



FINAL

Application for an Environmental Act Proposal

WestRock Company of Canada Corp.
1360 Inkster Blvd.
Winnipeg, MB
R2X 3C5

Submitted To:

Environmental Approvals Branch

Manitoba Environment, Climate and Parks
Box 35, 14 Fultz Blvd.
Winnipeg, MB R3Y 0L6, Canada

October 18, 2024

Pinchin File: 328461



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ABSTRACT

WestRock Company of Canada Corp. (Smurfit WestRock) manufactures corrugated paperboard containers at its 1360 Inkster Blvd., Winnipeg, MB site. The adjacent land around the facility is classified as industrial zoned lands. Smurfit WestRock owns the property.

The purpose of this application is to obtain an Environmental Act Proposal (EAP) permit for Smurfit WestRock's facility.

Processes include corrugating paper into the desired sizes; converting the cut and trimmed paper into the necessary tabs and folds and printing with water-based inks. The facility also has a scrap paper handling system. Airborne emissions from the facility include contaminants from natural gas fired combustion; VOCs from the use of inks/varnishes in printing processes; and particulate matter from paperboard converting activities.

An Emission Summary and Dispersion Modelling (ESDM) report has been prepared in support of this application in accordance with the email from the Manitoba Environment, Climate and Parks, dated June 5, 2023 and Ontario's O.Reg.419/05 and the "Procedure for Preparing an Emission Summary and Dispersion Modelling Report [Guideline A-10]", Version 4.1, published by the Ontario Ministry of Environment, Conservation and Parks (Ministry) in March 2018. The ESDM report indicates that facility emissions result in maximum POI concentrations that are in compliance with the Manitoba Conservation AAQCs where available and Ontario's "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants", Version 3.0, April 2023 where AAQCs were not available.

All sources as described in the enclosed ESDM report are requested to be permitted in the Environmental Act Proposal (EAP) application.

J:\328000s\0328461.000 WestRock,1360InksterBlvd,ERC,ECA\Deliverables\ECA Abstract & Forms\328461 - EAP Abstract 1360 Inkster Blvd, WPG MB Smurfit Westrock October 18, 2024.docx

Template: ECA Abstract (AERMOD Sch. 3) - September 3, 2014

TAB 1

WestRock Company of Canada Corp.
A Smurfit Westrock Company
1360 Inkster Blvd
Winnipeg MB Canada R2X 3C5
Tel: +1/204/697-5314
info@smurfitwestrock.com | www.smurfitwestrock.com



Eshetu Beshada (PhD, P. Eng)
Senior Environmental Engineer
Industrial and Wastewater Section | Environmental Approvals Branch
Box 35, 14 Fultz Blvd, Winnipeg, MB R3Y 0L6

Re: WestRock Manitoba Corrugated Container Plant
Date: 11-Oct-24

Dear Engr. Eshetu,

As we have previously discussed, the purpose of this correspondence is to provide your office with the completed Environmental Act Proposal (EAP) application to apply for the Environment Act license from the Manitoba Environmental Approvals Branch.

Background: Smurfit Westrock (www.smurfitwestrock.com) is a leading manufacturer of paper packaging products including corrugated containers which are better known as “cardboard boxes”. WestRock owns and operates numerous facilities in Canada, including one facility located in Winnipeg. The Winnipeg facility was constructed in 1963 and has operated continuously in the same location. Currently the plant operates 24 hours per day, 5-6 days per week.

Although the operations began in 1963, the basic manufacturing process has not changed over the years. All materials used in the manufacturing process meet food grade standards. No other changes are planned or anticipated by removing an old existing printing press and replacing with a new version. Nor do we anticipate any increase or change in the nature of the wastewater or solid waste generated from the facility.

The EAP and associated documentation are attached for your review. We hired “Pinchin Ltd.” as our consultant to compile the Environmental Assessment (EA) report. Please let me/ Pragyan know if there is any additional information that you may need.

Sincerely,


Randy Podolsky
General Manager | Randy.podolsky@smurfitwestrock.com


cc: Pragyan Garnaik (MAsc.Eng., EPt)
Senior Environmental Engineer | pragyan.garnaik@smurfitwestrock.com | ©: +1/905/876-8122

TAB 2

Environment Act Proposal Form



Name of the development: Smurfit Westrock - Winnipeg	
Type of development per Classes of Development Regulation (Manitoba Regulation 164/88): Class 2 development - Manufacturing and Industrial Plant	
Legal name of the applicant: WestRock Company of Canada Corp.	
Mailing address of the applicant: 1360 Inkster Blvd	
Contact Person: Randy Podolsky	
City: Winnipeg	Province: MB Postal Code: R2X 3C5
Phone Number: (204) 697-5314 Fax:	email: randy.podolsky@smurfitwestrock.com
Location of the development: 49.9425863,-97.1714305	
Contact Person: Randy Podolsky	
Street Address: 1360 Inkster Blvd	
Legal Description: Corrugated and Solid Fiber Box Manufacturing	
City/Town: Winnipeg	Province: MB Postal Code: R2X 3C5
Phone Number: (204) 697-5314 Fax:	email: randy.podolsky@smurfitwestrock.com
Name of proponent contact person for purposes of the environmental assessment: Pragyan Garnaik	
Phone: (905) 876-8122 Fax:	Mailing address: 1000 Abernathy Rd NE, Atlanta GA, United States, 30328
Email address: pragyan.garnaik@smurfitwestrock.com	
Webpage address: www.smurfitwestrock.com	
Date: 2024-10-11	Signature of proponent, or corporate principal of corporate proponent: 
Printed name: Pragyan Garnaik	

PRINT

RESET

A complete **Environment Act Proposal (EAP)** consists of the following components:

- ☒ **Cover letter**
- ☒ **Environment Act Proposal Form**
- ☒ **Reports/plans supporting the EAP** (see "Information Bulletin - Environment Act Proposal Report Guidelines" for required information and number of copies)
- ☒ **Application fee** (Cheque, payable to Minister of Finance, for the appropriate fee)

Per Environment Act Fees Regulation (Manitoba Regulation 168/96):	
Class 1 Developments	\$1,000
Class 2 Developments	\$7,500
Class 3 Developments:	
Transportation and Transmission Lines ..	\$10,000
Water Developments	\$60,000
Energy and Mining	\$120,000

Submit the complete EAP to:

Director
Environmental Approvals Branch
Manitoba Environment, Climate and Parks
1007 Century Street
Winnipeg, Manitoba R3H 0W4

For more information:

Email: EABDirector@gov.mb.ca
Phone: (204) 945-8321
Fax: (204) 945-5229
https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html

Internal Use Only	
\$1,000.....	C1 B-02
\$7,500.....	C2 B-02
\$10,000....	TT B-02
\$60,000....	WD B-02
\$120,000...	EM B-02

TAB 3

STATUS OF TITLE

Title Number **2858104/1**
Title Status **Accepted**
Client File



1. REGISTERED OWNERS, TENANCY AND LAND DESCRIPTION

WESTROCK COMPANY OF CANADA INC.

IS REGISTERED OWNER SUBJECT TO SUCH ENTRIES RECORDED HEREON
IN THE FOLLOWING DESCRIBED LAND:

LOT 1 PLAN 18757 WLTO
IN OTM LOTS 1 TO 3 PARISH OF KILDONAN

The land in this title is, unless the contrary is expressly declared, deemed to be subject to the reservations and restrictions set out in section 58 of *The Real Property Act*.

2. ACTIVE INSTRUMENTS

Instrument Type:	Notice
Registration Number:	4572188/1
Instrument Status:	Accepted
Registration Date:	2015-01-23
From/By:	MANITOBA HYDRO
To:	3242795 NOVA SCOTIA LIMITED
Amount:	
Notes:	No notes
Description:	NOTICE OF AGREEMENT S.12 ENERGY SAVINGS ACT

3. ADDRESSES FOR SERVICE

WESTROCK COMPANY OF
CANADA INC.
SUITE A - 1035 HODGE STREET
MONTREAL QC
H4N 2B4

4. TITLE NOTES

No title notes

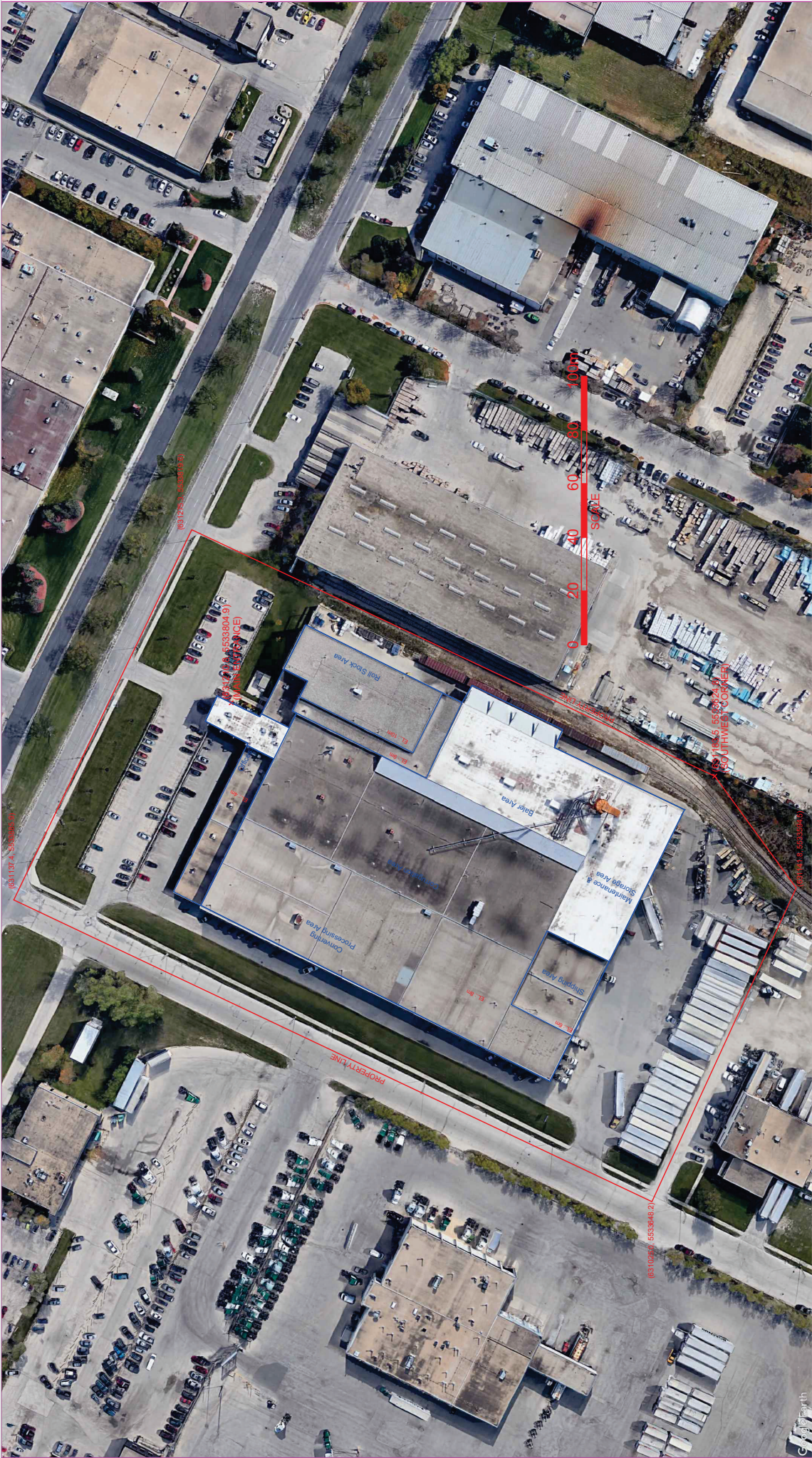
5. LAND TITLES DISTRICT

Winnipeg

6. DUPLICATE TITLE INFORMATION
Duplicate not produced
7. FROM TITLE NUMBERS
2462356/1 All
8. REAL PROPERTY APPLICATION / CROWN GRANT NUMBERS
No real property application or grant information
9. ORIGINATING INSTRUMENTS
Instrument Type: Transmission Of Land
Registration Number: 4757011/1
Registration Date: 2016-08-22
From/By: WESTROCK COMPANY OF CANADA INC.
To: MICHAEL P. PUCHNIAK AS AGENT
Amount:
10. LAND INDEX
Lot 1 Plan 18757

CERTIFIED TRUE EXTRACT PRODUCED FROM THE LAND TITLES DATA STORAGE
SYSTEM OF TITLE NUMBER 2858104/1

TAB 4



PROJECT NAME:
SMURFIT WESTROCK
1360 INKSTER BLVD., WINNIPEG

DRAWING NAME:
SCALED AREA LOCATION PLAN

SCALE:
AS SHOWN

PROJECT NO:
328461

DRAWING NO:
01

DRAWN BY:
MXM

05.					
04.					
03.					
02.					
01.	EAP APPLICATION				
NO.	REVISION				
				10-01-2024	DATE



ESDM



FINAL

Emission Summary and Dispersion Modelling Report

WestRock Company of Canada Corp.
1360 Inkster Blvd.
Winnipeg, MB
R2X 3C5

Submitted To:

Environmental Approvals Branch
Manitoba Environment, Climate and Parks
Box 35, 14 Fultz Blvd.
Winnipeg, MB R3Y 0L6, Canada

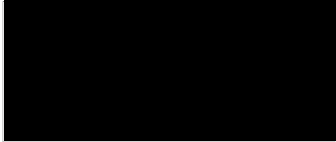
October 22, 2024

Pinchin File: 328461



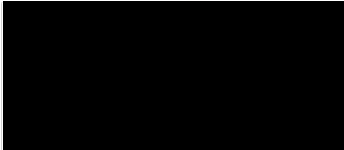
Issued to: WestRock Company of Canada Corp.
Issued on: October 22, 2024
Pinchin file: 328461
Issuing Office: 2360 Meadowpine Blvd., Unit 2, Mississauga
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VERSION CONTROL

Rev	Date	Revision Description	Pinchin File	Author's Initials
0.0	October 22, 2024	Original document for EAP Application	328461	MXM



EXECUTIVE SUMMARY

WestRock Company of Canada Corp. manufactures corrugated paperboard containers at its 1360 Inkster Blvd., Winnipeg, MB site.

This Emission Summary and Dispersion Modelling (ESDM) report documents the expected emissions from the facility. The purpose of this ESDM report is to support the Environmental Act Proposal application for the facility. The report has been prepared in accordance with the email from the Manitoba Environment, Climate and Parks, dated June 5, 2023 and Ontario's O.Reg.419/05 and the "Procedure for Preparing an Emission Summary and Dispersion Modelling Report [Guideline A-10]", Version 4.1, published by the Ministry of Environment, Conservation and Parks (Ministry) in March 2018. All potential sources and contaminants have been identified and assessed for significance; those deemed insignificant have been rationalized and tabulated.

Processes include corrugating paper into the desired sizes; converting the cut and trimmed paper into the necessary tabs and folds and printing with water-based inks. The facility also has a scrap paper handling system. Airborne emissions from the facility include contaminants from natural gas fired combustion; VOCs from the use of inks/varnishes in printing processes; and particulate matter from paperboard converting activities.

The facility is covered by NAICS code 322211 (Corrugated and Solid Fibre Box Manufacturing), which does not appear in Schedules 4 or 5 of O.Reg.419/05 and is considered as a Class 2 Development under Manitoba Regulation 164/88. The US EPA AERMOD dispersion model was used to predict the maximum point of impingement (POI) contaminant concentrations. Compliance was assessed by comparing the maximum POI concentrations to Manitoba Conservation AAQCs where available and Ontario's "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants", Version 3.0, April 2023 where AAQCs were not available.

The results are summarized in Table A3, Emission Summary Table, provided on the following page. Table A3 indicates that, for contaminants with Manitoba Conservation AAQCs or Ontario Ministry limits, the facility emissions result in maximum POI concentrations that are in compliance with Manitoba Conservation AAQCs, Ontario Ministry Schedule 3 standards/guidelines, and the 24-hour JSL values.

Table A3. Emission Summary Table

Contaminant	CAS #	Total Facility Emission Rate (g/s)	Air Dispersion Model Used	Maximum POI Concentration (µg/m ³)	Averaging Period (h)	POI Limit (µg/m ³)	Limiting Effect	Reg. Sch. No.	% of POI Limit	Ambient Air Concentration* (µg/m ³)	% of POI Limit (Including Ambient Air)
Nitrogen Oxides	10102-44-0	2.17E-01	AERMOD	5.57E+01	24	200	-	AAQC	28%	9	32%
			AERMOD	1.24E+02	1	400	-	AAQC	31%	10	34%
			AERMOD	7.89E+00 ***	Annual	60	-	AAQC	13%	-	-
Dimethylamionethanol	108-01-0	3.58E-05	AERMOD	3.87E-02	24	130	Health	B2	0.03%	-	-
2-butoxyethanol	111-76-2	3.58E-05	AERMOD	1.01E-01	10 min	500	Odour	G	0.02%	-	-
Potassium Hydroxide	1310-58-3	2.15E-04	AERMOD	3.87E-02	24	2400	Health	G	<0.01%	-	-
Ammonium hydroxide	1336-21-6	3.58E-05	AERMOD	2.32E-01	24	14	Corrosion	G	2%	-	-
2-aminoethanol	141-43-5	3.58E-05	AERMOD	3.87E-02	24	500	Health	B2	<0.01%	-	-
Quartz	14808-60-7	3.58E-05	AERMOD	3.87E-02	24	35	Health	B2	0.1%	-	-
poly(oxy-1,2-ethanediyl), a-hydro-?-hydroxy-	25322-68-3	4.29E-04	AERMOD	3.87E-02	24	5	Health	G	1%	-	-
Propan-2-ol [1]	67-63-0	7.16E+00	AERMOD	4.65E-01	24	40	Health	B2	1%	-	-
Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	3.58E-05	AERMOD	6.48E+03 ****	24	7300	Health	3	88.76%	-	-
Poly(oxy-1,2-ethanediyl), α-[bis(1-phenylethyl)phenyl]-ω-hydroxy	9086-52-6	3.58E-05	AERMOD	3.87E-02	24	-	-	-	Table C2	-	-
PM2.5 (Particulate Matter <= 2.5)	n/a1	1.39E-02	AERMOD	3.87E-02	24	-	-	-	Table C2	-	-
PM10 (Particulate Matter <= 10)	n/a2	1.39E-02	AERMOD	1.51E+01 *	24	30	-	AAQC	50%	10	84%
Particulate Matter (Total)	n/a	1.39E-02	AERMOD	1.51E+01 *	24	50	-	AAQC	30%	-	-
Particulate Matter (Total)	n/a	1.39E-02	AERMOD	1.51E+01	24	60	-	AAQC	25%	-	-

NOTE: This assessment was completed using AERMOD/AERMET version 22112.

*PM2.5 and PM10 conservatively assumed to be equivalent to Total Particulate Matter.

**Ambient air concentration values for the most recent year available (2022), 90th percentile value. Values are the average for Winnipeg. Values can be downloaded at the following site: <https://data-donnees.az.ec.gc.ca/data/air/monitor/national-air-pollution-surveillance-naps-program/>

***5-year annual average result was increased by a factor of 140% to account for potential variability between the overall 5-year annual average versus the maximum annual result per individual year.

****After removal of highest day per meteorological year.

[1] Individual model run for contaminant.

AAQC Guideline published by Manitoba Conservation, July 2005.

Reg. Sch. Or Benchmark 1: 3 Standard - Schedule 3 of Reg. 419

Benchmark 1: G Guideline - Summary of Standards and Guidelines to support O.Reg.419: Air Pollution - Local Air Quality, April 2012

Benchmark 2: B2 Air Contaminants Benchmark (ACB) List , April 2023



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1.0 INTRODUCTION AND FACILITY DESCRIPTION

1.1 Purpose and Scope of ESDM Report

The purpose of this Emission Summary Dispersion Modelling (ESDM) report is to support the Environmental Act Proposal (EAP) application for WestRock Company of Canada Corp.'s (Smurfit Westrock) facility. The facility is in the process of replacing their flexographic press.

The report has been prepared in accordance with the email from the Manitoba Environment, Climate and Parks, dated June 5, 2023 and Ontario's O.Reg.419/05 and the "Procedure for Preparing an ESDM Report" as published by the Ministry in March 2018.

All expected emissions from the facility have been accounted for in this report.

1.2 Description of Facility and Processes

Smurfit Westrock manufactures corrugated paperboard containers. The facility is located at 1360 Inkster Blvd., Winnipeg, MB. The adjacent land around the facility is classified as industrial zoned lands. Smurfit Westrock owns the site. Smurfit Westrock is the sole occupant on the site.

Smurfit Westrock's operations at the site are covered by NAICS code 322211 (Corrugated and Solid Fibre Box Manufacturing) and is considered as a Class 2 Development under Manitoba Regulation 164/88.

Smurfit Westrock's facility consists of one main building with five (5) roof elevations. The north end of the building has the main entrance to the facility, offices and washrooms. Paper rolls are stored on the northeast corner of the building. Corrugation processing occurs down the centre of the building. Corrugated sheets are sent to the northwest end of the building for the converting process. Trim waste and emissions from processing are captured and routed to the dust collector located on the roof of the south end of the building. Collections from the dust collector are sent back down into the baler room before being shipped for disposals. The shipping and receiving areas are found on the south end of the building, close to the maintenance and storage area. There are no outdoor storage piles, and all roads on-site are paved.

At the facility, "linerboard" and "medium" grades of paper are combined to form corrugated boards or sheets, which are then shaped, cut, printed, and folded to the customer's requirements. The corrugated board is manufactured on large high-precision machinery lines called corrugators. The key raw material in corrugating is paper, different grades for each layer making up the corrugated box. The paper is produced at off-site paper mills and brought into the plant in large rolls. Paper rolls feed into the corrugator, in which a starch-based adhesive is used to attach different layers of paper to form



paperboard. The starch-based adhesive is made from starch, water, and sodium hydroxide. All materials used in the process meet food grade packaging standards.

The paperboard is cut and trimmed in the corrugators to appropriate sizes that are fed to the converting machines. Steam used for the corrugator is generated by two boilers (ID: B1 and B2). Fugitive dust emissions and scrap trim waste created by the corrugator are ducted to a scrap handling system (dust collector ID: DC1). General exhaust ventilation is found over corrugation area for excess heat release.

Paperboard from the corrugator is fed into the converting machines. There are five converting equipment at the facility which we refer to as presses. Two of them are flexographic printing press and rest are called rotary die-cutters. The flexographic presses utilize water based, low VOC content inks and glue to produce a corrugated box.

There are five (5) current converting equipment, referred to as presses. They are flexographic/RDC presses (machines 3121, 3131, 4511, 4532, 4521) and one (1) newly replaced flexographic press (BOBST 3-colour, machine 1228). Two of them are flexographic printing press and rest are called rotary die-cutters. Dies are used to cut the necessary tabs and folds that enable the paperboard to be folded into a corrugated container. In all the converting machines, the paperboard is printed using a flexographic printing process (with water based inks). Trace amounts of VOCs are used in the inks, which are vented to the dust collector (ID: DC1), sent to the baler room and fugitively emitted into the building air. Emissions are attributed to the nearest general exhaust (ID: EF2). Particulate matter emissions from all converting machines will be ducted to the scrap handling system (dust collector DC2) and emitted from the nearest exhaust to the baler room (ID: EF2). Wastewater from cleaning the corrugator and printers is treated in our on-site wastewater treatment plant prior to being discharged to the City of Manitoba's municipal system in compliance with a discharge license issued by the city.

Ancillary processes and equipment include the following;

- Comfort heating equipment (Make-up Air Units (MUAs), Unit Heaters, (UHs) and Heating, Ventilation and Air Conditioning (HVACs) Units)

This link provides a visual overview of the box making process:

<https://www.youtube.com/watch?v=HL2yvqSk8Ww>

1.3 Description of Products and Raw Materials

This facility manufactures corrugated paperboard containers. Other raw materials include glues and water-based inks for printing.

1.4 Process Flow Diagram

A simplified process flow diagram is included in Appendix B, Figure B1.

1.5 Operating Schedule

The facility operates 24 hours a day for 5 – 6 days a week.

For the purpose of this assessment, it has been assumed that all processes/equipment are operating 24 hours per day, 7 days per week, year-round.

2.0 INITIAL IDENTIFICATION OF SOURCES AND CONTAMINANTS

2.1 Sources and Contaminants Identification Table

Sources and contaminants are identified in Table A1, “Sources and Contaminants Identification Table”, found in Appendix A.

3.0 ASSESSMENT OF THE SIGNIFICANCE OF CONTAMINANTS AND SOURCES

3.1 Identification of Negligible Contaminants and Sources

Some sources/contaminants at the facility have been deemed insignificant, and these sources are listed in Table A1, Appendix A, and Table C1, Appendix C. Rationales are provided in Table A1, Appendix A. Rationales for sources/contaminants not explicitly listed in Table A1 are given in Section 3.2.

3.2 Rationale for Assessment

- Two (2) contaminants without Manitoba Conservation AAQCs or Ontario Ministry ACB limits were found to have point of impingement (POI) concentrations which are below the de minimus threshold concentrations as per Table B-2A of Guideline A-10. These contaminants are listed in Table C2, Appendix C and have been deemed insignificant.

4.0 OPERATING CONDITIONS, EMISSION ESTIMATES AND DATA QUALITY

4.1 Description of Operating Conditions

Emission calculations and dispersion modelling were based on the following worst case operating conditions:

- Production was assumed to be operating at full capacity with all equipment operating simultaneously.
- The facility was assumed to be in operation 52 weeks per year, 7 days per week, and 24 hours per day.
- Dust collection was assumed to be in operation 52 weeks per year, 7 days per week, and 24 hours per day.

- A “worst-case” ink formulation comprising of the maximum percentage composition of each of the possible contaminants was used in the estimation of printing emissions. Additionally, this generic formulation was assumed to be used in all converting machines simultaneously with 25% evaporative loss. The daily ink usage is 618.32 kg/day and 165.9 kg/day of glue based on a maximum consumption of 497,552 lbs/year and approximately 135,890 lbs/year of adhesive. Inks and adhesives used in the manufacturing process are water based with trace amounts of VOCs.
- All of the natural gas fired equipment was assumed to be operating simultaneously and at the maximum capacity.

4.2 Explanation of Method Used to Estimate Emissions

Appendix D provides detailed explanations of the estimates.

4.3 Sample Calculations

Refer to Appendix D.

5.0 SOURCE SUMMARY TABLE AND SITE PLAN

5.1 Source Summary Table

The Source Summary is given in Table A2, Appendix A.

5.2 Site Plan

The property boundary, building layout, and source locations are given in Figures B2 and B3, Appendix B.

6.0 DISPERSION MODELLING

6.1 Description of Dispersion Modelling

The US EPA AERMOD dispersion model (v. 22112) was used to predict the maximum point of impingement (POI) concentrations of contaminants. The modelling was conducted in accordance with the “Guidelines for Air Dispersion Modelling in Manitoba”, November 2006. Further, direction was obtained from Ontario’s “Air Dispersion Modelling Guideline for Ontario [Guideline A-11], Version 3.0, published by the Ministry in March 2017 (ADMGO).

6.2 AERMOD Model

All major structures on site were included in the model to allow for building downwash. A standard multi-tier receptor grid (up to 2000m from source centroid) was placed around the facility in accordance with

the with the Air Dispersion Modelling Guideline of Manitoba. The digital elevation dataset for Bismark, North Dakota from the Ministry's website was entered into the model. The surrounding area is predominantly urban; however, the "RURAL" dispersion factor was chosen as it provides more conservative results. The surrounding land use within a 3 km radius of the site is 80% suburban and 20% crops. The meteorological data (upper air data and surface data) used was from the Bismark, North Dakota weather station and was downloaded from the following site: <http://www.webmet.com/>. The data was processed through the AERMET processor. The land use types were entered into the processor and the surface characteristics used were those assigned by the processor.

NOTE 1: The surrounding terrain within a 3km radius of the site demonstrated minimal variation amongst the terrain heights. As such the "Flat" terrain option was selected.

Natural gas-fired equipment and one (1) boiler (ID: B2) were modelled as volume sources. One other boiler (ID: B1) was modelled as an individual point source.

Refer to Figures B2 and B4, Appendix B, for dispersion modelling parameters.

All sources were assumed to be operating 24 hours/day, 7 days/week, 52 weeks/year.

The following approach was taken to simplify the modelling for the remainder of the contaminants in the "Base" model.

A base emission rate of 1 g/s was entered into each AERMOD source for Base.isc. The resulting maximum POI concentration from each source was then used as a dispersion factor for each applicable source. The emission rate of each contaminant was multiplied by the dispersion factor from the corresponding source group (refer to Tables E3-1 to E3-3 in Appendix E for determination of total POI concentrations for each contaminant). The individual POI concentrations were then summed for each contaminant and reported in the Emission Summary Table (Table A3).

It should be recognized that this methodology is conservative, as the aggregate maximum POI concentrations would be greater than the POI concentrations from modelling each contaminant individually with its corresponding emission rate from the various individual sources.

6.3 Dispersion Modelling Input Summary Table

The general inputs to the model are summarized in the Dispersion Modelling Input Summary Table, given in Appendix E.

6.4 Land Use Zoning Designation Plan

Refer to Appendix B.



6.5 Dispersion Modelling Input and Output Files

The model inputs are presented in Table E2-1, Appendix E. The outputs are also included in Appendix E.

7.0 EMISSION SUMMARY TABLE AND CONCLUSIONS

7.1 Emission Summary Table

The maximum POI concentration of contaminants predicted by the dispersion modelling is compared to Ministry limits in Table A3, "Emission Summary Table", given in Appendix A.

7.2 Assessment of Contaminants with No Ministry POI Limits

No contaminants without Manitoba Conservation AAQCs or Ontario Ministry standards/guidelines are emitted from the facility in significant amounts. The POI concentrations of two (2) contaminants are below the de minimus levels.

7.3 Conclusions

Table A3 indicates that, for contaminants with Manitoba Conservation AAQCs or Ontario Ministry limits, maximum POI concentrations do not exceed the AAQCs or ACB limits.

J:\328000s\0328461.000 WestRock,1360InksterBlvd,ERC,ECA\Deliverables\ESDM\328461 - ESDM Report 1360 Inkster Blvd, Wpg MB Westrock Oct 18, 2024.docx

Template: ESDM Report (AERMOD Sch.3) – January 24, 2024

APPENDIX A
Tables
(3 Pages)

Table A1. Sources and Contaminant Identification Table

Source Information		Expected Contaminants		Significant Yes/No ?	Rationale
Source ID	Source Description	General Location			
UJH1-UJH5, MUA1- MUA5, HVAC1- HVAC6	Comfort Heating Equipment	Production	Nitrogen Oxides	No	As per Table B-3B of Ontario's MECP Guideline A-10: Procedure for Preparing an Emission Summary and Dispersion Modelling Report, natural gas fired equipment are considered insignificant as the total facility-wide heat input usage for the equipment is less than 20 million kilojoules per hour.
AC	Air Conditioning	Production	None	No	Electrical AC Unit
INT1 - INT4	Air Supply	Main Bldg.	None	No	No emissions. Ventilation of outdoor air.
B1	Line 1 Natural Gas Steam Generator - Process	Production	Nitrogen Oxides	Yes	
B2	Line 2 Natural Gas Steam Generator - Process	Production	Nitrogen Oxides	Yes	
EHP	Electric Heat Pump	Main Bldg.	None	No	Electric unit - exempt
DC1	Dust Collection (Scrap Collection)	Main Bldg.	None	No	Emissions from dust collector are released into the baler room and is fugitively released and attributed to EF2.
CORR	Corrugator	Main Bldg.	None	No	Particulate matter from corrugation is already contributed to the dust collector emissions EF2. No inks or varnishes are used in corrugation process. Steam exhausts are only located in corrugation area.
FLEX	Flexographic and RDC Presses	Main Bldg.	None	No	Any emissions from printing presses get sucked up and are sent to the Dust Collector with any scrap particulate. Emissions are attributed to EF2.
EF1	General Exhaust - Storage Area	Main Bldg.	None	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.
EF2	General Exhaust - Baler Area	Main Bldg.	Particulate Matter	Yes	
EF3	General Exhaust - Offices & Washrooms	Main Bldg.	VOCs		
EF4	General Exhaust - Offices & Washrooms	Main Bldg.	None	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.
EF5	General Exhaust - Offices & Washrooms	Main Bldg.	None	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.
EF6	General Exhaust - Offices & Washrooms	Main Bldg.	None	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.
EF7	General Exhaust - Offices & Washrooms	Main Bldg.	None	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.
EF8	General Exhaust - Offices & Washrooms	Main Bldg.	None	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.
EF9 - EF11	General Exhaust - Corrugation Area	Main Bldg.	Heat/Steam	No	No Emissions. Ventilation of indoor air out of a space that does not discharge any contaminant other than heat or noise.

Table A2. Source Summary Table

Source Description		Source Data					Emission Data							
Source ID		Flow Rate	Exit Gas Temp	Inner Dia.	Height Above Grade	Height Above Roof	Discharge Type	Contaminant	CAS #	Maximum Emission Rate	Avg. Period	Emission Estimating Technique	Emissions Data Quality	% of Overall Emissions
MU1 - MU15 HVAC1 - HVAC6 UH1 - UH34	Natural Gas Fired Comfort Heating Equipment	-	-	-	-	-	-	Insignificant	-	-	-	-	-	-
		-	-	-	-	-	-							
		-	-	-	-	-	-							
B1	Line 1 Natural Gas Steam Generator - Process	3.03*	246 *	0.71	10.95	2.95	vertical	Nitrogen Oxides	10102-44-0	2.07E-01	1, 24	EF	AADQ	95%
B2	Line 2 Natural Gas Steam Generator - Process	-	-	-	-	-	volume	Nitrogen Oxides	10102-44-0	9.88E-03	1, 24	EF	AADQ	5%
EF2	General Exhaust - Baler Area (Dust Collector)	-	-	-	-	-	volume	Particulate Matter	n/a	1.39E-02	24	EF	AADQ	100%
								2-dimethylaminoethanol	108-01-0	3.58E-05	24	MB	HDQ	100%
								2-butoxyethanol	111-76-2	3.58E-05	24, 10 min	MB	HDQ	100%
								Potassium Hydroxide	1310-58-3	2.15E-04	24	MB	HDQ	100%
								Ammonium hydroxide	1336-21-6	3.58E-05	24	MB	HDQ	100%
								2-aminoethanol	141-43-5	3.58E-05	24	MB	HDQ	100%
								Quartz	14808-60-7	3.58E-05	24	MB	HDQ	100%
								poly(oxy-1,2-ethanediyl), a-hydro-7-hydroxy	25322-68-3	4.29E-04	24	MB	HDQ	100%
								Propan-2-ol	67-63-0	7.16E+00	24	MB	HDQ	100%
								Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	3.58E-05	24	MB	HDQ	100%
								Poly(oxy-1,2-ethanediyl), o-bis(1-phenylethyl)phenyl-Hu-hydroxy	9086-52-6	3.58E-05	24	MB	HDQ	100%

NOTE: UTM coordinates are included in Appendix E, Table E2-1.

* empirical stack data

EF : Emission Factor
MB : Mass Balance

HDQ : Highest Data Quality
AADQ : Above Average Data Quality

Table A3. Emission Summary Table

Contaminant	CAS #	Total Facility Emission Rate (g/s)	Air Dispersion Model Used	Maximum POI Concentration (µg/m ³)	Averaging Period	POI Limit	Limiting Effect	Reg. Sch. No.	% of POI Limit	Ambient Air Concentration* (µg/m ³)	% of POI Limit (Including Ambient Air)
Nitrogen Oxides	10102-44-0	2.17E+01	AERMOD	5.57E+01	24	200	-	AAQC	28%	9	32%
			AERMOD	1.24E+02	1	400	-	AAQC	31%	10	34%
			AERMOD	7.89E+00 ***	Annual	60	-	AAQC	13%	-	-
Dimethylaminoethanol	108-01-0	3.58E-05	AERMOD	3.87E-02	24	130	Health	B2	0.03%	-	-
2-butoxyethanol	111-76-2	3.58E-05	AERMOD	1.01E-01	10 min	500	Odour	G	0.02%	-	-
Potassium Hydroxide	1310-58-3	2.15E-04	AERMOD	3.87E-02	24	2400	Health	G	<0.01%	-	-
Ammonium hydroxide	1336-21-6	3.58E-05	AERMOD	3.87E-02	24	500	Health	B2	<0.01%	-	-
2-aminoethanol	141-43-5	3.58E-05	AERMOD	3.87E-02	24	35	Health	B2	0.1%	-	-
Quartz	14808-60-7	3.58E-05	AERMOD	3.87E-02	24	5	Health	G	1%	-	-
poly(oxy-1,2-ethanediyl), a-hydro-2-hydroxy-	25322-66-3	4.29E-04	AERMOD	4.65E-01	24	40	Health	B2	1%	-	-
Propan-2-ol [1]	67-63-0	7.16E+00	AERMOD	6.48E+03 ***	24	7300	Health	3	88.76%	-	-
Alcohols, C18-18 and C18-unsatd., ethoxylated	68920-66-1	3.58E-05	AERMOD	3.87E-02	24	-	-	-	Table C2	-	-
Poly(oxy-1,2-ethanediyl), α-[bis(1-phenylethyl)phenyl]-ω-hydroxy	9086-52-6	3.58E-05	AERMOD	3.87E-02	24	-	-	-	Table C2	-	-
PM2.5 (Particulate Matter <= 2.5)	n/a1	1.39E-02	AERMOD	1.51E+01 *	24	30	-	AAQC	50%	10	84%
PM10 (Particulate Matter <= 10)	n/a2	1.39E-02	AERMOD	1.51E+01 *	24	50	-	AAQC	30%	-	-
Particulate Matter (Total)	n/a	1.39E-02	AERMOD	1.51E+01	24	60	-	AAQC	25%	-	-

NOTE: This assessment was completed using AERMOD/AERMET version 22112.

*PM2.5 and PM10 conservatively assumed to be equivalent to Total Particulate Matter.

**Ambient air concentration values for the most recent year available (2022), 90th percentile value. Values are the average for Winnipeg. Values can be downloaded at the following site: [https://data-
donnees.az.ec.gc.ca/data/air/monitor/national-air-pollution-surveillance-naps-program/](https://data-
donnees.az.ec.gc.ca/data/air/monitor/national-air-pollution-surveillance-naps-program/)

***5-year annual average result was increased by a factor of 140% to account for potential variability between the overall 5-year annual average versus the maximum annual result per individual year.

****After removal of highest day per meteorological year.

[1] Individual model run for contaminant.

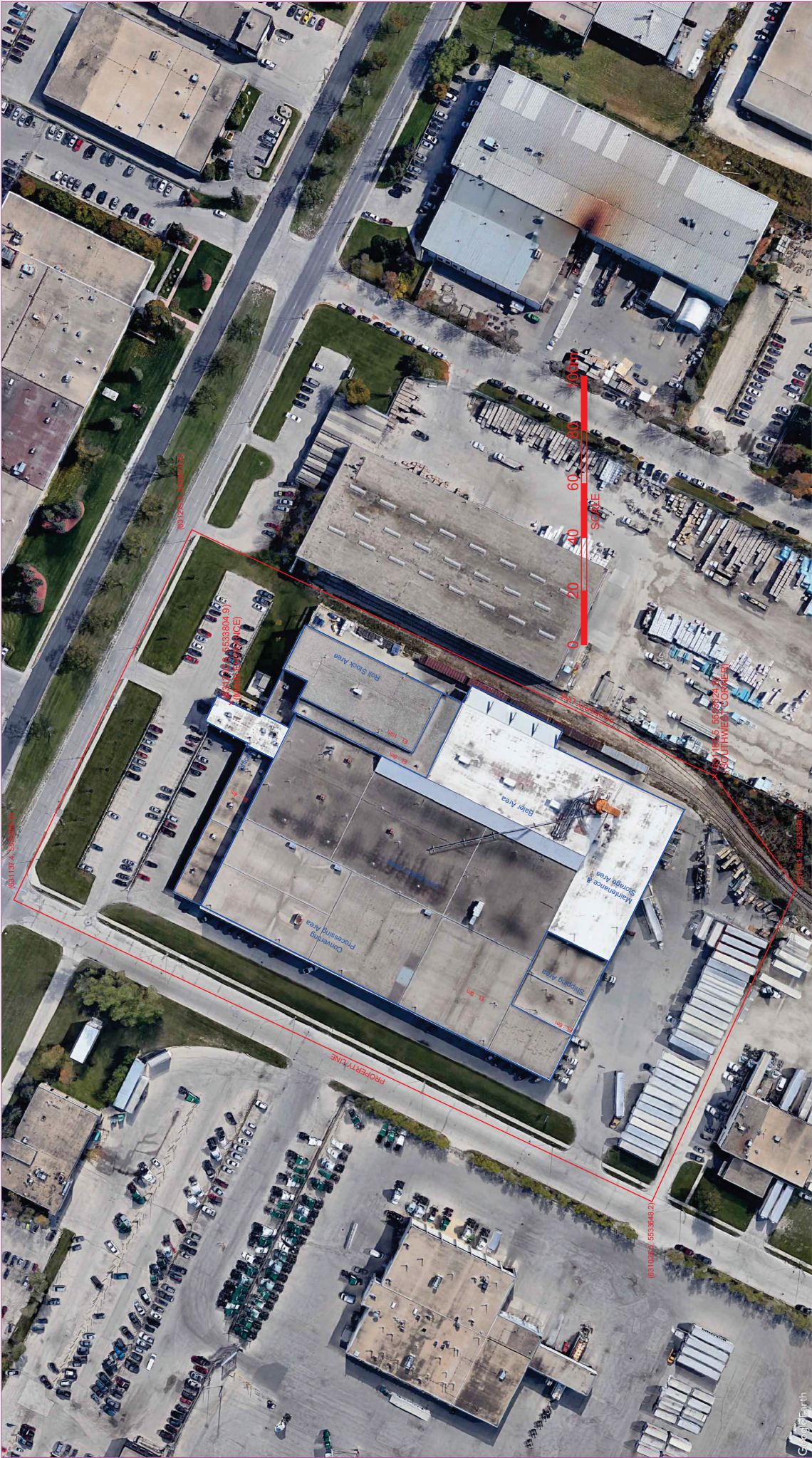
AAQC Guideline published by Manitoba Conservation, July 2005.

Reg. Sch. Or Benchmark 1: 3 Standard - Schedule 3 of Reg. 419

Benchmark 1: G Guideline - Summary of Standards and Guidelines to support O Reg.419: Air Pollution - Local Air Quality, April 2012

Benchmark 2: B2 Air Contaminants Benchmark (ACB) List, April 2023

APPENDIX B
Figures & Drawings
(5 Pages)



PROJECT NAME:
SMURFIT WESTROCK
1360 INKSTER BLVD., WINNIPEG

DRAWING NAME:
SCALED AREA LOCATION PLAN

SCALE:
AS SHOWN

PROJECT NO:
328461

DRAWING NO:
01

DRAWN BY:
MXM

05.

04.

03.

02.

01.

NO.

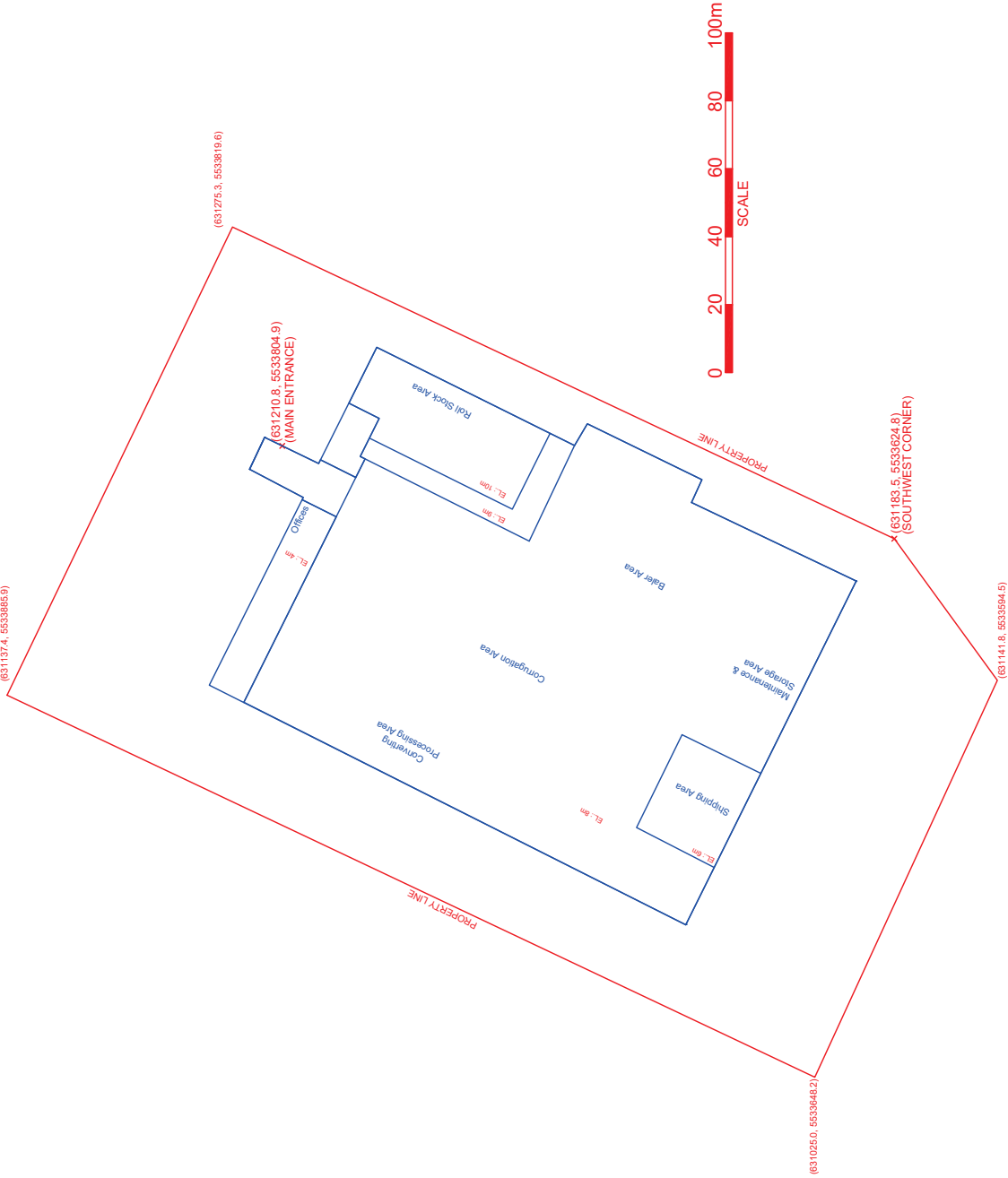
EAP APPLICATION

REVISION

10-01-2024

DATE

(631137.4, 5533885.9)



PROJECT NAME:
SMURFIT WESTROCK
1360 INKSTER BLVD., WINNIPEG

DRAWING NAME:
SITE PLAN

SCALE:

AS SHOWN

PROJECT NO:

328461

DRAWING NO:

B2

DRAWN BY:

MXM

05.

04.

03.

02.

01.

NO.

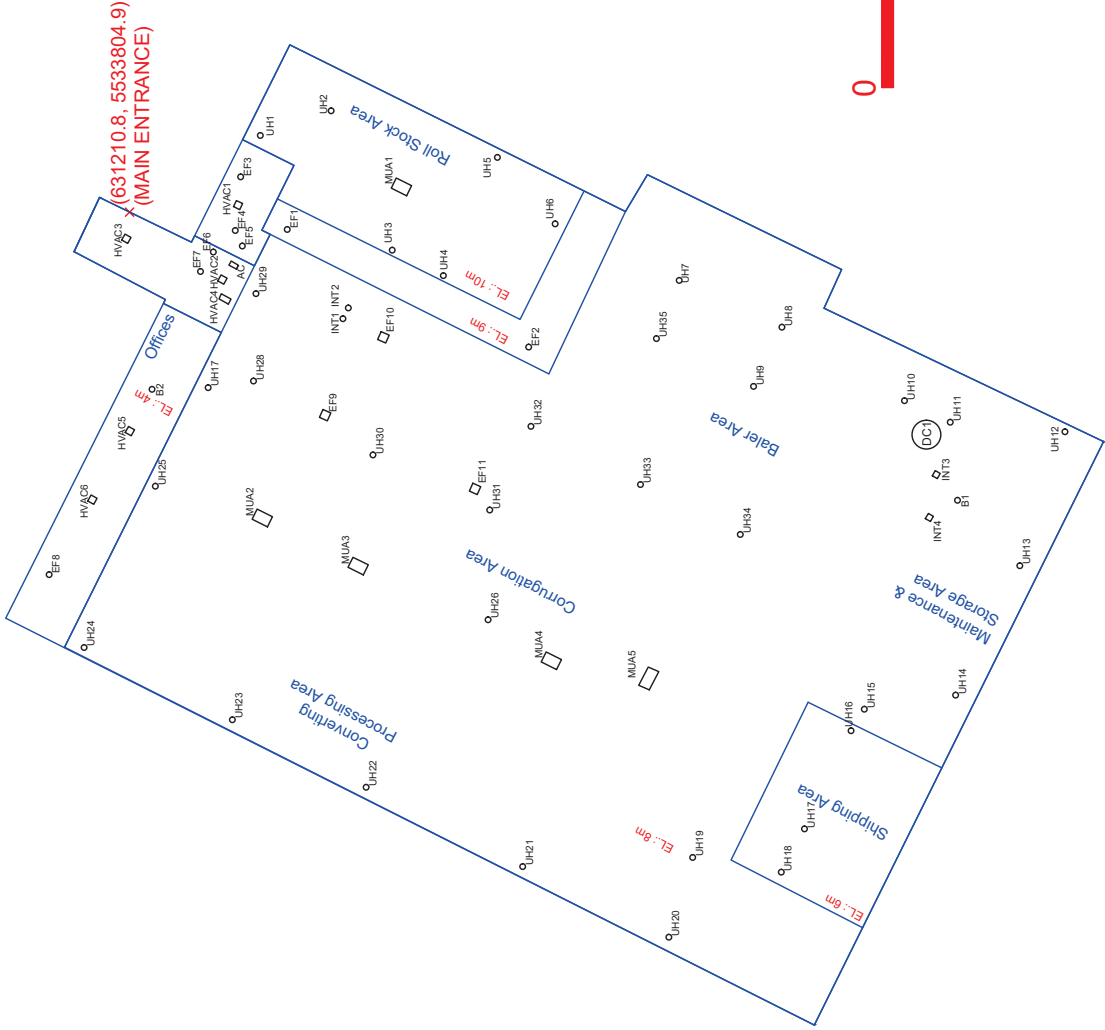
10-01-2024

DATE

EAP APPLICATION

REVISION





PROJECT NAME:
SMURFIT WESTROCK
1360 INKSTER BLVD., WINNIPEG
DRAWING NAME:
SOURCE LAYOUT

SCALE: AS SHOWN
PROJECT NO: 328461
DRAWING NO: B3
DRAWN BY: MXM

05.	
04.	
03.	
02.	
01.	EAP APPLICATION
NO.	REVISION

10-01-2024
DATE

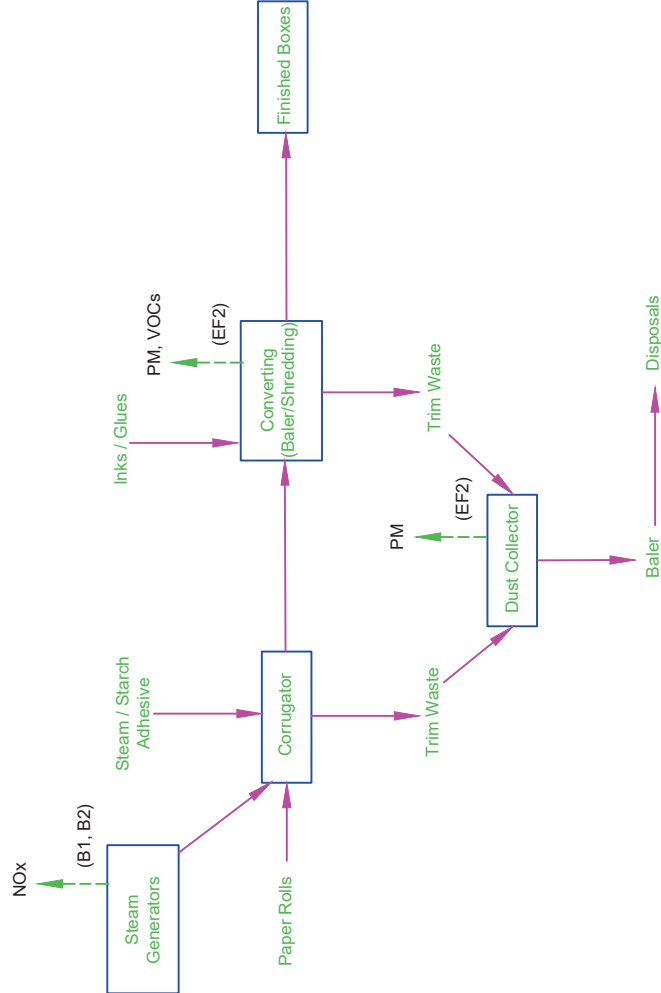




PROJECT NAME: SMURFIT WESTROCK 1360 INKSTER BLVD., WINNIPEG	SCALE:	05.	
	AS SHOWN	04.	
	PROJECT NO: 328461	03.	
	DRAWING NO: B4	02.	
DRAWING NAME: AERMOD PARAMETERS	DRAWN BY: MXM	01.	EAP APPLICATION 10-01-2024
		NO.	REVISION DATE



Smurfit Westrock - Winnipeg



Ancillary Operations

Comfort Heating
Equipment

Figure B1: Process Flow Diagram

APPENDIX C
Insignificant Sources
(1 Page)

Table C1. Insignificant Sources/Contaminants

Processing Area / Equipment	Insignificant	
	Contaminant	Source
Comfort Heating Equipment	Nitrogen Oxides	UH1-UH35, MUA1-MUA5, HVAC1-HVAC6

Table C2. Insignificant Contaminants Based on De Minimus Levels

Contaminant	CAS #	Total Facility Emission Rate (g/s)	Maximum POI Concentration (µg/m ³)	24-hour Threshold Concentration* (µg/m ³)
Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	3.58E-05	3.87E-02	0.1
Poly(oxy-1,2-ethanediyl), α-[bis(1-phenylethyl)phenyl]-ω-hydroxy	9086-52-6	3.58E-05	3.87E-02	0.1

*As per Table B-2A in Ontario MEC's "Procedure for Preparing an Emission Summary and Dispersion Modelling Report", Version 3.0, dated March 2018.

APPENDIX D
Emission Estimates
(5 Pages)

Natural Gas Fired Comfort Heating Equipment

Description: Combustion in comfort heating equipment

MUA1 to MUA4 are direct fired units and by-products of combustion are emitted into the building. The emissions are then exhausted to the atmosphere through general exhaust fans (EX1 to EX5), equally distributed. Remaining natural gas fired comfort heating equipment are treated as volume sources grouped by location.

Process Operating Conditions

- All combustion equipment below fueled by

Natural Gas
- All equipment operating simultaneously at the following maximum capacities:

Source Description	Source ID	No. of Units	Max. Thermal Energy Input (Btu/h) per unit	Total Thermal Energy Input (Btu/h)	Total Thermal Energy Input (kJ/h)
Hot Water Heater Units	MUA4, MUA5	2	95,200	190,400	200,872
Unit Heater	UH	2	280,000	560,000	590,800
Unit Heater	UH	3	250,000	750,000	791,250
Unit Heater	UH	1	271,000	271,000	285,905
Unit Heater	UH	3	225,000	675,000	712,125
Unit Heater	UH	1	300,000	300,000	316,500
Unit Heater	UH	1	310,000	310,000	327,050
Unit Heater	UH	1	135,000	135,000	142,425
Unit Heater	UH	5	165,000	825,000	870,375
Unit Heater	UH	2	300,000	600,000	633,000
Unit Heater	UH	2	300,000	600,000	633,000
Unit Heater	UH	1	310,000	310,000	327,050
Unit Heater	UH	1	400,000	400,000	422,000
Unit Heater	UH	2	180,000	360,000	379,800
Unit Heater	UH	4	105,000	420,000	443,100
Unit Heater	UH	2	200,000	400,000	422,000
Unit Heater	UH	1	315,000	315,000	332,325
Unit Heater	UH	1	250,000	250,000	263,750
Unit Heater	UH	1	100,000	100,000	105,500
Roof top Unit	HVAC1	1	115,000	115,000	121,325
Roof top Unit	HVAC2	1	150,000	150,000	158,250
Makeup Air	MUA1	1	50,000	50,000	52,750
Makeup Air	MUA2	1	240,000	240,000	253,200
AC unit	MUA3	1	115,000	115,000	121,325
Roof top Unit	HVAC3-HVAC6	3	150,000	450,000	474,750
Total				8,891,400	9,380,427

Emission Estimation Methodology

Emissions were calculated using USEPA AP-42 emission factors for uncontrolled natural gas combustion equipment <100MMBtu.

Contaminant	CAS #	Emission Factor (lb/MMBtu)	Maximum Emission Rate (g/s)
Insignificant (total thermal input <20GJ/h)			

References

- 1) Thermal input ratings provided by Smurfit Westrock, September 27, 2024.
- 2) USEPA AP-42 Emission Factors. Natural Gas Combustion, Chapter 1.4. Table 1.4-1. July 1998. <<http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf>>.

Natural Gas Fired Process Equipment

Description: Combustion in process boilers

Process Operating Conditions

- All combustion equipment below fueled by

Natural Gas
- All equipment operating simultaneously at the following maximum capacities:

Source Description	Source ID	No. of Units	Max. Thermal Energy Input (Btu/h) per unit	Total Thermal Energy Input (Btu/h)	Total Thermal Energy Input (kJ/h)
Natural Gas Steam Generator Boiler	B1	1	16,750,000	16,750,000	17,671,250
Natural Gas Steam Generator Boiler	B2	1	800,000	800,000	844,000
Total				17,550,000	18,515,250

Emission Estimation Methodology

Emissions were calculated using USEPA AP-42 emission factors for uncontrolled natural gas combustion equipment <100MMBtu.

Contaminant	CAS #	Emission Factor (lb/MMBtu)	Maximum Emission Rate (g/s)
Nitrogen Oxides	10102-44-0	9.80E-02	2.17E-01

Sample Calculation

Nitrogen Oxides Emission Rate = Fuel Input x Emission Factor

= 17.550 MMBtu/h x 0.0980 lb/MMBtu ÷ 3600 s/h x 453.6 g/lb

= 0.217 g/s

Process Emissions Summary

Contaminant	CAS #	Maximum Emission Rate (g/s)	Emission Estimation Technique	Data Quality
Nitrogen Oxides	10102-44-0	2.17E-01	EF	AADQ

EF: Emission Factor

AADQ: Above Average Data Quality

References

- 1) Thermal input ratings provided by Smurfit Westrock, September 27, 2024.
- 2) USEPA AP-42 Emission Factors. Natural Gas Combustion, Chapter 1.4. Table 1.4-1. July 1998.
<<http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf>>.

Scrap Handling Dust Emissions from DC1

Source ID: EF2

Description: Paperboard is cut/trimmed in the corrugator. Particulate matter generated in this area of the corrugator will be ducted to the Scrap Handling System dust collector, DC1. The dust collector is routed to the Baler Room and fugitive emissions are attributed to the nearest general exhaust, EF2.

Process Operating Conditions

Actual operating times: 24 hours/day, 365 days/year

Removal efficiency: 99.99%

Total Dust Collected: 9,694,528 lbs/year

Total Dust Collected: 26,560 lbs/day

Total Dust Emitted: 2.66 lbs/day

Emission Estimation Methodology

-Particulate matter generated from the cutting/trimming operation of the corrugator is ducted to the dust collector of the new Scrap Handling System. The quantity of dust collected at the dust collector was used to estimate particulate matter emissions ducted to the dust collector. The dust emitted from the dust collector was back calculated as the unfiltered percentage.

Worst-case MSDS Material Blend

Contaminant	CAS #	Max. Wt. Percent	Maximum Emission Rate (g/s)
Particulate Matter	n/a	100%	1.39E-02

Sample Calculations

$$\begin{aligned} \text{Total Dust Emitted} &= (\text{Collected Amount} / \text{Removal Efficiency}) - \text{Collected Amount} \\ &= (26,560 \text{ lbs/day} / 99.99\%) - 26,560 \text{ lbs/day} \\ &= 2.66 \text{ lbs/day} \end{aligned}$$

$$\begin{aligned} \text{Conversion to Emission Rate} &= \text{Total Dust Emitted} \times \text{Conversion Factors} \\ &= 2.66 \text{ lbs/day} \times 453.592 \text{ g/lbs} \div 24 \text{ h/day} \div 3600 \text{ s/h} \\ &= 0.0139 \text{ g/s} \end{aligned}$$

Process Emissions Summary

Contaminant	CAS #	Maximum Emission Rate (g/s)	Emission Estimation Technique	Data Quality
Particulate Matter	n/a	1.39E-02	EC	ADQ

EC: Engineering Calculation

ADQ: Average Data Quality

References

1) Dust collector parameters provided by Westrock September 5, 2024. via e-mail.

Inks & Glue VOC emissions (Converting Process)**Source ID:** EF2

Description: There are five (5) older flexographic/RDC presses (machines 3121, 3131, 4511, 4532, 4521) and one (1) newly replaced flexographic press (BOBST 3-colour, machine 1228). Converting machines may generate minor amounts of VOC emissions from the use of inks/varnishes in printing. Particulate matter emissions from cutting/converting of paperboard are accounted by the dust collector DC1. The VOC emissions from the converting machines are sucked out and sent to the dust collector DC1 which is routed to the Baler Room and fugitively emitted inside the building. The emissions from the Baler Room have been attributed to the nearest general exhaust (EF2).

Process Operating Conditions

Actual operating times: 24 hours/day, 365 days/year

Maximum Inks Consumption:	497,552	lb/year
	7.16	grams/sec
Maximum Glue Consumption:	135,890	lb/year
	1.95	grams/sec
Dust Collector Removal efficiency:	99.99%	

Emission Estimation Methodology

-A range of inks/varnishes are used in the converting machines. For a worst-case scenario, the maximum composition of each contaminant from all the inks/glues was used to determine the emission rates (Refer to "Product Formulations" datasheet for a listing of all paints and their composition).

-It was conservatively assumed 100% of volatiles are emitted to atmosphere after printing.

- The printing process is filtered through the dust collector (DC1) operating at a 99.99% removal efficiency.

Worst-case Paint Mixture

Contaminant	CAS #	Max. Wt. Percent	Maximum Emission Rate (g/s)
2-dimethylaminoethanol	108-01-0	5%	3.58E-05*
2-butoxyethanol	111-76-2	5%	3.58E-05*
Potassium Hydroxide	1310-58-3	30%	2.15E-04*
Ammonium hydroxide	1336-21-6	5%	3.58E-05*
2-aminoethanol	141-43-5	5%	3.58E-05*
Quartz	14808-60-7	5%	3.58E-05*
poly(oxy-1,2-ethanediyl), a-hydro-?-hydroxy-	25322-68-3	60%	4.29E-04*
Propan-2-ol	67-63-0	100%	7.16E+00
Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	5%	3.58E-05*
Poly(oxy-1,2-ethanediyl), α-[bis(1-phenylethyl)phenyl]-ω-hydroxy	9086-52-6	5%	3.58E-05*

*Contaminant is a solid or non-volatile liquid.

**Contaminant in ink was used at a maximum of 20 hrs per week. It is conservatively assumed to be used no more than 4 hrs per day.

Sample Calculations

Quartz Emission = Max (Ink Usage Rate or Glue Usage Rate) x Max Weight Percent x (100% - Filter Efficiency)

= 7.16 g/s x 5% x (100% - 99.99%)

= 0.0000358 g/s

Propan-2-ol Emission = Max (Ink Usage Rate or Glue Usage Rate) x Max Weight Percent

= 7.16 g/s x 100%

= 7.156 g/s

Process Emissions Summary

Contaminant	CAS #	Maximum Emission Rate (g/s)	Emission Estimation Technique	Data Quality
2-dimethylaminoethanol	108-01-0	3.58E-05	MB	HDQ
2-butoxyethanol	111-76-2	3.58E-05	MB	HDQ
Potassium Hydroxide	1310-58-3	2.15E-04	MB	HDQ
Ammonium hydroxide	1336-21-6	3.58E-05	MB	HDQ
2-aminoethanol	141-43-5	3.58E-05	MB	HDQ
Quartz	14808-60-7	3.58E-05	MB	HDQ
poly(oxy-1,2-ethanediyl), a-hydro-?-hydroxy-	25322-68-3	4.29E-04	MB	HDQ
Propan-2-ol	67-63-0	7.16E+00	MB	HDQ
Alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	3.58E-05	MB	HDQ
Poly(oxy-1,2-ethanediyl), α-[bis(1-phenylethyl)phenyl]-ω-hydroxy	9086-52-6	3.58E-05	MB	HDQ

MB: Mass Balance

HDQ: Highest Data Quality

Reference

- 1) Ink usages and summary MSDS provided by Smurfit Westrock. September 5, 2024 and September 24, 2024. via e-mail.
- 2) VOC breakdown and usage of orange and red ink provided by Smurfit Westrock. Oct 11, 2024 via e-mail.

Product Formulations

Source ID: VS1
Description: Smurfit Westrock has many inks and glues that are used throughout the year and not simultaneously. A variety of inks or glues can be used during printing operations.

Product Code/Name		Violet Base		Premobase W2 Cl 5 Blue		Carmy Up 220		Cell Kleen		GCMi 48 Purple GF		GCMi 609 Maroon GF		GFX TCA Extender		Isopropyl Alcohol		Non Skid Varnish		Paper Wax Compound		pH Conditioner		Rhodamine Base pp		Spectra Rhodamine YS (CF) DR168-6013		CU-5300 Transfer Ad		Overall Maximum Composition
Supplier	CAS #	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Min	Max	Flint	Max
Contaminant																														
Poly(oxy-1,2-ethanedyl), c-bis(1-phenylethyl)phenyl-u-hydroxy	908652-6		0.5%	1.5%			5.0%																							5%
poly(oxy-1,2-ethanedyl), s-hydro-2-hydroxy-	25322-68-3					30.0%	60.0%																							60%
Potassium Hydroxide	1310-58-3							10.0%	30.0%																					30%
2-butoxyethanol	111-76-2							1.0%	5.0%																					5%
2-aminoethanol	141-43-5									1.0%	5.0%		0.5%	1.5%				1.0%												5%
Quartz	14808-60-7													0.1%	5.0%															5%
Propan-2-ol	67-63-0																													100%
Alcohols, C16-18 and C18-unsatd.,	68920-66-1																			1.0%	5.0%									5%
2-dimethylaminoethanol	108-01-0																													5%
Ammonia	1306-21-6																													5%

Reference

MSDS obtained from Smurfit Westrock, September 24, 2024, via email.

APPENDIX E
Dispersion Modelling
(6 Pages)

Table E1. Dispersion Modelling Input Summary Table

Relevant Section of the Regulation	Section Title	Description of How the Approved Dispersion Model was Used
Section 6	Approved Models	AERMOD v22112
Section 8	Negligible Sources	See Section 3 of this ESDM Report
Section 9	Same Structure Contamination	Not Applicable
Section 10	Operating Conditions	See Section 4.1 of this ESDM Report
Section 11	Source of Contaminant Emission Rates	See Section 4.2 of this ESDM Report
Section 12	Combined Effect of Assumptions for Operating Conditions and Emission Rates	See Sections 4.1 and 4.2 of this ESDM Report
Section 13	Meteorological Conditions	Data from Bismark Weather Station, North Dakota
Section 14	Area of Modelling Coverage	5000m from source centroid; grid spacing as per ADMGM
Section 15	Stack Height for Certain New Sources of Contaminant	Not Applicable
Section 16	Terrain Data	Flat terrain. No dataset used.
Section 17	Averaging Periods	1-h, 24-h and annual

Table E2-1. Model Inputs - Basecase Emissions

base.isc

Source ID	Easting Coordinate (m)	Northing Coordinate (m)	Release Type	Release Height (m)	Emission Rate (g/s)	Exit Temp. (K)	Exit Velocity (m/s)	Exit Diameter (m)	Description	Operating Times	Side Length (m)	Building Height (m)	Initial Lateral Dimension (m)	Initial Vertical Dimension (m)
B1	631161	5533661	vertical	10.9	1	519.15	7.62	0.71	Line 1 Natural Gas Steam Generator - Process	24 / 7	-	-	-	-
B2	631160	5533801	volume	4.0	1	-	-	-	Line 2 Natural Gas Steam Generator - Process	24 / 7	2	4	0.47	1.86
EF2	631188	5533736	volume	9.0	1	-	-	-	Dust Collector/Scrap	24 / 7	43	9	10.00	4.19

Table E2-1. Model Inputs - Propan-2-ol (CAS# 67-63-0) Emissions

prop.isc

Source ID	Easting Coordinate (m)	Northing Coordinate (m)	Release Type	Release Height (m)	Emission Rate (g/s)	Exit Temp. (K)	Exit Velocity (m/s)	Exit Diameter (m)	Description	Operating Times	Side Length (m)	Building Height (m)	Initial Lateral Dimension (m)	Initial Vertical Dimension (m)
EF2	631188	5533736	volume	9.0	7.16E+00	-	-	-	Dust Collector/Scrap	24 / 7	43	9	10.00	4.19

Table E3-1. AERMOD Outputs (24-h results)

Contaminant	CAS #	B1		B2		EF2		Total POI Concentration
		Emission Rate (g/s)	Dispersion Factor 189 ug/m3	Emission Rate (g/s)	Dispersion Factor 1675 ug/m3	Emission Rate (g/s)	Dispersion Factor 1082 ug/m3	
Nitrogen Oxides	10102-44-0	2.07E-01	3.92E+01	9.88E-03	1.66E+01	-	-	5.57E+01
Dimethylamionethanol	108-01-0	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
2-butoxyethanol	111-76-2	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
Potassium Hydroxide	1310-58-3	-	-	-	-	2.15E-04	2.32E-01	2.32E-01
Ammonium hydroxide	1336-21-6	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
2-aminoethanol	141-43-5	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
Quartz	14808-60-7	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
poly(oxy-1,2-ethanediyl), a-hydro-?-hydroxy-	25322-68-3	-	-	-	-	4.29E-04	4.65E-01	4.65E-01
Propan-2-ol	67-63-0	-	-	-	-	7.16E+00	7.75E+03	7.75E+03
Alcohols, C16-18 and C18-unsatd., eth	68920-66-1	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
Poly(oxy-1,2-ethanediyl), α-[bis(1-phen	9086-52-6	-	-	-	-	3.58E-05	3.87E-02	3.87E-02
Particulate Matter	n/a	-	-	-	-	1.39E-02	1.51E+01	1.51E+01

Particulate Matter POI Concentration = Sum [(emission rate from source group) x (dispersion factor for source group)]

$$= 1.39\text{E-}02 \text{ (g/s)} \times 1082 \text{ ug/m}^3$$
$$= 15.094 \text{ } \mu\text{g/m}^3$$

Table E3-2. AERMOD Outputs (1-h results)

Contaminant	CAS #	B1		B2		EF2		Total POI Concentration
		Emission Rate (g/s)	Dispersion Factor 391 ug/m3	Emission Rate (g/s)	Dispersion Factor 4381 ug/m3	Emission Rate (g/s)	Dispersion Factor 1719 ug/m3	
Nitrogen Oxides	10102-44-0	2.07E-01	8.08E901	+88E-03	4.33E901	-	-	1.24E902
Dimethylamionethanol	108-01-0	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
2-butoxyethanol	111-76-2	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
Potassium Hydroxide	1310-58-3	-	-	-	-	2.15E-04	3.6+E-01	3.6+E-01
Ammonium hydroxide	1336-21-6	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
2-aminoethanol	141-43-5	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
Quartz	14808-60-7	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
poly(oxy-1,2-ethanediyl), a-hydro-?-hydroxy-	25322-68-3	-	-	-	-	4.2+E-04	7.38E-01	7.38E-01
Propan-2-ol	67-63-0	-	-	-	-	7.16E900	1.23E904	1.23E904
Alcohols, C16-18 and C18-unsatd., ethoxylated	68+20-66-1	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
Poly(oxy-1,2-ethanediyl), α-[bis(1-phenylethyl)phenyl]-ω-hydroxy	+086-52-6	-	-	-	-	3.58E-05	6.15E-02	6.15E-02
Particulate Matter	n/a	-	-	-	-	1.3+E-02	2.40E901	2.40E901

Particulate Matter POI Concentration = Sum [(emission rate from source group) x (dispersion factor for source group)]

$$= 1.3+E-02 \text{ (g/s)} \times 171+ \text{ ug/m}^3$$
$$= 23.+73 \text{ } \mu\text{g/m}^3$$

Table E3-3. AERMOD Outputs (annual results)

Contaminant	CAS #	B1		B2		Total POI Concentration
		Emission Rate (g/s)	Dispersion Factor 16 ug/m3	Emission Rate (g/s)	Dispersion Factor 225 ug/m3	
Nitrogen Oxides	10102-44-0	2.07E-01	3.41E+00	9.88E-03	2.22E+00	5.63E+00

Nitrogen Oxides POI Concentration = Sum [(emission rate from source group) x (dispersion factor for source group)]

$$= 2.07E-01 \text{ (g/s)} \times 16 \text{ ug/m}^3 + 9.88E-03 \text{ (g/s)} \times 225 \text{ ug/m}^3$$

= 5.634 $\mu\text{g/m}^3$

EECR



October 18, 2024

WestRock Company of Canada Corp.
1360 Inkster Boulevard
Winnipeg, Manitoba R2X 3C5

E-mail: matthew.hudson@westrock.com

Attention: Matthew Hudson
Quality Manager

Re: Development Environmental Assessment Report
1360 Inkster Boulevard, Winnipeg, Ontario
Pinchin File: 328461

Executive Summary

This Environmental Assessment Report constitutes part of a Manitoba *Environmental Act* Proposal application for works on the subject property, located at 1360 Inkster Boulevard, Winnipeg, Ontario (Site). WestRock Company of Canada Corp. currently has five older flexographic/RDC presses machines (machines 3121, 3131, 4511, 4532, 4521) and intends to bring one additional flexographic press (BOBST 3-colour, machine 1228) to the Site. Proposed mitigation measures consist of minimizing effects on roosting bats and nesting birds in the area, through the use of deterrents to prevent nesting inside the building, and scheduling any equipment being moved into the building outside of the breeding bird and roosting bat windows (April 1 to September 30). Given the scope of the proposed work, there are predicted to be minimal environmental, socio-economic, and human health implications.

1.0 INTRODUCTION, BACKGROUND, AND STUDY OBJECTIVE

WestRock Company of Canada Corp. (Client) requested Pinchin Ltd. (Pinchin) to prepare this Development Environmental Assessment (EA) Report for the subject property, located at 1360 Inkster Boulevard, Winnipeg, Ontario (Site), pursuant to an *Environmental Act* Proposal (EAP) application. This technical letter describes the EA undertaken and Client compliance in accordance with relevant federal and provincial legislation and policies. The Site is currently developed with an industrial building and associated parking lots and access routes. The Site and its immediately surrounding area extending outward 120 m, as the identified Study Area for this EIS, is depicted on Figure 2 in **Appendix A**. Based on information provided, the facility manufactures corrugated paperboard containers. Processes include primarily of corrugating paper into desired sizes, converting the cut and trimmed paper into the necessary tabs, then folding and printing with water-based inks. Additionally, the facility has a scrap paper handling system. The Client intends to bring a flexographic press (BOBST 3-colour machine 1228).

This EEP report was prepared to: identify key natural heritage features present on, or immediately adjacent to, the Site and characterize their ecological functions; identify any species at risk on or near the

Site; evaluate potential environmental effects of the development proposal on the natural features that might reasonably be expected; and provide recommendations of mitigation measures to avoid or otherwise mitigate potential impacts.

2.0 STUDY METHODOLOGY

2.1 Background Review

Pinchin conducted a desktop background review of available information sources relating to the Study Area prior to a site reconnaissance. Included in the review were natural heritage features present on the Site and in the surrounding area, historical species occurrences available from the Manitoba Conservation Data Centre existing wildlife data records, Species of Conservation Concern lists, and other relevant information. Pinchin identified natural heritage features with potential to be present on the Study Area through the following information sources:

- Assessment of habitat shown on aerial photographs and online mapping:
 - Land Cover Classes for Manitoba (Manitoba, 2006); and
 - Google Earth.
- Review of historical occurrence records for Species at Risk within or adjacent to the Study Area:
 - Manitoba Conservation Data Center (Manitoba, 2024);
 - Atlas of the Breeding Birds of Manitoba (Birds Canada, 2024);
 - HerpAtlas of Manitoba (HerpAtlas, 2024);
 - NatureServe Explorer Pro Biodiversity (NatureServe, 2024);
 - Species and Ecosystem at Risk List (Manitoba, 2024); and
 - Provincial and federal assessments, recovery strategies, and management plans.

2.2 Field Assessment

2.2.1 Species at Risk

The *Manitoba Endangered Species and Ecosystems Act 2018* offers protection for species and ecosystems classified as endangered, threatened, or of special concern under the provincial Species at Risk list. The Act safeguards these species from harm, harassment, or capture, ensuring their survival and recovery. Additionally, it provides protection to critical habitats essential for the conservation of these species.

Critical habitat includes areas necessary for the species' reproduction, nesting, feeding, migration, or other life processes, as well as any other habitat prescribed by regulations. The species at risk (SAR)

screening is required to also be compliant with the federal *Species at Risk Act* (2018) and *Migratory Birds Convention Act* (1994).

Pinchin completed a desktop background review of the Site to determine whether SAR have the potential to be found within the Site and Study Area using the sources listed in section 2.1. Pinchin qualitatively assessed the likelihood of occurrence of a SAR, based on the ability of the habitat to meet one or more life requisites for each SAR identified during the desktop assessment. A ranking of no suitable habitat indicates that no species or their habitat was identified on the Site or Study Area. Moderate probability indicates more potential for the species to occur, as suitable habitat appeared to be present in the area, but no occurrence of the species was observed. If habitat suitable for a SAR was identified, additional survey effort was applied in that area. All suitability ratings were updated based on the results of the field survey.

2.2.2 Land Cover Survey

Plant communities on the Site and Study Area were first delineated at a desktop level using high level resolution aerial imagery. Specifically, Pinchin referred to the Land Use Classification (LUC) (Province of Manitoba, 2006) to depict the land uses prior to heading to the Site. Communities on the Site were then ground-truthed in the field using the provincial land classification system. LUC and botanical inventories were carried out by systematically traversing the Site and Study Area for a throughout survey of vegetation communities, with specific attention to their structure, species composition, habitat characteristics, and supplemented that information with floristic surveys at the time of the visit. Species names generally follow the nomenclature of Flora Ontario (Newmaster and Ragupathy, 2012) and the NHIC.

2.2.3 Incidental Wildlife Observations

Wildlife was surveyed as part of general wildlife surveys during the field assessment. These surveys involved general coverage recording all species observations and signs, including tracks and trails, scat, burrows, dens, browse, and vocalizations. Wildlife surveys were done during the coincident surveys for vegetation communities and vascular plants.

3.0 DESCRIPTION OF EXISTING ENVIRONMENT AND POTENTIAL PROJECT EFFECTS

3.1 Regional Setting, Landforms, Physiography, and Geology

The Site in Winnipeg, Manitoba, is bounded by Inkster Boulevard to the northeast, Milner Street to the northwest, railway tracks to the southeast, and industrial buildings to the southwest. Site topography slopes slightly higher toward the eastern portion. The historical and present land use within the Study Area has been primarily industrial.

The Site is situated in the Prairie Ecozone, specifically the Lake Manitoba Plain (Manitoba, 2013). The Ontario Geological Survey classifies the bedrock of the Site as being Paleozoic in origin, consisting of

dimension stone (Bannatyne, 2006). No hills, valleys, lakes, rivers, shorelines, or important terrain features are found within the Site or Study Area.

3.2 Climate and Meteorological Conditions

The local Winnipeg climate and meteorological conditions were reviewed based on climate diagrams for 30 years of hourly weather model simulations. The highest mean daily maximum temperatures occur in July, with a mean daily maximum temperature of 26°C, and the lowest mean daily minimum temperature occurs in January with a daily minimum temperature of -20°C.

Regarding cloud cover and precipitation, the month with the most partly cloudy days is August (24.1 days), the most overcast month is December (10.4 days), and the month with the most precipitation is June (17 precipitation days).

Figure 4 in **Appendix A** provides a Wind Rose for Winnipeg, which indicates the predominant wind directions and windspeeds (based on the direction the wind is blowing from). This figure shows that the winds are predominantly blowing from either the North or the South, with minimal winds blowing from westerly or easterly directions.

3.3 Waterbodies, Aquatic Environment, and Groundwater Conditions

Based on aerial imagery, there are no surface aquatic features on the Site or within 120 m of the Site. Therefore, assessment of the aquatic environment was not applicable to this investigation.

According to Wang et al. (2008), much of southeastern Manitoba is underlain by two major bedrock aquifers. The Carbonate aquifer, near the surface, is formed by Ordovician Period limestone and dolostone. Underlying that formation is the basal Winnipeg aquifer that consists of interlayered sandstone and shale. Recharge of those aquifers originates primarily from a large glacial moraine that forms a local topographic high.

Given the anticipated scope of the Project, Pinchin anticipates no potential for aspects of the work to affect groundwater conditions on the Site. Accordingly, a detailed investigation of groundwater hydrology was not warranted as part of this EA.

3.4 Field Assessment of the Terrestrial Environment

3.4.1 Land Cover Survey

Pinchin conducted our field assessment on April 10, 2024, to observe natural heritage features present on, and adjacent to, the Site. During the assessment, the weather was 12°C and partially cloudy. In total, one land cover type was identified within the Study Area: Cultural Feature.

The land cover and the LUC layer for the Study Area are shown on Figure 2 in **Appendix A**. Selected site photographs as described below are provided for reference in **Appendix B**.

Cultural Feature: This community covers the entire Site and consists of an industrial building with associated parking and access routes. A manicured lawn with planted ornamental trees is found along the northern portion of the Site.

3.4.2 Species at Risk Screening

During a comprehensive SAR screening, Pinchin identified 14 SARs as having potential to inhabit the Study Area, based on our background review of the Manitoba Conservation Data Center records and other available data sources for the Study Area surrounding the Site. Details about the 14 species screened, including the listing status, last observed date, sources used to identify their presence in the Study Area, and their habitat requirements, are provided in the Species at Risk Screening Table in **Appendix C**. Based on the background review and field assessment, Pinchin determined that habitat suitable for 8 of the 14 SARs was found within the Study Area.

Two bat species were considered to have moderate probability, as suitable habitat occurs on the Site. Those species are the Little Brown Bat (*Myotis lucifuga*) and Northern Long-eared Myotis (*Myotis septentrionalis*). Those species can form summer colonies within attics, abandoned building and barns, and within established deciduous forests with loose bark and tree cavities. The building is currently occupied and heavily disturbed, however. Based on fieldwork results, the Site and surrounding area has the potential to provide habitat for those bat species. Potential mitigation measures to protect mammalian SAR species on the Site are discussed in Section 5.0 below.

3.4.3 Incidental Wildlife Observations

The following incidental wildlife were observed based on their sound, sight, scat, or a combination during the subsequent field surveys for vegetation on the Site and within the Study Area: Ring-billed Gull (*Larus delawarensis*) and Rock Pigeon (*Columba livia*). Both bird species observed are common in the industrial environment and have adapted to various habitats they share with humans.

3.5 Human Cultural and Socioeconomic Environment

3.5.1 Indigenous Communities

Indigenous communities within the study area were identified from Indigenous Services Canada (2014) online information. The Site is located within Treaty 1 lands, which include the following First Nations communities:

- Brokenhead Ojibway First Nation: Located 64 kilometres (km) north of Winnipeg.
- Fort Alexander First Nation (Sagkeeng): Situated 122 km northeast of Winnipeg.
- Long Plain First Nation: Located 14 km southwest of Portage la Prairie along the Assiniboine River, approximately 98 km west of Winnipeg.
- Peguis First Nation: Located 170 km north of Winnipeg.

- Roseau River Anishinabe First Nation: Situated 92 km south of Winnipeg and about 20 km north of the Canada-United States of America border.
- Sandy Bay First Nation: Located on the west shore of Lake Manitoba, approximately 165 km northwest of Winnipeg.
- Swan Lake First Nation: Positioned about 135 km southeast of Brandon and 175 km southwest of Winnipeg.

Based on the scope of the work, there is anticipated to be no impact on indigenous resources on the Site.

3.5.2 *Heritage Resources*

Based on the scope of the work, no impact on heritage or archaeological resources on the Site are anticipated. The Site has a long history of industrial use and, as no intrusive works are part of the Project, there is no potential for disturbance of previously undiscovered artefacts.

3.5.3 *Protected Areas*

Protected areas within the Study Area were searched for by using the Manitoba Protected Areas Initiative (2013). There are no identified networks of protected or conserved areas, nor any areas of special interest, on the Site or within the Study Area.

4.0 **MITIGATION MEASURES**

Given that no development or demolition is planned as part of this Project, bringing in equipment will require minimal mitigation measures. Based on the proposed scope of work, it is anticipated that there is likely not need for any specific mitigation measures for the conservation and protection of indigenous communities, natural features, or heritage resources. Standard mitigation measures are to be followed when the new machinery is brought to Site to avoid potential impacts on SAR. To minimize effects on roosting bats and nesting birds in the area, use deterrents to prevent nesting inside the building, and schedule any equipment being moved into the building outside of the breeding bird and roosting bat windows (April 1 to September 30).

5.0 **CONCLUSION AND RECOMMENDATIONS**

Pinchin was contracted to prepare this EA Report for the Site located at 1360 Inkster Boulevard, Winnipeg, Manitoba, in support of an *Environmental Act* Proposal application. Based on the scope of this project, Pinchin believes that the proposed installation of equipment is unlikely to have significant adverse effects on the biophysical environment or Indigenous communities.



6.0 TERMS AND LIMITATIONS

The enclosed Existing Environment Report has been prepared to summarize the description of the existing environment, and mitigation actions taken on Site for the project located at 1360 Inkster Boulevard, Winnipeg, Manitoba.

Conclusions derived are specific to the immediate area of study and cannot be extrapolated extensively away from the study location. Field surveys have been analyzed for the specific features within a limited time frame that are expected to be present at the Site, and the absence of information relating to a specific feature does not indicate that it is not present. No environmental assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions on a property.

Performance of this existing environment report to the standards established by Pinchin is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions on the Site and recognizes reasonable limits on time and cost.

This work was performed subject to the Terms and Limitations presented or referenced within the duly authorized proposal for this project. Information provided by Pinchin is intended for Client and regulatory agency use only.

Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law.

Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

7.0 REFERENCES

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12. Wang, J.R., R.N. Betcher, and G.C. Phipps. Groundwater resource evaluation in southeastern Manitoba. In: GeoEdmonton '08, A Heritage of Innovation, pp. 1327-1334



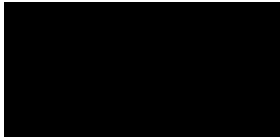
8.0 CLOSURE

Should you have any questions or concerns regarding the contents of this letter, please do not hesitate to contact the undersigned.

Sincerely,

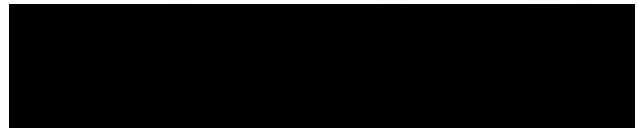
Pinchin Ltd.

Prepared by:



Kennedy Hanczyk, B.Sc.
Project Biologist, Environmental Science

Reviewed by:



James Neville, BSc, MEDes, RPBio, EP, AP, PMP
Senior Technical Advisor

Encl.: Appendix A – Site Figures
 Appendix B – Selected Site Photographs
 Appendix C – Species at Risk Screening Table

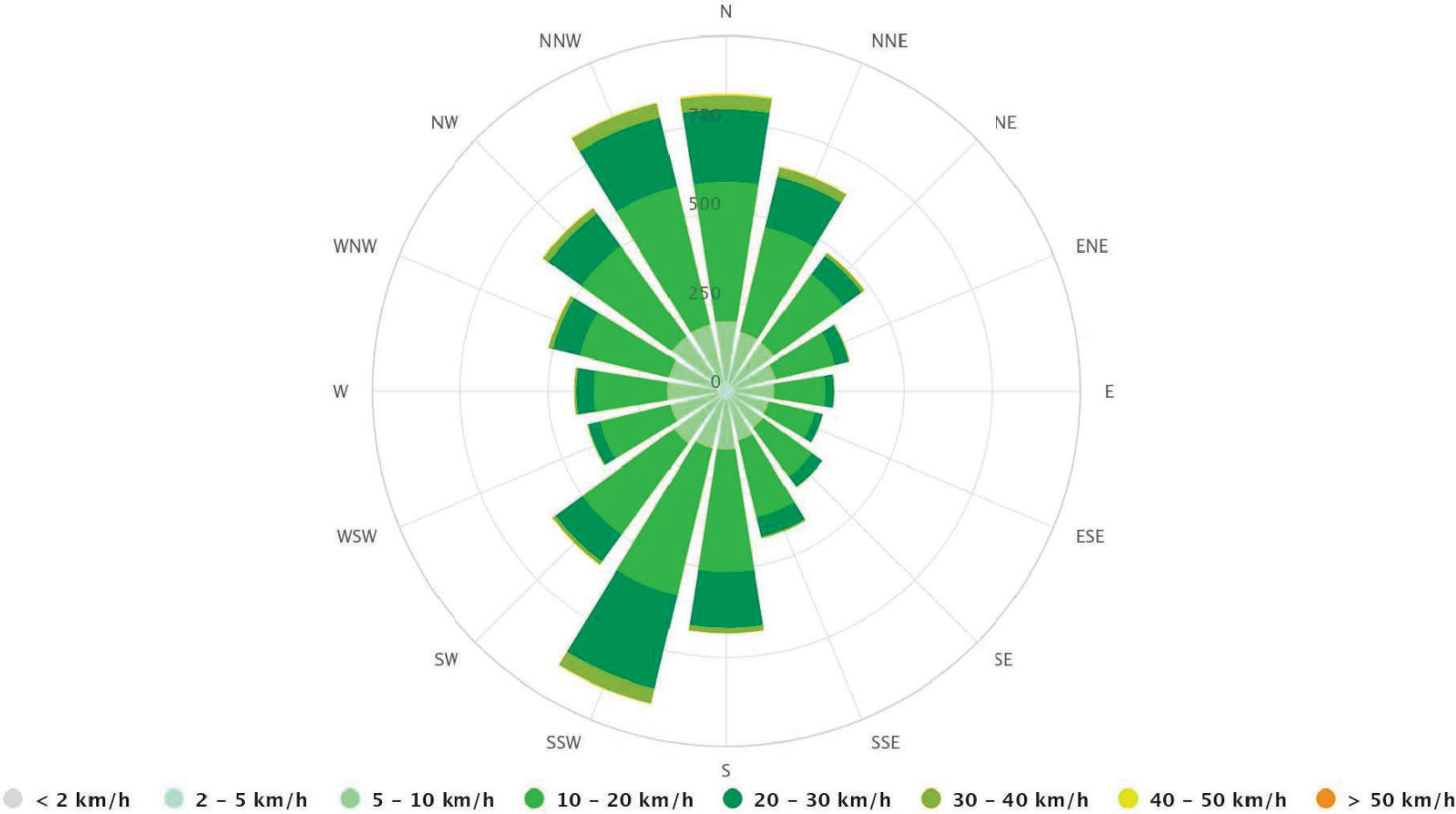
328461 DRAFT Existing Env Conditions 1360 Inkster Blvd Winnipeg MB Oct 11 2024

Template: Master Environmental Impact Statement Proposal, ENS, October 29, 2018

APPENDIX A
Site Figures

Winnipeg

49.88°N, 97.15°W (245 m asl).
Model: ERA5T.



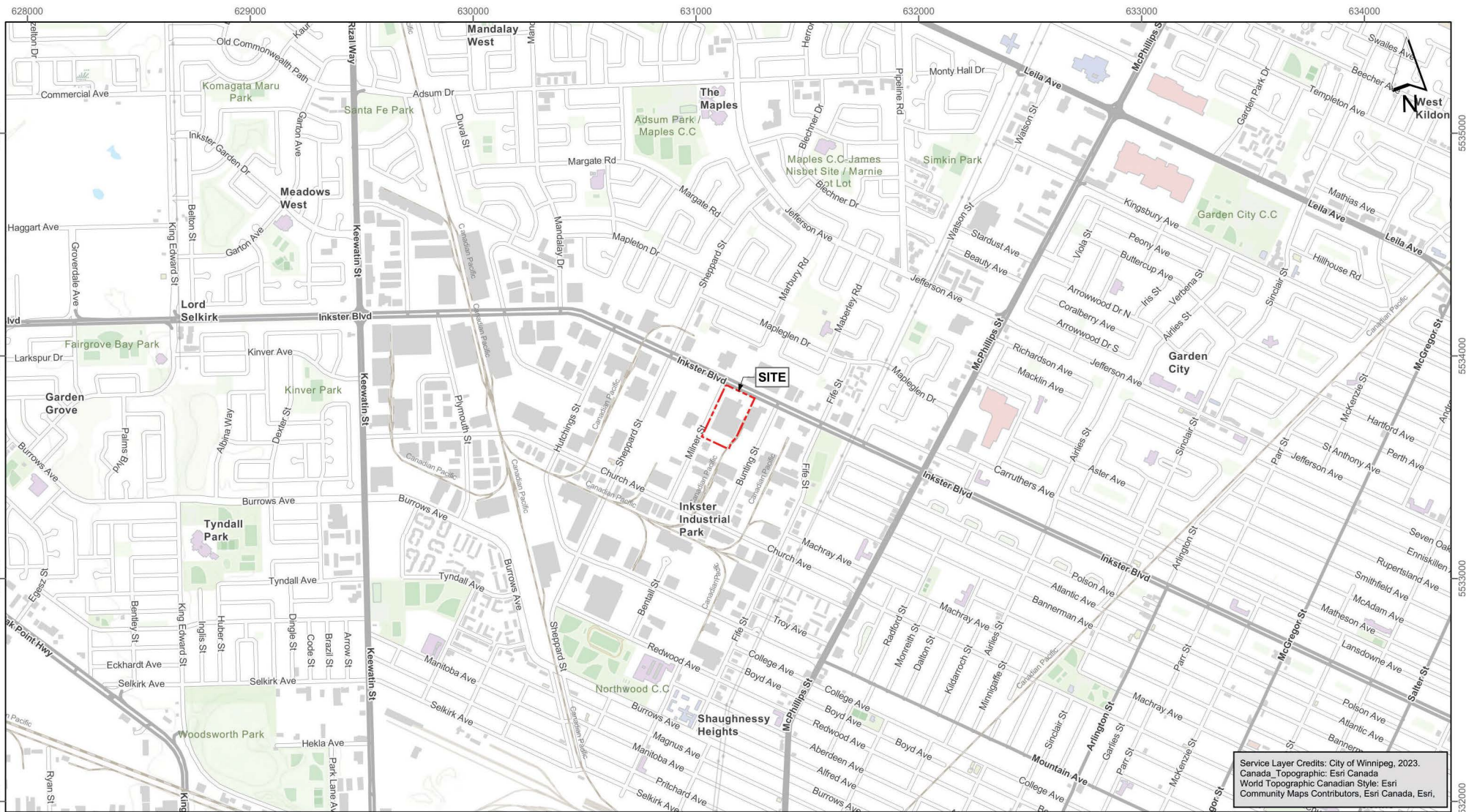
https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/winnipeg_canada_6183235

PROJECT NAME:
SMURFIT WESTROCK
1360 INKSTER BLVD., WINNIPEG

DRAWING NAME:
Wind Rose (Winds blowing from)

SCALE:	AS SHOWN	05.		
PROJECT NO:	328461	04.		
DRAWING NO:	4	03.		
DRAWN BY:	AXM	02.		
		01.	EAP APPLICATION	10-01-2024
		NO.	REVISION	DATE





Service Layer Credits: City of Winnipeg, 2023.
Canada, Topographic: Esri Canada
World Topographic Canadian Style: Esri
Community Maps Contributors, Esri Canada, Esri,



PROJECT NAME: Environmental Impact Study
CLIENT NAME: WestRock Company of Canada Corp.
PROJECT LOCATION: 1360 Inkster Boulevard, Winnipeg, Manitoba
FIGURE NAME: Site Location

PROJECT NO. 328461.001
DATE: February 2024
SCALE: 1:16,000
FIGURE NO. 1

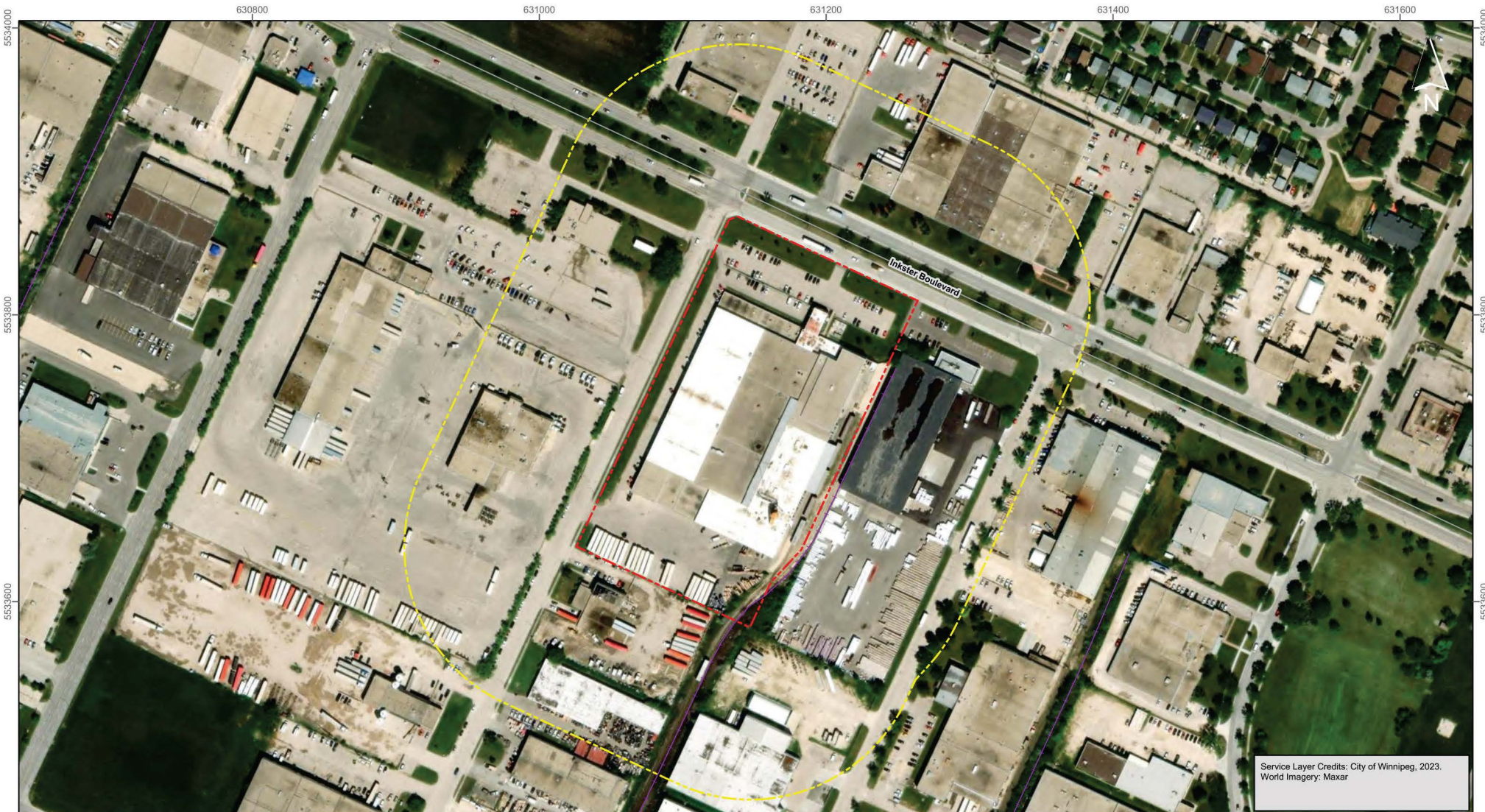
LEGEND
 Site Boundary

NOTES
1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
2. Use dimensions as shown, do not scale drawing.
3. This map is not to be used for legal purposes.

0 125 250 500
Metres

Coordinate System: NAD 1983 CSRS UTM Zone 14N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: EO REVISION: 0



Service Layer Credits: City of Winnipeg, 2023.
World Imagery: Maxar



PROJECT NAME: Environmental Impact Study
CLIENT NAME: WestRock Company of Canada Corp.
PROJECT LOCATION: 1360 Inkster Boulevard, Winnipeg, Manitoba
FIGURE NAME: Study Area

PROJECT NO. 328461.001
DATE: February 2024
SCALE: 1:2,500
FIGURE NO. 2

- LEGEND**
- Site Boundary
 - Study Area (120 m)
 - Roadway
 - Railway Line

- NOTES**
1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only.
 2. Use dimensions as shown, do not scale drawing.
 3. This map is not to be used for legal purposes.

0 20 40 80 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 14N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: EO REVISION: 0



Service Layer Credits: Manitoba Land Initiative/
Government of Manitoba, 2005. City of Winnipeg,
2023. World Imagery: Maxar

	PROJECT NAME: Environmental Impact Study	PROJECT NO. 328461.001	LEGEND  Site Boundary  Roadway  Railway Line Land Cover Classification  Cultural Features	NOTES 1. All features and measurements are approximate and subject to field verification. This map is for planning purposes only. 2. Use dimensions as shown, do not scale drawing. 3. This map is not to be used for legal purposes.	 0 10 20 40 Metres Coordinate System: NAD 1983 CSRS UTM Zone 14N Projection: Transverse Mercator Datum: North American 1983 CSRS
	CLIENT NAME: WestRock Company of Canada Corp.	DATE: Sept. 2024			
	PROJECT LOCATION: 1360 Inkster Boulevard, Winnipeg, Manitoba	SCALE: 1:1,448			
FIGURE NAME: Land Cover Classification		FIGURE NO. 3			DRAWN BY: MH REVIEWED BY: KH REVISION: 0

APPENDIX B
Selected Site Photographs



Selected Site Photographs

(All photos taken on April 10, 2024)



Photo 1. View of the Cultural Feature on the Site.

APPENDIX C
Species at Risk Screening Table

Table 1. Species at Risk Screening for the Site

Type	Common Name	Scientific Name	SEEA	COEWMC Status	Last Obs Date	Background Information Source						Notes on Preferred Habitat ¹	Suitable Habitat on Site	Confirmed Observation on Site
							COSEWIC Recovery Strategy	Manitoba Conservation Data Centre	INaturalist (Nat 2024)	Atlas of the Breeding Bird of Manitoba (MBA, 2011)	HerpAtlas (2024)	NatureServe Explorer Pro (NatureServe, 2024)	Aquatic Species at Risk Map (DFO, 2023)	

¹ Naturalist. 2023. INaturalist Manitoba. Retrieved on February 7, 2024 from <https://www.inaturalist.org/place/1941404>