



January 21, 2025

500\587\587.11\02\24-12 Summary Letter to MECC\Ltr - Dauphin WDG Info to MECC.docx

Asit Dey
Manitoba Environment and Climate Change
14 Fultz Blvd
Winnipeg, Manitoba
R3Y 0L6

via e-mail

D-587.11

Dear A. Dey,

Re: City of Dauphin – Waste Disposal Ground – Compliance Plan

The following is supplemental information to the Notice of Alteration (NoA) request submitted May 6, 2024 regarding the existing active cell of the Dauphin Waste Disposal Ground (WDG). The information is a follow up to the meeting between JRCC and Manitoba Environment and Climate Change (MECC) on December 5, 2024. The NoA form originally submitted May 6, 2024 is attached to this letter.

1.0 SUMMARY

The City of Dauphin are planning to continue using the existing active cell of their WDG until a new active cell area with leachate collection is constructed in 2026. Dauphin is hereby requesting approval from MECC to continue utilizing the existing WDG cell and build perimeter/interior dikes as required to reach the final shape of the cell to facilitate proper surface drainage upon final closure.

2.0 BACKGROUND

The City of Dauphin WDG is located approximately 2 km northwest of the City of Dauphin, Manitoba. The existing WDG is owned and operated by the City of Dauphin and services the residents in the City of Dauphin and the RM of Dauphin. A curbside waste and recycling program is being utilized in the City, while rural residents in the RM drop off waste individually. The existing active cell area is clay lined and has been in operation since the 1980's. See Plan 1 attached to this letter showing the existing WDG site, contours of the existing active cell, and drainage layout.

3.0 PROPOSED TIMELINE

The City of Dauphin is planning to construct a new active cell and leachate pond in the 2026 construction season. Dauphin requires time to secure budgets, hire an engineer and complete the final design so the project can be tendered. Once the new active cell is operational, the existing WDG cell will be closed, likely in fall of 2026 or spring of 2027.

4.0 FINAL SHAPE AND CLOSURE OF THE EXISTING ACTIVE CELL

Once the new active cell area is constructed and ready for use, the existing active cell area will be closed. The cell will be closed by applying final cover material consisting of a 0.5 m thick layer of compacted, low permeability soil. The final cover material will be applied over the waste disposal area in sections, as the waste material reaches the final elevation. Once the entire waste disposal area is capped, the final surface will be graded at an approximately 3% slope, to ensure proper surface drainage to prevent ponding. See Plan 2

attached to this letter showing the proposed grades of the final cover material on the existing active cell and Plan 4 for a cross-section of the cell. The perimeter dikes on the east and west sides of the cell will be maintained at their existing elevations of 300.82 m and 302.9 m, respectively. Perimeter dikes around the north and south sides will be constructed to connect the dikes on all sides of the cells. The high point of the cell will be approximately 304.0 m. The final cover will be graded at approximately 3% to the east and west of the high point to facilitate surface drainage. Exact final elevations are subject to change based on actual waste disposal rates.

5.0 NEW ACTIVE CELL AREA AND LEACHATE COLLECTION

An Environment Act Proposal (EAP) was submitted in 2015 for the expansion and upgrade of the Class 1 WDG. Licence #3206 was granted on January 10, 2017. The proposed upgrades include five additional WDG cells, each with a capacity for approximately five years of waste and cover material to be constructed in the southeast corner of the WDG property. See Plan 3 attached to this letter showing the proposed new cell locations. The new active cells will have a clay liner and include a leachate collection system. A new leachate evaporation pond will be constructed as part of the project. Other proposed upgrades include a compost area.

The existing active cell has been in operation since the 1980's and does not have a leachate collection system. Adding leachate collection to the existing active cell was considered but deemed not practical considering the new cells will be constructed in 2026 and the existing active cell will be permanently closed.

6.0 WASTE GENERATION

The existing active cell is proposed to be in operation for approximately two more years. JRCC reviewed actual waste generation rates to the WDG from City of Dauphin records and calculated a rate of 1.77 kg/person/day. A compaction rate of 475 kg/m³ was assumed based on the mechanical compaction equipment used by Dauphin, as presented in the 2015 EAP. Based on the 2025 and 2026 populations, a total of 29,242 m³ of waste is expected to be deposited in the existing active cell before it is closed. See Table 1 attached to this letter. Assuming an interim cover to waste ratio of 20%, a total of 35,090 m³ of space will be required in the existing cell. Using AutoCAD surfaces, the final shape of the cell as shown on Plan 2 will provide approximately 38,000 m³ of space for waste disposal. Actual final grades to be adjusted based on actual waste volumes encountered.

7.0 MONITORING WELLS

There are four monitoring wells at the WDG site located on the south side of the site. According to the City of Dauphin, there are no records of any groundwater test results from the monitoring wells. The City of Dauphin has engaged JRCC to sample and test the monitoring wells in the spring of 2025 after spring thaw. When the new active cells are constructed, two more monitoring wells are planned to be installed, one northwest of the new active cells and one southeast of the new active cells. See Plan 3 attached to this letter showing the existing and proposed monitoring well locations.

8.0 PERIMETER AND INTERIOR DIKE CONSTRUCTION DETAILS

The City of Dauphin has approximately 20,000 m³ of clay material stockpiled at the WDG site they intend to use to construct the perimeter and interior berms. The City of Dauphin has the heavy equipment required to construct the berms (excavator, dozer, compactor). The dikes will be constructed in compacted lifts on top of

the previous waste with interim cover. The dikes are not intended to tie into the existing liner, rather contain the waste within the existing footprint of the existing active cell.

If there are any questions or comments, please contact the undersigned.

Yours truly,

JR Cousin Consultants Ltd.



Brett McCormac, P.Eng.
Environmental Engineer

enc. NoA Form
 Table 1 – Population and Waste Generation Projections
 Dauphin Waste Disposal Cell Expansion Plan Set

cc Mike VanAlstyne, City of Dauphin (via email)

Notice of Alteration Form




File No. :	Environment Act Licence No. :		
Legal name of the Licencee:			
Name of the development:			
Category and Type of development per Classes of Development Regulation:			
Licencee Contact Person:			
Mailing address of the Licencee:			
City:	Province:	Postal Code:	
Phone Number:	Fax:	Email:	
Name of proponent contact person for purposes of the environmental assessment (e.g. consultant):			
Phone:		Mailing address:	
Fax:			
Email address:			
Short Description of Alteration (<i>max 90 characters</i>):			
Alteration fee attached: Yes: No:			
If No, please explain:			
Date:	Signature:		
	Printed name:		
<p>A complete Notice of Alteration (NoA) consists of the following components:</p> <p>Cover letter Notice of Alteration Form 1 hard copy and 1 electronic copy of the NoA detailed report (see "Information Bulletin - Alteration to Developments with Environment Act Licences") \$500 Application fee, if applicable (Cheque, payable to the Minister of Finance)</p>		<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>			

TABLE 1
POPULATION AND WASTE GENERATION PROJECTIONS
City of Dauphin Waste Disposal Ground

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12
CALENDAR YEAR	PROJECT YEAR	RM OF DAUPHIN RURAL POPULATION	CITY OF DAUPHIN POPULATION	CORRECTIONAL FACILITY POPULATION	TOTAL WASTE GENERATION (RM of Dauphin)	TOTAL WASTE GENERATION (City of Dauphin and Correctional facility)	TOTAL WASTE FOR DISPOSAL	TOTAL WASTE TO DISPOSAL SITE (RM of Dauphin)	TOTAL WASTE TO DISPOSAL SITE (City of Dauphin)	TOTAL WASTE TO DISPOSAL SITE	ACCUMULATED TOTAL WASTE TO DISPOSAL SITE FROM 2023
		(people) 0.0% Growth	(people) 0.40% Growth	(people) 0.0% Growth	1.77 kg/person/day (tonnes / year)	1.77 kg/person/day (tonnes / year)	(tonnes / year)	(m3 / year)	(m3 / year)	(m3 / year)	m3/year
2023	0	2,298	8,368	0	1,485	5,406	6,891	3,126	11,381	14,507	14,507
2024	1	2,298	8,401	0	1,485	5,428	6,912	3,126	11,427	14,552	29,059
2025	2	2,298	8,435	0	1,485	5,449	6,934	3,126	11,473	14,598	43,657
2026	3	2,298	8,469	0	1,485	5,471	6,956	3,126	11,518	14,644	58,301
2027	4	2,298	8,503	0	1,485	5,493	6,978	3,126	11,565	14,690	72,991
2028	5	2,298	8,537	0	1,485	5,515	7,000	3,126	11,611	14,736	87,728
2029	6	2,298	8,571	0	1,485	5,537	7,022	3,126	11,657	14,783	102,511
2030	7	2,298	8,605	0	1,485	5,559	7,044	3,126	11,704	14,829	117,340
2031	8	2,298	8,640	0	1,485	5,582	7,066	3,126	11,751	14,876	132,216
2032	9	2,298	8,674	0	1,485	5,604	7,089	3,126	11,798	14,923	147,139
2033	10	2,298	8,709	0	1,485	5,626	7,111	3,126	11,845	14,970	162,110
2034	11	2,298	8,744	100	1,485	5,713	7,198	3,126	12,028	15,154	177,264
2035	12	2,298	8,779	100	1,485	5,736	7,221	3,126	12,076	15,201	192,465
2036	13	2,298	8,814	100	1,485	5,759	7,243	3,126	12,124	15,249	207,714
2037	14	2,298	8,849	100	1,485	5,781	7,266	3,126	12,172	15,297	223,011
2038	15	2,298	8,884	100	1,485	5,804	7,289	3,126	12,220	15,345	238,357
2039	16	2,298	8,920	100	1,485	5,827	7,312	3,126	12,268	15,394	253,750
2040	17	2,298	8,956	100	1,485	5,850	7,335	3,126	12,317	15,442	269,192
2041	18	2,298	8,991	100	1,485	5,874	7,358	3,126	12,365	15,491	284,683
2042	19	2,298	9,027	100	1,485	5,897	7,381	3,126	12,414	15,540	300,223
2043	20	2,298	9,063	100	1,485	5,920	7,405	3,126	12,463	15,589	315,812
2044	21	2,298	9,100	100	1,485	5,944	7,428	3,126	12,513	15,638	331,450
2045	22	2,298	9,136	100	1,485	5,967	7,452	3,126	12,562	15,688	347,137
2046	23	2,298	9,173	100	1,485	5,991	7,475	3,126	12,612	15,737	362,875

Overall Total (tonnes)	172,366
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Overall Totals (m3)	75,013	287,862	362,875
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Compaction Rate (City of Dauphin):

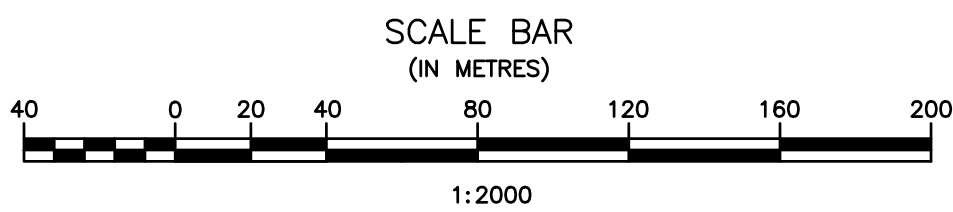
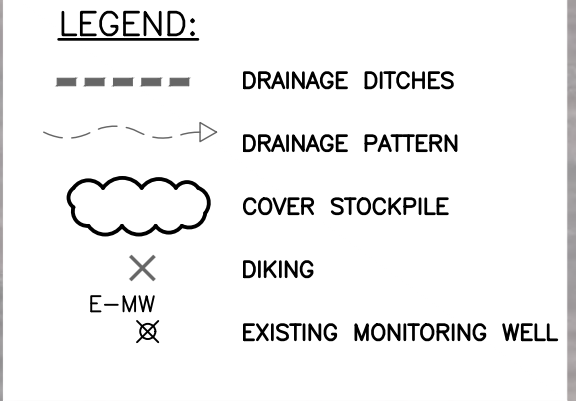
475

 kg/m3

Compaction Rate (RM of Dauphin):

475

 kg/m3

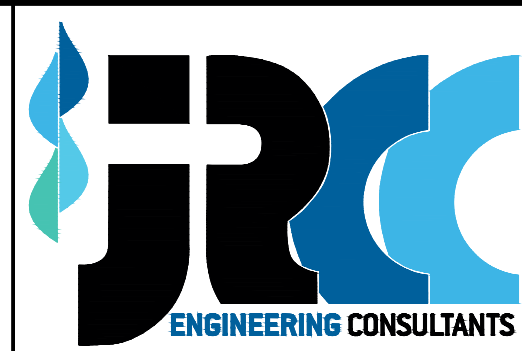


						B.M. EL.
						LOCATIONS OF UNDERGROUND STRUCTURES/UTILITIES AS SHOWN ARE BASED ON AVAILABLE INFORMATION, BUT NO GUARANTEE IS GIVEN OR IMPLIED THAT ALL EXISTING UNDERGROUND STRUCTURES/UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL UNDERGROUND STRUCTURES/UTILITIES MUST BE OBTAINED FROM THE APPROPRIATE AUTHORITY/OWNER, BY THE CONTRACTOR, BEFORE PROCEEDING WITH CONSTRUCTION.
No.	REVISIONS		DATE	INITIALS		

B.M.	EL.
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ENGINEER'S SEAL

PRELIMINARY

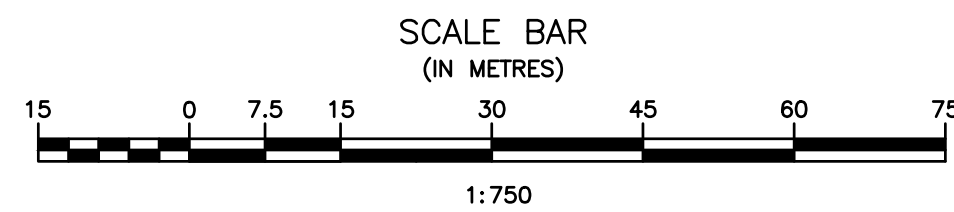


JR Cousin Consultants Ltd.

91A Scurfield Blvd. Winnipeg MB R3Y 1G4
p. [204] 489-0474
f. [204] 489-0487
www.jrcc.ca

ENGINEERING EXCELLENCE SINCE 1981

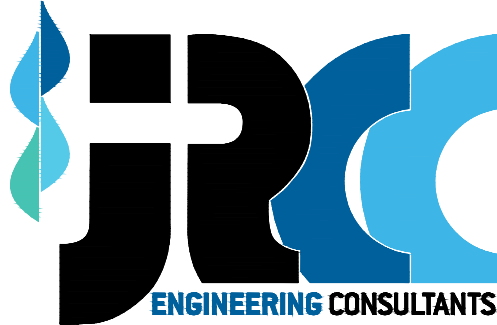
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DESIGNED BY: OW	TITLE: EXISTING WDG LAYOUT, DRAINAGE AND EXISTING CONTOUR PLAN			
DRAWN BY: LW				
REVIEWED BY: BM	SCALE: 1:2000	DATE: 24/12/18	PLAN: 1	SHEET: 1 of 4



				B.M. EL.
No.	REVISIONS	DATE	INITIALS	

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f. (204) 489-0487
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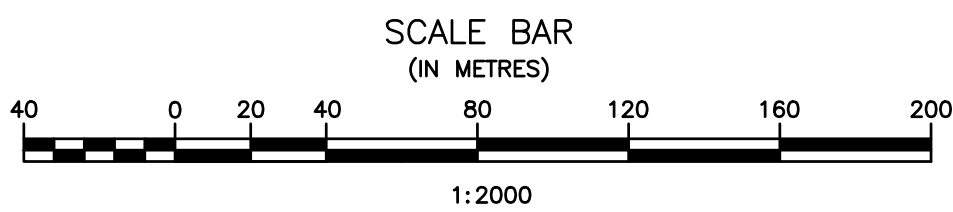
CODE: D-587.11	PROJECT: CITY OF DAUPHIN WDG CELL EXPANSION		
DESIGNED BY: OW	TITLE: PROPOSED FINAL COVER OF EXISTING ACTIVE CELL		
DRAWN BY: LW			
REVIEWED BY: BM			
SCALE: 1:750	DATE: 25/01/08	PLAN: 2	SHEET: 2 of 4



LEGEND:

E-MW
X
EXISTING MONITORING WELL

P-MW
X
PROPOSED MONITORING WELL



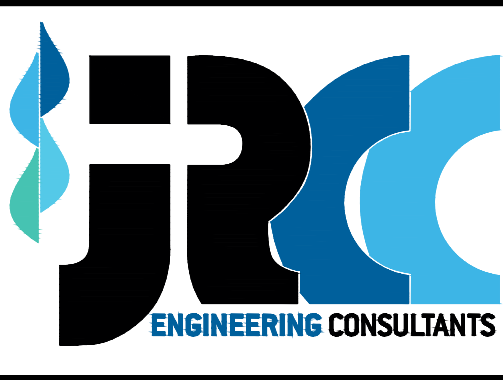
No.	REVISIONS	DATE	INITIALS

B.M. EL.

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91A Scurfield Blvd. Winnipeg MB R3Y 1G4
p. (204) 489-0474
f. (204) 489-0487
www.jrcc.ca

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CODE: D-587.11	PROJECT: CITY OF DAUPHIN WDG CELL EXPANSION
DESIGNED BY: OW	TITLE: PROPOSED FUTURE EXPANSION AND UPGRADE LAYOUT AND DRAINAGE PLAN
DRAWN BY: OT	SCALE: 1:2000
REVIEWED BY: BM	DATE: 24/01/03
	PLAN: 3
	SHEET: 3 of 4

 LOW PERMEABILITY SOIL MATERIAL

EXISTING SIDE WALKWAY

CONCRETE SIDE WALKWAY



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