



Odour Management Plan

Stoney Creek Regional Facility



65 Sunray Street, Whitby Ontario L1N 8Y3 Canada
11102771 | June 25, 2021



Table of Contents

1.	PURPOSE	1
2.	RESPONSIBILITIES	1
3.	PLAN	2
3.1	ODOUR EMISSION SOURCES	2
3.1.1	Incoming Waste Control Operations and Active Landfill Areas	2
3.1.2	Exposed Areas through Waste Movement and Construction Operations	2
3.1.3	Leachate and Leachate Pumping	2
4.	DO	2
4.1	INSPECTION AND MAINTENANCE PROCEDURES.....	2
4.2	MONITORING.....	3
4.3	SCHEDULE OF IMPLEMENTATION	3
4.4	TRAINING	3
4.5	CORRECTIVE ACTION/ RECORD KEEPING	4
5.	CHECK	4
5.1	PERIODIC REVIEWS	4
6.	ACT	5
6.1	CONTINUOUS IMPROVEMENT	5
7.	VERSION CONTROL	5
	APPENDICES	6
	APPENDIX A.1 SITE TRAINING LOG.....	6
	APPENDIX A.2 COMPLAINT REPORT.....	7
	APPENDIX A.3 ODOUR COMPLAINT RESPONSE LETTER EXAMPLE	8

Table Index

Table 4.1	Schedule for Odour Control Measures.....	3
Table 7.1	Document Version Control	5

Figure Index

Figure 1	Site Map
Figure 2	Potential Receptors

Appendices

Appendix A.1	Site Training Log
Appendix A.2	Complaint Report
Appendix A.3	Odour Complaint Response Letter Example



1. PURPOSE

This document describes the Odour Management Plan for the Terrapure Environmental (Terrapure) Stoney Creek Regional Facility (SCRF) prepared in accordance with Condition No. 10 of the Ministry of Environment, Conservation and Parks (MECP) Notice of Approval to Proceed with the Undertaking. The MECP approved the SCRF EA on August 29, 2019, which was subsequently approved by Ontario Cabinet on September 19, 2019.

In an effort to minimize the potential for off-site odour complaint events for the existing and future operations of the Stoney Creek Landfill site (Site), Terrapure has developed this Best Management Practices Plan that outlines measures that will be taken throughout the life of the landfill.

It is expected that the proposed waste stream will not routinely generate offensive odours; however, some of the wastes are expected to occasionally generate hydrocarbon odours. These are not routine occurrences and typically occur during the actual dumping and spreading of certain waste loads. The odour concerns typically associated with municipal landfills will not exist with the proposed waste stream.

The following sections outline the procedures that Terrapure will implement to control the potential for odour emissions from the Site.

2. RESPONSIBILITIES

Terrapure, through the Branch Manager of the SCRF, is responsible for ensuring the completeness and effective implementation of the Odour Management Plan. To accomplish this, employees will be trained in this plan and their responsibilities designated. Responsibilities will include mitigating odour emissions by covering incoming odorous waste immediately; and by immediately responding to and resolving complaints by determining the source of odour, and controlling and mitigating the odour emission source.

The Operations Supervisor is responsible for:

- Maintaining this plan
- Providing training to staff
- Providing guidance on odour control measures
- Assisting in undertaking reconnaissance for odour complaint confirmation
- Ensuring that proper records are maintained

The Field Technician and Operator is responsible for:

- Reviewing this plan
- Being trained
- Collaborating in keeping this plan up to date
- Maintaining records
- Inspecting incoming waste
- Ensuring waste is properly covered to mitigate odours



3. PLAN

3.1 ODOUR EMISSION SOURCES

Odour emissions will typically arise from waste material being brought in. Other emission sources can come from uncovering older waste material through movement of waste during operations or through construction operations.

3.1.1 Incoming Waste Control Operations and Active Landfill Areas

In administering the waste control procedures, Terrapure will reduce the likelihood of odourous wastes being accepted at the landfill by having waste stream samples judged by individuals at the generators facility, and by the bulldozer operator when checking wastes tipped at the working area.

To minimize odour impacts, odourous wastes will be identified which need to be covered with non-odourous wastes as soon as possible. Wastes that have strong offensive odours will not be accepted at the SCRF.

Regular operations will be staged to minimize the spreading of potentially odourous wastes over large areas.

Active areas will move around the site as the landfill evolves through its various development stages. Care will be taken to minimize active areas of the landfill by placing final cover over the waste as it is brought up to approved contours.

3.1.2 Exposed Areas through Waste Movement and Construction Operations

Care should be taken when exposing fresh waste through construction operations and through movement of waste.

Various phases in exposing existing landfill cells will take place during the initial operating period of the landfill. During this time the existing final cover, containing old waste underneath, will be stripped away. There may be potential for odour emissions to occur due to disturbance of the waste.

Throughout the operating period of the landfill, there will be times where existing waste materials will need to be relocated on-Site. The movement of waste may include grading waste to final contours, creating a pit to bury certain wastes, and developing landfill haul routes.

3.1.3 Leachate and Leachate Pumping

During periods of hot, humid, and stagnant weather, odours may originate from leachate on Site. If it is determined that leachate is a source of odour, the following procedures will be followed:

- Shut down leachate pumping operations immediately.
- Monitor the leachate pond for general odours (see Figure 2 for location of the pond).
- If required, further treat the leachate (e.g., aeration, chemical treatment) in order to mitigate the odours.
- Continue monitoring after treatment is applied to ensure odours have been mitigated.

4. DO

4.1 INSPECTION AND MAINTENANCE PROCEDURES

The Operations Supervisor, or individuals that have been identified by the Supervisor, will be responsible for monitoring the Site conditions for potential odour events. The following items will be inspected throughout the day:



- **Meteorological Conditions:** Evaluate wind speed and direction and temperature and determine if any waste disturbance operations be minimized.
- **Exposed Areas:** Observe the condition of the waste, construction, and exposed areas to ensure excessive odour is kept to a minimum.
- **Inspection of Waste:** Inbound waste will be inspected for odour after waste has been tipped to identify if waste requires cover with non-odourous waste.
- **Regular Operations:** While conducting regular duties, if odours are detected, the source should be investigated and the issue mitigated.
- **Leachate Treatment:** Ensure proper amounts of treatment is being applied to the leachate to prevent odour issues from arising.

4.2 MONITORING

Facility operations will occur over multiple phases, with the Site layout changing over time based on the progress of landfill construction and filling. It is also noted that the potential odour sources discussed above may also change locations based on the progress of landfill development.

Given the history of the Site, the type of waste materials accepted, as well as current operations and control measures it is anticipated that the potential for odours is minimal, and that routine odour monitoring of the landfill is not warranted. However, complaints related to odours will be immediately investigated by landfill staff, and appropriate remedial measures (e.g., rejection of loads, covering of odourous materials) will be taken as necessary. The need for odour monitoring will be reassessed on a regular basis with consideration given to any odour complaints that may be received.

Figure 1 shows the current Site layout, while **Figure 2** shows the potential receptors located in the vicinity of the Site.

Weather monitoring is performed using a Met One Beta Attenuated Monitor (BAM) unit and meteorological station to monitor parameters such as temperature, wind speed and direction, and rainfall in real-time. The current location of this unit is along the northeast property line between the landfill footprint and Upper Centennial Parkway. The monitoring method using the 1020 BAM unit complies with the methods specified by U.S.EPA (EQPM- 0798-122).

4.3 SCHEDULE OF IMPLEMENTATION

The following table provides the proposed schedule for implementation of the plan:

Table 4.1 Schedule for Odour Control Measures

	Implementation Time Lines
Monitoring of incoming odourous material to be buried immediately	Existing and ongoing.
Complaints resolution	Existing and ongoing as issues arise.
Review of complaints	Existing and ongoing.

4.4 TRAINING

The Operations Supervisor will be responsible for identifying personnel who are trained in odour mitigation and complaint response. These individuals have the responsibility to evaluate conditions for odours and implement control actions on an ongoing basis. The training will include:

- Identification and assessment of odour emissions;
- Implementation of control actions, such as location of waste placement, and waste covering techniques;
- Complaint resolution process; and,



- Record keeping of daily evaluations and notable emissions, control actions taken and weather conditions.

The list of responsible individuals identified will be added to the Site Training Log, as well as the date when they were trained. An example of Site Training Log is included in Appendix A.1. Training will be updated on an annual basis.

4.5 CORRECTIVE ACTION/ RECORD KEEPING

From time to time, there may be complaints regarding odour from the local residents. Odour-related nuisance effects will be dealt with through a formal complaint process. The initial step will involve recording the nature of the complaint in complaint report. The information recorded includes:

- Name of complainant
- Time/date of complaint
- Nature of complaint
- Operational details at the time of the complaint
- Weather conditions at the time of the complaint
- Details of any investigation
- Resolution

A template is provided in Appendix A.2. All records of complaints and corrective actions will be maintained on-Site.

The next step is to determine where the odour complaint is originating from, typically provided by the complainant; afterwards, using online meteorological data to determine wind direction, a determination will be made if the odour is being carried from the landfill to the source of the complaint.

A perimeter site reconnaissance will be conducted to verify if odour is being sensed off Site, around the perimeter, and around the area of the source of the complaint.

If the investigation is determined that the odour is not caused by the landfill through sufficient evidence, then the information and observations will be recorded and a formal letter will be sent to the complainant. An example is provided in Appendix A.3.

If an occurrence is deemed to be sourced from the landfill, immediate mitigation measures will be taken to deal with the odour issues. The information and observations will be recorded and a formal letter will be sent to the complainant. In addition, copies of complaints and responses will be sent to the Community Liaison Committee, the City and the MECF.

5. CHECK

5.1 PERIODIC REVIEWS

Information gathered on inspection forms/logs from inspections, monitoring and sampling will be periodically reviewed to verify and document ongoing implementation of the plan and to determine when to take additional action, if needed.

All complaints will be reviewed on a monthly basis and summarized in the Annual Monitoring Report to identify what, if any, corrective or preventative actions can be implemented.



6. ACT

6.1 CONTINUOUS IMPROVEMENT

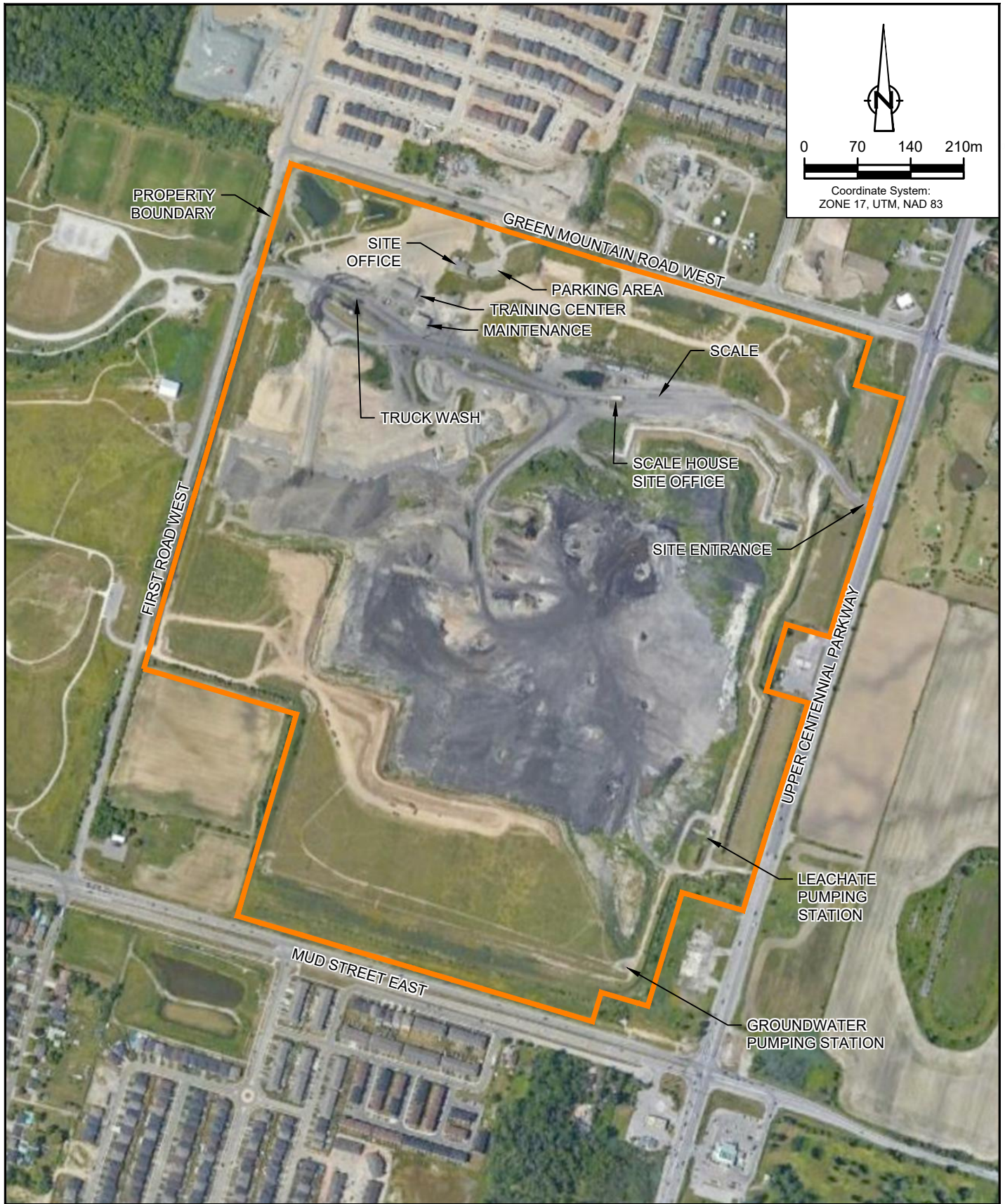
This Odour Management Plan is a comprehensive site-specific document that identifies sources of odour emissions from the Site and the Best Management Practices for controlling these sources. This plan will be reviewed and updated on a regular basis. It will build on current and known practices with a commitment to continuous improvement.

In addition, consideration will be given to process changes or material substitution that would result in reduction of odour emissions. Where justified, the plan will be adjusted where improvements in other areas may have made a control measure unnecessary.

7. VERSION CONTROL

Table 7.1 Document Version Control

Version	Date	Description of Changes
1.0	August 2019	Revision to bring document into alignment with the Environmental Management Plan.
1.1	June 2021	Updated to address MECP review comments.



SOURCE: IMAGE ©2018 GOOGLE.

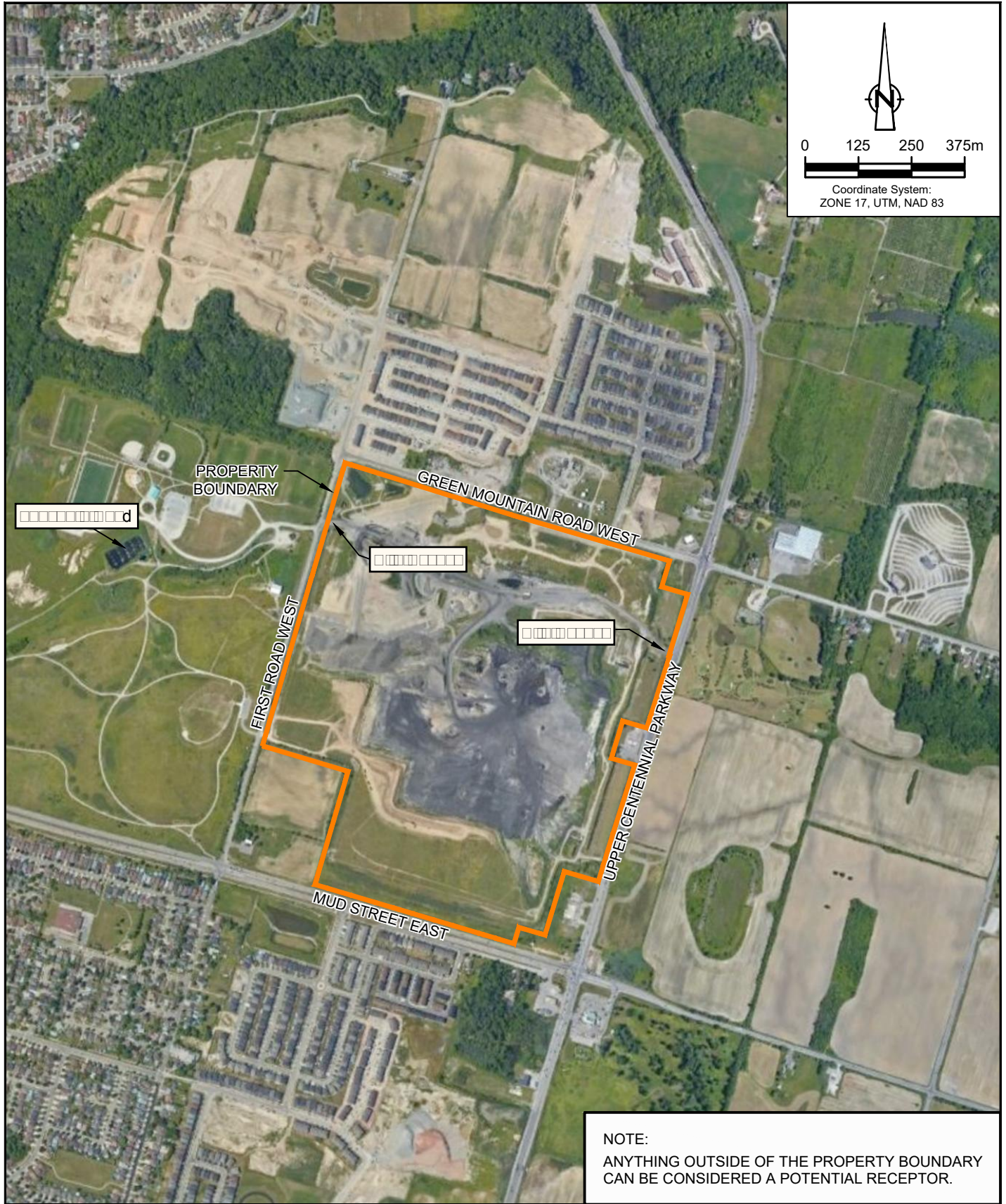


TERRAPURE ENVIRONMENTAL
 65 GREEN MOUNTAIN RD. W, STONEY CREEK, ONTARIO
 ODOUR MANAGEMENT PLAN

11102771-10
 Sep 3, 2019

SITE MAP

FIGURE 1



SOURCE: IMAGE ©2018 GOOGLE.



TERRAPURE ENVIRONMENTAL
65 GREEN MOUNTAIN RD. W, STONEY CREEK, ONTARIO
ODOUR MANAGEMENT PLAN

11102771-10

Sep 3, 2019

POTENTIAL RECEPTORS

FIGURE 2



APPENDICES

APPENDIX A.1 SITE TRAINING LOG

Table A.1 Sample Site Training Log

Date & Time	Trainee's Signature	Trainer's Signature



APPENDIX A.2 COMPLAINT REPORT

APPENDIX A.2 COMPLAINT REPORT

TERRAPURE STONEY CREEK REGIONAL FACILITY
Complaint Report

Complaint Number:	
To be completed by Staff receiving Complaint	
Date:	Time
Name:	
Address:	
Telephone:	
Nature of Occurrence	
<u>Taken By: Terrapure Staff</u>	
To be completed by the Terrapure Management	
Date:	Time:
Confirmation of Occurrence:	
Control Systems Operating:	
Active Landfill Area:	
Weather Conditions:	

APPENDIX A.2 COMPLAINT REPORT

TERRAPURE STONEY CREEK REGIONAL FACILITY
Complaint Report

Follow-up Action Taken:

Documentation of Occurrence to:

Caller

Br.Mgr

MOE

CLC/City

Mgr.

Other _____

Date of Occurrence:



APPENDIX A.3 ODOUR COMPLAINT RESPONSE LETTER EXAMPLE

APPENDIX A.3 ODOUR COMPLAINT RESPONSE LETTER EXAMPLE



August 28, 2019

Mr. Joe Smith
123 First Road W.
Stoney Creek, ON
A1B 2C3

Dr. Mr. Smith:

Re: Odour Complaint – July 31, 2019

This letter is to acknowledge receipt of your concern regarding odour, which you believe to be caused by the operations at the Stoney Creek Regional Facility.

Upon receipt of your concern, an investigation was immediately conducted by several staff members around the perimeter of the facility, your residence and the surrounding area. During these investigations no odours were detected.

Should you have any questions, please do not hesitate to contact me at (905) 123 – 4567.

Sincerely,

**TERRAPURE ENVIRONMENTAL
STONEY CREEK REGIONAL FACILITY (A181008)**

*****SIGNATURE*****

NAME of regional operations manager
Regional Operations Manager

cc: NAME, Operations Manager
NAME, Senior Environmental Technician

65 Green Mountain Road W., Stoney Creek, ON L8J 1X5
Tel: (905) 561-0305 Fax: (905) 549-4515
www.terrapureenv.com