



ATTACHMENT 54

North 40 Landfill and Waste Transfer Station Environmental Management Plan



DILLON
CONSULTING

CITY OF IQALUIT

Environmental Management Plan

Landfill and Waste Transfer Station

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1.0 Introduction

1.1 Background

The City of Iqaluit (City) is in the process of implementing its Solid Waste Management Strategy to service their near and long term (75 years) municipal solid waste disposal requirements. Founded on a previously-completed conceptual design and facility siting exercise, key elements of the project include a solid waste transfer station (WTS) within the immediate urban area of the City where residential and commercial waste will be hauled to, processed, and compacted in bales or the case of waste wood and cardboard, shredded for use as a fuel source for an on-site biomass boiler. Tires, metal and select construction and demolition (C&D) wastes will also be shredded and or baled for landfilling or transported south for recycling. The resulting solid waste bales and possibly a smaller amount of unbaled construction and demolition waste will be trucked to an engineered balefill landfill site located approximately six kilometres from the WTS. The vehicles transferring the waste bales will access the road leading to the landfill site from the waste transfer station to avoid having the transfer vehicle travel through the City.

Other planned features of the WTS include a public drop off area for Household Hazardous Wastes (HHW) and a vehicle logger/compactor unit; in both instances allowing for the preparation of waste materials before shipping to approved management facilities in the south.

The access road that will be used to reach the new landfill site has been designed by EXP Services Inc. who will also be providing Construction Contract Administration services for the construction of the road. It is anticipated that the construction of the road will be included in the new landfill and waste transfer station contractor's scope of work.

To address their objectives, and following a competitive proposal process, the City engaged Dillon Consulting Limited (Dillon) to provide design and construction contract administration services to support the establishment of the transfer station/baling facility and the engineered landfill site. The engineered landfill will be designed for 75 years of operation but for the construction/build portion of the project only the first stage of the Landfill (Stage 1 Operational Landfill) will be constructed (e.g., Cell 1 and ancillary components to meet requirements for an initial five years of operation).

Development of the proposed facilities is scheduled to commence in 2023, with facility commissioning occurring in 2024/2025.

1.2 Site Description

This Environmental Management Plan (EMP) applies to the Iqaluit Waste Management Facility (IWWMF), including the Waste Transfer Station (WTS) and Landfill at Iqaluit, Nunavut. Iqaluit is located at the south

end of Baffin Island, on Frobisher Bay at 64° 44' N latitude and 68° 31' E longitude. Access to the City is limited, with the only year-round access provided by commercial aircraft; sealift can also be utilized during the summer months.

The Landfill site is located approximately six kilometres northwest of the Iqaluit and occupies an approximate area of 22 ha. The WTS is located at the end of Kakivak Court. The site occupies an area of approximately 2.4 ha and includes a fenced yard, transfer station, scale house, site office and exterior storage areas.

The overall site locations are presented in Figure 1-1, with the layouts for the WTS and the Landfill being provided on Figures 1-2 and 1-3, respectively.

1.3 Purpose of the Environmental Management Plan

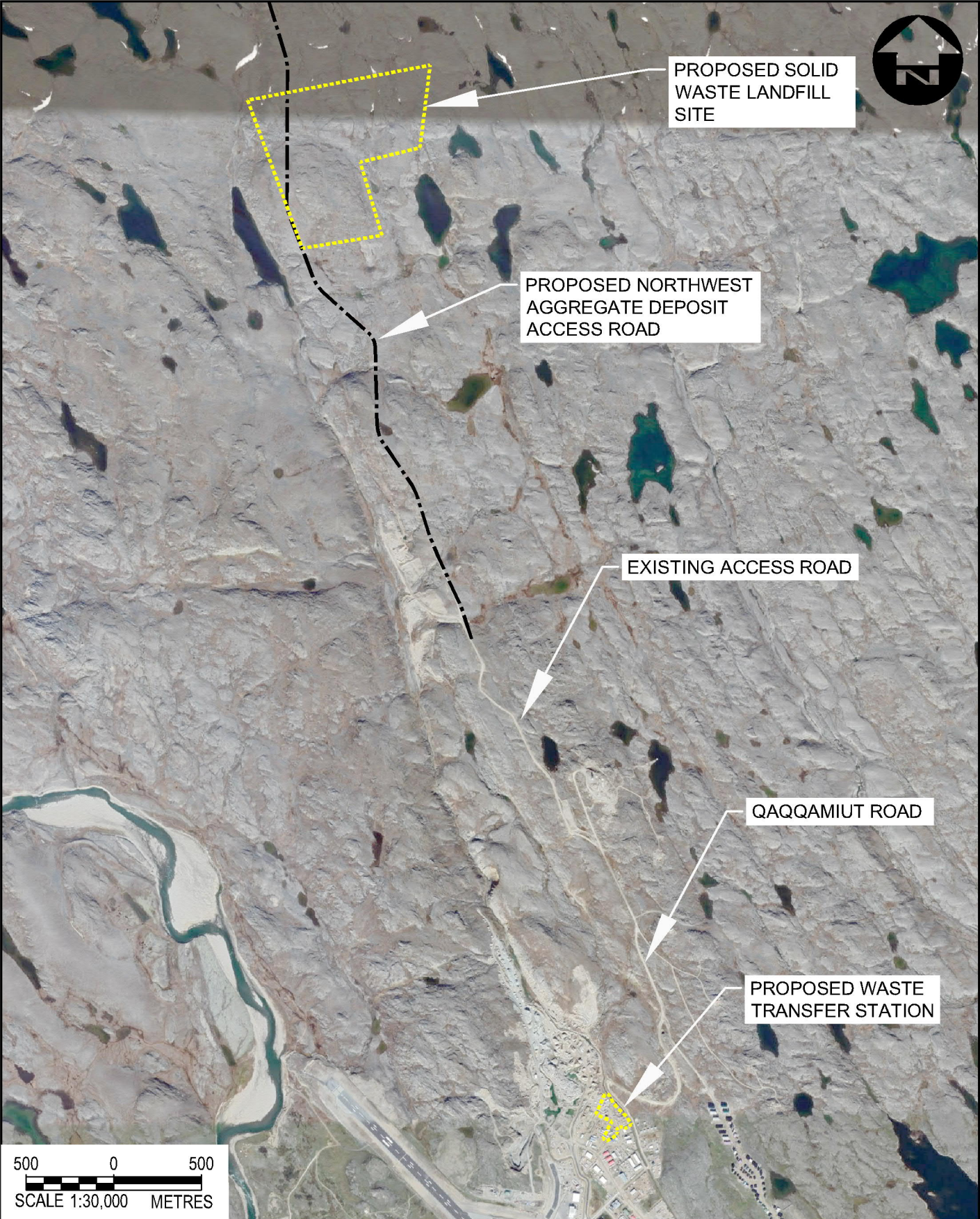
This EMP provides a framework by which to assess, track and document the project's environmental compliance requirements and provides a basis for the systematic management of environmental risks. The EMP is designed to implement, and form a basis for, the environmental protection and mitigation measures described in the Environmental Protection Plans (EPPs) for **two distinct phases** of the overall project:

- a) Construction Phase; and
- b) Operations, Closure and Post Closure Phase.

The EMP acts as the overarching document for both of the EPPs (and the supporting Emergency Response Plan (ERP) by outlining the roles and responsibilities for project personnel for both documents and describes the legislation governing these documents. The EPPs describe the environmental protection measures to be implemented throughout the project (beginning with construction and extending through to post closure) and act as a resource for the City and its contractors to avoid or mitigate potential adverse environmental effects to receptors. With a focus on the Operational Phase of the project, the ERP provides guidance to project personnel for responding to emergencies, and address a range of aspects associated with emergency planning and response.

Overall, the EMP describes:

- The City's environmental commitments to regulatory agencies, stakeholders, the natural environment and the general public;
- Roles and responsibilities of project personnel regarding environmental protection and mitigation, inspection, and reporting during the overall life of the Landfill and WTS;
- Environmental protection and mitigation measures to be implemented during the overall life of the two waste management facilities to achieve compliance with regulatory requirements; and
- Procedures to deal with environmental contingencies that may arise during construction, operations, closure and post closure activities.



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CONSULTING

DATE **AUGUST 2022**

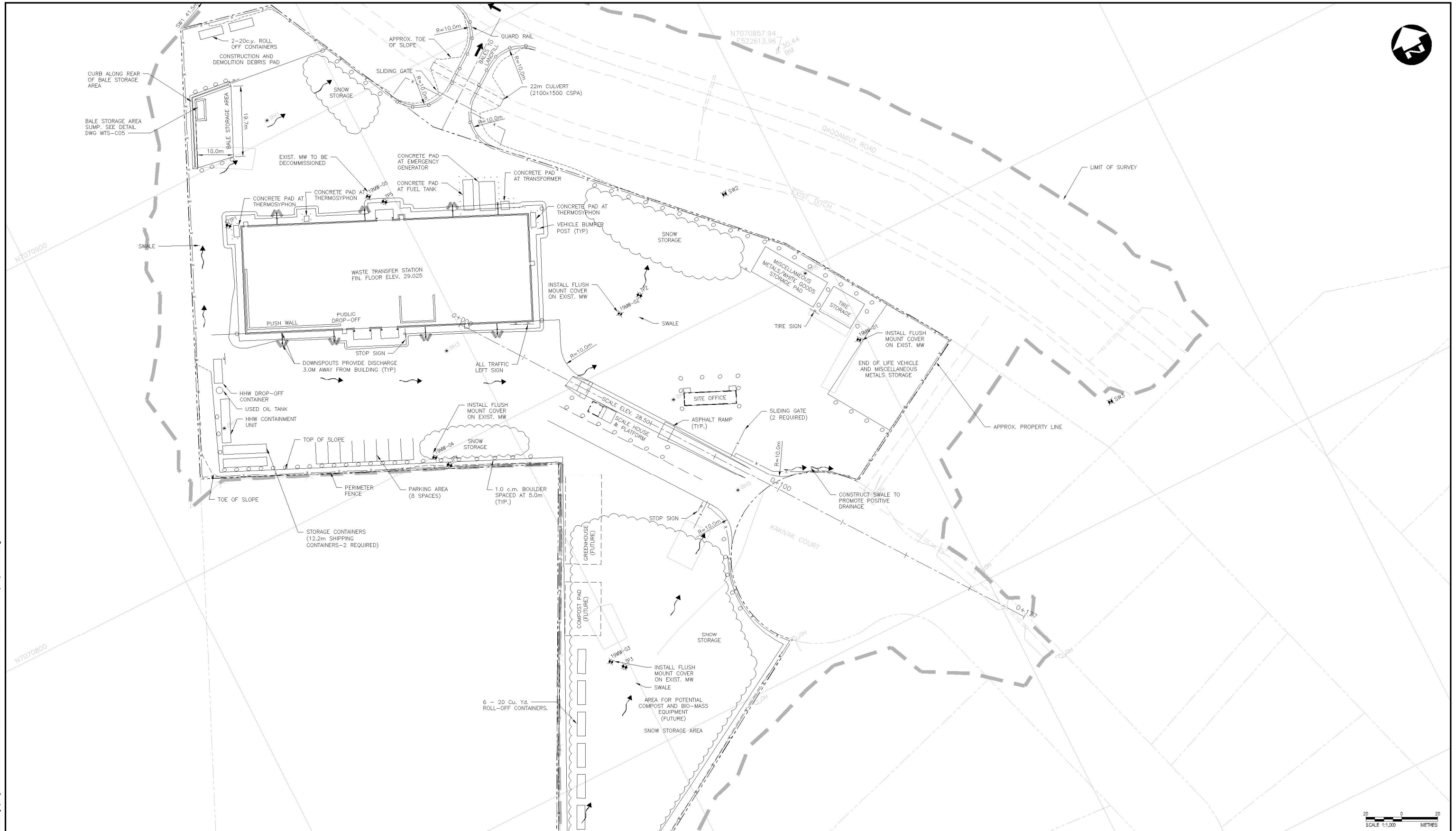
PROJECT
**IQUALUIT LANDFILL & WASTE TRANSFER STATION
ENVIRONMENTAL MANAGEMENT PLAN**



TITLE
SITE LOCATIONS

PROJECT NO.
19-9543

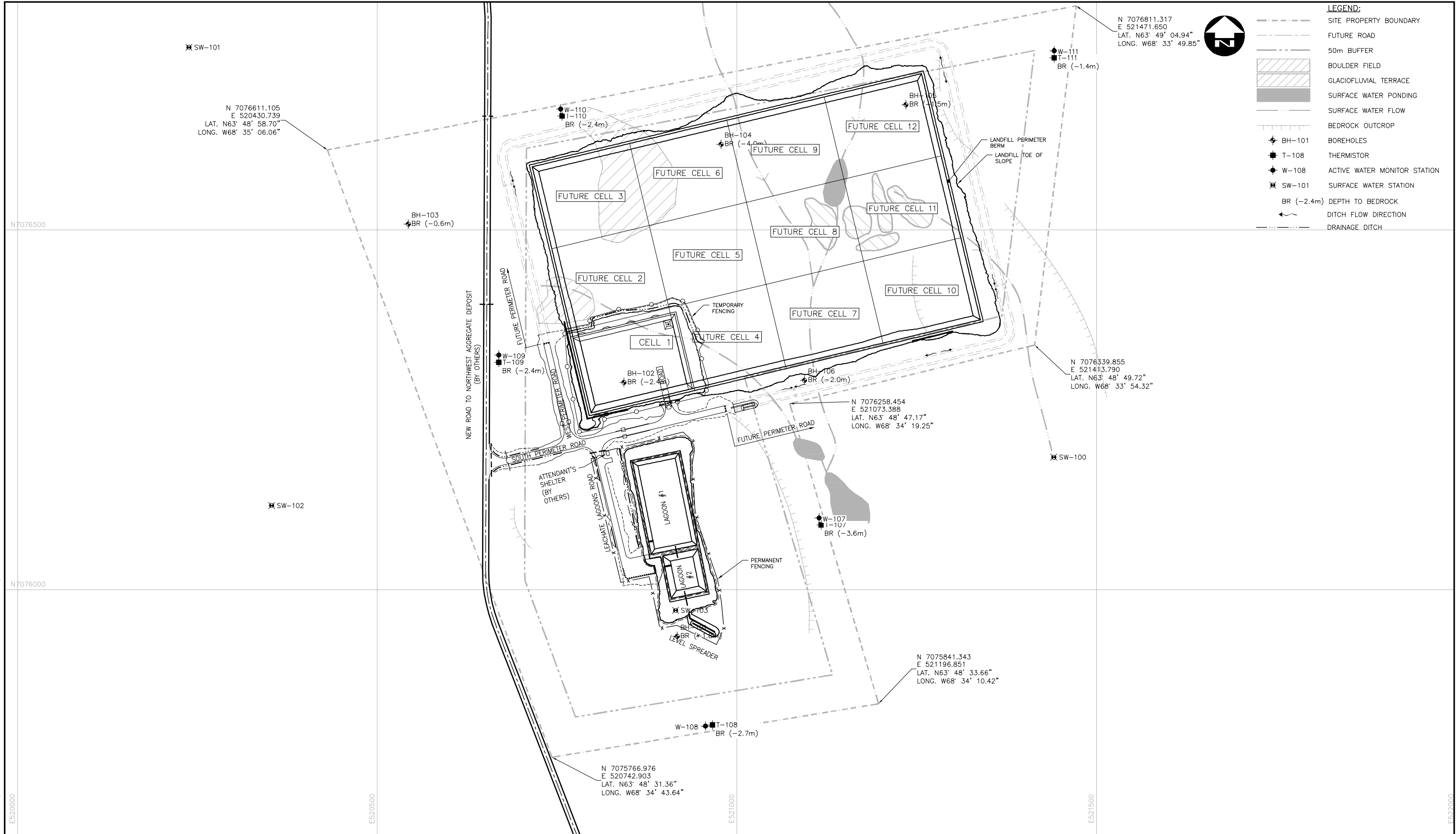
FIGURE NO.
1-1



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		PROJECT IQUALUIT LANDFILL & WASTE TRANSFER STATION ENVIRONMENTAL MANAGEMENT PLAN	PROJECT NO. 19-9543
		TITLE WTS SITE LAYOUT PLAN	FIGURE NO. 1-2
DATE AUGUST 2022			

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		PROJECT IQALUIT LANDFILL & WASTE TRANSFER STATION ENVIRONMENTAL MANAGEMENT PLAN	PROJECT NO. 19-9543
		TITLE LANDFILL LAYOUT PLAN	FIGURE NO. 1-3
DATE AUGUST 2022			

The EMP describes the environmental protection procedures to be implemented for each of the environmental features/parameters identified in the two EPPs and associated correspondences for this project to maintain environmental compliance by the Operator and its contractors. The EMP will serve as a procedural document to support the objective that all environmental compliance requirements are met, tracked and documented. The EMP will also serve as an educational tool for the orientation and training of project personnel.

2.0 Project Personnel, Roles and Responsibilities

The following sections of the EMP outline the roles and responsibilities of the City and its assigned contractors. These responsibilities include reporting, notifications, guidelines on documentation and incident reporting.

It is the responsibility of project personnel to ensure that the environmental commitments outlined in this EMP, as well as the Environmental Impact Assessment (EIA) and associated follow-up correspondence, are adhered to.

The EMP will be incorporated into the orientation and training exercise for applicable on-site personnel working on the project. A copy of this EMP will be available at a location designated on the site at all times during both the construction and operations, closure and post-closure phases. Project personnel working on the site are to be aware of the existence of this EMP, its requirements and where it is located on-site.

The ERP portion of the EMP contains vital information on project personnel, roles and responsibilities, and procedures involved in emergencies at the Landfill and WTS. The ERP must be reviewed by all project personnel before commencing the Operations Phase of the project, as well as at regular intervals during operation (as defined in the ERP document).

2.1 Owner – City of Iqaluit

As the Operator of the Landfill and WTS, the City will be responsible for ensuring its third party representative and the Contractor's Site Supervisor are made aware of the EMP and its requirements, and that the commitments contained therein are implemented. The City of Iqaluit is responsible for ensuring that construction requirements, and associated regulations, are followed. The City of Iqaluit will also provide guidance and technical support to on-site personnel with respect to environmental compliance.

As Owner, the City of Iqaluit's EMP obligations will extend through both the Construction and Operations, Closure and Post Closure phases of the overall project.

2.2 Construction Phase Owner's Representative – Dillon Consulting Limited

During the Construction Phase, the Owner's representative will be a third party consultant (Dillon Consulting Limited) responsible for ensuring the EMP is implemented in accordance with procedures outlined in this document and compliance obligations are satisfied. The Owner's representative will be responsible for observing the activities of the Contractor to assess whether required environmental

protection and mitigation measures are implemented. The Owner’s representative will ensure that reporting and documentation procedures and requirements stipulated in the EMP are completed.

The Owner’s representative will, at a minimum:

- Serve as an independent (third party); and
- Provide technical services associated with the completion of the project.

2.3 Construction Phase Contractor’s Site Supervisor

The Contractor’s Site Supervisor will ensure that the requirements of the Landfill and WTS EMP, applicable to its work, are implemented to ensure environmental compliance. The Contractor will also ensure that a separate ERP for work associated with the Construction Phase of the project is completed and approved before construction operations commence. In the event of a spill during the Construction Phase of the project, the Site Supervisor will ensure that the City and Environmental Protection (Government of Nunavut) are made aware of the spill and any clean-up measures are taken.

2.4 Contact Information

Appendix A provides contact information for key project contacts as of August 2022. This listing is to be reviewed and revised regularly, acknowledging City personnel changes as well as future construction projects.

2.5 Documentation Procedures

Continuous and effective communication and documentation is a key component of the environmental protection and mitigation process. Consistent with regulatory requirements, it will serve to support the reliable dissemination of pertinent documents and manuals for project personnel during the completion of site activities.

During the initial construction phase of the project (as well as during future contractor construction activities at either the Landfill or WTS), the Owner’s representative and Contractor’s Site Supervisor will maintain project documents and updates/revisions of documents (including this EMP), drawings and manuals, permits, and approvals at a designated location on the project site. During Operational, Closure and Post Closure activities (e.g., activities led by the City of Iqaluit), the Owner will be responsible for addressing the requirements of the EMP. Applicable project personnel will be advised of the location(s) of these documents and will be required to comply with the practices and procedures outlined therein.

3.0 Regulatory Requirements

The EMP has been developed in consideration of relevant legislative requirements. The Owner's representative and the Contractor will ensure that work associated with the project is undertaken following the items outlined in the scope of work for the project. The following legislation applies to the Landfill and WTS development for the City.

3.1 Federal Legislation

Fisheries Act

This Act prohibits the unregulated deposit of a deleterious substance into waters frequented by fish. It protects both the marine environment and freshwater features.

Canadian Environmental Protection Act (CEPA)

Through this Act, any activity that may alter, disrupt or destroy fish habitat, as defined in the Fisheries Act, may trigger a federal environmental assessment under CEPA. Relevant Regulations under this Act include the PCB Regulations (2008), which provide guidance for disposal of polychlorinated biphenyls (PCBs) and/or PCB waste; the Ozone-Depleting Substances and Halocarbon Alternatives Regulations (ODSHAR), which was released in 2016, and provides guidance and regulations surrounding manufacturing, import, export, use, sale, and transfer of these substances.

Migratory Birds Convention Act

This Act protects birds crossing provincial and international borders, working with other countries to ensure safe flyways for migratory birds.

Transportation of Dangerous Goods Act

This Act creates regulations to monitor and ensure safe practices for the handling, storage, and transportation of designated dangerous goods.

Workplace Hazardous Materials Information System Act (WHMIS)

This Act regulates all WHMIS requirements. Any personnel working with or near hazardous materials shall have WHMIS training.

3.2 Territorial Legislation

Nunavut Wildlife Act

This Act protects all wildlife in Nunavut and requires an assessment to ensure this project will not harm sensitive species within Nunavut.

Nunavut Environmental Protection Act

Among other matters, this Act ensures that environmental assessments are completed before construction related to new projects in Nunavut can commence. Contravention of the Act could lead to fines and/or imprisonment.

Nunavut Planning and Project Assessment Act

This Act regulates the planning of new projects and the processes required for project assessment. It promotes one assessment for one project.

Nunavut Waters and Nunavut Surface Rights Tribunal Act

This Act governs land use and permitting for new projects and developments within Nunavut.

Nunavut Safety Act

This Act ensures safe work practices are in place and followed by all project personnel at work sites. Punishment of fines and/or imprisonment could be administered through the authority of this Act.

3.3 Municipal Legislation

No municipal legislation applicable to the proposed project activities or implementation of this EMP has been identified.

3.4 Permits and Approvals

Iqaluit Building Bylaw

Permits to construct buildings must be obtained from the Building Inspector within the City. If construction is not started within a year of permit approval, the permit becomes invalid.

4.0

Environmental Protection Plans

A separate plan has been prepared for both the Construction Phase and the Operations, Closure and Post Closure Phase of the project. These plans are included as Appendix B and Appendix C, respectively. The EPPs describe the environmental protection measures to be implemented for the various relevant environmental considerations, during each phase of the project. The EPP for each project phase acts as a resource for the City or its contractors to avoid or mitigate potential adverse environmental effects on receptors.

4.1

Construction Phase Outline

The Construction Phase EPP consists of the following information:

- Introduction:
 - Purpose of This Document
 - Regulatory Context
- Project Roles and Responsibilities
- Environmental Considerations:
 - Vegetation
 - Wetlands and Watercourses
 - Wildlife and Wildlife Habitat
 - Fish and Fish Habitat
 - Species at Risk or Species of Special Status
 - Heritage and Cultural Resources
- Environmental Protection Measures
- Monitoring and Inspection
- Contingency and Emergency Response Plan:
 - Spill Response Plan
 - Small Spills/Leaks
 - Large Spills/Leaks
 - Incidental Discovery of Sensitive or Protected Species Contingency Plan

4.2

Operations, Closure and Post Closure Phase Outline

The Operations, Closure and Post Closure Phase EPP consists of the following information:

- Introduction:
 - Purpose of This Document
 - Regulatory Context
- Project Roles and Responsibilities
- Environmental Considerations:
 - Species at Risk or Species of Special Status
- Environmental Protection Measures

- Monitoring and Inspection
- Contingency and Emergency Response Plan:
 - Spill Response Plan
 - Small Spills/Leaks
 - Large Spills/Leaks
 - Incidental Discovery of Sensitive or Protected Species Contingency Plan

Emergency Response Plan

The ERP has been included as Appendix D and provides guidance to Operations Phase project personnel for responding to an emergency.

The ERP consists of the following information:

- Introduction:
 - Scope of Plan
- Types of Emergencies Covered by Plan
- Emergency Response Coordinators:
 - Emergency Service Contacts
 - Notification Procedures
- On-Site Emergency Equipment
- Emergency Response Procedures:
 - Medical Emergencies
 - Vehicle Fires
 - Building Fires
 - Landfill Fires
 - Liquid/Chemical Spills
 - Gas Leaks/Suspicious Odours
 - Explosions
 - Extreme Weather Events
 - Power Outages
 - Dangerous Animal Encounters
 - Violent/Criminal Behaviour
- Evacuation Plan:
 - Evacuation Routes
- ERP Distribution and Updating
- Post Emergency Review and Plan Assessment
- Readiness Review:
 - Emergency Reporting
 - Simulation Exercises

Appendix A

Project Contacts List

**CITY OF IQALUIT – LANDFILL AND WASTE TRANSFER STATION
Project Contacts List**

CITY OF IQALUIT			
CONTACT	PAGER #	WORK #	CELL #
Dispatch	N/A	979-5650	-
Chief Administrative Officer (Amy Elgersma)	N/A	979-5667	222-3971
Director of Public Works (Simon Doiron)	N/A	979-5635	222-2965
Director of Engineering (Sumon Ghosh)	N/A	979-5636	222-2940
Operations Superintendent, Public Works (Joe Brown)	N/A	979-5637	222-0726
Manager of Engineering (Vacant)	-	-	-
Utilidor Manager	N/A	979-5632	222-2966
Utilidor On-Call	32	N/A	222-3243
Garage/Roads Foreman	N/A	979-5638	222-2949
Trucked Services Foreman	N/A	979-5612	222-2947
Owner's Third Party Representative - Dillon Consulting Limited (Scott Kyle)	-	(902) 450-5015 ext 5014	(902) 497-5218

EMERGENCY SERVICES		
CONTACT	WORK #	CELL #
Dispatch	979-5650	-
Duty Officer (Fire/Ambulance)	979-4422	-
Director of Emergency Services/Fire Chief (Stephen McGean, Acting)	979-5653	
Deputy Director of Emergency Services/Deputy Fire Chief	979-5657	
Chief Municipal Enforcement Officer	979-5670	222-5521
RCMP	979-0123	

GOVERNMENT RESOURCES- SPILL LINE

24-Hour Spill Line	Telephone #	(867) 920-8130
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EXTERNAL ASSISTANCE- GOVERNMENT RESOURCES	
DEPARTMENT	CONTACT #
Environmental Protection, Government of Nunavut	975-5900
Indian and Northern Affairs Canada, Nunavut District Manager	975-4295
Indian and Northern Affairs, Baffin Sub-District	975-4295
Environment and Climate Change Canada, Iqaluit	975-4636
Department of Fisheries and Oceans, Iqaluit	979-8000
Regional Public Health Officer, Government of Nunavut	979-7652

LOCAL CONTRACTORS	CONTACT #
Baffin Building Systems	979-5903
Kudlik Construction Ltd	979-1166

LOCAL CONTRACTORS	CONTACT #
Nunavut Excavating Ltd (Contractor for Landfill Construction)	975-3320
RL Hanson	979-6004
Tower Arctic Ltd.	979-6465

Appendix B

*Environmental Protection Plan –
Construction Phase (under separate cover)*

Appendix C

*Environmental Protection Plan –
Operations, Closure and Post-Closure Phase
(under separate cover)*

Appendix D

Emergency Response Plan (under separate cover)