (ha):***	0
Mob Unit Cert No:		***Landfill Cap (m³):***	0
EBR Registry No:		***Transfer Area (ha):***	0
Status:	Approved	***Transfer Cap (m³):***	0
Facility Type:		***Transfer Cert No:***	
Record Type:		***Inciner. Area (ha):***	0
Link Source:		***Inciner. Cap (t):***	0
Project Type:		***Process Area (m³):***	0
Application Status:		***Process Cap (m³/d):***	0
Issue Date:	03/26/1998	***Process Vol (m³):***	0
Input Date:	3/27/98	***Process Feed (m³):***	0
Date Received:	3/6/96	***Site Concession:***	4
Est Closure Date:		***Site Region/County:***	OTTAWA-CARLETON
Mobile Capacity:	0	***SWP Area Name:***	
Mobile Units:		***MOE District:***	
Mobile Description:		***District Office:***	Cornwall
Prop City:	NAVAN	***Latitude:***	
Prop Postal:	K4B-1H9	***Longitude:***	
Prop Phone:		***Geometry X:***	
Serial Link:	460702	***Geometry Y:***	

Approval Type:
Proponent: HUNEAULT WASTE MANAGEMENT LTD.
Prop Address: 3354 NAVAN ROAD
Proponent County/District:
Full Address:
Site Lot: PT. OF LOTS 2, 3 & 4
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other: No
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL:

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3 | ***9 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***HUNEAULT WASTE MANAGEMENT LTD.*** | ***WDS***

GLOUCESTER, TOWNSHIP OF ON

Approval No:	A460702	***Total Area (ha):***	0
Mob Unit Cert No:		***Landfill Cap (m³):***	0
EBR Registry No:		***Transfer Area (ha):***	0
Status:	Approved	***Transfer Cap (m³):***	0
Facility Type:	Landfill, Processing	***Transfer Cert No:***	
Record Type:		***Inciner. Area (ha):***	0
Link Source:		***Inciner. Cap (t):***	0
Project Type:		***Process Area (m³):***	0
Application Status:		***Process Cap (m³/d):***	0
Issue Date:	10/07/1996	***Process Vol (m³):***	0

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Input Date:	10/8/96	**Process Feed (m³):**	0
Date Received:	6/14/96	**Site Concession:**	4
Est Closure Date:		**Site Region/County:**	OTTAWA-CARLETON
Mobile Capacity:	0	**SWP Area Name:**	
Mobile Units:		**MOE District:**	
Mobile Description:		**District Office:**	Cornwall
Prop City:	GLOUCESTER, ONTARIO	**Latitude:**	
Prop Postal:	K4B-1H9	**Longitude:**	
Prop Phone:	613-824-1970	**Geometry X:**	
Serial Link:	460702	**Geometry Y:**	
Approval Type:			
Proponent:	HUNEAULT WASTE MANAGEMENT LTD.		
Prop Address:	3354 NAVAN ROAD		
Proponent County/District:			
Full Address:			
Site Lot:	2, 3, 4 OTTAWA-FRONT		
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:	No		
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:			

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3 | ***10 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***HUNEAULT WASTE MANAGEMENT LTD.***
3354 NAVAN ROAD, GLOUCESTER
GLOUCESTER, TOWNSHIP OF ON | ***WDS***

Approval No:	A460702	**Total Area (ha):**	0
Mob Unit Cert No:		**Landfill Cap (m³):**	0
EBR Registry No:		**Transfer Area (ha):**	0
Status:	Approved	**Transfer Cap (m³):**	0
Facility Type:	Landfill, Processing	**Transfer Cert No:**	
Record Type:		**Inciner. Area (ha):**	0
Link Source:		**Inciner. Cap (t):**	0
Project Type:		**Process Area (m³):**	0
Application Status:		**Process Cap (m³/d):**	0
Issue Date:	07/10/1997	**Process Vol (m³):**	0
Input Date:	12/7/98	**Process Feed (m³):**	0
Date Received:	1/29/97	**Site Concession:**	4
Est Closure Date:		**Site Region/County:**	OTTAWA
Mobile Capacity:	0	**SWP Area Name:**	
Mobile Units:		**MOE District:**	
Mobile Description:		**District Office:**	Cornwall
Prop City:	Gloucester, Ontario	**Latitude:**	
Prop Postal:	K4B-1H9	**Longitude:**	
Prop Phone:	613-824-1970	**Geometry X:**	
Serial Link:	460702	**Geometry Y:**	
Approval Type:			
Proponent:	HUNEAULT WASTE MANAGEMENT LTD.		
Prop Address:	3354 Navan Road		
Proponent County/District:			
Full Address:			
Site Lot:	23 and 4, Part of Lots		
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:	No		

Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL:

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3 | **11 of 99** | **E/249.9** | **79.6 / 2.63** | **HUNEAULT WASTE MANAGEMENT** | **WDS**

GLOUCESTER, TOWNSHIP OF ON

Approval No:	A460702	**Total Area (ha):**	0
Mob Unit Cert No:		**Landfill Cap (m³):**	0
EBR Registry No:		**Transfer Area (ha):**	0
Status:	Approved	**Transfer Cap (m³):**	0
Facility Type:	Processing	**Transfer Cert No:**	
Record Type:		**Inciner. Area (ha):**	0
Link Source:		**Inciner. Cap (t):**	0
Project Type:		**Process Area (m³):**	0
Application Status:		**Process Cap (m³/d):**	0
Issue Date:	06/01/1998	**Process Vol (m³):**	0
Input Date:	6/3/98	**Process Feed (m³):**	0
Date Received:	5/5/98	**Site Concession:**	4
Est Closure Date:		**Site Region/County:**	OTTAWA-CARLETON
Mobile Capacity:	0	**SWP Area Name:**	
Mobile Units:		**MOE District:**	
Mobile Description:		**District Office:**	Cornwall
Prop City:	NAVAN	**Latitude:**	
Prop Postal:	K4B-1H9	**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:	460702	**Geometry Y:**	

Approval Type:
Proponent: HUNEAULT WASTE MANAGEMENT LTD.
Prop Address: 3354 NAVAN ROAD
Proponent County/District:
Full Address:
Site Lot: PT. OF LOTS 2, 3 & 4
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other: No
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL:

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3 | **12 of 99** | **E/249.9** | **79.6 / 2.63** | **HUNEAULT WASTE MANAGEMENT** | **WDS**

GLOUCESTER, TOWNSHIP OF ON

Approval No:	A460702	**Total Area (ha):**	0
Mob Unit Cert No:		**Landfill Cap (m³):**	0
EBR Registry No:		**Transfer Area (ha):**	0
Status:	Approved	**Transfer Cap (m³):**	0

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Facility Type:	Landfill	**Transfer Cert No:**	
Record Type:		**Inciner. Area (ha):**	0
Link Source:		**Inciner. Cap (t):**	0
Project Type:		**Process Area (m³):**	0
Application Status:		**Process Cap (m³/d):**	0
Issue Date:	12/15/1998	**Process Vol (m³):**	0
Input Date:	12/16/98	**Process Feed (m³):**	0
Date Received:	9/30/98	**Site Concession:**	4
Est Closure Date:		**Site Region/County:**	OTTAWA-CARLETON
Mobile Capacity:	0	**SWP Area Name:**	
Mobile Units:		**MOE District:**	
Mobile Description:		**District Office:**	Cornwall
Prop City:	NAVAN, Ontario	**Latitude:**	
Prop Postal:	K4B-1H9	**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:	460702	**Geometry Y:**	
Approval Type:			
Proponent:	HUNEAULT WASTE MANAGEMENT LTD.		
Prop Address:	3354 NAVAN ROAD		
Proponent County/District:			
Full Address:			
Site Lot:	PT. OF LOTS 2, 3 & 4		
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:	No		
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:			

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3 | ***13 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***HUNEAULT WASTE MANAGEMENT 3354 NAVAN ROAD, GLOUCESTER GLOUCESTER, TOWNSHIP OF ON*** | ***WDS***

Approval No:	A460702	**Total Area (ha):**	0
Mob Unit Cert No:		**Landfill Cap (m³):**	0
EBR Registry No:		**Transfer Area (ha):**	0
Status:	Approved	**Transfer Cap (m³):**	0
Facility Type:	Landfill	**Transfer Cert No:**	
Record Type:		**Inciner. Area (ha):**	0
Link Source:		**Inciner. Cap (t):**	0
Project Type:		**Process Area (m³):**	0
Application Status:		**Process Cap (m³/d):**	0
Issue Date:	07/27/1999	**Process Vol (m³):**	0
Input Date:	8/3/99	**Process Feed (m³):**	0
Date Received:	6/10/99	**Site Concession:**	4
Est Closure Date:		**Site Region/County:**	OTTAWA-CARLETON
Mobile Capacity:	0	**SWP Area Name:**	
Mobile Units:		**MOE District:**	
Mobile Description:		**District Office:**	Cornwall
Prop City:	Gloucester, Ontario	**Latitude:**	
Prop Postal:	K4B-1H9	**Longitude:**	
Prop Phone:	613-824-1970	**Geometry X:**	
Serial Link:	460702	**Geometry Y:**	
Approval Type:			
Proponent:	HUNEAULT WASTE MANAGEMENT LTD.		
Prop Address:	3354 Navan Road		
Proponent County/District:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Full Address:
Site Lot: 23 and 4, part of Lots
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other: No
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	14 of 99	E/249.9	79.6 / 2.63	Waste Services Inc. Part of lot 2, 3 & 4, conc 4; 3354 Navan Road Ottawa Ontario K4B 1H9 Ottawa ON	EBR

EBR Registry No: IA01E1421
Ministry Ref No: 4020-536P2U
Notice Type: Instrument Decision
Notice Stage: 800483318
Notice Date: February 05, 2002
Proposal Date: October 04, 2001
Year: 2001
Instrument Type: (EPA s. 27) - Approval for a waste disposal site.
Off Instrument Name:
Posted By:
Company Name: Waste Services Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 3354 Navan Road, Gloucester Ontario, K4B 1H9
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

Part of lot 2, 3 & 4, conc 4; 3354 Navan Road Ottawa Ontario K4B 1H9 Ottawa

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	15 of 99	E/249.9	79.6 / 2.63	3354 Navan Road Ottawa ON K4B 1H9	EHS

Order No: 20030319003
Status: C
Report Type: Complete Report
Report Date: 3/27/03
Date Received: 3/19/03
Previous Site Name:
Lot/Building Size:
Additional Info Ordered: Aerials Photos and/or Topographical Maps

Nearest Intersection:
Municipality:
Client Prov/State: ON
Search Radius (km): 0.60
X: -75.502948
Y: 45.424698

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	16 of 99	E/249.9	79.6 / 2.63	HUNEAULT WASTE MANAGEMENT LTD. 3354 NAVAN ROAD GLOUCESTER ON K4B 1H9	GEN

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Generator No: ON1983400
Status:
Approval Years: 95,96,97,98,99
Contam. Facility:
MHSW Facility:
SIC Code: 9999
SIC Description: OTHER SERVICES

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

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3 ***17 of 99*** ***E/249.9*** ***79.6 / 2.63***

WASTE SERVICE INC.
3354 NAVAN ROAD
GLOUCESTER ON K4B 1A9

GEN

Generator No: ON1983400
Status:
Approval Years: 00,01
Contam. Facility:
MHSW Facility:
SIC Code: 9999
SIC Description: OTHER SERVICES

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

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3 ***18 of 99*** ***E/249.9*** ***79.6 / 2.63***

Capital Environmental Resource Inc.
3354 Navan Road
Ottawa (Navan) ON K4B 1H9

GEN

Generator No: ON1983400
Status:
Approval Years: 02
Contam. Facility:
MHSW Facility:
SIC Code:
SIC Description:

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

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3 | **19 of 99** | **E/249.9** | **79.6 / 2.63** | **Waste Services (CA) Inc.**
3354 Navan Road
Ottawa (Navan) ON | **GEN**

Generator No: ON1983400
Status:
Approval Years: 03,04,05,06,07,08
Contam. Facility:
MHSW Facility:
SIC Code: 562210
SIC Description: Waste Treatment & Disposal

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

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3 | **20 of 99** | **E/249.9** | **79.6 / 2.63** | **WASTE SERVICES INC.**
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9 | **NPRI**

NPRI ID: 10967
Other ID: *
No Other ID:

Org ID: 72918
Submit Date: 9/14/2004
Last Modified: 5/29/2015 3:28:24 PM

Track ID:	23484	**Contact ID:**	194424
Report ID:	156433	**Cont Type:**	MED
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	NORMAND
Report Year:	2003	**Cont Last Name:**	CASTONGUAY
Not-Current Rpt?:	No	**Contact Position:**	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	**Contact Fax:**	6138247139
Fac ID:	155486	**Contact Ph.:**	6138247289
Fac Name:	WSI WASTE SERVICES OTTAWA LANDFILL	**Cont Area Code:**	613
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	38247289
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	226
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	613
Facility Lat:	45.4244	**Contact Fax:**	38247139
Facility Long:	-75.5002	**Contact Email:**	NCASTONGUAY@CAPITALENVIRONMENTAL.COM
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:	False	**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	22	**Waste Streams:**	True¿
Parent Co.:	Y	**No Streams:**	
No Parent Co.:	1	**Waste Off Sites:**	False
Pollut Prev Cmnts:	False	**No Off Sites:**	
Stacks:	True	**Shutdown:**	True
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.893
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	3.188
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 2

Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	2.242
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	20.173
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

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3 | ***21 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***WASTE SERVICES (CA) INC.***
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9 | ***NPRI***

NPRI ID:	10967	**Org ID:**	72917
Other ID:	*	**Submit Date:**	6/29/2005
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	30596	**Contact ID:**	194431
Report ID:	85826	**Cont Type:**	MED
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	NORMAND
Report Year:	2004	**Cont Last Name:**	CASTONGUAY
Not-Current Rpt?:	No	**Contact Position:**	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	**Contact Fax:**	6138247139
Fac ID:	222792	**Contact Ph.:**	6138247289
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	613
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	38247289
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	226
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	613
Facility Lat:	45.4244	**Contact Fax:**	38247139
Facility Long:	-75.5002	**Contact Email:**	NCASTONGUAY@WSIWASTE.COM
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:	True	**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	23	**Waste Streams:**	False
Parent Co.:	Y	**No Streams:**	
No Parent Co.:	1	**Waste Off Sites:**	False
Pollut Prev Cmnts:	True	**No Off Sites:**	
Stacks:	No	**Shutdown:**	
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		

NAICS 6 Description: Waste treatment and disposal

Substance Release Report

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t
Trans Code:
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: .019
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t
Trans Code:
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: .059000000000000004
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t
Trans Code:
Chem: Iron (and its compounds)
Chem (fr): Fer (et ses composés)
Quantity: 0
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t
Trans Code:
Chem: PM - Total Particulate Matter
Chem (fr): PM - Particules totales
Quantity: .124
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

3	***22 of 99***	***E/249.9***	***79.6 / 2.63***	***city of ottawa*** ***3354 Navan Road*** ***City of Ottawa ON K4B 1H9***	***GEN***

Generator No: ON3141088
Status:
Approval Years: 05,06,07,08
Contam. Facility:
MHSW Facility:
SIC Code: 913150
SIC Description: Municipal Regulatory Services

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class:	212
Waste Class Desc:	ALIPHATIC SOLVENTS
Waste Class:	112
Waste Class Desc:	ACID WASTE - HEAVY METALS
Waste Class:	145
Waste Class Desc:	PAINT/PIGMENT/COATING RESIDUES
Waste Class:	148
Waste Class Desc:	INORGANIC LABORATORY CHEMICALS
Waste Class:	221
Waste Class Desc:	LIGHT FUELS
Waste Class:	242
Waste Class Desc:	HALOGENATED PESTICIDES
Waste Class:	252
Waste Class Desc:	WASTE OILS & LUBRICANTS
Waste Class:	261
Waste Class Desc:	PHARMACEUTICALS
Waste Class:	263
Waste Class Desc:	ORGANIC LABORATORY CHEMICALS
Waste Class:	312
Waste Class Desc:	PATHOLOGICAL WASTES
Waste Class:	331
Waste Class Desc:	WASTE COMPRESSED GASES

3	23 of 99	E/249.9	79.6 / 2.63	***WASTE SERVICES (CA) INC.*** ***3354 NAVAN ROAD NOT AVAILABLE*** ***OTTAWA ON K4B1H9***	***NPRI***

NPRI ID:	10967	***Org ID:***	72917
Other ID:	*	***Submit Date:***	5/30/2006
No Other ID:		***Last Modified:***	5/29/2015 3:28:24 PM
Track ID:	38078	***Contact ID:***	194431
Report ID:	94798	***Cont Type:***	MED
Report Type:	NPRI	***Contact Title:***	
Rpt Type ID:	1	***Cont First Name:***	NORMAND
Report Year:	2005	***Cont Last Name:***	CASTONGUAY
Not-Current Rpt?:	No	***Contact Position:***	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	***Contact Fax:***	6138247139
Fac ID:	222792	***Contact Ph.:***	6138247289
Fac Name:	NAVAN LANDFILL	***Cont Area Code:***	613
Fac Address1:	3354 NAVAN ROAD	***Contact Tel.:***	38247289
Fac Address2:	NOT AVAILABLE	***Contact Ext.:***	226
Fac Postal Zip:	K4B1H9	***Cont Fax Area Cde:***	613
Facility Lat:	45.4244	***Contact Fax:***	38247139
Facility Long:	-75.5002	***Contact Email:***	NCASTONGUAY@WSIWASTE.COM
DLS (Last Filed Rpt):		***Latitude:***	45.4244
Facility DLS:		***Longitude:***	-75.5002
Datum:	1983	***UTM Zone:***	
Facility Cmnts:	False	***UTM Northing:***	
URL:		***UTM Easting:***	
No of Empl.:	22	***Waste Streams:***	False
Parent Co.:	Y	***No Streams:***	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

No Parent Co.:	1	**Waste Off Sites:**	False
Pollut Prev Cmnts:	False	**No Off Sites:**	
Stacks:	False	**Shutdown:**	
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	13
Category Type Desc:	All Media
Category Type Desc (fr):	Rejets à tous les médias
Grouping:	Total All Media<1t
Trans Code:	
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	0
Unit:	tonnes
Basis of Estimate Cd:	
Basis of Estimate Desc:	

Category Type ID:	13
Category Type Desc:	All Media
Category Type Desc (fr):	Rejets à tous les médias
Grouping:	Total All Media<1t
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	0
Unit:	tonnes
Basis of Estimate Cd:	
Basis of Estimate Desc:	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	24 of 99	E/249.9	79.6 / 2.63	3354 Navan Road Ottawa (Navan) ON K4B 1H9	EHS

Order No:	20061020028	**Nearest Intersection:**	
Status:	C	**Municipality:**	
Report Type:	Custom Report	**Client Prov/State:**	ON
Report Date:	10/23/2006	**Search Radius (km):**	0.25
Date Received:	10/20/2006	**X:**	-75.502277
Previous Site Name:		**Y:**	45.428624
Lot/Building Size:			
Additional Info Ordered:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	25 of 99	E/249.9	79.6 / 2.63	WASTE SERVICES (CA) INC. 3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	NPRI

NPRI ID:	10967	**Org ID:**	72917
Other ID:	*	**Submit Date:**	5/31/2007
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	49104	**Contact ID:**	194423
Report ID:	110059	**Cont Type:**	MED

Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	NORMAND
Report Year:	2006	**Cont Last Name:**	CASTONGUAY
Not-Current Rpt?:	No	**Contact Position:**	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	**Contact Fax:**	6138246730
Fac ID:	222792	**Contact Ph.:**	6138247289
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	613
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	38247289
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	226
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	613
Facility Lat:	45.4244	**Contact Fax:**	38246730
Facility Long:	-75.5002	**Contact Email:**	NCASTONGUAY@WSII.CA
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:	False	**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	22	**Waste Streams:**	True¿
Parent Co.:	Y	**No Streams:**	
No Parent Co.:	1	**Waste Off Sites:**	False
Pollut Prev Cmnts:	False	**No Off Sites:**	
Stacks:	True	**Shutdown:**	
No of Stacks:		**No of Shutdown:**	

Canadian SIC Code (2 digit):
Canadian SIC Code:
SIC Code Description:
American SIC Code:
NAICS Code (2 digit): 56
NAICS 2 Description: Administrative and support, waste management and remediation services
NAICS Code (4 digit): 5622
NAICS 4 Description: Waste treatment and disposal
NAICS Code (6 digit): 562210
NAICS 6 Description: Waste treatment and disposal

Substance Release Report

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t
Trans Code:
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: 0
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t
Trans Code:
Chem: PM - Total Particulate Matter
Chem (fr): PM - Particules totales
Quantity: 0
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

Category Type ID: 13
Category Type Desc: All Media
Category Type Desc (fr): Rejets à tous les médias
Grouping: Total All Media<1t

Trans Code:
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: 0
Unit: tonnes
Basis of Estimate Cd:
Basis of Estimate Desc:

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3 | ***26 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***WASTE SERVICES (CA) INC.***
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9 | ***NPRI***

NPRI ID:	10967	***Org ID:***	72917
Other ID:	*	***Submit Date:***	5/29/2008
No Other ID:		***Last Modified:***	5/29/2015 3:28:24 PM
Track ID:	55354	***Contact ID:***	194423
Report ID:	116405	***Cont Type:***	MED
Report Type:	NPRI	***Contact Title:***	
Rpt Type ID:	1	***Cont First Name:***	NORMAND
Report Year:	2007	***Cont Last Name:***	CASTONGUAY
Not-Current Rpt?:	No	***Contact Position:***	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	***Contact Fax:***	6138246730
Fac ID:	222792	***Contact Ph.:***	6138247289
Fac Name:	NAVAN LANDFILL	***Cont Area Code:***	613
Fac Address1:	3354 NAVAN ROAD	***Contact Tel.:***	38247289
Fac Address2:	NOT AVAILABLE	***Contact Ext.:***	226
Fac Postal Zip:	K4B1H9	***Cont Fax Area Cde:***	613
Facility Lat:	45.4244	***Contact Fax:***	38246730
Facility Long:	-75.5002	***Contact Email:***	NCASTONGUAY@WSII.CA
DLS (Last Filed Rpt):		***Latitude:***	45.4244
Facility DLS:		***Longitude:***	-75.5002
Datum:	1983	***UTM Zone:***	
Facility Cmnts:	Fals	***UTM Northing:***	
URL:		***UTM Easting:***	
No of Empl.:	22	***Waste Streams:***	True¿
Parent Co.:	Y	***No Streams:***	
No Parent Co.:	1.00	***Waste Off Sites:***	True
Pollut Prev Cmnts:	False	***No Off Sites:***	1.00
Stacks:	True	***Shutdown:***	
No of Stacks:		***No of Shutdown:***	

Canadian SIC Code (2 digit):
Canadian SIC Code:
SIC Code Description:
American SIC Code:
NAICS Code (2 digit): 56
NAICS 2 Description: Administrative and support, waste management and remediation services
NAICS Code (4 digit): 5622
NAICS 4 Description: Waste treatment and disposal
NAICS Code (6 digit): 562210
NAICS 6 Description: Waste treatment and disposal

Substance Release Report

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: .318
Unit: tonnes
Basis of Estimate Cd: E2

Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.001
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	3.18
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	13
Category Type Desc:	All Media
Category Type Desc (fr):	Rejets à tous les médias
Grouping:	Total All Media<1t
Trans Code:	
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.009999999999999998
Unit:	tonnes
Basis of Estimate Cd:	
Basis of Estimate Desc:	
Category Type ID:	3
Category Type Desc:	Fugitive
Category Type Desc (fr):	Émissions fugitives
Grouping:	Total Air
Trans Code:	VOCs
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.058
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	13
Category Type Desc:	All Media
Category Type Desc (fr):	Rejets à tous les médias
Grouping:	Total All Media<1t
Trans Code:	
Chem:	Mercury (and its compounds)
Chem (fr):	Mercure (et ses composés)
Quantity:	.024
Unit:	kg
Basis of Estimate Cd:	
Basis of Estimate Desc:	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	27 of 99	E/249.9	79.6 / 2.63	3354 Navan Rd Ottawa ON	SPL

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Ref No:	3223-7E2UJB	**Discharger Report:**	
Site No:		**Material Group:**	
Incident Dt:		**Health/Env Conseq:**	
Year:		**Client Type:**	
Incident Cause:	Unknown	**Sector Type:**	
Incident Event:		**Agency Involved:**	
Contaminant Code:		**Nearest Watercourse:**	
Contaminant Name:		**Site Address:**	
Contaminant Limit 1:		**Site District Office:**	Ottawa
Contam Limit Freq 1:		**Site Postal Code:**	
Contaminant UN No 1:		**Site Region:**	
Environment Impact:	Possible	**Site Municipality:**	Ottawa
Nature of Impact:	Surface Water Pollution	**Site Lot:**	
Receiving Medium:		**Site Conc:**	
Receiving Env:		**Northing:**	NA
MOE Response:	No Field Response	**Easting:**	NA
Dt MOE Arvl on Scn:		**Site Geo Ref Accu:**	
MOE Reported Dt:	4/25/2008	**Site Map Datum:**	
Dt Document Closed:	5/12/2008	**SAC Action Class:**	Pollution Incident Reports (PIRs) and ¿Other¿ calls
Incident Reason:	Other - Reason not otherwise defined	**Source Type:**	
Site Name:	Navan Landfill		
Site County/District:			
Site Geo Ref Meth:			
Incident Summary:	Black Water flowing to Green Creek		
Contaminant Qty:			

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3 | **28 of 99** | **E/249.9** | **79.6 / 2.63**

WASTE SERVICES (CA) INC.
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9

NPRI

NPRI ID:	10967	**Org ID:**	72917
Other ID:	*	**Submit Date:**	6/1/2009
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	69482	**Contact ID:**	194423
Report ID:	124554	**Cont Type:**	MED
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	NORMAND
Report Year:	2008	**Cont Last Name:**	CASTONGUAY
Not-Current Rpt?:	No	**Contact Position:**	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	**Contact Fax:**	6138246730
Fac ID:	222792	**Contact Ph.:**	6138247289
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	613
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	38247289
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	226
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	613
Facility Lat:	45.4244	**Contact Fax:**	38246730
Facility Long:	-75.5002	**Contact Email:**	NCASTONGUAY@WSII.CA
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:	No	**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	22	**Waste Streams:**	No
Parent Co.:	Y	**No Streams:**	
No Parent Co.:	1	**Waste Off Sites:**	No
Pollut Prev Cmnts:	No	**No Off Sites:**	
Stacks:	No	**Shutdown:**	No
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			

NAICS Code (2 digit):	56
NAICS 2 Description:	Administrative and support, waste management and remediation services
NAICS Code (4 digit):	5622
NAICS 4 Description:	Waste treatment and disposal
NAICS Code (6 digit):	562210
NAICS 6 Description:	Waste treatment and disposal

Substance Release Report

Category Type ID:	3
Category Type Desc:	Fugitive
Category Type Desc (fr):	Émissions fugitives
Grouping:	Total Air
Trans Code:	VOCs
Chem:	Volatile Organic Compounds (VOCs)
Chem (fr):	Composés organiques volatils (COV)
Quantity:	13.033
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	0
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	1.706
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	29 of 99	E/249.9	79.6 / 2.63	BFI Canada Inc. 3354 Navan Rd Ottawa ON	CA

Certificate #:	3536-8APNZD
Application Year:	2010
Issue Date:	11/24/2010
Approval Type:	Air
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	30 of 99	E/249.9	79.6 / 2.63	Waste Services (CA) Inc. 3354 Navan Rd Ottawa ON	CA

Certificate #: 4816-7C7M6C
Application Year: 2009
Issue Date: 4/16/2009
Approval Type: Industrial Sewage Works
Status: Revoked and/or Replaced
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	31 of 99	E/249.9	79.6 / 2.63	Waste Services (CA) Inc. 3354 Navan Rd Ottawa ON	CA

Certificate #: 5616-86NKNW
Application Year: 2010
Issue Date: 6/29/2010
Approval Type: Industrial Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	32 of 99	E/249.9	79.6 / 2.63	Waste Services (CA) Inc. 3354 Navan Rd Ottawa ON	CA

Certificate #: 6733-7BYS9A
Application Year: 2009
Issue Date: 4/16/2009
Approval Type: Air
Status: Revoked and/or Replaced
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	33 of 99	E/249.9	79.6 / 2.63	943162 Ontario Inc. 3354 Navan Road Gloucester ON	CA

Certificate #: A860296
Application Year: 2000

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Issue Date: 10/25/2000
Approval Type: Waste Management Systems
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

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3 | 34 of 99 | E/249.9 | 79.6 / 2.63 | 943162 Ontario Inc.
3354 Navan Road
Gloucester ON | CA

Certificate #: A860296
Application Year: 2000
Issue Date: 10/4/2000
Approval Type: Waste Management Systems
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

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3 | 35 of 99 | E/249.9 | 79.6 / 2.63 | Capital Environmental Resource Inc.
3354 Navan Road
Ottawa ON L7L 6Z8 | WDS

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Revoked and/or Replaced
Facility Type:
Record Type: ECA
Link Source: IDS
Project Type: WASTE DISPOSAL SITES
Application Status:
Issue Date: 2004-07-30
Input Date:
Date Received:
Est Closure Date:
Mobile Capacity:
Mobile Units:
Mobile Description:
Prop City:
Prop Postal:
Prop Phone:
Serial Link:
Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354 Navan Road
Site Lot:
Waste Class Code:
Waste Class:

Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):
Transfer Cap (m³):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m³):
Process Cap (m³/d):
Process Vol (m³):
Process Feed (m³):
Site Concession:
Site Region/County:
SWP Area Name: South Nation
MOE District: Ottawa
District Office:
Latitude: 45.424
Longitude: -75.5055
Geometry X: -75.5055
Geometry Y: 45.424

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/7718-639LNV-14.pdf

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3 | 36 of 99 | E/249.9 | 79.6 / 2.63 | **Waste Services (CA) Inc.**
3354 Navan Road
Ottawa ON L7L 6Z8 | WDS

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Amended
Facility Type:
Record Type: ECA
Link Source: IDS
Project Type: WASTE DISPOSAL SITES
Application Status:
Issue Date: 2006-05-12
Input Date:
Date Received:
Est Closure Date:
Mobile Capacity:
Mobile Units:
Mobile Description:
Prop City:
Prop Postal:
Prop Phone:
Serial Link:
Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354 Navan Road
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/4455-6BEMKK-14.pdf

Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):
Transfer Cap (m³):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m³):
Process Cap (m³/d):
Process Vol (m³):
Process Feed (m³):
Site Concession:
Site Region/County:
SWP Area Name: South Nation
MOE District: Ottawa
District Office:
Latitude: 45.424
Longitude: -75.5055
Geometry X: -75.5055
Geometry Y: 45.424

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3 | 37 of 99 | E/249.9 | 79.6 / 2.63 | **Waste Services (CA) Inc.**
3354 Navan Rd
Ottawa ON L7L 6Z8 | WDS

Approval No: A460702
Mob Unit Cert No:

Total Area (ha):
Landfill Cap (m³):

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

EBR Registry No:		**Transfer Area (ha):**	
Status:	Approved	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2010-08-04	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	
Prop Postal:		**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:			
Prop Address:			
Proponent County/District:			
Full Address:	3354 Navan Rd		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:	https://www.accessenvironment.ene.gov.on.ca/instruments/1630-7VYP37-14.pdf		

3	38 of 99	E/249.9	79.6 / 2.63	**Waste Services (CA) Inc.** **3354 Navan Rd** **Ottawa ON L7L 6Z8**	WDS

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Approved	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2010-11-01	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	
Prop Postal:		**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Prop Address:
Proponent County/District:
Full Address: 3354 Navan Rd
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/4387-87ERAZ-14.pdf

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3	39 of 99	E/249.9	79.6 / 2.63	***Waste Services (CA) Inc.*** ***3354 Navan Rd*** ***Ottawa ON L7L 6Z8***	***WDS***

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Approved
Facility Type:
Record Type: ECA
Link Source: IDS
Project Type: WASTE DISPOSAL SITES
Application Status:
Issue Date: 2009-10-09
Input Date:
Date Received:
Est Closure Date:
Mobile Capacity:
Mobile Units:
Mobile Description:
Prop City:
Prop Postal:
Prop Phone:
Serial Link:
Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):
Transfer Cap (m³):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m³):
Process Cap (m³/d):
Process Vol (m³):
Process Feed (m³):
Site Concession:
Site Region/County:
SWP Area Name: South Nation
MOE District: Ottawa
District Office:
Latitude:
Longitude:
Geometry X:
Geometry Y:
Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354 Navan Rd
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/1851-7SUSJ9-14.pdf

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	40 of 99	E/249.9	79.6 / 2.63	Waste Services (CA) Inc. 3354 Navan Rd Ottawa ON L7L 6Z8	WDS

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Amended	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2009-04-16	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	
Prop Postal:		**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:			
Prop Address:			
Proponent County/District:			
Full Address:	3354 Navan Rd		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:	https://www.accessenvironment.ene.gov.on.ca/instruments/3843-7BDU7Q-14.pdf		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	41 of 99	E/249.9	79.6 / 2.63	WASTE SERVICES (CA) INC. 3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	NPRI

NPRI ID:	10967	**Org ID:**	72917
Other ID:	*	**Submit Date:**	5/31/2010
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	78800	**Contact ID:**	194423
Report ID:	132440	**Cont Type:**	MED
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	NORMAND
Report Year:	2009	**Cont Last Name:**	CASTONGUAY
Not-Current Rpt?:	No	**Contact Position:**	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	**Contact Fax:**	6138246730
Fac ID:	222792	**Contact Ph.:**	6138247289
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	613
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	38247289
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	226
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	613

Facility Lat:	45.4244	**Contact Fax:**	38246730
Facility Long:	-75.5002	**Contact Email:**	NCASTONGUAY@WSII.CA
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:	Yes	**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	22	**Waste Streams:**	No
Parent Co.:	N	**No Streams:**	
No Parent Co.:		**Waste Off Sites:**	No
Pollut Prev Cmnts:	No	**No Off Sites:**	
Stacks:	No	**Shutdown:**	No
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	0
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.003
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	2.262
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	42 of 99	E/249.9	79.6 / 2.63	**BFI Canada Inc.** **3354 Navan Rd**	WDS

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Ottawa ON L4K 0C3

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Approved	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2011-04-29	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	
Prop Postal:		**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	

Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354 Navan Rd
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/7757-8EUPGS-14.pdf

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	43 of 99	E/249.9	79.6 / 2.63	**WSI - Ottawa - Navan Road** **3354 Navan Road; Lots 2-4, Concession 4** **ON**	LIMO

ECA/Instrument No:	A460702	**Natural Attenuation:**	No
Oper Status 2016:	Open	**Liners:**	
C of A Issue Date:	08/05/1973	**Cover Material:**	Yes
C of A Issued to:	Waste Services (CA) Incorporated	**Leachate Off-Site:**	No
Lndfl Gas Mgmt (P):	Yes	**Leachate On Site:**	Yes
Lndfl Gas Mgmt (F):		**Req Coll Lndfll Gas:**	Yes
Lndfl Gas Mgmt (E):		**Lndfll Gas Coll:**	No
Lndfl Gas Mgmt Sys:		**Total Waste Rec:**	342202 Tonnes
Landfill Gas Mntr:	Annual	**TWR Methodology:**	2011
Leachate Coll Sys:		**TWR Unit:**	
ERC Est Vol (m3):	3660490 Cubic Metres	**Tot Aprv Cap Unit:**	
ERC Volume Unit:		**Financial Assurance:**	
ERC Dt Last Det:	31/12/2011	**Last Report Year:**	Weighed
Landfill Type:	Private	**MOE Region:**	Eastern
Source File Type:		**MOE District:**	Ottawa
Fill Rate:	344750 Tonnes / Year	**Site County:**	Ottawa
Fill Rate Unit:		**Lot:**	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Tot Fill Area (ha):		**Concession:**	
Tot Site Area (ha):	69 Ha	**Latitude:**	
Footprint:	31.9 Ha	**Longitude:**	
Tot Apprv Cap (m3):	7600000 Cubic Metres	**Easting:**	
Contam Atten Zone:	Yes	**Northing:**	
Grndwtr Mntr:		**UTM Zone:**	
Surf Wtr Mntr:		**Data Source:**	
Air Emis Monitor:			

Approved Waste Type: Domestic/Residential, Hazardous and Asbestos
Client Site Name:
ERC Methodology: Aerial Photogrammetry
Site Name: WSI - Ottawa - Navan Road
Site Location Details:
Service Area: Outaouais and Province of Ontario
Page URL: https://www.ontario.ca/environment-and-energy/large-landfill-site-details?site=A460702

3	44 of 99	E/249.9	79.6 / 2.63	3354 NAVAN ROAD, NAVAN ON K4B 1H9	INC

Incident No: 329920
Incident ID: 2481384
Attribute Category: FS-Incident
Status Code: Causal Analysis Complete
Incident Location: 3354 NAVAN ROAD, NAVAN - 1" PIPELINE HIT
Drainage System:
Sub Surface Contam.:
Aff. Prop. Use Water:
Contam. Migrated:
Contact Natural Env.:
Near Body of Water:
Approx. Quant. Rel.:
Equipment Model:
Serial No:
Residential App. Type:
Commercial App. Type:
Industrial App. Type:
Institutional App. Type:
Venting Type:
Vent Connector Mater:
Vent Chimney Mater:
Pipeline Type: Service / Riser Distribution Pipeline
Pipeline Involved:
Pipe Material: Plastic
Depth Ground Cover: 0.6
Regulator Location: Outside
Regulator Type: Service Regulator (up to 60 psi intake)
Operation Pressure: 60
Liquid Prop Make:
Liquid Prop Model:
Liquid Prop Serial No:
Equipment Type:
Cylinder Capacity:
Cylinder Capac. Units:
Cylinder Material Type:
Tank Capacity:
Fuels Occurence Type:
Fuel Type Involved:
Date of Occurence:
Time of Occurence:
Occur Insp Start Date:
Any Health Impact:
Any Environmental Impact:
Was Service Interrupted:
Was Property Damaged:

Operation Type Involved:
Enforcement Policy:
Prc Escalation Required:
Task No:
Notes:
Occurence Narrative: hi hoe operator only hand located gas line at one spot gas line rose up.
Tank Material Type:
Tank Storage Type:
Tank Location Type:
Pump Flow Rate Capac:
Liquid Prop Notes:

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3 | ***45 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***BFI CANADA INC.***
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9 | ***NPRI***

NPRI ID:	10967	***Org ID:***	39038
Other ID:	Y	***Submit Date:***	6/9/2011
No Other ID:	1	***Last Modified:***	5/29/2015 3:28:24 PM
Track ID:	89481	***Contact ID:***	194425
Report ID:	143538	***Cont Type:***	MED
Report Type:	NPRI	***Contact Title:***	
Rpt Type ID:	1	***Cont First Name:***	NORMAND
Report Year:	2010	***Cont Last Name:***	CASTONGUAY
Not-Current Rpt?:	No	***Contact Position:***	DISTRICT MANAGER AND LANDFILL ENGINEER
Yr of Last Filed Rpt:	2014	***Contact Fax:***	6138247139
Fac ID:	222792	***Contact Ph.:***	6138247289
Fac Name:	NAVAN LANDFILL	***Cont Area Code:***	613
Fac Address1:	3354 NAVAN ROAD	***Contact Tel.:***	38247289
Fac Address2:	NOT AVAILABLE	***Contact Ext.:***	226
Fac Postal Zip:	K4B1H9	***Cont Fax Area Cde:***	613
Facility Lat:	45.4244	***Contact Fax:***	38247139
Facility Long:	-75.5002	***Contact Email:***	NCASTONGUAY@WSII.CA
DLS (Last Filed Rpt):		***Latitude:***	45.4244
Facility DLS:		***Longitude:***	-75.5002
Datum:	1983	***UTM Zone:***	
Facility Cmnts:	No	***UTM Northing:***	
URL:		***UTM Easting:***	
No of Empl.:	22	***Waste Streams:***	No
Parent Co.:	*	***No Streams:***	
No Parent Co.:		***Waste Off Sites:***	No
Pollut Prev Cmnts:	No	***No Off Sites:***	
Stacks:	No	***Shutdown:***	No
No of Stacks:		***No of Shutdown:***	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	

Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.4638
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.0001
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	13
Category Type Desc:	All Media
Category Type Desc (fr):	Rejets à tous les médias
Grouping:	Total All Media<1t
Trans Code:	
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.0005
Unit:	tonnes
Basis of Estimate Cd:	
Basis of Estimate Desc:	
Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	4.6382
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.0005
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	46 of 99	E/249.9	79.6 / 2.63	**Waste Services (CA) Inc.** **3354 Navan Road** **Ottawa (Navan) ON**	GEN

Generator No:	ON1983400	**PO Box No:**	
Status:		**Country:**	
Approval Years:	2009	**Choice of Contact:**	
Contam. Facility:		**Co Admin:**	
MHSW Facility:		**Phone No Admin:**	
SIC Code:	562210		

SIC Description: Waste Treatment and Disposal

Detail(s)

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

3	47 of 99	E/249.9	79.6 / 2.63	***city of ottawa*** ***3354 Navan Road*** ***City of Ottawa ON***	***GEN***

Generator No: ON3141088
Status:
Approval Years: 2009
Contam. Facility:
MHSW Facility:
SIC Code: 913150
SIC Description: Municipal Regulatory Services

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

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3 | **48 of 99** | **E/249.9** | **79.6 / 2.63** | **BFI Canada Inc.**
3354- Navan Rd
Ottawa ON | **WDS**

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Approved	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:		**Inciner. Area (ha):**	
Link Source:		**Inciner. Cap (t):**	
Project Type:		**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	6/13/12	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	Ottawa
Mobile Capacity:		**SWP Area Name:**	
Mobile Units:		**MOE District:**	
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	
Prop Postal:		**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	
Approval Type:			
Proponent:			
Prop Address:			
Proponent County/District:			
Full Address:			
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:			

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3 | **49 of 99** | **E/249.9** | **79.6 / 2.63** | **3354 Navan Rd**
Ottawa ON | **EHS**

Order No: 20121005048 **Nearest Intersection:**

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Status:	C	**Municipality:**		
Report Type:	Site Report	**Client Prov/State:**	NJ	
Report Date:	09-OCT-12	**Search Radius (km):**	.25	
Date Received:	05-OCT-12	**X:**	-75.501884	
Previous Site Name:		**Y:**	45.425922	
Lot/Building Size:				
Additional Info Ordered:				

3	50 of 99	E/249.9	79.6 / 2.63	**BFI Canada Inc.** **3354- Navan Rd** **Ottawa ON K1B 1H9**	WDS

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Approved	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2013-04-19	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	
Prop Postal:		**Longitude:**	
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:			
Prop Address:			
Proponent County/District:			
Full Address:	3354- Navan Rd		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:	https://www.accessenvironment.ene.gov.on.ca/instruments/1087-94UKZ4-14.pdf		

3	51 of 99	E/249.9	79.6 / 2.63	**BFI CANADA INC.** **3354 NAVAN ROAD NOT AVAILABLE** **OTTAWA ON K4B1H9**	NPRI

NPRI ID:	10967	**Org ID:**	39038
Other ID:		**Submit Date:**	6/29/2012
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	99926	**Contact ID:**	
Report ID:	3682	**Cont Type:**	
Report Type:	NPRI	**Contact Title:**	

Rpt Type ID:	1	**Cont First Name:**	
Report Year:	2011	**Cont Last Name:**	
Not-Current Rpt?:	No	**Contact Position:**	
Yr of Last Filed Rpt:	2014	**Contact Fax:**	
Fac ID:	222792	**Contact Ph.:**	
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	
Facility Lat:	45.4244	**Contact Fax:**	
Facility Long:	-75.5002	**Contact Email:**	
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:		**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	22	**Waste Streams:**	
Parent Co.:		**No Streams:**	
No Parent Co.:		**Waste Off Sites:**	
Pollut Prev Cmnts:		**No Off Sites:**	
Stacks:		**Shutdown:**	
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.0048
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	2.7196
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM10 - Particulate Matter <= 10 Microns

Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: .0117
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

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3 | ***52 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***city of ottawa***
3354 Navan Road
City of Ottawa ON | ***GEN***

Generator No: ON3141088
Status:
Approval Years: 2010
Contam. Facility:
MHSW Facility:
SIC Code: 913150
SIC Description: Municipal Regulatory Services

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

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3 | ***53 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***BFI Canada Inc.***
3354 Navan Road
Ottawa (Navan) ON | ***GEN***

Generator No: ON1983400
Status:
Approval Years: 2010
Contam. Facility:
MHSW Facility:
SIC Code: 562210

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

SIC Description: Waste Treatment and Disposal

Detail(s)

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

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3 ***54 of 99*** ***E/249.9*** ***79.6 / 2.63*** ***BFI Canada Inc.***
3354 Navan Road
Ottawa (Navan) ON ***GEN***

Generator No: ON1983400
Status:
Approval Years: 2011
Contam. Facility:
MHSW Facility:
SIC Code: 562210
SIC Description: Waste Treatment and Disposal

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

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3 | ***55 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***city of ottawa***
3354 Navan Road
City of Ottawa ON | ***GEN***

Generator No: ON3141088
Status:
Approval Years: 2011
Contam. Facility:
MHSW Facility:
SIC Code: 913150
SIC Description: Municipal Regulatory Services

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

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3 **56 of 99** **E/249.9** **79.6 / 2.63**

city of ottawa
3354 Navan Road
City of Ottawa ON K4B 1H9

GEN

Generator No: ON3141088
Status:
Approval Years: 2012
Contam. Facility:
MHSW Facility:
SIC Code: 913150
SIC Description: Municipal Regulatory Services

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

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3 **57 of 99** **E/249.9** **79.6 / 2.63**

BFI Canada Inc.
3354 Navan Road
Ottawa (Navan) ON K4B 1H9

GEN

Generator No: ON1983400
Status:
Approval Years: 2012
Contam. Facility:
MHSW Facility:
SIC Code: 562210
SIC Description: Waste Treatment and Disposal

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Detail(s)

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

3	58 of 99	E/249.9	79.6 / 2.63	***BFI Canada Inc.*** ***3354- Navan Rd*** ***Ottawa ON L4K 0C3***	***WDS***

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Approved
Facility Type:
Record Type: ECA
Link Source: IDS
Project Type: WASTE DISPOSAL SITES
Application Status:
Issue Date: 2014-02-25
Input Date:
Date Received:
Est Closure Date:
Mobile Capacity:
Mobile Units:
Mobile Description:
Prop City:
Prop Postal:
Prop Phone:
Serial Link:
Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354- Navan Rd
Site Lot:

Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):
Transfer Cap (m³):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m³):
Process Cap (m³/d):
Process Vol (m³):
Process Feed (m³):
Site Concession:
Site Region/County:
SWP Area Name: South Nation
MOE District: Ottawa
District Office:
Latitude:
Longitude:
Geometry X:
Geometry Y:

Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/7759-8R3JYP-14.pdf

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	59 of 99	E/249.9	79.6 / 2.63	**BFI Canada Inc.** **3354 Navan Rd** **Ottawa ON**	SPL

Ref No:	6264-9E2ST4	**Discharger Report:**	
Site No:		**Material Group:**	
Incident Dt:	2013/12/03	**Health/Env Conseq:**	
Year:		**Client Type:**	
Incident Cause:	Leak/Break	**Sector Type:**	Waste Disposal Site
Incident Event:		**Agency Involved:**	
Contaminant Code:	99	**Nearest Watercourse:**	
Contaminant Name:	LEACHATE, TRASH CAN, COMPACTOR, ETC	**Site Address:**	3354 Navan Rd
Contaminant Limit 1:		**Site District Office:**	
Contam Limit Freq 1:		**Site Postal Code:**	
Contaminant UN No 1:		**Site Region:**	
Environment Impact:	Not Anticipated	**Site Municipality:**	Ottawa
Nature of Impact:	Soil Contamination; Surface Water Pollution	**Site Lot:**	
Receiving Medium:		**Site Conc:**	
Receiving Env:		**Northing:**	5030224
MOE Response:		**Easting:**	460890
Dt MOE Arvl on Scn:		**Site Geo Ref Accu:**	
MOE Reported Dt:	2013/12/03	**Site Map Datum:**	
Dt Document Closed:		**SAC Action Class:**	Watercourse Spills
Incident Reason:	Other	**Source Type:**	

Site Name: BFI Navan Waste Recycling and Disposal Facility
Site County/District:
Site Geo Ref Meth:
Incident Summary: BFI Ottawa: Force main break
Contaminant Qty: 0 other - see incident description

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	60 of 99	E/249.9	79.6 / 2.63	**BFI CANADA INC.** **3354 NAVAN ROAD NOT AVAILABLE** **OTTAWA ON K4B1H9**	NPRI

NPRI ID:	10967	**Org ID:**	39038
Other ID:		**Submit Date:**	5/31/2013
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	107387	**Contact ID:**	
Report ID:	15827	**Cont Type:**	
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	
Report Year:	2012	**Cont Last Name:**	
Not-Current Rpt?:	No	**Contact Position:**	
Yr of Last Filed Rpt:	2014	**Contact Fax:**	
Fac ID:	222792	**Contact Ph.:**	
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	

Fac Address2:	NOT AVAILABLE	***Contact Ext.:***	
Fac Postal Zip:	K4B1H9	***Cont Fax Area Cde:***	
Facility Lat:	45.4244	***Contact Fax:***	
Facility Long:	-75.5002	***Contact Email:***	
DLS (Last Filed Rpt):		***Latitude:***	45.4244
Facility DLS:		***Longitude:***	-75.5002
Datum:	1983	***UTM Zone:***	
Facility Cmnts:		***UTM Northing:***	
URL:		***UTM Easting:***	
No of Empl.:	23	***Waste Streams:***	
Parent Co.:		***No Streams:***	
No Parent Co.:		***Waste Off Sites:***	
Pollut Prev Cmnts:		***No Off Sites:***	
Stacks:		***Shutdown:***	
No of Stacks:		***No of Shutdown:***	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	Carbon monoxide
Chem (fr):	Monoxyde de carbone
Quantity:	38.932
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.0022
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	6
Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	2.759
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 6

Category Type Desc:	Road dust
Category Type Desc (fr):	Poussières de routes
Grouping:	Total Air
Trans Code:	
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.276
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr):	PM2,5 - Matière particulaire <= 2,5 microns
Quantity:	.8838
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.0146
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	PM10 - Particulate Matter <= 10 Microns
Chem (fr):	PM10 - Matière particulaire <= 10 microns
Quantity:	.8838
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	61 of 99	E/249.9	79.6 / 2.63	**GPM (12) GP Inc.** **3354 Navan Road** **Ottawa ON**	GEN

Generator No:	ON4488168	**PO Box No:**	
Status:		**Country:**	
Approval Years:	2013	**Choice of Contact:**	
Contam. Facility:		**Co Admin:**	
MHSW Facility:		**Phone No Admin:**	
SIC Code:	531310		
SIC Description:	REAL ESTATE PROPERTY MANAGERS		

Detail(s)

Waste Class:	212
Waste Class Desc:	ALIPHATIC SOLVENTS

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	62 of 99	E/249.9	79.6 / 2.63	city of ottawa 3354 Navan Road City of Ottawa ON	GEN

Generator No: ON3141088
Status:
Approval Years: 2013
Contam. Facility:
MHSW Facility:
SIC Code: 913150
SIC Description:

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 147
Waste Class Desc: CHEMICAL FERTILIZER WASTES

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 121
Waste Class Desc: ALKALINE WASTES - HEAVY METALS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 146
Waste Class Desc: OTHER SPECIFIED INORGANICS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	63 of 99	E/249.9	79.6 / 2.63	BFI Canada Inc. 3354 Navan Road Ottawa (Navan) ON	GEN

Generator No: ON1983400
Status:
Approval Years: 2013

PO Box No:
Country:
Choice of Contact:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Contam. Facility: ***Co Admin:***
MHSW Facility: ***Phone No Admin:***
SIC Code: 562210
SIC Description: WASTE TREATMENT AND DISPOSAL

Detail(s)

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

3	64 of 99	E/249.9	79.6 / 2.63	***BFI Canada Inc.*** ***3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA*** ***ON***	***EBR***

EBR Registry No: 012-3254 ***Decision Posted:***
Ministry Ref No: 3432-9QHSKA ***Exception Posted:***
Notice Type: Instrument Decision ***Section:***
Notice Stage: 822149989 ***Act 1:***
Notice Date: July 16, 2015 ***Act 2:***
Proposal Date: December 18, 2014 ***Site Location Map:***
Year: 2014
Instrument Type: (EPA Part II.1-air) - Environmental Compliance Approval (project type: air)
Off Instrument Name:
Posted By:
Company Name: BFI Canada Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 400 Applewood Crescent, Vaughan Ontario, Canada L4K 0C3
Comment Period:
URL:

Site Location Details:

3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA

3	65 of 99	E/249.9	79.6 / 2.63	BFI CANADA INC. 3354 NAVAN ROAD NOT AVAILABLE OTTAWA ON K4B1H9	NPRI

NPRI ID:	10967	**Org ID:**	39038
Other ID:		**Submit Date:**	5/28/2014
No Other ID:		**Last Modified:**	5/29/2015 3:28:24 PM
Track ID:	116092	**Contact ID:**	
Report ID:	30181	**Cont Type:**	
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	
Report Year:	2013	**Cont Last Name:**	
Not-Current Rpt?:	No	**Contact Position:**	
Yr of Last Filed Rpt:	2014	**Contact Fax:**	
Fac ID:	222792	**Contact Ph.:**	
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	
Facility Lat:	45.4244	**Contact Fax:**	
Facility Long:	-75.5002	**Contact Email:**	
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:		**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	24	**Waste Streams:**	
Parent Co.:		**No Streams:**	
No Parent Co.:		**Waste Off Sites:**	
Pollut Prev Cmnts:		**No Off Sites:**	
Stacks:		**Shutdown:**	
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID:	1
Category Type Desc:	Stack / Point
Category Type Desc (fr):	Rejets de cheminée ou ponctuels
Grouping:	Total Air
Trans Code:	ASta
Chem:	Carbon monoxide
Chem (fr):	Monoxyde de carbone
Quantity:	73.721
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	2
Category Type Desc:	Storage / Handling

Category Type Desc (fr): Rejets de stockage ou manutention
Grouping: Total Air
Trans Code: VOCg
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: .0272
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: 1.596
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: 1.6733
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: 1.6733
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: .16
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 2
Category Type Desc: Storage / Handling
Category Type Desc (fr): Rejets de stockage ou manutention
Grouping: Total Air
Trans Code: VOCg
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: .004

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

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3 | **66 of 99** | **E/249.9** | **79.6 / 2.63** | **BFI Canada Inc.**
3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA
ON | **EBR**

EBR Registry No: 012-3937
Ministry Ref No: 7116-9TULG2
Notice Type: Instrument Decision
Notice Stage: 822596387
Notice Date: July 16, 2015
Proposal Date: April 17, 2015
Year: 2015
Instrument Type: (EPA Part II.1-waste) - Environmental Compliance Approval (project type: waste)
Off Instrument Name:
Posted By:
Company Name: BFI Canada Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 400 Applewood Crescent, Vaughan Ontario, Canada L4K 0C3
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA

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3 | **67 of 99** | **E/249.9** | **79.6 / 2.63** | **Progressive Waste Solutions Canada Inc.**
3354 Navan Rd
Ottawa ON L4K 0C3 | **ECA**

Approval No: 4024-9WFQE5
Approval Date: 2015-06-08
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
Approval Type: ECA-AIR
Project Type: AIR
Address: 3354 Navan Rd
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/3432-9QHSKA-14.pdf

MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

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3 | **68 of 99** | **E/249.9** | **79.6 / 2.63** | **Progressive Waste Solutions Canada Inc.**
3354 Navan Rd
Ottawa ON K4B1H9 | **WDS**

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Approved
Facility Type:
Record Type:
Link Source:
Project Type:
Application Status:

Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):
Transfer Cap (m³):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m³):
Process Cap (m³/d):

Issue Date:	6/8/15			**Process Vol (m³):**	
Input Date:				**Process Feed (m³):**	
Date Received:				**Site Concession:**	
Est Closure Date:				**Site Region/County:**	Ottawa
Mobile Capacity:				**SWP Area Name:**	
Mobile Units:				**MOE District:**	
Mobile Description:				**District Office:**	
Prop City:				**Latitude:**	
Prop Postal:				**Longitude:**	
Prop Phone:				**Geometry X:**	
Serial Link:				**Geometry Y:**	
Approval Type:					
Proponent:					
Prop Address:					
Proponent County/District:					
Full Address:	Navan Waste Recycling and Disposal Facility 3354 Navan Rd Ottawa City, K4B1H9				
Site Lot:					
Waste Class Code:					
Waste Class:					
Waste Type:					
Waste Type Other:					
Waste Description:					
Landfill Monitoring:					
Landfill Ctrl Type:					
Site Closing Description:					
Project Description:					
Municipalities Served:					
Approval Description:					
Other Approvals/Permits:					
PDF URL:					

3	**69 of 99**	**E/249.9**	**79.6 / 2.63**	**BFI Canada Inc.** **3354 Navan Rd** **Ottawa ON K1B 1H9**	**WDS**

Approval No:	A460702			**Total Area (ha):**	
Mob Unit Cert No:				**Landfill Cap (m³):**	
EBR Registry No:				**Transfer Area (ha):**	
Status:	Approved			**Transfer Cap (m³):**	
Facility Type:				**Transfer Cert No:**	
Record Type:	ECA			**Inciner. Area (ha):**	
Link Source:	IDS			**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES			**Process Area (m³):**	
Application Status:				**Process Cap (m³/d):**	
Issue Date:	2016-02-01			**Process Vol (m³):**	
Input Date:				**Process Feed (m³):**	
Date Received:				**Site Concession:**	
Est Closure Date:				**Site Region/County:**	
Mobile Capacity:				**SWP Area Name:**	South Nation
Mobile Units:				**MOE District:**	Ottawa
Mobile Description:				**District Office:**	
Prop City:				**Latitude:**	
Prop Postal:				**Longitude:**	
Prop Phone:				**Geometry X:**	
Serial Link:				**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES				
Proponent:					
Prop Address:					
Proponent County/District:					
Full Address:	3354 Navan Rd				
Site Lot:					
Waste Class Code:					
Waste Class:					
Waste Type:					

Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/7953-9T9SYY-14.pdf

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3 | ***70 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***PROGRESSIVE WASTE SOLUTIONS CANADA INC.***
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9 | ***NPRI***

NPRI ID:	10967	***Org ID:***	103095
Other ID:		***Submit Date:***	5/25/2015
No Other ID:		***Last Modified:***	6/10/2015 10:59:04 AM
Track ID:	126265	***Contact ID:***	
Report ID:	48005	***Cont Type:***	
Report Type:	NPRI	***Contact Title:***	
Rpt Type ID:	1	***Cont First Name:***	
Report Year:	2014	***Cont Last Name:***	
Not-Current Rpt?:	No	***Contact Position:***	
Yr of Last Filed Rpt:	2014	***Contact Fax:***	
Fac ID:	222792	***Contact Ph.:***	
Fac Name:	NAVAN LANDFILL	***Cont Area Code:***	
Fac Address1:	3354 NAVAN ROAD	***Contact Tel.:***	
Fac Address2:	NOT AVAILABLE	***Contact Ext.:***	
Fac Postal Zip:	K4B1H9	***Cont Fax Area Cde:***	
Facility Lat:	45.4244	***Contact Fax:***	
Facility Long:	-75.5002	***Contact Email:***	
DLS (Last Filed Rpt):		***Latitude:***	45.4244
Facility DLS:		***Longitude:***	-75.5002
Datum:	1983	***UTM Zone:***	
Facility Cmnts:		***UTM Northing:***	
URL:		***UTM Easting:***	
No of Empl.:	24	***Waste Streams:***	
Parent Co.:		***No Streams:***	
No Parent Co.:		***Waste Off Sites:***	
Pollut Prev Cmnts:		***No Off Sites:***	
Stacks:		***Shutdown:***	
No of Stacks:		***No of Shutdown:***	

Canadian SIC Code (2 digit):
Canadian SIC Code:
SIC Code Description:
American SIC Code:
NAICS Code (2 digit): 56
NAICS 2 Description: Administrative and support, waste management and remediation services
NAICS Code (4 digit): 5622
NAICS 4 Description: Waste treatment and disposal
NAICS Code (6 digit): 562210
NAICS 6 Description: Waste treatment and disposal

Substance Release Report

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem: PM10 - Particulate Matter <= 10 Microns

Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: 4.819
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: 1.5786
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem: Carbon monoxide
Chem (fr): Monoxyde de carbone
Quantity: 69.552
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: .482
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 2
Category Type Desc: Storage / Handling
Category Type Desc (fr): Rejets de stockage ou manutention
Grouping: Total Air
Trans Code: VOCg
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: .0285
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 2
Category Type Desc: Storage / Handling
Category Type Desc (fr): Rejets de stockage ou manutention
Grouping: Total Air
Trans Code: VOCg
Chem: PM2.5 - Particulate Matter <= 2.5 Microns
Chem (fr): PM2,5 - Matière particulaire <= 2,5 microns
Quantity: .0043
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem: PM10 - Particulate Matter <= 10 Microns
Chem (fr): PM10 - Matière particulaire <= 10 microns
Quantity: 1.5786
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	71 of 99	E/249.9	79.6 / 2.63	Progressive Waste Solutions Canada Inc. 3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA ON	EBR

EBR Registry No: 012-7852
Ministry Ref No: 2806-A65L8C
Notice Type: Instrument Decision
Notice Stage: 848863918
Notice Date: November 22, 2016
Proposal Date: June 07, 2016
Year: 2016
Instrument Type: (EPA Part II.1-air) - Environmental Compliance Approval (project type: air)
Off Instrument Name:
Posted By:
Company Name: Progressive Waste Solutions Canada Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 610 Applewood Crescent, Vaughan Ontario, Canada L4K 0E3
Comment Period:
URL:

Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

Site Location Details:

3354 Navan Road Ottawa K4B 1H9 CITY OF OTTAWA

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	72 of 99	E/249.9	79.6 / 2.63	Progressive Waste Solutions Canada Inc. 3354 Navan Rd Ottawa ON L4K 0E3	ECA

Approval No: 2427-AETKQ5
Approval Date: 2016-11-14
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
Approval Type: ECA-AIR
Project Type: AIR
Address: 3354 Navan Rd
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/2806-A65L8C-14.pdf

MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	73 of 99	E/249.9	79.6 / 2.63	Progressive Waste Solutions Canada Inc. 3354 Navan Rd Ottawa ON K1B 1H9	WDS

Approval No: A460702

Total Area (ha):

Mob Unit Cert No:				**Landfill Cap (m³):**	
EBR Registry No:				**Transfer Area (ha):**	
Status:	Approved			**Transfer Cap (m³):**	
Facility Type:				**Transfer Cert No:**	
Record Type:	ECA			**Inciner. Area (ha):**	
Link Source:	IDS			**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES			**Process Area (m³):**	
Application Status:				**Process Cap (m³/d):**	
Issue Date:	2017-03-14			**Process Vol (m³):**	
Input Date:				**Process Feed (m³):**	
Date Received:				**Site Concession:**	
Est Closure Date:				**Site Region/County:**	
Mobile Capacity:				**SWP Area Name:**	South Nation
Mobile Units:				**MOE District:**	Ottawa
Mobile Description:				**District Office:**	
Prop City:				**Latitude:**	
Prop Postal:				**Longitude:**	
Prop Phone:				**Geometry X:**	
Serial Link:				**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES				
Proponent:					
Prop Address:					
Proponent County/District:					
Full Address:	3354 Navan Rd				
Site Lot:					
Waste Class Code:					
Waste Class:					
Waste Type:					
Waste Type Other:					
Waste Description:					
Landfill Monitoring:					
Landfill Ctrl Type:					
Site Closing Description:					
Project Description:					
Municipalities Served:					
Approval Description:					
Other Approvals/Permits:					
PDF URL:	https://www.accessenvironment.ene.gov.on.ca/instruments/1147-AJFHCZ-14.pdf				

3	74 of 99	E/249.9	79.6 / 2.63	**Progressive Waste Solutions Canada Inc.** **3354 Navan Rd** **Ottawa ON L4K 0C3**	WDS

Approval No:	A460702			**Total Area (ha):**	
Mob Unit Cert No:				**Landfill Cap (m³):**	
EBR Registry No:				**Transfer Area (ha):**	
Status:	Approved			**Transfer Cap (m³):**	
Facility Type:				**Transfer Cert No:**	
Record Type:	ECA			**Inciner. Area (ha):**	
Link Source:	IDS			**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES			**Process Area (m³):**	
Application Status:				**Process Cap (m³/d):**	
Issue Date:	2015-06-08			**Process Vol (m³):**	
Input Date:				**Process Feed (m³):**	
Date Received:				**Site Concession:**	
Est Closure Date:				**Site Region/County:**	
Mobile Capacity:				**SWP Area Name:**	South Nation
Mobile Units:				**MOE District:**	Ottawa
Mobile Description:				**District Office:**	
Prop City:				**Latitude:**	
Prop Postal:				**Longitude:**	
Prop Phone:				**Geometry X:**	
Serial Link:				**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES				

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354 Navan Rd
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/7116-9TULG2-14.pdf

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	75 of 99	E/249.9	79.6 / 2.63	BFI Canada Inc. 3354- Navan Rd Ottawa ON M9W 6V1	WDS

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Approved
Facility Type:
Record Type: ECA
Link Source: IDS
Project Type: WASTE DISPOSAL SITES
Application Status:
Issue Date: 2012-06-13
Input Date:
Date Received:
Est Closure Date:
Mobile Capacity:
Mobile Units:
Mobile Description:
Prop City:
Prop Postal:
Prop Phone:
Serial Link:
Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354- Navan Rd
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/8874-8SNQHQ-14.pdf

Total Area (ha):
Landfill Cap (m^3):
Transfer Area (ha):
Transfer Cap (m^3):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m^3):
Process Cap (m^3/d):
Process Vol (m^3):
Process Feed (m^3):
Site Concession:
Site Region/County:
SWP Area Name: South Nation
MOE District: Ottawa
District Office:
Latitude:
Longitude:
Geometry X:
Geometry Y:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	76 of 99	E/249.9	79.6 / 2.63	Waste Services Inc. 3354 Navan Road Ottawa ON K4B 1H9	WDS

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Revoked and/or Replaced	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2008-03-07	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	Rideau Valley
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	45.424
Prop Postal:		**Longitude:**	-75.5055
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:			
Prop Address:			
Proponent County/District:			
Full Address:	3354 Navan Road		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	77 of 99	E/249.9	79.6 / 2.63	Waste Services (CA) Inc. 3354 Navan Rd Ottawa ON L7L 6Z8	ECA

Approval No:	4816-7C7M6C	**MOE District:**	
Approval Date:	2009-04-16	**City:**	
Status:	Revoked and/or Replaced	**Longitude:**	
Record Type:	ECA	**Latitude:**	
Link Source:	IDS	**Geometry X:**	
SWP Area Name:		**Geometry Y:**	
Approval Type:	ECA-INDUSTRIAL SEWAGE WORKS		
Project Type:	INDUSTRIAL SEWAGE WORKS		
Address:	3354 Navan Rd		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/8904-7BDU5X-14.pdf		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	78 of 99	E/249.9	79.6 / 2.63	943162 Ontario Inc. 3354 Navan Road Ottawa ON K4B 1H9	ECA

Approval No:	A860296	**MOE District:**	Ottawa
Approval Date:	2000-10-04	**City:**	
Status:	Approved	**Longitude:**	-75.5055
Record Type:	ECA	**Latitude:**	45.424
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-WASTE MANAGEMENT SYSTEMS		
Project Type:	WASTE MANAGEMENT SYSTEMS		
Address:	3354 Navan Road		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/8728-4PHTGM-14.pdf		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	79 of 99	E/249.9	79.6 / 2.63	943162 Ontario Inc. 3354 Navan Road Ottawa ON	ECA

Approval No:	A860296	**MOE District:**	Ottawa
Approval Date:	2000-10-25	**City:**	
Status:	Approved	**Longitude:**	-75.5055
Record Type:	ECA	**Latitude:**	45.424
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-WASTE MANAGEMENT SYSTEMS		
Project Type:	WASTE MANAGEMENT SYSTEMS		
Address:	3354 Navan Road		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/7638-4Q8NLH-14.pdf		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	80 of 99	E/249.9	79.6 / 2.63	Waste Services (CA) Inc. 3354 Navan Rd Ottawa ON L7L 6Z8	ECA

Approval No:	5616-86NKNW	**MOE District:**	
Approval Date:	2010-06-29	**City:**	
Status:	Approved	**Longitude:**	
Record Type:	ECA	**Latitude:**	
Link Source:	IDS	**Geometry X:**	
SWP Area Name:		**Geometry Y:**	
Approval Type:	ECA-INDUSTRIAL SEWAGE WORKS		
Project Type:	INDUSTRIAL SEWAGE WORKS		
Address:	3354 Navan Rd		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/6600-86BNNL-14.pdf		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	81 of 99	E/249.9	79.6 / 2.63	BFI Canada Inc. 3354 Navan Rd Ottawa ON M9W 6V1	ECA

Approval No:	3536-8APNZD	**MOE District:**	
Approval Date:	2010-11-24	**City:**	
Status:	Revoked and/or Replaced	**Longitude:**	
Record Type:	ECA	**Latitude:**	
Link Source:	IDS	**Geometry X:**	
SWP Area Name:		**Geometry Y:**	
Approval Type:	ECA-AIR		
Project Type:	AIR		
Address:	3354 Navan Rd		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/2742-8ADJ2R-14.pdf

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3 | ***82 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***Waste Services (CA) Inc.***
3354 Navan Rd
Ottawa ON L7L 6Z8 | ***ECA***

Approval No: 6733-7BYS9A
Approval Date: 2009-04-16
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
Approval Type: ECA-AIR
Project Type: AIR
Address: 3354 Navan Rd
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/5088-7BDU3Z-14.pdf
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:

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3 | ***83 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***Waste Services Inc.***
3354 Navan Road
Ottawa ON K4B 1H9 | ***ECA***

Approval No: 6141-59XKF9
Approval Date: 2002-05-10
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-AIR
Project Type: AIR
Address: 3354 Navan Road
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/9828-52VJAS-14.pdf
MOE District: Ottawa
City:
Longitude: -75.5055
Latitude: 45.424
Geometry X:
Geometry Y:

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3 | ***84 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***Waste Connections of Canada***
3354 Navan Road
Ottawa (Navan) ON K4B 1H9 | ***GEN***

Generator No: ON1983400
Status:
Approval Years: 2016
Contam. Facility: No
MHSW Facility: No
SIC Code: 562210
SIC Description: WASTE TREATMENT AND DISPOSAL
PO Box No:
Country: Canada
Choice of Contact: CO_ADMIN
Co Admin: Laura Huneault
Phone No Admin: 613-824-7289 Ext.238

Detail(s)

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

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3 | ***85 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***city of ottawa***
3354 Navan Road
City of Ottawa ON K4B 1H9 | ***GEN***

Generator No: ON3141088
Status:
Approval Years: 2015
Contam. Facility: No
MHSW Facility: Yes
SIC Code: 913150
SIC Description: 913150

PO Box No:
Country: Canada
Choice of Contact: CO_ADMIN
Co Admin: Cameron Neale
Phone No Admin: 613 580 2424 Ext.25102

Detail(s)

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 212

Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 121
Waste Class Desc: ALKALINE WASTES - HEAVY METALS

Waste Class: 146
Waste Class Desc: OTHER SPECIFIED INORGANICS

Waste Class: 147
Waste Class Desc: CHEMICAL FERTILIZER WASTES

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

3	86 of 99	E/249.9	79.6 / 2.63	city of ottawa 3354 Navan Road City of Ottawa ON K4B 1H9	GEN

Generator No: ON3141088
Status:
Approval Years: 2016
Contam. Facility: No
MHSW Facility: Yes
SIC Code: 913150
SIC Description: 913150

PO Box No:
Country: Canada
Choice of Contact: CO_ADMIN
Co Admin: Cameron Neale
Phone No Admin: 613 580 2424 Ext.25102

Detail(s)

Waste Class: 121
Waste Class Desc: ALKALINE WASTES - HEAVY METALS

Waste Class: 146
Waste Class Desc: OTHER SPECIFIED INORGANICS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 147
Waste Class Desc: CHEMICAL FERTILIZER WASTES

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

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3 | **87 of 99** | **E/249.9** | **79.6 / 2.63** | **Progressive Waste Solutions Canada Inc.**
3354 Navan Road
Ottawa (Navan) ON K4B 1H9 | **GEN**

Generator No: ON1983400
Status:
Approval Years: 2015
Contam. Facility: No
MHSW Facility: No
SIC Code: 562210
SIC Description: WASTE TREATMENT AND DISPOSAL

PO Box No:
Country: Canada
Choice of Contact: CO_ADMIN
Co Admin: John Yablonski
Phone No Admin: 613-824-7289 Ext.234

Detail(s)

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

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3 | **88 of 99** | **E/249.9** | **79.6 / 2.63** | **city of ottawa**
3354 Navan Road
City of Ottawa ON K4B 1H9 | **GEN**

Generator No: ON3141088
Status:
Approval Years: 2014
Contam. Facility: No
MHSW Facility: Yes
SIC Code: 913150

PO Box No:
Country: Canada
Choice of Contact: CO_ADMIN
Co Admin: Peter A Ross
Phone No Admin: 613 580 2424 Ext.12660

SIC Description: 913150

Detail(s)

Waste Class: 147
Waste Class Desc: CHEMICAL FERTILIZER WASTES

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 331
Waste Class Desc: WASTE COMPRESSED GASES

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 261
Waste Class Desc: PHARMACEUTICALS

Waste Class: 146
Waste Class Desc: OTHER SPECIFIED INORGANICS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 312
Waste Class Desc: PATHOLOGICAL WASTES

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 121
Waste Class Desc: ALKALINE WASTES - HEAVY METALS

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 112
Waste Class Desc: ACID WASTE - HEAVY METALS

Waste Class: 242
Waste Class Desc: HALOGENATED PESTICIDES

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3 | **89 of 99** | **E/249.9** | **79.6 / 2.63**

BFI Canada Inc.
3354 Navan Road
Ottawa (Navan) ON K4B 1H9

GEN

Generator No: ON1983400
Status:
Approval Years: 2014
Contam. Facility: No
MHSW Facility: No
SIC Code: 562210
SIC Description: WASTE TREATMENT AND DISPOSAL

PO Box No:
Country: Canada
Choice of Contact: CO_ADMIN
Co Admin: John Yablonski
Phone No Admin: 613-824-7289 Ext.234

Detail(s)

Waste Class: 148
Waste Class Desc: INORGANIC LABORATORY CHEMICALS

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Waste Class: 221
Waste Class Desc: LIGHT FUELS

Waste Class: 113
Waste Class Desc: ACID WASTE - OTHER METALS

Waste Class: 149
Waste Class Desc: LANDFILL LEACHATES

Waste Class: 145
Waste Class Desc: PAINT/PIGMENT/COATING RESIDUES

Waste Class: 263
Waste Class Desc: ORGANIC LABORATORY CHEMICALS

Waste Class: 232
Waste Class Desc: POLYMERIC RESINS

Waste Class: 212
Waste Class Desc: ALIPHATIC SOLVENTS

Waste Class: 251
Waste Class Desc: OIL SKIMMINGS & SLUDGES

Waste Class: 213
Waste Class Desc: PETROLEUM DISTILLATES

3	***90 of 99***	***E/249.9***	***79.6 / 2.63***	***city of ottawa Solid Waste 3354 Navan Road City of Ottawa ON K4B 1H9***	***GEN***

Generator No: ON3141088
Status: Registered
Approval Years: As of Dec 2018
Contam. Facility:
MHSW Facility:
SIC Code:
SIC Description:

PO Box No:
Country: Canada
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 112 C
Waste Class Desc: Acid solutions - containing heavy metals

Waste Class: 121 C
Waste Class Desc: Alkaline slutions - containing heavy metals

Waste Class: 145 I
Waste Class Desc: Wastes from the use of pigments, coatings and paints

Waste Class: 145 L
Waste Class Desc: Wastes from the use of pigments, coatings and paints

Waste Class: 146 T
Waste Class Desc: Other specified inorganic sludges, slurries or solids

Waste Class: 147 I
Waste Class Desc: Chemical fertilizer wastes

Waste Class: 148 B
Waste Class Desc: Misc. wastes and inorganic chemicals

Waste Class: 148 C
Waste Class Desc: Misc. wastes and inorganic chemicals

Waste Class: 148 I
Waste Class Desc: Misc. wastes and inorganic chemicals

Waste Class: 212 L
Waste Class Desc: Aliphatic solvents and residues

Waste Class: 221 I
Waste Class Desc: Light fuels

Waste Class: 242 A
Waste Class Desc: Halogenated pesticides and herbicides

Waste Class: 252 L
Waste Class Desc: Waste crankcase oils and lubricants

Waste Class: 261 A
Waste Class Desc: Pharmaceuticals

Waste Class: 263 I
Waste Class Desc: Misc. waste organic chemicals

Waste Class: 312 P
Waste Class Desc: Pathological wastes

Waste Class: 331 I
Waste Class Desc: Waste compressed gases including cylinders

Waste Class: 331 R
Waste Class Desc: Waste compressed gases including cylinders

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	91 of 99	E/249.9	79.6 / 2.63	***Waste Connections of Canada*** ***3354 Navan Road*** ***Ottawa (Navan) ON K4B 1H9***	GEN

Generator No: ON1983400
Status: Registered
Approval Years: As of Dec 2018
Contam. Facility:
MHSW Facility:
SIC Code:
SIC Description:

PO Box No:
Country: Canada
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 232 L
Waste Class Desc: Polymeric resins

Waste Class: 251 L
Waste Class Desc: Waste oils/sludges (petroleum based)

Waste Class: 113 L
Waste Class Desc: Acid solutions - containing other metals and non-metals

Waste Class: 252 L
Waste Class Desc: Waste crankcase oils and lubricants

Waste Class: 263 A
Waste Class Desc: Misc. waste organic chemicals

Waste Class: 263 L

Waste Class Desc:	Misc. waste organic chemicals
Waste Class:	145 I
Waste Class Desc:	Wastes from the use of pigments, coatings and paints
Waste Class:	148 A
Waste Class Desc:	Misc. wastes and inorganic chemicals
Waste Class:	149 L
Waste Class Desc:	Landfill leachate
Waste Class:	212 L
Waste Class Desc:	Aliphatic solvents and residues
Waste Class:	213 I
Waste Class Desc:	Petroleum distillates
Waste Class:	221 I
Waste Class Desc:	Light fuels

3 | **92 of 99** | **E/249.9** | **79.6 / 2.63** | **Progressive Waste Solutions Canada Inc.**
3354 NAVAN ROAD NOT AVAILABLE
OTTAWA ON K4B1H9 | **NPRI**

NPRI ID:	10967	**Org ID:**	107219
Other ID:		**Submit Date:**	5/30/2016
No Other ID:		**Last Modified:**	11/18/2016 8:28:05 AM
Track ID:	138820	**Contact ID:**	
Report ID:	72821	**Cont Type:**	
Report Type:	NPRI	**Contact Title:**	
Rpt Type ID:	1	**Cont First Name:**	
Report Year:	2015	**Cont Last Name:**	
Not-Current Rpt?:	No	**Contact Position:**	
Yr of Last Filed Rpt:	2014	**Contact Fax:**	
Fac ID:	222792	**Contact Ph.:**	
Fac Name:	NAVAN LANDFILL	**Cont Area Code:**	
Fac Address1:	3354 NAVAN ROAD	**Contact Tel.:**	
Fac Address2:	NOT AVAILABLE	**Contact Ext.:**	
Fac Postal Zip:	K4B1H9	**Cont Fax Area Cde:**	
Facility Lat:	45.4244	**Contact Fax:**	
Facility Long:	-75.5002	**Contact Email:**	
DLS (Last Filed Rpt):		**Latitude:**	45.4244
Facility DLS:		**Longitude:**	-75.5002
Datum:	1983	**UTM Zone:**	
Facility Cmnts:		**UTM Northing:**	
URL:		**UTM Easting:**	
No of Empl.:	25	**Waste Streams:**	
Parent Co.:		**No Streams:**	
No Parent Co.:		**Waste Off Sites:**	
Pollut Prev Cmnts:		**No Off Sites:**	
Stacks:		**Shutdown:**	
No of Stacks:		**No of Shutdown:**	
Canadian SIC Code (2 digit):			
Canadian SIC Code:			
SIC Code Description:			
American SIC Code:			
NAICS Code (2 digit):	56		
NAICS 2 Description:	Administrative and support, waste management and remediation services		
NAICS Code (4 digit):	5622		
NAICS 4 Description:	Waste treatment and disposal		
NAICS Code (6 digit):	562210		
NAICS 6 Description:	Waste treatment and disposal		

Substance Release Report

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem:
Chem (fr):
Quantity: 3.612
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem:
Chem (fr):
Quantity: 1.614
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 6
Category Type Desc: Road dust
Category Type Desc (fr): Poussières de routes
Grouping: Total Air
Trans Code:
Chem:
Chem (fr):
Quantity: .361
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 2
Category Type Desc: Storage / Handling
Category Type Desc (fr): Rejets de stockage ou manutention
Grouping: Total Air
Trans Code: VOCg
Chem:
Chem (fr):
Quantity: .0294
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta
Chem:
Chem (fr):
Quantity: 1.614
Unit: tonnes
Basis of Estimate Cd: E2
Basis of Estimate Desc: E2- Published Emission Factors - In use from 2003 and onward

Category Type ID: 1
Category Type Desc: Stack / Point
Category Type Desc (fr): Rejets de cheminée ou ponctuels
Grouping: Total Air
Trans Code: ASta

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Chem:	
Chem (fr):	
Quantity:	71.1
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward
Category Type ID:	2
Category Type Desc:	Storage / Handling
Category Type Desc (fr):	Rejets de stockage ou manutention
Grouping:	Total Air
Trans Code:	VOCg
Chem:	
Chem (fr):	
Quantity:	.0044
Unit:	tonnes
Basis of Estimate Cd:	E2
Basis of Estimate Desc:	E2- Published Emission Factors - In use from 2003 and onward

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3 | **93 of 99** | **E/249.9** | **79.6 / 2.63** | **Progressive Waste Solutions Canada Inc.**
3354 Navan Rd
Ottawa ON K1B 1H9 | **WDS**

Approval No:	A460702	**Total Area (ha):**	
Mob Unit Cert No:		**Landfill Cap (m³):**	
EBR Registry No:		**Transfer Area (ha):**	
Status:	Approved	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	6/19/2018	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	0
Prop Postal:		**Longitude:**	0
Prop Phone:		**Geometry X:**	
Serial Link:		**Geometry Y:**	

Approval Type:	ECA-WASTE DISPOSAL SITES
Proponent:	
Prop Address:	
Proponent County/District:	
Full Address:	3354 Navan Rd
Site Lot:	
Waste Class Code:	
Waste Class:	
Waste Type:	
Waste Type Other:	
Waste Description:	
Landfill Monitoring:	
Landfill Ctrl Type:	
Site Closing Description:	
Project Description:	
Municipalities Served:	
Approval Description:	
Other Approvals/Permits:	
PDF URL:	https://www.accessenvironment.ene.gov.on.ca/instruments/6695-AVKLU9-14.pdf

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Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	94 of 99	E/249.9	79.6 / 2.63	Waste Connections of Canada Inc. 3354 Navan Rd Ottawa ON K4B 1H9	SPL

Ref No:	5846-B4R3XQ	**Discharger Report:**	
Site No:	9411-7BDU2B	**Material Group:**	
Incident Dt:	2018/09/18	**Health/Env Conseq:**	4 - Medium Environment
Year:		**Client Type:**	Corporation
Incident Cause:		**Sector Type:**	Miscellaneous Industrial
Incident Event:	Process Upset/Malfunction	**Agency Involved:**	
Contaminant Code:	99	**Nearest Watercourse:**	
Contaminant Name:	LEACHATE, TRASH CAN, COMPACTOR, ETC	**Site Address:**	3354 Navan Rd
Contaminant Limit 1:		**Site District Office:**	Ottawa
Contam Limit Freq 1:		**Site Postal Code:**	K4B 1H9
Contaminant UN No 1:	n/a	**Site Region:**	Eastern
Environment Impact:		**Site Municipality:**	Ottawa
Nature of Impact:		**Site Lot:**	
Receiving Medium:		**Site Conc:**	NA
Receiving Env:	Land	**Northing:**	5030224
MOE Response:	Yes	**Easting:**	460890
Dt MOE Arvl on Scn:		**Site Geo Ref Accu:**	NA
MOE Reported Dt:	2018/09/18	**Site Map Datum:**	NAD83
Dt Document Closed:		**SAC Action Class:**	Land Spills
Incident Reason:	Unknown / N/A	**Source Type:**	Unknown / N/A

Site Name: Navan Landfill
Site County/District: NA
Site Geo Ref Meth: 10-30 metres eg. Medium Quality GPS
Incident Summary: WSI Landfill: leachate spilling to road, CB and ditch. Navan Rd.
Contaminant Qty: 10 m³

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
3	95 of 99	E/249.9	79.6 / 2.63	Navan Landfill 3354 Navan Road Ottawa ON K4B1H9	GHG

GHG ID No:	G10975	**Public Contact:**	Normand Castonguay
Facility NPRI ID:	10967	**Pub Cont Phone:**	6138247289
DUNS No:		**Pub Cont Ext:**	226
Year:	2017	**Pub Cont Email:**	norm.castonguay@progressivewaste.com
Rprt Comp Legal Nm:	Waste Connections of Canada Inc.	**Pub Cont Mail Addr:**	3354 Navan Road
Rprt Comp Trade Nm:	Waste Connections of Canada Inc.	**Pub Cont City:**	Navan
Rprt Comp Bus No:	885237370	**Pub Cont Prov:**	Ontario
Emission Factors:	Applicable	**Pub Cont Postal Cd:**	K4B1H9
Engineer Estimates:	Not Applicable / Sans objet	**Latitude:**	45.42440
Mass Balance:	Not Applicable / Sans objet	**Longitude:**	-75.50020

GHG Emissions (kt):
Total Emissions (tonnes CO2e): 11004.354635
Monitoring or Direct Measure: Not Applicable / Sans objet
Facility GHG Data Link: https://climate-change.canada.ca/facility-emissions/GHGRP-G10975-2017.html
Public Contact Position: District Manager
NAICS Name: 562210
NAICS Code (English): Waste Treatment & Disposal
NAICS Code (French): Traitement & élimination des déchets
NAICS Data Link: http://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=307532&CVD=307548&CST=01012017&CLV=5&MLV=5&CPV=562210
Facility Detail: http://indicators-map.canada.ca/App/Detail?id=0110975&GoCTemplateCulture=en-CA

GHG Emission Details

CO2 tonnes:	1448.993	**HFC-143 t CO2e:**	0
CO2 tonnes CO2e:	1448.993	**HFC-227ea tonnes:**	
CH4 tonnes:	381.463863	**HFC-227ea t CO2e:**	0
CH4 tonnes CO2e:	9536.596575	**HFC-236fa tonnes:**	

N2O tonnes:	0.06297	***HFC-236fa t CO2e:***	0
N2O tonnes CO2e:	18.76506	***HFC-245ca tonnes:***	
HFC-23 tonnes:		***HFC-245ca t CO2e:***	0
HFC-23 tonnes CO2e:	0	***HFC Total t Co2e:***	0
HFC-32 tonnes:		***CF4 tonnes:***	
HFC-32 tonnes CO2e:	0	***CF4 tonnes CO2e:***	0
HFC-125 tonnes:		***C2F6 tonnes:***	
HFC-125 t CO2e:	0	***C2F6 tonnes CO2e:***	0
HFC-134a tonnes:		***C3F8 tonnes:***	
HFC-134a t CO2e:	0	***C3F8 tonnes CO2e:***	0
HFC-143a tonnes:		***C4F10 tonnes:***	
HFC-143a ton CO2e:	0	***C4F10 tonnes CO2e:***	0
HFC-152a tonnes:		***C4F8 tonnes:***	
HFC-152a ton CO2e:	0	***C4F8 tonnes CO2e:***	0
HFC-41 tonnes:		***C5F12 tonnes:***	
HFC-41 tonnes CO2e:	0	***C5F12 tonnes CO2e:***	0
HFC-43 10mee t:		***C6F14 tonnes:***	
HFC-43 10mee t CO2:	0	***C6F14 tonnes CO2e:***	0
HFC-134 tonnes:		***PFC Total t CO2e:***	0
HFC-134 t CO2e:	0	***SF6 tonnes:***	
HFC-143 tonnes:		***SF6 tonnes CO2e:***	0

3 ***96 of 99*** ***E/249.9*** ***79.6 / 2.63***

Waste Connections of Canada
3354 Navan Road
Ottawa (Navan) ON K4B 1H9

GEN

Generator No:	ON1983400	***PO Box No:***	
Status:	Registered	***Country:***	Canada
Approval Years:	As of Oct 2019	***Choice of Contact:***	
Contam. Facility:		***Co Admin:***	
MHSW Facility:		***Phone No Admin:***	
SIC Code:			
SIC Description:			

Detail(s)

Waste Class:	263 A
Waste Class Desc:	Misc. waste organic chemicals
Waste Class:	212 L
Waste Class Desc:	Aliphatic solvents and residues
Waste Class:	263 L
Waste Class Desc:	Misc. waste organic chemicals
Waste Class:	232 L
Waste Class Desc:	Polymeric resins
Waste Class:	148 A
Waste Class Desc:	Misc. wastes and inorganic chemicals
Waste Class:	213 I
Waste Class Desc:	Petroleum distillates
Waste Class:	251 L
Waste Class Desc:	Waste oils/sludges (petroleum based)
Waste Class:	113 L
Waste Class Desc:	Acid solutions - containing other metals and non-metals
Waste Class:	145 I
Waste Class Desc:	Wastes from the use of pigments, coatings and paints
Waste Class:	252 L

Waste Class Desc: Waste crankcase oils and lubricants

Waste Class: 149 L
Waste Class Desc: Landfill leachate

Waste Class: 221 I
Waste Class Desc: Light fuels

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3 | ***97 of 99*** | ***E/249.9*** | ***79.6 / 2.63*** | ***city of ottawa Solid Waste***
3354 Navan Road
City of Ottawa ON K4B 1H9 | ***GEN***

Generator No: ON3141088
Status: Registered
Approval Years: As of Oct 2019
Contam. Facility:
MHSW Facility:
SIC Code:
SIC Description:

PO Box No:
Country: Canada
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 331 I
Waste Class Desc: Waste compressed gases including cylinders

Waste Class: 221 I
Waste Class Desc: Light fuels

Waste Class: 261 A
Waste Class Desc: Pharmaceuticals

Waste Class: 148 C
Waste Class Desc: Misc. wastes and inorganic chemicals

Waste Class: 147 I
Waste Class Desc: Chemical fertilizer wastes

Waste Class: 312 P
Waste Class Desc: Pathological wastes

Waste Class: 212 L
Waste Class Desc: Aliphatic solvents and residues

Waste Class: 148 B
Waste Class Desc: Misc. wastes and inorganic chemicals

Waste Class: 146 T
Waste Class Desc: Other specified inorganic sludges, slurries or solids

Waste Class: 148 I
Waste Class Desc: Misc. wastes and inorganic chemicals

Waste Class: 242 A
Waste Class Desc: Halogenated pesticides and herbicides

Waste Class: 112 C
Waste Class Desc: Acid solutions - containing heavy metals

Waste Class: 252 L
Waste Class Desc: Waste crankcase oils and lubricants

Waste Class: 263 I
Waste Class Desc: Misc. waste organic chemicals

Waste Class: 121 C
Waste Class Desc: Alkaline slutions - containing heavy metals

Waste Class: 331 R
Waste Class Desc: Waste compressed gases including cylinders

Waste Class: 145 I
Waste Class Desc: Wastes from the use of pigments, coatings and paints

Waste Class: 145 L
Waste Class Desc: Wastes from the use of pigments, coatings and paints

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3 | **98 of 99** | **E/249.9** | **79.6 / 2.63**

Progressive Waste Solutions Canada Inc.
3354 Navan Rd
Ottawa ON K1B 1H9

WDS

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:
Status: Approved
Facility Type:
Record Type: ECA
Link Source: IDS
Project Type: WASTE DISPOSAL SITES
Application Status:
Issue Date: 2018-06-19
Input Date:
Date Received:
Est Closure Date:
Mobile Capacity:
Mobile Units:
Mobile Description:
Prop City:
Prop Postal:
Prop Phone:
Serial Link:
Approval Type: ECA-WASTE DISPOSAL SITES
Proponent:
Prop Address:
Proponent County/District:
Full Address: 3354 Navan Rd
Site Lot:
Waste Class Code:
Waste Class:
Waste Type:
Waste Type Other:
Waste Description:
Landfill Monitoring:
Landfill Ctrl Type:
Site Closing Description:
Project Description:
Municipalities Served:
Approval Description:
Other Approvals/Permits:
PDF URL: https://www.accessenvironment.ene.gov.on.ca/instruments/6695-AVKLU9-14.pdf

Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):
Transfer Cap (m³):
Transfer Cert No:
Inciner. Area (ha):
Inciner. Cap (t):
Process Area (m³):
Process Cap (m³/d):
Process Vol (m³):
Process Feed (m³):
Site Concession:
Site Region/County:
SWP Area Name: South Nation
MOE District: Ottawa
District Office:
Latitude:
Longitude:
Geometry X:
Geometry Y:

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3 | **99 of 99** | **E/249.9** | **79.6 / 2.63**

Waste Services Inc.
3354 Navan Road
Ottawa ON K4B 1H9

WDS

Approval No: A460702
Mob Unit Cert No:
EBR Registry No:

Total Area (ha):
Landfill Cap (m³):
Transfer Area (ha):

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Status:	Revoked and/or Replaced	**Transfer Cap (m³):**	
Facility Type:		**Transfer Cert No:**	
Record Type:	ECA	**Inciner. Area (ha):**	
Link Source:	IDS	**Inciner. Cap (t):**	
Project Type:	WASTE DISPOSAL SITES	**Process Area (m³):**	
Application Status:		**Process Cap (m³/d):**	
Issue Date:	2008-03-07	**Process Vol (m³):**	
Input Date:		**Process Feed (m³):**	
Date Received:		**Site Concession:**	
Est Closure Date:		**Site Region/County:**	
Mobile Capacity:		**SWP Area Name:**	South Nation
Mobile Units:		**MOE District:**	Ottawa
Mobile Description:		**District Office:**	
Prop City:		**Latitude:**	45.424
Prop Postal:		**Longitude:**	-75.5055
Prop Phone:		**Geometry X:**	-75.5055
Serial Link:		**Geometry Y:**	45.424
Approval Type:	ECA-WASTE DISPOSAL SITES		
Proponent:			
Prop Address:			
Proponent County/District:			
Full Address:	3354 Navan Road		
Site Lot:			
Waste Class Code:			
Waste Class:			
Waste Type:			
Waste Type Other:			
Waste Description:			
Landfill Monitoring:			
Landfill Ctrl Type:			
Site Closing Description:			
Project Description:			
Municipalities Served:			
Approval Description:			
Other Approvals/Permits:			
PDF URL:			

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4 | ***1 of 4*** | ***SSW/199.0*** | ***67.8 / -9.16*** | ***Claridge Homes (Carson) Inc.*** | ***ECA***

Ottawa ON K2P 0Y6

Approval No:	9611-7PUSMB	**MOE District:**	Ottawa
Approval Date:	2009-03-09	**City:**	
Status:	Approved	**Longitude:**	-75.51
Record Type:	ECA	**Latitude:**	45.422200000000004
Link Source:	IDS	**Geometry X:**	
SWP Area Name:	Rideau Valley	**Geometry Y:**	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Address:			
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/3395-7PTPTW-14.pdf		

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4 | ***2 of 4*** | ***SSW/199.0*** | ***67.8 / -9.16*** | ***Claridge Homes (Carson) Inc.*** | ***ECA***

Ottawa ON K2P 0Y6

Approval No:	5746-7PUSV9	**MOE District:**	Ottawa
Approval Date:	2009-03-09	**City:**	
Status:	Approved	**Longitude:**	-75.51
Record Type:	ECA	**Latitude:**	45.422200000000004
Link Source:	IDS	**Geometry X:**	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

SWP Area Name: Rideau Valley
Geometry Y:
Approval Type: ECA-Municipal Drinking Water Systems
Project Type: Municipal Drinking Water Systems
Address:
Full Address:
Full PDF Link:

---

4 | **3 of 4** | **SSW/199.0** | **67.8 / -9.16** | **Claridge Homes (Carson) Inc.**
Ottawa ON K2P 0Y6 | **ECA**

Approval No: 1961-6Z5TFX
Approval Date: 2007-04-17
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-Municipal Drinking Water Systems
Project Type: Municipal Drinking Water Systems
Address:
Full Address:
Full PDF Link:
MOE District: Ottawa
City:
Longitude: -75.51
Latitude: 45.422200000000004
Geometry X:
Geometry Y:

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4 | **4 of 4** | **SSW/199.0** | **67.8 / -9.16** | **Claridge Homes (Carson) Inc.**
Ottawa ON K2P 0Y6 | **ECA**

Approval No: 8697-6Z5TCD
Approval Date: 2007-04-17
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name: Rideau Valley
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/2229-6Z3TA7-14.pdf
MOE District: Ottawa
City:
Longitude: -75.51
Latitude: 45.422200000000004
Geometry X:
Geometry Y:

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5 | **1 of 1** | **NNE/185.2** | **81.9 / 4.87** | **Ashcroft Homes Inc.**
3323 Navan Road, Ottawa, Ontario. CITY OF OTTAWA
ON | **EBR**

EBR Registry No: 013-0286
Ministry Ref No: MNRF INST 29/17
Notice Type: Instrument Decision
Notice Stage: 860201388
Notice Date: September 01, 2017
Proposal Date: April 06, 2017
Year: 2017
Instrument Type: (ESA s.17(2) (c)) - Permit for activities with conditions to achieve overall benefit to the species
Off Instrument Name:
Posted By:
Company Name: Ashcroft Homes Inc.
Site Address:
Location Other:
Proponent Name:
Proponent Address: 18 Antares Drive, Ottawa Ontario, Canada K2E1A9
Comment Period:
Decision Posted:
Exception Posted:
Section:
Act 1:
Act 2:
Site Location Map:

URL:

Site Location Details:

3323 Navan Road, Ottawa, Ontario. CITY OF OTTAWA

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6 | ***1 of 2*** | ***N/81.5*** | ***80.9 / 3.87*** | ***1561976 Ontario Inc.***
3317 NAVAN RD, GLOUCESTER, ON, K4B 1H9
GLOUCESTER ON K4B 1H9 | ***RSC***

RSC ID:	53713	***Cert Date:***	7-May-09
RA No:		***Cert Prop Use No:***	No CPU
RSC Type:		***Intended Prop Use:***	Residential
Curr Property Use:	Agriculture/Other	***Qual Person Name:***	David Choo
Ministry District:	OTTAWA	***Stratified (Y/N):***	
Filing Date:	29-Jul-09	***Audit (Y/N):***	
Date Ack:		***Entire Leg Prop. (Y/N):***	Yes
Date Returned:		***Accuracy Estimate:***	0 to 1 meters
Restoration Type:		***Telephone:***	613-2267266x201
Soil Type:		***Fax:***	613-2267161
Criteria:		***Email:***	dchoo@ashcroft-homes.com
CPU Issued Sect 1686:	No		

Asmt Roll No:	061 460021 512100, 061 460021 510800 and 0614600 21512400
Prop ID No (PIN):	Part of PIN 04352-1622
Property Municipal Address:	3317 NAVAN RD, GLOUCESTER, ON, K4B 1H9
Mailing Address:	18 ANTARES DR, OTTAWA, ON, K2E 1A9
Latitude & Latitude:	45.43118820N 75.50949930W (converted from UTM)
UTM Coordinates:	NAD83 18-460146-5030978
Consultant:	
Legal Desc:	Part of Lots 3 and 4, Concession 4 (OF), Gloucester, being part 1 on Plan 4R-23678, Ottawa
Measurement Method:	Digitized from a map
Applicable Standards:	ESA Phase 1
RSC PDF:	

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6 | ***2 of 2*** | ***N/81.5*** | ***80.9 / 3.87*** | ***3317 Navan Rd***
Ottawa ON | ***EHS***

Order No:	20100305012	***Nearest Intersection:***	
Status:	C	***Municipality:***	
Report Type:	Custom Report	***Client Prov/State:***	ON
Report Date:	3/17/2010	***Search Radius (km):***	0.25
Date Received:	3/5/2010	***X:***	-75.508503
Previous Site Name:		***Y:***	45.428
Lot/Building Size:			
Additional Info Ordered:			

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7 | ***1 of 1*** | ***NNW/24.4*** | ***80.9 / 3.87*** | ***lot 5 con 4***
OTTAWA ON | ***WWIS***

Well ID:	7254951	***Data Entry Status:***	
Construction Date:		***Data Src:***	
Primary Water Use:	Not Used	***Date Received:***	12/29/2015
Sec. Water Use:		***Selected Flag:***	Yes
Final Well Status:	Abandoned-Other	***Abandonment Rec:***	Yes
Water Type:		***Contractor:***	4875
Casing Material:		***Form Version:***	7
Audit No:	Z220167	***Owner:***	
Tag:		***Street Name:***	3225 NAVAN ROAD
Construction Method:		***County:***	OTTAWA-CARLETON

Elevation (m):		***Municipality:***	GLOUCESTER TOWNSHIP
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	005
Well Depth:		***Concession:***	04
Overburden/Bedrock:		***Concession Name:***	OF
Pump Rate:		***Easting NAD83:***	
Static Water Level:		***Northing NAD83:***	
Flowing (Y/N):		***Zone:***	
Flow Rate:		***UTM Reliability:***	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	1005846525	***Elevation:***	85.962409
DP2BR:		***Elevrc:***	
Spatial Status:		***Zone:***	18
Code OB:		***East83:***	460025
Code OB Desc:		***North83:***	5030784
Open Hole:		***Org CS:***	UTM83
Cluster Kind:		***UTMRC:***	4
Date Completed:	12/9/2015	***UTMRC Desc:***	margin of error : 30 m - 100 m
Remarks:		***Location Method:***	wwr
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Annular Space/Abandonment Sealing Record

Plug ID:	1005954067
Layer:	1
Plug From:	0
Plug To:	
Plug Depth UOM:	m

Pipe Information

Pipe ID:	1005954058
Casing No:	0
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	1005954063
Layer:	
Material:	
Open Hole or Material:	
Depth From:	
Depth To:	
Casing Diameter:	
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Construction Record - Screen

Screen ID:	1005954064
Layer:	
Slot:	

Screen Top Depth:
Screen End Depth:
Screen Material:
Screen Depth UOM: m
Screen Diameter UOM: cm
Screen Diameter:

Results of Well Yield Testing

Pump Test ID: 1005954059
Pump Set At:
Static Level: 11.3
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: m
Rate UOM: LPM
Water State After Test Code: 0
Water State After Test:
Pumping Test Method: 0
Pumping Duration HR:
Pumping Duration MIN:
Flowing: N

Hole Diameter

Hole ID: 1005954061
Diameter: 12.2
Depth From: 0
Depth To: 32.7
Hole Depth UOM: m
Hole Diameter UOM: cm

---

8 | ***1 of 1*** | ***NNW/79.3*** | ***80.9 / 3.87*** | ***Ashcroft Homes - Eastboro Inc.***
3253 Navan Rd part 4 , 4 Ottawa front
Ottawa ON K2E 1A9 | ***ECA***

Approval No: 7692-85VRBV
Approval Date: 2010-06-01
Status: Revoked and/or Replaced
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: 3253 Navan Rd part 4 , 4 Ottawa front
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/3864-85NRTL-14.pdf

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9 | ***1 of 1*** | ***WNW/216.8*** | ***79.9 / 2.87*** | ***278 ROLLING MEADOWS CRES, OTTAWA ON*** | ***INC***

Incident No: 1785504
Incident ID:
Attribute Category: FS-Perform L1 Incident Insp
Status Code:
Incident Location: 278 ROLLING MEADOWS CRES, OTTAWA - CO RELEASE
Drainage System:
Sub Surface Contam.:
Aff. Prop. Use Water:

Contam. Migrated:	
Contact Natural Env.:	
Near Body of Water:	
Approx. Quant. Rel.:	
Equipment Model:	
Serial No:	
Residential App. Type:	
Commercial App. Type:	
Industrial App. Type:	
Institutional App. Type:	
Venting Type:	
Vent Connector Mater:	
Vent Chimney Mater:	
Pipeline Type:	
Pipeline Involved:	
Pipe Material:	
Depth Ground Cover:	
Regulator Location:	
Regulator Type:	
Operation Pressure:	
Liquid Prop Make:	
Liquid Prop Model:	
Liquid Prop Serial No:	
Equipment Type:	
Cylinder Capacity:	
Cylinder Capac. Units:	
Cylinder Material Type:	
Tank Capacity:	
Fuels Occurence Type:	CO Release
Fuel Type Involved:	Natural Gas
Date of Occurence:	2016/01/12 00:00:00
Time of Occurence:	14:00:00
Occur Insp Start Date:	2016/01/13 00:00:00
Any Health Impact:	No
Any Environmental Impact:	No
Was Service Interrupted:	Yes
Was Property Damaged:	Yes
Operation Type Involved:	Private Dwelling
Enforcement Policy:	NULL
Prc Escalation Required:	NULL
Task No:	6005926
Notes:	
Occurence Narrative:	furnace corrosion
Tank Material Type:	
Tank Storage Type:	
Tank Location Type:	
Pump Flow Rate Capac:	
Liquid Prop Notes:	

10	1 of 1	NNW/249.6	80.9 / 3.87	6230 Renaud Road, Ottawa ON	PINC

Incident ID:	2746686	**Health Impact:**	No
Incident No:	590120	**Environment Impact:**	No
Type:	FS-Pipeline Incident	**Property Damage:**	Yes
Status Code:	Pipeline Damage Reason Est	**Service Interupt:**	Yes
Fuel Occurrence Tp:	Pipeline Strike	**Enforce Policy:**	Yes
Fuel Type:	Natural Gas	**Public Relation:**	No
Tank Status:	RC Established	**Pipeline System:**	
Task No:	3341731	**Depth:**	41
Spills Action Centre:		**Pipe Material:**	Plastic
Method Details:	E-mail	**PSIG:**	53
Fuel Category:	Natural Gas	**Attribute Category:**	FS-Perform P-line Inc Invest
Date of Occurrence:	5/5/2011 0:00	**Regulator Location:**	Outside

Occurrence Start Date:	2011/06/16
Operation Type:	Construction Site (pipeline strike)
Pipeline Type:	Service / Riser Distribution Pipeline
Regulator Type:	Service Regulator (up to 60 psi intake)
Summary:	6230 Renaud Road, Ottawa - 1/2" Pipeline Hit
Reported By:	Armstrong, Alan - Enbridge
Affiliation:	Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)
Occurrence Desc:	failed to protect gas line
Damage Reason:	Excavation practices not sufficient
Notes:	debris from excavation fell on service

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11 | **1 of 1** | **NW/245.0** | **80.9 / 3.87** | **lot 4 con 4 ON** | **WWIS**

Well ID:	1501523	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Livestock	**Date Received:**	6/1/1962
Sec. Water Use:	Domestic	**Selected Flag:**	Yes
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	1504
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	OTTAWA-CARLETON
Elevation (m):		**Municipality:**	GLOUCESTER TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	004
Well Depth:		**Concession:**	04
Overburden/Bedrock:		**Concession Name:**	OF
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10023566	**Elevation:**	86.307312
DP2BR:	89	**Elevrc:**	
Spatial Status:		**Zone:**	18
Code OB:	r	**East83:**	459900.8
Code OB Desc:	Bedrock	**North83:**	5030982
Open Hole:		**Org CS:**	
Cluster Kind:		**UTMRC:**	5
Date Completed:	2/27/1962	**UTMRC Desc:**	margin of error : 100 m - 300 m
Remarks:		**Location Method:**	p5
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	930992064
Layer:	1
Color:	
General Color:	
Mat1:	05

Most Common Material: CLAY
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 0
Formation End Depth: 80
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 930992066
Layer: 3
Color: 2
General Color: GREY
Mat1: 15
Most Common Material: LIMESTONE
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 89
Formation End Depth: 145
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 930992065
Layer: 2
Color:
General Color:
Mat1: 13
Most Common Material: BOULDERS
Mat2: 09
Other Materials: MEDIUM SAND
Mat3:
Other Materials:
Formation Top Depth: 80
Formation End Depth: 89
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID:
Method Construction Code: 7
Method Construction: Diamond
Other Method Construction:

Pipe Information

Pipe ID: 10572136
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930039992
Layer: 2

Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	145
Casing Diameter:	2
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Construction Record - Casing

Casing ID:	930039991
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	90
Casing Diameter:	2
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	991501523
Pump Set At:	
Static Level:	4
Final Level After Pumping:	20
Recommended Pump Depth:	20
Pumping Rate:	8
Flowing Rate:	
Recommended Pump Rate:	8
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	2
Pumping Duration MIN:	0
Flowing:	N

Water Details

Water ID:	933454233
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	145
Water Found Depth UOM:	ft

12 ***1 of 1*** ***NW/245.2*** ***80.9 / 3.87*** ***ON*** ***BORE***

Borehole ID:	615092	***Inclin FLG:***	No
OGF ID:	215516034	***SP Status:***	Initial Entry
Status:		***Surv Elev:***	No
Type:	Borehole	***Piezometer:***	No
Use:		***Primary Name:***	
Completion Date:	FEB-1962	***Municipality:***	
Static Water Level:		***Lot:***	
Primary Water Use:		***Township:***	
Sec. Water Use:		***Latitude DD:***	45.431212
Total Depth m:	44.2	***Longitude DD:***	-75.512634
Depth Ref:	Ground Surface	***UTM Zone:***	18

Depth Elev:		**Easting:**	459901
Drill Method:		**Northing:**	5030982
Orig Ground Elev m:	85.3	**Location Accuracy:**	
Elev Reliabil Note:		**Accuracy:**	Not Applicable
DEM Ground Elev m:	86.3		
Concession:			
Location D:			
Survey D:			
Comments:			

Borehole Geology Stratum

Geology Stratum ID:	218400388	**Mat Consistency:**	
Top Depth:	24.4	**Material Moisture:**	
Bottom Depth:	27.1	**Material Texture:**	
Material Color:		**Non Geo Mat Type:**	
Material 1:	Boulders	**Geologic Formation:**	
Material 2:	Sand	**Geologic Group:**	
Material 3:		**Geologic Period:**	
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	BOULDERS.		

Geology Stratum ID:	218400389	**Mat Consistency:**	Firm
Top Depth:	27.1	**Material Moisture:**	
Bottom Depth:	44.2	**Material Texture:**	
Material Color:	Grey	**Non Geo Mat Type:**	
Material 1:	Limestone	**Geologic Formation:**	
Material 2:		**Geologic Group:**	
Material 3:		**Geologic Period:**	
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	LIMESTONE. GREY. 00145 FEET.D. CLAY. GREY,FIRM. 00010 040 00100 067 004000300 **Note: Many records provided by the department have a truncated [Stratum Description] field.		

Geology Stratum ID:	218400387	**Mat Consistency:**	
Top Depth:	0	**Material Moisture:**	
Bottom Depth:	24.4	**Material Texture:**	
Material Color:		**Non Geo Mat Type:**	
Material 1:	Clay	**Geologic Formation:**	
Material 2:		**Geologic Group:**	
Material 3:		**Geologic Period:**	
Material 4:		**Depositional Gen:**	
Gsc Material Description:			
Stratum Description:	CLAY.		

Source

Source Type:	Data Survey	**Source Appl:**	Spatial/Tabular
Source Orig:	Geological Survey of Canada	**Source Iden:**	1
Source Date:	1956-1972	**Scale or Res:**	Varies
Confidence:		**Horizontal:**	NAD27
Observatio:		**Verticalda:**	Mean Average Sea Level
Source Name:	Urban Geology Automated Information System (UGAIS)		
Source Details:	File: OTTAWA2.txt RecordID: 07600 NTS_Sheet:		
Confiden 1:			

Source List

Source Identifier:	1	**Horizontal Datum:**	NAD27
Source Type:	Data Survey	**Vertical Datum:**	Mean Average Sea Level
Source Date:	1956-1972	**Projection Name:**	Universal Transverse Mercator
Scale or Resolution:	Varies		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Source Name: Urban Geology Automated Information System (UGAIS)
Source Originators: Geological Survey of Canada

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13 | **1 of 1** | **NNW/250.3** | **80.9 / 3.87** | **lot 4 con 4 ON** | **WWIS**

Well ID:	1501526	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Domestic	**Date Received:**	2/14/1967
Sec. Water Use:	0	**Selected Flag:**	Yes
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	1504
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	OTTAWA-CARLETON
Elevation (m):		**Municipality:**	GLOUCESTER TOWNSHIP
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	004
Well Depth:		**Concession:**	04
Overburden/Bedrock:		**Concession Name:**	OF
Pump Rate:		**Easting NAD83:**	
Static Water Level:		**Northing NAD83:**	
Flowing (Y/N):		**Zone:**	
Flow Rate:		**UTM Reliability:**	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10023569	**Elevation:**	86.529022
DP2BR:	75	**Elevrc:**	
Spatial Status:		**Zone:**	18
Code OB:	r	**East83:**	459935.8
Code OB Desc:	Bedrock	**North83:**	5031002
Open Hole:		**Org CS:**	
Cluster Kind:		**UTMRC:**	5
Date Completed:	8/16/1966	**UTMRC Desc:**	margin of error : 100 m - 300 m
Remarks:		**Location Method:**	p5
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	930992074
Layer:	2
Color:	2
General Color:	GREY
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	75
Formation End Depth:	117
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	930992073
Layer:	1
Color:	3
General Color:	BLUE
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	0
Formation End Depth:	75
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	
Method Construction Code:	7
Method Construction:	Diamond
Other Method Construction:	

Pipe Information

Pipe ID:	10572139
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930039997
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	100
Casing Diameter:	2
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Construction Record - Casing

Casing ID:	930039998
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	117
Casing Diameter:	2
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	991501526
Pump Set At:	
Static Level:	30
Final Level After Pumping:	60

Recommended Pump Depth:	60
Pumping Rate:	8
Flowing Rate:	
Recommended Pump Rate:	6
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	2
Pumping Duration MIN:	0
Flowing:	N

Water Details

Water ID:	933454236
Layer:	1
Kind Code:	3
Kind:	SULPHUR
Water Found Depth:	117
Water Found Depth UOM:	ft

Unplottable Summary

Total: 13 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
CA	GLOUCESTER CITY	NAVAN RD.	GLOUCESTER CITY ON	
CA	APEX CONST. (VAULTEX CONST.)	NAVAN RD.	GLOUCESTER CITY ON	
CA	Ashcroft Homes - Eastboro Inc.	Ward 2	Ottawa ON	
CA	Claridge Homes (Carson) Inc.		Ottawa ON	
CA	Claridge Homes (Carson) Inc.		Ottawa ON	
CA	Ashcroft Homes - Eastboro Inc.		Ottawa ON	
ECA	Claridge Homes (Carson) Inc.		Ottawa ON	K2P 0Y6
ECA	City of Ottawa	Navan Road	Ottawa ON	K1S 5K2
ECA	City of Ottawa	Navan Rd	Ottawa ON	K2G 6J8
ECA	Ashcroft Homes - Eastboro Inc.		Ottawa ON	K4B 1H9
GEN	OTTAWA-CARLTON, REGIONAL MUN OF	REGIONAL ROAD #28 (NAVAN ROAD) C/O 175 LORETTA AVENUE NORTH	OTTAWA ON	K1Y 2Z7
GEN	OTTAWA-CARLTON, REGIONAL MUN OF 29-004	REGIONAL ROAD #28 (NAVAN ROAD) C/O 175 LORETTA AVENUE NORTH	OTTAWA ON	K1Y 2Z7
RSC	CLARIDGE HOMES (CARSON) INC.	No Municipal Address	Ottawa ON	

Unplottable Report

Site: ***GLOUCESTER CITY***
NAVAN RD. GLOUCESTER CITY ON

Database: ***CA***

Certificate #:	3-2067-87-
Application Year:	87
Issue Date:	11/17/1987
Approval Type:	Municipal sewage
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***APEX CONST. (VAULTEX CONST.)***
NAVAN RD. GLOUCESTER CITY ON

Database: ***CA***

Certificate #:	3-1234-86-
Application Year:	86
Issue Date:	9/11/1986
Approval Type:	Municipal sewage
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***Ashcroft Homes - Eastboro Inc.***
Ward 2 Ottawa ON

Database: ***CA***

Certificate #:	7692-85VRBV
Application Year:	2010
Issue Date:	6/1/2010
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***Claridge Homes (Carson) Inc.***
Ottawa ON

Database: ***CA***

Certificate #:	8697-6Z5TCD

Application Year: 2007
Issue Date: 4/17/2007
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Claridge Homes (Carson) Inc.***
Ottawa ON

Database: ***CA***

Certificate #: 9611-7PUSMB
Application Year: 2009
Issue Date: 3/9/2009
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Ashcroft Homes - Eastboro Inc.***
Ottawa ON

Database: ***CA***

Certificate #: 8786-8BATXA
Application Year: 2010
Issue Date: 11/18/2010
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Claridge Homes (Carson) Inc.***
Ottawa ON K2P 0Y6

Database: ***ECA***

Approval No: 8741-AU3KP5
Approval Date: 2017-12-20
Status: Approved
Record Type: ECA
Link Source: IDS
SWP Area Name:
MOE District:
City:
Longitude:
Latitude:
Geometry X:
Geometry Y:
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address:
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1645-ATXMXA-14.pdf

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Site: ***City of Ottawa***
Navan Road Ottawa ON K1S 5K2

Database: ***ECA***

Approval No:	2148-5PNPTW	***MOE District:***	
Approval Date:	2003-07-25	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-Municipal Drinking Water Systems		
Project Type:	Municipal Drinking Water Systems		
Address:	Navan Road		
Full Address:			
Full PDF Link:			

Site: ***City of Ottawa***
Navan Rd Ottawa ON K2G 6J8

Database: ***ECA***

Approval No:	7659-ALUK3A	***MOE District:***	
Approval Date:	2017-05-11	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Address:	Navan Rd		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/2093-ALCKN7-14.pdf		

Site: ***Ashcroft Homes - Eastboro Inc.***
Ottawa ON K4B 1H9

Database: ***ECA***

Approval No:	2215-BBTP2H	***MOE District:***	
Approval Date:	2019-05-12	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Address:			
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/9531-BBJRNK-14.pdf		

Site: ***OTTAWA-CARLTON, REGIONAL MUN OF***
REGIONAL ROAD #28 (NAVAN ROAD) C/O 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 2Z7

Database: ***GEN***

Generator No:	ON0303100	***PO Box No:***	
Status:		***Country:***	
Approval Years:	88,89,90	***Choice of Contact:***	
Contam. Facility:		***Co Admin:***	
MHSW Facility:		***Phone No Admin:***	
SIC Code:	8351		
SIC Description:	EXEC./LEGIS. ADMIN.		

Detail(s)

Waste Class:	252
Waste Class Desc:	WASTE OILS & LUBRICANTS

Site: ***OTTAWA-CARLTON, REGIONAL MUN OF 29-004***
REGIONAL ROAD #28 (NAVAN ROAD) C/O 175 LORETTA AVENUE NORTH OTTAWA ON K1Y 2Z7

Database: ***GEN***

Generator No: ON0303100
Status:
Approval Years: 94,95,96
Contam. Facility:
MHSW Facility:
SIC Code: 8351
SIC Description: EXEC./LEGIS. ADMIN.

PO Box No:
Country:
Choice of Contact:
Co Admin:
Phone No Admin:

Detail(s)

Waste Class: 252
Waste Class Desc: WASTE OILS & LUBRICANTS

Site: ***CLARIDGE HOMES (CARSON) INC.***
No Municipal Address Ottawa ON

Database: ***RSC***

RSC ID: 223098
RA No:
RSC Type: Phase 1 and 2 RSC
Curr Property Use: Agricultural/Other
Ministry District: Ottawa District Office
Filing Date: 2017/03/24
Date Ack:
Date Returned:
Restoration Type:
Soil Type:
Criteria:
CPU Issued Sect 1686:
Asmt Roll No: 061460021514215
Prop ID No (PIN): 04352-2075 (LT), 04352-2076 (LT), 04352-2077 (LT)
Property Municipal Address: No Municipal Address
Mailing Address:
Latitude & Latitude:
UTM Coordinates:
Consultant:
Legal Desc:
Measurement Method:
Applicable Standards:
RSC PDF: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=76631&fileName=BROWNFIELDS-E.pdf

Cert Date:
Cert Prop Use No:
Intended Prop Use: Residential
Qual Person Name: ADRIAN MENYHART
Stratified (Y/N):
Audit (Y/N):
Entire Leg Prop. (Y/N):
Accuracy Estimate:
Telephone:
Fax:
Email:

Document(s) Detail

Document Heading: Supporting Documents
Document Name: APECTable.pdf
Document Type: Area(s) of Potential Environmental Concern
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=78676&fileName=APECTable.pdf

Document Heading: Supporting Documents
Document Name: Table of Current and Past Uses.pdf
Document Type: Table of Current and Past Property Use
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=76636&fileName=Table+of+Current+and+Past+Uses.pdf

Document Heading: Supporting Documents
Document Name: Plan of Survey - January 2017.pdf
Document Type: A Current plan of Survey
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=76633&fileName=Plan+of+Survey+-+January+2017.pdf

Document Heading: Supporting Documents
Document Name: Phase II CSM Feb 2017.pdf

Document Type: Phase 2 Conceptual Site Model
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=76638&fileName=Phase+II+CSM+Feb+2017.pdf

Document Heading: Supporting Documents
Document Name: LawyersLetter.pdf
Document Type: Lawyer's letter consisting of a legal description of the property
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=78675&fileName=LawyersLetter.pdf

Document Heading: Supporting Documents
Document Name: certificatestatus.pdf
Document Type: Certificate of Status
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=76632&fileName=certificatestatus.pdf

Document Heading: Supporting Documents
Document Name: Transfer.pdf
Document Type: Copy of any deed(s), transfer(s) or other document(s)
Document Link: https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/viewDocument.action?attachmentId=78674&fileName=Transfer.pdf

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ***Note:*** *Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.*

Abandoned Aggregate Inventory: Provincial AAGR

The MAAP Program maintains a database of abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.*

Government Publication Date: Sept 2002*

Aggregate Inventory: Provincial AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Sep 2019

Abandoned Mine Information System: Provincial AMIS

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Government Publication Date: 1800-Oct 2018

Anderson's Waste Disposal Sites: Private ANDR

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the Ontario MOE Waste Disposal Site Inventory, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. Please note that the data is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1860s-Present

Aboveground Storage Tanks: Provincial AST

Historical listing of aboveground storage tanks made available by the Department of Natural Resources and Forestry. Includes tanks used to hold water or petroleum. This dataset has been retired as of September 25, 2014 and will no longer be updated.

Government Publication Date: May 31, 2014

Automobile Wrecking & Supplies: Private AUWR

This database provides an inventory of known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Government Publication Date: 1999-Jan 31, 2020

Borehole: Provincial BORE

A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc. For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

Government Publication Date: 1875-Jul 2018

Certificates of Approval: Provincial CA

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status. This database will no longer be updated, as CofA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Government Publication Date: 1985-Oct 30, 2011*

Dry Cleaning Facilities: Federal CDRY

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Government Publication Date: Jan 2004-Dec 2017

Commercial Fuel Oil Tanks: Provincial CFOT

Locations of commercial underground fuel oil tanks. This is not a comprehensive or complete inventory of commercial fuel tanks in the province; this listing is a copy of records of registered commercial underground fuel oil tanks obtained under Access to Public Information.
Note that the following types of tanks do not require registration: waste oil tanks in apartments, office buildings, residences, etc.; aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2017

Chemical Register: Private CHEM

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

Government Publication Date: 1999-Jan 31, 2020

Compressed Natural Gas Stations: Private CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 2012 - Feb 2020

Inventory of Coal Gasification Plants and Coal Tar Sites: Provincial COAL

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.*

Government Publication Date: Apr 1987 and Nov 1988*

Compliance and Convictions: Provincial CONV

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Government Publication Date: 1989-Nov 2019

Certificates of Property Use: Provincial CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994-Mar 31, 2020

Drill Hole Database: Provincial DRL

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Government Publication Date: 1886 - Sep 2019

Environmental Activity and Sector Registry: Provincial EASR

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Government Publication Date: Oct 2011-Mar 31, 2020

Environmental Registry: Provincial EBR

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Government Publication Date: 1994-Mar 31, 2020

Environmental Compliance Approval: Provincial ECA

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Oct 2011-Mar 31, 2020

Environmental Effects Monitoring: Federal EEM

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Government Publication Date: 1992-2007*

ERIS Historical Searches: Private EHS

ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Government Publication Date: 1999-Jan 31, 2020

Environmental Issues Inventory System: Federal EIIS

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Government Publication Date: 1992-2001*

Emergency Management Historical Event: Provincial EMHE

List of locations of historical occurrences of emergency events, including those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act, as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance. EMHE record details are reproduced by ERIS under License with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Government Publication Date: Dec 31, 2016

Environmental Penalty Annual Report: Provincial EPAR

This database contains data from Ontario's annual environmental penalty report published by the Ministry of the Environment and Climate Change. These reports provide information on environmental penalties for land or water violations issued to companies in one of the nine industrial sectors covered by the Municipal Industrial Strategy for Abatement (MISA) regulations.

Government Publication Date: Jan 1, 2011 - Dec 31, 2019

List of Expired Fuels Safety Facilities: Provincial EXP

List of facilities and tanks for which there was once a fuel registration. This is not a comprehensive or complete inventory of expired tanks/tank facilities in the province; this listing is a copy of previously registered tanks and facilities obtained under Access to Public Information. Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc; includes tanks which have been removed from the ground.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2017

Federal Convictions: Federal FCON

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land: Federal FCS

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

Government Publication Date: Jun 2000-Nov 2019

Federal Identification Registry for Storage Tank Systems (FIRSTS): Federal FED TANKS

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

Government Publication Date: May 31, 2018

Fisheries & Oceans Fuel Tanks: Federal FOFT

Fisheries & Oceans Canada maintains an inventory of aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Government Publication Date: 1964-Sep 2019

Fuel Storage Tank: Provincial FST

List of registered private and retail fuel storage tanks. This is not a comprehensive or complete inventory of private and retail fuel storage tanks in the province; this listing is a copy of registered private and retail fuel storage tanks, obtained under Access to Public Information.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2017

Fuel Storage Tank - Historic: Provincial FSTH

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks. Public records of private fuel storage tanks are only available since the registration became effective in September 1989. This information is now collected by the Technical Standards and Safety Authority.

Government Publication Date: Pre-Jan 2010*

Ontario Regulation 347 Waste Generators Summary: Provincial GEN

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

Government Publication Date: 1986-Jan 31, 2020

Greenhouse Gas Emissions from Large Facilities: Federal GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO2 eq).

Government Publication Date: 2013-Dec 2017

TSSA Historic Incidents: Provincial HINC

List of historic incidences of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen recorded by the TSSA in their previous incident tracking system. The TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of historical fuel spills and leaks in the province. This listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks: Federal IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

Government Publication Date: 1950-Aug 2003*

Fuel Oil Spills and Leaks: Provincial INC

Listing of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen reported to the Spills Action Centre (SAC). This is not a comprehensive or complete inventory of fuel-related leaks, spills, and incidents in the province; this listing in a copy of incidents reported to the SAC, obtained under Access to Public Information. Includes incidents from fuel-related hazards such as spills, fires, and explosions. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2017

Landfill Inventory Management Ontario: Provincial LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the ministry compiles new and updated information. The inventory will include small and large landfills. Additionally, each year the ministry will request operators of the larger landfills complete a landfill data collection form that will be used to update LIMO and will include the following information from the previous operating year. This will include additional information such as estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills will include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: Feb 28, 2019

Canadian Mine Locations: Private MINE

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Government Publication Date: 1998-2009*

Mineral Occurrences: Provincial MNR

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Jan 2020

National Analysis of Trends in Emergencies System (NATES): Federal NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

Government Publication Date: 1974-1994*

Non-Compliance Reports: Provincial NCPL

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

Government Publication Date: Dec 31, 2018

National Defense & Canadian Forces Fuel Tanks: Federal NDFT

The Department of National Defense and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

Government Publication Date: Up to May 2001*

National Defense & Canadian Forces Spills: Federal NDSP

The Department of National Defense and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

Government Publication Date: Mar 1999-Apr 2018

National Defence & Canadian Forces Waste Disposal Sites: Federal NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

Government Publication Date: 2001-Apr 2007*

National Energy Board Pipeline Incidents: Federal NEBI

Locations of pipeline incidents from 2008 to present, made available by the Canada Energy Regulator (CER) - previously the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008-Dec 31, 2019

National Energy Board Wells: Federal NEBP

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES): Federal NEES

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for previous Environment Canada spill datasets. NEES is composed of the historic datasets ' or Trends ' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

Government Publication Date: 1974-2003*

National PCB Inventory: Federal NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008*

National Pollutant Release Inventory: Federal NPRI

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

Government Publication Date: 1993-May 2017

Oil and Gas Wells: Private OGWE

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-Feb 29, 2020

Ontario Oil and Gas Wells: Provincial OOGW

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, and well cap date, license No., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

Government Publication Date: 1800-Jun 2019

Inventory of PCB Storage Sites: Provincial OPCB

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013

Orders: Provincial ORD

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Government Publication Date: 1994-Mar 31, 2020

Canadian Pulp and Paper: Private PAP

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Government Publication Date: 1999, 2002, 2004, 2005, 2009-2014

Parks Canada Fuel Storage Tanks: Federal PCFT

Canadian Heritage maintains an inventory of known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Government Publication Date: 1920-Jan 2005*

Pesticide Register: Provincial PES

The Ontario Ministry of the Environment and Climate Change maintains a database of licensed operators and vendors of registered pesticides.

Government Publication Date: 1988 - Mar 2020

Pipeline Incidents: Provincial PINC

List of pipeline incidents (strikes, leaks, spills). This is not a comprehensive or complete inventory of pipeline incidents in the province; this listing in an historical copy of records previously obtained under Access to Public Information. Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2017

Private and Retail Fuel Storage Tanks: Provincial PRT

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

Government Publication Date: 1989-1996*

Permit to Take Water: Provincial PTTW

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Government Publication Date: 1994-Mar 31, 2020

Ontario Regulation 347 Waste Receivers Summary: Provincial REC

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

Government Publication Date: 1986-2016

Record of Site Condition: Provincial RSC

The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use (such as residential) proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up.
RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Government Publication Date: 1997-Sept 2001, Oct 2004-Mar 2020

Retail Fuel Storage Tanks: Private RST

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

Government Publication Date: 1999-Jan 31, 2020

Scott's Manufacturing Directory: Private SCT

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011*

Ontario Spills: Provincial SPL

This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

Government Publication Date: 1988-Aug 2019

Wastewater Discharger Registration Database: Provincial SRDS

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Government Publication Date: 1990-Dec 31, 2017

Anderson's Storage Tanks: Private TANK

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1915-1953*

Transport Canada Fuel Storage Tanks: Federal TCFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 7,530 hectares (18,600 acres) of land in Pickering, Markham, and Uxbridge owned by the Government of Canada since 1972; properties on this land has been leased by the government since 1975, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970-Aug 2018

Variances for Abandonment of Underground Storage Tanks: Provincial VAR

Listing of variances granted for storage tank abandonment. This is not a comprehensive or complete inventory of tank abandonment variances in the province; this listing is a copy of tank abandonment variance records previously obtained under Access to Public Information. In Ontario, registered underground storage tanks must be removed within two years of disuse; if removal of a tank is not feasible, an application may be sought for a variance from this code requirement.
Records are not verified for accuracy or completeness.

Government Publication Date: Feb 28, 2017

Waste Disposal Sites - MOE CA Inventory: Provincial WDS

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Government Publication Date: Oct 2011-Mar 31, 2020

Waste Disposal Sites - MOE 1991 Historical Approval Inventory: Provincial WDSH

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Government Publication Date: Up to Oct 1990*

Water Well Information System: Provincial WWIS

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

Government Publication Date: Feb 28, 2019

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

December 2013

REPORT ON

Claridge Homes Spring Valley Trails Development – Phase 3 Buffer Study in Relation to the BFI Navan Waste Recycling and Disposal Facility

Submitted to:
Claridge Homes
210 Gladstone Avenue, Suite 2001
Ottawa, Ontario
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Attn: Jim Burghout

REPORT

Report Number: 07-1121-0232 (2000)

Distribution:

5 copies, 1 CD - City of Ottawa
2 copies, 1 CD - Claridge Homes
1 copy, 1 CD - Paterson Group Inc.
2 copies - Golder Associates Ltd.

Golder Associates

EXECUTIVE SUMMARY

The Claridge Homes (Claridge) Spring Valley Trails development is located on lands to the south of the intersection of Navan Road and Renaud Road in Ottawa, Ontario. The property is being developed in 3 Phases. Presently, Phases 1 and 2 have been approved. Phase 3 of the Claridge development is located within 500 metres of the BFI Canada Inc. (BFI) Navan Waste Recycling and Disposal Facility (BFI Navan Facility), a solid waste disposal site. According to Section 3.8 of the City of Ottawa (City) Official Plan, land within 500 metres of an operating or non-operating solid waste disposal site is considered to be within the influence area of the solid waste disposal site. This buffer study was performed on behalf of Claridge in consultation with BFI Canada Inc. to satisfy the requirements of Section 3.8.6 as it relates to Phase 3 of the Spring Valley Trails development area, which requires that a study be performed to assess the potential for the solid waste disposal site to have unacceptable or adverse effects on the proposed development or pose risks to human health and safety. Based on this site-specific assessment, a determination is to be made of the required buffer (or separation) between the waste disposal site and the proposed development.

As required under Section 3.8.7 of the City of Ottawa's Official Plan, this buffer study addresses the potential for impact to the Claridge site from the BFI Navan Facility due to contamination by leachate, surface water runoff, ground settlement, visual impact, air (dust), odour, and noise, soil contamination, and landfill gas migration.

The BFI Navan Facility is owned and operated by BFI under Environmental Compliance Approval (ECA) No. A460702. The BFI Navan Facility performs landfilling and/or processing/recycling of solid, non-hazardous industrial, commercial and institutional (IC&I) waste (including construction and demolition (C&D) waste), asbestos waste, dry non-putrescible domestic waste (non-organic) and impacted soil. Composting of leaf and yard materials was previously performed, but material has not been accepted for composting since 2009. The western edge of the BFI Navan Facility property is located approximately 100 metres from the eastern edge of the Claridge Spring Valley Trails development; an additional separation of 100 metres exists between the western toe of the landfill footprint and the BFI Navan Facility western property boundary, such that Phase 3 of the Claridge site is separated from the limit of waste placement by approximately 200 metres. In April 2009, BFI received *Environmental Protection Act* (EPA) Approval for the expansion of the BFI Navan Facility. The approved expansion design provided additional disposal capacity for an estimated 10 years of operation beyond 2012. As per an agreement made during the Environmental Assessment (EA) process, the site will close on reaching the currently approved capacity and there will not be an application made for future expansion.

Local geology in the area of the Claridge site and the BFI Navan Facility consists of a thick clay deposit overlain by sands of varying thickness. An escarpment which runs east-west through the Claridge site and the BFI Navan Facility was once covered by such sand deposits, which have been mostly eroded below the escarpment. Above the escarpment, sands are found to be 0.6 to 2.0 metres thick. A thick (20 to 35 metre) marine clay deposit underlies the entire area. Bedrock in the area is composed of shale of the Billings Formation.

Surface runoff from the east side of the BFI Navan Facility site drains to the Bear Brook drainage basin, which is part of the South Nation River watershed. The west side (and the Claridge site) drain into the Mud Creek drainage basin, which in turn drains into Green's Creek, part of the Rideau River watershed. The Mer Bleue bog, a unique and internationally recognized ecological feature, is located to the south of both sites.

Local groundwater flow in the area is from north to south, from the escarpment toward the edge of the Mer Bleue. The thick clay deposit acts as an aquitard or barrier to groundwater movement, such that lateral flow

occurs only through the surficial sand unit and upper weathered clay zone, which have a total thickness of a few metres. The water table is between 1 and 2 metres below ground surface north of the escarpment and near the ground surface south of the escarpment. Regional groundwater flow in the deep bedrock aquifer is eastward.

Infiltration of rain water into a landfill and decomposing waste creates a liquid called leachate which, if not managed properly, has the potential to impact groundwater in the vicinity of a landfill. In assessing the potential for groundwater contamination by leachate, the local geology and hydrogeology, approved engineered controls, and continued groundwater monitoring program were considered. The natural hydrogeological aquitard imposed by the thick clay deposit that underlies the area impedes the flow of groundwater, which flows from north to south, hydraulically cross-gradient to the Claridge site. Engineered controls include a leachate collection system below the northeast and central area of the waste footprint, and a perimeter collection trench along the west and south edges of the waste footprint. The leachate collection system is designed such that the groundwater elevation within the landfill is maintained at a level lower than the groundwater elevation in the surrounding area, creating a "hydraulic trap", which causes groundwater to flow toward the landfill, rather than away from it. In addition, the 100 metre wide west buffer between the landfill footprint and the BFI Navan Facility property boundary is occupied by a berm of compacted silty clay soil, which adds an additional level of redundancy in mitigating the potential westward migration of leachate. Collected leachate is pumped to the City's sewer system via force main, but can also be pumped to tanker trucks as a contingency measure. A proposed addition to the leachate management system will be constructed during the approved horizontal expansion area of the landfill to the east. Groundwater monitoring is performed semi-annually, such that potentially impacted groundwater would be detected prior to any migration off-site. In summary, there is no mechanism by which landfill leachate can affect groundwater quality beneath the Claridge Phase 3 lands.

Studies performed during the approval process for the expansion of the BFI Navan Facility found that surface water runoff is not having an adverse effect on surface water receivers downstream of the landfill. The existing approved surface water management system at the BFI Navan Facility comprises a network of drainage ditches and roadside swales to intercept runoff generated on-site and direct it to either the east or west stormwater management pond. As the BFI Navan Facility landfill is an engineered landfill, potential contamination from a leachate release would be apparent in groundwater prior to surface water. Additionally, surface water monitoring is performed to assess surface water flow and quality at the BFI Navan Facility. As such, surface water on the Claridge site will not be impacted by the BFI Navan Facility.

Ground settlement on the Claridge lands is not expected to occur as a result of landfilling activities. Significant drawdown of the water table can cause ground settlement in clay soils. Water table drawdown as a result of excavations during landfill construction and the hydraulic trap design of the leachate collection system is limited in lateral extent due to the low permeability of the thick silty clay deposit. As a result, ground settlement on the Claridge site will not be caused by operations at the BFI Navan Facility, as confirmed by ongoing monitoring of groundwater levels within 10 metres of the landfill on the BFI site.

Potential visual impact from the BFI Navan Facility expansion was assessed during the expansion approval process. Though additional mitigation of visual impact was not deemed necessary along the west side of the BFI Navan Facility (which is closest to the Claridge property), existing mitigation measures provide an adequate visual barrier from viewpoints west of the BFI Navan Facility. Continued growth of vegetation will further decrease the landfill visibility with time. Additionally, in the longer term the waste mound will be landscaped with plantings so as to blend into the escarpment, which will occur early on in the lifespan of the landfill due to

phasing of the vertical expansion beginning on the west side of the BFI Navan Facility site and moving eastward away from the Claridge lands.

The predictive modelling of potential off-site impacts related to air quality, dust, odour and noise carried out as part of the approvals processes for the BFI Navan Facility landfill expansion included potential receptor locations within the Claridge Phase 3 lands. The modelling prediction results indicated that the site operations were expected to meet provincial requirements and not cause adverse effects off-site. There are a number of design and operational mitigation measures to control and minimize the potential for off-site atmospheric impacts. Ongoing monitoring programs demonstrate that the BFI Navan Facility is performing acceptably as expected based on predictions. Considering that operations on the landfill are progressively moving eastwards, away from the Claridge Phase 3 lands, it is expected that the Claridge Phase 3 lands will not experience unacceptable atmospheric effects from the BFI Navan Facility site.

Contamination of soil at the Claridge site is not expected to occur as a result of the BFI Navan Facility.

Hazardous waste is not accepted at the BFI Navan Facility.

As discussed in studies performed during the approval process for the BFI Navan Facility expansion, the migration of landfill gas generated by the BFI Navan Facility landfill is impeded by the naturally occurring geology and engineered controls for the landfill site. Landfill gas migrates through the path of least resistance; as such, the thick clay layer which underlies the area does not favor methane migration and gas would preferentially migrate toward the atmosphere through the waste or sand unit. Methane generated by the landfill is expected to be intercepted by the leachate collection perimeter trench or blocked by the perimeter clay berms before it would travel off site. Using a generally accepted approximation that significant methane migration may extend for a distance equal to ten times the depth of landfill between the ground surface and the water table, the maximum distance of significant methane migration would be expected to be 20 metres from the toe of the waste footprint, about one tenth the distance between the western waste limit of the BFI Navan Facility landfill and the eastern property boundary of the Claridge site. A proposed landfill gas collection system was approved as part of the expansion of the BFI Navan Facility and an interim landfill gas management system is currently in place. Furthermore, landfill gas monitoring is performed at a large number of locations on the BFI Navan Facility site, and indicates that off-site lateral migration of landfill gas has not occurred. For all of the reasons described above, the combination of the natural geological setting and engineered features mitigate the potential migration of landfill gas in the subsurface from the BFI Navan Facility.

The City has retained consultants in the past to review studies about potential impacts from the BFI Navan Facility on the surrounding properties. Outstanding concerns raised during previous reviews of the BFI Navan Facility expansion and its potential off-site impacts have been addressed throughout this study.

In conclusion, the BFI Navan Facility will not have unacceptable or adverse effects on the proposed development and will not pose any risks to human health and safety. It is recommended that the zone of influence of the BFI Navan Facility be reduced such that it excludes the Claridge Spring Valley Trails development lands.

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APPENDIX A

1.0 INTRODUCTION

Claridge Homes (Claridge) is constructing a residential development called Spring Valley Trails to the south of the intersection of Navan Road and Renaud Road in the east end of Ottawa, Ontario as shown in the Key Plan (Figure 1). The development has been proposed in 3 Phases; presently, Phases 1 and 2 have been approved. Phase 3 of the Claridge development is located within 500 metres of the BFI Canada Inc. (BFI) Navan Waste Recycling and Disposal Facility (BFI Navan Facility), a solid waste disposal site. According to Section 3.8 of the City of Ottawa (City) Official Plan, land within 500 metres of an operating or non-operating solid waste disposal site is considered to be within the influence area of the solid waste disposal site, as shown on Figure 2. As a result, the City requires that a buffer study be conducted, in consultation with the owner/operator of the waste disposal site, to assess the potential for the solid waste disposal site to have unacceptable or adverse effects on the proposed development or pose risks to human health and safety. Based on this site-specific assessment, a determination is to be made of the required buffer (or separation) between the waste disposal site and the proposed development.

The purpose of this buffer study is to satisfy the requirements of Section 3.8 of the City's Official Plan, as it relates to Phase 3 of the Spring Valley Trails development area. The study also addresses previous concerns expressed by the City with regard to development within 500 metres of the BFI Navan Facility. As required by Section 3.8.7 of the Official Plan, the buffer study addresses the following areas of potential concern: contamination by leachate, surface water runoff, ground settlement, visual impact, air (dust), odour, and noise, soil contamination, and landfill gas (LFG) migration. This study has been completed by Golder Associates Ltd. (Golder) on behalf of Claridge and in consultation with BFI.

2.0 SITE DESCRIPTION

2.1 Claridge Homes Spring Valley Trails Development

The Claridge Homes Spring Valley Trails Development (Claridge Development) is located on lands south of Navan Road and Renaud Road. The property measures approximately 800 metres by 800 metres in plan dimension (though is irregular in shape). It is bound to the south by a former CN Rail line and the Mer Bleue Conservation area (Mer Bleue), to the west by a residential development, to the north by Navan Road and Renaud Road, and to the east by a 100 metre wide commercial property followed by the BFI Navan Facility site further to the east. Figure 1 indicates the site location on a Key Plan. The development has been proposed in three Phases. Phases 1 and 2, located at the western portion of the Claridge Development, have been approved and are constructed or are under construction. The proposed Phase 3 comprises the eastern end of the property, and falls within 500 metres of the BFI Navan Facility landfill property. Phase 3 of the Claridge Development, to which this buffer study applies, will be hereafter referred to as the Claridge site. Figure 2 shows the extent of Phase 3, and its location in relation to the BFI Navan Facility landfill.

2.2 BFI Navan Facility

The BFI Navan Facility (formerly known as the Waste Services (CA) Inc. Navan Landfill) is located at 3354 Navan Road in the east end of Ottawa, Ontario, and is owned and operated by BFI under Environmental Compliance Approval (ECA) (formerly referred to as a Certificate of Approval) No. A460702. The BFI Navan Facility began operating in 1960, and performs landfilling and processing/recycling of wastes mostly generated within the City. The BFI Navan Facility accepts solid, non-hazardous industrial, commercial and institutional (IC&I) waste (including construction and demolition (C&D) waste), asbestos waste, dry non-putrescible domestic waste (non-organic) and impacted soil. Composting of leaf and yard materials was previously performed at the BFI Navan Facility, but material has not been accepted for composting since 2009. The north, west, south and east sides of the landfill footprint are surrounded by buffer zones of 30 to 70 metres, 100 metres, 10 metres and 140 metres, respectively. Note that on the south side of the landfill a 10-metre buffer zone exists between the south limits of the waste mound and the VIA Rail right-of-way (ROW) and an additional buffer strip with a width of 100 metres exists to the south of the VIA Rail ROW. Figure 3 shows the BFI Navan Facility site layout and its location in relation to the neighbouring Claridge Development to the west. Considering the total 100 metre width of buffer on the west side of the BFI Navan Facility and the adjacent 100 metre wide commercial property, the total separation distance between the limit of waste placement and the east limit of the Claridge property is 200 metres.

In April 2009, BFI received *Environmental Protection Act* (EPA) Approval for the expansion of the BFI Navan Facility. This approval was achieved following the approval under the *Environmental Assessment Act* of an Environmental Assessment Study Report (EASR) (Golder 2007b) in August 2007, and through the submission of the following applications:

- Amendment to ECA No. A460702 under Section 27 of the EPA;
- ECA (Air and Noise) under Section 9 of the EPA; and,
- ECA (Sewage Works) under Section 53 of the *Ontario Water Resources Act* (OWRA).

The EASR considered several options for the expansion of the landfill, and identified the preferred option from which the final landfill expansion details were developed. The EASR was accompanied by technical support documents detailing the air and odour assessment, noise assessment and the conceptual design for each of the expansion options. As part of the public consultation process, the EASR was peer reviewed on behalf of the City in full by Conestoga-Rovers & Associates (CRA) in 2007. Following the environmental assessment, the aforementioned ECA applications under Sections 9 and 27 of the EPA and under Section 53 of the OWRA were submitted. A Design and Operations (D&O) Report (Golder 2008b) was submitted providing the required technical support for the three applications. Additional supporting documents included a Hydrogeology, Hydrology and Geotechnical Study (Golder 2008a) and Financial Assurance documents. The application to amend ECA No. A460702 was approved, and ECA (Air and Noise) No. 6733-7BYS9A and ECA (Sewage Works) No. 4816-7C7M6C were issued for the expanded BFI Navan Facility. The approved expansion design provided additional disposal capacity for an estimated 10 years operation beyond 2012; it is currently expected that the landfill capacity will be reached in about 2025.

3.0 PHYSICAL SITE SETTING

Due to the physical proximity of the Claridge site and the BFI Navan Facility, the geology, hydrogeology, and hydrology for the two sites have been described concurrently.

3.1 Geology

The Claridge site and the BFI Navan Facility are situated in the region of the Ottawa Valley clay plain at the western edge of the Prescott and Russell sand plains. The lowland region is composed of unconsolidated glacial till deposits, varved clays and marine beds of clay and sand from the post-glacial Champlain Sea. The Claridge and BFI sites are located on the banks of a former channel of the Ottawa River. The post-glacial Ottawa River Channels (located east of Ottawa) are from 3 kilometres to 10 kilometres wide and up to 18 metres deep, and are floored with clay and silt and bordered by sand deltas. The escarpment which runs east-west through the Claridge site and the BFI Navan Facility was once covered by sand deposits which have been mostly eroded below the escarpment. Above the escarpment, surficial sands are found to be 0.6 to 2.0 metres thick in the landfill area. A thick (20 to 35 metre) marine clay deposit underlies the entire area. Bedrock in the area is composed of shale of the Billings Formation. Figure 4 provides a schematic cross-section through the landfill in the north-south direction, which shows the geology through the escarpment. Figure 5 contains a cross-section in the east-west direction through the eastern portion of the Claridge site and the western portion of the BFI Navan Facility, which shows the consistency in geology across the sites. The landfill geometry and certain features are also shown on the cross sections.

3.2 Hydrogeology and Hydrology

The BFI Navan Facility is located on a watershed divide between two major drainage watersheds - the Rideau River watershed to the west and the South Nation River watershed to the east. Surface runoff drains to both the east and west of the BFI Navan Facility site. The east side of the BFI Navan Facility site drains to the Bear Brook drainage basin, which is part of the South Nation River watershed. The west side, and the Claridge site, drain into the Mud Creek drainage basin, which in turn drains into Green's Creek, part of the Rideau River watershed. The Mer Bleue bog, a unique and internationally recognized ecological feature, is located to the south of both sites.

Studies have shown that the regional groundwater flow in the deep bedrock aquifer is eastward. Local groundwater flow in the area is from north to south as shown on Figure 6, i.e., from the escarpment towards the edge of the Mer Bleue. The thick clay deposit acts as an aquitard or barrier to groundwater movement, such that lateral flow occurs only through the surficial sand unit and upper weathered clay zone, which have a total thickness of a few metres. As indicated in the Hydrogeology, Hydrology and Geotechnical Study Report for the BFI Navan Facility (Golder, 2008a), the water table is between 1 and 2 metres below ground surface north of the escarpment, and very near the ground surface south of the escarpment. Historical groundwater level data from the BFI Navan Facility site indicate that a groundwater recharge zone exists north of the escarpment (where a downward hydraulic gradient exists), and that a discharge zone exists south of the escarpment (where an upward hydraulic gradient exists).

4.0 ASSESSMENT OF POTENTIAL LANDFILL IMPACTS

4.1 Groundwater Contamination by Leachate

Infiltration of rain water into a landfill and decomposing waste creates a liquid called leachate. If not managed properly, leachate has the potential to impact groundwater in the vicinity of a landfill. The following sections describe the generation of leachate at the BFI Navan Facility, the systems in place to manage the leachate (the natural geological and hydrogeological barriers and the leachate management system) and the approach used to detect if leachate has entered and is migrating in the groundwater flow system (the groundwater monitoring program).

4.1.1 Leachate Generation Rate and Quality

As discussed in the Hydrogeology, Hydrology and Geotechnical Study (Golder 2008a), leachate contaminants suggested in Ontario Regulation (O.Reg.) 232/98 (MOE 1998) to represent municipal solid waste are not all applicable to the BFI Navan Facility due to the type of waste accepted at the landfill site, which consists of IC&I waste and non-organic domestic waste. Following consultation with the MOE and the Ministry of Natural Resources (MNR) during the EA process for the landfill expansion, boron, dichloromethane, potassium, magnesium, ammonia and phenols were chosen as appropriate parameters for modelling the potential groundwater impacts due to leachate from the landfill.

4.1.2 Geological and Hydrogeological Barriers

The potential for leachate generated by the BFI Navan Facility landfill to impact the Claridge site has been assessed based on the direction of groundwater flow, the physical separation between the Claridge site and the landfill footprint, the leachate collection system (LCS) and the results of the contaminant transport modelling.

Shallow groundwater flow in the area is from north to south consistent with the relief of the property which changes in elevation by approximately 15 metres to 18 metres between the up-gradient and down-gradient boundaries of the landfill. The groundwater flow is shown in Figure 6, which has been generated using water elevation data from May 2013. Groundwater elevations within the landfill footprint are not available as monitoring wells are not constructed within the waste footprint; groundwater levels within the footprint are locally controlled by the leachate collection system beneath the base of the waste. As shown on Figure 6 the groundwater elevation north of the landfill (on top of the escarpment) is approximately 14 metres higher than the groundwater elevation south of the landfill (below the escarpment), indicating a strong horizontal hydraulic gradient from north to south. The Claridge site is located west and hydraulically cross-gradient of the BFI Navan Facility. The thick clay deposit in the area is of low permeability and acts as an aquitard (or barrier to groundwater movement). Shallow groundwater flow is thus controlled by the surficial sand layer and upper weathered clay zone above the clay aquitard. The slight upward gradient at the down-gradient boundary of the landfill would suggest there is upward vertical flow of shallow groundwater at this location, which would retard the potential for leachate migration into the deeper groundwater system. Groundwater flow in the deep bedrock aquifer is eastward and hydraulically downgradient (away) from the Claridge site, noting that the landfill area does not provide a source of infiltrating water to the deep aquifer due to the natural aquitard provided by the thick clay deposit.

In addition to being hydraulically cross-gradient and upgradient from the BFI Navan Facility, the Claridge site is physically separated from the landfill footprint by a 100 metre buffer zone (within the BFI Navan Facility property limits) and a 100 metre wide commercial property, reducing even further the potential for landfill leachate impacted groundwater from reaching the Claridge site.

Potentially impacted groundwater is cut off from the shallow groundwater flow system by the perimeter LCS located around the south and southwest sides of the landfill. The groundwater elevations in the area around the landfill footprint are higher than the base of the landfill and LCS, therefore creating a "hydraulic trap", i.e., a groundwater flow direction into the landfill as opposed to out of the landfill. Maintaining the LCS in a drained condition, which is the way the LCS is operated, results in a lowering of the water table at the southeast corner of the landfill by more than 3 metres below the original ground at the southeast corner of the landfill, and by about 2 metres at the southwest corner. This water table lowering influences the hydraulic gradients within the waste pile near the landfill's south boundary. A clay cut-off wall on the down-gradient (south) side of the LCS was constructed as a back up to the LCS to further limit the potential migration of leachate out of the landfill towards the south. The hydraulic trap, and presence and operation of a LCS decrease the potential risk of leachate impacting the surrounding groundwater.

Finally, contaminant transport modelling was completed during the landfill expansion approvals process as documented in the Hydrogeology, Hydrology and Geotechnical Study (Golder 2008a). The modelling found that movement of contaminants, both laterally at shallow depth south toward Mer Bleue and downward toward the bedrock aquifer is controlled by diffusion. It was concluded, based on the modelling, that any diffusion of contaminants laterally and downward at the landfill site itself will be negligible. Lateral diffusion of contaminants was modelled for movement southward as this is the direction of groundwater flow, and would thus also be the direction potentially most impacted by the diffusion of contaminants. As such, impacts from the diffusion of contaminants in all other directions (for example, westward in the direction of the Claridge site) would be less than those in the direction of groundwater flow. As such, long term diffusion of contaminants is not expected to impact groundwater beneath the Claridge site.

4.1.3 Leachate Management System

A plan view of the existing and approved eastern expansion of the leachate management system is presented in Figure 7. The existing leachate management system includes an underdrain system in the northwest corner of the waste footprint. This is connected via HDPE pipe to a perimeter leachate collection trench which runs along the west and south sides of the waste mound, and extends approximately 150 metres along the east side of the waste mound, starting at the southeast corner. The perimeter leachate collection trench consists of a granular-filled trench and perforated drainage pipe and access to the perimeter leachate collection trench is provided via a series of manholes. A LCS also exists beneath the northeast and central area of the waste footprint. All leachate collected is drained to a wet well and pump station located at the southeast corner of the pre-expansion waste footprint. Leachate is pretreated and pumped via forcemain to the City sewer system for final treatment at the City's municipal sewage treatment plant. As a contingency, leachate may also be transported by tanker truck to the municipal sewage treatment plant. A vertical manhole connected to the LCS in the northeast quadrant ("the central manhole") provides an alternative point of access to evacuate leachate if positive drainage to the wet well and pump station is not maintained. The need for an artificial constructed liner system is negated by the natural low-permeability clay soils at the base of the landfill, which act as a natural barrier to the transport of contaminants out of the landfill.

The proposed extension of the LCS in the disposal area to the east of the existing waste mound has been designed to meet or exceed the requirements in Schedule 1 of the Landfill Standards (MOE 1998) for a 100-year service life. The proposed LCS in this area includes an underdrain system consisting of perforated leachate collection pipes and a granular drainage blanket composed of clear stone, separated from the clay subgrade by a separator geotextile, and from the waste by a filter geotextile covered above by a sand layer to prevent fines from entering the drainage blanket. The leachate collection pipes will drain to a perforated header pipe which will drain to a sump. Leachate will be pumped from the sump to the existing wet well and leachate pump station. Leachate collection pipes will be sloped toward the header pipe, and the header pipe sloped toward the sump to achieve positive drainage. The sump will be located in the interior of the eastern area where settlement is expected to be highest, such that positive drainage will be maintained as settlement occurs. The subgrade will be prepared in a saw-tooth fashion to provide gradients toward the collection pipes. A perimeter collection trench will be constructed along the south limits of the eastern area as a secondary/contingency containment measure, and will be connected to the wet well/pump station by a gate valve.

BFI has constructed low permeability clay cut-off walls and clay berms at the perimeter of the waste footprint. At the edge of the fill area, native sand and other pervious materials have been removed and replaced with lower permeability compacted clay. These clay barriers are designed to contain leachate. Presently, the constructed clay barriers exist along the north perimeter, and the west and south perimeters of the fill area. As development of the landfill progresses into the eastern area, clay barriers will be constructed along the south and southeast perimeters.

In addition, the 100 metre wide west buffer of the BFI site is occupied by a large berm of compacted silty clay soil between the disposal area and the BFI property boundary (illustrated in Figure 5). This berm, together with the west side perimeter leachate collection pipe, provides protection against potential leachate migration in the westward direction.

4.1.4 Contingency Plan

The existing perimeter LCS and the perimeter LCS to be constructed at the down-gradient side of the expanded footprint area to the east will function as a contingency measure should the collection system beneath the waste fail. If these perimeter systems (and repaired or replacement perimeter systems) do not function as intended, and in the event of premature failure of the LCS such that a leachate mound is formed within the landfill, an additional contingency exists that involves the installation of purge wells through the cover of the landfill and into the granular blanket of the LCS. Details of the purge well installation would be determined based on the level of leachate mound control required. Leachate collected from the purge wells would be sent off-site for treatment. MOE approval to implement the contingency measures, if ever required, will be obtained through an amendment to the D&O Report for the expanded BFI Navan Facility landfill.

In addition, a compacted clay berm/cut-off trench will be built along the southern limits of the expanded footprint area to the east, extending some distance up the east side of the waste footprint. This clay berm would be keyed into the underlying native unweathered clay soils to provide a redundant level of containment in the unlikely event that leachate were to mound at the downgradient end of this eastern area.

In the event that positive drainage is not maintained within the LCS in the northeast quadrant, leachate can be removed through the central manhole.

4.1.5 Groundwater Monitoring

Groundwater monitoring has been performed at the BFI Navan Facility since 1981, and has occurred semi-annually since 1991. Groundwater monitoring is performed and reported as outlined in Condition 109 of ECA No. A460702. Groundwater monitoring is performed in the four stratigraphic units identified as a shallow surface sand layer, an upper weathered clay zone, an intact (unweathered) deposit of clay and a glacial till/upper bedrock zone. Monitoring wells are present in each of these units up-gradient, at the down-gradient edge of the waste pile and further down-gradient of the landfill. Monitoring well locations are shown on Figure 6.

Traditional methods of site compliance assessment involve comparing downgradient concentrations of site specific compliance evaluation parameters (parameters defined as site specific leachate indicator parameters) in groundwater to Reasonable Use Performance Objective (RUPO) concentrations, as defined by MOE Guideline B-7 (MOE 1994). RUPO concentrations for compliance evaluation parameters are calculated using the upper background concentration value at the site. Traditionally, a trigger concentration of a compliance evaluation parameter exceeds the RUPO for that parameter. Trigger concentrations may change over time as background concentrations from future monitoring programs are added to the data base.

Due to the poor natural (background) water quality at the BFI Navan Facility site, traditional methods of site compliance assessment provide very limited understanding of potential leachate impact. A comparison of water quality between the up-gradient station and the south property boundary station on the east side of the property, where there are no potential impacts from landfill activities, shows that there is a difference between the up-gradient and down-gradient water quality in the area of the landfill site. Several naturally occurring parameters, including boron, copper, iron, sodium, alkalinity, arsenic, bicarbonate, lead, TDS, COD and chloride are elevated at the southeast property boundary station. These naturally elevated parameters could potentially mask the presence of leachate impacts associated with the landfill. The RUPO for groundwater at the BFI Navan Facility would consider iron, manganese, and boron. Based on the natural water quality data, boron and iron are not good leachate indicator parameters, which would leave only manganese to evaluate compliance. Therefore, the MOE has agreed that RUPO is not an appropriate method of determining site compliance in the hydrogeologic setting of the BFI Navan Facility.

A site-specific trigger mechanism outlined in the Groundwater and Surface Water Trigger Mechanism report (Golder 2007a) was proposed in 2007, and approved during the expansion approval process. The leachate indicator parameter list for the BFI Navan Facility site includes alkalinity, ammonia, boron, chloride, hardness, magnesium, manganese and potassium. The list was derived based on both typical landfill and site specific leachate indicator parameters, taking into consideration historical concentrations of typical parameters observed in the leachate compared to those observed concentrations in groundwater. Concentrations of parameters that exceed background range are treated as potential exceedances which warrant further consideration. Trigger locations within the sand deposit, weathered clay zone, intact clay deposit, and glacial till/upper bedrock zone are located at the down-gradient (south) limit of the landfill footprint. .

In conclusion, groundwater is monitored on a regular basis and there are systems in place to detect if landfill leachate is beginning to impact the groundwater surrounding the landfill footprint (trigger mechanism). Steps would then be taken to determine how the leachate is reaching the groundwater and the situation would be rectified. This monitoring program and trigger mechanism further reduce the potential for landfill leachate to impact groundwater on the Claridge site.

The results of the groundwater monitoring to date show that leachate has not adversely affected groundwater quality in the surficial sand layer or upper weathered clay zone at a distance 10 metre south of the landfill (directly downgradient in terms of the groundwater flow direction).

4.1.6 Summary

Groundwater quality beneath the Claridge Phase 3 Spring Valley Trails land is protected from potential leachate impacts from the BFI Navan Facility by:

- The natural geologic setting, consisting of an extensive and thick deposit of low permeability silty clay soil;
- A groundwater flow direction from north to south (escarpment towards the edge of the Mer Bleue), not westward towards the Claridge site;
- A physical separation distance of 200 metres between the disposal area and the east property limit of the Phase 3 lands;
- An engineered perimeter leachate collector around the west and south side of the landfill, and a leachate collection system beneath the northeast and central portions of the disposal area and beneath the approved expanded footprint area further to the east; and,
- The design and operation of the leachate collection system, which creates a "hydraulic trap" and induces shallow groundwater flow towards the landfill, not away from it.

Ongoing groundwater monitoring shows that leachate has not affected groundwater quality at a distance of 10 metres beyond the downgradient (south) limit of the disposal area.

In conclusion, there is no apparent mechanism by which landfill leachate can affect groundwater quality beneath the Claridge Phase 3 lands.

4.2 Surface Water Runoff

The following sections describe the study undertaken to assess potential impact to surface water from the BFI Navan Facility landfill, the surface water management system in place and the surface water monitoring program.

4.2.1 Environmental Assessment Study Report

An assessment of the surface water environment was previously performed during the preparation of the EASR (Golder 2007b) for the BFI Navan Facility expansion. Both surface water quantity and surface water quality were assessed based on the conceptual model of surface flows for the BFI Navan Facility. The assessment found that the landfill is not having an adverse effect on downstream surface water receivers or the Mer Bleue.

4.2.2 Surface Water Management

The surface water management system at the BFI Navan Facility comprises a network of drainage ditches and roadside swales to intercept runoff generated at the BFI Navan Facility and direct it to either the east or west stormwater management pond. The east stormwater pond is located in the southeast corner of the BFI Navan Facility property, north of the Via Rail ROW and the discharge follows the same path south of the Via Rail ROW as the original pond servicing the east half of the site. Upstream flows originating to the northeast of the landfill

site are directed and conveyed to the Mer Bleue via the East By-Pass Ditch. The west stormwater pond is located in the northwest part of the BFI Navan Facility property approximately 275 m from the north property limit and discharges to the existing ditch which crosses the west property limit. Upstream flows originating to the north and northwest of the BFI Navan Facility site are diverted around the landfill by ditches that exist along the perimeters of the on-site buffer zone. The surface water management plan is shown in Figure 8.

Additionally, interim clay cover is placed over inactive portions of the existing waste mound to minimize runoff from the waste mound. Finished slopes are covered with clay soil, graded and seeded. Soil stockpiles are also covered with topsoil and/or compost and seeded for surface water and erosion control. To protect the perimeter clay slopes against erosion, clay diversion dikes and drainage swales have been constructed to collect surface run-off above the slope.

4.2.3 Surface Water Monitoring

Surface water monitoring is performed and reported as outlined in Condition 109 of ECA No. A460702. Surface water monitoring is performed three times per year to assess surface water quality and to estimate surface water flow at the BFI Navan Facility. Monitoring locations are shown in Figure 8.

Similar to groundwater, traditional compliance monitoring is not appropriate for the BFI Navan Facility. Surface water data at the BFI Navan Facility is variable over time and the Mer Bleue bog surface water quality is poor. It is difficult to assess surface water site compliance with scattered data. The BFI Navan Facility is an engineered landfill site; therefore, a release of leachate would be apparent in the underlying stratigraphic units prior to a surface water impact. As such, a surface water trigger mechanism would not be an effective component for the purpose of effectively protecting the off-site surface water/bog water regime. The site-specific groundwater based trigger mechanism discussed in Section 4.1.4 of this report is the appropriate approach for the BFI Navan Facility. Surface water quality monitoring continues at the BFI Navan Facility, with the samples analyzed for appropriate parameters of concern and evaluated for potential impacts. This approach was outlined in the approved Groundwater and Surface Water Trigger Mechanism report (Golder 2007a) and the MOE has agreed that this is the appropriate approach for the BFI Navan Facility.

4.2.4 Summary

Therefore, based on the EASR study and the surface water management system in place, the BFI Navan Facility landfill will not impact the surface water on the Claridge site. The site-specific groundwater trigger mechanism will detect landfill leachate impact in the groundwater before the BFI Navan Facility surface water is impacted. Steps would then be taken to prevent impacted groundwater from impacting the surface water at the BFI Navan Facility before it would have the potential to impact surface water outside of the BFI Navan Facility property.

4.3 Ground Settlement

Significant drawdown of the water table can cause ground settlement in clay soils. Drawdown of the water table in an area could be caused by dewatered excavations on adjacent land. The oldest western part of the BFI Navan Facility landfill operations consisted of placing waste essentially above the existing grade without a bottom leachate collection system. As shown on Figure 7, in the newer north central and eastern portions, an excavation has been made to a depth of about 12 metres into the clay escarpment to create the landfill cell and construct a leachate collection system. As mentioned previously, the hydraulic trap design in the north central and eastern portions induces groundwater flow towards/into the landfill, and lowers the water table within the

disposal area relative to the water table in the area beyond the landfill. Because of the low permeability silty clay deposit, the radius (or distance) of influence of the "dewatered" landfill disposal area is quite limited; this is shown by ongoing monitoring of groundwater levels on the BFI site both above and below the escarpment area within 10 of metres of the landfill. Considering that the "dewatered" portion of the BFI Navan landfill is physically separated by a minimum of about 500 metres from the closest east boundary of the Claridge lands, the BFI Navan Facility will not cause ground settlement on the Claridge site.

4.4 Visual Impact

An assessment of the visual impact from the approved BFI Navan Facility landfill expansion was performed as part of the EASR (Golder 2007b). Visual impact was assessed by determining the impact of the landfill from nine view points surrounding the BFI Navan Facility. View point 3, "From Field West of Landfill" is located in the eastern portion of the Claridge site. During the EASR, it was concluded that additional visual impact mitigation measures (berms) were only required for the north portion of the BFI Navan Facility site along Navan Road.

Existing visual impact mitigation measures along the west side of the landfill include a deciduous hedgerow, as well as planting along the existing crest of the landfill prior to the vertical expansion (raising) of the landfill. In the EASR (Golder 2007b), the landfill is noted as being visible between the deciduous trees, particularly during the leafless period of the year. Visibility of the landfill will decrease as growth at the base of the landfill continues. In addition, in the longer term the waste mound will be landscaped with plantings so as to blend into the escarpment. Lastly, the approved phasing of the landfill development involves first raising the west part of the fill area closest to the Claridge lands, so that this area can be completed, final cover and vegetation applied early on, which will shelter future filling activities further to the east from view on the Claridge lands.

4.5 Air, Odour and Noise

The following sections describe the studies undertaken regarding the potential for atmospheric impacts as a result of the expanded BFI Navan Facility, the improved atmospheric controls associated with the approved expansion, and the monitoring programs for air, odour and noise in place at the BFI Navan Facility.

4.5.1 Environmental Assessment Study Report

An air impact assessment for the BFI Navan Facility was produced as a component of the EASR (Golder 2007b) prepared for the then proposed (now approved) BFI Navan Facility expansion. The assessment considered the possible impacts to air, odour and noise from the design alternatives considered for the expansion. Sources of air quality and odour impacts from the landfill included dust from roads and loading/unloading activities, products of combustion from the landfill gas (LFG) flare and on-site vehicles, fugitive LFG emissions, and odour emissions from the active area of the landfill. Sources of noise impacts from the landfill site included operations equipment, the site maintenance facility, LFG flare, and leachate pumping facility.

Potential air quality and odour impacts from the landfill were assessed for compliance with O.Reg. 419/05 (MOE 2005) and for impacts to off-site receptors based on the predicted concentration of indicator compounds determined from dispersion modelling. Indicator compounds selected for the assessment included particulate matter associated with dust (suspended particulate matter (SPM) and particulate matter < 10 micrometres (PM_{10})), combustion gases associated with landfill gas flaring and on-site vehicles (nitrogen dioxide (NO_2) and sulphur dioxide (SO_2), hydrogen sulphide (H_2S), vinyl chloride, and odour. Off-site air quality indicator compounds and odour levels were predicted using the AERMOD dispersion modelling system, a regulatory

model recommended by the MOE. Four different groups of receptors used in the dispersion modelling; most notably, 285 sensitive receptors were placed in existing and future residential areas to establish the maximum exposure that residents near the landfill may experience. Figure 9 shows the location of all sensitive receptors considered in the modelling, and the Claridge site. Many of the sensitive receptor locations used in the modelling were within the Claridge site.

Potential noise impacts from the landfill were assessed at 17 existing or future receptor locations identified as the most sensitive in the vicinity of the BFI Navan Facility. Figure 10 shows the receptor locations, which included 3 future locations (R1, R2, R3) along the east limits of the Claridge site. Source sound level measurements at the BFI Navan Facility were taken using a sound level meter/realtime analyzer. Using the source sound level data, noise impact predictions were made for each receptor using the international standard ISO 9613-2 [AE4] on sound propagation outdoors.

The air quality and odour impact assessment found that all previously proposed landfill expansion alternatives, including the chosen alternative that received *Environmental Protection Act* approval in 2009, comply with O.Reg. 419/05 (MOE 2005). Predicted levels of air quality indicator parameters did not exceed Ontario criteria, while predicted odour levels, though infrequently marginally exceeding Ontario guideline criteria at certain sensitive receptor locations, were found to be within the allowable number of exceedances set out by the odour framework for Ontario at the time of the assessment.

The noise impact assessment found that all previously proposed landfill expansion alternatives, including the chosen alternative that received *Environmental Protection Act* approval in 2009, will generate noise levels that meet the MOE noise level limit for landfill operations and ancillary equipment at all off-site receptor locations, using the installation of the proposed noise barrier systems incorporated into the landfill operations design alternatives. Additionally, annual noise monitoring has previously indicated that noise levels caused by landfill operations do not significantly contribute to noise levels at the BFI Navan Facility property limits (Golder 2013b).

4.5.2 Improvements to Controls of Atmospheric Emissions from the BFI Navan Facility Expansion

The approved landfill expansion incorporated a number of mitigation measures that assist in the management of potential impacts to air quality, odour, and noise. These mitigation measures include:

- The installation of the leachate management system (mitigates potential air quality and odour impacts);
- Conveying of leachate off-site for treatment in a forcemain, therefore eliminating leachate tanker traffic (and associated traffic noise and/or odours off-site);
- Interim landfill gas and odour control system that went into operation in 2012 (mitigates potential odour impacts);
- The discontinuation of composting operations (mitigates potential air quality and odour impacts, reduces noise from on-site equipment);
- The proposed installation of an active LFG collection system, for the whole landfill site, to be installed progressively as filling is completed in an area of the landfill, equipped with an enclosed flare (mitigates potential air quality and odour impacts);

- Enclosing the leachate pump and LFG flare (Golder 2008b) (reduces noise impacts);
- The continuation of the landfill dust management practices including:
  - The application of gravel to unpaved on-site haul routes;
  - Watering and the addition of dust suppressants (calcium chloride) on unpaved roads;
  - Imposing a speed limit of 20 km/h on unpaved roads;
  - Implementation of truck tire-wash facility; and,
  - Cleaning of BFI Navan Facility site entrance.
- The installation of 4 metre high berms along Navan Road and tree planting as defined in the D&O Report (Golder 2008b) (mitigates noise impacts);
- The adoption of noise, odour, and dust monitoring plans as described in the D&O Report (Golder 2008b); and,
- Continuation of a complaints and response procedure as defined in the D&O Report (Golder 2008b).

4.5.3 Monitoring Program

Dust, noise, and odour monitoring programs were developed and approved during the previous expansion approval process, and are defined in the D&O Report (Golder 2008b), and required by the ECA for site operation.

4.5.3.1 Dust Monitoring

The BFI Navan Facility dust monitoring plan was developed in consultation with the MOE, National Capital Commission (NCC) and the City in accordance with EA Conditions 10.7 and 10.8. The plan comprised two parts: monitoring of dust, and monitoring of triggers of fugitive dust.

Dust monitoring was performed and reported as outlined in Condition 111 of ECA No. A460702. The monitoring of dust was performed from 2009 to 2011 using dust fall monitors located within the Mer Bleue Conservation Area and in areas of potential highest off-property impacts, with locations varying based on the movement of landfilling operations across the BFI Navan Facility site over time. Dust fall monitoring was performed for three years, and the program was discontinued following the results of the 2011 monitoring report (Golder 2012), as they did not indicate additional impact beyond existing conditions in the area, and the requirements under EA conditions 10.7 and 10.8 had been met.

The monitoring of triggers of fugitive dust is performed through maintaining records of mitigative dust control measures, any complaints and complaint response, and traffic, and by performing weekly site inspections that includes factors related to the generation of dust.

4.5.3.2 Noise Monitoring

Noise monitoring is performed and reported as outlined in Condition 111 of ECA No. A460702. The BFI Navan Facility noise monitoring program involves the use of noise monitors that log acoustic data every hour for the duration of the monitoring period. Monitoring is performed twice per year during peak landfilling activity.

Monitoring locations may vary depending on the active landfill phase. Current monitoring locations are presented in Figure 10. Noise monitoring to date indicates that the BFI Navan Facility is operating as expected.

4.5.3.3 Odour Monitoring

Odour monitoring is performed and reported as outlined in Condition 111 of ECA No. A460702. The BFI Navan Facility odour monitoring program involves inspecting the preventative measures that make up the Odour Management Plan. During the once weekly site inspection for fugitive dust, an inspection is also conducted of the landfill cap, to ensure there are no cracks and/ or gaps which would potentially allow LFG to escape. This inspection program also records any significant changes to on-site odour and initiates corrective action in cases where it is possible that off-property impacts may occur. Odour monitoring to date indicates that the BFI Navan Facility is operating as expected.

4.5.4 Summary

The predictive modelling of potential off-site impacts related to air quality, dust, odour and noise carried out as part of the approvals process for the BFI Navan Facility landfill expansion included potential receptor locations within the Claridge Phase 3 lands. The modelling prediction results indicated the site operations were expected to meet provincial requirements and not cause adverse effects off-site. There are a number of design and operational mitigation measures to control and minimize the potential for off-site atmospheric impacts. Ongoing monitoring programs demonstrate that the BFI Navan Facility is performing acceptably, as expected based on predictions. Considering that operations on the landfill are progressively moving eastwards, away from the Claridge Phase 3 lands, it is expected that the Claridge Phase 3 lands will not experience unacceptable atmospheric effects from the BFI Navan Site.

4.6 Soil Contamination

Contamination of soil on the Claridge site could only occur as a result of contaminant transport from the BFI Navan Facility landfill to the Claridge site via groundwater or surface water. As previously discussed in Sections 4.1 and 4.2, contaminant transport from the BFI Navan Facility by groundwater or surface water is not expected to occur due to the natural hydrogeology and engineered controls for the landfill site.

4.7 Hazardous Waste

Hazardous waste is not accepted at the BFI Navan Facility.

4.8 Landfill Gas

The following sections describe the potential for LFG migration in the subsurface from the BFI Navan Facility to the Claridge site. The natural geological and engineered barriers to LFG migration are considered, and LFG monitoring is described.

4.8.1 Geological Barriers

The natural potential for the subsurface migration of LFG was considered during the environmental assessment for the proposed landfill expansion in 2007, and in the D&O Report (Golder 2008b) for the landfill. LFG is composed of about 50% methane, which is of concern if it accumulates in potentially explosive concentrations in air within enclosed spaces. It was discussed in the D&O Report (Golder 2008b) that the geological setting in the area does not encourage the lateral migration of methane from LFG through the subsurface. The clay deposit

does not support migration of gas, causing the gas (which is lighter than air) to move preferentially to the atmosphere through the waste, surficial sand unit, or through passive ventilation through the LCS on the west, south and east limits of the waste area, and by stormwater ditches or leachate intervening trenches. Additionally, LFG migrates above the water table. In the *Guideline for Assessing Methane Hazards from Landfill Sites* (MOE 1987) it is stated that significant methane migration may extend for a distance equal to ten times the depth of landfill between the ground surface and the water table. If the depth of the water table in this site area can be conservatively considered to be 2 metres below the ground surface, the maximum distance of significant methane migration would be expected to be 20 metres from the toe of the waste footprint. As stated in the D&O Report (Golder 2008b), the buffer between the toe of the waste mound and the western property boundary of the BFI Navan Facility is 100 metres. An additional 100 metres of privately owned land (not used for residential purposes) separates the BFI Navan Facility property from the Claridge site. It is not anticipated that methane generated by the landfill would migrate off of the BFI Navan Facility site, or the additional 100 metres to the eastern edge of the Claridge site.

LFG migration is also impeded by barriers and passive ventilation on the BFI Navan Facility site. Low permeability clay cut-off walls, clay berms and intervening drainage trenches installed for the purpose of minimizing and containing the flow of leachate also act as a barrier against LFG migration. The low permeability barriers exist along the north, west and south perimeters of the waste footprint. Clay barriers will be installed along the east perimeter of the waste footprint as landfill development progresses (Golder 2013a).

4.8.2 Landfill Gas Management System

As an approved component of the BFI Navan Facility expansion, a LFG management system that complies with existing requirements under O.Reg. 232/98 (MOE 1998) was designed. A complete description of the proposed LFG management system is provided in Section 6.7 of the D&O Report (Golder 2008b). The LFG management system consists of LFG extraction wells, lateral and header piping, an abstraction facility and enclosed flare. The 31 vertical extraction wells will be drilled into the waste and connected to lateral piping which will direct the gas to the main header pipe. Maintenance manholes and the leachate collection sump (as proposed for the landfill expansion) will also be connected to the main header by lateral piping. The main header transmits the gas to the abstraction facility and flare. The blower within the abstraction facility extracts the gas under negative pressure, and the enclosed flare will destroy the LFG by combustion. It is estimated that the system will have 65-70% collection efficiency. The LFG management system is expected to significantly reduce or eliminate outward LFG pressure gradients, and by doing so contribute further to decreasing the potential for lateral migration away from the waste mound. Operation of the LFG management system will include regular monitoring and periodic adjustment to the well field and abstraction facility to maintain and balance the system. Figure 11 shows the proposed LFG management system layout. The LFG management system will be progressively installed as the development of the landfill continues.

An interim LFG odour control system has been installed and operated since April of 2012 with the purpose of reducing odour from LFG prior to the full-scale LFG collection system being completely installed. This system includes connections to the existing LCS cleanouts and to existing vertical LFG extraction wells, as well as lateral and header piping, condensate management facilities, an outdoor abstraction plant and candlestick flare.

4.8.3 Landfill Gas Monitoring Program

LFG monitoring is performed and reported as outlined in Condition 110 of ECA No. A460702. Figure 12 shows the locations on the BFI Navan Facility site where LFG is monitored. LFG monitoring at the locations shown in Figure 12 is performed three times per year. Additionally, routine monitoring for explosive methane gas levels within all buildings or structures at the BFI Navan Facility is performed at the same frequency as the current monitoring program of three times per year. LFG monitoring to date has indicated that there is no lateral migration of landfill gas from the landfill.

4.8.4 Summary

For all of the reasons described above, the combination of the natural geological setting and engineered features mitigate the potential migration of LFG in the subsurface from the BFI Navan Facility.

4.9 Post-closure Activities and Monitoring

Following the BFI Navan Landfill site reaching its approved disposal capacity, the ongoing post-closure activities will consist of: continued operation of the leachate collection system and conveyance for off-site treatment; continued operation of the landfill gas extraction system and flare; the site monitoring programs; and site inspection and maintenance.

5.0 PREVIOUS REVIEWS BY THE CITY OF OTTAWA

The City has retained consultants in the past to review studies about potential impacts from the BFI Navan Facility on the surrounding properties.

During the BFI Navan Facility expansion Environmental Assessment approval process, the EASR and supporting technical documents (Golder 2007b) were peer reviewed in full by Conestoga Rovers and Associates (CRA) on behalf of the City in 2007. The CRA peer review included all agents of the environment relevant to the buffer study. The peer review and resulting comments from the City were submitted to the MOE for consideration with regard to the previously pending expansion approval. The City concluded from the peer review that there were no outstanding technical concerns with the EASR, with the exception of comments regarding the odour and noise review, as stated in the attached letter from the City to the MOE dated April 23, 2007. These comments were addressed by Golder on behalf of BFI (formerly WSI (CA) Inc.), the owner of the BFI Navan Facility. The responses were submitted to the MOE as part of the application for expansion approval. The MOE subsequently granted EA and EPA approval of the expansion. The CRA peer review is included in Appendix A of this report.

In 2008, RWDI Air Inc. (RWDI) performed a peer review of the atmospheric portion of the EASR (Golder 2007b) on behalf of the City with regard to potential atmospheric impacts from the BFI Navan Facility to a proposed development located north of Navan Road. Golder provided responses to comments resulting from the peer review, and provided supplemental information to RWDI. Additionally, a buffer study was completed by Trow Associates Inc. (Trow) with regard to potential impacts to the same proposed development north of Navan Road resulting from the BFI Navan Facility. As a result of the peer review by RWDI and the buffer study by Trow, the City agreed to reduce the zone of influence of the BFI Navan Facility to exclude the proposed development. The City has recently requested that the buffer study by Trow be revisited to address any substantive changes to the environment that have occurred since the aforementioned buffer study, which was completed and accepted in 2008.

Jacques Whitford Ltd. (JWL), on behalf of the City, performed a peer review of work done by John D. Paterson and Associates (Paterson) for the Claridge lands, which included comments on potential impacts to the proposed Claridge site from the BFI Navan Facility. Comments resulting from this peer review were addressed by Golder, acting on behalf of Claridge, in a letter dated February 15, 2008, and in a presentation to the City on July 8, 2008. Outstanding concerns presented by JWL are addressed within this buffer study.

6.0 CONCLUSIONS

This buffer study was completed to satisfy Section 3.8.6 of the City's Official Plan, which requires any development requiring planning approval on land within the (presumed) influence area of 500 metres from an operating or non-operating solid waste disposal site to undertake a study to demonstrate that the solid waste disposal site will not have any unacceptable adverse effects on the proposed development and will not pose any risks to human health and safety.

As required by Section 3.8.7 of the Official Plan, this buffer study addressed the following areas of concern: potential contamination by leachate, surface runoff, ground settlement, visual impact, air (dust), odour, and noise, soil contamination, and LFG migration.

Based on the studies and design work performed during the BFI Navan Facility's expansion, which received EA approval in 2007 and EPA Approval in 2009, as well as historical and on-going monitoring at the BFI Navan Facility site, it can be concluded that the BFI Navan Facility will not have any unacceptable adverse effects on the proposed Claridge Spring Valley Trails Phase 3 development, and will not pose any risks to human health and safety. It is also not expected that the development of the Claridge site will impact the continued operation of the landfill. The proposed continuation of current operational practices and environmental monitoring, as well as the installation of environmental controls proposed as part of the continued expansion of the BFI Navan Facility is expected to result in continued compliance with Section 3.8.6 of the City's Official Plan.

It is recommended that the zone of influence of the BFI Navan Facility be reduced such that it excludes the Claridge Spring Valley Trails development lands.

7.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the exclusive use of Claridge Homes. The report, which specifically includes all figures and attachments, is based on data and information collected by Golder Associates Ltd. and is based solely on the conditions of the properties at the time of the work, supplemented by historical information and data obtained by Golder Associates Ltd. as described in this report.

Golder Associates Ltd. has relied in good faith on all information provided and does not accept responsibility for any deficiency, misstatements, or inaccuracies contained in the report as a result of omissions, misinterpretation, or fraudulent acts of the persons contacted or errors or omissions in the reviewed documentation.

The assessment of environmental conditions and possible hazards at this site has been made using the results of physical measurements from a number of locations. The site conditions between sampling locations have been inferred based on conditions observed. Conditions may vary from these sampled locations.

The services performed, as described in this report, were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. Golder Associates Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings, or other studies, Golder Associates Ltd. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

8.0 CLOSURE

We trust this report meets your current needs. If you have any questions regarding this report, please contact the undersigned.

GOLDER ASSOCIATES LTD.

Andria Caletti, B.Sc.Eng.
Environmental Consultant

Paul Smolkin, P.Eng.
Principal

REGISTERED PROFESSIONAL ENGINEER
P. A. SMOLKIN
Dec 20/13
PROVINCE OF ONTARIO

ALC/MKF/PAS/sg
n:\active\2007\1121 - geotechnical\07-1121-0232 claridge spring valley ottawa\task 2000 environmental\buffer study\navan landfill buffer study_final 2013dec20.docx

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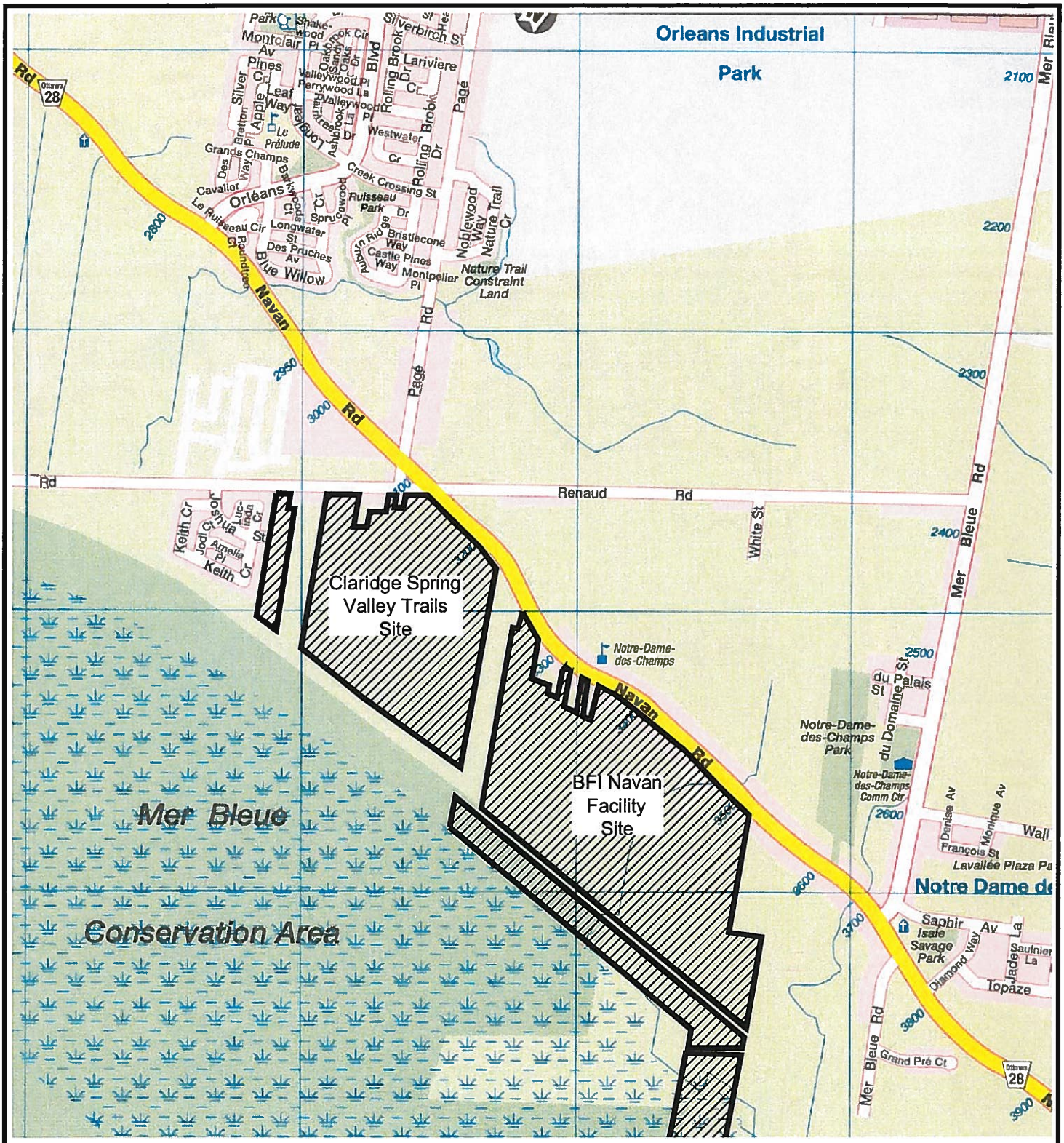

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NOTE

THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

Golder Associates
Ottawa, Ontario, Canada

SCALE	1:20,000
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DESIGN	
CAD	JM/BR
CHECK	ALC
REVIEW	PAS

TITLE

KEY PLAN

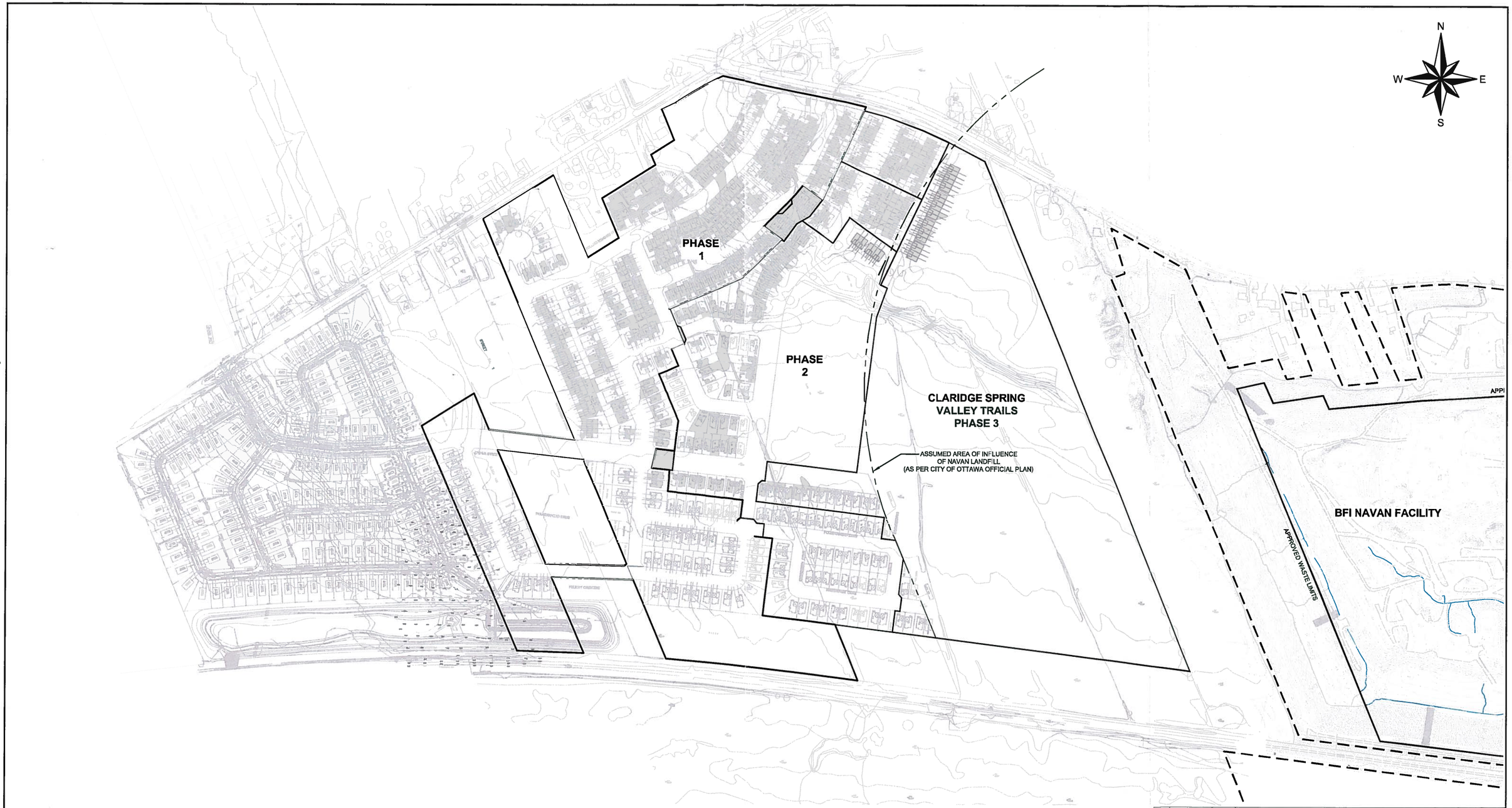
FILE No. 0711210232-2000-01.dwg

PROJECT No. 07-1121-0232 REV.

BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS

FIGURE 1

PLOT DATE: December 20, 2013
FILENAME: N:\Active\2007\1121 - Geotechnical\07-1121-0232 Claridge Spring Valley Ottawa\ACAD\Phase 2000\0711210232-2000-01.dwg



LEGEND

- CLARIDGE PROPERTY BOUNDARY
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2006)
- BFI SITE CONTOURS (JULY 2010)

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200
SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW

PROJECT
BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE
CLARIDGE HOMES
SPRING VALLEY TRAILS
SITE PLAN

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.	07-1121-0232		FILE No.	0711210232-2000-02.dwg	
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PLOT DATE: December 20, 2013
FILENAME: N:\Active\2007\1121 - Geotechnical\07-1121-0232 Claridge Spring Valley Ottawa\ACAD\Phase 2000\0711210232-2000-02.dwg

PHASE 2

CLARIDGE SPRING VALLEY TRAILS PHASE 3

ASSUMED AREA OF INFLUENCE OF NAVAN LANDFILL (AS PER CITY OF OTTAWA OFFICIAL PLAN)

BFI NAVAN FACILITY

APPROVED WASTE LIMITS

APPROVED WASTE LIMITS

APPROVED WASTE LIMITS

APPROVED WASTE LIMITS

A

A'

B

B'

N

W

E

S

LEGEND

- CLARIDGE PROPERTY BOUNDARY
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2006)
- BFI SITE CONTOURS (JULY 2010)
- GROUNDWATER MONITORING STATION
- A A' CROSS-SECTION LOCATION. REFER TO FIGURES 4 AND 5 FOR CROSS-SECTIONS

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200

SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW

PROJECT

BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE

BFI NAVAN FACILITY SITE PLAN

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.		07-1121-0232	FILE No.	0711210232-2000-03.dwg	
DESIGN			SCALE	1:5,000	REV.
CAD	JMBR	2013-12-20	FIGURE No.		
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REVIEW	PAS	2013-12-20			

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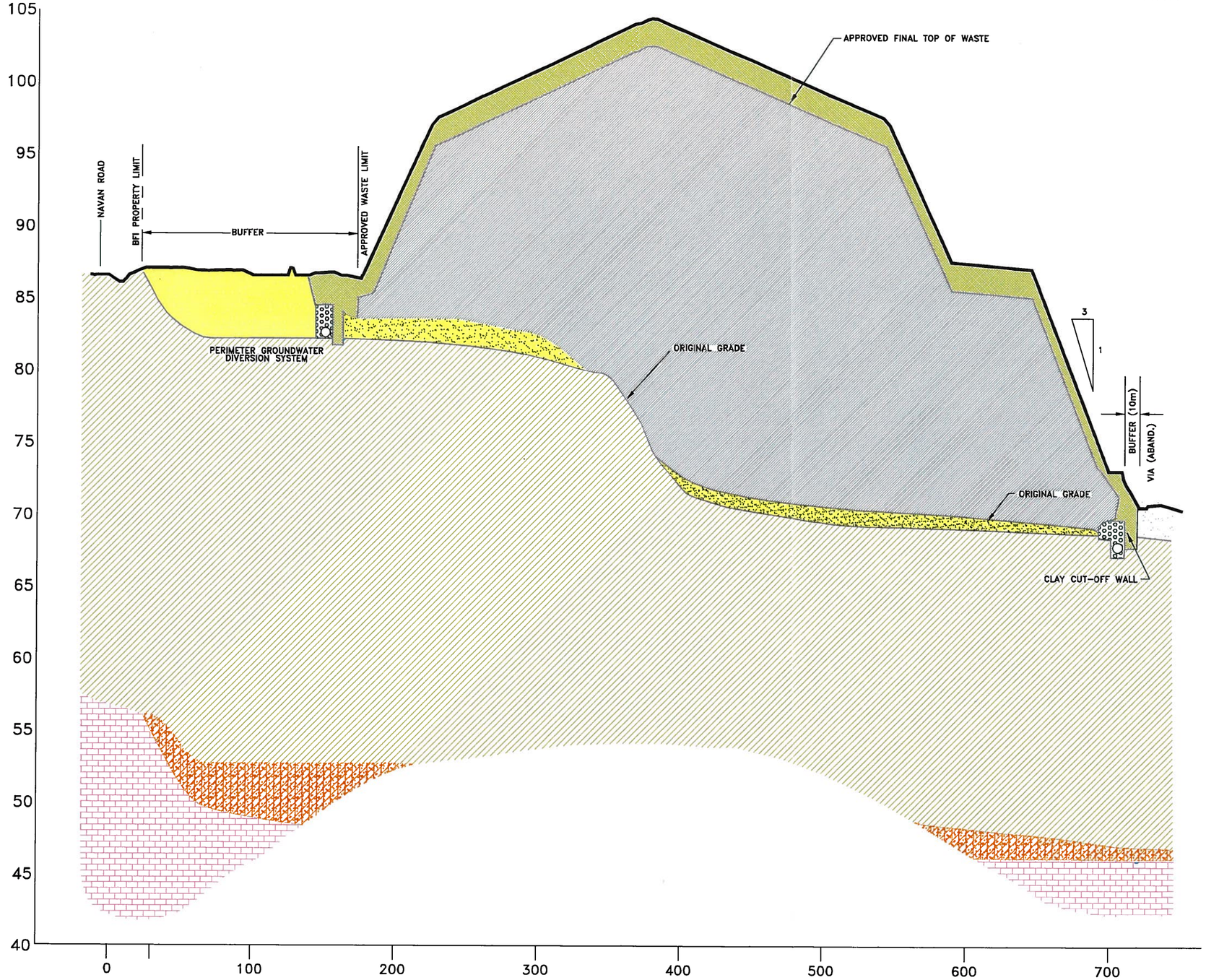


HORIZONTAL SCALE: 1:3,000
VERTICAL SCALE: 1:300
HORIZONTAL SCALE EXAGGERATED 10 TIMES THE VERTICAL SCALE FOR ILLUSTRATION PURPOSES

LEGEND

- CLAY FINAL COVER
- REFUSE
- CLEAR CRUSHED STONE
- SAND
- SILTY CLAY
- GLACIAL TILL
- BEDROCK

REFERENCE

1. BASE MAP PROVIDED BY WSI, DRAWING No.: 2005-2.9. DATED: FEBRUARY 2006

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
0	01/01/01	XXX	REV_DESC	XXX		

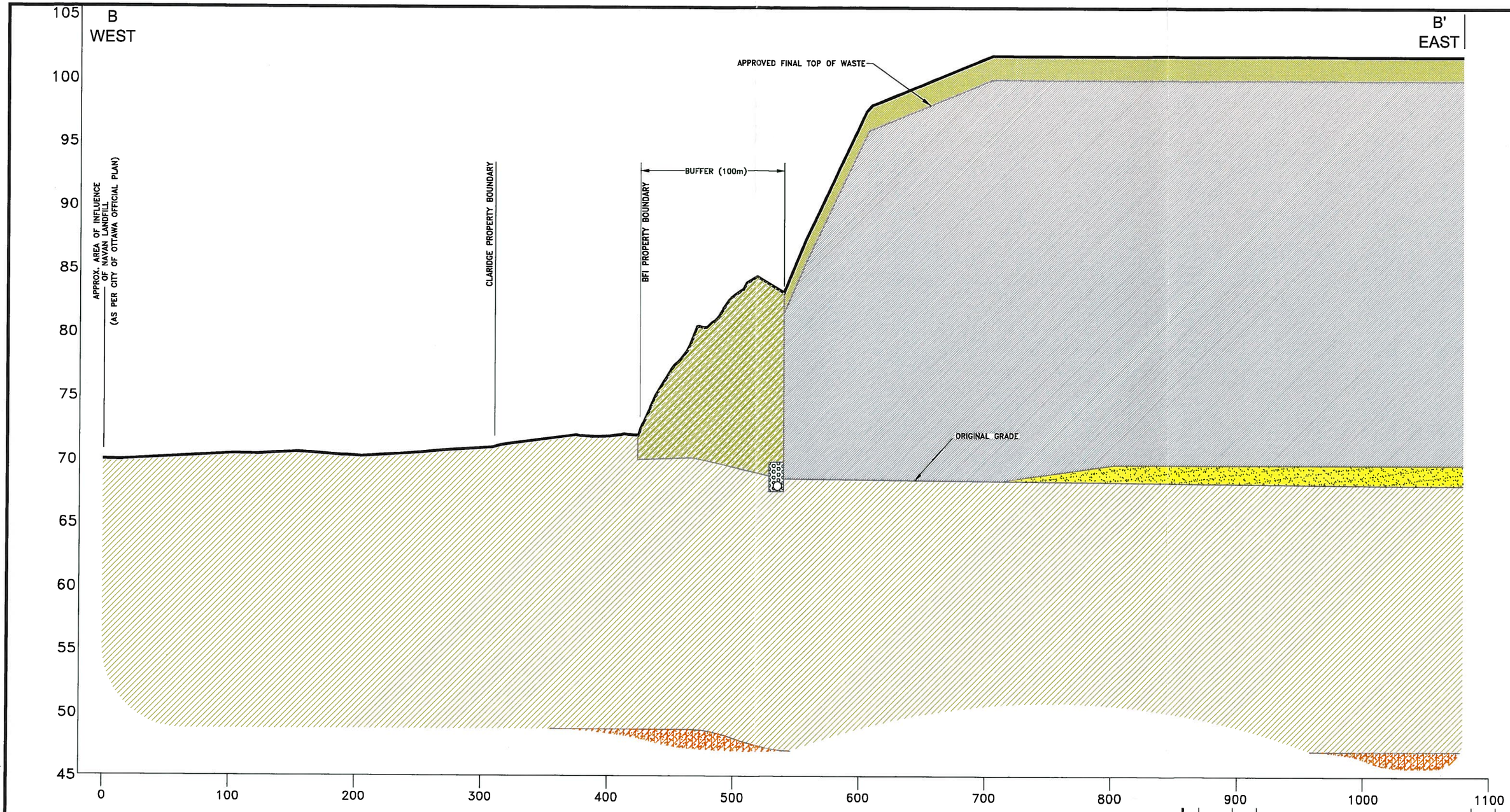
PROJECT
BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE
SCHEMATIC CROSS-SECTION A-A'

Golder Associates
Ottawa, Ontario

PROJECT No. 07-1121-0232			FILE No. 0711210232-2000-03.dwg		
DESIGN			SCALE AS SHOWN	REV.	D
CADD	JM/BR	2013-12-20	FIGURE 4		
CHECK	ALC	2013-12-20			
REVIEW	PAS	2013-12-20			

Drawing file: 0711210232-2000-04.dwg Dec 20, 2013 - 11:21am



HORIZONTAL SCALE: 1:3,000
VERTICAL SCALE: 1:300
HORIZONTAL SCALE EXAGGERATED 10 TIMES THE VERTICAL SCALE FOR ILLUSTRATION PURPOSES

LEGEND

- CLAY FINAL COVER
- REFUSE
- CLAY BERM
- CLEAR CRUSHED STONE
- SILTY CLAY
- SAND
- GLACIAL TILL

REFERENCE

1. BASE MAP PROVIDED BY WSI, DRAWING No.: 2005-2.9. DATED: FEBRUARY 2006

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	01/01/01	XXX	REV_DESC	XXX		

PROJECT

BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE

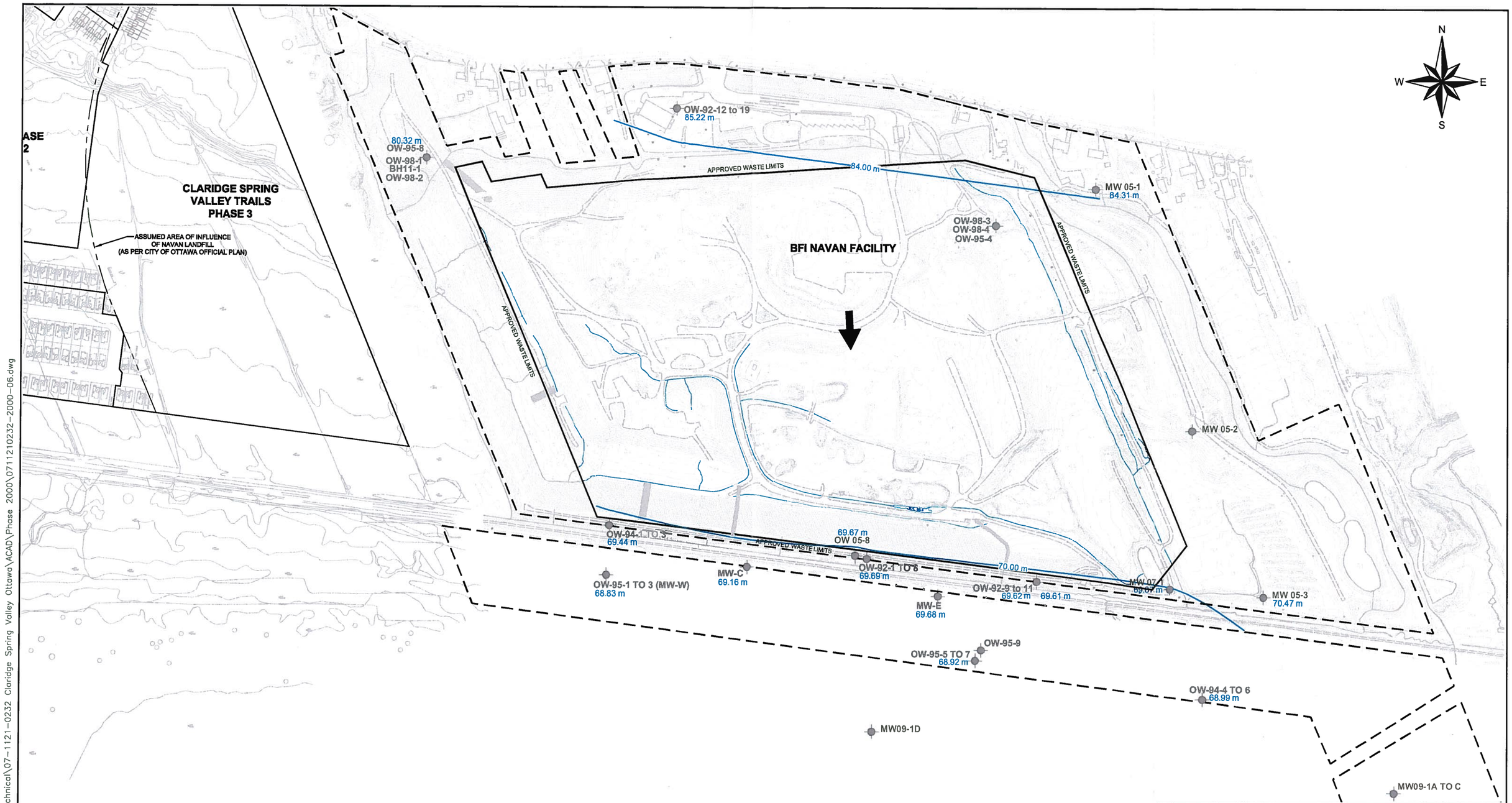
SCHEMATIC CROSS-SECTION B-B'

Golder Associates
Ottawa, Ontario

PROJECT No. 07-1121-0232			FILE No.	0711210232-2000-03.dwg
DESIGN			SCALE	AS SHOWN
CADD	JM/BR	2013-12-20	REV.	D
CHECK	ALC	2013-12-20		
REVIEW	PAS	2013-12-20		

FIGURE 5

Drawing file: 0711210232-2000-05.dwg Dec 20, 2013 - 11:24am



LEGEND

- CLARIDGE PROPERTY BOUNDARY
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2006)
- BFI SITE CONTOURS (JULY 2010)
- GROUNDWATER MONITORING STATION
- –74.00 m– GROUNDWATER ELEVATION CONTOUR (MAY 21, 2013)
- 85.22 m GROUNDWATER ELEVATION, metres (MAY 21, 2013)
- INTERPRETED GW FLOW DIRECTION

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200
SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW
△						

PROJECT
BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE
GROUNDWATER FLOW IN SURFICIAL SAND AND WEATHERED CLAY ZONE

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.	07-1121-0232		FILE No.	0711210232-2000-06.dwg	
DESIGN			SCALE	1:5,000	REV.
CAD	JWBR	2013-12-20	FIGURE No.		
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REVIEW	PAS	2013-12-20			

PLOT DATE: December 20, 2013
FILENAME: N:\Active\2007\1121 – Geotechnical\07–1121–0232 Claridge Spring Valley Ottawa\ACAD\Phase 2000\0711210232–2000–06.dwg

PHASE 2

CLARIDGE SPRING VALLEY TRAILS PHASE 3

ASSUMED AREA OF INFLUENCE OF NAVAN LANDFILL (AS PER CITY OF OTTAWA OFFICIAL PLAN)

APPROVED WASTE LIMITS

(ABANDONED)

MH-12

MH-11

MH-10

MH-9

MH-8

MH-7

MH-6

MH-5

MH-4

MH-3

MH-2

MH-1

MH-0

MH-15

MH

MH

CENTRAL MANHOLE

APPROVED EXPANSION AREA

LEACHATE WET WELL AND PUMP STATION

N

W

E

S

LEGEND

- CLARIDGE PROPERTY BOUNDARY
- EXISTING MAINTENANCE HOLE
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2060)
- BFI SITE CONTOURS (JULY 2010)
- EXISTING LEACHATE UNDERDRAIN COLLECTOR
- EXISTING PERIMETER LEACHATE COLLECTOR AND UNDERDRAINS
- EXISTING HYDRAULIC CONNECTIONS
- LEACHATE COLLECTOR PIPE (APPROVED, YET TO BE CONSTRUCTED)
- 200 mm DIA. NON-PERFORATED DRAIN PIPE
- FRENCH DRAIN
- CLAY FILL

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200

SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW

PROJECT

BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE

LEACHATE COLLECTION SYSTEM

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.	07-1121-0232		FILE No. 0711210232-2000-07.dwg
DESIGN			SCALE 1:5,000 REV.
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REVIEW	PAS	2013-12-20	

PLOT DATE: December 20, 2013
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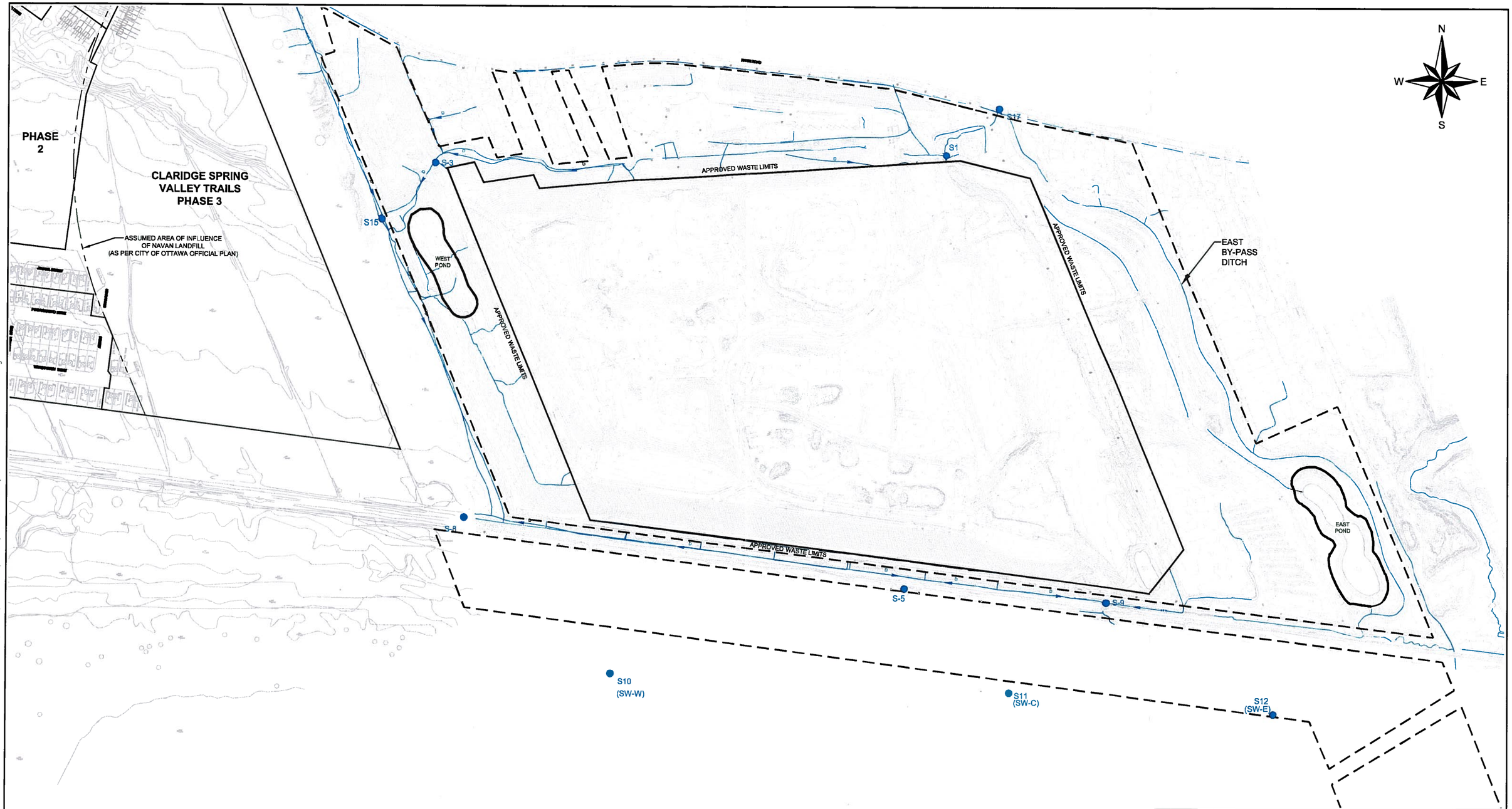

LEGEND

- CLARIDGE PROPERTY BOUNDARY
- D — DITCH
- DRAINAGE FLOW DIRECTION
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2006)
- BFI SITE CONTOURS (JULY 2010)
- SURFACE WATER SAMPLING STATION

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200
SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW

PROJECT

BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE

SURFACE WATER MANAGEMENT PLAN

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.	07-1121-0232		FILE No. 0711210232-2000-08.dwg		
DESIGN			SCALE 1:5,000	REV.	
CAD	JW/BR	2013-12-20	FIGURE No.		
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REVIEW	PAS	2013-12-20			

PLOT DATE: December 20, 2013
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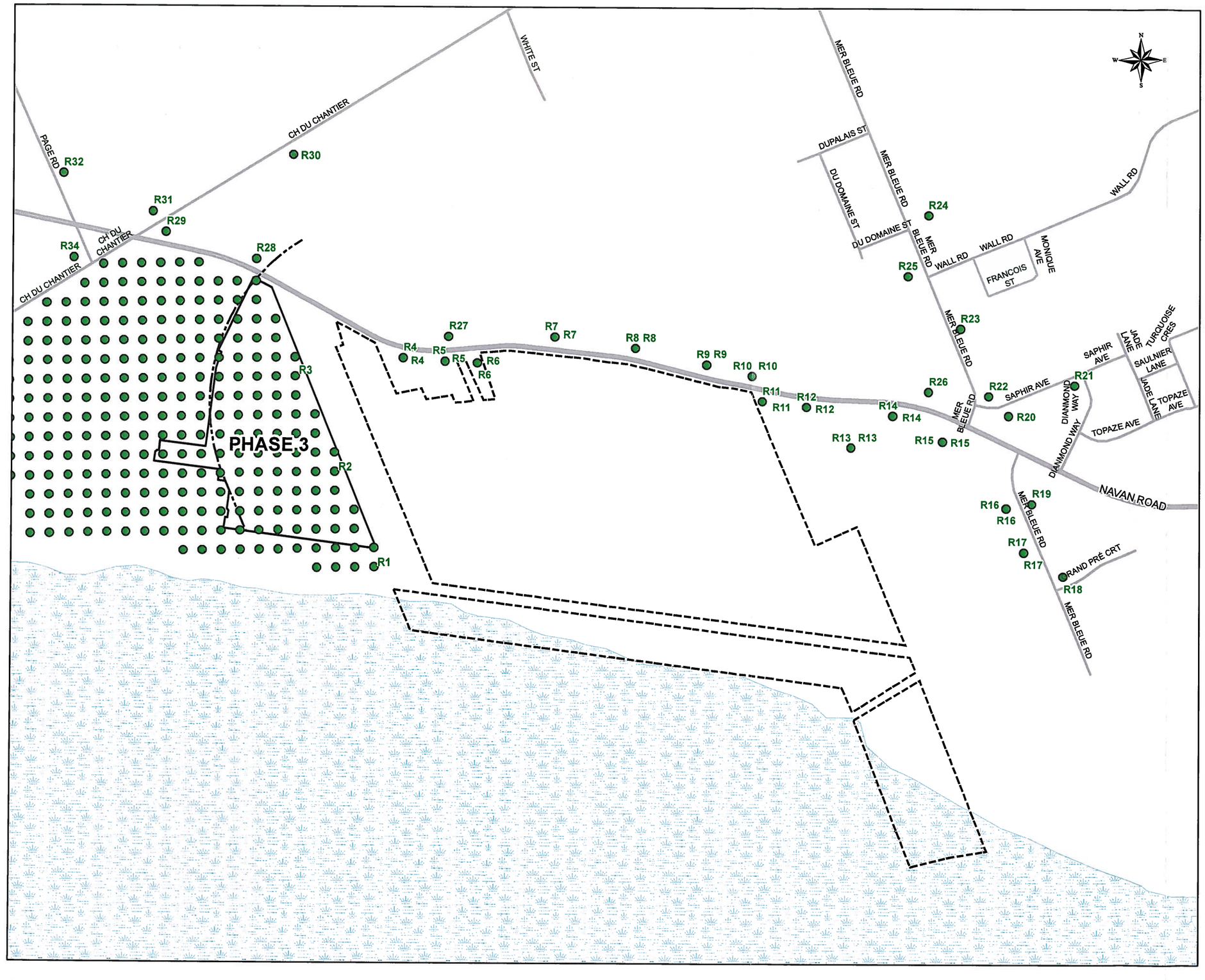

LEGEND

- SENSITIVE RECEPTOR LOCATION
- ASSUMED AREA OF INFLUENCE OF NAVAN LANDFILL (AS PER CITY OF OTTAWA OFFICIAL PLAN)
- BFI PROPERTY BOUNDARY
- CLARIDGE PHASE 3 BOUNDARY
- ROADWAY
- WETLAND (MER BLEUE)

REFERENCE

DIGITAL BASE MAP DATA SUPPLIED BY DMTI SPATIAL INC. CANMAP, 2006.
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: UTM ZONE 18

200 0 200
SCALE 1:5,000 METRES

PROJECT
BUFFER STUDY, PHASE 3
SPRING VALLEY TRAILS

TITLE
AIR AND ODOUR MODELING
SENSITIVE RECEPTOR LOCATIONS

Golder Associates
Ottawa, Ontario

PROJECT No. 07-1121-232			SCALE AS SHOWN	REV. 0
DESIGN	DDS	2007-02-07		
GIS	PJM	2013-12-20		
CHECK	ALC	2013-12-20		
REVIEW	PAS	2013-12-20		

FIGURE: 9

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LEGEND

- NOISE MONITOR LOCATION
- NOISE RECEPTOR LOCATION
- ASSUMED AREA OF INFLUENCE OF NAVAN LANDFILL (AS PER CITY OF OTTAWA OFFICIAL PLAN)
- BFI PROPERTY BOUNDARY
- CLARIDGE PHASE 3 BOUNDARY
- ROADWAY
- WETLAND (MER BLEUE)

REFERENCE

DIGITAL BASE MAP DATA SUPPLIED BY DMTI SPATIAL INC. CANMAP, 2006.
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: UTM ZONE 18

200 0 200
SCALE 1:5,000 METRES

PROJECT
BUFFER STUDY, PHASE 3
SPRING VALLEY TRAILS

TITLE
NOISE RECEPTORS AND 2012 MONITOR LOCATIONS

Golder Associates
Ottawa, Ontario

PROJECT No. 07-1121-232			SCALE AS SHOWN	REV. 0
DESIGN	DDS	2007-02-07		
GIS	PJM	2013-12-20		
CHECK	ALC	2013-12-20		
REVIEW	PAS	2013-12-20		

FIGURE: 10

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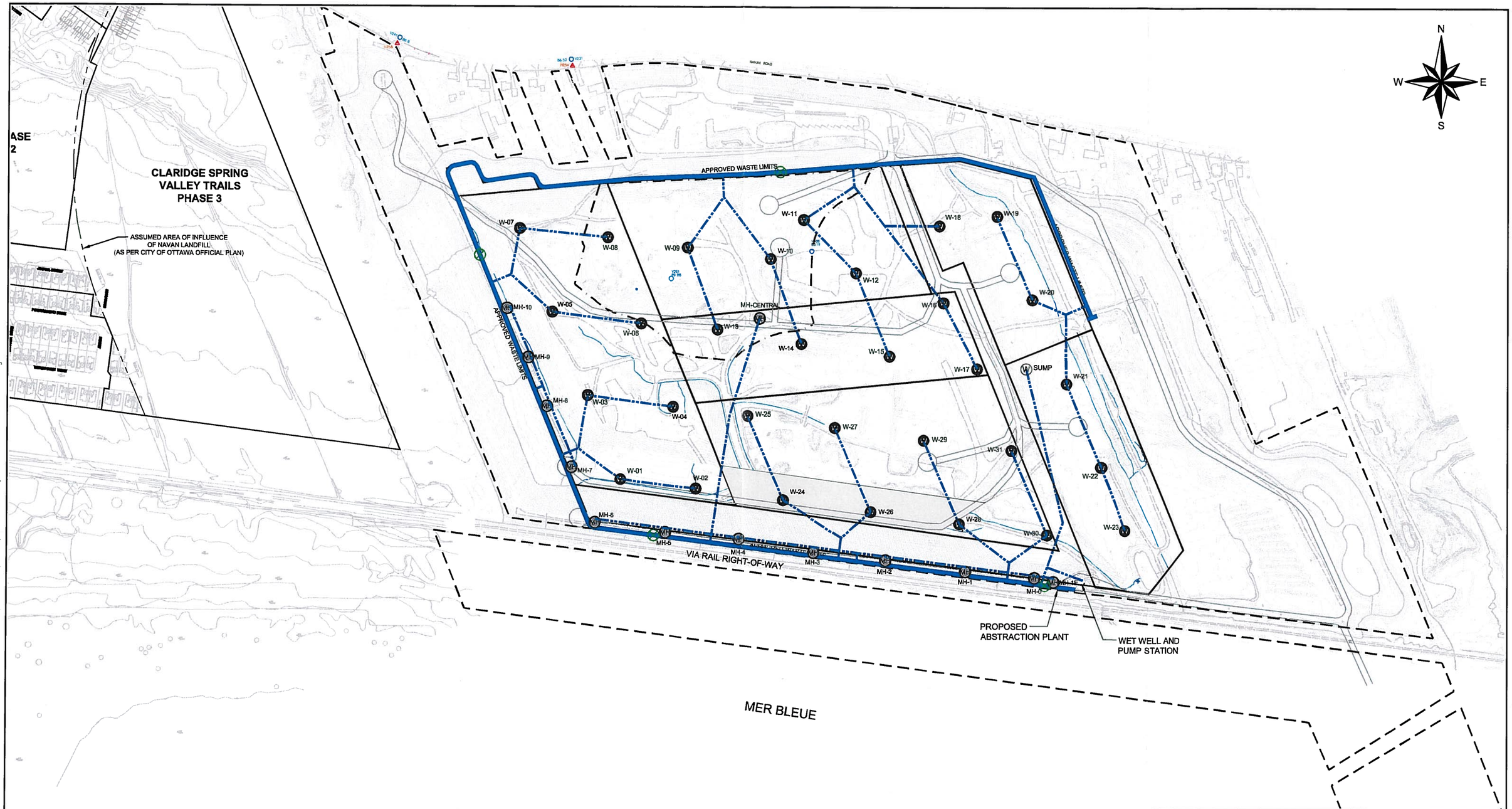

LEGEND

- PROPOSED LANDFILL GAS LATERAL PIPE
- PROPOSED LANDFILL GAS HEADER PIPE
- W-01 PROPOSED LANDFILL GAS EXTRACTION WELL
- PROPOSED CONDENSATE TRAP
- SUMP PROPOSED LEACHATE COLLECTION SUMP
- MH-1 EXISTING MAINTENANCE MANHOLE
- EXISTING WET WELL AND LEACHATE PUMP STATION
- VERTICAL / HORIZONTAL CONTROL
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2006)
- BFI SITE CONTOURS (JULY 2010)

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200

SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW

PROJECT

BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE

APPROVED LANDFILL GAS COLLECTION SYSTEM LAYOUT

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.	07-1121-0232		FILE No.	0711210232-2000-11.dwg	
DESIGN			SCALE	1:5,000	REV.
CAD	JM/BR	2013-12-20	FIGURE No.		
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REVIEW	PAS	2013-12-20			

PLOT DATE: December 20, 2013
FILENAME: N:\Active\2007\1121 - Geotechnical\07-1121-0232 Claridge Spring Valley Ottawa\ACAD\Phase 2000\0711210232-2000-11.dwg

CLARIDGE SPRING
VALLEY TRAILS
PHASE 3

ASSUMED AREA OF INFLUENCE
OF NAVAN LANDFILL
(AS PER CITY OF OTTAWA OFFICIAL PLAN)

APPROVED WASTE LIMITS

PUMP STATION

MH-0 MH-1 MH-1E MH-2 MH-3 MH-4 MH-5 MH-6 MH-7 MH-8 MH-9 MH-10

GW-1 GW-2 GW-3 GW-4

N
W E
S

LEGEND

- G56 AMBIENT AIR COLLECTOR PIPES
- G68 CENTRAL AREA-MISCELLANEOUS
- G45 AIR VENTS
- G5 WEST AND SOUTH FACES
- EXISTING LANDFILL GAS EXTRACTION WELL
- G30 OFFICE/BUILDING AREA
- G50 FORMER COMPOST AREA
- G90 NORTH AND EAST FACES
- G101 AIR VENTS
- MAINTENANCE HOLE LOCATION
- EXISTING BUILDING
- ROAD
- BFI PROPERTY BOUNDARY
- FENCE LINE
- CLARIDGE SITE CONTOURS (SEP. 2006)
- BFI SITE CONTOURS (JULY 2010)

REFERENCE

1. BASE PLAN SUPPLIED IN ELECTRONIC FORMAT BY IBI GROUP AND THE BASE MAPPING CO. LTD.

NOTE

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT No. 07-1121-0232-2000

100 0 100 200
SCALE 1:5000 METRES

REV	DATE	DES	REVISION DESCRIPTION	CAD	CHK	RVW

PROJECT
BUFFER STUDY
PHASE 3 - SPRING VALLEY TRAILS
OTTAWA, ONTARIO

TITLE
LANDFILL GAS MONITORING LOCATIONS

Golder Associates
Ottawa, Ontario, Canada

PROJECT No.	07-1121-0232		FILE No. 0711210232-2000-12.dwg
DESIGN			SCALE 1:5,000 REV.
CAD	JM/BR	2013-12-20	FIGURE No.
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REVIEW	PAS	2013-12-20	

PLOT DATE: December 20, 2013
FILENAME: N:\Active\2007\1121 - Geotechnical\07-1121-0232 Claridge Spring Valley Ottawa\ACAD\Phase 2000\0711210232-2000-12.dwg

APPENDIX A

City of Ottawa Peer Review of Environmental Assessment Study Report

December 2013
Report No. 07-1121-0232 (2000)

Golder Associates

File No. W21-06-07-NAVAN/45838

23 April 2007

VIA FACSIMILE AND E-MAIL

Ms. Solange Desautels
Project Officer
Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario M4V 1L5
FAX (416) 314-8452
Email: solange.desautels@ontario.ca

Dear Ms. Desautels:

Re: Environmental Assessment (EA) – Environmental Assessment Study Report (February 2007) – Waste Services (CA) Inc., Ottawa (Navan), Ontario

Introduction

This letter and attachments provides the City's comments on the Environmental Study Report (ESR) prepared on behalf of Waste Services (CA) Inc. (WSI). These comments have been compiled from staff in the City's Public Works and Services Department and by the City's consultant, Conestoga Rovers & Associates (CRA). As you are aware, these staff comments are subject to ratification by the City's Planning and Environment Committee (PEC) and Council. It is expected that these comments will be considered by PEC on May 22, 2007 and forwarded to Council for approval on May 23, 2007.

Focused Peer Review Comments

The City's consultant, CRA, was tasked with doing a high-level, focused peer review of the ESR. The City has adopted CRA's report attached as Document 1 to this letter with the following summary conclusions:

1. Consultation – The consultation conducted satisfies the Province's EA consultation requirements. Consistent with the City's comments on the Terms of Reference (ToR), the City expects that an EA monitoring strategy be required as a condition of EA approval and/or will be incorporated into any *Environmental Protection Act* (EPA) or *Ontario Water Resources Act* (OWRA) approvals. The City requests that WSI describe how it intends to continue to consult with stakeholders pending approval of the expansion;

2. Conceptual Site Design – The proposed expansion design alternatives appear to comply with *O.Reg. 232/98 Landfilling Sites* and no other issues were identified;

3. Geologic/Hydrologic – Based on review of geology and hydrologeology, the site is suitable for use as a landfill site. The modeling assessment was appropriate and applied correctly with regards to the requirements of regulations and industry standards. The predicted results of no future impact are reasonable based on the modeling work conducted;

4. Surface Water – The modeling assessment was appropriate and applied correctly with regards to the requirements of regulations and industry standards. No issues were identified with the proposed drainage/surface water management measures associated with the proposed expansion and WSI has identified that these measures will be in accordance with O.Reg. 232/98 Landfilling Site and subject to OWRA approval;

5. Atmospheric Impact (Odour & Noise) – The odour modeling did not include the odour emissions from fugitive landfill gas emitted from the surface of the landfill that is not collected by the landfill gas collection system. The report assumed that approximately 5% of the landfill gas will be emitted as fugitive emissions from the surface (see Section 5.6.2). A September 27, 2006 Odour Sampling report by Zorix indicates that there is odour in the landfill gas emitted from a passive gas vent. This same landfill gas also has a potential to contribute to off-site odour as it is currently assumed to be emitted from the landfill surface at a rate of 5% of the total gas generated. The City recommends that fugitive landfill gas emissions through the landfill cap be incorporated into the odour modeling evaluation and that appropriate mitigation measures be developed in conjunction with a future EPA section 9 application, as required.

   With respect to noise modeling, several of the residential receptors, including R5, R6, R7, R8, and R11 are predicted to have a noise level of 55 dBA even with the proposed noise barriers. Given the inherent uncertainty in the modeling results, the proposed noise barrier designs should be revised to achieve theoretical noise levels less than 55 dBA at the sensitive receptors. The modeling does show that compliance with noise criteria can be achieved and the City recommends that the noise barrier designs be revisited during the EPA section 9 approvals process;

6. Site Mitigation Measures – The selection of site mitigation measures to address odour, noise, dust, visual impact, property value and end use are appropriate at this time;

7. Preferred Alternative Selective Methodology – The preferred selection methodology is appropriate, however, a quantitative approach might have been more useful in confirming the identification of the preferred alternative.

Thus, in regards to the matters examined, with the exception of odour and noise review assessments noted above, the City has concluded that there are no outstanding technical concerns with the ESR.

Planning Act Comments

The ESR identified planned land use matters in Section 5.13 of the ESR. While the City has no concerns with the factual issues discussed therein, the ESR did not outline the requirement to submit a required rezoning application with the City for the proposed expansion. This requirement has been noted in the City's Official Plan Policy 3.8.4 available at http://www.ottawa.ca/city_hall/ottawa2020/official_plan/vol_1/designtns_lnd_use/solid_waste_sites/index_en.html.

Agreement between the Friends of Mer Bleue Community Association (FOMB) & WSI

Staff have obtained and reviewed a recent agreement signed by FOMB and WSI, attached as Document 2 to this letter. The City is in support of the substantive matters as outlined in the agreement. The City recommends that each substantive matter be incorporated as a condition of EA approval by the Minister of the Environment as follows:

- **Formation and composition of membership of a Public Advisory Committee (PAC);**

  This recommendation is consistent with the City's prior submission on the Navan Landfill Terms of Reference (ToR) and the present membership composition of the City's Trail Landfill Liaison Committee. The role of the PAC would be to review new issues that may arise out of approvals issued under the *EA Act*, *Environmental Protection Act* or *Ontario Water Resources Act*, to incorporate the recommendations of the City's Industrial, Commercial & Institutional (IC&I) Waste Strategy, encourage enhanced waste diversion measures at the Landfill site and be supplied with monitoring data regarding potential environmental impacts or emissions from the Landfill site.

- **Formation of a Dispute Resolution Strategy to be employed by WSI and the PAC;**

  This recommendation is consistent with the City's prior comments on the Terms of Reference that were submitted, and recently withdrawn, by Waste Management of Canada Corporation for their Carp Ottawa Waste Management Facility.

- **Expansion of WSI's Property Value Protection Plan to include the properties on Mer Bleue Road and on Grandpre, directly east of the Navan Landfill;**

- **WSI work with the City of Ottawa, FOMB and the PAC to identify and develop community projects to enhance and improve the local community and public spaces; and**

- **In issuing any future approval under the *Environmental Protection Act*, the City of Toronto would be specifically excluded from the service area for the Navan Landfill site.**

  This recommendation is consistent with the 2001 Settlement Agreement which obliges WSI to reserve 75% capacity of the Site for waste generated within Ottawa and prior City communications to the Ministry of the Environment regarding shipment of waste from the City of Toronto.

Conclusion

As previously noted, the City's Planning and Environment Committee will be considering these comments on May 22, 2007 with the anticipated Council consideration to follow on May 23, 2007. Any changes to staff's comments or Council resolutions related to the proposed Navan Landfill expansion will be forwarded to you for the MOE's consideration as soon as possible after the Council meeting.

In the interim, please do not hesitate to contact the undersigned at (613) 580-2424 ext. 21268, should you have any questions or concerns about the City's comments.

Yours truly,

Original signed by

R.G. Hewitt. P.Eng.
Deputy City Manager
Public Works and Services

Attach. (2)

cc: Kenneth J. Brothers, Director, Utility Services Branch
M. Rick O'Connor, City Solicitor, Legal Services Branch

Brian Forrestal, Vice President, Environmental Mgmt. & Engineering, Waste Services Inc.
Mike Benson, Conestoga Rovers & Associates

CONESTOGA-ROVERS
& ASSOCIATES

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April 23, 2007 Reference No. 45838-10

Ms. Jennifer Jackson
Special Projects Manager
Utility Services Branch
Public Works and Services
City of Ottawa
100 Constellation Crescent
Ottawa, ON K2G 6J8

Dear Ms. Jackson:

Re: Focused Peer Review of Environmental Study Report
Waste Services (CA) Inc.
Proposed Expansion of the Navan Landfill, Ottawa, Ontario

Conestoga-Rovers & Associates (CRA) was retained by the City of Ottawa (City) to complete a focused peer review of the Environmental Assessment (EA) Study Report prepared by Waste Services (CA) Inc. (WSI) for the proposed expansion of the Navan Landfill (Site). The scope of work consisted of the following tasks:

Task 1 – Review of Consultation Process
Task 2 – Review of Conceptual Expansion Design
Task 3 – Review of Geologic/Hydrogeologic Impact Assessment
Task 4 – Review of Surface Water Assessment
Task 5 – Review of Atmospheric Impact Assessment
Task 6 – Review of Proposed Site Mitigation Measures
Task 7 – Review of Preferred Alternative Selection Methodology

The purpose of the focused peer review was to establish whether WSI completed the necessary technical studies described above in a manner consistent with the requirements of the Environmental Assessment Act (EA Act), and whether the results described therein are technically accurate and representative of existing and/or anticipated Site conditions under an expansion scenario. The above issues were considered to be of particular relevance to the City and, as such, were subject to the focused peer review process.

Representatives of CRA (Mike Benson, Mike Mateyk, Don Campbell, Gordon Reusing) and the City (Jennifer Jackson, Anne-Marie Fowler) further met with representatives of WSI (Brian Forestal, Norm Castonguay, Sylvio Richard) and Golder Associates Ltd. (Mr. Paul Smokin) on April 18, 2007 to review CRA's preliminary comments on the EA Study Report in an effort to resolve any outstanding issues or questions.

Review of Consultation Process

Consultation was undertaken by WSI during the EA Terms of Reference (ToR) review process consisting, in part, of two Open Houses, two workshops and newsletters distributed amongst area residents. Public consultation during the EA (i.e. post-ToR approval) consisted of the following:

- Open House No. 3 held on December 14, 2006;
- Open House No. 4 held on February 15, 2007;
- letters to City Council, community associations, Chambers of Commerce and local land owners and developers;
- media releases;
- electronic mailings;
- meetings with public and regulatory agencies;
- preparation of consultation reports;
- project website;
- EA hotline and contact person;
- EA newsletters; and
- a comment tracking database.

Stakeholders for the consultation program included the public, First Nation communities and regulatory agencies.

Based on the consultation guidance procedures set out in the document entitled Guideline on Consultation in the Environmental Assessment Process (Draft), MOE, December 15, 2000, which was in effect at the time that the ToR were being prepared by WSI but which has since been replaced by the document entitled Code of Practice, Consultation in Ontario's Environmental Assessment Process (Draft), MOE, October 2006, CRA believes that, overall, the consultation undertaken by WSI satisfies the Province's EA consultation requirements. CRA is not aware of

any outstanding issues derived from the consultation process that were not addressed in the EA Study Report.

Notwithstanding the above, there does not appear to be a discussion in the EA Study Report to an EA monitoring strategy for commitments made in respect of the preferred alternative. Although the MOE did not specifically require that an EA monitoring strategy be identified in the ToR, the City expects that an EA monitoring strategy will be required as a condition of any EA approval and/or will be incorporated into the conditions for EPA/OWRA approvals.

WSI is requested to describe how it will continue to consult with stakeholders pending EA Act approval for the proposed expansion.

Review of Conceptual Expansion Design

The review of the conceptual expansion design was undertaken to assess the design components in relation to current landfill design standards and practices and to identify any areas of concern with the proposed design that may not have been adequately addressed in the EA Study Report. Since the proposed expansion involves an increase in the currently approved capacity of the Site, the proposed expansion is subject to the requirements of Ontario Regulation (O. Reg.) 232/98, Landfilling Sites, under the Environmental Protection Act. O. Reg. 232/98 provides design standards for new and expanding landfill sites and provides a proponent with the option of using either a "generic" design approach, or a "site specific" design approach. Although not specifically stated in the EA Study Report, the proposed conceptual expansion design alternatives for the Navan Landfill would be considered as site specific designs. It is also noted that the Navan Landfill accepts primarily industrial, commercial and institutional (ICI) and construction and demolition (C & D) waste and avoids accepting putrescible waste.

The EA Study Report identified five alternative designs for the expansion of the Navan Landfill. Each alternative consisted, in general, of a lateral expansion to the east in conjunction with a vertical expansion within the existing landfill area. The maximum limits of the horizontal expansion were dictated by maintaining a minimum 100 m buffer area on Site property to the east. The maximum limits of the vertical expansion were dictated by slope stability analysis. Through follow-up discussions with Golder Associates, it is understood that an additional objective of the conceptual expansion design alternatives was to provide for additional Site life of at least 10 years.

Of the five alternatives presented, Alternative 3 was identified as the preferred alternative. Alternative 3 consists of a horizontal expansion of 130 m to the east for a total expansion area of

8.5 ha., and a vertical expansion of 13 m. Alternative 3 is predicted to provide an increase in Site life of 10.8 years.

Details of the conceptual expansion designs were provided in the Conceptual Design Document, Technical Support Document For The Environmental assessment of the Proposed WSI Navan Landfill Expansion, (Golder Associates Ltd, February 2007) (design document). The following is a summary of the key design components presented in the report:

- Base Contours
  - The conceptual design proposes that the base of the expansion cell be excavated to a depth that will approximate the base grades in the existing landfill area. These proposed base grades will result in excavation of approximately 515,000 m^3 of native soil at depths of up to 12 m at the north end of the expansion area. The proposed base of the expansion cell will be consistent with the existing landfill area in that the excavation surface will form the base of the cell. No additional engineered components (e.g., recompacted clay layer, HDPE liner, etc.) is proposed. The base will be contoured to facilitate the overlying leachate drainage layer.

- New Site Entrance
  - The conceptual design proposes a new Site entrance, located approximately 100 m east of the existing Site entrance. The new Site entrance has been designed to align with a future intersection on Navan Road and will accommodate a truck queuing area, more flexibility for on-site traffic flow and enhanced visual and sound screening features.

- On-Site Roads
  - On-Site roads have been proposed for the expanded Site. The proposed roads will consist of paved surface roads for all roads located outside the limits of waste. For roads within the limits of waste, the roads will have a granular surface.

- Composting Area
  - The report indicates that the current composting operations on-Site will be discontinued as part of the expansion undertaking. It is understood that this is intended as a mitigative measure to eliminate potential odour concerns associated with the composting operation.

- Site Buffer Zones
  - O.Reg. 232/98 stipulate buffer zones around the limits of waste of a minimum of 100 m, or a minimum of 30 m if a written report confirms that the narrower buffer zone is adequate for landfill operations and is sufficient to ensure that potential effects of the

landfill operations do not have any unacceptable impact outside the Site. The buffer zones around the existing landfill limits consist of 30 m, 100 m, 10 m and 260 m to the north, west, south and east, respectively. The 10 m buffer to the south abuts a VIA rail right-of-way. An additional 100 m buffer zone along the south side of the VIA right-of-way is also owned by WSI and considered part of the Site. The proposed expansion cell would extend 130 m to the east from the edge of the existing eastern waste limit, resulting in a buffer zone width of 130 m along the east side of the Site.

- Landfill Sequencing and Phasing
  - The design document outlines criteria that were assumed for development of the proposed landfill sequencing and phasing including approximate duration per phase (2 years), maximum permitted landfilling rate (234,750 tonnes per year), compacted waste density (0.85 tonnes per m^3), waste to cover soil ratio (4:1), and soil excavation rate (140,000 m^3 per year). The design document states that the sequencing and phasing will be refined during the detail design stages.

- Final Cover
  - The final cover design currently approved for the Site consists of a 0.6 m thick clay layer, overlain by a 0.3 m sand layer and a 0.1 m topsoil layer. The design document indicates that consideration will be given to increasing the thickness of the clay layer to between 1.5 m and 3.0 m to accommodate surplus excavated clay. It is noted that increasing the clay thickness of the final cover may aid in reducing leachate generation due to reduced infiltration, and will also aid in reducing landfill gas emissions from the landfill through the final cover. It is noted, however, that the existing final cover design is in accordance with O. Reg. 232/98.

- Excavation of Soils
  - The excavation of soil for the expansion area will result in a significant surplus of soil at the Site. A portion of the surplus soil will be used for final cover construction and screening berm construction, however, a significant volume of soil will be required to be stockpiled on Site. The proposed stockpile location is in the eastern buffer area. The conceptual design report recognizes and addresses the potential for settlement of the native ground beneath the stockpile, which is anticipated to be significant (3-5 metres) due to the characteristics of the marine clay that is present at the Site.

- Geotechnical Evaluation
  - A slope stability and settlement analysis was performed in support of the environmental assessment for the landfill expansion. The slope stability analysis consisted of both static and seismic (earthquake) analysis. The results of the slope stability analysis

indicated that the design of the expansion will provide for a factor of safety of greater than 1.4 for the static analysis. Under the design earthquake analysis, a displacement of less than 200 mm for the waste slopes was predicted.

- The results of the settlement analysis predicted settlement of the base of the expansion cell due to waste surcharge in the order of 3-5 metres. Settlement of this magnitude is considered significant, however, the design report acknowledges this and has modified the design of the expansion to accommodate this settlement.

- Leachate Management
  - The leachate management system for the existing landfill consists of an underdrain system in the northwest portion of the Site, connected to a perimeter leachate collection trench, which runs along the west and south sides of the waste mound. An underdrain system is also located in the northeast portion of the existing landfill. All leachate collected by the existing system is drained to a wet well in the south east corner of the existing landfill where it is loaded into tank trucks for haulage and off-Site disposal at the City of Ottawa municipal sewage treatment plant. The report also indicates that a recent agreement with the City will result in the construction of a forcemain from the Site to the City's municipal sewage system, for future disposal of the leachate.
  - The expansion cell will be constructed with a full underdrain consisting of a granular drainage layer and HDPE piping to convey leachate to a central pumping sump. Collected leachate will be pumped from this sump to the existing wet well. The configuration of the proposed leachate underdrain system for the expansion cell has been designed to accommodate the anticipated significant settlement predicted for the expansion cell base. The design report states that the leachate underdrain system will be designed in accordance with O.Reg. 232/98.

- Landfill Gas and Odour
  - A landfill gas management system is proposed for the expanded site to control potential landfill gas odour. The proposed landfill gas management system consists of a series of vertical extraction wells drilled into the waste, which would be connected to blowers to extract, under negative pressure, the landfill gas from the waste. The extracted landfill gas would be conveyed to an enclosed flare for thermal destruction. The design report does not anticipate off-Site migration of landfill gas will occur due to the soil conditions and presence of the leachate collection trench and storm water diversion ditches around the perimeter of the Site.

- Stormwater
  - See Review of Surface Water Assessment

In summary, the proposed conceptual expansion design alternatives were developed to a level of detail to permit comparison of the alternatives for the purpose of selecting a preferred alternative. CRA did not identify any components of the proposed expansion design alternatives presented that were in potential contravention of O. Reg. 232/98 requirements or that CRA felt should have been considered further at this stage. The design document indicates that the major components of the expansion design will be designed to meet the requirements of O. Reg. 232/98. Further, it is noted that a detailed design of the proposed expansion will be required to be prepared by the proponent and submitted to the Environmental Assessment and Approval Branch of the MOE in support of an EPA Section 5 approval, prior to implementation of the expansion.

Review of Geologic/Hydrogeologic Impact Assessment

The purpose of this task was to review the geologic and hydrogeologic impact assessment presented in the EA Study Report to determine if the technical studies undertaken by WSI were consistent with the following:

- Environmental Assessment Act (EA Act);
- Ontario Regulation 232/98; and
- Industry standards.

Under this task the relevant sections of the following documents were reviewed:

- EA Study Report (Volumes I and II);
- Conceptual Design Document;
- 2005 Operations and Monitoring Report;
- 2006 Monitoring Report; and
- POLLUTE model output files not provided in Appendix E of Volume II of the EASR.

Description of the Geology and Hydrogeology

The description of the geology and hydrogeology of the Site is presented in Volume I of the EA Study Report. A separate Technical Supporting Document for this environmental component was not presented. This is understandable since investigation of the geology and hydrogeology of the existing Site began in the 1980s and has been described in previous reports. The EA Study Report presents an adequate summary description of the geology and hydrogeology environment for the purpose of the EA. The description presented was verified by CRA

through the examination of existing monitoring well stratigraphic and instrumentation logs, geologic cross-sections and groundwater level information presented in the above-noted reports.

Based on our review of the Site geology and hydrogeology, CRA concurs that it is suitable for use as a landfill due the significant thickness of marine clay and glacial till overlying the principal aquifer (shale/limestone bedrock). This clay/till sequence acts an aquitard protecting the bedrock from leachate-impacted groundwater.

Description of Groundwater Quality

A general description of the current groundwater quality in the various hydrostratigraphic units was presented in Volume I of the EA Study Report. It is noted that groundwater monitoring has occurred at the Site since 1981. There was a measured impact in the shallow sand unit downgradient of the Site. In response to the measured impact, WSI installed a perimeter collection drain along the west and south side of the Site to contain and collect leachate-impacted groundwater migrating in the shallow sand unit. The perimeter drain has been effective is preventing further off-Site migration.

The description in the EA Study Report stated that currently the existing Site had no measurable impact on the downgradient groundwater quality. However, no actual groundwater data were presented in the EA Study Report. In order to verify the conclusion of no current impact, CRA reviewed the 2005 and 2006 Monitoring Reports. These reports included the measured groundwater concentrations for the various parameters included in the monitoring program. This independent examination of the 2005 and 2006 groundwater data confirmed that the existing Site has had no measurable impact on groundwater quality.

The review of the most recent monitoring reports has also shown that the monitoring network is suitable for the purpose of establishing background conditions and measuring any potential impact. Typically, the MOE, under O. Reg. 232/98, requires the use of the Reasonable Use Guideline (RUG) to assess landfill impact on groundwater quality. However, because of the nature of the groundwater on and in the vicinity of the Site, the MOE has agreed that RUG is not applicable. We concur with this assessment. The method to evaluate the potential groundwater impacts was modified in 2007 to compare measured groundwater concentrations to the range of background values. This approach is appropriate for the Site.

Predictions of Future Impact

It is required under O. Reg. 232/98 to conduct appropriate modelling to assess future groundwater impacts, if any, for landfill expansions. Groundwater modelling was undertaken

as part of the EA to assess the effects of the expansion alternatives on groundwater quality. The modelling assessment was presented in Appendix E of the EA Study Report. The modelling assessment was conducted using the contaminant transport model POLLUTE. This model is approved by the MOE and is commonly used in the consulting industry. Appendix E described the conceptual Site model, modelling approach, leachate generation rates, key contaminants (parameters that were evaluated), service life of the leachate collection system, predicted leachate mound heights, vertical leakage rates and results.

Based on our review, the modelling approach and assumptions used were appropriate for the Site and consistent with the requirements of O. Reg. 232/98. The hydraulic conductivity values used for the various hydrostratigraphic units were obtained primarily from historical reports. We could not verify the correctness of the historical testing. However, based on our professional experience, the input parameters are reasonable.

The modelling assessment concluded that none of the landfill expansion alternatives resulted in measurable impact to the bedrock aquifer. However, no model output results were presented in Appendix E. CRA requested this information from Golder Associates, and the breakthrough curves were provided for the various alternatives. Our examination of these breakthrough curves show that the conclusions presented by Golder Associates are valid.

In summary, the method used in the modelling assessment to predict future impact was appropriate and was applied correctly with respect to the requirements of the regulations and industry standards. The predicted results of no future impact are reasonable based on the modelling work conducted.

Review of Surface Water Assessment

The conceptual design document presents the existing stormwater management features for the Site and the proposed stormwater management plan for the Site. As noted in the design report, the Site is located on a watershed divide between two major watersheds- the Rideau River watershed to the west and the South Nation River watershed to the east. The design document states that the surface water system operates at the Site to maintain the pre-landfill drainage conditions to each watershed; to divert surface water and shallow groundwater flow originating upstream of the Site around the landfill; to minimize the amount of surface water that comes in contact with the waste; and to maximize the removal of suspended sediment from surface water prior to release to the down stream watershed. The report indicates that upgrades to the stormwater system at the Site are currently underway to meet the requirements of O.Reg. 232/98. A generic, conceptual stormwater management plan for the expanded Site was provided in the design report, which included a new pond in the southeast corner of the

Site. The report also presented preliminary stormwater modeling results for the proposed storm water management pond sizing.

The Visual OTTHYMO (2.0) model was used to predict peak flows and runoff volumes for the east and west drainage portions of the Site. The use of this model is acceptable. Flows were predicted for each of the alternatives for the 1:2, 5; 10; 25; 50; and 100 year return period storm events. Flows for existing conditions were also modeled. The volumes of the stormwater management ponds required on the east and west side of the Site to maintain peak flows at existing condition levels were then calculated for each alternative. Since the stormwater management ponds have been designed to prevent increases in peak flows downstream of the landfill, there are no differences in the alternatives. There are, however, differences in the size of the ponds required for each alternative. For each of the alternatives, there is enough space to construct ponds of the required sizes within the Site boundaries.

The EA Study Report concludes that, under baseline conditions, the landfill does not having an adverse impact on water quality downstream of the landfill, either in the perimeter lagg of the Mer Bleue bog or the drainage course discharging to Mud Creek. The drainage improvements associated with the proposed expansion including segregation of clean and potentially impacted runoff, ponds on the east and west sides to remove sediment and improve water quality, leachate collection system and ongoing surface water and groundwater monitoring programs will be in place to maintain and protect water quality downstream of the landfill. Considering that approved Site operations will require that these measures are implemented and maintained, the EA Study Report concluded that future water quality impacts on downstream receiving waters are not expected under any alternative.

Based on CRA's review of the design document, there were no issues identified with surface water management associated with the proposed expansion. The proposed stormwater management plan will be designed in accordance with O. Reg. 232/98 and will also be designed to meet re-development conditions. Further, the design of the stormwater management plan is subject to Ontario Water Resources Act (OWRA) approval.

Review of Atmospheric Impact Assessment

The Atmospheric Environment Part I – Air and Odour Assessment Report generally followed standard MOE procedures for emissions estimates and dispersion modeling. The air compliance assessment with Regulation 419 Schedule 3 standards shows that particulate matter, particulate matter less than 10 microns (PM-10), nitrogen oxides, sulphur dioxide, hydrogen sulphide and vinyl chloride are well below the applicable criteria (see Table 8.1-1).

The odour concentration assessment using the proposed hydrogen sulphide 10-minute standard shows that there will be some exceedances of the standard for Alternatives 1 and 2 (see Table 8.1-3), however the fraction of time that the exceedances occur is less than the proposed allowable frequency of 0.15%. There are no predicted exceedances of the proposed hydrogen sulphide 10-minute odour standard for Alternatives 3 and 4.

The predicted maximum whole odour concentration using odour units (OU) for all Alternatives is 1.01 OU. The MOE typically uses 1 OU as a standard for sensitive receptors within the Section 9 Approvals process. A value of 1 OU indicates that 50% of a normal population would be able to detect an odour. CRA was informed that if the maximum eight hours of odour concentrations were removed from each year of modeling data (as allowed by the MOE in their dispersion modeling guidance), the maximum odour unit level would drop to 0.54 OU.

The odour modeling did not include the odour emissions from fugitive landfill gas emitted from the surface of the landfill that is not collected by the landfill gas collection system. The report assumed that approximately 5% of the landfill gas will be emitted as fugitive emissions from the surface (see Section 5.6.2). A September 27, 2006 Odour Sampling report by Zorix indicates that there is odour in the landfill gas emitted from a passive gas vent. This same landfill gas also has a potential to contribute to off-Site odour as it is currently assumed to be emitted from the landfill surface at a rate of 5% of the total gas generated. Therefore, CRA recommends that this landfill gas odour emission be included in the EPA Section 9 Approvals application. CRA was informed by Golder Associates that the inclusion of this landfill gas odour emission in the dispersion modeling would likely have a small impact on the modeling results. Nevertheless, pending the results of the dispersion modeling prepared in support of the EPA Section 9 application, it may be necessary to evaluate additional odour controls to address fugitive landfill gas emissions through the landfill surface. It may also be necessary to modify the EA Study Report to reflect the corresponding impact generated by the modeling results, and communicate those results accordingly.

The Atmospheric Environment Part II – Noise Assessment report generally followed accepted MOE procedures for noise assessments, using ISO 9613 -2 calculation procedures with source-specific sound power levels estimated for each significant noise source at the Site. There are numerous sensitive receptors (residences) located along Navan Road, many within 100 metres of the Site boundary. The report calculates that the estimated noise level at the sensitive receptors will be at or below 55 dBA for all four alternatives (Tables 6.2-1, 6.2-2, 6.2-3 and 6.2-4). The EA Study Report concluded that all four alternatives will require extensive noise attenuation measures to shield the noise sources from the sensitive receptors.

Several of the receptors, including R5, R6, R7, R8, and R11 are predicted to have a noise level of 55 dBA even with the proposed noise barriers. Given the inherent uncertainty in the modeling

results, the proposed noise barrier designs should be revised to achieve theoretical noise levels less than 55 dBA at the sensitive receptors. The modeling does show that compliance with noise criteria can be achieved and CRA recommends that the noise barrier designs be revisited during the EPA Section 9 Approvals process.

Section 6 of the report Tables 6.1-1 and 6.1-2 summarizes the minimum nighttime and minimum daytime noise levels for six days of ambient noise measurements. Appendix B has 13 days of noise monitoring data. There is no explanation given in the report regarding the missing 7 days of data in Tables 6.1-1 and 6.1-2. CRA was informed that the missing data was left out due to poor weather conditions.

In summary, CRA recommends that fugitive landfill gas emissions through the landfill cap be incorporated into the odour modeling evaluation and that appropriate mitigation measures be developed in conjunction with future EPA Section 9 Approvals, as required. Further, CRA recommends that noise attenuation designs be revised, as required, to reflect achievement of noise levels less than 55 dBA at sensitive receptors.

Review of Proposed Site Mitigation Measures

Site mitigation measures identified in the EA Study Report included the following:

- Odour – Leachate forcemain; active gas management system; discontinuation of composting
- Noise – Berms
- Dust and Dragout – Best management plan for dust control
- Visual Impact – Vegetation of sideslopes and berms
- Property Value – Property Value Protection Plan
- End Use – Plan within 3 years of closure

Details relating to design of the above mitigation measures were not provided in the EA Study Report and will instead be provided in future design and operation documents submitted to the Environmental Assessment and Approval Branch of the MOE in support of an EPA Section 5 approval, prior to implementation of the expansion. CRA is in agreement that selection of the proposed Site mitigation measures appears appropriate for the Site at this time, pending confirmation of potential fugitive odour and noise related impacts noted above.

Review of Preferred Alternative Selection Methodology

In order to establish the relative importance of the various environmental evaluation criteria used to select the preferred alternative, WSI consulted the public during the ToR process. The public provided input into whether certain environmental evaluation criteria were Very Important (e.g. air quality, odour), Important (e.g. groundwater quality, surface water quality) or Less Important (e.g. archaeological resources, economic benefit to community), and each alternative was evaluated on the basis of whether it was Most Preferred, Less Preferred or Least Preferred under the various environmental evaluation criteria importance categories. Mitigation measures were considered to reduce or eliminate potential adverse effects of each alternative on the environment. The preferred alternative was determined by identifying the alternative that was Most Preferred the greatest number of times in the most important categories with the fewest number of Less Preferred or Least Preferred. This approach is qualitative in nature.

In its approval of the ToR, the MOE did not require that environmental effects be considered independent of mitigation measures, nor did the MOE require that non-qualitative (i.e. quantitative) methods be employed to evaluate the various alternatives and identify the preferred alternative.

Mitigation measures are typically implemented under approvals subject to other legislation (e.g. Environmental Protection Act, Ontario Water Resources Act, etc.) and are not assumed to be pre-approved. In this instance, WSI has indicated that other approvals will be applied for subsequent to EA Act approval.

Quantitative methods (e.g. weighted additive method, non-parametric additive method, dominance set method, etc.) are used to provide confidence in the results of the evaluation: if the same alternative consistently appears as the preferred alternative from one evaluation method to another, then that alternative is considered the most preferred. The assignment of preferences indicating the importance of one criterion relative to another is inherently difficult. For example, how much more or less important is groundwater quality than surface water quality? The qualitative (subjective) preference values assigned are necessarily uncertain and, thus, the ability to test the sensitivity of the selection process through use of quantitative methods gives confidence to the robustness of the selection of the preferred alternative. This is why quantitative methods are employed instead of or in addition to qualitative methods.

As the above methods were deemed acceptable through the consultation process and were not challenged by the public and the MOE, and as there are no "hard and fast" rules governing alternative selection methodology, it is concluded that the preferred alternative selection

methodology used is acceptable. It is noted, however, that a quantitative approach may be useful in confirming the identification of the preferred alternative.

We trust the enclosed to be satisfactory for your consideration. Please do not hesitate to contact our office should you have any question or comments concerning this submission.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Michael A. Benson, M.A., RPP

MAB/dma/2

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