

Resolute Bay- Upgrades to the Solid Waste Facility

Municipal Council Presentation
Dillon Consulting Limited

AGENDA

- Project Overview
- Facility Assessment & Site Deficiencies
- Mandatory Upgrades
- Optional Upgrades
- Cost Estimate – Mandatory and Optional Items
- Tentative Project Schedule
- Request for Motion

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Resolute Bay Municipal Waste Dump and Burning Site

PROJECT OVERVIEW

- Upgrade the existing Solid Waste Facility to:
 - Bring operations more in line with regulatory compliance (Water License)
 - Extend the useful life of the facility
 - Improve operational needs of the community
- Identify upgrades that are the most pertinent for the facility, that fall within the budget available
- ~210 tonnes of solid waste is generated in Resolute Bay each year



Resolute Bay Municipal Waste Dump and Burning Site

PROJECT OVERVIEW

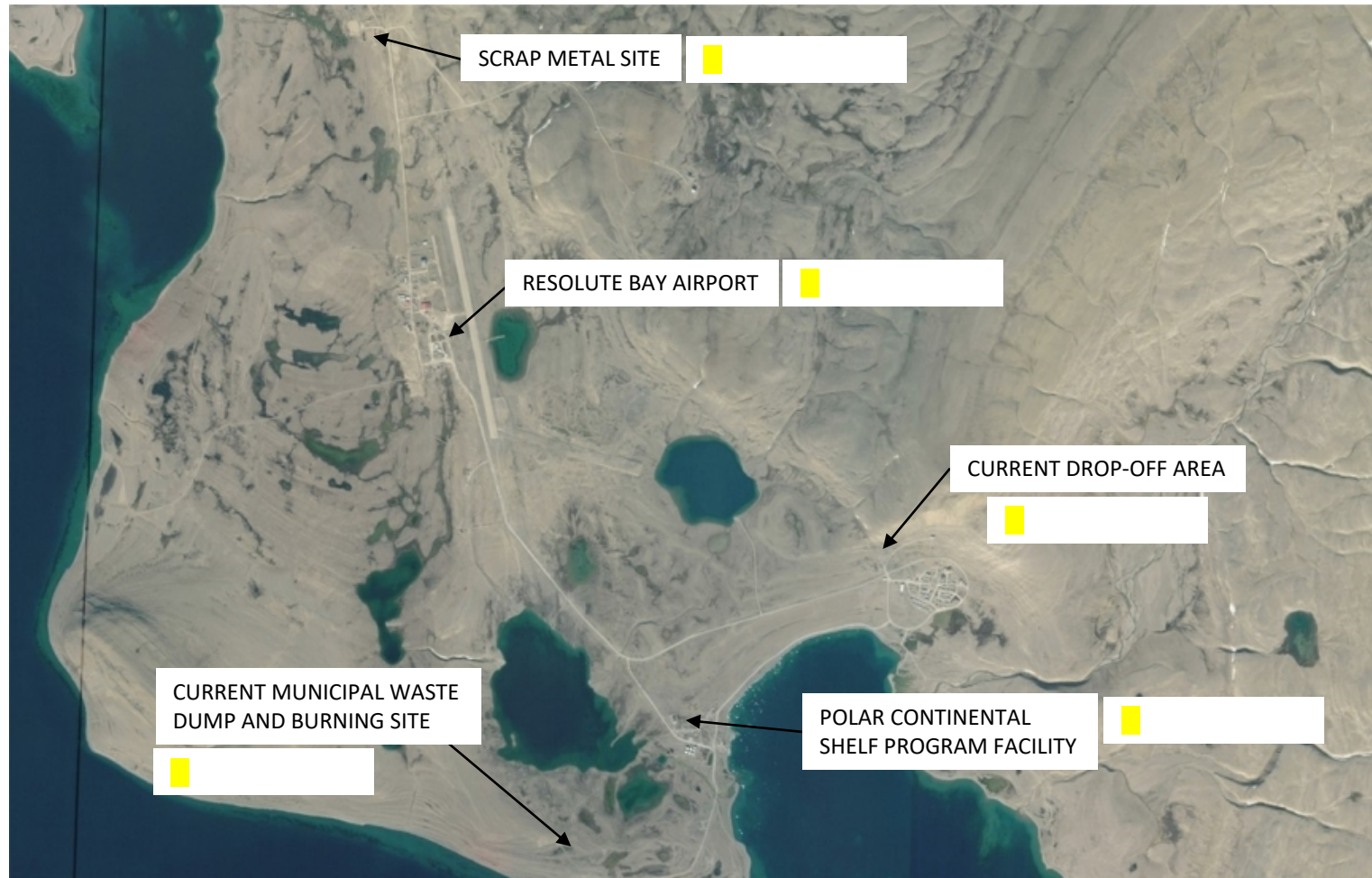


- Project scope included 3 **Mandatory** components:
 - Water management and grading
 - Delineation of locations for different types of waste to improve segregation
 - Installation of new fencing and gate
- **Optional** components to be reviewed on a site-by-site basis:
 - Waste incinerator
 - Attendant shelter
 - Equipment to manage the proposed upgraded site
 - Backhauling materials



Site Plan

Current Site Plan



Facility Assessment & Site Deficiencies

Water Management and Grading

- Inadequate ditching / runoff collection systems
- Inadequate secondary containment of hazardous waste



Inadequate HHW containment



Inadequate ditching along access road



Facility Assessment & Site Deficiencies

Waste Segregation and Management

- Open burning waste site with no boundaries
- Insufficient segregation of waste types
- No containment of Hazardous Waste
- Windblown litter



No containment of waste oil barrels – staining visible



Open burning of waste at the MSW Dump and Burning Site

Facility Assessment & Site Deficiencies

Facility Operations and Access

- No fencing or gate
- Wildlife attractants (polar bears)
- No lighting, inadequate signage, no site attendant

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Waste drop-off area – no fencing or gate



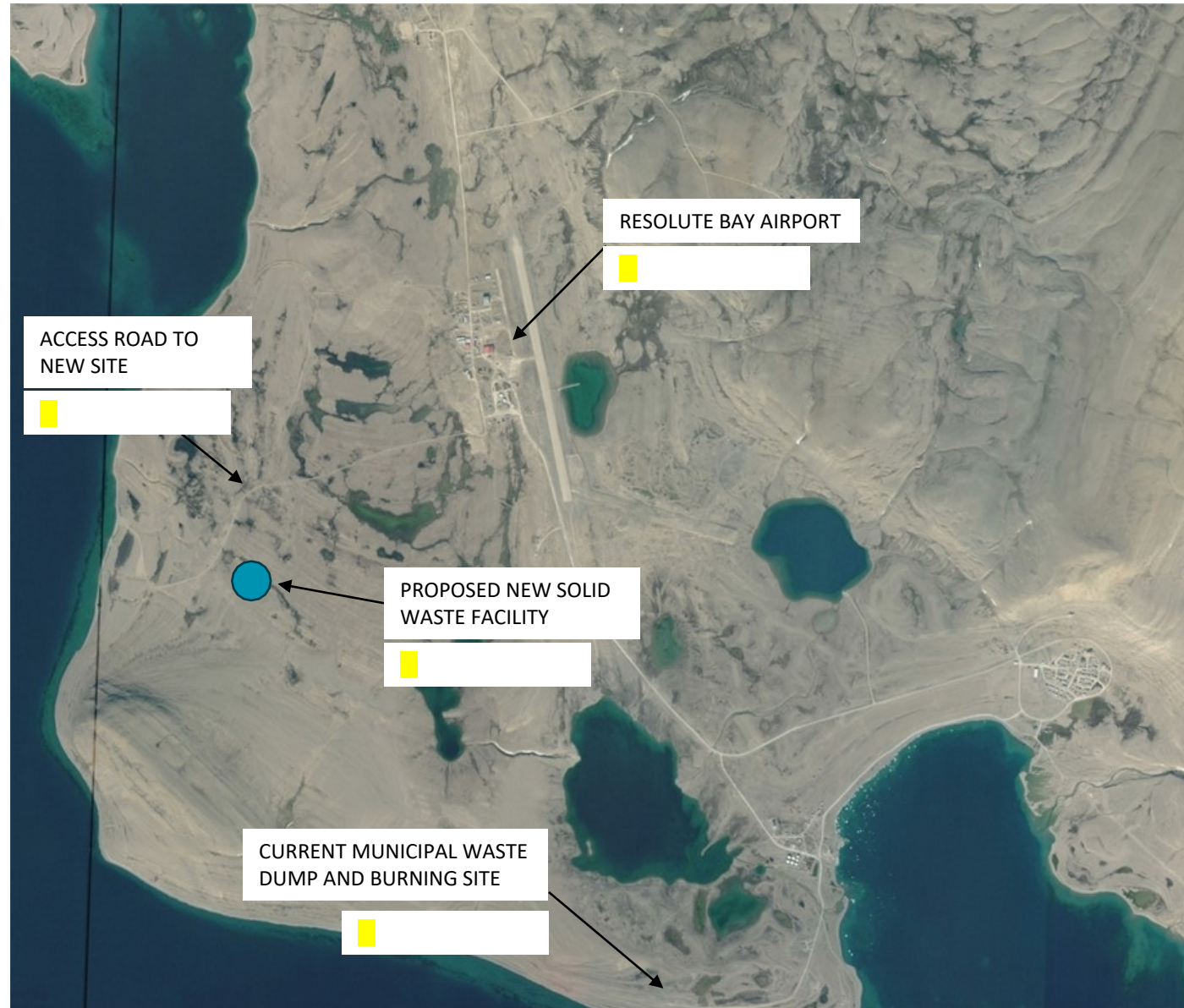
Municipal Waste Dump and Burning Site – no fencing

Waste Management Challenges and Proposed Improvements

- Unlike other municipalities in Nunavut, existing infrastructure in Resolute Bay does not offer the ability to upgrade the waste site
- Current practice of burning and burying waste is not acceptable
- Current site has no boundaries and poses significant environmental, H&S and operational risks
- Current site located near culturally and historically significant site
- To address WM requirements for Resolute Bay, a new Solid Waste Management Facility is recommended



Site Location for Proposed New Waste Site



New Solid Waste Management Facility Design

Water Management and Grading

- Ditching and berms
- A leachate pond

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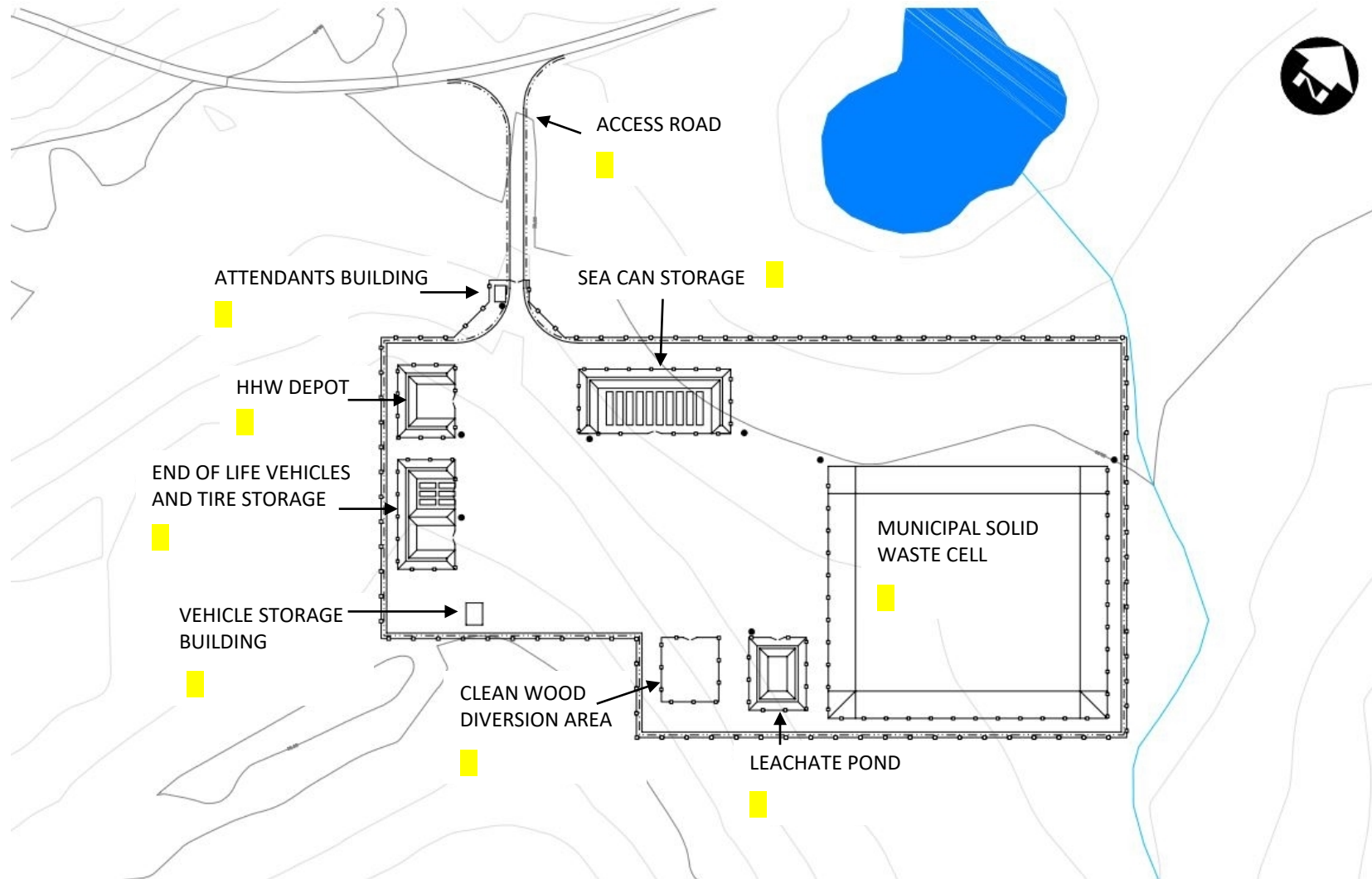
Waste Segregation and Management

- New MSW landfill cell
- Sorting waste from existing drop-off site
- Waste segregation through:
 - (1) Berms and fencing
 - (2) Designated stockpiling

Facility Access and Operations

- Fencing, gate, signage, and access road
- Attendant's trailer
- Power and lighting
- Equipment and vehicle storage building

New Solid Waste Management Facility Design – Mandatory



Optional Site Upgrades

Waste Segregation and Management

- Waste incineration partnership with Polar Continental Shelf
- Closure of drop-off site
- Backhauling program

Facility Access and Operations

- Extension of lighting

Mandatory Site Upgrades – Cost Estimate

Mandatory Upgrades

Cost Item	Cost Estimate
Site Grading and Preparation	\$773,367
Water Management (Berming and Leachate Pond)	\$420,885
Waste Landfill Cell + HHW Depot	\$2,365,707
Attendant Facility and Storage Building	\$627,813
Access Road, Fencing and Signage	\$1,080,640
Power and Lighting	\$1,567,868
Heavy Equipment Mobilization	\$735,000
Equipment for New Facility	\$934,500
Sub-Total	\$8,506,500
Contingency	\$10,491,000
Total (Mandatory Items)	\$18,997,500

Optional Site Upgrades – Cost Estimate

Optional (Recommended) Upgrades

Cost Item	Cost Estimate
Site Closure for Drop-off Site	\$397,425
Backhauling Hazardous Waste	\$183,333
Backhauling End-of-life Vehicles	\$159,600
Backhauling Metals	\$753,562
Sub-Total	\$1,494,000
Contingency	\$1,842,000
Total (Recommended Optional Items)	\$3,336,000

Note: Backhauling is recommended for the closure of the Drop-off Site only

Recommended Site Upgrades – Cost Estimate

Recommended Upgrades Summary

Cost Item	Cost Estimate
Mandatory Site Upgrades	\$8,506,500
Optional (Recommended) Site Upgrades	\$1,494,000
Sub-Total	\$10,000,500
Contingency	\$12,335,000
Total (Recommended Upgrades)	\$22,335,500

Tentative Project Schedule

- Detailed Design: 2025
- Tender: Late 2025
- Construction Equipment Shipped to Site: 2026
- Construction Start: 2027

Request for Council Motion

- Request for motion to accept the proposed new solid waste management facility

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Questions