


Notice of Alteration Form



File No. : 5556.00	Environment Act Licence No. : 3081R
Legal name of the Licencee: The City of Winnipeg, Water and Waste Department	
Name of the development: The Brady Road Resource Management Facility	
Category and Type of development per Classes of Development Regulation: Waste Treatment and Disposal <input type="button" value="v"/> <SELECT>	
Licencee Contact Person: Chris Kozak Mailing address of the Licencee: 1120 Waverley Street City: Winnipeg Province: Manitoba Postal Code: R3T 0P4 Phone Number: 986-2384 Fax: Email: ckozak@winnipeg.ca	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant): Chris Kozak, Superintendent of Operations	
Phone: 986-2384 Fax:	Mailing address: 1120 Waverley Street, Winnipeg, MB, R3T0P
Email address: ckozak@winnipeg.ca	
Short Description of Alteration (max 90 characters): -Emergency Cell Area D - Deep-Pit Burial Pilot Project	
Alteration fee attached: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
If No, please explain:	
Date: Nov 7, 2023	Signature:  Printed name:
<p>A complete Notice of Alteration (NoA) consists of the following components:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Cover letter <input checked="" type="checkbox"/> Notice of Alteration Form <input checked="" type="checkbox"/> 1 hard copy and 1 electronic copy of the NoA detailed report (see "Information Bulletin - Alteration to Developments with Environment Act Licences") <input type="checkbox"/> \$500 Application fee, if applicable (Cheque, payable to the Minister of Finance) 	
<p>Submit the complete NoA to: Director, Environmental Approvals Branch Manitoba Environment and Climate 14 Fultz Blvd Winnipeg, Manitoba R3Y 0L6 EABDirector@gov.mb.ca</p> <p>For more information: Phone: (204) 945-8321 Fax: (204) 945-5229 https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html</p>	
<p>Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")</p>	



Water and Waste Department • Service des eaux et des déchets

November 7, 2023

Our File No.: G-249

Manitoba Conservation and Climate
Environmental Approvals Branch
14 Fultz Blvd
Winnipeg, MB R3Y 0L6

Attention: Edwin Yazon, Environmental Engineer

**RE: Notice of Alteration, Environment Act Licence No. 3081 R, The Brady Road
Resource Management Facility, Emergency Cell. Client File No. 5556.00**

Please accept this letter as a Notice of Alteration to the above noted Environment Act Licence.

The Brady Road Resource Management Facility (BRRMF) is a Class 1 Waste Disposal Ground operated by the City under Environmental Act License No. 3081 R issued in April 23, 2014. The BRRMF consists of approximately 790 hectares of land located south of the Perimeter Highway and between Brady Road and Waverley Street. Waste accepted includes residential wastes, internal city waste, commercial, industrial and charity wastes, Construction and Demolition (C&D) wastes, asbestos, hospital waste, animal waste, grit from the streets, biosolids, sweeping, wood wastes, glass, clean fill, etc.

The City has a need to design and construct an emergency cell as a backup alternative for the current landfill operations. Area D is identified for this purpose. Area D contains two closed existing waste cells, one monitoring well (W-12), and two surface water ditches (west-east and north-south) conveying runoff. KGS Group submitted the conceptual design of this emergency cell over Area D to the Province and City and met on July 25, 2023 to discuss the concept. The conceptual design site plan includes placement of waste over the closed waste cells and adjacent undisturbed area. Base preparations will include stripping of topsoils, scarifying the underlying high plastic clay, and re-compaction. Perimeter and centrally located leachate trenches will convey the leachate from south to north to three (3) new manholes located on the north side of the cell. The central south-north trench will also receive leachate from finger drains to be installed into the two existing closed waste cells ("mounds") flanking the trench. Leachate will then be pumped to the existing leachate storage tank at the site. The leachate trenches will include perforated pipe, bedded in gravel, and the remainder filled with tire shred as drainage media. A series of swales and tire shred conduits may also be included to enhance drainage on the "floor" of the cell. The existing groundwater monitoring well is to be decommissioned to the standards and guidelines in Manitoba, and two new groundwater wells (MW-1 and MW-2) are to be installed.



1120 Waverley Street • 1120 rue Waverley • Winnipeg • Manitoba R3T 0P4
tel/tél. (204) 986-5311 • fax/télé. (204) 774-6729 • winnipeg.ca



Water and Waste Department • Service des eaux et des déchets

Secondly the City of Winnipeg seeks approval for the demonstration of deep-pit burial of pig mortalities at Brady Resource Management Facility (Brady). The objective of this study is to determine the decomposition rate of pig mortalities via deep-pit burial for up to 10 years. The expected start date is Fall 2023.

Additionally, please see the attached detailed design proposal by KGS Group for an emergency cell at the Brady Road Resource Management Facility (BRRMF), operated by the City of Winnipeg ("The City") also the Pilot Project: Deep-Pit Burial of Pig Mortalities from Manitoba Agriculture. The City seeks approval for this design and demonstration as an alteration to the existing licence for BRRMF.

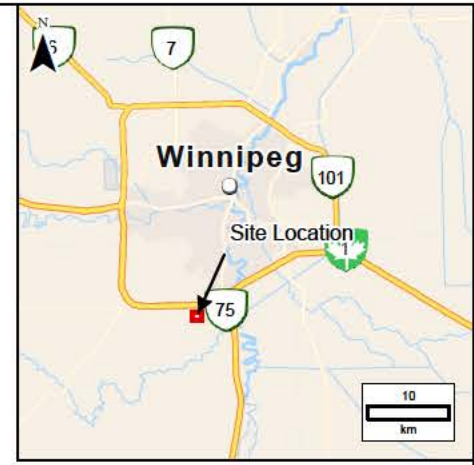
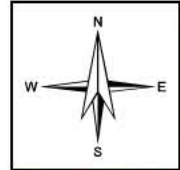
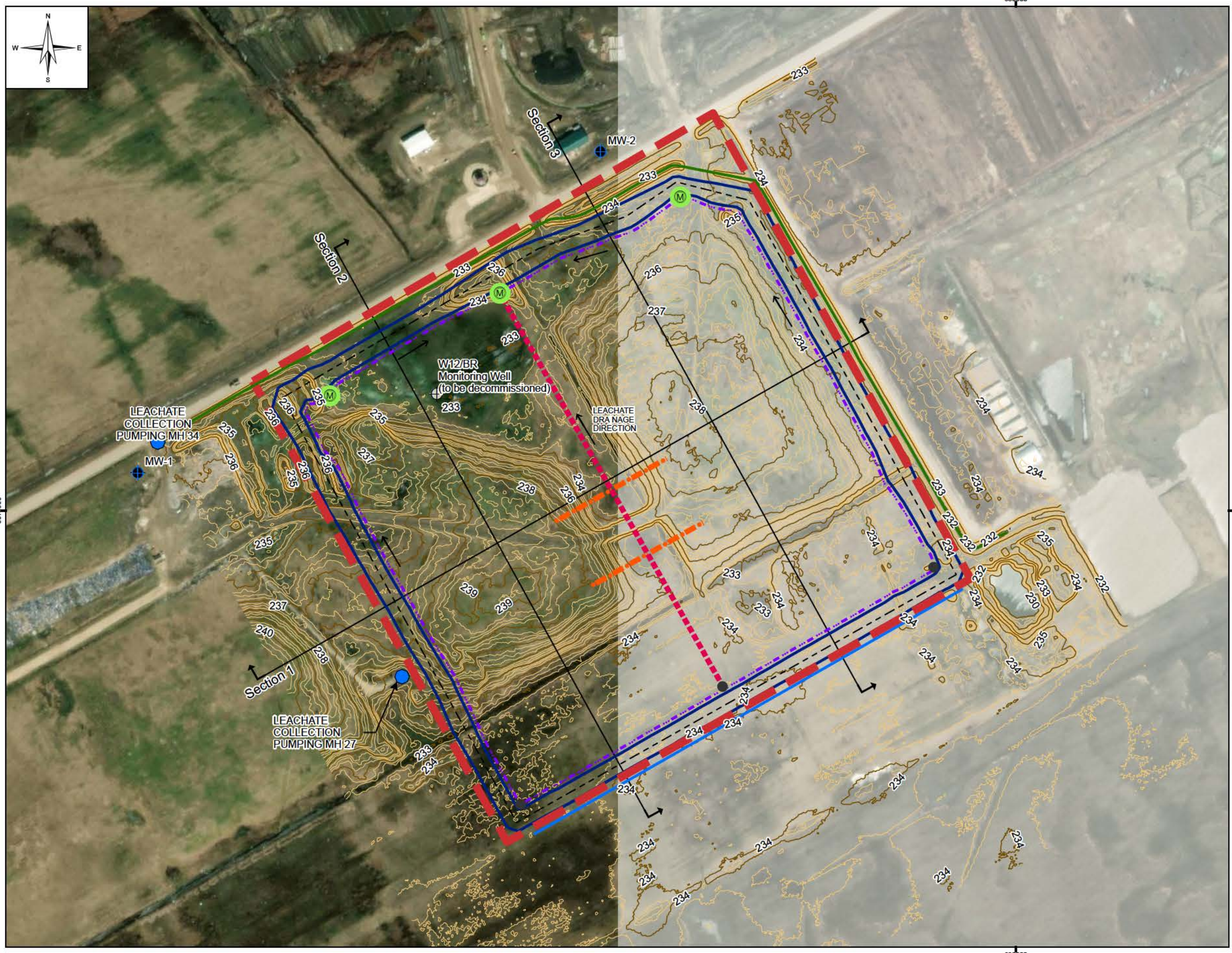
Should you have any questions or require additional information, please feel free to contact the undersigned at (204) 986-2384 or at ckozak@winnipeg.ca. Thank you for your consideration.

Yours truly,



Chris Kozak, C.E.T.
Superintendent of Operations, Solid Waste Services



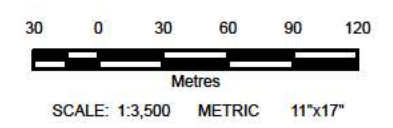


- LEGEND:**
- 2020 LIDAR**
- 0.25m Contours
 - 1m Contours
- Proposed Works**
- Emergency Cell Area
 - Berm Limits
 - Berm CL
 - Clean Out
 - Manhole
 - Monitoring Well
 - 10" Perforated Pipe (French Drains cut into existing waste bodies for leachate drainage control)
 - Leachate Trench with 10" Perforated Pipe
 - Leachate Trench with 8" Perforated Pipe
 - Proposed Ditch
- Existing**
- City of Winnipeg Manhole
 - Groundwater Well
 - Existing Ditch

NOTES:

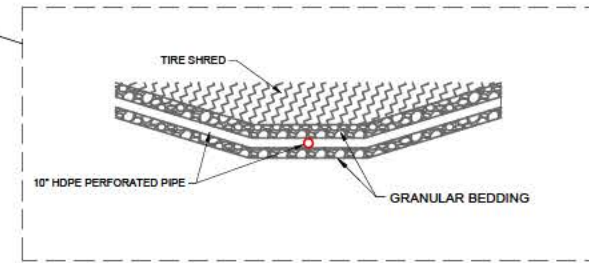
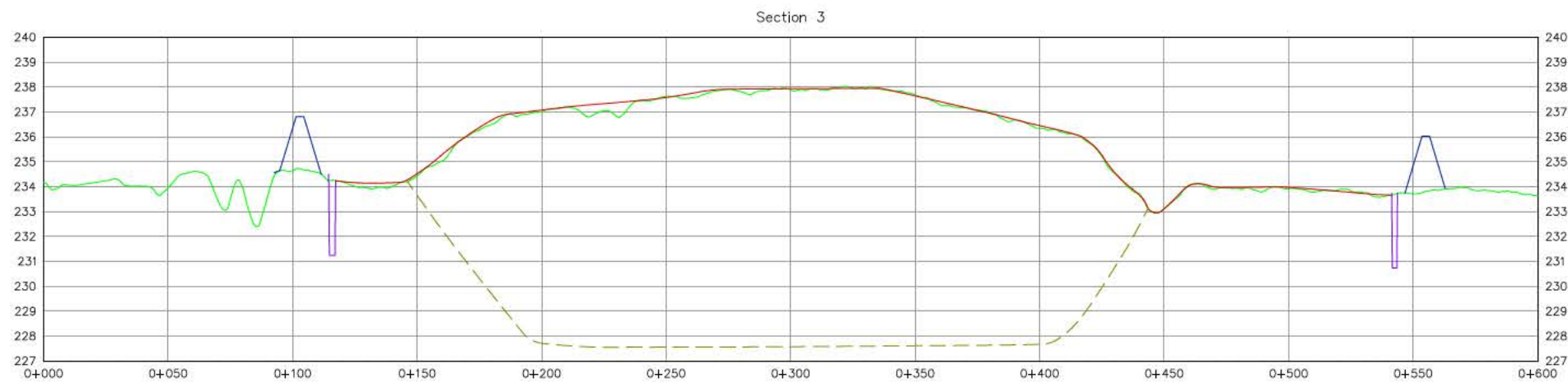
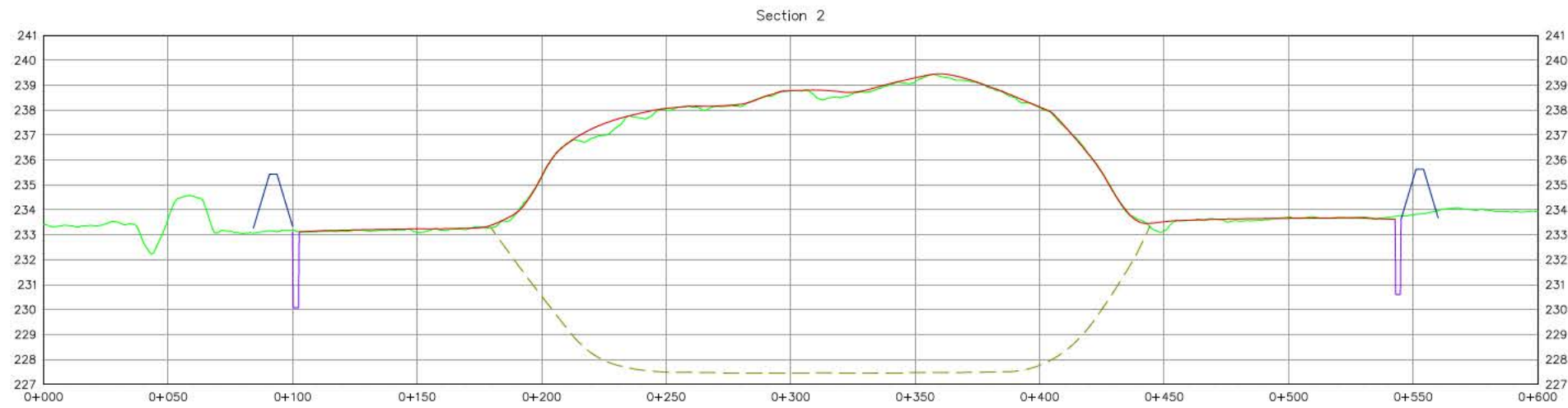
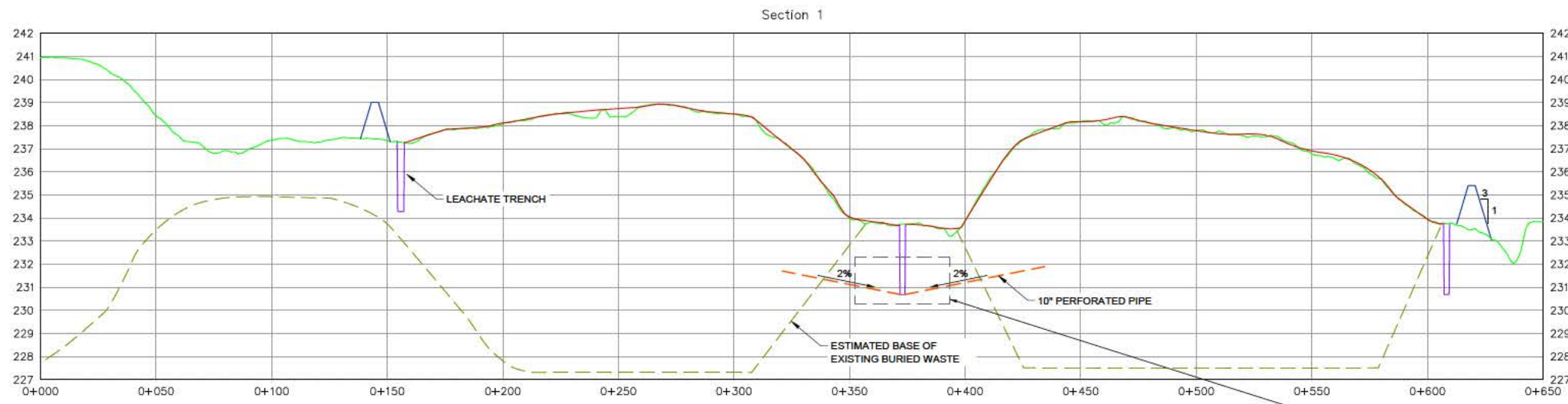
- All units are metric and in metres unless otherwise specified. Transverse Mercator Projection, NAD 1983 CSRS, Zone 14. Elevations are in metres above sea level (MSL) CGVD28.
- For W12 stratigraphy, see attached log.

DRAFT



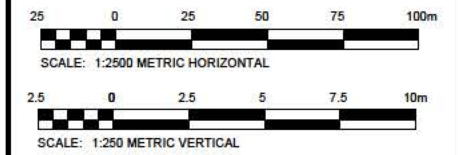
A	23/07/19	ISSUED FOR REVIEW	SL	IH
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY
REVISIONS / ISSUE				
KGS GROUP				
BRRMF EMERGENCY CELL				
SITE PLAN				
JULY 2023		FIGURE 01		REV: A

File name: P:\Projects\2015\15-0107-01\Design\GIS\GISData\CSDV15-0107-014_conceptual_design_2023_v6 - Tab: 15-0107-014_2 Plotted By: EBrincheski 23/07/21 [Fri 10:47am]
 11x17 PLOT SCALE: 1"=2'



- LEGEND:**
- 2020 LIDAR SURFACE
 - PROPOSED CAP REGRADE
 - LEACHATE TRENCH
 - BERM
 - - - ESTIMATED EXISTING CELL BASE
 - - - 10" PERFORATED PIPE

DRAFT
FOR INTERNAL DISCUSSION
PURPOSES

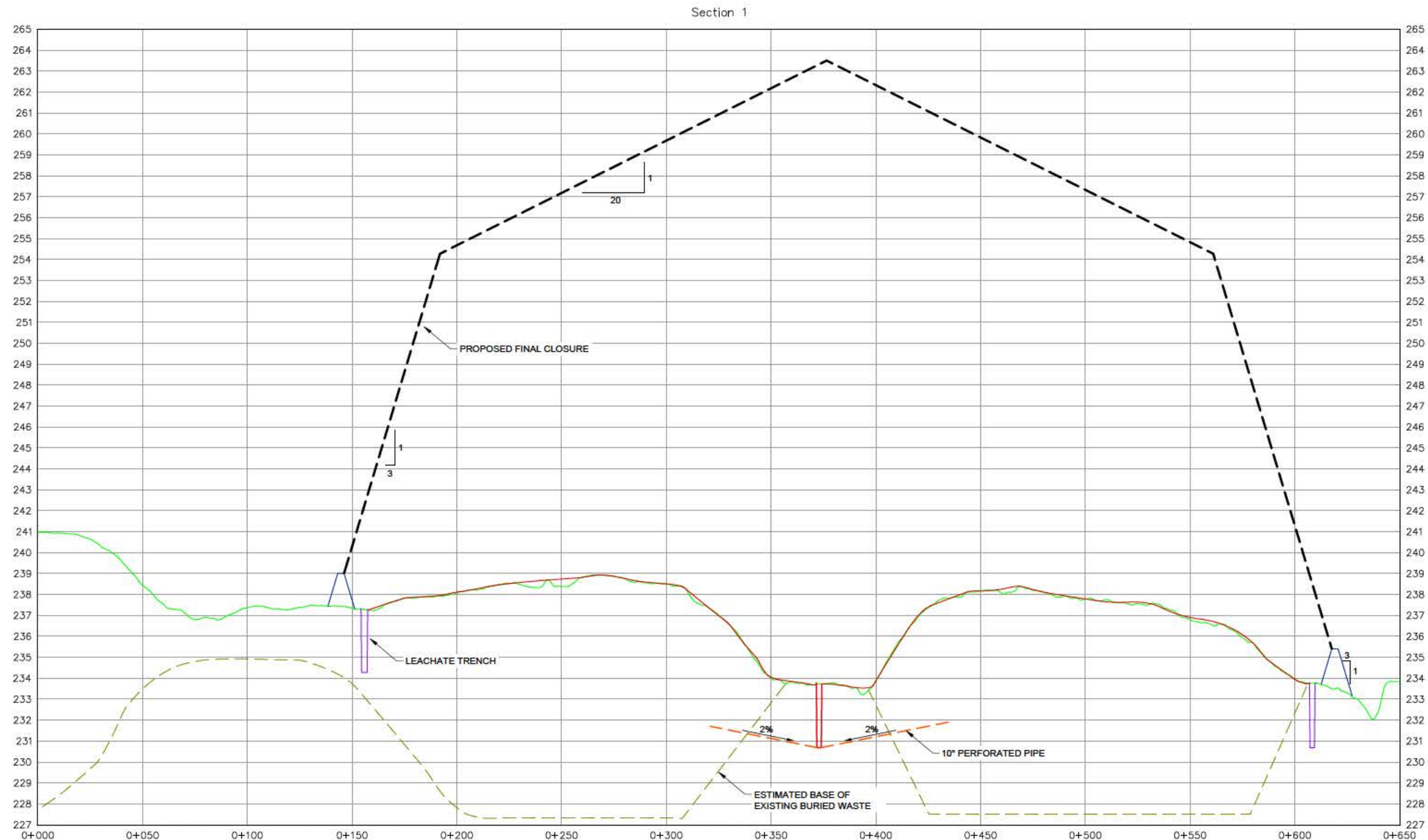


A	23/07/20	ISSUED FOR REVIEW	SL	IH
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY

BRRMF EMERGENCY CELL

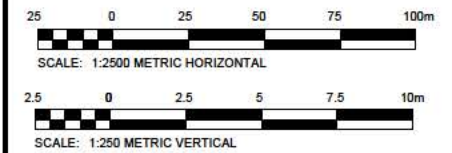
CONCEPT DESIGN SECTIONS

JULY 2023	FIGURE 2	REV A
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- LEGEND:**
- 2020 LIDAR SURFACE
 - PROPOSED CAP REGRADE
 - - - PROPOSED FINAL CLOSURE
 - LEACHATE TRENCH
 - BERM
 - - - ESTIMATED EXISTING CELL BASE
 - 10" PERFORATED PIPE

DRAFT
FOR INTERNAL DISCUSSION
PURPOSES



A	23/07/20	ISSUED FOR REVIEW	SL	IH
NO.	YYMMDD	DESCRIPTION	ISSUED BY	CHECK BY

KGS GROUP	
BRRMF EMERGENCY CELL	
CONCEPT DESIGN SECTION	
JULY 2023	FIGURE 3
	REV A

CITY OF WINNIPEG - SOLID WASTE DEPARTMENT DRILL LOG

Contractor: Paddock Drilling Ltd. Sheet No. 1 of 1
 Date: 06-Apr-10 Landfill: Brady
 Type & Size of Hole: 5" borehole, 2" PVC Casing Landfill No. 25
 Depth: 29.41 m / 96.5 ft Probe No. W12
 Drilling Detail: 5" Solid Stem until refusal
 Location:

Legend	
[]	Solid PVC
[]	Slotted PVC
*****	Bentonite Chips
-----	Silica Sand

Elevations Ground Surface: 233.243 TOC UTM Northing: 5513109.167
 (m) Top of Casing (TOC): 234.226 Coordinates: Easting: 629448.572

Total Depth from TOC (m): 30.33
 Water Elevation (m):

DEPTH		SOL PROFILE	DESCRIPTION	WELL		WELL DESCRIPTION / COMMENTS
m	ft			PVC	Backfill	
			0 - 2' Topsoil	[]	[]	
1	1		2' - 4.5' Clay fill Brown, moist to dry, some silt	[]	*****	3' above ground 2" PVC pipe stick up. 10' Sections of solid 2" pvc into bedrock 4'. Bentonite from surface to top of bedrock @ 61.5'.
	2			[]	*****	
	3			[]	*****	
	4			[]	*****	
	5		4.5' - 14' Clay Olive, moist, plastic, some silt	[]	*****	
2	6			[]	*****	
	7			[]	*****	
	8			[]	*****	
	9		Trace sulfate inclusions at 12'	[]	*****	
3	10			[]	*****	
	11			[]	*****	
	12			[]	*****	
	13		14' - 24.5' Clay Olive modeled grey, moist, plastic, some silt softer with depth	[]	*****	
4	14			[]	*****	
	15			[]	*****	
	16			[]	*****	
	17		24.5' - 25 Clay Grey, moist, soft, plastic, some silt, trace sulfate incusions	[]	*****	
5	18			[]	*****	
	19			[]	*****	
	20			[]	*****	
	21		25 - 41' Clay, grey, moist, soft, plastic, trace silt inclusions	[]	*****	
6	22			[]	*****	
	23			[]	*****	
	24			[]	*****	
	25		37' Silty till inclusions	[]	*****	
7	26			[]	*****	
	27			[]	*****	
	28			[]	*****	
	29		41' - 82' 9" Silty Till Grey, moist dry at 43'	[]	*****	
8	30			[]	*****	
	31			[]	*****	
	32			[]	*****	
	33		82.9' - 96.6' White Limestone Bedrock	[]	*****	
9	34			[]	*****	
	35			[]	*****	
	36			[]	*****	
	37		Open hole in Bedrock	[]	*****	
10	38			[]	*****	
	39			[]	*****	
	40			[]	*****	
	41			[]	*****	
11	42			[]	*****	
	43			[]	*****	
	44			[]	*****	
	45			[]	*****	
12	46			[]	*****	
	47			[]	*****	
	48			[]	*****	
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13	50			[]	*****	
	51			[]	*****	
	52			[]	*****	
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14	54			[]	*****	
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	60			[]	*****	
	61			[]	*****	
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	63			[]	*****	
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	65			[]	*****	
17	66			[]	*****	
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	68			[]	*****	
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18	70			[]	*****	
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21	82			[]	*****	
	83			[]	*****	
	84			[]	*****	
	85			[]	*****	
22	86			[]	*****	
	87			[]	*****	
	88			[]	*****	
	89			[]	*****	
23	90			[]	*****	
	91			[]	*****	
	92			[]	*****	
	93			[]	*****	
24	94			[]	*****	
	95			[]	*****	
	96			[]	*****	
	97		End of Hole @ 96.6'	[]	*****	

BRADY ROAD LANDFILL



LEGEND

- ◻ OVERBURDEN PIEZOMETER NEST
- GROUNDWATER WELL



B.M. ELEV.	FIELD BOOK #
POSTED TO LBIS	
1	11/11/25 KB
NO. REVISIONS	DATE BY

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

BRADY ROAD LANDFILL
WELL LOCATIONS

SHEET 1 OF 1

FIGURE 1_R1

Pilot Project: Deep-Pit Burial of Mass Pig Mortalities

Manitoba Agriculture proposes a joint project with the City of Winnipeg for the demonstration of deep-pit burial of pig mortalities at Brady Resource Management Facility (Brady). The objective of this study is to determine the decomposition rate of pig mortalities via deep-pit burial for up to 10 years. The expected start date is Fall 2023.

Materials and Method

- Three burial trenches approximately 2m wide x 3m deep x 8-10m long will be constructed at Area C. Spacing between trenches will be minimum 5m.
- The burial trench location is in an area with Osbourne clay soils and test wells show a minimum of 42m of clay.
- Each pit will hold 7-10 tonnes of pig carcasses.
- Pig mortalities will be placed up to 2m deep in the pit and covered with a minimum 1m of soil (see Fig. 1).

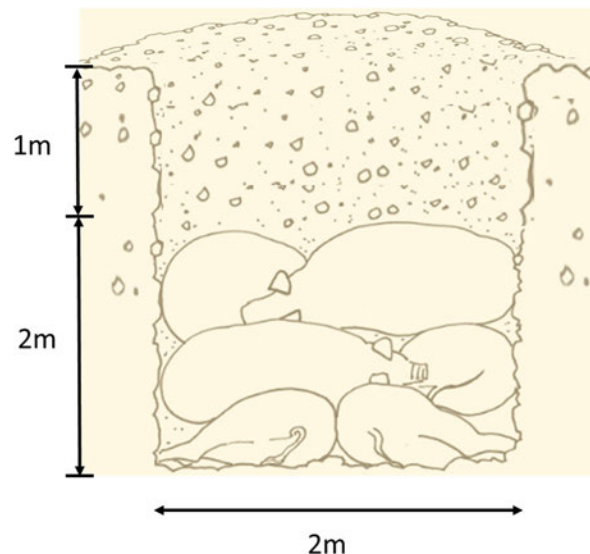


Fig. 1. Cross section of trench burial pit

Monitoring and Maintenance

- The initial burial trench dimensions, volume of pig mortalities, depth of pig mortalities in the pit, soil cover depth will be measured.
- Trail cams will also be set-up to determine if the burial trenches are attracting any scavengers.
- The burial trenches will be monitored weekly in the first month to identify and address cracks in the soil cover and to see if there is evidence of animal burrowing.
- Soil settling will also be monitored and additional soil cover will be added if needed.

- There will be an annual inspection to visually determine the degradation of the buried carcasses. The soil cover will be carefully removed from one determined burial trench location, the decomposition of the carcasses will be noted and the soil cover will be replaced immediately after inspection. If needed, additional soil will be added to ensure there is 1m minimum soil cover. Note: Every year a new undisturbed portion of a burial trench will be excavated for the visual inspection until the carcasses decomposition is deemed complete.

Other

- Additional collaborators for this project are: Prairie Agricultural Machinery Institute, Maple Leaf Foods, and Darling Ingredients.