NWT & NUNAVUT CHAMBER OF MINES

Repurposing the Diavik Mine

An Investigation into Costs for Alternative Use of the Diavik Mine Camp and Key Supporting Infrastructure

Report prepared and finalized: June 2023

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NWT & NUNAVUT CHAMBER OF MINES

Summary / Background

The Diavik Diamond Mine site is a significant capital infrastructure investment which exceeded two billion dollars (CDN $2 Billion) to support the successful mining of diamonds over the past 20 years, and until final closure in 2026.

In northern Canada, the land underlying mines and the mineral resources being removed, are legally the property of the Crown, and not the mining companies. Government has essentially invited those companies to find the resources, and then provide the expertise, startup and any future investment required, and the risk tolerance to convert found resources into benefits for the public.

Mine sites must be reclaimed and left in an environmentally safe and secure condition after mining is completed. Historically, under government policy this has meant that virtually all traces of infrastructure – save perhaps an airstrip – must be removed. In few cases is there any benefit remaining after reclamation, of the huge investments in infrastructure that a mining company has made on behalf of the government.

Ironically, the Northwest Territories and Nunavut suffer the largest infrastructure deficits in Canada. It is this infrastructure gap that contributes to the North having some of the highest living and operating costs in the country.

It would seem wise for government and industry to seek the public's thoughts before demolishing and removing infrastructure, on other potential, alternative uses of a site after mining is completed.

Diavik has sought and received that permission to investigate. A workshop in fall 2022, sponsored by DeBeers and Rio Tinto in partnership with the Government of the Northwest Territories and Canada, invited the public to provide thoughts and ideas on potential uses of sites like Diavik.

A key requirement on seeking alternative uses is to know how much it would cost to operate and maintain the key/core mine site infrastructure, that is, a mine site minus the infrastructure related specifically to mining and processing of rock.

The report attached: *Economic Prefeasibility Study: Repurposing Diavik Mine Infrastructure* presents the results of a study supported by Diavik Diamond Mines Inc. and the Canadian Northern Economic Development Agency, managed through the Chamber of Mines, and delivered by the consulting firm, Stantec.

The Chamber of Mines would like to thank Stantec for their expertise, Diavik for the significant amount of data shared, and to acknowledge the financial support provided this project by the Canadian Northern Economic Development Agency and Diavik Diamond Mine (2012) Inc.

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ECONOMIC PREFEASIBILITY STUDY REPURPOSING DIAVIK MINE INFRASTRUCTURE

June 9, 2023

Prepared for:
Northwest Territories & Nunavut Chamber of Mines

Prepared by:
Stantec

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The conclusions in the Report titled Diavik Prefeasibility Report are Stantec's professional opinion, as of the time of the Report and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not consider any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project or any other project or purpose. Any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from DDMI in preparing the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in using such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for the Northwest Territories & Nunavut Chamber of Mines (the Client) per Stantec's contract with the Client. While the Client may provide the Report to applicable authorities having jurisdiction and to other third parties in connection with the project, Stantec disclaims any legal duty based upon warranty, reliance, or any other theory to any third party and will not be liable for a such third party for any damages or losses of any kind that may result.

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Executive Summary

The Northwest Territories (NWT) and Nunavut Chamber of Mines commissioned Stantec Ltd. (Stantec) to perform an economic pre-feasibility study (study) for repurposing core Diavik Diamond Mine (Diavik) infrastructure. This report provides the study results that include an informed analysis of the cost for maintaining and operating the repurposed Diavik site assets after mining is complete. It is intended to inform an interested party of the financial costs of using the mine infrastructure for a purpose other than mining. Stantec is a top-tier global design and delivery firm and is well qualified to perform this economic pre-feasibility study for repurposing Diavik infrastructure.

Diavik is in the remote North Slave region of the Northwest Territories, Canada. In 2002, Diavik Diamond Mine (2012) Inc. (DDMI) invested approximately $357 million CAD (Charpentier, January 2023) to construct buildings needed to operate the Diavik site, with mine production commencing in 2003. Mining operations at the Diavik site are scheduled to cease in 2026, followed by the commencement of closure activities, including decommissioning and demolition of process infrastructure. Non-process infrastructure (NPI) will also be decommissioned and demolished unless some or all of the NPI can be repurposed for use post-mining.

The financial costs to repurpose the NPI for approximately 200 occupants is $69 million CAD per year. This includes a forecast of replacement costs for buildings and equipment based on a typical end of useful life. For purposes of the study, it is assumed the new occupant operates and maintains the repurposed infrastructure for a ten (10) year period. Using the infrastructure for a longer time is possible; however, it may result in higher financial costs as buildings and equipment reach the end of their useful life. Table ES- 1 provides the breakdown of the financial costs.

Table ES-1 Repurposed Infrastructure Financial Costs

Cost Type	Annual Cost
Capital replacement[1]	$3,070,613
Annual operating, repair and maintenance for approximately 200 occupants[2]	$65,880,728
Permits and authorizations[2]	$15,800
Financial Costs for 200 Occupants[2]	$68,967,141

1 – It was assumed that the new occupant would operate and maintain the repurposed infrastructure for 10-years. This value captures the total cost of the capital replacement over the 10-year period, divided into an annual cost. Escalation and a location factor was included in the total 10-year operational period for costs.

2 – Annual amount as a 2023 dollar value.

The financial costs are dependent on the number of occupants using the facility. Figure ES-1 provides a plot of the annual operations, repair, and maintenance cost for less or greater than the 383 occupants provided in Table ES-1. Capital replacement and permitting costs would remain constant regardless of the number of occupants.

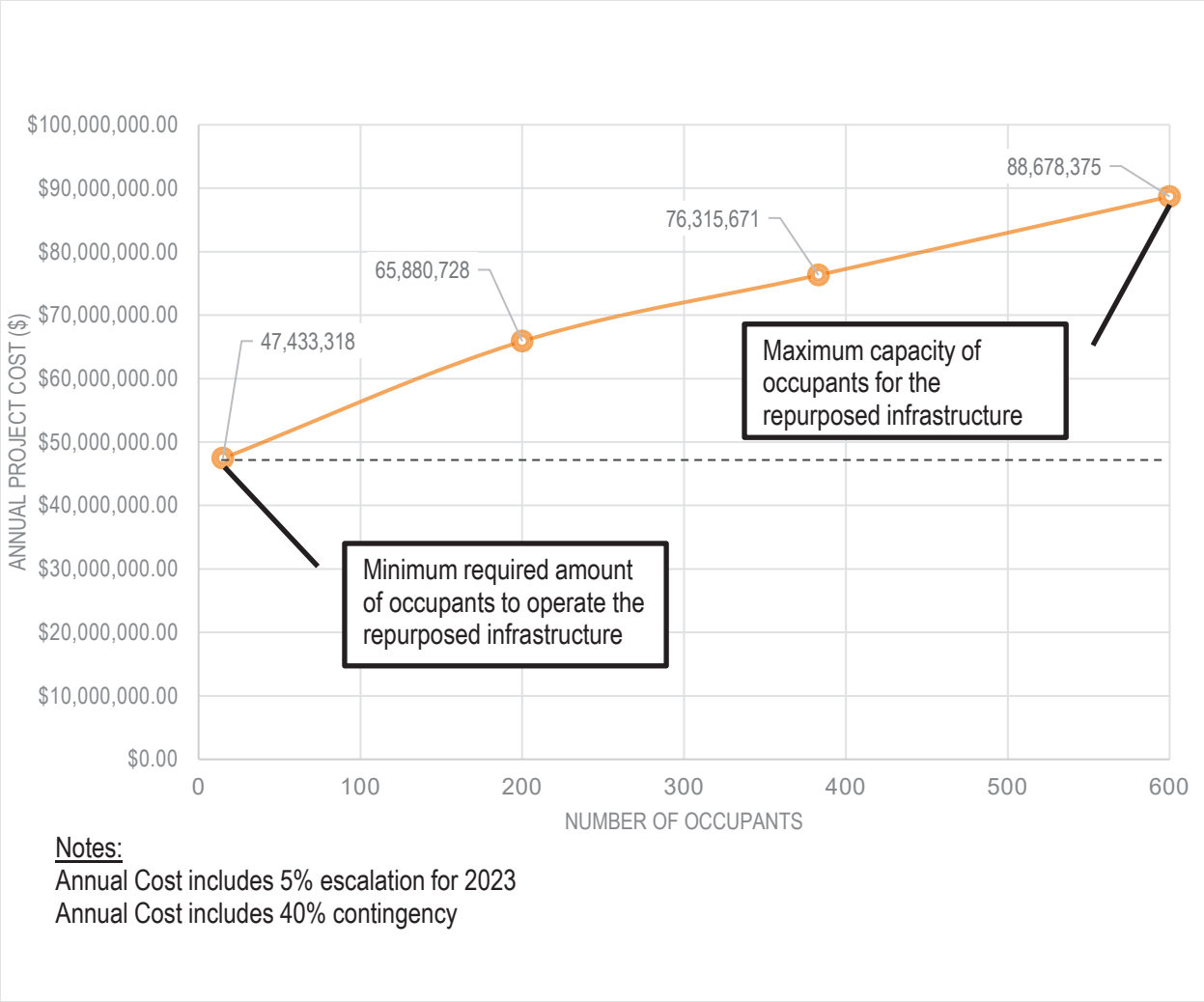


Figure ES- 1 Annual Operations, Repair, and Maintenance Costs per Number of Occupants

The result of this study will provide a party interested in occupying and using the Diavik infrastructure with the cost to operate and maintain the infrastructure left behind after mining is complete. Repurposing Diavik is not a single event but a series of events occurring in a planned methodical manner keeping the interest of the community and stakeholders in place through continued partnership programs.

Acronyms / Abbreviations

DDMI	Diavik Diamond Mine (2012) Inc.
De Beers	De Beers Group
Diavik	Diavik Diamond Mine
ERM	Environmental Resource Management
ERT	Emergency Response Team
EUL	Expected Useful Life
GDP	Gross Domestic Product
kW	Kilowatt Hour
MW	megawatt
MAC	Main accommodations complex
MVLWB	Mackenzie Valley Land and Water Board public registry
NPI	Non-process infrastructure
NWT	Northwest Territories
O&M	operations and maintenance
SGP	Slave Geological Province
SME	subject matter expert
Stantec	Stantec Ltd.
The Site	Diavik

1 Introduction

The Northwest Territories (NWT) and Nunavut Chamber of Mines commissioned Stantec Ltd. (Stantec) to perform an economic pre-feasibility study (study) for repurposing core elements of the Diavik Diamond Mine (Diavik) infrastructure. This report provides the study results that include an informed analysis of the financial costs for maintaining and operating the repurposed Diavik site assets after mining is complete. This study provides a transparent understanding of the possible financial commitments, the viability of future operations, and a review of regulatory obligations. It is intended to inform an interested party of the financial costs to repurpose Diavik site infrastructure for something other than mining as a first step in the process of comprehensive due diligence of risks and associated liabilities. This report considers due diligence activities to be the next step in assessing the feasibility of repurposing Diavik infrastructure.

1.1 Scope of Work

Stantec is a top-tier global design and delivery firm and is well qualified to perform this economic pre-feasibility study for repurposing Diavik infrastructure. The Stantec community unites more than 25,000 employees working in over 400 locations across six continents, including offices in Canada, South America, Europe, Australia, and Asia, with a team in the Northwest Territories. Stantec collaborates across disciplines and industries to bring community redevelopment, asset transformation, mining, energy and resources, environmental, buildings, and infrastructure projects to life.

Stantec's scope of work (Stantec, 2022) in coordination with NWT & Nunavut Chamber of Mines, and Diavik Diamond Mine (2012) Inc. (DDMI) included:

a) Identify the Diavik infrastructure to be retained after mining is complete.

b) Estimate capital replacement costs for equipment and facilities based on an assumed life.

c) Estimate the repurposed infrastructure's operation, repair, and maintenance costs.

d) Estimate the cost to maintain regulatory permits to operate and occupy repurposed infrastructure.

The study began in December 2022 and continued for approximately five (5) months, finishing in May 2023.

This study was performed as a "desktop" study meaning that Stantec relied on information provided by DDMI for completing the scope of work. Stantec has assumed all information supplied by DDMI in the performance of its work to be correct. While we have exercised a customary level of judgment or due diligence in using such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein. We disclaim any legal duty based upon warranty, reliance, or any other theory to any party and are not liable to such party for any damages or losses that may result in using the information provided herein.

1.2 Background

Diavik (the Site) is in the remote North Slave region of the Northwest Territories, Canada. In 2002, DDMI invested approximately $357 million CAD (Charpentier, January 2023) to build the infrastructure needed to operate the mine, with production commencing in 2003. DDMI included process infrastructure and non-process infrastructure to support the mining operation. Mining operations are scheduled to cease in 2026, followed by the completion of closure activities, including decommissioning and demolition of process infrastructure. Non-process infrastructure (NPI) will also be decommissioned and demolished unless some or all of the NPI can be repurposed for use post-mining.

Diavik is on an island within Lac de Gras in the Northwest Territories without power or other utilities from outside the island. The community of Wekweètì is the nearest, 190 km west-southwest of Diavik. The closest city center is Yellowknife, approximately 300 km southwest of Diavik. Figure 1 displays the site location map. The Site is accessible by means of an ice road and has historically operated for two months annually, between February and March in the winter. The ice road is approximately 425 km long, beginning 65 km east of Yellowknife. The ice road also provides access to other mines in the area. Access to the Site is possible by air year-round.

The Canadian Government owns the land leased to DDMI, which will expire in 2030. The permitted mine covers a surface area of approximately 1,283 hectares. The Site consists of the above and in-ground mine workings, waste rock and tailings storage facilities, and process infrastructure. DDMI will reclaim approximately 788 hectares of the Site leaving 495 hectares for repurposed NPI. The NPI includes a 383-room main accommodations complex (MAC), a 200-person dining hall, reception offices, meeting spaces, a gymnasium, a squash court, exercise facilities, and a recreation room. The MAC is connected to a maintenance truck shop, a power supply, and other support facilities. Water is supplied from Lac de Gras (Macdonald, 2023). The NPI provides the power, water, wastewater treatment, solid waste disposal, fuel and supply storage, housing, emergency equipment, and maintenance equipment needed to be self-sufficient with only food, fuel, and supplies needed from outside the island. A minimum number of fifteen (15) staff are needed year around to operate and maintain the facility even when the Site is vacant.

The region experiences sub-zero temperatures in the winter months and mild temperatures in summer months. The average seasonal temperature is:

- Spring (March, April, May): -7.3º C
- Summer (June, July, August): 13.5º C
- Fall (September, October, November): -3.8º C
- Winter (December, January, February): -22.8º C

In general, the climate in the Northwest Territories is cold, but relatively dry. On average throughout the year, Yellowknife experiences 170.7 mm and 157.7 cm of annual rainfall and snowfall, respectively.

1.3 Report Organization

This report provides the estimated financial costs to maintain core infrastructure at the Diavik site. The report has been divided into sections that provide context to the project, each cost component that would need to be considered in the repurpose process, and conclusions. The report also contains appendices with supporting information.

Section 2 describes the repurposed NPI that is being considered in this study, including the following:

- South Infrastructure (Repurpose Area A)
- Airstrip (Repurpose Area B)
- Windfarm (Repurpose Area C)

Section 3 discusses the considerations and factors that may be required to perform the transfer of land and assets to another user. This section also highlights the reclamation plan that DDMI will perform, giving insight to the site conditions post mining activities. Further discussion is also included on the potential next steps for the end-user regarding site liability and ownership if they were to retain the site.

Section 4 outlines the methods and findings of the capital replacement costs. Each repurpose area will have its own subsection, listing its specific components and its associated capital replacement cost. This section includes limitations and assumptions to the capital replacement cost.

Section 5 outlines the methodology and findings of the operations, repair, and maintenance costs. The operations, repair, and maintenance costs are broken down by variable, fixed, and fixed indirect costs. There is a subsection for each of these categories that provides a definition of the category and a summary of its associated operations, repair, and maintenance cost. This section includes limitations and assumptions to the operations, repair, and maintenance costs.

Section 6 outlines the methodology and findings for the permitting costs. An overview is given of the permits that are currently held by DDMI and what function they serve. Then a discussion is provided on what permits and regulatory requirements would terminate post-mine activities and which would need to be maintained for the repurposed infrastructure. This section includes limitations and assumptions to the permitting and regulatory costs.

Section 7 is the conclusion of the prefeasibility study and reports the total 10-year forecasted costs for repurposing the infrastructure at Diavik.

Section 8 contains the report references.

2 Repurposed Non-Process Infrastructure

The repurposed NPI includes the 383-room MAC and the facilities and equipment necessary to support MAC occupants. DDMI, through a series of bi-weekly conference calls with Stantec, identified the specific NPI to remain in place after the mine closed. DDMI provided Stantec with facility functions, descriptions, construction years, photographs, aerial images, and general engineering drawings for the NPI. DDMI also provided their cost to operate and maintain the NPI for the calendar year 2022. After receiving the initial information packages, Stantec issued a request for additional information along with instructions for interior photographs (Swain, January 2023).

The repurposed NPT that will remain after mine closure are grouped into three NPI areas consisting of: A) South Infrastructure; B) Airstrip; and C) Windfarm. The location of the three NPI areas are shown in Figure 2.

2.1 South Infrastructure (Area A)

Figure 5 shows the specific buildings retained in the south infrastructure area (Area A). Each building was assigned a unique identification number for reference purposes. The buildings, identification number, description, and function are listed in Table 2-1.

Table 2-1 South Infrastructure (Area A) Facilities

I.D.	Building Name	Description	Function
1	Main accommodation complex (MAC)	The living areas are steel modular prefabricated ATCO buildings. The main building is a steel structure on a concrete footing and a basement. The building is four stories. The entire accommodations building is on steel pipe piles drilled into hard bedrock.	Includes main accommodations area, living quarters, kitchen, cafeteria, gym, and basement for storage.
2	Sewage treatment plant	A two-story steel frame warehouse with concrete flooring and office space.	Wastewater treatment
3	Maintenance complex	A three-story steel frame structure with concrete flooring, dry good storage, office space, machine shop, welding bay, truck shop area, and wash bay.	This building houses equipment for servicing and repairing operation and maintenance vehicles.
4	Power plant	Steel superstructure with 5 chimney/ generator stacks. There are 5 x Caterpillar 3616 diesel engines coupled to generators (4.4 MW), 4 x Caterpillar 3512 diesel engines couples to generators (1.25 MW). Interior tanks have a combined capacity of 298,000 litres. Exterior	This building houses the main generators that produce power for the Site. Heat recovery elements are built into the exhaust stacks and engine jackets to collect and direct waste heat to the site's buildings.

I.D.	Building Name	Description	Function
		tanks have a combined capacity of 220,000 litres.	
5	Boiler house	Steel superstructure with concrete flooring housing three Cleaver Brooks firetube boilers, each rated at 7,000 kilowatts.	The boilers heat glycol that is circulated throughout the infrastructure for heat. They are adjunct to the waste heat collected from the generators to heat the site's buildings.
6	Lubricants and oil storage	A single-story steel building with concrete flooring. Fluid tanks are stored in this building and there is a metal walkway (mezzanine) over the tanks for access. The interior tanks have a combined capacity of 635,000 litres and exterior tanks have a combined capacity of 553,000 litres.	Utilized for storage and piping of greases, oil, and products for the Maintenance Complex operations.
7	South tank farm	Double walled cylindrical steel covered tanks. Area also contains three fuel pads and a steel tower for overhead fueling. Each tank has a total storage capacity is 18,000,000 litres. Tanks also contain fire suppression equipment.	Storage of diesel fuel for on-site activities. Also utilized as the area for refueling tanks and fueling trucks/ mobile equipment and vehicles.
8	Emergency Response Team (ERT) building	A double height steel frame, 2-bay warehouse building with a single-story ATCO style wooden office add-on.	Utilized for the storage of ERT equipment and adjoining office for supplies, training, and other activities
9	Potable water treatment plant	A single-story, small steel structure with metal flooring, comprising a series of tanks.	Supports the potable water system that provides safe drinking water for the personnel on-site.
10	Raw water pumphouse	A single-story, small steel structure with metal flooring interior flooring.	Intake location for site fire, potable, and process water.
11	Environmental field lab and warm storage	A single-story steel frame warehouse with concrete flooring.	Utilized for storage of environmental department field equipment.
12	Communications Building	ATCO style trailer and communications tower, satellite dishes, and generator.	Houses telecommunications equipment and supplies microwave, communications, cable, and internet services.
13	Incinerator and waste handling complex	A double height, steel frame warehouse building with a concrete floor. Comprises of two incinerator units.	Utilized for incineration of site food waste.

Above ground arctic corridors connect the MAC, maintenance complex, boiler house, and power plant. The arctic corridors are elevated steel structures that that have a combined footprint of 1700 m^2. The arctic corridor houses piping for water, sewer, fire suppression, and heating, as well as electrical conduit and a manway for walking between structures out of the weather.

The MAC is the largest repurposed structure at the Site. It is a multi-story metal structure with 383 living suites. The suites are in four (4) wings (Wing A, B, C, and D) connected to a central core structure. The building predominantly comprises of premanufactured modular ATCO[1] steel trailer buildings. The ATCO trailers were delivered as modules without siding, already wired and plumbed, then it was sided on-site. Each suite consists of a sleeping space, bathroom, desk and storage space. The central core includes a commercial kitchen, a 200-person capacity dining hall, reception offices, meeting spaces, a gymnasium, a squash court, exercise facilities and a recreation room. To allow for a greater capacity of occupants, additional “wings” (ATCO style modular structures) were constructed. This increased the capacity of the facility to approximately 600 occupants. For the purposes of this study, it was assumed that these additions would be removed and only the original “core” MAC structures would be considered in the analysis. Appendix A provides MAC photographs.

The second largest structure is the maintenance complex which is about half the size of the MAC. It is a multi-story metal structure that had been used as a warehouse, machine shop, and equipment maintenance facility.

The remaining facilities in Area A support the MAC and maintenance complex by providing power, heat, potable water, waste treatment, storage, and communications.

Figure 3 shows a rendering of the repurposed facilities in the repurposed Area A.

2.2 Airstrip (Area B)

Figures 4 and 5 show the repurposed airstrip (Area B). Table 2-2 provides the description and function of the Area B facilities.

Table 2-2 Airstrip (Area B) Facilities

I.D.	Building Name	Description	Function
1	De-icer	Single-story prefabricated galvanized steel foldaway[1] heated storage structure.	Houses the equipment to facilitate de-icing operations of the gravel runway.
2	Fire-Suppression	Single-story ATCO style trailer.	Back-up building for fire suppression.
3	Operations and Control	Three ATCO Units.	Houses airport operations and control equipment.
4	Airstrip	Gravel runway – 1,596 m x 51 m.	Runway for aircraft to land.

The airstrip can accommodate cargo and passenger aircraft as large as a Hercules and Boeing 737. It is equipped with runway lights, an aviation navigation system, and lightning detection. The runway requires resurfacing approximately every three (3) years. Resurfacing consists of reapplying a layer of gravel, grading to establish positive drainage, and compacting.

2.3 Windfarm (Area C)

Figures 6 and 7 show the windfarm (Area C) for supplying green power to the infrastructure. Table 2-3 provides the description and function of the Area C facilities.

Table 2-3 Windfarm (Area C) Facilities

I.D.	Building Name	Description	Function
1	Wind Turbine (4)	ENERCON E70 comprising of a rotor (71 m diameter), turbine blades (33 m epoxy-resin), and a hub height of 64 m, containing a combined capacity of 9.2 MW (2.3 MW each).	Provides additional power to the Site.
2	Substation	Single-story ATCO style trailer.	Houses all the equipment for operating and maintaining the wind turbines.

The windfarm has provided an annual average of 17,834,904kWh. The yearly reported power available from the windfarm is presented in Table 2-4.

[1] ATCO trailers are durable, portable trailers designed for industrial use in remote areas. Refer to https://structures.atco.com/en-ca.html for a more detailed description of ATCO trailers and their components.

Table 2-4 Annual Wind Energy

Year	Kilowatt Hour
2013	15,893,683
2014	19,853,679
2015	20,842,138
2016	14,297,803
2017	17,192,885
2018	17,979,982
2019	17,326,685
2020	19,292,380

There are currently six (6) fuel tanks in the south tank farm; however, DDMI intends to remove four (4) of the tanks as part of closure. It is expected that the 18,000,000 litre capacity (each) tanks will be adequate for operating the repurposed infrastructure.

For the purpose of this study, it was assumed that all power supplied to the Site would be by means of diesel generators. As seen in Table 2-4, the windfarm does have the capacity to provide the majority of the power demands of the repurposed site operations. Utilizing wind power has the potential to reduce power consumption costs and contribute to net-zero site operations.

3 Land Use and Asset Transformation

This section includes a description of anticipated land use assumed for the basis of the study.

Reimagining Closure is a joint initiative that aims to engage interest holders in a collaborative process of exploring innovative ways relating to how the closure of mines can be used to benefit future and ongoing socioeconomic interests and opportunities in the Slave Geological Province (SGP). The Northwest Territories is undergoing a major economic transformation. In the Northwest Territories, production from the existing diamond mines is currently scheduled to cease by 2031. At least 29% of the Gross Domestic Product (GDP) of the Northwest Territories comes from diamond mining, and changes in this GDP are already having impacts on the communities, businesses, and people. Reimagining Closure was initiated by De Beers Group (De Beers) and DDMI, with the support of the sustainability consulting firm, Environmental Resource Management (ERM). Coeuraj, a co-design and facilitation group, was retained by ERM to design and facilitate the interest holder engagement process as an arms-length, third party organization.

While performing this evaluation to determine the transformational potential of the Site, we have considered the unique nature and location. Rather than allowing existing constraints to define the Site's potential and hence limit its opportunities, we have opted to reimagine the Site in its best and highest potential and value.

There has been a broad range of ideas considered for end-user options. Some options include but are not limited to:

- Military.
- Tourism.
- Wellness Center.
- Research Institutes.

Currently, it is most plausible that it would be given back for federal use or that it would be federally funded in some capacity.

The facility and all the land that could be transferred to another user will be reclaimed to be stable and safe. DDMI will need access bi-annually (for up to 20-30 years) for inspection purposes. In the case that there is no end-user, the site will be brought to neutral condition and returned to the government as the landowner. All of the infrastructure, including the landfill, will be demolished and then covered. The rock piles will be re-sloped at 3H:1V (horizontal to vertical ratio). As stated in Diavik's Closure and Reclamation Plan, the pits will be filled, dikes breached, and they will become part of Lac de Gras again (Diavik Diamond Mines Inc, 2022).

3.1 Reclaimed Land

DDMI will close facilities and reclaim the site at the end of its mine life. Closure is an integral part of the mine project following a closure plan developed at the inception of the mine. Mine plans often change

throughout the mine's life. Consequently, the DDMI Closure and Reclamation Plan has been continually updated to reflect mine plan changes, including a change such as repurposing infrastructure for non-mining use described in this study. A similar change would not invalidate the closure plan since the closure principles remain the same and only specific closure details change.

The DDMI closure goals (Diavik Diamond Mines Inc, 2022) or principles established at the onset of mine planning include:

1. Land and water that is physically and chemically stable and safe for people, wildlife and aquatic life.
2. Land and water that allows for traditional use.
3. Final landscape guided by traditional knowledge.
4. Final landscape guided by pre-development conditions.
5. Final landscape that is neutral to wildlife – being neither a significant attractant nor significant deterrent relative to pre-development conditions.
6. Maximize northern business opportunities during operations and closure.
7. Develop northern capacities during operations and closure for the benefit of the North infrastructure areas, post-closure.
8. Final site conditions that do not require a continuous presence of mine staff.

DDMI will maintain these goals for the portions of the Site not repurposed. Similar closure goals are suggested for the future occupants of the repurposed facility.

DDMI is still in the process of establishing final detailed closure plans that are being refined as closure approaches. At the very minimum, it is assumed that occupants of the repurposed infrastructure should expect to have the closure activities below completed or in progress upon transfer of site infrastructure.

- Mine process infrastructure decommissioning and demolition.
- Open pit, underground and dike areas to rejoin with Lac de Gras.
- Waste rock storage area reclaimed.
- Processed Kimberlite containment facility reclaimed.

Reclaimed facilities will re-vegetate naturally in time. Occupants of the repurposed facility may be restricted in accessing reclaimed areas for a period of time to allow establishment of vegetation. Occupants of the repurposed area will also need to accommodate and allow access for DDMI personnel to periodically visit to maintain and monitor reclaimed facilities.

Reclaimed areas will be landscape features safe for people and wildlife to access. Demolition debris will be placed in an on-site landfill and closed. A new on-site landfill will be needed if the Site is repurposed. An area located in the South Country Rock Pile may be suitable for a new landfill.

3.2 Site Transformation Process Considerations

This section provides parties and stakeholders interested in occupying the repurposed NPI considerations in transforming the Site from a mine operation to another function. Repurposing the Site is not a single event but a series of events occurring in a planned methodical manner keeping the interest of the community and stakeholders in place through continued partnership programs.

The Site transformation considerations below are by no means comprehensive or complete but are provided for consideration purposes.

- Develop an Asset Transformation Master Plan that provides a roadmap for transitioning the Site to its post-mine land use purpose.
- Perform a property building and facility condition assessment to visually review the condition of buildings, structures and equipment to determine opinions of cost to remedy physical deficiencies and to replace components which will exceed their expected useful life.
- A process for setting aside funding for eventual closure of the repurposed NPI.
- A process for obtaining or transforming responsibilities for required permits.
- Improvements and modifications of facilities for the specific use post mining.

4 Capital Replacement Cost

This section discusses capital replacement costs, which are the amount that the occupant will pay to replace essential infrastructure components to maintain the safe operation of the facility. Operation, repair, and maintenance costs (discussed in Section 5) are for routine repairs, equipment, supplies, and labor needed to keep the Site habitable. The sum of capital replacement costs; operation, repair, and maintenance costs; and permitting costs provide the occupant with the anticipated financial costs to occupy and maintain the Site over a given duration.

4.1 Overview

Stantec reviewed available information to determine the condition of buildings, related structures, and equipment for the repurposed NPI to estimate the cost to replace components that would exceed their Expected Useful Life (EUL). For purposes of determining infrastructure components that may need replacement, Stantec assumed a 30-year operational period. Diavik infrastructure has been operated and maintained for 20 of the 30-year period and is assumed to be managed by a new site occupant for the remaining 10-years, until 2033.

Stantec's team of subject matter experts (SMEs) provided a forecast of replacement costs for buildings, equipment for power generation, water and wastewater treatment, solid waste treatment, aviation facilities, and wind turbines. Components that would require replacement during the capital replacement period were primarily based on the age of the component and EUL. Stantec's SMEs reviewed photographs and general information on components to estimate a replacement cost using the SME's experience and judgement. Replacement costs were estimated to an order of magnitude accuracy.

4.2 South Infrastructure (Area A) Replacement Cost

Stantec's building condition assessment SME performed a desktop review of the Area A buildings to determine the capital replacement cost to maintain the buildings in their current condition and functionality. The SME relied on information provided by DDMI and did not visit the site to personally assess the condition of each building. DDMI reported that the buildings generally are in good condition without major deficiencies. The estimation of the capital expenditures over the capital forecast period was based on:

- The assumed current age of the building components.
- The theoretical useful life expectancy of the components within each of the buildings.
- Review of select drawings and photographs of the building components provided by DDMI.

Stantec reviewed the theoretical EUL of components likely to be incorporated into the construction of the buildings and, based on the assumed year of construction and its anticipated age at the end of the capital forecast period, identified components that would need replacement. The building components included:

- Building interior.
- Mechanical system.
- Electrical system.
- Building envelope[2].

Stantec used its building condition assessment experience at sites (CMBC Port Coquitlam and Shell Albian) with similar building types. Capital expenditures for the building components listed above for Area A were determined by applying cost adjustment factors to the reference site building component. The adjustment factors include difference in the floor area, difference in the date of when the capital planning forecast was prepared and the date of issuance of this capital plan forecast, and location. Equation 4-1 provides the procedure for estimating capital expenditure.

Equation 4-1

Repurpose building capital expenditure = *reference building* x *size factor* x (*location factor* + *inflation factor*) x *Yellowknife_Diavik location factor*

Where:

Reference building - A similar structure at a different location

Size factor – The ratio between the size of the repurposed building and reference building

Location factor – The factor that is applied to the capital forecast planning cost data based on the differences in the location of the source data site and the closest city to the Diavik site within the RS Means™ software.

Inflation factor – The factor that is applied to the capital planning forecast cost data to adjust for the difference in time between the date when the capital planning results of source data was prepared and when the date of the issuance of this capital plan forecast (2023) is being issued.

Yellowknife-Diavik location factor – Location factor of 25% due to the remote nature of the Diavik site.

We utilized RS Means™ software to provide a combined adjustment factor for these the location and inflation factor adjustments.

Major equipment replacement costs for boilers, generators, and process treatment equipment in utility maintenance buildings were determined separately from the building itself. Table 4-1 provides a summary of the capital replacement costs for the Area A buildings.

[2] The building envelope is the separation of the interior and exterior of a building and includes windows, doors, roof, floor, foundations, and insulation.

Table 4-1 Summary of Capital Replacement Cost for South Infrastructure Buildings

I.D.	Building Name	Structure	Capital Expenditure
1	Main accommodation complex (MAC)	Suites	$3,276,900
		Core	$4,424,800
		Arctic corridor	$959,700
2	Sewage treatment plant	Building (no plant process equipment)	$392,500
3	Maintenance complex	Building (no building equipment)	$4,864,600
4	Power plant	Building only (no generator equipment)	$1,572,800
5	Boiler house	Building only (no boiler equipment)	$317,700
6	Lubricants and oil storage	Building only	$515,700
7	South tank farm	No building	$0
8	ERT building	Building	$294,800
9	Potable water treatment plant	Building only (no process equipment)	$45,000
10	Raw water pumphouse	Building only (no process equipment)	$66,700
11	Environmental field lab and warm storage	Building only	$111,000
12	Communications Building	Building only (no communications equipment)	$39,400
13	Incinerator and waste handling complex	Building only	$243,500
Subtotal Area A Building Capital Expenditures (includes 25% Yellowknife-Diavik location factor)			$21,406,375

Table 4-2 summarizes the major equipment replacement costs for boilers, generators, and process treatment equipment in utility maintenance buildings.

Table 4-2 Major Equipment Replacement Costs

Equipment	Description	Capital Expenditure
Power plant generators	4 Caterpillar 3616 and 2 3612 Caterpillar generators	$0
Boiler	Three cleaver brooks boilers (7,000 kW capacity each)	$1,500,000
Raw water pumps	Three pumps sited on metal plinths	$150,000
Water treatment	Plant consists of deep bed multi-media filters, polishing filters, and chlorine dosing.	$1,600,000
Wastewater treatment	Plant consists of digester, equalization tank, anoxic chamber, aeration chamber, primary clarifier, and sand filter.	$4,800,000
Subtotal South Infrastructure Major Equipment Capital Expenditures		$8,050,000

No capital expenditure for power plant generators were assumed due to the amount of generators available to provide reliable power to the repurposed infrastructure, in conjunction with the decrease in power required to meet the demands of the repurposed infrastructure. Approximately half of the mine power available from generators will no longer be needed after mine closure since process and working infrastructure will no longer be operating. Additionally, there are 4 Caterpillar 3616s generators (4.4 MW each) and 2 Caterpillar 3512s (1.25 MW each) that are in the second power house (Power House 2) on-site. If any generators are to be retained in the first power house (Power House 1), redundant generators in Power House 2 can be used for spare parts or backup, to alleviate any additional costs. Additionally, the windfarm can provide a sufficient amount of power, as discussed in Section 2.3.

The EUL for boilers can be in the range of 20 years so we have assumed that new boilers would be required during the capital replacement period. Stantec contacted Cleaver Brooks boilers to get a budgetary price of a new boiler to replace (in-kind) the current boilers (Mazar, April 2023). The boilers run adjunct to the generators, when it is very cold outside, as the generators are the main heat source for the site.

The EUL for water treatment equipment and pumps is generally in the range of 20 years, so we have assumed that new treatment infrastructure and equipment would be required during the capital replacement period. Stantec used its database of water treatment equipment costs for similar sites (reference sites) to determine the Diavik capital costs. Capital expenditures for the water processing components for Area A were determined by applying cost adjustment factors to the reference site building component. The adjustment factors used include the difference in water treatment production. It was assumed that the system would need to have the capacity to produce at least 170,000 litres per day.

4.3 Airstrip (Area B) Replacement Costs

Stantec's building condition assessment and aviation SMEs performed a desktop review of the Area B facilities to determine the capital replacement cost to maintain the three buildings in its current condition

and functionality. The SMEs relied on information provided by DDMI and did not visit the site to personally assess the condition of each building. DDMI reported that the buildings generally are in good condition without major deficiencies.

The estimation of the capital expenditures over the capital forecast period was based on:

- The assumed current age of the building components.
- The theoretical useful life expectancy of the components within each of the buildings.
- The theoretical useful life of the runway lights and electrical system based on Stantec's experience from other airport facilities.
- Review of select photographs of the building components provided by DDMI.

Stantec reviewed the theoretical EUL of components likely to be incorporated into the construction of the building and based on the assumed year of construction and its anticipated age at the end of the capital forecast period, we identified components that would need replacements based on achieving their theoretical EUL. The building components included:

- Building interior.
- Building mechanical system.
- Building electrical system.
- Building envelope[3].
- Aviation navigation systems.
- Runway light and electrical infrastructure.

Stantec used its building condition assessment experience at similar sites (reference sites) to develop capital building expenditures for Diavik. Capital expenditures for the building components listed above for Area B were determined by applying cost adjustment factors to the reference site building component. Similar to Area A, the Area B building adjustment factors included the difference in the floor area, difference in the date of when the capital planning forecast was prepared and the date of the issuance of this capital plan forecast, and location.

Stantec's aviation infrastructure SME opinion was that the aviation navigation equipment would function during the capital expenditure period. However, runway lighting and electrical system components may

[3] The building envelope is the separation of the interior and exterior of a building and includes windows, doors, roof, floor, foundations, and insulation.

require replacement after a 20-year operation life. Table 4-3 provides a summary of the capital replacement cost for Area B facilities.

Table 4-3 Summary of Capital Replacement Cost for Airstrip (Area B) Facilities

I.D.	Building Name	Structure	Capital Expenditure
1	De-icer		$83,250
2	Fire-Suppression		$83,250
3	Operations and Control		$83,250
4	Airstrip	Runway lights	$1,000,000
Subtotal Airstrip and Airport Capital Expenditures			$1,249,750

The costs shown in Table 4-3 do not include runway resurfacing, which is assumed to be required every three years. This cost is provided in Section 5 - Operating, Repair and Maintenance.

4.4 Windfarm (Area C) Replacement Costs

Stantec's wind turbine SME performed a desktop review of the wind turbines to determine the capital replacement cost to maintain the Area C facilities in their current condition and functionality. The SME relied on information provided by DDMI and did not visit the site, although they had a good working knowledge of the Enercon wind turbines that had been installed at Diavik. DDMI reported that the wind turbines generally are in good condition without major deficiencies. The estimation of the capital expenditures over the capital forecast period was based on:

- The assumed current age of the wind turbines.
- The theoretical useful life expectancy of the wind turbine components such as the generator and turbine blades.
- The theoretical useful life of the wind turbines is based on Stantec's experience with Enercon wind turbine installations at other sites.
- Review of select photographs of the building components provided by DDMI.

Stantec reviewed the EUL of the wind turbines and its anticipated age at the end of the capital forecast period and believes that the wind turbines will continue to function during the capital expenditure period. No replacement costs for the Area C facilities would be expected during the capital expenditure period.

4.5 Summary of Capital Replacement Costs

DDMI has operated and maintained infrastructure for 20 years with the expectation that the Site will be occupied by another party for the next 10 years. It is expected that some equipment will require

replacement based on Stantec's experience with similar equipment at other sites. Table 4-4 summarizes the estimated capital replacement costs for repurposing of the Site.

Table 4-4 Summary of Capital Replacement Costs

Repurpose Area	Capital Expenditure
Subtotal Area A Building Capital Expenditures	$21,406,375
Subtotal Area A Major Equipment Capital Expenditures	$8,050,000
Subtotal Airstrip and Airport Area B Capital Expenditures	$1,249,750
Subtotal Area C Capital Replacement Costs	$0
Capital Replacement Cost Subtotal	$30,706,125

Replacement costs were estimated to an order of magnitude accuracy.

4.6 Limitations and Additional Considerations

This section includes the limitations of our opinion of the capital replacement costs for the repurposed infrastructure. The development of the capital replacement costs was performed at a desktop level using information provided by DDMI. Responsibility cannot be accepted for unknown factors that might adversely affect the accuracy of these projections. The capital replacement costs are not to be construed as a warranty or guarantee regarding existing or future physical conditions or regarding compliance of systems / components and procedures / operations with the various regulating codes, standards, regulations, ordinances, etc.

The following assumptions were used in the forecasting the capital replacement plan forecast:

- All building assets are assumed to have been constructed in 2002 and put into operation in 2003.
- The building assets are assumed to have been maintained in good condition and therefore no deferred maintenance capital expenditures are anticipated or needed to be added to the capital forecast to restore any of the building components or systems to a good working condition.
- Capital replacement cost information has been based on the nearest city of Yellowknife to determine the specific location factor listed in RS Means™ building cost estimating software. The replacement cost was then increased by 25 percent due to the remote location of Diavik (Charpentier, April 2023).
- Replacement cost forecast does not include capital expenditures for altering or modifying the buildings to change their current use or function.
- The capital cost forecast does not include any capital expenditures to upgrade the buildings to meet current code requirements or any future anticipated code requirements.
- Soft costs, such as design and construction administration fees, have not been included in the capital plan forecast.

We reviewed the theoretical EUL of components likely to be incorporated into the construction of the building assets and based on the assumed year of construction and its anticipated age at the end of the capital forecast period, we have identified components that would need replacement based on achieving their theoretical expected useful life.

5 Operating, Repair, and Maintenance Cost

The repurposed NPI will require labor, supplies, and equipment to operate, repair, and maintain the facilities in a condition for safe occupancy. The sum of capital replacement costs; operation, repair, and maintenance costs; and permitting costs provide the occupant with the anticipated financial costs to occupy the Site over a given duration. The following sections describe the development of the operating, repair, and maintenance costs.

5.1 Overview

DDMI supplied Stantec with a breakdown of the 2022 operations and maintenance (O&M) costs (herein referred to as the reference O&M cost) for an average number of 568 occupants (herein referred to as the reference occupant number). O&M costs were determined for the minimum, low, medium, and high number of occupants to develop a plot of O&M costs verses number of occupants. The four price points include:

- 15 occupants – Minimum number of occupants.
- 200 occupants – Low number of occupants.
- 383 occupants – Medium number of occupants based on assigning one person per suite in the MAC.
- 600 occupants – High number of occupants based on including the add-ons to the MAC which is not part of the repurposed infrastructure.

Regardless of the number of occupants at the Site, a minimum of fifteen (15) trained staff are needed to operate and maintain the repurposed infrastructure year around. For the purposes of this study, these 15 staff members are included in each of the price points.

The operation, repair, and maintenance costs for the Site are “variable costs”, as they vary per number of occupants. As such, each of the four price points (including the minimum staff) were developed by applying a scaling factor to the 2022 O&M costs for the reference occupant number (568). Further discussion about the variable costs can be found in Section 5.2 of this report. The scaling factors for the four price points are defined below:

- 15 occupants: 15/568 = 0.026
- 200 occupants: 200/568 = 0.35
- 383 occupants: 383/568 = 0.67
- 600 occupants: 600/568 = 1.06

There were some values that were left “as-is” or unadjusted, as they apply to the operations, repair, and maintenance of the Site, regardless of the number of occupants (i.e., communications, health and safety, property taxes, etc.). These operations, repair, and maintenance costs are considered a fixed cost.

To evaluate the operation, maintenance, and repair costs for the repurposed infrastructure, Stantec reviewed specific operation components that include:

- Site services
- Camp
- Power consumption
- Travel
- Freight and winter road
- Communications
- Health and Safety
- Operation and maintenance equipment fleet
- Indirect costs

Site services include maintenance of Area A (i.e., power generation maintenance, site fire system maintenance, general facilities maintenance, etc.).

Indirect costs are most easily defined as the operations, repair, and maintenance costs that are not directly related to production or service. While they are not contingent upon activity or any particular function, they are necessary for the general operation of a facility. For example, property taxes would be an indirect cost.

Figure 5-1 shows the breakdown of the operations, repair, and maintenance cost by service and the proportion of their cost when compared to the total cost.

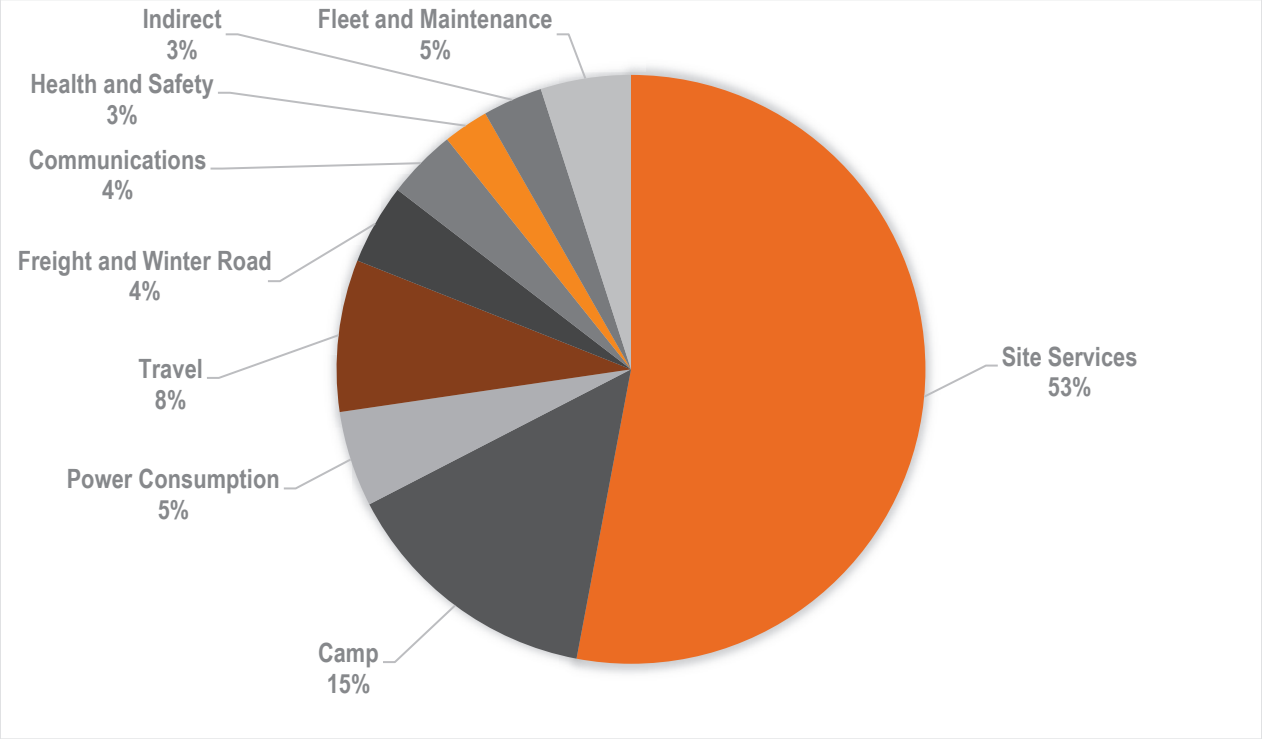


Figure 5-1 Operations, Repair, and Maintenance Cost by Service (200 Occupants)

5.2 Variable Cost

As aforementioned in Section 5.1, variable costs were any of the operations, repair, and maintenance costs with a scaling factor applied. The “scaling” factor was applied to both the material and labor costs, where applicable. For example, the scaling factor was applied to cleaning supplies for the camp as the cleaning supplies required would be directly proportional to the number of occupants that are at the Site.

The variable costs are summarized in Table 5-1. A detailed breakdown of the variable costs is provided in Appendix C.

Table 5-1 Summary of Variable Costs by Component and Occupant Variation

Variable Cost Component	Variable Cost for Occupant Price Points			
	Vacant (except for O&M staff)	Low Occupancy (200 Occupants)	Medium Occupancy (383 Occupants)	High Occupancy (600 Occupants)
Site Services Maintenance	$14,715,594	$18,477,337	$18,477,749	$18,478,237
Camp (Catering and Cleaning)	$297,858	$3,971,443	$7,605,313	$11,914,329
Freight and Winter Road	$90.909	$1,212,122	$2,321,213	$3,636,365
Communications	$222,266	$666,797	$666,797	$666,797
Power Consumption/ Fuel	$28,189	$375,850	$719,752	$1,127,549
Safety and Training	$5,000	$10,000	$20,000	$30,000
Health and Safety	$576,236	$1,152,473	$1,152,473	$1,152,473
Fleet Maintenance	$169,315	$846,575	$846,575	$846,575
Travel[1]	$171,854	$2,291,393	$4,388,018	$6,874,179
Variable Cost Subtotal	**$16,277,222**	**$29,003,988**	**$36,197,889**	**$44,726,503**

1 – Based on historical DDMI 2022 O&M costs, travel costs are assumed to be approximately $11,500 per occupant per year. This cost includes passenger flights from Edmonton and Yellowknife and excludes flights from other communities. These costs have the potential to deviate as they are occupant dependent and vary with frequency.

5.3 Fixed Costs

Fixed costs are most easily defined as the operations, repair, and maintenance costs for a production or service that are independent of the number of occupants. An example of a fixed operations, repair, and maintenance cost is the communications services because the cost for long distance satellite service is constant regardless of the occupants of at the Site.

The fixed operations, repair, and maintenance costs are summarized in Table 5-2. A detailed breakdown of the fixed costs is provided in Appendix C.

Table 5-2 Summary of Fixed Costs by Component

Fixed Costs	Cost
Site Services	$9,387,333
Fleet Maintenance	$1,760,073
Communications	$1,348,000
Health and Safety	$1,348,000
Power Consumption	$2,045,594
Fixed Cost subtotal	**$14,701,584**

5.4 Indirect Costs

Indirect costs are most easily defined as fixed operations, repair, and maintenance costs that are not directly related to production or service. While they are not contingent upon activity or any particular function, they are necessary for the general operation of a facility. Examples of indirect costs include but are not limited to rent, utilities, personnel salaries, etc.

The fixed indirect costs for the facility and their cost are provided below in Table 5-3. Further breakdown and details of the fixed indirect costs can be found in Appendix C.

Table 5-3 Summary of Fixed Indirect Costs by Component

Fixed Indirect Cost	Cost
Property Taxes	$1,6395,07
Land Leases	$22,128
Security Cost on RECLAIM	$67,779
Fixed Indirect Subtotal	$1,729,413

5.5 Summary of Operating, Repair and Maintenance Cost

Figure 5-2 provides a summary of the annual operations, repair, and maintenance costs per number of occupants inclusive of variable, fixed, and indirect costs.

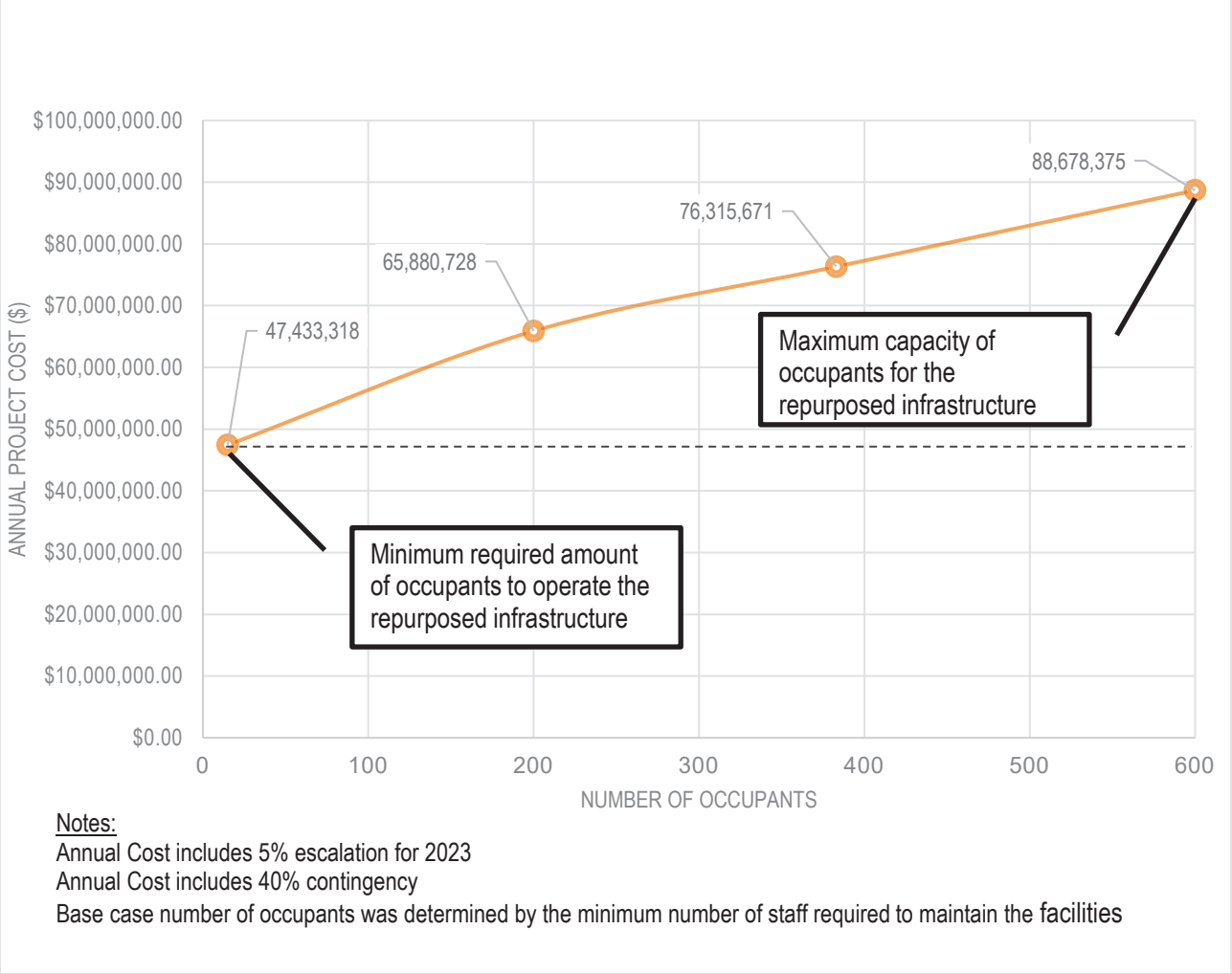


Figure 5-2 Annual Operations, Repair, and Maintenance Costs per Number of Occupants

The costs shown in Figure 5-2 include a five (5) percent escalation to convert the cost for the year 2022 to 2023. The costs were increased by 40% as a contingency to address unknown factors such as unexpected repairs, maintenance staff unfamiliar with the Site, and other unknown conditions that could increase the overall operating cost for the site.

5.6 Limitations and Assumptions

The following assumptions were used in the preparing of the operations, repair, and maintenance costs:

- DDMI 2022 O&M costs were utilized as the basis for annual costs.
- No finance, human resources, procurement, security, or warehouse functions were included.

- DDMI salaries, allowances, and benefits were assumed based on the provided DDMI 2022 operations and maintenance costs.
- Assumed DDMI current contractor rates based on the provided DDMI 2022 operations and maintenance costs.
- Assumed a 40% contingency factor.
- Assumed a 5% escalation percentage each year following 2022.

6 Permits and Authorizations

The new occupant will be required to have permits and authorizations to continue using the repurposed infrastructure. While there are some permits that are specific to mining activities, select permits and regulatory requirements will still apply for the new occupant. The following sections describe the permits and authorizations that were assumed for the purposes of developing an estimate of cost.

6.1 Overview

As previously discussed, there are some permits that will be terminated upon cessation of mining activities, but there will be some that are still required for the repurposed infrastructure and occupying the land. According to the Mackenzie Valley Land and Water Board public registry (MVLWB), DDMI holds the permits and licenses listed in Table 6-1.

Table 6-1 Summary of Permits and Licenses

Permit	Function
Water License	Entitles the licensee to use water, dewater a portion of Lac de Gras, and dispose of waste, including deposition of processed kimberlite, in the mine workings for the purpose of the Diavik diamond mining project
Land Use Permit (Type A)	a) winter road construction b) fuel positioning and storage c) ground geophysical, geological, and geochemical surveys d) drilling programs
Land Use Permit (Type B)	a) establishment and use of a man camp b) fuel storage
Land Use Permit (Mineral Exploration)	Mineral exploration and related activities
Land Use Permit (Staging Area)	Modifications to improve outlets to regulate lake levels and improve stream connectivity
Mining and Milling	a) Dikes construction adjacent to the east island, transferring of water b) Open pit and underground mining

Permit	Function
Land Use Permit (Fish Habitat)	Habitat compensation work activities on West Island under direction from the Department of Fisheries and Oceans to compensate for harmful alterations, disruption or destruction of fish habitat and the East of Lac de Gras, as a direct result of the construction of Diavik Mine.

The permits and authorizations assumed for the new occupant for cost purposes are described in the following sections.

6.2 Cost for Permits and Authorizations

For developing a cost for permits and authorizations we assumed that the new occupant would require the Water License, Land Use Permit A, and Land Use Permit B. Though the water license was utilized for mining activities, it was assumed that the occupant would still be accessing Lac de Gras for water. Similarly, Land Use Permit A was considered applicable since the occupant would construct the winter road and have fuel storage on-site. Land Use Permit B entitles the permittee to utilize the camp, which is the repurposed infrastructure.

The land is owned by the Government of Canada. DDMI is currently leasing the land until 2030. Transferred assets would have to be done with the permission of the landowner. Additionally, the new owners would need to take over the lease, which would include a transfer of liability that would be done through a negotiated liability agreement. This transfer would also require the new owner to have a financial security deposit which was not included in the cost for authorizations and permits.

Table 6-2 displays the cost and required renewal period for the permits that are suggested to be retained.

Table 6-2 Cost and Required Renewal Period for Permits

Permit	Cost	Renewal	Extended Cost for 10 Years
Water License	$15,500	Yearly	$155,500
Camp Land Use Permit (Type B)	$150	5 years	$300
Winter Road Construction Land Use	$150	Yearly	$1,500
Subtotal Permit and Authorization Cost			**$157,300**

6.3 Limitations and Exclusions

The following assumptions were used in the preparing the permit and regulatory costs:

- Publicly available DDMI permits are listed on the Mackenzie Valley Land and Water Board Website.
- Land use for occupying the repurposed infrastructure is similar to the current function.
- Additional permitting and authorization may be required which would increase the financial costs for the repurposed infrastructure.

7 Conclusions

This report provides a pre-feasibility level economic study to inform an interested party of the financial costs for maintaining and operating the repurposed Diavik NPI. Stantec reviewed available information provided by DDMI to determine the condition of the buildings, related structures, and equipment for the repurposed NPI to estimate the cost to replace components that would exceed their EUL. For purposes of determining infrastructure components that may need replacement, Stantec assumed a 30-year operational period between 2003 and 2033. The costs assume operation and maintenance of the infrastructure for ten (10) years from 2023 to 2033.

Stantec's team of subject matter experts (SMEs) provided a forecast of replacement costs for buildings, equipment for power generation, water and wastewater treatment, solid waste treatment, aviation facilities, and wind turbines. Components that would require replacement during the capital replacement period were primarily based on the age of the component and EUL. Table 7-1 shows the summary of the forecasted costs for the repurposed infrastructure.

Table 7-1 Repurposed Infrastructure Financial Costs

Cost Type	Annual Cost
Capital replacement[1]	$3,070,613
Annual operating, repair and maintenance for approximately 200 occupants[2]	$65,880,728
Permits and authorizations[2]	$15,800
Financial Costs for 200 Occupants	$68,967,141

1 – It was assumed that the new occupant would operate and maintain the repurposed infrastructure for 10-years. This value captures the total cost of the capital replacement over the 10-year period, divided into an annual cost. Escalation and a location factor was included in the total 10-year operational period for costs.

2 – Annual amount as a 2023 dollar value.

The financial costs are dependent on the number of occupants using the facility. Figure 7-1 provides a plot of the annual operations, repair, and maintenance cost for less or greater than the 383 occupants. Capital replacement permits and authorization costs would remain constant regardless of the number of occupants.

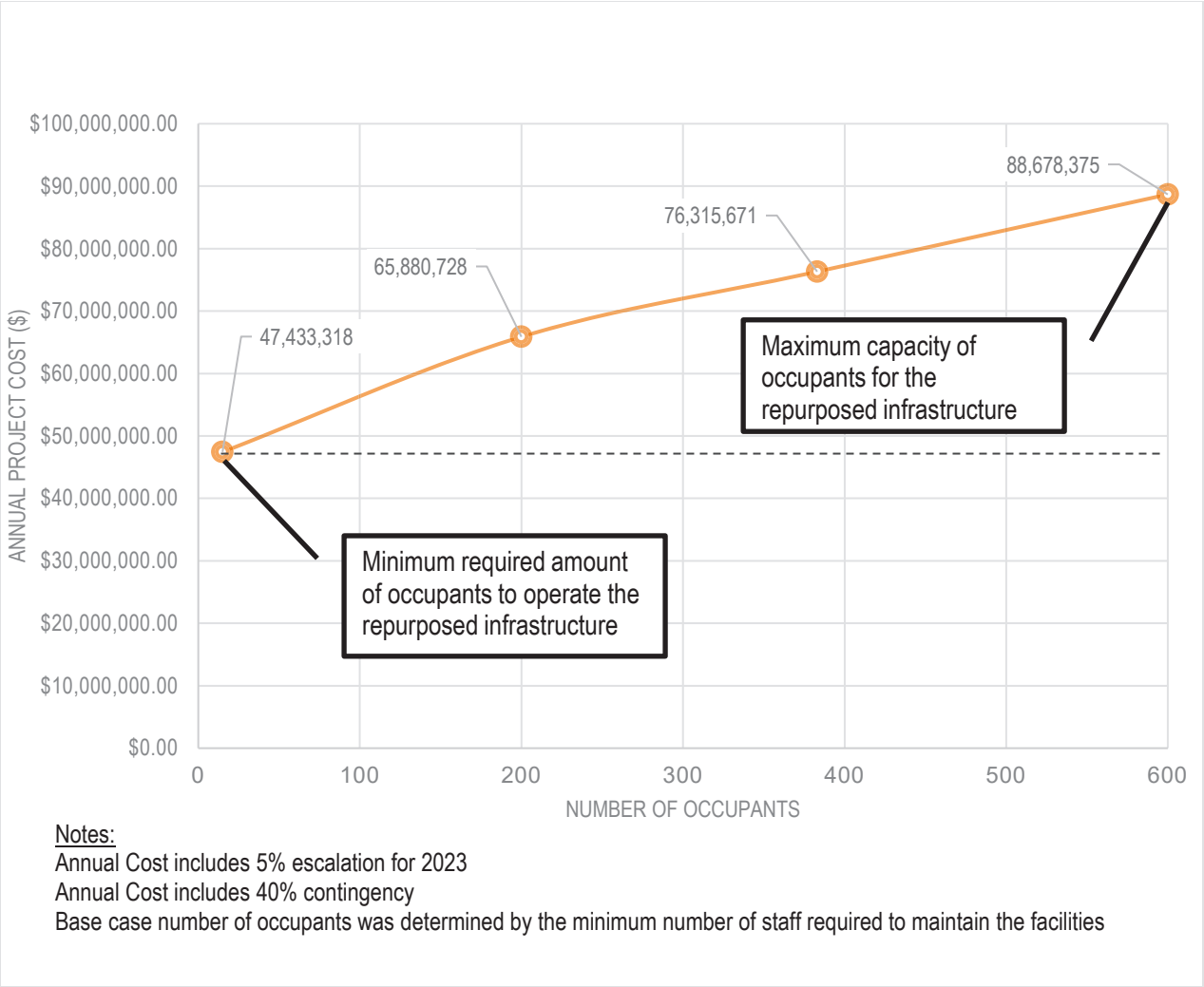


Figure 7-1 Annual Operations, Repair, and Maintenance Costs per Number of Occupants

This study was performed as a “desktop” study meaning that Stantec relied on information provided by DDMI for completing the scope of work. Understanding the financial costs are a first step in the process of a comprehensive due diligence of risks and associated liabilities in repurposing DDMI infrastructure for something other than mining.

8 References

Charpentier, Robert Email to Phillip Crouse. January 13 2023.

Charpentier, Robert Email to Phillip Crouse. April 6 2023.

Diavik Diamond Mines Inc., Closure and Reclamation Plan, 2022. http://registry.mlwb.ca

Macdonald, G. Diavik Asset Overview. February 15, 2023. PowerPoint Slides.

Mackenzie Valley Land and Water Board (MVLWB)., Public Registry., https://mvlwb.com/registry. Site accessed March 2023.

Mazar, Jacob Email to Michaela Swain. April 12 2023.

Stantec Consulting Services Inc., Diavik Mine Prefeasibility Study: unpublished memorandum prepared for NWT and Nunavut Chamber of Mines., November 4, 2022.

Swain, M. log_rf_00116. January 25, 2023. Microsoft Excel File.

FIGURES

Project Location

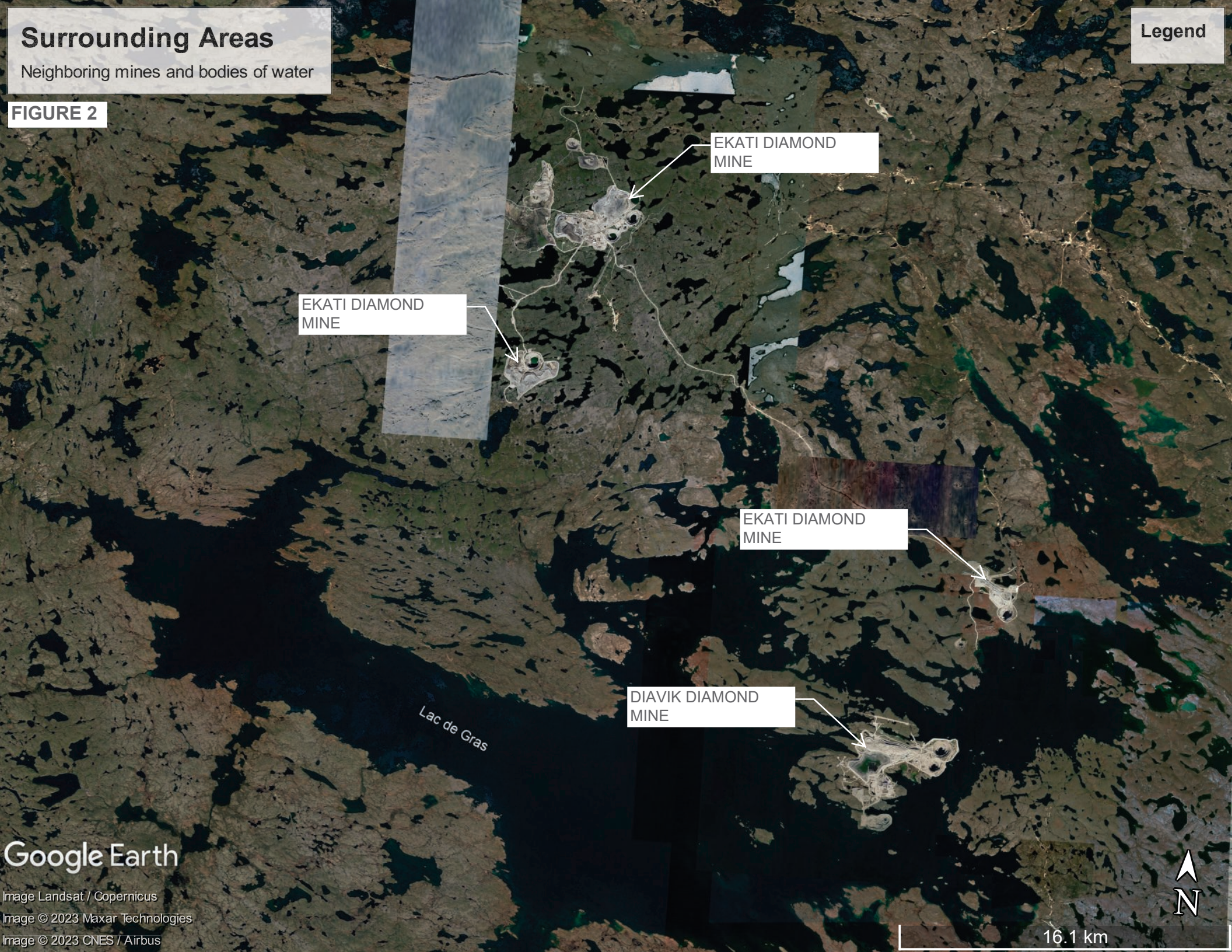
FIGURE 1

Legend

Surrounding Areas

Neighboring mines and bodies of water

FIGURE 2



Overall Diavik Map

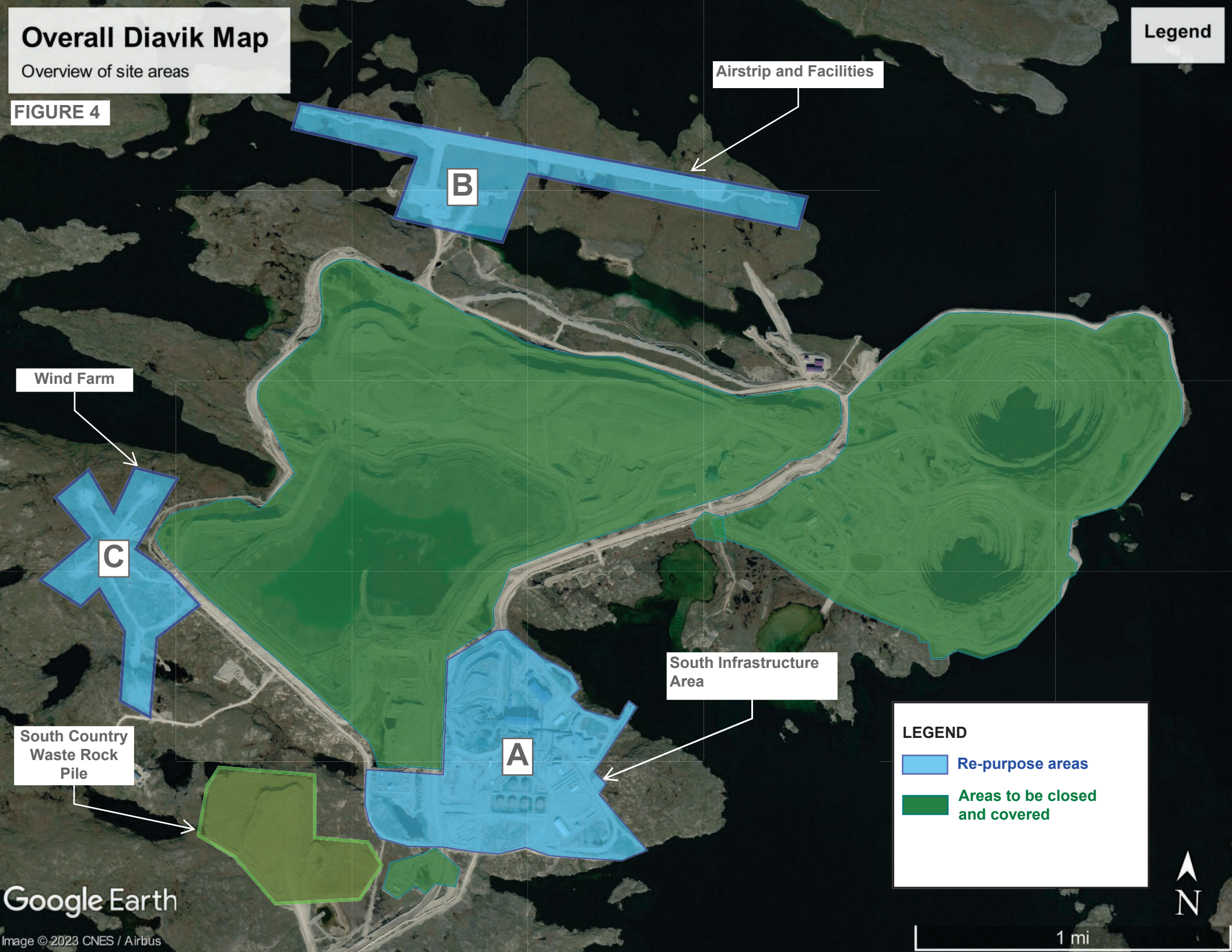
Overview of site areas

FIGURE 3

Overall Diavik Map

Overview of site areas

FIGURE 4



Re-purposed South Infrastructure

FIGURE 5

Re-purposed South Infrastructure

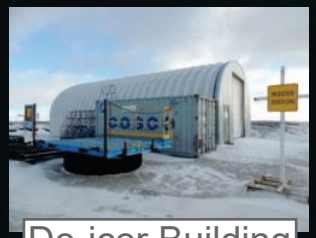
FIGURE 6

Re-purposed Airstrip and Facilities

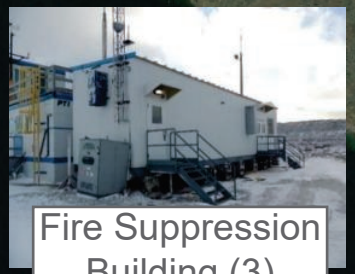
Aerial view

FIGURE 7

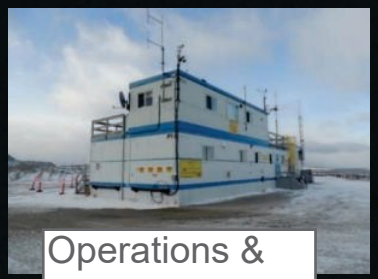
Legend



De-icer Building (1)



Fire Suppression Building (3)



Operations & Control Building (2)

1,596 x 51 m gravel airstrip (4)

N

915 km

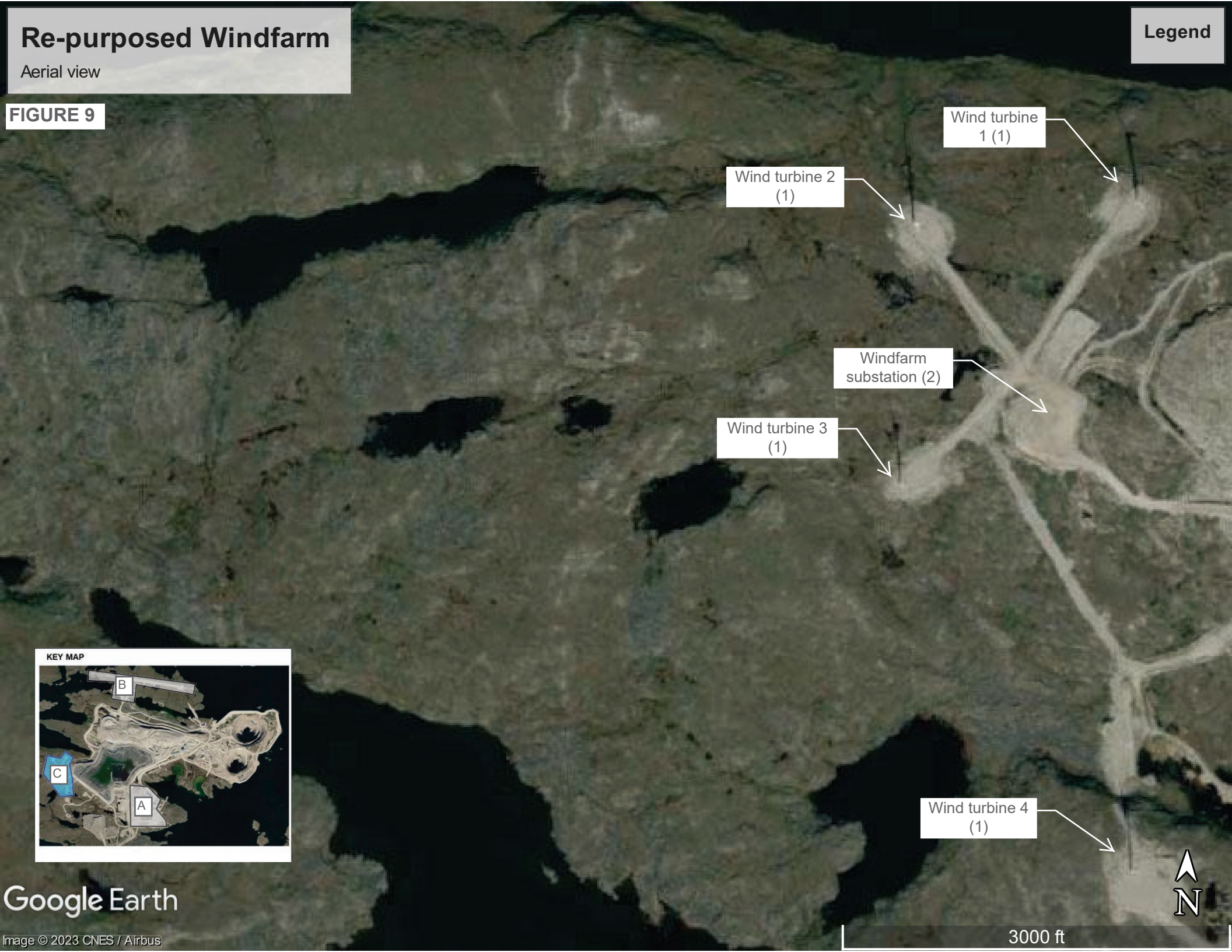
Re-purposed Airstrip

FIGURE 8

Re-purposed Windfarm

Aerial view

FIGURE 9



Re-purposed Windfarm

FIGURE 10

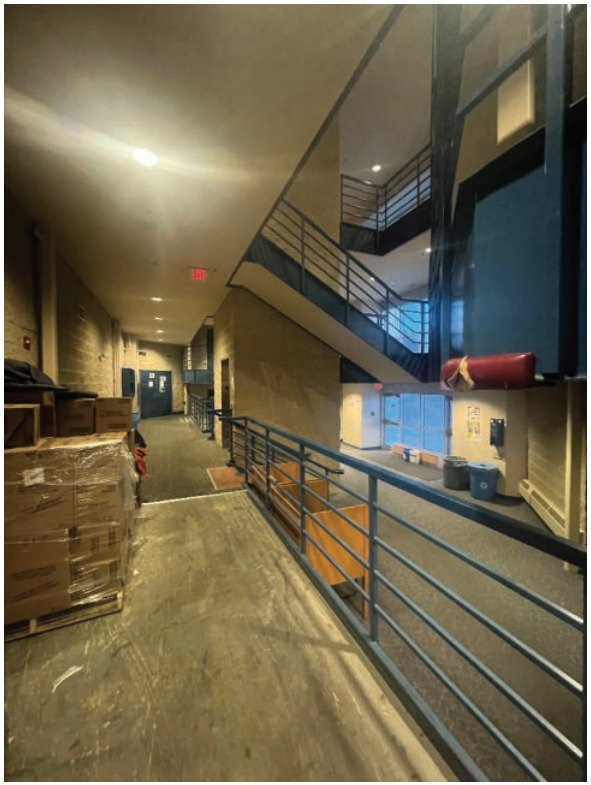
APPENDICES

Appendix A Site Photographs

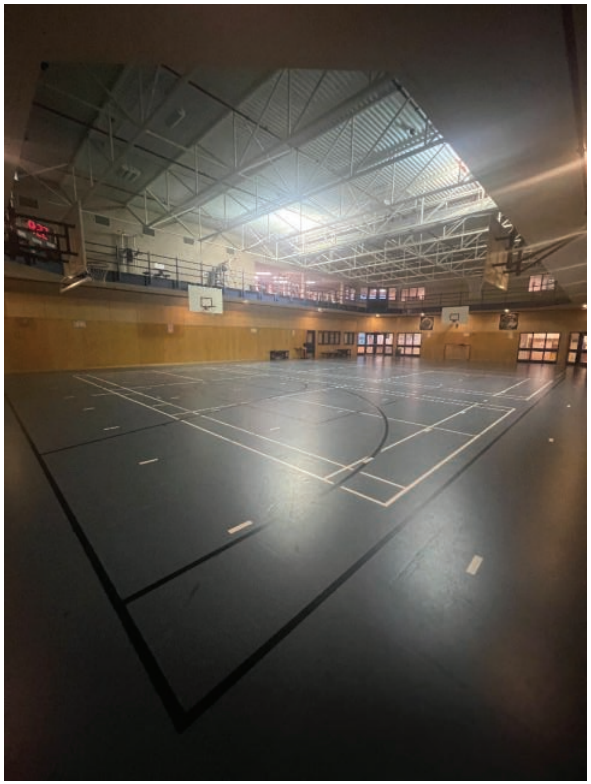
Appendix A SOUTH INFRASTRUCTRE PHOTOGRAPHS

1 – Main Accommodations Complex (MAC)

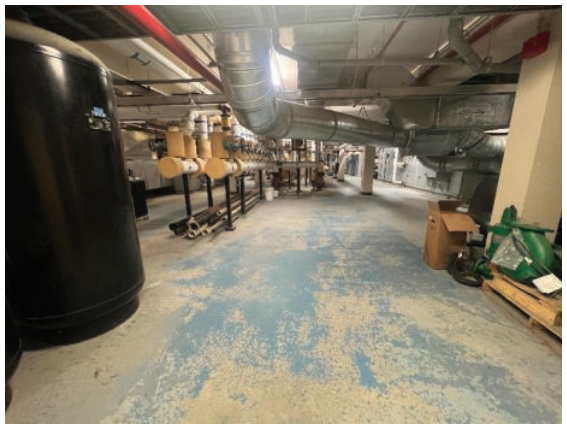
1 – Main Accommodations Complex (MAC)

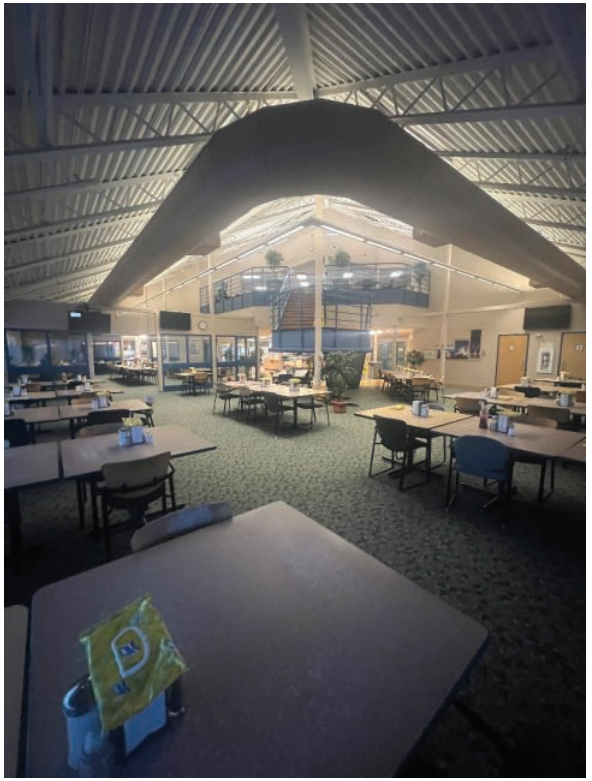


1 – Main Accommodations Complex (MAC)



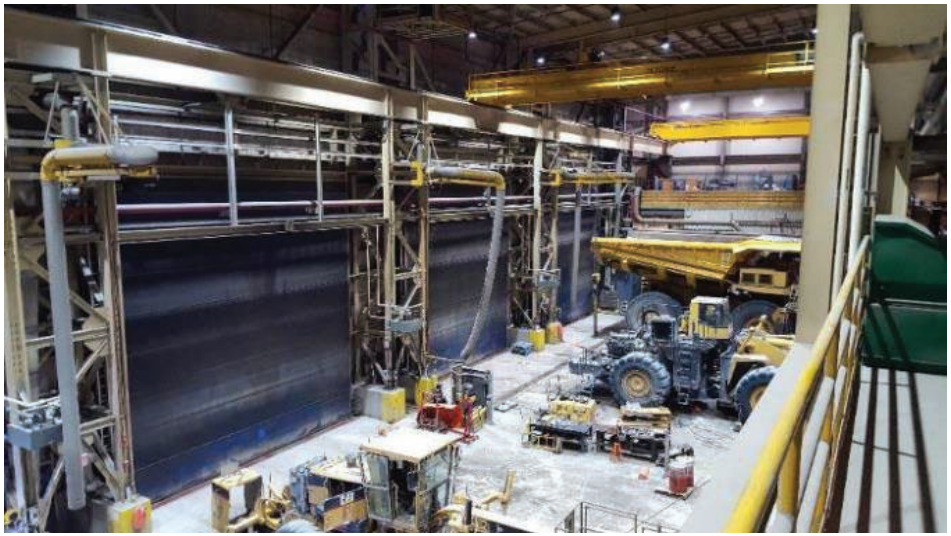
1 – Main Accommodations Complex (MAC)



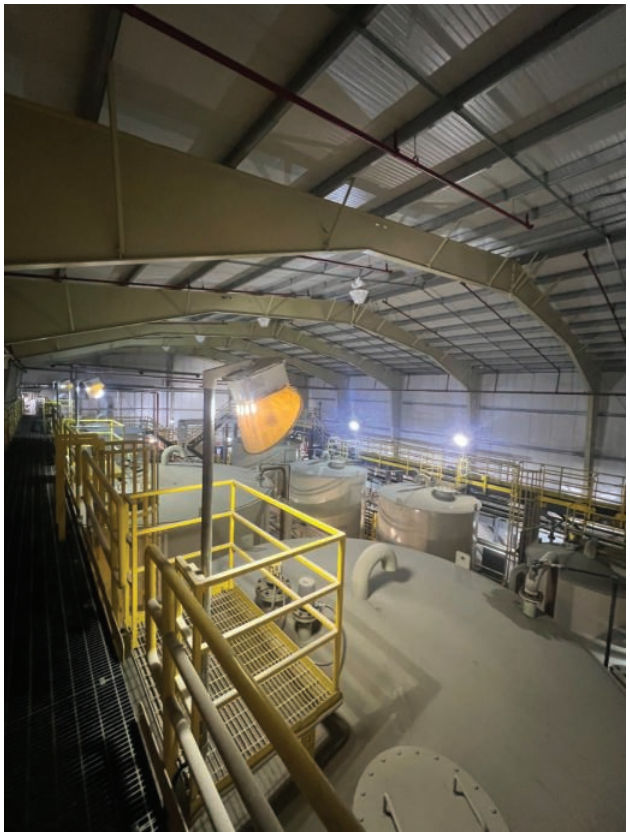


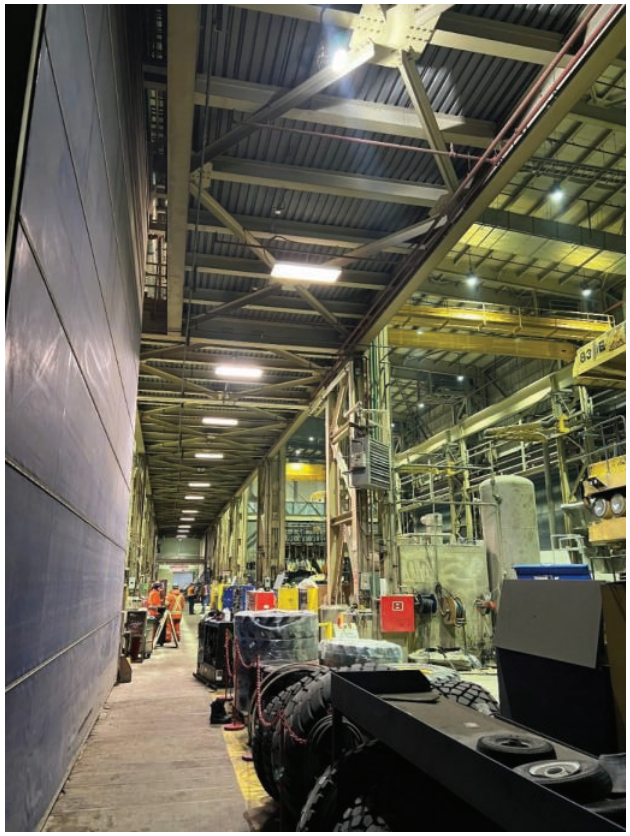
2 – Sewage Treatment Plant

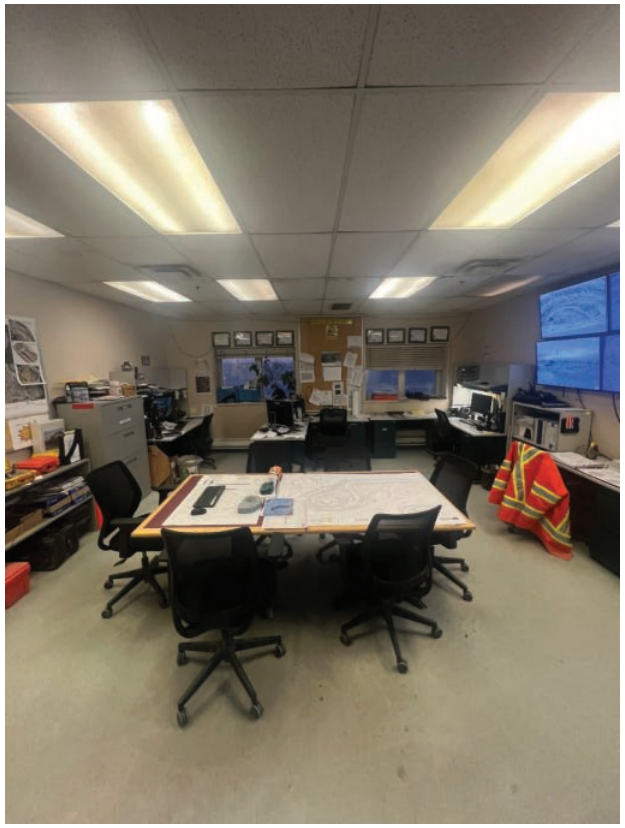
3 – Maintenance Complex



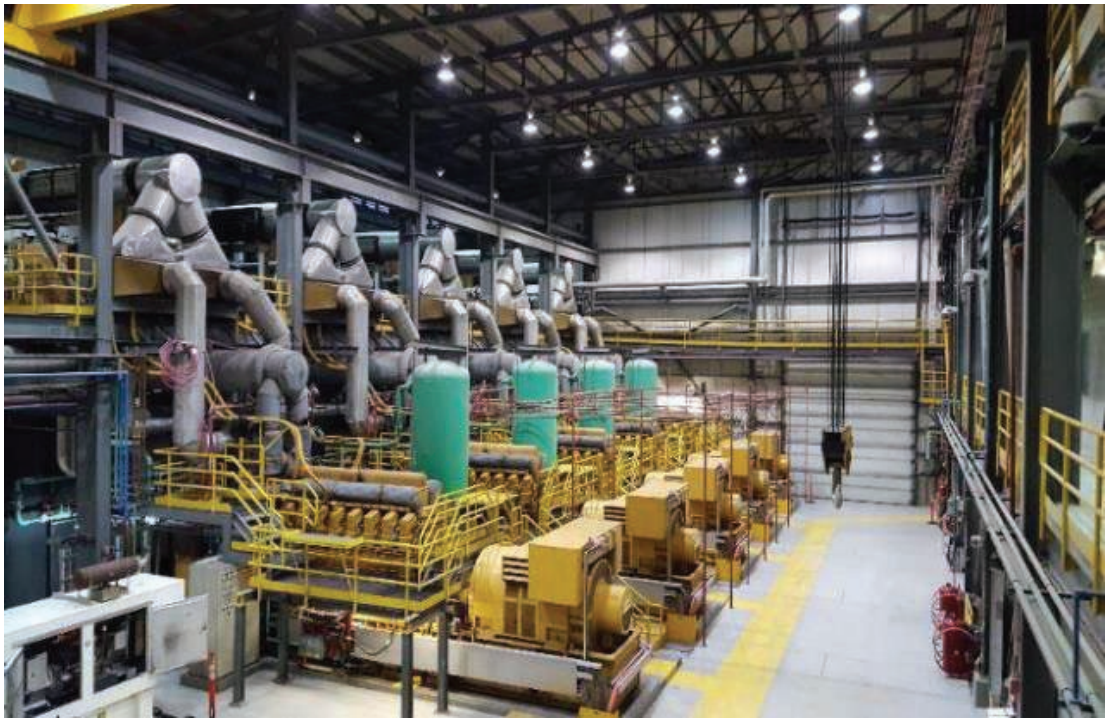
3 – Maintenance Complex







4 – Power Plant

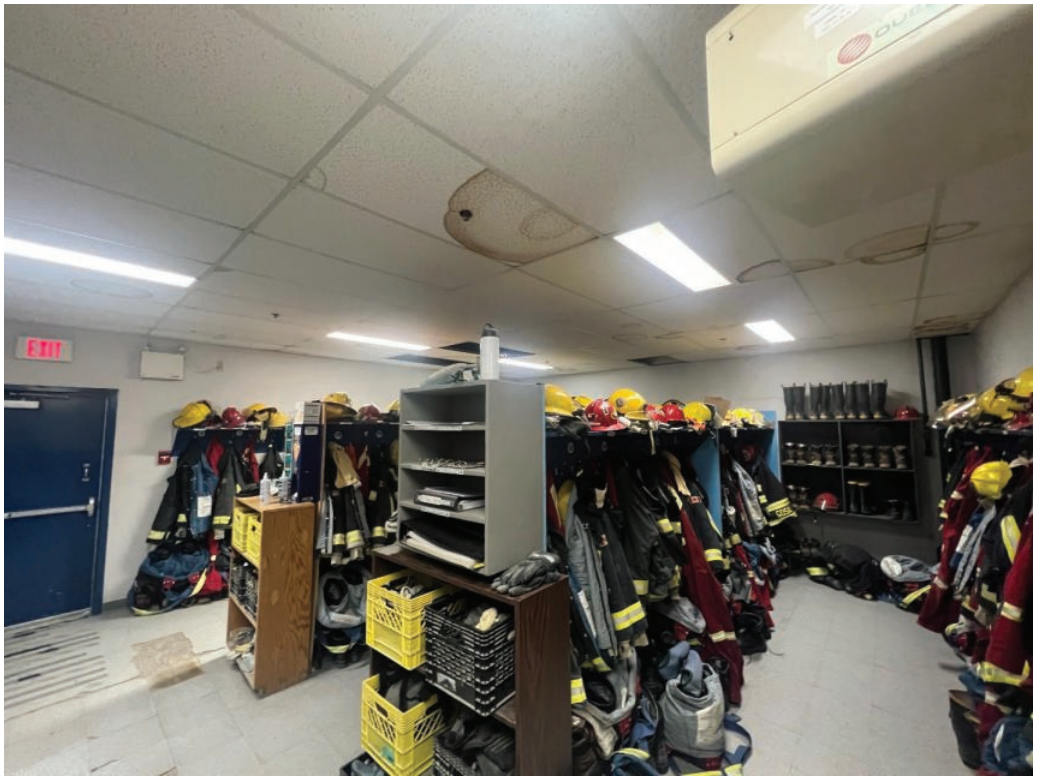


5 - Boiler House

6 – Lubricant and Oil Storage

7 – South Tank Farm

8 – ERT Building



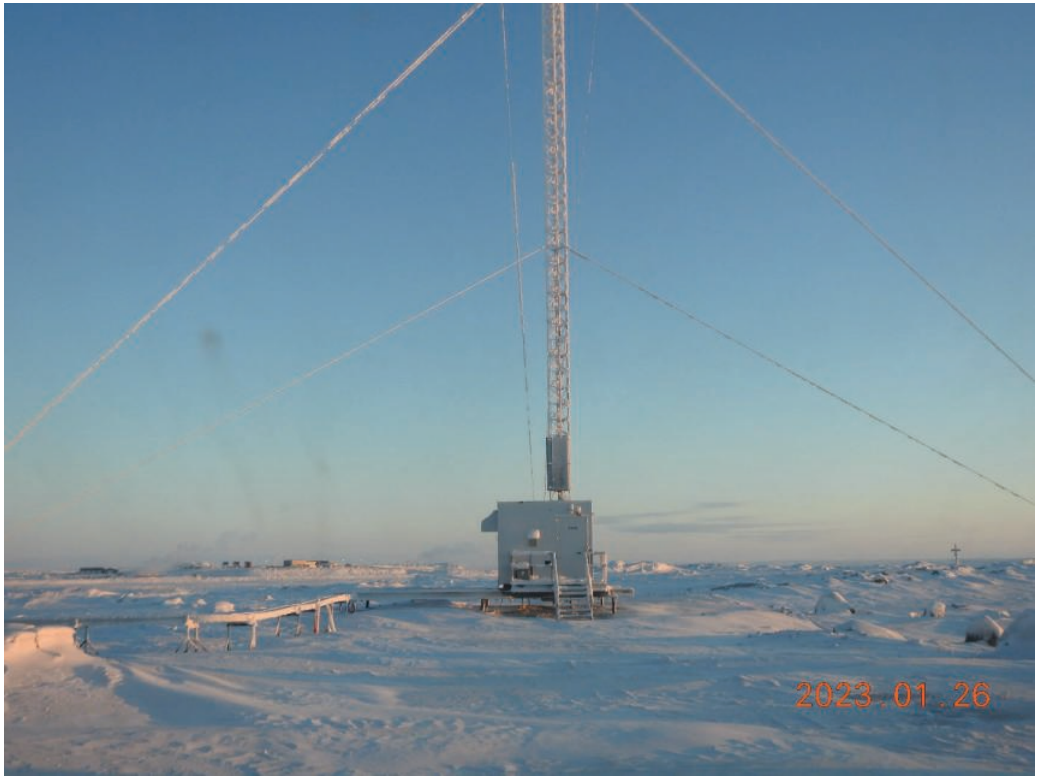
8 – ERT Building

9 – Potable Water Treatment Plant

10 – Raw Water Pumphouse

11 – Environmental Field Lab

12 – Communications Building



13 – Incinerator and Waste Handling Complex

Appendix A AIRPORT PHOTOGRAPHS

1 – De-icer Building

2 – Fire Suppression

2 – Substation

3 – Operations and Control

4 - Airstrip

Appendix A WINDFARM PHOTOGRAPHS

1 – Wind Turbines

Appendix B Building Conditions Assessment

Diavik Mine - Capital Plan Forecast - Appendix B Source Data Details

Diavik Mine building name	Building section name	Diavik Mine building section Area (sm)	Source of building area			Source data building size to Diavik Mine building size ratio	Source of costing data	Distance from Yellowknife (km)		Location + Inflation Factor
Accomodation Building	Dorms	8187	taken from drawings			6.21	from Similar Site 1 Dorms	1,630		110.2
Accomodation Building	Core	7226	taken from drawings			1.51	from Similar Site 1 Core	1,630		110.2
Artic Corridor	Artic Corridor	1759	taken from drawings			3.68	from Similar Site 2	2,275		129.2
Sewage TP	Sewage TP	719	taken from drawings			9.01	from Similar Site 2	2,275		129.2
Maint. Complex	Maint. Complex	8918	taken from drawings			0.73	from Similar Site 2	2,275		129.2
Power House	Power House	2883	taken from drawings			2.25	from Similar Site 2	2,275		129.2
Boiler House	Boiler House	582	taken from drawings			11.13	from Similar Site 2	2,275		129.2
Lube Oil Storage	Lube Oil Storage	945	taken from drawings			6.86	from Similar Site 2	2,275		129.2
ERT Building	ERT Building	540	taken from Daftlogic			12.00	from Similar Site 2	2,275		129.2
Potable Water TP	Potable Water TP	82	taken from drawings			79.02	from Similar Site 2	2,275		129.2
Raw Water Pump	Raw Water Pump	122	taken from drawings			53.11	from Similar Site 2	2,275		129.2
Enviro Lab Building	Enviro Lab Building	203	taken from Daftlogic			31.92	from Similar Site 2	2,275		129.2
Comms Building	Comms Building	72	taken from appendix C			90.00	from Similar Site 2	2,275		129.2
Airport Buildings	Airport Buildings	326	taken from Daftlogic			33.37	from Similar Site 1 Core	1,630		110.2
Incinerator	Incinerator	446	taken from Daftlogic			14.53	from Similar Site 2	2,275		129.2

Diavik Mine - Capital Plan Forecast - Appendix B Source Data Details

Similar Site 1 Camp info (report date 2015)

Similar Site 1 Dorms	50,824	m2
Similar Site 1 Core	10,878	m2

Dorm Costs		Dorm Comment	Core Costs		Core Comment
Interior	$ 6,508,740	see similar site 1 (Dorm) cost table source data note 1	Interior	$ 3,507,348	see similar site 1 (Core) cost table source data note 1
Mechanical	$ 4,115,795	see similar site 1 (Dorm) cost table source data note 2	Mechanical	$ 1,118,700	see similar site 1 (Core) cost table source data note 2
Electrical	$ 1,994,090	see similar site 1 (Dorm) cost table source data note 3	Electrical	$ 1,196,295	see similar site 1 (Core) cost table source data note 3
Envelope	$ 36,000	see similar site 1 (Dorm) cost table source data note 4	Envelope	$ 31,000	see similar site 1 (Core) cost table source data note 4

Combined Adjustment Factor (Cost indeces for location and timing of data development, developed from RS Means)		
Yellowknife	125.4	Q1 2023
1,630 km away	110.2	Q2 2015
1,740 km away	101.2	Q3 2020
2,275 km away	129.2	Q4 2021

Diavik Mine - Capital Plan Forecast - Appendix B Source Data Details

Similar Site 2				Similar Site 2		
Main Building (maint.)	Area (sm) 6,480			Main Building (maint.)	Area (sm) 6480	
Main Building (maint.) Costs		Comment		**Warehouse Costs**		Comment
Interior	$ 1,833,000	see similar site 2 cost table source data note 1		Interior	$ 1,833,000	see similar site 2 cost table source data note 1
Mechanical	$ 1,125,800	see similar site 2 cost table source data note 2		Mechanical	$ 1,125,800	see similar site 2 cost table source data note 2
Electrical	$ 444,000	see similar site 2 cost table source data note 3		Electrical	$ 444,000	see similar site 2 cost table source data note 3
Envelope	$ 238,900	see similar site 2 cost table source data note 4		Envelope	$ 238,900	see similar site 2 cost table source data note 4

Diavik Mine - Capital Plan Forecast - Appendix B Source Data Details

General notes:
Originally, we had four sources of data:
-One to be used for the dormitory portion of the accommodation building and airport building(coloured in blue in the table above).
-One for the kitchen/dinning hall/recreation space of the accommodation building(coloured in blue in the table above).
-One for the maintenance building(coloured in brown in the table above).
-One for the other buildings. Based on a closer review the source building date intended to be used for providing data for the "other" type buildings (coloured in green in the table above).
The data source intended to be used for the “other buildings” had already been renovated and much of the mechanical had already been replaced. It was decided that the CMBC Port Coquitlam Transit Centre info for this group of buildings would be used for the “other buildings” group as well. The overall capital costs for the site went up from 15.1 million to 17.3 million.

Similar Site 1 cost table (Core) source data notes
In general, the source data’s 25 planning horizon data was used, where the data matches the intended buildings’ age (30 yto 40y) during the evaluation period. This was generally column X to column AH in the cost tables.
1. Source data file filtered for "building interior" and ”furnishing and equipment”.
2. Source data file filtered for "mechanical systems".
3. To produce value the source data file was filtered for "electrical systems".
4. Source data file filtered for "building envelope" , "component name" system (excluded cladding and roof (eul greater than 30y).

Similar Site 1 cost table (Dorm) source data notes
In general, the source data’s 25 planning horizon data was used, where the data matches the intended buildings’ age (30 yto 40y) during the evaluation period. This was generally column X to column AH in the cost tables.
1. Source data file filtered for "building interior".
2. Source data file filtered for "main building" and "mechanical systems" to produce value.
3. To produce value the source data file was filtered for "electrical systems".
4. Source data file filtered for "building envelope" , "component name" system (excluded roof (eul greater than 30y).

Similar Site 2 cost table source data notes:
In general the source data’s 10 planning horizon data was used. The data does not match the intended buildings’ age (30 yto 40y) during the evaluation period.
1. "Source data file filtered for "main building" and "building interior" system) to produce value.
2. Source data file filtered for "main building" and "mechanical systems" to produce value.
3. Source data file filtered for "main building" and "electrical systems" to produce value.
4. Source data file filtered for "main building" , "building envelope" systems and have excluded brick cladding, soffits and gutter and downspouts (eul greater than 30y) to produce value.

Appendix B1 CAPITAL FORECAST – TABLE A

TABLE A - MAJOR SYSTEM AND EVENT COSTS

Item No.	Diavik Mine building Section Name/ Building Name	Major Component Group	Assumptions	Building Construction Year	Physical Age (Years)	Initial Event Year	Source data building size to Diavik Mine building size ratio	Major Component Source data	Unit of Measure	Combined Adjustment Factor	Adjusted major Component data lump sum Cost	Total Opinion of Cost (10 Years)
1	Dorms	Interior	Includes all interior finishes and fittings.	2002	20	2027	6.21	$ 6,508,740.00	Lump Sum	1.14	$ 1,193,100.00	$ 1,193,100
2	Dorms	Mechanical	Includes all HVAC equipment.	2002	20	2027	6.21	$ 4,115,795.00	Lump Sum	1.14	$ 754,500.00	$ 754,500
3	Dorms	Electrical	Includes all electrical equipment.	2002	20	2027	6.21	$ 1,994,090.00	Lump Sum	1.14	$ 365,600.00	$ 365,600
4	Dorms	Envelope	Includes all Envelope finishes.	2002	20	2027	6.21	$ 5,257,200.00	Lump Sum	1.14	$ 963,700.00	$ 963,700
5	Core	Interior	Includes all interior finishes and fittings. For the building section this includes the kitchen, dining hall and recreational space fixed equipment)	2002	20	2027	1.51	$ 3,507,348.00	Lump Sum	1.14	$ 2,651,300.00	$ 2,651,300
6	Core	Mechanical	Includes all HVAC equipment.	2002	20	2027	1.51	$ 1,118,700.00	Lump Sum	1.14	$ 845,700.00	$ 845,700
7	Core	Electrical	Includes all electrical equipment.	2002	20	2027	1.51	$ 1,196,295.00	Lump Sum	1.14	$ 904,300.00	$ 904,300
8	Core	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	1.51	$ 31,000.00	Lump Sum	1.14	$ 23,500.00	$ 23,500
9	Artic Corridor	Interior	Includes all interior finishes.	2002	20	2027	3.68	$ 1,833,000.00	Lump Sum	0.97	$ 483,000.00	$ 483,000
10	Artic Corridor	Mechanical	Includes all HVAC equipment.	2002	20	2027	3.68	$ 1,125,800.00	Lump Sum	0.97	$ 296,700.00	$ 296,700
11	Artic Corridor	Electrical	Includes all electrical equipment.	2002	20	2027	3.68	$ 444,000.00	Lump Sum	0.97	$ 117,000.00	$ 117,000
12	Artic Corridor	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	3.68	$ 238,900.00	Lump Sum	0.97	$ 63,000.00	$ 63,000
13	Sewage TP	Interior	Includes all interior finishes and fittings.	2002	20	2027	9.01	$ 1,833,000.00	Lump Sum	0.97	$ 197,500.00	$ 197,500
14	Sewage TP	Mechanical	Includes all HVAC equipment. Does not include sewage treatment systems.	2002	20	2027	9.01	$ 1,125,800.00	Lump Sum	0.97	$ 121,300.00	$ 121,300

TABLE A - MAJOR SYSTEM AND EVENT COSTS

Item No.	Diavik Mine building Section Name/ Building Name	Major Component Group	Assumptions	Building Construction Year	Physical Age (Years)	Initial Event Year	Source data building size to Diavik Mine building size ratio	Major Component Source data	Unit of Measure	Combined Adjustment Factor	Adjusted major Component data lump sum Cost	Total Opinion of Cost (10 Years)
15	Sewage TP	Electrical	Includes all electrical equipment. Does not include electrical systems for sewage treatment systems.	2002	20	2027	9.01	$ 444,000.00	Lump Sum	0.97	$ 47,900.00	$ 47,900
16	Sewage TP	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	9.01	$ 238,900.00	Lump Sum	0.97	$ 25,800.00	$ 25,800
17	Maint. Complex	Interior	Includes all interior finishes and fittings.	2002	20	2027	0.73	$ 1,833,000.00	Lump Sum	0.97	$ 2,448,500.00	$ 2,448,500
18	Maint. Complex	Mechanical	Includes all HVAC equipment.	2002	20	2027	0.73	$ 1,125,800.00	Lump Sum	0.97	$ 1,503,800.00	$ 1,503,800
19	Maint. Complex	Electrical	Includes all electrical equipment.	2002	20	2027	0.73	$ 444,000.00	Lump Sum	0.97	$ 593,100.00	$ 593,100
20	Maint. Complex	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	0.73	$ 238,900.00	Lump Sum	0.97	$ 319,200.00	$ 319,200
21	Power House	Interior	Includes all interior finishes and fittings.	2002	20	2027	2.25	$ 1,833,000.00	Lump Sum	0.97	$ 791,600.00	$ 791,600
22	Power House	Mechanical	Includes all HVAC equipment. Does not include power plant.	2002	20	2027	2.25	$ 1,125,800.00	Lump Sum	0.97	$ 486,200.00	$ 486,200
23	Power House	Electrical	Includes all electrical equipment. Does not include power plant's electrical distribution systems.	2002	20	2027	2.25	$ 444,000.00	Lump Sum	0.97	$ 191,800.00	$ 191,800
24	Power House	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	2.25	$ 238,900.00	Lump Sum	0.97	$ 103,200.00	$ 103,200
25	Boiler House	Interior	Includes all interior finishes and fittings.	2002	20	2027	11.13	$ 1,833,000.00	Lump Sum	0.97	$ 159,800.00	$ 159,800
26	Boiler House	Mechanical	Includes all HVAC equipment. Does not include boiler plant.	2002	20	2027	11.13	$ 1,125,800.00	Lump Sum	0.97	$ 98,200.00	$ 98,200
27	Boiler House	Electrical	Includes all electrical equipment. Does not include boiler plant's electrical systems.	2002	20	2027	11.13	$ 444,000.00	Lump Sum	0.97	$ 38,800.00	$ 38,800

TABLE A - MAJOR SYSTEM AND EVENT COSTS

Item No.	Diavik Mine building Section Name/ Building Name	Major Component Group	Assumptions	Building Construction Year	Physical Age (Years)	Initial Event Year	Source data building size to Diavik Mine building size ratio	Major Component Source data	Unit of Measure	Combined Adjustment Factor	Adjusted major Component data lump sum Cost	Total Opinion of Cost (10 Years)
28	Boiler House	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	11.13	$ 238,900.00	Lump Sum	0.97	$ 20,900.00	$ 20,900
29	Lube Oil Storage	Interior	Includes all interior finishes and fittings.	2002	20	2027	6.86	$ 1,833,000.00	Lump Sum	0.97	$ 259,500.00	$ 259,500
30	Lube Oil Storage	Mechanical	Includes all HVAC equipment.	2002	20	2027	6.86	$ 1,125,800.00	Lump Sum	0.97	$ 159,400.00	$ 159,400
31	Lube Oil Storage	Electrical	Includes all electrical equipment.	2002	20	2027	6.86	$ 444,000.00	Lump Sum	0.97	$ 62,900.00	$ 62,900
32	Lube Oil Storage	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	6.86	$ 238,900.00	Lump Sum	0.97	$ 33,900.00	$ 33,900
33	ERT Building	Interior	Includes all interior finishes and fittings.	2002	20	2027	12.00	$ 1,833,000.00	Lump Sum	0.97	$ 148,300.00	$ 148,300
34	ERT Building	Mechanical	Includes all HVAC equipment.	2002	20	2027	12.00	$ 1,125,800.00	Lump Sum	0.97	$ 91,100.00	$ 91,100
35	ERT Building	Electrical	Includes all electrical equipment.	2002	20	2027	12.00	$ 444,000.00	Lump Sum	0.97	$ 36,000.00	$ 36,000
36	ERT Building	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	12.00	$ 238,900.00	Lump Sum	0.97	$ 19,400.00	$ 19,400
37	Potable Water TP	Interior	Includes all interior finishes and fittings.	2002	20	2027	79.02	$ 1,833,000.00	Lump Sum	0.97	$ 22,600.00	$ 22,600
38	Potable Water TP	Mechanical	Includes all HVAC equipment. Does not include potable water treatment plant equipment.	2002	20	2027	79.02	$ 1,125,800.00	Lump Sum	0.97	$ 13,900.00	$ 13,900
39	Potable Water TP	Electrical	Includes all electrical equipment. Does not include potable water treatment plant equipment electrical systems.	2002	20	2027	79.02	$ 444,000.00	Lump Sum	0.97	$ 5,500.00	$ 5,500

TABLE A - MAJOR SYSTEM AND EVENT COSTS

Item No.	Diavik Mine building Section Name/ Building Name	Major Component Group	Assumptions	Building Construction Year	Physical Age (Years)	Initial Event Year	Source data building size to Diavik Mine building size ratio	Major Component Source data	Unit of Measure	Combined Adjustment Factor	Adjusted major Component data lump sum Cost	Total Opinion of Cost (10 Years)
40	Potable Water TP	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	79.02	$ 238,900.00	Lump Sum	0.97	$ 3,000.00	$ 3,000
41	Raw Water Pump	Interior	Includes all interior finishes and fittings.	2002	20	2027	53.11	$ 1,833,000.00	Lump Sum	0.97	$ 33,500.00	$ 33,500
42	Raw Water Pump	Mechanical	Includes all HVAC equipment. Does not include raw water pumping systems.	2002	20	2027	53.11	$ 1,125,800.00	Lump Sum	0.97	$ 20,600.00	$ 20,600
43	Raw Water Pump	Electrical	Includes all electrical equipment. Does not include raw water pumping system electrical systems.	2002	20	2027	53.11	$ 444,000.00	Lump Sum	0.97	$ 8,200.00	$ 8,200
44	Raw Water Pump	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	53.11	$ 238,900.00	Lump Sum	0.97	$ 4,400.00	$ 4,400
45	Enviro Lab Building	Interior	Includes all interior finishes and fittings.	2002	20	2027	31.92	$ 1,833,000.00	Lump Sum	0.97	$ 55,800.00	$ 55,800
46	Enviro Lab Building	Mechanical	Includes all HVAC equipment.	2002	20	2027	31.92	$ 1,125,800.00	Lump Sum	0.97	$ 34,300.00	$ 34,300
47	Enviro Lab Building	Electrical	Includes all electrical equipment.	2002	20	2027	31.92	$ 444,000.00	Lump Sum	0.97	$ 13,600.00	$ 13,600
48	Enviro Lab Building	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	31.92	$ 238,900.00	Lump Sum	0.97	$ 7,300.00	$ 7,300
49	Comms Building	Interior	Includes all interior finishes and fittings.	2002	20	2027	90.00	$ 1,833,000.00	Lump Sum	0.97	$ 19,800.00	$ 19,800
50	Comms Building	Mechanical	Includes all HVAC equipment.	2002	20	2027	90.00	$ 1,125,800.00	Lump Sum	0.97	$ 12,200.00	$ 12,200
51	Comms Building	Electrical	Includes all electrical equipment.	2002	20	2027	90.00	$ 444,000.00	Lump Sum	0.97	$ 4,800.00	$ 4,800
52	Comms Building	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	90.00	$ 238,900.00	Lump Sum	0.97	$ 2,600.00	$ 2,600

TABLE A - MAJOR SYSTEM AND EVENT COSTS

Item No.	Diavik Mine building Section Name/ Building Name	Major Component Group	Assumptions	Building Construction Year	Physical Age (Years)	Initial Event Year	Source data building size to Diavik Mine building size ratio	Major Component Source data	Unit of Measure	Combined Adjustment Factor	Adjusted major Component data lump sum Cost	Total Opinion of Cost (10 Years)
53	Airport Buildings	Interior	Includes all interior finishes and fittings.	2002	20	2027	33.37	$ 3,507,348.00	Lump Sum	1.14	$ 119,700.00	$ 119,700
54	Airport Buildings	Mechanical	Includes all HVAC equipment.	2002	20	2027	33.37	$ 1,118,700.00	Lump Sum	1.14	$ 38,200.00	$ 38,200
55	Airport Buildings	Electrical	Includes all electrical equipment.	2002	20	2027	33.37	$ 1,196,295.00	Lump Sum	1.14	$ 40,800.00	$ 40,800
56	Airport Buildings	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	33.37	$ 31,000.00	Lump Sum	1.14	$ 1,100.00	$ 1,100
57	Incinerator	Interior	Includes all interior finishes and fittings.	2002	20	2027	14.53	$ 1,833,000.00	Lump Sum	0.97	$ 122,500.00	$ 122,500
58	Incinerator	Mechanical	Includes all HVAC equipment. Does not include incinerator systems.	2002	20	2027	14.53	$ 1,125,800.00	Lump Sum	0.97	$ 75,300.00	$ 75,300
59	Incinerator	Electrical	Includes all electrical equipment. Does not include incinerator system electrical systems.	2002	20	2027	14.53	$ 444,000.00	Lump Sum	0.97	$ 29,700.00	$ 29,700
60	Incinerator	Envelope	Includes limited envelope components that will achieve their service life between year 20 and year 30.	2002	20	2027	14.53	$ 238,900.00	Lump Sum	0.97	$ 16,000.00	$ 16,000

Appendix B2 COMPONENTS' LIST

Diavik Mine - Capital Plan Forecast
Appendix B - Component List

System Group Name	System Name	EUL
A1010 Standard Foundations	A1011 Wall Foundations	75
	A1012 Column Foundations, Spread Footings & Pile Caps	75
	A1013 Perimeter Drainage & Insulation	75
A1020 Special Foundations	A1021 Pile Foundations	75
	A1022 Grade Beams	75
A1030 Slab on Grade	A1031 Standard Slab on Grade	75
	A1032 Structural Slab on Grade	75
	A1033 Inclined Slab on Grade	75
	A1034 Trenches, Pits & Bases	75
	A1035 Under-Slab Drainage & Insulation	75
A2010 Basement Excavation	A2011 Excavation for Basements	75
	A2012 Structure Back Fill & Compaction	75
	A2013 Shoring	75
A2020 Basement Walls	A2021 Basement Wall Construction	75
	A2022 Moisture Protection	75
	A2023 Basement Wall Insulation	75
	A2024 Interior Skin	75
B1010 Floor Construction	B1011 Suspended Basement Floors Construction	75
	B1012 Upper Floors Construction	50
	B1013.01.01 Concrete Balcony Floor Construction (& Decks)	30
	B1013.01.02 Metal Balcony Construction	35
	B1013.02 Mezzanine Construction	50
	B1014.01 Metal Ramp Construction: Exterior	35
	B1015.01 Concrete Stair Construction: Exterior	40
	B1015.02 Metal Stair Construction: Exterior	35
	B1015.04 Exterior Railings (Iron)	25
	B1015.05 Exterior Railings (Aluminum)	25
	B1015.06 Exterior Railings (Metal and Glass)	25
	B1016 Floor Raceway Systems	25
	B1017 Floor Construction Fireproofing and Firestopping	50
B1020 Roof Construction	B1021.01 Flat Roof Structural Frame	50
	B1021.02 Structural Interior Walls Supporting Roofs	50
	B1021.03 Roof Decks, Slabs, and Sheathing	50
	B1022 Pitched Roof Construction	50
	B1023.01 Concrete Canopies	40
	B1024 Roof Construction Fireproofing and Firestopping	50
B2010 Exterior Walls	B2011.01 Cast-in-place Concrete: Ext. Wall Const.	50
	B2011.02 Precast Concrete: Ext. Wall Const.	50
	B2011.03 Masonry Units: Ext. Wall Const.	50
	B2011.04 Load-Bearing-Metal Studs: Ext. Wall Const.	50
	B2011.06 Other Exterior Wall Construction	50
	B2011.07 Exterior Wall Vapour Retarders, Air Barriers, and Insulation	50
	B2013 Exterior Louvers, Grilles, Screens, and Fencing	50
	B2013.01 Awnings	30
	B2016 Exterior Soffits	50
	B2017.02 Brick Masonry: Ext. Wall Skin	50
	B2017.03 Concrete Block: Ext. Wall Skin	50
	B2017.07 Metal Siding	40
	B2017.11 Expansion Control: Ext. Wall	15
	B2017.12 Joint Sealers (caulking): Ext. Wall	15
	B2017.13 Paints (& Stains): Ext. Wall	10
	B2021.02 Aluminum Windows (Glass & Frame)	40
	B2022 Glazed Curtain Walls	45
	B2023 Glazed Storefronts	40

Systems shaded in grey are not expected to need replacment during the capital forecast period.

System Group Name	System Name	EUL
	B2024 Window Wall	40
B2030 Exterior Doors	B2031.01 Aluminum-Framed Storefronts: Doors	30
	B2031.02 Steel-Framed Storefronts: Doors	30
	B2031.03 All Glass Entrances and Storefronts (Double): Doors	40
	B2031.04 Automatic Entrance Doors	30
	B2032.02 Aluminum Entrance Door: Ext. Door	30
	B2032.03 Steel Doors (Single): Ext. Door	30
	B2034 Large Exterior Special Doors (Overhead)	25
	B2035 Exterior Gates	25
	B2036 Standard Door Hardware (Egress Door)	20
	B2036.01 Door Actuator	20
B3010 Roof Coverings	B3011.12 Sheet Metal Roofing: Roof Finishes	40
	B3013 Vapour Retarder and Insulation	50
	B3014 Flashings & Trim	30
	B3015 Roof Eaves and Soffits	30
	B3016 Gutters and Downspouts	30
B3020 Roof Openings	B3021.01 Glazed Roof Openings (Skylights)	25
	B3021.02 Clerestory Windows	30
	B3022 Other Roofing Openings (Hatch, Vent, etc.)	25
C1010 Partitions	C1011 Fixed Partitions	50
	C1012 Demountable Partitions	50
	C1013.01 Operable Partitions (Panel Wall)	30
	C1013.02 Operable Partitions (Accordion Screen)	20
	C1017 Interior Windows & Storefronts	30
	C1018 Interior Partition Firestopping	50
C1020 Interior Doors	C1021.01 Interior Swinging Doors	30
	C1021.02 Interior Entrance Doors	40
	C1021.03 Interior Fire Doors	40
	C1021.05 Interior Large Doors	30
	C1023 Interior Door Hardware	20
	C1023.01 Door Actuator	20
	C1026 Interior Hatches & Access Doors	30
C1030 Fittings	C1031.01 Fabricated Compartments (Toilets/Showers)	30
	C1032 Fabricated Compartments & Cubicles	30
	C1033.01 Lockers	30
	C1033.02 Storage Shelving	60
	C1033.03 Other Storage Specialties	40
	C1034 Ornamental Metals and Handrails	50
	C1036 Wardrobe and Closet Specialties	50
	C1037.03 Fireplaces and Stoves	30
	C1037.07 Visual Display Boards	30
	C1037.08 Toilet, Bath, and Laundry Accessories	15
C2010 Stair Construction	C2011.01 Concrete Stair Construction: Regular Stairs	40
	C2011.02 Metal Stair Construction: Regular Stairs	35
	C2011.04 Composite Stair Construction: Regular Stairs	30
	C2014 Stair Handrails and Balustrades	45
	C2020.04 Resilient Stair Finishes	20
	C2020.05 Carpet Stair Finishes	10
	C2020.06 Stair Painting	5
	C2023 Stair Handrail & Balustrade Finishes	5
C2030 Interior Ramps	C2030.01 Concrete Ramp Construction	35
	C2030.03 Composite Ramp Construction	30
	C3012.02 Wall Paneling	25
	C3012.03 Plaster Wall Finishes (Unpainted)	50
	C3012.04 Gypsum Board Wall Finishes (Unpainted)	50
	C3012.05 Tile Wall Finishes	50

Systems shaded in grey are not expected to need replacment during the capital forecast period.

System Group Name	System Name	EUL
	C3012.07 Stone Facing Wall Finishes	75
	C3012.08 Acoustical Wall Treatment	30
	C3012.09 Wall Carpet	20
	C3012.10 Interior Wall Painting	10
	C3012.11 Wall Coverings	25
	C3012.13.01 Cement Plaster (Stucco)	50
	C3012.13.02 Veneer Plaster (Stipple)	30
	C3022 Traffic Membranes	25
	C3023.01 Epoxy Concrete Floor Finishes	30
	C3024.01 Tile Floor Finishes	50
	C3024.02 Terrazzo Floor Finishes	75
	C3024.03 Wood Flooring	40
	C3024.04 Stone Flooring	75
	C3024.06 Resilient Sheet Flooring	20
	C3024.07 Floor Painting	10
	C3024.08 Sport Flooring (non-wood)	20
	C3024.09 Other Floor Finishes	20
	C3024.09.01 Laminate Flooring	25
	C3024.09.02 Resilient Tile Flooring	20
	C3025 Carpeting	15
	C3026 Bases, Curbs and Trim	30
	C3027 Access Flooring	30
C3030 Ceiling Finishes	C3031.01 Concrete Ceiling Finishes (Unpainted)	50
	C3031.03 Plaster Ceiling Finishes (Unpainted)	50
	C3031.04 Gypsum Board Ceiling Finishes (Unpainted)	50
	C3031.05 Veneer Plaster Finishes (Stipple)	50
	C3031.06 Interior Ceiling Painting	20
	C3032 Suspended Ceilings	30
	C3033.01 Acoustical Tile Ceilings	30
	C3033.02 Fabric Panel Ceilings	30
D1010 Elevators & Lifts	D1011.01 Electric Traction Passenger Elevators	30
	D1011.02 Hydraulic Passenger Elevators	30
	D1012.01 Electric Traction Freight Elevators	30
	D1012.02 Hydraulic Freight Elevators	30
D2010 Plumbing Fixtures	D2011 Water Closets	35
	D2012 Urinals	35
	D2013 Lavatories	35
	D2014 Sinks	35
	D2015 Bathtubs	35
	D2017 Showers	35
	D2018 Drinking Fountains and Coolers	25
D2020 Domestic Water Distribution	D2021 Cold Water Service	40
	D2022 Hot Water Service	40
	D2023.01 Domestic Water Heaters	20
	D2023.02 Domestic Water Valves	40
	D2023.03 Piping Specialties (Backflow Preventers)	20
	D2023.04 Hose Bibbs	40
	D2023.05 Domestic Water Pumps	20
	D2023.06 Domestic Water Storage Tanks	30
	D2023.07 Domestic Water Conditioning Equipment	20
	D2023.08 Domestic Water Filtrating Equipment	20
	D2024 Pipes and Tubes: Domestic Water	50
D2030 Sanitary Waste	D2031 Waste and Vent Piping	50
	D2033 Floor Drains	50
	D2034 Sanitary Waste Equipment	25
	D2034.01 Waste Interceptors	50

Systems shaded in grey are not expected to need replacment during the capital forecast period.

System Group Name	System Name	EUL
D2040 Rain Water Drainage	D2041 Rain Water Drainage Piping Systems	35
	D2042 Roof Drains	35
D2090 Other Plumbing Systems	D2091.01 Compressed Air Systems (Non Controls): Gas Distribution	30
	D2091.02 Natural Gas Systems (Non-Heating): Gas Distribution	50
D3010 Energy Supply	D3011 Oil Supply System (Fuel, Diesel)	25
	D3012 Gas Supply System	50
D3020 Heat Generating Systems	D3021.01 Heating Boilers & Accessories (Steam): Boilers	35
	D3021.02 Chimneys (& Comb. Air): Steam Boilers	35
	D3021.04 Feedwater Equipment	35
	D3021.11 Heating Boilers and Accessories: H.W.	30
	D3025.01 Furnaces	25
	D3026.01 Fuel-Fired Duct Heaters	30
	D3026.02 Fuel-Fired Radiant Heaters	30
	D3026.03 Fuel-Fired Unit Heaters	25
D3040 Distribution Systems	D3041.01 Air Handling Units	30
	D3041.02 Fans (Remote from AHU)	55
	D3041.04 Air Distribution Ducts	55
	D3041.06 Air Terminal Units (VAV/CV Box)	30
	D3041.07 Air Distribution Outlets & Inlets	55
	D3042.01 Exhaust Fans	30
	D3042.03 Exhaust Ducts	55
	D3042.05 Exhaust Outlets & Inlets	55
	D3043 Steam Distribution Systems	40
	D3044 Hot Water Distribution	30
	D3047 Glycol Distribution Systems	40
	D3048 Heat Exchangers	30
	D3049 Other HVAC Distribution Systems	30
D3050 Terminal & Package Units	D3051.01 Air Coils: Terminal Self-Contained Units	30
	D3051.02 Convectors: Terminal Self-Contained Units	30
	D3051.03 Fan Coil Units: Terminal Self-Contained Units	30
	D3051.04 Finned Tube Radiation: Terminal Self-Contained Units	40
	D3051.05 Induction Units: Terminal Self-Contained Units	30
	D3051.07 Unit Heaters: Terminal Self-Contained Units	30
	D3051.08 Unit Ventilators: Terminal Self-Contained Units	30
	D3051.09 Radiant Heating (Ceiling & Floor): Terminal Self-Contained Uni	35
	D3052.01 Computer Room Air Conditioning Units	25
	D3052.02 Packaged Rooftop Air Conditioning Units (& Heating Units)	30
	D3052.03 Packaged Terminal Air Conditioning Units	30
	D3052.04 Unit Air Conditioners	25
	D3052.05 Energy Recovery Units	30
D3060 Controls & Instrumentation	D3067 Energy Monitoring & Control	25
	D3068.01 Building Systems Controls (BMCS, EMCS)	20
	D3069.01 Electric and Electronic Controls	30
	D3069.02 Pneumatic Controls	40
	D3069.05 Other HVAC Instrumentation and Controls	20
	D3092.01 Humidifiers	25
D4010 Sprinklers	D4011 Wet Sprinkler System	40
	D4013 Dry Sprinkler System	40
D4020 Standpipes	D4021 Standpipe Water Supply	35
D4030 Fire Protection Specialties	D4031 Fire Extinguisher, Cabinets and Accessories	12
D4090 Other Fire Protection Systems	D4091 Carbon Dioxide Systems	40
	D4093 Clean Agent Systems	40
	D4094 Dry Chemical System	40
	D4095 Hood & Duct Fire Protection	20

Systems shaded in grey are not expected to need replacment during the capital forecast period.

System Group Name	System Name	EUL
	D4096 Smoke Protection & Exhaust Fans	40
	D4096.01 Smoke and Carbon Monoxide Detectors	10
D5010 Electrical Service & Distribution	D5011.01 Main Electrical Transformers (Facility Owned)	40
	D5011.02 Main Electrical Transformers (Utility Owned)	40
	D5012.01 Secondary Electrical Transformers (Interior)	40
	D5012.02 Main Electrical Switchboards (Main Distribution)	40
	D5012.03 Electrical Branch Circuit Panelboards (Secondary Distribution)	30
	D5012.04 Enclosed Electrical Circuit Breakers	30
	D5012.05 Switchboards, Panelboards, and (Motor) Control Centers	30
	D5012.06 Motor Starters and Accessories	30
	D5012.07 Variable Frequency Drives	25
D5020 Lighting and Branch Wiring	D5021 Electrical Branch Wiring	40
	D5022.01 Interior Incandescent Fixtures	30
	D5022.02 Interior Fluorescent Fixtures	30
	D5022.03 Interior Metal Halide Fixtures	30
	D5022.06 Interior LED Fixtures	30
	D5023.01 Exterior Incandescent Fixtures	20
	D5023.02 Exterior Fluorescent Fixtures	20
	D5023.03 Exterior Metal Halide Fixtures	20
	D5023.04 Exterior H.P. Sodium Fixtures	20
	D5023.06 Exterior LED Fixtures	20
	D5024.05 Special Purpose Lighting - Other	20
	D5025.01 Lighting Accessories: Interior (Lighting Controls)	20
	D5025.03 Lighting Accessories: Exterior (Lighting Controls)	25
D5030 Communications & Security	D5031 Public Address & Music Systems	20
	D5032.02 Paging Systems	20
	D5032.03 Door Answering Systems	20
	D5033 Telephone Systems	25
	D5034 Call Systems	20
	D5035 Television Systems	25
	D5037 Fire Alarm Systems	20
	D5038.02 Intrusion Detection	20
	D5038.03 Security Access	15
	D5038.04 Video Surveillance	15
	D5039 Local Area Networks	20
D5090 Other Electrical Systems	D5092.01 Emergency Lighting Built-in	30
	D5092.02 Emergency Lighting Battery Packs	20
	D5092.03 Exit Signs	30
	D5092.04 Uninterruptible Power Supply Systems	30
	D5092.05 Packaged Engine Generator Systems (Emergency Power)	35
	E1093 Food Service Equipment (cooking equipment)	25

Systems shaded in grey are not expected to need replacment during the capital forecast period.

Appendix B3 COMBINED ADJUSTMENT FACTOR

UNIFORMAT II City Cost Indexes (Assemblies) ~ Year 2015 Quarter 2

DIV. NO.	BUILDING SYSTEMS	CANADA														
		BRANTFORD, ONTARIO			BRIDGEWATER, NOVA SCOTIA			CALGARY, ALBERTA			CAP-DE-LA-MADELEINE, QUEBEC			CHARLESBOURG, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	150.4	98.7	118.9	144.2	73.8	101.2	166.1	97.0	123.9	125.5	91.4	104.7	125.5	91.4	104.7
B10	Shell: Superstructure	119.1	93.2	109.0	116.3	70.1	98.1	142.3	91.2	122.3	113.5	87.2	103.1	113.5	87.2	103.1
B20	Exterior Closure	135.4	100.9	118.9	134.1	71.1	104.0	152.6	86.3	120.9	134.8	85.6	111.3	134.8	85.6	111.3
B30	Roofing	115.4	93.8	107.2	110.1	69.9	94.8	118.8	94.0	109.4	108.9	90.2	101.8	108.9	90.2	101.8
C	Interior Construction	104.5	96.6	101.2	97.9	69.2	85.9	109.0	96.7	103.9	105.9	89.5	99.0	105.9	89.5	99.0
D10	Services: Conveying	121.1	73.7	108.1	121.1	65.6	105.9	121.1	97.2	114.6	121.1	84.4	111.0	121.1	84.4	111.0
D20 - 40	Mechanical	99.6	102.3	100.7	99.6	84.4	93.4	98.8	90.9	95.6	99.9	91.0	96.3	99.9	91.0	96.3
D50	Electrical	117.1	89.9	102.7	122.3	64.4	91.7	114.0	101.3	107.3	116.6	72.6	93.3	116.6	72.6	93.3
E	Equipment & Furnishings	121.1	95.5	119.8	121.1	70.5	118.5	121.1	97.2	119.9	121.1	87.1	119.4	121.1	87.1	119.4
G	Site Work	124.4	98.3	106.5	109.3	95.5	99.9	129.1	102.8	111.1	104.3	97.1	99.4	104.3	97.1	99.4
A-G	**WEIGHTED AVERAGE**	115.0	96.4	106.9	112.9	74.1	96.0	122.6	94.2	110.2	112.3	87.1	101.3	112.3	87.1	101.3

DIV. NO.	BUILDING SYSTEMS	CANADA														
		CHARLOTTETOWN, PRINCE EDWARD ISLAND			CHICOUTIMI, QUEBEC			CORNER BROOK, NEWFOUNDLAND			CORNWALL, ONTARIO			DALHOUSIE, NEW BRUNSWICK		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	154.9	65.5	100.3	120.1	96.0	105.4	152.5	69.7	102.0	140.3	93.3	111.6	127.5	69.2	91.9
B10	Shell: Superstructure	140.8	61.6	109.7	114.3	92.6	105.8	130.4	66.7	105.4	117.0	89.3	106.1	109.9	66.1	92.7
B20	Exterior Closure	144.0	60.7	104.1	129.1	90.7	110.8	216.7	63.8	143.6	136.1	92.7	115.3	139.1	63.5	103.0
B30	Roofing	124.3	59.8	99.8	108.1	96.2	103.6	144.8	61.5	113.1	115.3	88.3	105.0	111.9	61.6	92.8
C	Interior Construction	102.9	56.9	83.6	106.2	95.5	101.7	118.4	60.0	94.0	108.5	90.6	101.0	101.9	63.4	85.8
D10	Services: Conveying	121.1	65.4	105.8	121.1	87.2	111.8	121.1	65.8	105.9	121.1	71.6	107.5	121.1	65.1	105.7
D20 - 40	Mechanical	100.0	63.8	85.4	99.6	94.5	97.5	99.6	71.8	88.4	99.9	100.1	100.0	99.6	69.8	87.6
D50	Electrical	116.9	52.3	82.7	114.8	86.8	100.0	120.6	58.3	87.6	117.8	90.9	103.6	119.4	58.4	87.2
E	Equipment & Furnishings	121.1	56.9	117.8	121.1	93.0	119.7	121.1	59.9	118.0	121.1	89.0	119.5	121.1	63.0	118.2
G	Site Work	129.2	93.0	104.4	107.0	96.5	99.8	152.9	94.3	112.7	122.1	97.8	105.4	106.9	93.9	98.0
A-G	**WEIGHTED AVERAGE**	120.6	62.3	95.2	111.5	92.9	103.4	130.0	67.0	102.6	114.9	92.8	105.3	111.8	66.9	92.3

DIV. NO.	BUILDING SYSTEMS	CANADA														
		DARTMOUTH, NOVA SCOTIA			EDMONTON, ALBERTA			FORT MCMURRAY, ALBERTA			FREDERICTON, NEW BRUNSWICK			GATINEAU, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	149.1	73.8	103.2	169.8	97.0	125.4	180.2	94.8	128.1	126.5	69.3	91.6	126.0	91.3	104.8
B10	Shell: Superstructure	129.3	70.1	106.1	142.4	91.2	122.3	146.1	90.0	124.0	132.2	66.5	106.4	113.6	87.1	103.2
B20	Exterior Closure	199.9	71.1	138.3	149.2	86.3	119.1	155.0	87.3	122.6	147.2	64.5	107.6	134.7	84.0	110.5
B30	Roofing	141.7	69.9	114.4	121.4	94.0	111.0	124.0	93.0	112.2	119.9	62.4	98.1	108.9	90.2	101.8
C	Interior Construction	109.1	69.2	92.4	105.4	96.7	101.8	105.9	92.2	100.2	107.0	65.1	89.5	104.0	89.5	97.9
D10	Services: Conveying	121.1	65.6	105.9	121.1	97.2	114.6	121.1	97.5	114.6	121.1	65.0	105.7	121.1	84.4	111.0
D20 - 40	Mechanical	99.6	84.4	93.5	98.7	90.9	95.6	100.0	98.9	99.6	99.9	79.3	91.6	99.9	91.0	96.3
D50	Electrical	125.2	64.4	93.1	114.8	101.3	107.7	111.4	85.4	97.7	122.1	77.1	98.3	116.6	72.6	93.3
E	Equipment & Furnishings	121.1	70.5	118.5	121.1	97.2	119.9	121.1	91.3	119.6	121.1	63.9	118.2	121.1	87.1	119.4
G	Site Work	136.9	95.5	108.5	146.3	102.8	116.5	129.8	99.0	108.7	112.1	93.9	99.6	104.1	97.1	99.3
A-G	**WEIGHTED AVERAGE**	126.4	74.1	103.6	122.3	94.2	110.1	123.9	92.5	110.2	118.7	72.0	98.3	112.1	86.9	101.1

DIV. NO.	BUILDING SYSTEMS	CANADA														
		GRANBY, QUEBEC			HALIFAX, NOVA SCOTIA			HAMILTON, ONTARIO			HULL, QUEBEC			JOLIETTE, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	128.6	91.3	105.8	139.9	81.2	104.1	144.3	99.3	116.9	126.0	91.3	104.8	127.6	91.4	105.5
B10	Shell: Superstructure	114.1	87.0	103.5	136.3	78.4	113.6	130.1	93.1	115.6	113.6	87.1	103.2	113.9	87.2	103.4
B20	Exterior Closure	134.9	84.0	110.6	146.2	82.7	115.8	138.0	100.0	119.8	134.7	84.0	110.5	134.9	85.6	111.3
B30	Roofing	108.9	88.4	101.1	119.3	78.5	103.8	119.3	94.3	109.8	108.9	90.2	101.8	108.9	90.2	101.8
C	Interior Construction	104.0	89.5	97.9	105.4	80.5	95.0	106.5	96.1	102.1	104.0	89.5	97.9	105.9	89.5	99.0
D10	Services: Conveying	121.1	84.4	111.0	121.1	68.3	106.6	121.1	101.4	115.7	121.1	84.4	111.0	121.1	84.4	111.0
D20 - 40	Mechanical	99.6	91.0	96.1	98.3	77.6	89.9	99.0	89.1	95.0	99.6	91.0	96.1	99.6	91.0	96.1
D50	Electrical	117.1	72.6	93.6	117.1	81.2	98.1	112.9	100.5	106.3	118.3	72.6	94.2	117.1	72.6	93.6
E	Equipment & Furnishings	121.1	87.1	119.4	121.1	77.8	118.9	121.1	94.3	119.8	121.1	87.1	119.4	121.1	87.1	119.4
G	Site Work	104.7	97.1	99.5	115.7	95.7	102.0	120.2	110.3	113.4	104.1	97.1	99.3	104.8	97.1	99.6
A-G	**WEIGHTED AVERAGE**	112.3	86.8	101.2	118.9	80.5	102.2	117.0	96.4	108.0	112.1	86.9	101.1	112.5	87.1	101.4

DIV. NO.	BUILDING SYSTEMS	CANADA														
		KAMLOOPS, BRITISH COLUMBIA			KINGSTON, ONTARIO			KITCHENER, ONTARIO			LAVAL, QUEBEC			LETHBRIDGE, ALBERTA		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	113.6	94.0	101.6	140.4	94.1	112.2	120.1	92.9	103.5	128.6	91.3	105.8	147.6	95.0	115.5
B10	Shell: Superstructure	110.9	88.2	102.0	118.3	89.4	106.9	119.2	90.0	107.7	114.2	87.1	103.5	134.5	90.0	117.0
B20	Exterior Closure	158.0	93.6	127.2	141.2	92.6	118.0	114.3	96.2	105.7	134.9	84.0	110.6	143.0	87.3	116.4
B30	Roofing	125.2	86.0	110.3	115.3	89.6	105.5	109.6	91.3	102.6	109.4	90.2	102.1	121.2	93.0	110.5
C	Interior Construction	102.5	84.1	94.8	110.2	90.0	101.7	97.2	89.4	93.9	104.0	89.5	97.9	104.7	93.0	99.8
D10	Services: Conveying	121.1	95.9	114.2	121.1	71.6	107.5	121.1	100.4	115.4	121.1	84.4	111.0	121.1	97.5	114.6
D20 - 40	Mechanical	99.6	94.4	97.5	99.9	100.2	100.0	98.1	87.7	93.9	98.1	91.0	95.2	99.8	95.6	98.1
D50	Electrical	120.5	81.9	100.1	117.8	89.6	102.9	118.6	98.0	107.7	118.4	72.6	94.2	112.7	85.4	98.3
E	Equipment & Furnishings	121.1	89.1	119.5	121.1	89.0	119.5	121.1	86.1	119.3	121.1	87.1	119.4	121.1	91.4	119.6
G	Site Work	123.4	100.6	107.8	122.1	101.6	108.0	103.5	102.5	102.8	104.7	97.1	99.5	121.1	99.6	106.3
A-G	**WEIGHTED AVERAGE**	114.4	90.1	103.8	116.0	92.9	105.9	109.4	92.6	102.1	112.1	86.9	101.1	118.5	92.0	107.0

UNIFORMAT II City Cost Indexes (Assemblies) ~ Year 2020 Quarter 3

DIV. NO.	BUILDING SYSTEMS	CANADA														
		LLOYDMINSTER, ALBERTA			LONDON, ONTARIO			MEDICINE HAT, ALBERTA			MONCTON, NEW BRUNSWICK			MONTREAL, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	126.3	87.5	103.9	120.5	96.9	106.9	126.3	87.4	103.9	114.5	72.6	90.3	124.1	98.4	109.3
B10	Shell: Superstructure	108.2	87.1	100.3	121.9	99.1	113.4	108.5	87.1	100.5	106.4	76.7	95.3	130.1	98.8	118.5
B20	Exterior Closure	132.9	80.2	109.4	152.3	98.7	128.4	132.9	80.2	109.4	130.6	73.0	104.9	146.3	90.7	121.5
B30	Roofing	129.0	90.0	113.4	135.1	99.1	120.6	135.7	90.0	117.3	120.5	71.3	100.8	132.4	102.8	120.5
C	Interior Construction	98.1	79.9	90.5	100.4	90.3	96.2	98.1	79.9	90.5	96.1	67.7	84.2	104.5	95.1	100.6
D10	Services: Conveying	124.7	88.8	113.9	124.7	91.9	114.8	124.7	87.4	113.5	124.7	60.4	105.4	124.7	82.3	111.9
D20 - 40	Mechanical	108.0	91.9	101.6	107.5	90.5	100.8	107.5	88.7	100.1	107.5	74.0	94.3	107.6	84.5	98.5
D50	Electrical	112.5	79.2	96.1	114.4	102.0	108.3	112.5	79.2	96.1	126.1	88.8	107.7	122.6	87.6	105.3
E	Equipment & Furnishings	124.7	78.8	122.0	124.7	87.3	122.5	124.7	78.8	122.0	124.7	66.1	121.3	124.7	93.5	122.9
G	Site Work	119.6	92.8	101.7	110.9	101.2	104.4	118.4	92.8	101.4	109.9	89.5	96.3	121.4	101.6	108.2
A-G	**WEIGHTED AVERAGE**	112.8	85.5	101.2	118.0	96.0	108.7	112.9	84.7	101.0	112.2	75.8	96.8	120.9	92.3	108.9

DIV. NO.	BUILDING SYSTEMS	CANADA														
		MOOSE JAW, SASKATCHEWAN			NEW GLASGOW, NOVA SCOTIA			NEWCASTLE, NEW BRUNSWICK			NORTH BAY, ONTARIO			OSHAWA, ONTARIO		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	113.9	66.3	86.4	125.9	71.0	94.2	117.2	65.1	87.1	132.9	84.5	105.0	130.3	98.3	111.9
B10	Shell: Superstructure	102.7	67.0	89.4	117.0	70.7	99.7	107.0	65.9	91.6	120.2	86.2	107.6	110.5	96.9	105.4
B20	Exterior Closure	124.1	57.7	94.5	172.1	66.7	125.1	130.7	58.1	98.3	172.9	83.3	132.9	123.0	100.5	113.0
B30	Roofing	119.0	61.7	96.0	135.0	69.8	108.8	120.5	59.7	96.1	141.5	83.8	118.3	122.5	103.8	115.0
C	Interior Construction	94.5	55.4	78.2	105.5	66.3	89.2	96.1	58.7	80.5	113.2	83.3	100.7	94.4	93.1	93.9
D10	Services: Conveying	124.7	58.7	104.9	124.7	60.8	105.5	124.7	58.6	104.8	124.7	62.0	105.9	124.7	90.2	114.3
D20 - 40	Mechanical	108.0	71.8	93.8	107.7	81.2	97.3	107.5	66.2	91.3	107.7	94.4	102.5	106.4	92.1	100.8
D50	Electrical	121.4	57.6	89.9	118.9	60.0	89.8	121.5	57.1	89.7	120.2	85.1	102.9	116.6	104.2	110.5
E	Equipment & Furnishings	124.7	54.0	120.6	124.7	68.2	121.4	124.7	58.4	120.9	124.7	81.8	122.2	124.7	90.6	122.7
G	Site Work	120.3	87.2	98.2	117.8	89.7	99.1	110.6	87.7	95.4	132.9	91.5	105.4	110.6	96.9	101.4
A-G	**WEIGHTED AVERAGE**	110.2	64.5	90.9	121.0	71.1	99.9	112.0	63.5	91.5	124.0	86.4	108.1	111.4	96.9	105.3

DIV. NO.	BUILDING SYSTEMS	CANADA														
		OTTAWA, ONTARIO			OWEN SOUND, ONTARIO			PETERBOROUGH, ONTARIO			PORTAGE LA PRAIRIE, MANITOBA			PRINCE ALBERT, SASKATCHEWAN		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	123.7	97.3	108.5	153.4	83.3	112.9	135.0	85.3	106.3	126.1	72.0	94.9	107.7	66.2	83.8
B10	Shell: Superstructure	122.8	100.0	114.3	114.2	85.9	103.6	110.0	86.7	101.3	108.5	72.3	95.0	101.4	66.8	88.5
B20	Exterior Closure	147.5	99.0	125.9	131.2	87.9	111.9	133.6	89.1	113.7	126.6	61.2	97.4	123.5	57.7	94.2
B30	Roofing	149.3	100.0	129.5	119.9	84.0	105.5	126.5	89.7	111.7	119.5	70.9	100.0	118.9	60.4	95.4
C	Interior Construction	107.0	88.5	99.3	101.7	82.0	93.5	98.7	83.6	92.4	98.1	65.3	84.4	94.0	54.6	77.6
D10	Services: Conveying	124.7	89.7	114.2	132.4	62.9	111.5	124.7	63.7	106.4	124.7	59.7	105.2	124.7	58.7	104.9
D20 - 40	Mechanical	107.5	92.3	101.5	107.5	94.4	102.4	107.5	97.8	103.7	107.5	80.0	96.7	108.0	64.7	91.0
D50	Electrical	115.6	101.9	108.9	123.7	84.0	104.1	119.5	84.7	102.4	121.1	55.6	88.8	121.4	57.5	89.9
E	Equipment & Furnishings	124.7	86.2	122.5	132.4	79.0	129.4	124.7	80.8	122.2	124.7	66.7	121.3	124.7	54.0	120.6
G	Site Work	114.4	101.5	105.8	125.7	92.2	103.4	122.8	91.6	102.0	121.2	90.4	100.7	115.3	87.3	96.7
A-G	**WEIGHTED AVERAGE**	119.4	96.3	109.7	117.2	86.5	104.2	114.4	88.2	103.3	112.7	69.8	94.5	109.4	62.8	89.7

DIV. NO.	BUILDING SYSTEMS	CANADA														
		PRINCE GEORGE, BRITISH COLUMBIA			QUEBEC CITY, QUEBEC			RED DEER, ALBERTA			REGINA, SASKATCHEWAN			RIMOUSKI, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	117.1	86.3	99.3	127.6	98.4	110.7	127.4	87.4	104.3	143.0	98.3	117.2	108.9	94.5	100.6
B10	Shell: Superstructure	105.5	84.3	97.6	126.6	99.6	116.5	108.8	87.1	100.7	130.1	95.6	117.2	103.8	93.0	99.8
B20	Exterior Closure	161.1	85.2	127.2	147.0	93.2	123.0	132.9	80.2	109.4	163.7	84.7	128.4	132.9	89.4	113.5
B30	Roofing	130.5	82.7	111.3	129.4	102.8	118.7	146.2	90.0	123.6	156.9	88.0	129.2	119.7	101.0	112.2
C	Interior Construction	96.6	76.0	88.0	105.1	95.1	100.9	98.6	79.9	90.8	109.5	92.2	102.3	100.4	94.2	97.8
D10	Services: Conveying	124.7	86.1	113.1	124.7	82.2	111.9	124.7	87.4	113.5	124.7	68.3	107.7	124.7	80.6	111.4
D20 - 40	Mechanical	107.5	89.4	100.4	107.3	84.5	98.4	107.5	88.7	100.1	107.2	86.9	99.3	107.5	84.3	98.4
D50	Electrical	119.5	75.8	98.0	129.0	87.6	108.6	112.5	79.2	96.1	125.7	91.5	108.8	118.9	87.5	103.4
E	Equipment & Furnishings	124.7	75.8	121.9	124.7	93.5	122.9	124.7	78.8	122.0	124.7	91.7	122.8	124.7	93.3	122.9
G	Site Work	127.4	94.3	105.4	121.0	101.2	107.8	118.4	92.8	101.4	134.5	113.7	120.6	102.7	90.7	94.7
A-G	**WEIGHTED AVERAGE**	115.7	83.8	102.2	121.0	92.8	109.1	113.3	84.7	101.2	125.7	91.6	111.3	111.4	89.9	102.3

DIV. NO.	BUILDING SYSTEMS	CANADA														
		ROUYN-NORANDA, QUEBEC			SAINT HYACINTHE, QUEBEC			SAINT JOHN, NEW BRUNSWICK			SARNIA, ONTARIO			SASKATOON, SASKATCHEWAN		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	113.4	84.4	96.7	115.7	84.4	97.6	117.9	71.6	91.2	119.6	91.5	103.4	113.2	90.8	100.3
B10	Shell: Superstructure	105.1	82.8	96.8	105.6	82.8	97.1	107.9	76.0	96.0	106.6	90.5	100.6	100.1	88.5	95.8
B20	Exterior Closure	133.1	75.8	107.5	133.2	75.8	107.6	140.5	72.4	110.1	141.4	91.2	119.0	130.3	83.9	109.6
B30	Roofing	119.7	87.2	106.6	120.2	87.2	106.9	120.9	71.2	100.9	126.6	93.5	113.3	122.6	85.1	107.6
C	Interior Construction	98.2	81.7	91.3	98.2	81.7	91.3	99.2	65.4	85.1	101.1	91.1	96.9	99.0	91.5	95.9
D10	Services: Conveying	124.7	76.2	110.1	124.7	76.2	110.1	124.7	60.8	105.5	124.7	64.2	106.5	124.7	66.1	107.1
D20 - 40	Mechanical	107.5	86.0	99.1	103.5	86.0	96.6	107.5	75.5	94.9	107.5	103.7	106.0	106.9	86.7	98.9
D50	Electrical	118.9	66.6	93.1	119.5	66.6	93.4	128.8	88.8	109.1	122.8	86.9	105.1	123.2	91.4	107.5
E	Equipment & Furnishings	124.7	79.8	122.1	124.7	79.8	122.1	124.7	62.7	121.1	124.7	88.4	122.6	124.7	91.3	122.8
G	Site Work	102.0	90.7	94.5	102.6	90.7	94.7	110.8	89.5	96.6	121.2	91.7	101.6	117.5	89.8	99.1
A-G	**WEIGHTED AVERAGE**	111.5	80.7	98.5	110.9	80.7	98.1	114.6	75.5	98.1	114.6	92.5	105.2	111.0	88.0	101.3

UNIFORMAT II City Cost Indexes (Assemblies) ~ Year 2021 Quarter 4

DIV. NO.	BUILDING SYSTEMS	CANADA														
		SAULT STE MARIE, ONTARIO			SHERBROOKE, QUEBEC			SOREL, QUEBEC			ST CATHARINES, ONTARIO			ST JEROME, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	138.8	85.7	108.1	147.8	83.2	110.4	147.0	83.3	110.0	145.3	96.7	117.1	144.8	83.2	109.1
B10	Shell: Superstructure	198.6	90.8	156.6	201.3	83.1	155.2	201.3	83.2	155.2	206.4	98.5	164.3	200.8	83.1	154.9
B20	Exterior Closure	139.0	91.3	117.3	151.9	73.7	116.3	151.9	75.1	117.0	123.3	99.3	112.4	151.7	73.7	116.2
B30	Roofing	134.4	84.3	114.6	129.9	84.2	111.7	129.8	84.2	111.7	132.5	98.8	119.1	129.8	84.2	111.7
C	Interior Construction	104.8	87.9	97.7	109.3	79.4	96.7	111.4	79.4	97.8	100.7	93.3	97.6	109.3	79.4	96.7
D10	Services: Conveying	154.8	84.8	132.7	154.8	73.5	129.1	154.8	73.5	129.1	154.8	64.3	126.2	154.8	73.5	129.1
D20 - 40	Mechanical	104.8	88.0	98.1	105.3	82.8	96.2	104.8	82.8	95.9	105.5	87.5	98.2	104.8	82.8	95.9
D50	Electrical	149.0	82.8	116.2	142.1	64.8	103.9	142.1	64.8	103.9	150.7	98.1	124.7	143.6	64.8	104.6
E	Equipment & Furnishings	154.8	87.6	150.7	154.8	77.9	150.1	154.8	77.9	150.1	154.8	93.6	151.1	154.8	77.9	150.1
G	Site Work	131.2	92.5	105.6	119.9	92.2	101.6	120.1	92.2	101.7	119.5	95.4	103.6	119.2	92.2	101.4
A-G	**WEIGHTED AVERAGE**	139.2	88.0	117.1	141.3	79.0	114.4	141.5	79.2	114.6	138.5	94.1	119.3	141.1	79.0	114.2

DIV. NO.	BUILDING SYSTEMS	CANADA														
		ST JOHN'S, NEWFOUNDLAND			SUDBURY, ONTARIO			SUMMERSIDE, PRINCE EDWARD ISLAND			SYDNEY, NOVA SCOTIA			THUNDER BAY, ONTARIO		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	161.7	95.0	123.0	145.7	93.5	115.4	156.3	59.7	100.3	136.6	69.4	97.7	155.2	95.5	120.6
B10	Shell: Superstructure	234.5	93.1	179.4	205.6	95.8	162.8	218.0	60.7	156.7	213.6	70.0	157.6	209.2	97.1	165.5
B20	Exterior Closure	168.5	87.1	131.5	123.5	95.7	110.8	221.3	53.5	145.0	197.7	64.8	137.3	128.4	97.6	114.4
B30	Roofing	162.2	95.4	135.7	130.2	93.5	115.6	143.2	56.5	108.8	143.4	67.3	113.2	132.8	95.3	118.0
C	Interior Construction	124.2	79.1	105.1	99.6	89.0	95.1	122.7	50.8	92.2	117.1	64.4	94.7	102.2	91.9	97.8
D10	Services: Conveying	154.8	64.5	126.3	154.8	86.6	133.3	154.8	56.2	123.6	154.8	58.3	124.3	154.8	64.1	126.1
D20 - 40	Mechanical	106.2	82.0	96.4	104.6	85.8	97.0	105.1	57.9	86.0	105.1	78.2	94.2	105.5	86.9	98.0
D50	Electrical	161.8	78.3	120.5	146.1	98.4	122.5	136.1	47.1	92.1	138.3	58.3	98.7	146.7	101.6	124.4
E	Equipment & Furnishings	154.8	81.7	150.4	154.8	88.9	150.8	154.8	50.9	148.5	154.8	66.5	149.4	154.8	91.5	151.0
G	Site Work	135.4	114.1	121.3	119.7	94.9	103.3	142.4	86.4	105.5	125.4	89.0	101.4	125.9	95.0	105.5
A-G	**WEIGHTED AVERAGE**	156.5	86.3	126.2	137.4	92.4	118.0	155.4	56.9	112.8	149.8	69.2	115.0	140.1	93.6	120.0

DIV. NO.	BUILDING SYSTEMS	CANADA														
		TIMMINS, ONTARIO			TORONTO, ONTARIO			TROIS RIVIERES, QUEBEC			TRURO, NOVA SCOTIA			VANCOUVER, BRITISH COLUMBIA		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	172.9	83.1	120.8	159.2	108.1	129.6	145.5	82.7	109.1	166.1	70.0	110.4	163.1	101.7	127.5
B10	Shell: Superstructure	208.0	86.2	160.5	234.0	108.3	185.0	218.1	82.3	165.1	203.9	70.9	152.0	241.8	103.0	187.7
B20	Exterior Closure	152.5	80.9	120.0	164.9	107.8	138.9	197.9	75.0	142.0	153.0	64.9	112.9	170.2	93.1	135.1
B30	Roofing	135.7	80.9	114.0	158.9	110.1	139.6	142.8	84.0	119.5	130.4	67.4	105.5	165.2	92.0	136.2
C	Interior Construction	109.4	81.0	97.4	120.1	101.2	112.1	127.5	79.4	107.1	103.2	64.5	86.8	119.9	89.5	107.0
D10	Services: Conveying	154.8	59.8	124.8	154.8	91.9	134.9	154.8	73.2	129.0	154.8	58.6	124.4	154.8	87.7	133.6
D20 - 40	Mechanical	104.8	90.9	99.2	106.9	98.1	103.4	105.1	82.8	96.1	104.8	78.2	94.1	106.8	88.2	99.3
D50	Electrical	149.0	82.7	116.2	145.6	104.2	125.1	138.9	64.8	102.3	141.3	58.3	100.2	146.0	81.6	114.1
E	Equipment & Furnishings	154.8	79.7	150.2	154.8	101.2	151.5	154.8	77.8	150.1	154.8	66.5	149.4	154.8	88.5	150.8
G	Site Work	144.7	92.4	110.2	132.3	108.9	116.9	126.0	90.4	102.5	126.1	90.8	102.8	139.6	124.1	129.3
A-G	**WEIGHTED AVERAGE**	145.2	84.4	119.0	153.4	104.0	132.1	152.9	78.8	120.9	141.8	69.6	110.6	156.1	93.8	129.2

DIV. NO.	BUILDING SYSTEMS	CANADA														
		VICTORIA, BRITISH COLUMBIA			WHITEHORSE, YUKON			WINDSOR, ONTARIO			WINNIPEG, MANITOBA			YARMOUTH, NOVA SCOTIA		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	153.6	93.9	119.0	198.2	76.1	127.4	148.5	95.3	117.7	184.7	77.6	122.6	159.9	69.4	107.4
B10	Shell: Superstructure	196.8	93.1	156.4	247.7	76.3	180.9	207.8	97.1	164.6	246.9	76.9	180.7	219.0	70.0	160.9
B20	Exterior Closure	218.6	90.6	160.4	239.9	58.5	157.4	123.2	98.5	112.0	185.3	63.8	130.0	199.0	64.8	137.9
B30	Roofing	142.3	86.8	120.3	161.7	65.0	123.3	132.6	95.6	117.9	161.0	70.0	124.9	143.4	67.3	113.2
C	Interior Construction	110.1	85.0	99.5	139.6	55.1	103.8	100.9	90.4	96.5	128.0	63.0	100.5	117.1	64.4	94.7
D10	Services: Conveying	154.8	61.1	125.2	154.8	60.2	124.9	154.8	64.4	126.2	154.8	61.6	125.3	154.8	58.3	124.3
D20 - 40	Mechanical	104.9	84.9	96.8	105.4	70.4	91.3	105.5	88.4	98.6	106.9	62.4	89.0	105.1	78.2	94.2
D50	Electrical	143.9	82.3	113.5	178.2	56.8	118.1	158.1	102.3	130.5	146.0	62.2	104.5	138.3	58.3	98.7
E	Equipment & Furnishings	154.8	86.4	150.6	154.8	54.5	148.7	154.8	89.4	150.8	154.8	63.5	149.3	154.8	66.5	149.4
G	Site Work	146.5	101.2	116.6	153.4	120.0	131.3	115.9	95.2	102.2	141.7	117.0	125.4	131.2	89.0	103.4
A-G	**WEIGHTED AVERAGE**	149.6	87.7	122.9	173.6	68.5	128.2	139.7	93.9	119.9	161.1	69.7	121.6	152.3	69.2	116.4

DIV. NO.	BUILDING SYSTEMS	CANADA														
		YELLOWKNIFE, NWT														
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	212.5	86.6	139.5												
B10	Shell: Superstructure	250.2	84.2	185.5												
B20	Exterior Closure	214.2	68.2	147.8												
B30	Roofing	162.7	80.6	130.1												
C	Interior Construction	136.1	75.0	110.2												
D10	Services: Conveying	154.8	60.7	125.0												
D20 - 40	Mechanical	106.0	87.0	98.4												
D50	Electrical	169.8	77.0	123.9												
E	Equipment & Furnishings	154.8	76.6	150.1												
G	Site Work	170.8	114.2	133.4												
A-G	**WEIGHTED AVERAGE**	170.8	81.5	132.2												

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DIV. NO.	BUILDING SYSTEMS	CANADA														
		SAULT STE MARIE, ONTARIO			SHERBROOKE, QUEBEC			SOREL, QUEBEC			ST. CATHARINES, ONTARIO			ST JEROME, QUEBEC		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	105.4	84.3	94.8	113.3	81.8	97.5	112.6	81.8	97.2	104.6	95.1	99.8	111.1	81.8	96.4
B10	Shell: Superstructure	133.5	83.9	120.1	134.3	76.7	118.8	134.4	76.8	118.9	141.0	91.8	127.7	134.1	76.7	118.7
B20	Exterior Closure	146.3	87.3	119.5	160.0	70.0	119.2	160.0	71.4	119.8	137.8	95.3	118.5	159.8	70.0	119.1
B30	Roofing	128.8	82.6	113.6	123.5	82.4	110.0	123.7	82.4	110.1	130.4	98.9	120.0	123.7	82.4	110.1
C	Interior Construction	91.9	84.6	89.0	95.8	76.1	88.1	97.6	76.1	89.2	86.4	90.2	87.9	95.8	76.1	88.1
D10	Services: Conveying	132.6	81.0	118.4	132.6	70.6	115.5	132.6	70.6	115.5	128.8	62.1	110.5	132.6	70.6	115.5
D20 - 40	Mechanical	119.2	85.8	106.8	119.0	79.4	104.2	119.2	79.4	104.4	117.5	87.9	106.4	119.2	79.4	104.4
D50	Electrical	140.3	77.8	113.2	132.5	60.9	101.5	132.5	60.9	101.5	141.9	97.5	122.7	134.1	60.9	102.4
E	Equipment & Furnishings	133.1	84.6	130.7	133.1	74.5	130.2	133.1	74.5	130.2	128.8	90.5	126.9	133.1	74.5	130.2
G	Site Work	121.8	94.5	104.6	112.6	94.5	101.2	112.8	94.5	101.3	109.4	98.1	102.3	111.9	94.5	101.0
A-G	**WEIGHTED AVERAGE**	124.6	84.5	109.7	125.8	75.5	107.0	126.1	75.7	107.3	124.3	91.9	112.2	125.8	75.5	107.1

DIV. NO.	BUILDING SYSTEMS	CANADA														
		ST JOHN'S, NEWFOUNDLAND			SUDBURY, ONTARIO			SUMMERSIDE, PRINCE EDWARD ISLAND			SYDNEY, NOVA SCOTIA			THUNDER BAY, ONTARIO		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	133.0	95.8	114.4	104.9	92.2	98.5	111.1	59.5	85.3	97.9	68.6	83.3	111.4	94.0	102.7
B10	Shell: Superstructure	148.9	89.4	132.9	140.7	89.4	126.9	155.8	55.3	128.8	153.5	64.2	129.4	142.5	90.7	128.5
B20	Exterior Closure	174.3	83.0	132.9	138.0	91.9	117.1	224.6	50.7	145.7	202.3	61.5	138.4	143.6	93.6	120.9
B30	Roofing	150.1	93.9	131.7	128.5	94.0	117.1	136.3	56.3	110.0	136.9	66.4	113.7	130.7	95.7	119.1
C	Interior Construction	106.4	75.8	94.4	85.7	86.1	85.9	105.8	48.8	83.5	100.9	61.7	85.6	87.9	88.8	88.3
D10	Services: Conveying	128.8	63.5	110.9	132.6	83.0	119.0	132.6	54.2	111.0	132.6	56.2	111.6	128.8	61.8	110.4
D20 - 40	Mechanical	117.9	78.7	103.3	118.0	86.0	106.1	126.3	55.5	100.0	126.3	74.9	107.2	117.5	87.1	106.2
D50	Electrical	151.9	73.0	117.7	137.5	97.6	120.2	125.3	44.3	90.2	127.5	54.8	96.0	137.8	96.7	120.0
E	Equipment & Furnishings	128.8	77.8	126.3	133.1	86.1	130.7	133.1	48.8	128.9	133.1	63.7	129.6	128.8	88.4	126.8
G	Site Work	135.9	124.2	128.6	109.5	97.7	102.1	128.9	88.9	103.8	115.4	91.3	100.3	114.3	97.9	104.0
A-G	**WEIGHTED AVERAGE**	136.4	83.9	116.8	124.1	90.3	111.5	140.2	54.5	108.3	136.2	66.2	110.1	125.5	90.9	112.6

DIV. NO.	BUILDING SYSTEMS	CANADA														
		TIMMINS, ONTARIO			TORONTO, ONTARIO			TROIS RIVIERES, QUEBEC			TRURO, NOVA SCOTIA			VANCOUVER, BRITISH COLUMBIA		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	132.2	81.5	106.8	114.4	106.8	110.6	104.2	81.2	92.7	127.2	69.2	98.2	136.4	100.0	118.2
B10	Shell: Superstructure	139.4	79.5	123.3	160.4	101.4	144.5	155.2	75.9	133.8	136.6	65.1	117.3	165.7	94.7	146.6
B20	Exterior Closure	159.9	76.9	122.3	186.7	103.5	148.9	202.7	71.3	143.1	160.9	61.6	115.9	187.3	89.6	143.0
B30	Roofing	129.8	79.2	113.1	151.0	109.3	137.3	136.0	82.2	118.3	124.6	66.6	105.5	151.4	90.8	131.5
C	Interior Construction	96.0	77.5	88.7	102.8	98.0	100.9	108.9	76.0	96.0	90.7	61.8	79.4	106.0	85.4	97.9
D10	Services: Conveying	132.6	57.6	112.0	128.8	88.3	117.7	132.6	70.2	115.5	132.6	56.5	111.7	128.8	84.2	116.5
D20 - 40	Mechanical	119.2	87.1	107.3	118.3	98.2	110.8	126.3	79.3	108.8	119.2	75.0	102.8	118.3	84.6	105.8
D50	Electrical	140.3	77.8	113.2	136.6	99.1	120.3	128.2	60.9	99.1	131.7	54.8	98.4	136.8	75.9	110.5
E	Equipment & Furnishings	133.1	76.3	130.2	128.8	97.8	127.3	133.1	74.5	130.2	133.1	63.7	129.6	128.8	84.5	126.6
G	Site Work	133.1	94.4	108.8	119.0	112.4	114.8	115.6	92.7	101.2	118.1	93.1	102.4	133.4	127.1	129.4
A-G	**WEIGHTED AVERAGE**	129.6	80.6	111.4	137.2	101.0	123.7	138.2	75.4	114.8	126.5	66.6	104.2	140.6	89.8	121.6

DIV. NO.	BUILDING SYSTEMS	CANADA														
		VICTORIA, BRITISH COLUMBIA			WHITEHORSE, YUKON			WINDSOR, ONTARIO			WINNIPEG, MANITOBA			YARMOUTH, NOVA SCOTIA		
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	122.9	91.6	107.2	140.1	76.5	108.3	106.8	93.9	100.3	159.0	77.6	118.3	113.7	68.6	91.2
B10	Shell: Superstructure	135.9	86.0	122.5	174.2	70.5	146.3	141.7	90.6	128.0	172.6	70.8	145.2	156.4	64.2	131.6
B20	Exterior Closure	210.6	87.3	154.7	245.1	55.6	159.2	137.8	94.5	118.1	196.2	60.6	134.7	203.5	61.5	139.1
B30	Roofing	135.4	84.7	118.8	152.6	65.8	124.1	130.5	95.9	119.1	151.6	69.9	124.7	136.9	66.4	113.7
C	Interior Construction	98.0	81.0	91.4	120.7	53.1	94.2	86.8	87.2	86.9	110.9	60.5	91.2	100.9	61.7	85.6
D10	Services: Conveying	132.6	58.8	112.3	132.6	58.5	112.2	128.8	62.1	110.5	128.8	59.7	109.8	132.6	56.2	111.6
D20 - 40	Mechanical	119.9	82.3	105.9	126.8	67.6	104.8	117.5	88.6	106.7	118.4	59.9	96.6	126.3	74.9	107.2
D50	Electrical	135.1	76.7	109.8	168.0	53.4	118.3	149.4	97.4	126.8	136.9	58.5	102.9	127.5	54.8	96.0
E	Equipment & Furnishings	133.1	82.3	130.5	132.5	52.4	128.5	128.8	86.1	126.7	128.8	61.0	125.4	133.1	63.7	129.6
G	Site Work	135.7	102.8	115.1	137.7	124.4	129.3	106.5	98.0	101.2	137.9	120.7	127.1	120.0	91.3	102.0
A-G	**WEIGHTED AVERAGE**	132.9	84.0	114.7	156.0	66.1	122.5	125.4	91.1	112.6	145.2	67.1	116.1	138.0	66.2	111.2

DIV. NO.	BUILDING SYSTEMS	CANADA														
		YELLOWKNIFE, NWT														
		MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL	MAT.	INST.	TOTAL
A	Substructure	149.1	86.2	117.6												
B10	Shell: Superstructure	176.7	78.0	150.1												
B20	Exterior Closure	219.5	64.8	149.3												
B30	Roofing	154.5	80.5	130.2												
C	Interior Construction	114.6	72.0	97.9												
D10	Services: Conveying	132.6	58.9	112.3												
D20 - 40	Mechanical	127.4	83.5	111.0												
D50	Electrical	159.1	72.4	121.5												
E	Equipment & Furnishings	132.5	73.5	129.6												
G	Site Work	151.3	118.0	130.4												
A-G	**WEIGHTED AVERAGE**	153.4	78.3	125.4												

Appendix C Operations and Maintenance

OPERATIONS AND MAINTENANCE ESTIMATE SUMMARY

Client:	NWT Nunavut and Chamber of Mines
Project:	Diavik Mine Prefeasibility Economic Study
Project Location:	Diavik Mine
Estimate Type:	Pre-Feasibility Study

Estimate Rev:		A
Date:		13-Apr-23

	DESCRIPTION	0 Occupants (Base Case)		200 Occupants		383 Occupants		600 Occupants	
		COST	FTE	COST	FTE	COST	FTE	COST	FTE
VARIABLE COST									
	Site Services Maintenance	$ 14,715,594	9	$ 18,477,337	32	$ 18,477,749	32	$ 18,478,237	32
	Camp (Catering and Cleaning)	$ 297,858	2	$ 3,971,443	15	$ 7,605,313	29	$ 11,914,329	45
	Freight and Winter Road	$ 90,909		$ 1,212,122		$ 2,321,213		$ 3,636,365	
	Communications	$ 222,266	1	$ 666,797	3	$ 666,797	3	$ 666,797	3
	Power Consumption	$ 28,189		$ 375,850		$ 719,752		$ 1,127,549	
	Safety and Training	$ 5,000	1	$ 10,000	2	$ 20,000	4	$ 30,000	6
	Health and Safety	$ 576,236	2	$ 1,152,473	4	$ 1,152,473	4	$ 1,152,473	4
	Fleet Maintenance	$ 169,315	1	$ 846,575	5	$ 846,575	5	$ 846,575	5
	Travel	$ 171,854		$ 2,291,393		$ 4,388,018		$ 6,874,179	
	SCALING COSTS	$ 16,277,222	16	$ 29,003,988	61	$ 36,197,889	77	$ 44,726,503	95
FIXED COSTS									
	Site Services Maintenance	9,391,748		9,387,333		9,387,333		9,387,333	
	Fleet Maintenance	$ 1,760,073		$ 1,760,073		$ 1,760,073		$ 1,760,073	
	Communications	$ 1,348,000		$ 1,348,000		$ 1,348,000		$ 1,348,000	
	Health and Safety	$ 160,584		$ 160,584		$ 160,584		$ 160,584	
	Power Consumption	$ 2,045,594		$ 2,045,594		$ 2,048,206		$ 2,045,594	
	FIXED COSTS	$ 14,705,999	0	$ 14,701,584	0	$ 14,704,195	0	$ 14,701,584	0
FIXED INDIRECT COSTS									
	Property Taxes	$ 1,639,507		$ 1,639,507		$ 1,639,507		$ 1,639,507	
	Land Leases	$ 22,128		$ 22,128		$ 22,128		$ 22,128	
	Security Cost on RECLAIM	$ 67,778		$ 67,778		$ 67,778		$ 67,778	
	FIXED INDIRECT COSTS	$ 1,729,413	0	$ 1,729,413	0	$ 1,729,413	0	$ 1,729,413	0
	TOTAL O&M SUB-PROJECT COST	$ 32,712,633.40	16	$ 45,434,985.06	61	$ 52,631,496.97	77	$ 61,157,499.84	95
ADDITIONAL PROJECT COST									
	ESCALATION (5% on Annualized Basis)	$ 1,635,631.67		$ 2,271,749.25		$ 2,631,574.85		$ 3,057,874.99	
	40% Contingency Applied to Sub-Project Cost	$ 13,085,053.36		$ 18,173,994.03		$ 21,052,598.79		$ 24,462,999.93	
	ADDITIONAL PROJECT COSTS	$ 14,720,685		$ 20,445,743		$ 23,684,174		$ 27,520,875	
	TOTAL O&M PROJECT COST	$ 47,433,318.43	16	$ 65,880,728.34	61	$ 76,315,670.60	77	$ 88,678,374.76	95

Diavik Mine Prefeasibility Economic Study - Site Services Summary

	DESCRIPTION	15 people (Base Case)				200 people				383 people				600 people			
		Materials	Contractor Labor	Labor	FTE	Materials	Contractor Labor	Labor	FTE	Materials	Contractor Labor	Labor	FTE	Materials	Contractor Labor	Labor	FTE
VARIABLE COSTS																	
	Facilities General	1,142,100	12,004,951	403,139	2	1,142,100	12,004,951	1,209,418	6	1,142,100	12,004,951	1,209,418	6	1,142,100	12,004,951	1,209,418	6
	Mechanical/ Electrical Engineering Services			1,165,371	7			4,120,418	26			4,120,418	26			4,120,418	26
	Water Treatment Operations	34				450				862				1,351			
	SCALING COSTS	**$ 1,142,134**	**$ 12,004,951**	**$ 1,568,510**	**9**	**$ 1,142,550**	**$ 12,004,951**	**$ 5,329,836**	**32**	**$ 1,142,962**	**$ 12,004,951**	**$ 5,329,836**	**32**	**$ 1,143,451**	**$ 12,004,951**	**$ 5,329,836**	**32**
		$ 14,715,594				**$ 18,477,337**				**$ 18,477,749**				**$ 18,478,237**			

	DESCRIPTION	15 people (Base Case)				200 people				383 people				600 people			
		Materials	Contractor Labor	Labor	FTE	Materials	Contractor Labor	Labor	FTE	Materials	Contractor Labor	Labor	FTE	Materials	Contractor Labor	Labor	FTE
FIXED COSTS																	
	Main Camp Facility Maintenance	207,646	588,611	0	-	207,646	588,611	-	-	207,646	588,611	-	-	207,646	588,611	-	-
	Power Generation Maintenance	135,836	633,194	0	-	135,836	633,194	-	-	135,836	633,194	-	-	135,836	633,194	-	-
	Diesel Generation Maintenance	767,866	829,004	0	-	767,866	829,004	-	-	767,866	829,004	-	-	767,866	829,004	-	-
	Power Distribution General Maintenance	11,506	82,282	0	-	11,506	82,282	-	-	11,506	82,282	-	-	11,506	82,282	-	-
	Power Operation	511,299	415,900	0	-	511,299	415,900	-	-	511,299	415,900	-	-	511,299	415,900	-	-
	General Building Maintenance	677,165	3,706,565	0	-	677,165	3,706,565	-	-	677,165	3,706,565	-	-	677,165	3,706,565	-	-
	Wind Farm Maintenance	95,900	48,109	0	-	95,900	48,109	-	-	95,900	48,109	-	-	95,900	48,109	-	-
	Fuel Tank Farm Maintenance	8,650	18,480	0	-	8,650	18,480	-	-	8,650	18,480	-	-	8,650	18,480	-	-
	Lube Tank Maintenance	4,415															
	Site Fire System Maintenance	49,971	79,895	0	-	49,971	79,895	-	-	49,971	79,895	-	-	49,971	79,895	-	-
	Water Treatment Operations	44,912	474,541	0	-	44,912	474,541	-	-	44,912	474,541	-	-	44,912	474,541	-	-
	FIXED COSTS	**$ 2,515,167**	**$ 6,876,580**	**$ -**	**0**	**$ 2,510,752**	**$ 6,876,580**	**$ -**	**0**	**$ 2,510,752**	**$ 6,876,580**	**$ -**	**0**	**$ 2,510,752**	**$ 6,876,580**	**$ -**	**0**

Diavik Mine Prefeasibility Economic Study - Camp Summary

	DESCRIPTION	15 people (Base Case)		200 people		383 people		600 people	
		COST	FTE	COST	FTE	COST	FTE	COST	FTE
VARIABLE COSTS									
	Catering Contracted Labor	$ 90,845.54		$1,211,273.88		$2,319,589.49		$3,633,821.65	
	Cleaning Contracted Labor	$ 68,532.60		$913,768.02		$1,749,865.75		$2,741,304.05	
	Cleaning Supplies	$ 3,252.41		$43,365.49		$83,044.92		$130,096.48	
	Newspapers	$ 205.99		$2,746.48		$5,259.51		$8,239.44	
	Towels and Linens	$ 530.20		$7,069.37		$13,537.84		$21,208.10	
	Kitchen - Russell Food	$ 863.87		$11,518.31		$22,057.56		$34,554.93	
	Provisions	$ 133,627.61		$1,781,701.41		$3,411,958.20		$5,345,104.23	
	SCALING COSTS	**$ 297,858**	**2**	**$ 3,971,443**	**15**	**$ 7,605,313**	**29**	**$ 11,914,329**	**45**

Diavik Mine Prefeasibility Economic Study - Power Consumption Summary

DESCRIPTION		15 people (Base Case)	200 people	383 people	600 people
		Power Consumption (KwH)	Power Consumption (KwH)	Power Consumption (KwH)	Power Consumption (KwH)
VARIABLE COSTS					
	Accommodations Complex	71062	947,491	1,814,445	2,842,473
	Accommodations Complex - Wings A-B	9649	128,650	246,364	385,949
	Accommodations Complex - Wings C-D	8772	116,954	223,967	350,863
	Accommodations Complex - Arctic Corridor	5282	70,423	134,859	211,268
	SCALED POWER CONSUMPTION (kWh)	**94764**	**1263517**	**2419636**	**3790552**
	Power House Burn Rate (L/kWh)	0.235	0.235	0.235	0.235
	Total Diesel Consumption	22269	296927	568614	890780
	TOTAL COST	**$ 28,188.72**	**$ 375,849.63**	**$ 719,752.05**	**$ 1,127,548.90**

DESCRIPTION		15 people (Base Case)	200 people	383 people	600 people
		Power Consumption (KwH)	Power Consumption (KwH)	Power Consumption (KwH)	Power Consumption (KwH)
FIXED COSTS					
	Maintenance Complex	3,202,272	3,202,272	3,202,272	3,202,272
	Power House 1	403,783	403,783	403,783	403,783
	Boiler House	400,000	400,000	400,000	400,000
	Lube Oil Storage	395,472	395,472	395,472	395,472
	Tank Farm	248,900	248,900	248,900	248,900
	ERT Building	86,453	86,453	86,453	86,453
	Sewage Treatment Plant	286,506	286,506	286,506	286,506
	Potable Water Treatment	249,806	249,806	249,806	249,806
	Raw Water Intake	555,094	555,094	555,094	555,094
	Airport - Terminal	240,117	240,117	240,117	240,117
	Airport - Warehouse	16,289	16,289	16,289	16,289
	Environmental Field Lab	218,190	218,190	218,190	218,190
	Communications Building	126,509	126,509	126,509	126,509
	Windfarm - Substation and Heat Trace	100,000	100,000	100,000	100,000
	Boiler Plant - Heating	60,000	60,000	60,000	60,000
	Incinerator	287,411	287,411	287,411	287,411
	FIXED POWER CONSUMPTION (kWh)	**6,876,802**	**6,876,802**	**6,876,802**	**6,876,802**
	Power House Burn Rate (L/kWh)	0.235	0.235	0.235	0.235
	Total Diesel Consumption	1616049	1616049	1618112	1616049
	TOTAL COST	$2,045,594.25	$2,045,594.25	$2,048,205.65	$2,045,594.25

Diavik Mine Prefeasibility Economic Study - Travel Summary

	DESCRIPTION	15 people (Base Case)		200 people		383 people		600 people	
		COST	FTE	COST	FTE	COST	FTE	COST	FTE
VARIABLE COSTS									
	Terminal Services	$ 171,854.47		$2,291,393		$4,388,018		$6,874,179	
	SCALING COSTS	**$ 171,854**	**0**	**$ 2,291,393**	**0**	**$ 4,388,018**	**0**	**$ 6,874,179**	**0**

Diavik Mine Prefeasibility Economic Study - Travel Summary

	DESCRIPTION	15 people (Base Case)		200 people		383 people		600 people	
		COST	FTE	COST	FTE	COST	FTE	COST	FTE
VARIABLE COSTS									
	Terminal Services	$ 171,854.47		$2,291,393		$4,388,018		$6,874,179	
	SCALING COSTS	**$ 171,854**	**0**	**$ 2,291,393**	**0**	**$ 4,388,018**	**0**	**$ 6,874,179**	**0**

Diavik Mine Prefeasibility Economic Study - Freight and Winter Road Summary

	DESCRIPTION	15 people (Base Case)		200 people		383 people		600 people	
		COST	FTE	COST	FTE	COST	FTE	COST	FTE
VARIABLE COSTS									
	Freight Costs	$90,909.12		$1,212,121.57		$2,321,212.81		$3,636,365	
	SCALED COSTS	**$ 90,909**	**0**	**$ 1,212,122**	**0**	**$ 2,321,213**	**0**	**$ 3,636,365**	**0**

Diavik Mine Prefeasibility Economic Study - Communications Summary

	DESCRIPTION	15 people (Base Case)			200 people			383 people			600 people		
		COST	LABOR	FTE	COST	LABOR	FTE	COST	LABOR	FTE	COST	LABOR	FTE
FIXED COSTS													
	Northwestel microwave service - Internet and TV	1,060,000	$82,308.04	0	$1,060,000.00	$246,924.12	1	$1,060,000.00	$246,924.12	1	$1,060,000.00	$246,924.12	1
	Novanet Satellite Service - Long Distance	48,000	$69,978.77	0	$48,000.00	$209,936.30	1	$48,000.00	$209,936.30	1	$48,000.00	$209,936.30	1
	One Web LEO Satellite Service	240,000	$69,978.77	$ 246,924.00	$240,000.00	$209,936.30	1	$240,000.00	$209,936.30	1	$240,000.00	$209,936.30	1
	FIXED COSTS	**$1,348,000**	**$ 222,266**	**246924**	**$ 1,348,000**	**$ 666,797**	**3**	**$ 1,348,000**	**$ 666,797**	**3**	**$ 1,348,000**	**$ 666,797**	**3**

Diavik Mine Prefeasibility Economic Study - Health and Safety Summary

	DESCRIPTION	15 people (Base Case)			200 people			383 people			600 people		
		COST	LABOR	FTE	COST	LABOR	FTE	COST	LABOR	FTE	COST	LABOR	FTE
FIXED COSTS													
	Medical Supplies	$160,584.00			$160,584.00			$160,584.00			$160,584.00		
	Advisor, Safety & HSE Systems	0	$209,936.30	1		$419,872.59	2		$419,872.59	2		$419,872.59	2
	Medics	0	$366,300.00	1		$732,600.00	2		$732,600.00	2		$732,600.00	2
	FIXED COSTS	**$ 160,584**	**$ 576,236**	**2**	**$ 160,584**	*********	**4**	**$ 160,584**	**$1,152,473**	**4**	**$ 160,584**	**$1,152,473**	**4**

Diavik Mine Prefeasibility Economic Study - Fleet and Maintenance Summary

	DESCRIPTION	15 people (Base Case)			200 people			383 people			600 people		
		COST	LABOR	FTE	COST	LABOR	FTE	COST	LABOR	FTE	COST	LABOR	FTE
VARIABLE COSTS													
	Supervisor, Mobile Maintenance	-	$194,256.85	1	-	$194,256.85	1	$0.00	$194,256.85	1	$0.00	$194,256.85	1
	Lead Hand		$0.00	0		$174,180.33	1	$0.00	$174,180.33	1	$0.00	$174,180.33	1
	Maintainers, LVM	-	$0.00	0	-	$318,758.59	2	$0.00	$318,758.59	2	$0.00	$318,758.59	2
	Tire technician	-	$0.00	0	-	$159,379.29	1	$0.00	$159,379.29	1	$0.00	$159,379.29	1
	VARIABLE COSTS	**$ -**	**$ 194,257**	**1**	**$ -**	**$ 846,575**	**5**	**$ -**	**$ 846,575**	**5**	**$ -**	**$ 846,575**	**5**

FLEET AND MAINTENANCE DESCRIPTION								
FIXED COSTS								
	Equipment	**Units**	**Hours per year (per unit)**	**Hours per**	**Diesel consumption (Litres/ hour)**	**Total Diesel consumption**	**Maintenace parts ($/hr)**	**Total Maintenance Parts Cost**
	CAT 16G Grader	2	$ 3,287.00	6574	20	131480	$ 153.89	$ 1,011,672.86
	CAT 930IT	5	$ 5,075.00	25375	3.9	98962.5	$ 6.95	$ 176,356.25
	Sterling Roll Off/ Winch Trucks	2	$ 1,732.00	3464	4.7	16280.8	$ 9.70	$ 33,600.80
	Sterling Water/ Sewage Trucks	2	$ 1,638.00	3276	6	19656	$ 8.30	$ 27,190.80
	F350 Pickups	10	$ 4,558.00	45580	1.5	68370	$ 1.82	$ 82,955.60
	Western Star Service Trucks	2	$ 4,638.00	9276	4.5	41742	$ 7.77	$ 72,074.52
	Hyster Forklift	3	$ 1,315.00	3945	0.45	1775.25	$ 10.60	$ 41,817.00
	CAT 14H Grader	1	$ 807.00	807	8.8	7101.6	$ 29.55	$ 23,846.85
	Freightliner 44 Passenger Buses	2	$ 1,180.00	2360	3.6	8496	$ 42.33	$ 99,898.80
	Small Excavator/ Backhoe	2	$ 6,212.00	12424	2.3	28575.2	$ 11.15	$ 138,527.60
	JLG 800 Manlift/ Boom lift	2	$ 400.00	800	0.5	400	$ 43.13	$ 34,504.00
	Miscellaneous	22	$ 400.00	8800	0.5	4400	$ 2.00	$ 17,600.00
	FIXED COSTS							**$ 1,760,045**

Diavik Mine Prefeasibility Economic Study - Indirect Summary

	DESCRIPTION	15 people (Base Case)		200 people		383 people		600 people	
		COST	FTE	COST	FTE	COST	FTE	COST	FTE
INDIRECT FIXED COSTS									
	Property Taxes	$1,639,506.64		$1,639,506.64		$1,639,506.64		$1,639,506.64	
	Mining, Airstrip	$22,128.00		$22,128.00		$22,128.00		$22,128.00	
	Mining, Mine Site	67,778		$67,778.00		$67,778.00		$67,778.00	
	RECLAIM Estimate	127,120		$127,120.00		$127,120.00		$127,120.00	
	INDIRECT COSTS	**$ 1,856,533**	**0**	**$ 1,856,533**	**0**	**$ 1,856,533**	**0**	**$ 1,856,533**	**0**

Appendix C OPERATIONS, REPAIR, AND MAINTENANCE CALCULATIONS

METHODOLOGY
For site services the current labor costs, material costs, and contracted labor was supplied by Rio Tinto. The only full "variable" cost was water treatment operations in which the "scaling factor" was applied, dependent upon the number of occupants. Other assumptions were made, based on estimators judgement and experience. The assumptions have been noted as "estimators notes."

PROJECT GIVENS (LABOR)		
Description	**Yearly Unit Cost**	**Estimators Notes**
Facilities General		For the base case, the amount of personnel has been reduced to 2 people
Superintendent	$ 144,902.00	
Supervisor - Surface Support	$ 104,968.00	
Supervisor - Infrastructure	$ 209,936.00	
Mechanical/ Electrical Engineering Services		The total amount mechanical/ electrical services would be reduced to 7 people (base case). For the remaning number of occupants, it has been reduced by 25%.
Supervisor - Power Distribution	$ 104,968.00	
Chief Boiler Inspector	$ 174,180.00	
Lead Hand, Power House	$ 159,379.00	
Powerhouse Operator	$ 159,379.00	
Team Lead - E & M Engineering	$ 159,379.00	
Lead Hand, Electrical	$ 159,379.00	
Maintainer, HDM	$ 159,379.00	
Engineer, Mechanical Design	$ 212,817.00	
Engineer, Mechanical	$ 212,817.00	
Engineer, Electrical	$ 212,817.00	
Graduate, Engineer	$ 161,422.00	
Maintainer, Electrical	$ 159,379.00	
Coordinator, Business Support	$ 144,067.00	
Senior Document Control Analyst	$ 161,422.00	

PROJECT GIVENS (MATERIAL COSTS)			
Description	**Materials cost**	**Contractor Labor**	**Estimators Notes**
Facilities General	$ 1,142,100.00	$ 12,004,951.00	Remained the same since general facilities services will be required, and is not contingent upon the number of occupants
Main Camp Facility Maintenance	$ 207,646.00	$ 588,611.00	Remained the same since Main Camp Facility Maintenance will be required, and is not contingent upon the number of occupants
Power Generation Maintenance	$ 271,672.00	$ 1,266,387.00	Reduced by 50% because it was assumed that only one of the two power houses would be retained.
Diesel Generation Maintenance	$ 767,866.00	$ 829,004.00	Remained the same since Main Camp Facility Maintenance will be required, and is not contingent upon the number of occupants
Power Distribution General Maintenance	$ 23,013.00	$ 164,564.00	Reduced by 50% because it was assumed that only one of the two power houses would be retained.
Power Operation	$ 1,022,597.00	$ 831,801.00	Reduced by 50% because it was assumed that only one of the two power houses would be retained.
General Building Maintenance	$ 677,165.00	$ 3,706,565.00	Remained the same since General Building Maintenance will be required, and is not contingent upon the number of occupants
Wind Farm Maintenance	$ 95,900.00	$ 48,109.00	Remained the same since it is intended that the wind farm will be repurposed
Fuel Tank Farm Maintenance	$ 25,951.00	$ 55,440.00	Reduced by 67% because it was assumed that only two of the 6 fuel tanks would be retained
Lube Tank Maintenance	$ 4,415.00	$ 32,760.00	Remained the same since Lube Tank Maintenance will be required, and is not contingent upon the number of occupants
Site Fire System Maintenance	$ 66,628.00	$ 106,527.00	Reduced by 25%. This is based on estimators judgement of what would be required when facilities aren't utilized for mining activities
Water Treatment Operations	$ 59,883.00	$ 632,721.00	Reduced by 25%. This is based on estimators judgement of what would be required when facilities aren't utilized for mining activities
300 litres per day per person	$ 1,351.00	-	This was scaled by number of occupants.

EXAMPLE LABOR CALCULATION				
Description	**Given Personnel**	**Base Case Personnel**	**Given Total Cost**	**Calculated Cost**
Facilities General	6	2	$ 1,209,418.00	$ 403,139.33

EXAMPLE MATERIAL CALCUALTION			
Description	**Given Cost**	**Scaling Factor (383 occupants)**	**Calculated Cost (Given * Scaling Factor)**
Water Treatment Operations	$ 1,278.75	0.67	$ 856.76

EXAMPLE CALCULATION WITH ASSUMPTION			
Description	**Given Cost**	**Estimators assumption**	**Calculated Cost (Given Cost * Reduction %)**
Power Distribution General Maintenance	$ 23,013.00	Reduce by 50%	$ 11,506.50

METHODOLOGY
For the camp costs, each "scaling factor" was applied to the given costs, dependent upon the number of occupants. The labor and materials that were provided were for 568 occupants.

GIVEN INFORMATION (MATERIALS)		
Description	**Annual Cost**	**Occupants**
Newspapers	$7,800	568
Towels & Linens	$20,077	568
Kitchen - Russell Food	$32,712	568
Provisions	$5,060,032	568

GIVEN INFORMATION (LABOR)			
Description	**Annual (Given) Cost**	**FTE**	**Calculated Unit Cost (Annual Given / FTE)**
Catering Contracted Labor	$3,440,018	19	$181,053.58
Cleaning Contracted Labor	$2,595,101	23	$112,830.48
Superintendent, Personnel & CMX	$289,804	1	$289,804.00

EXAMPLE MATERIALS CALCULATION				
Description	**Given Cost**	**Scaling factor (15 occupants)**	**Calculation**	**Calculated Cost**
Newspapers	$7,800.00	0.026	7800*.026	$ 203

EXAMPLE LABOR CALCULATION					
Description	**Given FTE**	**Scaling factor (200 occupants)**	**Adjusted Value (Given FTE * Scaling factor**	**Calculated Unit Cost (Annual Given / FTE)**	**Calculated cost (Calculate Unit Cost * Adjusted FTE)**
Catering Contracted Labor	19	0.35	7	$181,053.58	$1,267,375.06

METHODOLOGY
For the purposes of this high-level estimate, all of the given power consumptions were unadjusted with the exception of the accommodations complex. It can be confidently assumed that the power consumption of the accommodations complex would be dependent on the number of occupants. The given power consumption was given in Kwh, and therefore needed to be converted to liters in order to cost (per liter of diesel). In order to achieve that, the base consumption was multiplied by the given burn rate of the power house. This resulted in power consumption in terms of diesel liters. From there, the diesel consumption was multipled by the cost per liter of diesel, to result in a final cost.

GIVEN INFORMATION (POWER CONSUMPTION)		
Description	**Base Consumption (per year, KwH)**	**ESTIMATORS NOTES**
Accommodations Complex	2690874	Scaled by the number of occupants
Accommodations Complex - Wings A-B	365365	Scaled by the number of occupants
Accommodations Complex - Wings C-D	332150	Scaled by the number of occupants
Accommodations Complex - Arctic Corridor	200000	Scaled by the number of occupants
Maintenance Complex	3202272	Unadjusted
Power House 1	403783	Unadjusted
Boiler House	400000	Unadjusted
Lube Oil Storage	395472	Unadjusted
Tank Farm	746700	Reduced by 67% since only two (2) of the six (6) fuel tanks to be repurposed
ERT Building	86453	Unadjusted
Sewage Treatment Plant	286506	Unadjusted
Potable Water Treatment Plant	249806	Unadjusted
Raw Water Intake	555094	Unadjusted
Airport - Terminal	240117	Unadjusted
Airport - Warehouse	16289	Unadjusted
Environmental Field Lab	218190	Unadjusted
Incinerator	287411	Unadjusted
Communications Building	126509	Unadjusted
Wind Farm - Substation & Heat Trace	10000	Unadjusted

GIVEN INFORMATION (POWER CONVERSIONS AND COSTS)	
Power House Burn Rate (L/Kwh)	0.235
Power ($ per liter)	$ 1.26

EXAMPLE CALCULATION							
Description	**Base Consumption (Given)**	**Scaling factor (200 occupants)**	**Adjusted power consumption (Kwh)**	**Conversion from Kwh to liters (Power House Burn Rate)**	**Diesel consumption (liters)**	**Cost of diesel (per liter)**	**Total cost (diesel consumption * cost per liter)**
Accomodations Complex	2690874	0.352113	947491.7168	0.235	222660.5534	$ 1.26	$ 280,552.30

METHODOLOGY
The travel information was given in terms of flights per year, therefore the scaling factor was applied to the sum of the given costs.

GIVEN INFORMATION			
Air Charter Passenger Costs	**Flights per year**	**Annual Cost**	
YEG-LDG-YEG	52	$	2,935,036.00
YZF-LDG-YZF	104	$	1,040,000.00
YZF-LDG-YZF	208	$	1,937,520.00
Terminal Services	Annually	$	595,000.00
	TOTAL COST	**$**	**6,507,556.00**

GIVEN ASSUMPTIONS
2 passenger flights every two weeks from Edmonton
4 passenger flights every two weeks from Yellowknife
4 passenger flights every week from Yellowknife
Excudes flights from other communities

EXAMPLE CALCULATION		
Total Cost of Travel	**Scaling Factor (383 occupants)**	**Adjusted Annual Cost**
$ 6,507,556.00	0.674295775	$ 4,388,018

METHODOLOGY
The given freight and winter road costs were given in terms of trips, therefore the scaling factor was applied to the sum of the annual costs.

GIVEN INFORMATION	
Description	**Annual cost**
2022 winter road loads - food	$ 81,093.00
2022 WR toll - food	$ 21,682.00
2022 air flights - food	$ 920,000.00
General freight - Dash 7 combined	$ 93,150.00
2022 General Freight - Winter Road	$ 123,797.00
2022 WR toll - General Freight	$ 53,366.00
Diesel Freight from YK to Diavik	$ 133,263.00
2022 WR toll on diesel	$ 111,101.00
Expediting Services	$ 1,686,073.00
WR Freight Management	$ 200,000.00
WR Expediting	$ 18,900.00
TOTAL	**$ 3,442,425**

EXAMPLE CALCULATION		
Total Freight and Winter Road Cost	**Scaling Factor (600 Occupants)**	**Annual Adjusted Cost**
$ 3,442,425.00	1.056338	$ 3,636,364

METHODOLOGY
Since the communications costs apply to the site, independent of the amount of occupants, all of these values were left unadjusted. Regarding to labor costs, all costs of 3 personnel total remained the same, with the excepetion of the base case, in which only one personnel (Senior Adviser, Infrastructure & Op Support), was retained.

GIVEN SERVICE INFORMATION	
Service Description	**Annual Cost**
Northwestel Microwave Service - Internet and TV	$ 1,060,000.00
Novanet Satellite Service - Long Distance	$ 48,000.00
One Web LEO Satellite Service	$ 240,000.00
TOTAL	**$ 1,348,000.00**

GIVEN LABOR COSTS		
Description	**Annual Salary**	**Estimators Notes**
Senior Adviser, Infrastructure & Op Support	$ 246,924.00	Assumed one senior advisor for all occupant cases
Communication Infrastructure Specialist	$ 209,936.00	Assumed one specialist for all occupant cases, except for the base case
System Administrator	$ 209,936.00	Assumed one system administrator for all occupant cases, except the base case

METHODOLOGY
It was assumed that the medical supplies would be necessary for all occupants cases. Regarding labor, for all other occupants except the base case, it was assumed that there would need to be at least 2 of each staff so that there could be a rotation.

GIVEN INFORMATION (MATERIALS)		
Description	**Cost**	**Estimators Notes**
Medical Supplies, etc.	$ 160,584.00	Unadjusted

GIVEN INFORMATION (LABOR)		
Description	**Annual Cost**	**Estimators Notes**
Advisor, Safety, & HSE Systems	$ 209,936.00	One (1) Advisor assumed for the base case and two (2) for all other occupant cases
Medics	$ 366,300.00	One (1) medic assumed for the base case and two (2) for all other occupant cases

METHODOLOGY
For the fleet and maintenance costs, the client provided equipment onsite, number of units, total annual hours, and maintenance parts per hour. The estimator utilized its judgement on what equipment would still be required for the repurposed infrastructure.

GIVEN INFORMATION (LABOR)				
Description	**Annual Cost**	**FTE**	**Total Annual Cost**	**Estimators Notes**
Supervisor, Mobile Maintenance	$ 194,257.00	1	$ 194,257.00	One supervisor will be required
Lead Hand	$ 174,180.00	1	$ 174,180.00	One lead hand will be required
Maintainers	$ 159,379.00	2	$ 318,758.00	Originally was three maintainers, but due to the reduction of total vehicles, this was reduced to two
Tire Technician	$ 159,379.00	1	$ 159,379.00	One tire technician will be required

GIVEN INFORMATION EQUIPMENT								
Equipment	**Units**	**Hours per year (per unit)**	**Total Hours per year**	**Diesel consumption (Litres/ hour)**	**Total Diesel consumption**	**Maintenace parts ($/hr)**	**Total Maintenance Parts Cost**	**Estimators Notes**
CAT 16G Grader	2	$ 3,287.00	6574	20	131480	$ 153.89	$ 1,011,672.86	2 units are required for general site services (one for use, one for backup)
CAT 930IT	5	$ 5,075.00	25375	3.9	98962.5	$ 6.95	$ 176,356.25	Utilized for airport, sanding, snow removal, berms, etc.
Sterling Roll Off/ Winch Trucks	2	$ 1,732.00	3464	4.7	16280.8	$ 9.70	$ 33,600.80	Utilized for airport (one for use, one for backup)
Sterling Water/ Sewage Trucks	2	$ 1,638.00	3276	6	19656	$ 8.30	$ 27,190.80	One Sewage pump-out truck and one potable water truck
F350 Pickups	10	$ 4,558.00	45580	1.5	68370	$ 1.82	$ 82,955.60	Reduced from 19 to 10 pickup trucks
Western Star Service Trucks	2	$ 4,638.00	9276	4.5	41742	$ 7.77	$ 72,074.52	Fuel/ winch truck and lube truck
Hyster Forklift	3	$ 1,315.00	3945	0.45	1775.25	$ 10.60	$ 41,817.00	Utilized for warehouse and mobile maintenance
CAT 14H Grader	1	$ 807.00	807	8.8	7101.6	$ 29.55	$ 23,846.85	Utilized for Airport services
Freightliner 44 Passenger Buses	2	$ 1,180.00	2360	3.6	8496	$ 42.33	$ 99,898.80	Utilized for emergency purposes
Small Excavator/ Backhoe	2	$ 6,212.00	12424	2.3	28575.2	$ 11.15	$ 138,527.60	Utilized for site services (one for use, one for backup)
JLG 800 Manlift/ Boom lift	2	$ 400.00	800	0.5	400	$ 43.13	$ 34,504.00	Utlized for site services (one for use, one for backup)
Miscellaneous	22	$ 400.00	8800	0.5	4400	$ 2.00	$ 17,600.00	Includes 4 boats, 4 snow mobiles, 12 gensets/ frostfighters/ lightstands, 1 fire supression truck, and 1 highline bucket truck

METHODOLOGY
Indirect costs that were applicable to the potential end-user were retained.

GIVEN INFORMATION (PROPERTY TAX MILL RATES)	
Description	Cost
Assessment	$ 126,602,829.00
2022 Mill Rate per $1,000	$ 12.95
Annual Mill Rate	

GIVEN INFORMATION (LAND LEASES)		
Description	Annual Cost	Estimators Notes
Mining, Airstrip LDG	$ 22,128.00	Land Lease would transfer and need to be accounted for
Mining, Diamond pipes, A154 & A418	$ 27,176.00	Not applicable
Mining, Quarry Stock Pile. LDG	$ 60,200.00	Not applicable
Mining, Mine Site, LDG	$ 67,778.00	Land Lease would transfer and need to be accounted for
Mining, Diamond Pipe, LDG	$ 24,000.00	Not applicable

GIVEN INFORMATION (ILOC Fees - RECLAIM)	
Description	Cost
RECLAIM Estimate	$ 36,320,000.00
Basis point per $100	$ 0.35
TOTAL COST	$ 127,120.00

Appendix C OPERATIONS, REPAIR, AND MAINTENANCE DDMI 2022 DATA

Diavik Mine Prefeasibility Economic Study - Summary DDMI 2022 Data

Operations & Maintenance	**FTE's**	**Labour Costs**	**Consumables**	**Diesel Costs**	**Total Cost per Year**
Responsibility					
Fleet Maintenance	6	$ 1,005,954	$ 1,834,733	$ 663,937	$ 3,504,624
Site Services Maintenance	39	$ 26,970,748	$ 4,366,188		$ 31,336,935
Power consumption	-			$ 1,074,164	$ 1,074,164
Catering & Cleaning	43	$ 6,324,923	$ 5,243,779	$ -	$ 11,568,702
Travel	-		$ 6,507,556		$ 6,507,556
Freight & Winter Road	-		$ 3,442,425		$ 3,442,425
Communications	3	$ 666,797	$ 1,348,000	$ -	$ 2,014,797
Health & Safety	4	$ 1,152,473	$ 160,584	$ -	$ 1,313,057
Indirects:					$ -
- Property Taxes	-		$ 1,639,507		$ 1,639,507
- Land leases	-		$ 201,282		$ 201,282
- Security cost on RECLAIM	-		$ 127,120		$ 127,120
	95	$ 36,120,895	$ 24,871,173	$ 1,738,101	$ 62,730,168

Project Capital Spend			$ 1,967,909		
Battery for wind farm					

Assumptions:

2022 basis for costs
Only day shift - 12 hours
assumes current camp capacity being used
assumes no Finance/HR/Procurement/Security/Warehouse functions
asssumes DDMI salaries, allowances and benefits
asssumes current DDMI contractor rates

	Cost Centre	2022 Estimated Cost Materials Only	Contractor Labour	DDMI Labour	DDMI FTE's	
Facilities General	51005200	$ 1,142,100	$ 12,004,951	$ 1,209,418	6	
Main Camp Facility Maintenance	51055220	$ 207,646	$ 588,611			
Power Generation Maintenance	51055310	$ 271,672	$ 1,266,387			
Diesel Generation Maintenance	51055320	$ 767,866	$ 829,004			
Power Distribution General Maintenance	51055330	$ 23,013	$ 164,564			
Power Operation	51005300	$ 1,022,597	$ 831,801			ORBIS - highline support $ 580,073
General Building Maintenance	51055210	$ 677,165	$ 3,706,565			
Mechanical/Electrical Engineering Services	51005160	$ -		$ 5,493,891	33	
Wind Farm Maintenance	51055350	$ 95,900	$ 48,109			
Fuel Tank Farm Maintenance	51055270	$ 25,951	$ 55,440			
Lube Tank Farm Maintenance	51055280	$ 4,415	$ 32,760			
Site Fire System Maintenance	51055250	$ 66,628	$ 106,527			
Water Treatment Operations	51008630	$ 59,883	$ 632,721			
300 litres per day per person	Chemicals	$ 1,351				
		$ 4,366,188	$ 20,267,439	$ 6,703,309	39	

			Kg per litre	Cost per Kg
Aluminum sulfate coagulant	per M litre	$17.16	0.0000260	$0.66
Organic Polymer flocculant	per M litre	$3.40	0.0000005	$6.80

Source: 2018 NIWTP_Op_Mtc Cost Sean Sinclair July 2019 email for rates
Source: Branko Babic email November 6, 2020 cost per kg

Airport
Runway Maintenance
Buildings/Other maintenance

Sewage treatment — how is it treated?
Incinerator — 1,000 kg p3r load, 2,000 kg per day curently used once a day — KeyTech diesel incinerator - purchased in 2019 for $1.9M

Garbage collection
Landfill — capacity left
Potable water intake — process?

Road maintenance
Snow removal

Cost of diesel per Litre

Motive	$ Per litre	$ 1.3658
Blasting	$ Per litre	$ 1.2658
Power	$ Per litre	$ 1.2658
Heating	$ Per litre	$ 1.2348

excluding winter road toll
2022 cost

20 Tli Cho labour – surface support
- Water treatment 20 equipment operators
- Airport 14 maintenance

		FTEs			
2 Superintendents	$ 289,804	2	ISN	$ 579,609	51005200
2 Supervisors – Surface Support	$ 209,936	2	KSN	$ 419,873	51005200
2 Supervisors – Power Distribution	$ 209,936	2	KSN	$ 419,873	51005160
2 Supervisors – Infrastructure	$ 209,936	1	KSN	$ 209,936	51005200
				$ 1,629,290	

True North Environmental; - $651,736 2022 FY
Hazardous waste removal – Volumes????

CC51005160

Chief Boiler Inspector	$ 174,180	1	MSN	$ 174,180
Lead Hand, Powerhouse	$ 159,379	1	MSS	$ 159,379
Powerhouse Operator	$ 159,379	4	MSS	$ 637,517
Team Lead - E & M Engineering	$ 159,379	1	MSS	$ 159,379
Lead hand Electrical	$ 159,379	1	MSS	$ 159,379
Maintainer, HDM	$ 159,379	8	MSS	$ 1,275,034
Engineer, Mechanical Design	$ 212,817	1	JSS	$ 212,817
Engineer Mechanical	$ 212,817	1	JSS	$ 212,817
Engineer, Electrical	$ 212,817	1	JSS	$ 212,817
Graduate, Engineer	$ 161,422	1	LSS	$ 161,422
Maintainer, Electrical	$ 159,379	7	MSS	$ 1,115,655
Coordinator, Business Support	$ 144,067	3	NSN	$ 432,200
Senior Document Control Analyst	$ 161,422	1	LSS	$ 161,422
		31		$ 5,074,019

8 mechanics and 2 lead hands split in two crews

Mechanics perform PM work, breakdowns, and rebuilds on engines. They also maintain the ancillary equipment which includes heat recovery, pumps, fans etc. Engine reliability is second only to safety. Mechanics run a dayshift but are considered on call while on site.

Also responsible for portable equipment which includes a wide variety of gensets, hotboxes, light plants etc.
10 Electricians split in two crews.

Catering contracted labour	424161	$	3,440,018		
Cleaning contracted labour	424161	$	2,595,101		
Cleaning supplies	404435	$	123,158		
Newspapers	404435	$	7,800		
Towels & linens	404435	$	20,077		
Kitchen - Russell Food	404435	$	32,712		
Provisions	404435	$	5,060,032		
2022 Average daily camp occupancy	568	$	11,278,898	$ 54.40	per person per day

Housekeeping & Janitorial	16
Commissary	1
Kitchen	23
Camp Management & Administration	2
Total	**42**

		FTE
Superintendent, Personnel & CMX	**$ 289,804**	1

NOTES:
Purchasing $100,000 of new gym equipment in 2023
New mattresses and TVs

Presently, we have 42 BWC employees on site at one time to perform services (this will likely be reduced to 40 as covid controls are rolled back) with breakdown below of area specific allocation.

Power House KwH Schedule

Source: Imran March 3, 2020 worksheet

	Per Year Base Consumption		
Accommodation Complex	2,690,874	KWH	2,690,874
Accommodation Complex - Wings A-B	365,365	KWH	365,365
Accommodation Complex - Wings C-D	332,150	KWH	332,150
Accommodation Complex - Arctic Corridor	200,000	KWH	200,000
Maintenance Complex	3,202,272	kWh	3,202,272
Megadome / Storage Sprung	64,970	kWh	64,970
Power House 1	403,783	kWh	403,783
Boiler House	400,000	kWh	400,000
Lude Oil Storage	395,472	kWh	395,472
North Inlet Water Treatment - Original	2,150,947	kWh	2,150,947
North Inlet Water Treatment - Expansion	378,240	kWh	378,240
North Inlet Water Treatment - Warehouse	48,928	kWh	48,928
Tank Farm	746,700	kWh	746,700
ERT Building	86,453	kWh	86,453
Sewage Treatment Plant	286,506	kWh	286,506
Potable Water Treatment	249,806	kWh	249,806
Raw Water Intake	555,094	kWh	555,094
Airport -Terminal	240,117	kWh	240,117
Airport -Warehouse	16,289	kWh	16,289
Enviro Field Lab	218,190	kWh	218,190
Incinerator	287,411	kWh	287,411
Communications building	126,509	kWh	126,509
North Inlet Water Intake (Barge I)	458,066	kWh	458,066
North Inlet Water Intake (Barge II)	680,424	kWh	680,424
Wind Farm - Substation & heat trace	100,000	kWh	100,000
Contingency	25%	%	3,671,142
Total Energy Consumption		kWh	18,355,708
WF Generation		kWh	15,000,000
Total Energy Consumption afer WF Generation		kWh	3,355,708
WF Penetration		%	82%
Power House Burn Rate	0.235	L/kWh	0.235
Boiler Plant - Heating	60,000	Litres	60,000
Site Services Shop - Heating		Litres	
Total Diesel for Heating (not included above)			60,000
Total Diesel Consumption for Power and Heating		Litres	848,591

Air Charter Passanger Costs:			**Per Year**		**Total Costs**	No. of passengers per week	
YEG-LDG-YEG	per week	1	52	$	2,935,036	184	2x2 rotation
YZF-LDG-YZF	per week	2	104	$	1,040,000	240	2x2 rotation
YZF-LDG-YZF	per week	4	208	$	1,937,520	104	4x3 rotation
						528	
Terminal services	per annum			$	595,000		
				$	6,507,556		

Air Charters - Passangers			**Per Return Flight**	**No. of Passengers**	
RJ100	Per flight	$	56,443.00	92	**YEG-LDG-YEG**
ATR 72 LCD	Per flight	$	10,000.00	60	**YZF-LDG-YZF**
DHC 6 Twin Otter	Per flight	$	4,500.00	14	**YZF-LDG-YZF**
Dash 7 combi 2	Per flight	$	9,315.00	26	**YZF-LDG-YZF**

2022 rates

Assumptions:

2 passenger flights every two weeks from Edmonton	RJ100
4 passenger flights every two weeks from Yellowknife	ATR 72
4 passenger flights every week from Yellowknife	Dash 7
excludes flights from other communities	

Freight Costs:					**Total Costs**
2022 winter road loads - food	Number	12	$ 6,758		$ 81,093
2022 WR toll - food	KGs	221,617			$ 21,682
2022 air flights - food	Flights	92	$ 10,000		$ 920,000
General freight - Dash 7 combi	Flights	10	$ 9,315		$ 93,150
2022 general freight - winter road	Loads	20	tridem decks		$ 123,797
2022 WR toll - general freight	tonnes	545			$ 53,366
Diesel freight from YK to Diavik	Total litres	1,334,700			$ 133,263
2022 WR toll on diesel					$ 111,101
Expediting services	per annum				$ 1,686,073
WR Freight Mgmt	per annum				$ 200,000
WR Expediting	per annum				$ 18,900
					$ 3,442,425

Winter Road Truck Freight		
Average 2020 rate per tonne for general freight		$ 196.00
Source: Branko Babic November 6, 2020 email		
Winter Road toll charge	Per tonne	$ 97.84
Average tonnes per trip (load)	37	
Source: Tonne-kms report 2022		

Diesel Purchased in 2022			84,027,468	litres
GT Freight on Fuel				
Freight on Fuel	$	8,389,733	YK to Diavik	
	$	8,389,733		
Freight per litre			$ 0.100	
Suncor cost per litre FOB YK			$ 1.320	
Warehouse price per litre (excluding WR toll)			$ 1.420	
Number of diesel loads on 2022 WR		1,787		
Litres per load		47,021.53		
1 litre of diesel weighs		0.851	kilograms	
		40,006	kilograms per load	
		40.01	tonnes per load	
Winter Road toll	$	0.08	per litre	

Current Operations Freight:

Diavik currently has two grocery freighter charters a week outside of the winter road season. We utilize the ATR-72 aircraft, which has a payload of approximately 15,500lbs/flight. Current utilization of these flights with groceries is 92% (the remainder is rush freight or mail), meaning an average of 28,520lbs of groceries are shipped to site per week outside of February and March. Winter Road - a tandem or tridem axle reefer (refrigerated) van is utilized to truck our groceries to site. This time of year is when Bouwa-Whee ships their bulk grocery orders. Please see below for a weekly breakdown (and chart) from 2020-2022

Yellowknife tank farm rental not needed due to smaller volume of fuel

Row Labels	Sum of Weight(KG)
2020-02-04 - 2020-02-10	12,098.00
2020-02-18 - 2020-02-24	44,414.00
2020-02-25 - 2020-03-02	80,256.00
2020-03-03 - 2020-03-09	23,973.00
2020-03-10 - 2020-03-16	11,429.00
2020-03-17 - 2020-03-23	49,451.00
2021-02-09 - 2021-02-15	22,069.00
2021-02-16 - 2021-02-22	17,908.00
2021-02-23 - 2021-03-01	63,344.00
2021-03-02 - 2021-03-08	24,058.00
2021-03-09 - 2021-03-15	21,938.00
2021-03-16 - 2021-03-22	56,095.00
2021-03-23 - 2021-03-29	22,883.00
2021-03-30 - 2021-04-05	21,045.00
2022-02-01 - 2022-02-07	22,573.00
2022-02-08 - 2022-02-14	28,323.00
2022-02-15 - 2022-02-21	17,877.00
2022-02-22 - 2022-02-28	16,410.00
2022-03-01 - 2022-03-07	64,336.00
2022-03-08 - 2022-03-14	30,132.00
2022-03-15 - 2022-03-21	32,307.00
2022-03-29 - 2022-04-03	9,659.00
Grand Total	**692,578.00**

Row Labels	Sum of Weight(KG)
2020	**221,621.00**
Feb	88,467.00
Mar	133,154.00
2021	**249,340.00**
Feb	103,321.00
Mar	135,880.00
Apr	10,139.00
2022	**221,617.00**
Feb	85,183.00
Mar	126,775.00
Apr	9,659.00
Grand Total	**692,578.00**

SOW 1= Freight Services
SOW 2= Passenger Services
SOW 3= Winter Road Freight Management
SOW 4= Edmonton Freight Consolidation

	Annual Fee	Monthly Fee
SOW1	1,686,073	
SOW2	595,000	
SOW3	200,000	
Current Contract	2,481,073	206,756
SOW4	280,000	23,333
Winter Road Expediting	18,900	3,780

Misc	Unit Price
2.1 - Repacking of Dangerous Goods - cost of materials plus 5%	Cost + 5%
2.2 - Freight Forwarding	Cost + 5%
2.3 - Procurement for example, straps, dunnage, tarps ext.	Cost + 5%

HOURS OF OPERATION FREIGHT HANDLING		FREIGHT RECEIVING HOURS		WINTER ROAD MANIFESTING		HOURS OF OPERATIONS PASSANGER HANDLING	
Sunday	Closed	Sunday	Closed	Sunday	6:00 - 24:00	Sunday	Closed
Monday	08:00 - 17:00	Monday	08:30 - 16:00	Monday	6:00 - 24:00	Monday	05:30 - 18:30
Tuesday	08:00 - 17:00	Tuesday	08:30 - 16:00	Tuesday	6:00 - 24:00	Tuesday	05:30 - 17:00
Wednesday	08:00 - 17:00	Wednesday	08:30 - 16:00	Wednesday	6:00 - 24:00	Wednesday	08:00 - 17:00
Thursday	08:00 - 17:00	Thursday	08:30 - 16:00	Thursday	6:00 - 24:00	Thursday	08:00 - 18:00
Friday	08:00 - 17:00	Friday	08:30 - 16:00	Friday	6:00 - 24:00	Friday	08:00 - 17:00
Saturday	Closed	Saturday	Closed	Saturday	6:00 - 24:00	Saturday	Closed

	Annual Cost
Northwestel microwave service - Internet & TV	$ 1,060,000
Novanet satellite service - long distance	$ 48,000
One Web LEO satellite service	$ 240,000
	$ 1,348,000

		FTEs	Annual Cost
Senior Adviser, Infrastructure & Op Support	$ 246,924	1	$ 246,924
Communication Infrastructure Specialist	$ 209,936	1	$ 209,936
System Administrator	$ 209,936	1	$ 209,936
		3	$ 666,797

Medical supplies, etc.	$	160,584	used 2023 budget to ensure no COVID related costs

		FTEs	Annual Cost	
Advisor, Safety & HSE Systems	$ 209,936	2	$ 419,873	
Medics		2	$ 732,600	Contractors
		4	$ 1,152,473	

Ancillary Equipment (not scheduled)		Units	Hours per Year	Diesel Consumption - litres per hour	Total Annual Litres	Total Annual Hours	Maintenance Parts $/hr	Total Maintenance Parts Cost
CAT 16G Grader	AUX1	2	3,287	20	131,480	6,574	$ 153.89	$ 1,011,701
CAT 930IT	AUX2	5	5,075	3.9	99,216	25,375	$ 6.95	$ 176,356
Sterling Roll Off/Winch Trucks	AUX3	2	1,732	4.7	16,212	3,464	$ 9.70	$ 33,601
Sterling Water/sewage Trucks	AUX4	2	1,638	6	19,656	3,276	$ 8.30	$ 27,191
F350 Pickups	AUX5	19	4,558	1.5	127,305	86,602	$ 1.82	$ 157,616
Western Star Service Trucks	AUX6	2	4,638	4.5	42,113	9,276	$ 7.77	$ 72,075
Hyster forklift	AUX7	3	1,315	0.45	1,775	3,945	$ 10.60	$ 41,817
CAT 14H Grader	AUX8	1	807	8.8	7,102	807	$ 29.55	$ 23,847
Freightliner 44 Passenger Buses	AUX9	2	1,180	3.6	8,496	2,360	$ 42.33	$ 99,899
Small Excavator/Backhoe	AUX10	2	6,212	2.3	27,954	12,424	$ 11.15	$ 138,528
JLG 800 Manlift/Boom lift	AUX11	2	400	0.5	400	800	$ 43.13	$ 34,504
Miscellaneous	AUX12	22	400	0.5	4,400	8,800	$ 2.00	$ 17,600
		0 *check*			486,109	163,703		$ 1,834,733

Warehouse			
F350 pickup truck	AUX5	1	
JCB 940 forklift	AUX2	1	
CAT 924 FE Loader/forklift	AUX10	1	
Hyster forklift	AUX7	1	
Health & Safety			
F350 pickup truck	AUX5	1	
F450 ERT cube van	AUX5	1	
F350 ERT ambulance	AUX5	1	
Fire suppression truck	AUX12	1	Airport
Environment			
F350 pickup truck	AUX5	2	
Snowmobiles	AUX12	4	
Small boats	AUX12	4	
F350 pickup truck - water treatment (	AUX5	1	
Site Services			
CAT 16G Grader	AUX1	2	
Passenger Buses	AUX9	2	Airport, crew haul
F350 pickup truck	AUX5	4	
F450 garbabe truck	AUX5	1	
F450 baggage truck	AUX5	1	
CAT 930 loaders	AUX2	4	Airport, sanding, snow removal, berms etc.
Flat bed trucks	AUX3	2	Airport
CAT 14H Grader	AUX8	1	Airport
F450 Deicer	AUX5	1	Airport
F350 runway truck	AUX5	2	Airport
Caterpillar 349EL Hydraulic Excavator	AUX10	1	
Sewage Pump-out truck	AUX4	1	
Potable Water Truck	AUX4	1	
Fuel/Winch Truck	AUX6	1	
Aerial Trucks (highline) bucket trucks	AUX12	1	
Other			
Gensets, frostfighters, light stands	AUX12	12	
Genie lifts Man/boom lifts	AUX11	2	
Mobile Maintenance			
F350 pickup truck	AUX5	2	
F350 Mechanics Canopy	AUX5		
F550 Service Trucks	AUX5	1	
Lube truck	AUX6		
Fuel truck	AUX6		
F750 Welding Truck	AUX6	1	
Forklift - small	AUX7	1	
Forklift - large	AUX7	1	
Komastu WA600 loader	AUX2		
Loader IT28	AUX2		
Total		64	

Light Vehicle Mechanic (LVM)

Productivity per shift	9		
Shifts per year	154		
Productive Hours per Year	1,386		
Maintenance Hours per Year	1	Maintenance hour	
	36	Running hour	4,547

		FTEs	Annual Cost
Supervisor, Mobile Maintenance	$ 194,257	1	$ 194,257
Lead Hand	$ 174,180	1	$ 174,180
Maintainers, LVM	$ 159,379	3	$ 478,138
Tire technician	$ 159,379	1	$ 159,379
		6	$ 1,005,954

Property Tax Mill Rates

Assessment	$ 126,602,829
2022 Mill Rate per $1,000	12.95
Annual mill rate	

Source: GNWT Notice of Taxes Payable

Land Leases

0760D09005	22,128	Mining, Airstrip LDG
0760D08005	27,176	Mining, Diamond pipes, A154 & A418
0760D08006	60,200	Mining, Quarry Rock Pile, LDG
0760D08007	67,778	Mining, Mine Site, LDG
0760D08009	24,000	Mining, Diamond Pipe, LDG
3/31/2022	$ 201,282	

ILOC fees - RECLAIM

RECLAIM Estimate	$ 36,320,000
Basis points per $100	0.35
	127,120

Appendix C **INFRASTRUCTURE INFORMATION**

Diavik Re-purposed Infrastructure Information

Building Name	1. Accommodation Complex





Building Description / Use	Accommodation Complex including: - Main Accommodation Area (including recreation areas and basement) - South Camp - Former accommodation units - Arctic corridor connecting plant
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item					
1	Building - Approximate base foot print	12,655	m^2	136167.8	
	- Wings A-D (each)	730	m^2	23564.4	
	- Additional Accommodations	7,300	m^2	78548	
	- Diavik Operations Building (Dorm G+H)	3,100	m^2	66712	
	- Megadome / Storage Sprung	1,525	m^2		
	- Arctic Corridor	1,700	m^2	18292	
	- Basement	2,930	m^2	94580.4	
2	Building - Approximate building height			304992.2	
	- Core	9	m	Roof varies - 9m from grade to roof of Wings. Core is 2	
	- Arctic Corridor	4	m	storeys and steepled roofs	
	- Wings A-D (each)	9	m	Towers are about 9m high + Concrete footing	
	- Additional Accommodations	Single Storey			
	- Diavik Operations Building	2 storeys			
	- Megadome / Storage Sprung	Single Storey			
3	No. of Storeys	Multiple storey - see as-built drawings			
4	Structure	Living areas (Wings, additional accommodations, operations buildings) are predominantly ATCO style modular trailer buildings. Main building (Security, kitchen, cafeteria, gym) steel structure and concrete footing, with additional basement floor for storage, boilers, piping/mechanical equipment. Additionally has 2x 4-storey elevators.			
5	Exterior cladding	Metal siding with insulation			
6	Services	Power, raw H2O, domestic H2O, telecomms, fire H2O, glycol, sanitary, air (Arctic corridor)			
7	Basement				
8	Plant for Salvage				
9	Tanks	None observed			

Building Name	2. Sewage Treatment Plant

	Building Description / Use	Treatment of sewage and wastewater pumped from all site work areas. Plant consists of: digester, equalization tank, anoxic chamber, aeration chamber, primary clarifier, secondary clarifier, and sand filter. Treated water is chlorinated at the end of the system and used as process water in the process plant. Underground water is brought to STP by vac trucks
	Building Inspection Date	12-Oct-16
	Year Built	Unknown

Construction Methodology

Item			
1	Building - Approximate base foot print	720.0	m2
2	Building - Approximate building height	8.7	m
3	No. of Storeys	Double height warehouse	
4	Structure	Steel frame superstructure on concrete floor. Internal block wall office and electrical room.	
5	Exterior cladding		
6	Services	Power, water, telecomms, fire water	
7	Basement	None Observed - above ground structures	
8	Plant for Salvage	Potential for entire sewage treatment plant to be sold on	
9	Tanks	Sewage plant vessels	

Diavik Re-purposed Infrastructure Information

Building Name	3. Maintenance Complex

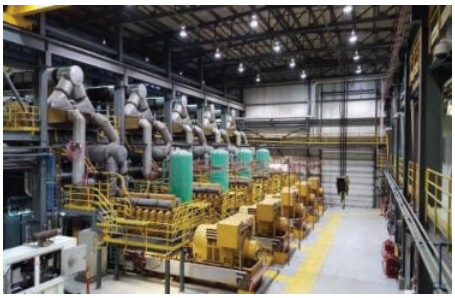
Building Description / Use	Maintenance Complex comprising key areas: - Warehouse: 3-storey with steel frame mezzanine levels for storage of dry goods on metal shelving units. Large (electric) freight elevator in centre of warehouse (capacity 15,000 lbs) - Offices - Machine Shop: did not enter - Welding Bay: isolated working bay with welding gear and ventilation - Main Truck Shop area: heavy duty mechanic workshop comprising working bays each with dedicated fluid/grease points and air system. Fluids for shop pumped from Lube Bay. 4 x overhead galley style cranes (2 x 75T and 2 x 20T) and jack lifts for smaller equipment. Serviced by Haakon Industries heavy duty HVAC systems (including 25,640 CFM and 88,006 CFM units) located on mezzanine walkway over bay area. - Wash Bay: isolated working bay with water cannon and hoses with subfloor drainage to WTP.
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item				
1	Building - Approximate base foot print	6,560	m^2	70585.6
2	Building - Approximate building height	20.9	m	
3	No. of Storeys	Multiple storey - see as-built drawings		
4	Structure	Large scale steel frame superstructure with concrete flooring throughout and concrete or steel frame mezzanine walkways through work areas.		
5	Exterior cladding	Steel sheet w/ foam insulation		
6	Services	Power, raw water, domestic water, telecomms, fire water, glycol, air, truckshop fluids		
7	Basement	None observed - no pits beneath truck shop bays.		
8	Plant for Salvage	Possible resale / salvage value in fixed equipment items Possible scrap value in structural steel / crane components		
9	Tanks	None observed - see Lube Building		

Diavik Re-purposed Infrastructure Information

Building Name	4. Power House 1



Building Description / Use	Original site power plant - 5 x Caterpillar 3616 diesel engines coupled to generators, each capable of producing 4.4 megawatts, and 4 x Caterpillar 3512s, each capable of producing 1.25 megawatts. Plant has glycol recovery system. Waste heat is recovered and is used to heat Diavik's plant site buildings.
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item			
1	Building - Approximate base foot print	2,050	m2
2	Building - Approximate building height	14.7	m
3	No. of Storeys	3	
4	Structure	Steel superstructure on a concrete substructure 5 chimney/generator stacks approximately 36m in height	
5	Exterior cladding	Steel sheet	
6	Services	Power, water, telecomms, fire water	
7	Basement	None observed	
8	Plant for Salvage	Possible resale / salvage value in power plant items Possible scrap value in structural steel components	
9	Tanks	Exterior Tanks: - Waste Oil - 96,000 litres - Waste Glycol - 28,000 litres - Diesel (ULS) - 96,000 litres Interior Tanks: - Ralube 40 CFS Motor Oil - 149,000 litres - 60/40 Engine Antifreeze - 149,000 litres	

Building Name	5. Boiler House

Building Description / Use	Boiler plant houses three Cleaver Brooks firetube boilers, each rated at 7,000 kilowatts. The boilers are held in reserve and supply additional heat when needed - only used when very cold outside.
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item			
1	Building - Approximate base foot print	540	m2
2	Building - Approximate building height	10	m
3	No. of Storeys		
4	Structure	Steel superstructure on a concrete substructure	
5	Exterior cladding	Steel sheet	
6	Services	Power, water, telecomms, fire water, glycol	
7	Basement	None observed	
8	Plant for Salvage	Possible resale / salvage value in boiler items Possible scrap value in structural steel components	
9	Tanks	Exterior Tanks: - Heat Transfer Glycol - 51,000 litres - Diesel (ULS) - 96,000 litres	

Building Name	6. Lube Shop

	Building Description / Use	Storage and piping of greases, oil and products for the Truck Shop operations. Products include: - lube oil, hydraulic oil, glycol coolant, waste oil, Hydrex XV all season. Fluids stored in interior upright steel AST located in tank farm concrete lined bund area (approx. 0.5m below floor grade). Sump pump (440 kg gross weight) located in tank farm to direct spills to 'tailings pond'. Concrete lined area approx. 1.5m in height.
	Building Inspection Date	12-Oct-16
	Year Built	Unknown
	Construction Methodology	
Item		
1	Building - Approximate base foot print	864.0 m2
2	Building - Approximate building height	12.2 m
3	No. of Storeys	Single storey - double height
4	Structure	Steel frame superstructure with concrete flooring. Metal walkway 'mezzanine' over tanks
5	Exterior cladding	Steel sheet
6	Services	Power, water, telecomms, fire water
7	Basement	None observed - concrete lined tank area located approx. 0.5m below grade
8	Plant for Salvage	Possible resale / salvage value in tanks Possible scrap value in structural steel components
9	Tanks	Interior tanks - - 75W-90 Gear Oil - 27,000 litres - 5W-40 Motor Oil - 98,000 litres - Hydraulic Oil - 51,000 litres - 5W-40 Motor Oil - 135,000 litres - Hydraulic Oil - 62,000 litres - 60/40 Engine Antifreeze - 84,000 litres - Transmission/Hydraulic Oil - 76,000 litres - Transmission/Hydraulic Oil - 102,000 litres Exterior tanks - - Waste Glycol - 58,000 litres - Waste Oil - 467,000 litres - Waste Oil - 28,000 litres

Building Name	7. Tank Farm

	Building Description / Use	6 x 18,000,000-litre above ground steel diesel storage tanks. Lined tank area with 3-5m berm surrounding tank farm (height varies due to ramps and access) Fuel pad for refueling tanks and fueling trucks/mobile equipment/vehicles. Made up of 5x ATCO trailers with multiple pumps. 3 fuelling pads each approximately 5m x 20m. Steel tower for overhead fueling.		
	Building Inspection Date	11-Oct-16		
	Year Built	Various		
	Construction Methodology			
Item				
1	Building - Approximate base foot print	8,167	m2	- Each tank is 41.63m diameter
2	Building - Approximate building height	14.63	m	
3	No. of Storeys	n/a		
4	Structure	Cylindrical steel covered tanks - assumed to be double walled		
5	Exterior cladding	n/a		
6	Services	Power		
7	Basement	n/a		
8	Plant for Salvage	Possible salvage of tanks may be possible if one of the local mine sites has a need. Otherwise, reuse/resale is unlikely as: • By the time of actual decommissioning, the plant is likely to have started to deteriorate, thus precluding it from being reused. • The tanks are too large to be moved whole and it is not considered cost effective for them to be dismantled for rebuilding elsewhere outside immediate vicinity.		
9	Tanks	6 (see above)		

Diavik Re-purposed Infrastructure Information

Building Name	8. ERT Building

Building Description / Use	Warehouse for the storage of Emergency Response equipment and adjoining office for supplies, training and other activities
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item			
1	Building - Approximate base foot print	336.0	m2
2	Building - Approximate building height	6.9	m
3	No. of Storeys	Double height steel frame warehouse with single storey ATCO style office accommodation	
4	Structure	Steel frame 2-bay warehouse building with concrete floor (plus 0.3m concrete kerb). Double width ATCO-style wooden office add-on	
5	Exterior cladding		
6	Services	Power, water, telecomms, fire water	
7	Basement	None Observed - above ground structures	
8	Plant for Salvage	No	
9	Tanks	None Observed	

Building Name	9. Potable Treatment Plant

Building Description / Use	Potable water system providing safe drinking water for personnel at site. Plant consists of deep bed multi-media filters, polishing filters, and chlorine dosing. Feed water is supplied from the raw water system.
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item				
1	Building - Approximate base foot print	81.1	m2	- Does not include potable water storage tank outside building
2	Building - Approximate building height	4.3	m	
3	No. of Storeys	Single storey		
4	Structure	Small steel structure with metal flooring comprising series of tanks		
5	Exterior cladding			
6	Services	Power, water, telecomms, fire water		
7	Basement	None Observed - above ground structures		
8	Plant for Salvage	Potential for vessels / components to be sold on		
9	Tanks	Large external water storage tank		

Diavik Re-purposed Infrastructure Information

Building Name	10. Raw Water Intake

Building Description / Use	Intake location for site fire and process water comprising series of pumps (3) sited on metal plinths with diesel powered back-up pump	
Building Inspection Date	11-Oct-16	
Year Built	Unknown	

Construction Methodology

Item					
1	Building - Approximate base foot print	490.0	m2		
2	Building - Approximate building height	4.8	m	- Does not include well located under building	
3	No. of Storeys	1			
4	Structure	Single storey steel trailer style building with metal interior flooring			
5	Exterior cladding	Steel			
6	Services	Power, water, telecomms, fire water			
7	Basement	None observed - above ground structure			
8	Plant for Salvage				
9	Tanks	Cylindrical steel diesel fuel tank (approx. 1,000 litres) for back-up pump			

Diavik Re-purposed Infrastructure Information

Building Name	11. Environmental Field Lab

Building Description / Use	Building for storage of environmental department field equipment
Building Inspection Date	12-Oct-16
Year Built	Unknown

Construction Methodology

Item			
1	Building - Approximate base foot print	200.0	m2
2	Building - Approximate building height	8.1	m
3	No. of Storeys	1	
4	Structure	Steel frame warehouse with concrete floor and 0.3m concrete lip at base of building	
5	Exterior cladding		
6	Services	Power, telecomms	
7	Basement	None observed - above ground structures	
8	Plant for Salvage	None	
9	Tanks	None observed	

Diavik Re-purposed Infrastructure Information

Building Name	12. Communications

Building Description / Use	Communications area comprising tower, dishes, generator and ATCO trailer housing telecomms equipment
Building Inspection Date	11-Oct-16
Year Built	Unknown

Construction Methodology

Item				
1	Building - Approximate base foot print	72.0	m2	- For main building / trailer only
2	Building - Approximate building height	4	m	- Approximately; ATCO type trailers
3	No. of Storeys			
4	Structure	Various - see above		
5	Exterior cladding	n/a		
6	Services	Power, telecomms		
7	Basement	No		
8	Plant for Salvage	Likely residual value in telecom units - may belong to third party		
9	Tanks	None observed - possible back-up diesel tank in generator		

Building Name	13. Airport

	Building Description / Use	Airport comprises three buildings as follows: - De-icer building - Airport operations / control - Back-up for fire suppression Airport runway is approximately 5200ft - 10x double wide steel frames for runway lighting, with concrete footings - 5x single steel frame/pole for runway lighting, with concrete footings.		
	Building Inspection Date	11-Oct-16		
	Year Built	Unknown		
	Construction Methodology			
Item				
1	Building - Approximate base foot print	800	m2	
	- Terminal	200		- No drawings; 2 ATCO long x 2 ATCO wide?
	- Warehouse	600		- No drawings; Similar to Summit Building with SCAP fab shop
2	Building - Approximate building height		m	
	- Terminal			- No drawings; 2 ATCO high
	- Warehouse	7.5		- No drawings; Similar to Summit Building with SCAP fab shop
3	No. of Storeys			
4	Structure	1. De-icer building - Single storey pre-fab galvanized steel foldaway heated storage structure 2. Airport operations - Three ATCO units 3. Back-up for fire suppression - single storey ATCO style trailer		
5	Exterior cladding			
6	Services	Power, Water, Telecomms, Back-up transformer		
7	Basement	No - all above ground structures		
8	Plant for Salvage	Generator, transformer, airport comms		
9	Tanks	Bulk diesel tank in back-up trailer - 1,363 litres		

Other Notes

Gravel runway – 5,200' length, 160' width
Radio licensed tower operator – 1 per rotation
Maintenance conducted twice a week
Uplift needed every couple of years (gravel/compaction) surveyed for slope to ensure water runoff.
Dust suppressant is only applied to the apron.
Daily visible inspection done on runway lights.

Current Operations:

4 freight flights a week
10 passenger flights a week

Aviation navigation system consists as follows:

1. AWOS (Automated Weather Observing Station) system that observes and records the weather in the following parameters:
   - Barometric Pressure (in hectopascals (hPA) / inches of Mercury (inHg)) altimeter setting and density altitude
   - Wind Speed and wind gust (in knots), wind direction and variable wind direction (in degrees of the compass)
   - Temperature and dew point (in degrees Celsius)
   - Visibility (in Statute miles)
   - Sky Condition (in oktas), cloud ceiling height (in feet)
   - Present Weather (Precipitation type, ie. Rain, snow, drizzle), obstructions to vision identification
   - We do have the options for Thunderstorm and Runway surface condition, but that equipment was not installed or warranted as we have other means of obtaining that inform
   - I do believe we will be getting an updated model sometime next year, but this is what we have and the newer model should have the same information as well
   - The system we currently have in place is updated at hourly intervals and normally monitored and recorded by Air Traffic Control and relayed to air-line carriers
2. NDB (Non-Directional Beacon) is a radio beacon that transmits a signal of equal strength in all directions. The signal contains a coded element which is used for station identification in mo
3. LPV w/RNAV (Non-Precision Approach, Localizer Performance with Vertical Guidance uses WAAS GPS only), is an instrument approach based on a navigational system. A few years back w
4. DME (Distance Measuring Equipment) is a navigation beacon to enable aircraft to measure their position relative to that beacon. This is a combination of ground and airborne equipment
5. We also have 2 VHF (Very High Frequency) base radios and a portable handheld radio on hand to communicate and relay weather or air traffic information to aircraft
6. Airfield Lighting, controlled by Remote Operator Panel, which consists of
   a. Runway Edge Lights
      i. Lights with clear lenses placed along both sides of runway, lights appear white when lit and are exactly 200 feet apart, also note Windsock w
   b. Threshold Lights
      i. Lights with red and green lenses placed at exact end of both runways. Red lenses face the runway for departing aircraft and indicate end of
   c. Taxiway / Apron Edge lights,
      i. Lights with blue lenses placed on both sides of the taxiway and along the edge of the apron. Also, to indicate the intersection of the taxiway
   d. Apron Intersection lights
      i. A pair of lights with orange lenses place on each side of the intersection of the taxiway and apron
   e. RAILS, (Runway Alignment Indicator Lights)
      i. Sequential flashing lights, clear lenses so light appears white when lit, high intensity lights with orange lenses extending from the centerline
   f. PAPI (Precision Approach Path Indicator)
      i. Lights placed on the sides of the runway that indicate if the aircraft is too high or too low on approach
   g. Aerodrome Beacon
      i. Bright flashing light used to indicate the location of the aerodrome during hours of darkness
   h. Apron Flood Lights
      i. Used to illuminate the apron at night and the parking lot
7. Lightening Detection Equipment with case, provides distance of lightening detected in area.
8. General Admin Equipment, we have 1 computer with 2 monitors, 2 land line phones, 1 base local radio, handheld radio and satellite phone and a printer along with access to Internet.

Diavik Re-purposed Infrastructure Information

Building Name	14. Wind farm

Building Description / Use	9.2 MW Wind Farm comprising 4 wind turbines and associated substation
Building Inspection Date	11-Oct-16
Year Built	2012

Construction Methodology

Item				
1	Building - Approximate base foot print	95	m2	- Substation only
2	Building - Approximate building height	4.2	m	- Substation only
3	No. of Storeys	n/a		
4	Structure	4 ENERCON wind turbines comprising: - Rotor diameter - 71m - Turbine blades - 33m epoxy-resin (each weighing 6.5 tonnes) - Hub height - 64m - ENERCON E70 generator with gearless direct-drive design - 600 volt heaters in turbine for electronics and troubleshooting - Portable diesel generators outside to provide power to heaters - Elevator inside windmill shaft.		
5	Exterior cladding	n/a		
6	Services	Diesel generator, telecomms		
7	Basement	No		
8	Plant for Salvage	Possible resale/reuse options for wind turbine components (generators, transformer, etc.) - unlikely cost effective to dismantle and transport entire unit for relocation - possible for local facility		
9	Tanks	None observed		

Diavik Re-purposed Infrastructure Information

Building Name	15. Incinerator

Building Description / Use	Incinerator located in gated and lined waste compound area. Used for incineration of site food wastes. Incinerator building comprises two incinerator units - each with primary & secondary burner, water scrubber, water tank and process water tank. Each unit is on sleds (for easier relocation if necessary).
Building Inspection Date	11-Oct-16
Year Built	Unknown

Construction Methodology

Item			
1	Building - Approximate base foot print	455.0	m2
2	Building - Approximate building height	9.5	m
3	No. of Storeys	Double height warehouse	
4	Structure	Steel frame building with concrete floor. Incinerator units sit on approx. 0.2m concrete plinth	
5	Exterior cladding	Steel	
6	Services	Power, water, telecomms, fire water	
7	Basement	None observed - above ground structures	
8	Plant for Salvage	Potential for resale of incinerator units (on sleds)	
9	Tanks	2 x 63.59 m3 AST water tanks (dated 1981) - Constructed to API Specification 12F 2 x AST process water tank 1 x 50,000 litre steel diesel AST (exterior)	