SHEAR DIAMONDS LTD.

PRELIMINARY LANDFARM DESIGN PLAN
JERICHO PROJECT, NUNAVUT

REPORT

FEBRUARY 2011
ISSUED FOR REVIEW
EBA FILE: E14101118

SHEAR DIAMONDS LTD.

eba
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EXECUTIVE SUMMARY

A landfarm is required at Jericho Diamond Mine as part of the Water Board licensing requirements. The purpose of the facility is to contain and remediate hydrocarbon-contaminated soil caused by accidental spills occurring during mining operations. The preliminary design for the facility was completed by EBA, A Tetra Tech Company, on behalf of Shear Diamonds (Nunavut) Corp (Shear).

The Jericho landfarm design consists of a lined, bermed enclosure that provides an upstream area for remediation of hydrocarbon-impacted soils and a down-gradient sump area to collect runoff. The liner system consists of a 60 mil HDPE liner sandwiched between nonwoven geotextile for protection. A minimum 600 mm of cover will be maintained over the liner system to preserve liner integrity.

The landfarm is designed with a centreline crown, which allows contaminated soils to be separated on either side of the facility. Runoff from each side is collected separately in two downstream, recessed sumps. These two graded areas allow for hydrocarbon-impacted soils to be segregated, depending on their hydrocarbon concentration and the remediation options being employed.

The landfarm is sized to accommodate approximately half of the estimated petroleum hydrocarbon contaminated soils on site. This will necessitate a staged approach to remediate the existing and future contaminated soils on site. Sufficient mine life remains to effectively remediate the soils using this approach.

The landfarm location has not yet been determined. The location will be selected during investigation work being completed by Shear in 2011. Considerations for landfarm siting will include proximity to water bodies, direction of surface runoff, and thickness of the active layer.

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APPENDICES

ACRONYMS & ABBREVIATIONS

AA	Atomic Absorption Spectrophotometry
ABA	Acid Base Accounting
ACM	Asbestos-containing Material
AEM	Aquatic Effects Monitoring
AIA	Aquatic Impact Assessment
AIRS	Adaptation and Impacts Research Section
ANCOVA	Analysis of Covariance
ANFO	Ammonium Nitrate Fuel Oil Explosives
ANOVA	Analysis of Variance
APEC	Areas of Potential Environmental Concern
ARD	Acid Rock Drainage
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
BACI	Before-after-control-impact
CALA	Canadian Association for Laboratory Accreditation
CCME	Canadian Council of Ministers of the Environment
CDA	Canadian Dam Association
CPK	Coarse Processed Kimberlite
DIAND	Department of Indian Affairs and Northern Development
DFO	Department of Fisheries and Oceans
DO	Dissolved Oxygen
EBA	EBA, A Tetra Tech Company
EC	Electric Conductivity
EIS	Environmental Impact Statement
EOC	Emergency Operations Centre
EPP	Emergency Preparedness Plan
ERP	Emergency Response Plan
ESA	Environmental Site Assessment
FSCF	Fuel Storage Containment Facility
FPK	Fine Processed Kimberlite
GC/FID	Gas Chromatograph - Flame Ionization Detector
GTC	Ground Temperature Cable
Hazmat	Hazardous Materials
HDPE	High Density Polyethylene
HVAS	High Volume Air Sampling
HWTA	Hazardous Waste Transfer Area
ICP-MS	Inductively Coupled Plasma – Mass Spectrometry
IDLH	Immediately Dangerous to Life and Health
INAC	Indian and Northern Affairs Canada
KIA	Kitikmeot Inuit Association
LBP	Lead-based Paint
LPRM	Long-term Post-reclamation Monitoring
MANOVA	Multivariate Analysis of Variance

MSDS	Material Safety Data Sheets
NIRB	Nunavut Impact Review Board
NP	Neutralization Potential
NWB	Nunavut Water Board
PHC	Petroleum Hydrocarbons
PKCA	Processed Kimberlite Containment Area
PPE	Personal Protection Equipment
QA	Quality Assurance
QC	Quality Control
RBC	Rotating Biological Contactor
RCM	Reclamation Construction Monitoring
ROM	Run of Mine
RPD	Relative Percent Difference
RRPK	Recovery Rejects Processed Kimberlite
SCBA	Self-contained Breathing Aparatus
Shear	Shear Diamonds (Nunavut) Corp.
SOP	Standard Operating Procedure
SPRM	Short-term Post-reclamation Monitoring
TDC	Tahera Diamonds Corporation
TDGR	Transportation of Dangerous Goods Act (RSNWT 1988) and Regulations
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TSS	Total Suspended Solids
WSCC	Workers' Safety and Compensation Commission of the Northwest Territories and Nunavut
WHMIS	Workplace Hazardous Materials Information System
WWTP	Wastewater Treatment Plant

2011 Water Licence Renewal Documents

AEMP	Aquatic Effects Monitoring Plan
AQMP	Air Quality Management Plan
CAMP	Care and Maintenance Plan
CMP	Contingency Management Plan
EP-RP	Emergency Preparedness and Response Plan for Dam Emergencies
GMP	General Monitoring Plan
ICRP	Interim Closure and Reclamation Plan
LDP	Preliminary Landfill Design Plan
LMP	Landfill Management Plan
LFDP	Preliminary Landfarm Design Plan
LFMP	Landfarm Management Plan
OMS	Operations, Maintenance, and Surveillance Manual
PKMP	PKCA Management Plan
SWMP	Site Water Management Plan
WEMP	Wildlife Effects Management Plan

WMP	Waste Management Plan
WRMP	Waste Rock Management Plan
WTMP	Wastewater Treatment Management Plan

1.0 INTRODUCTION

1.1 General

This Jericho Landfarm Design Plan (LFDP) summarizes the proposed landfarm design for the Jericho Diamond Mine (Jericho). The primary purpose of the landfarm is to remediate petroleum hydrocarbon (PHC) affected soils; however, provision is made in the design to accommodate small amounts of hydrocarbon-contaminated snow in winter months.

Part D of the Jericho Mine Water Licence NWB1JER0410 (issued December 21, 2004) requires the LFDP to be completed and submitted to the Nunavut Water Board (NWB) 60 days prior to construction of the landfarm. The LFDP is being submitted as a preliminary design, because the landfarm location has not yet been determined. Shear assumed control of the Jericho mine site in August 2010. Since that time, Shear has discovered that detailed information on the present site conditions, including hydrocarbon-contaminated soil volumes, is limited. Comprehensive historical site monitoring records were not well maintained under the previous ownership and management and the available information is incomplete or lacking detail.

A site investigation is being planned by Shear in 2011, at which time possible landfarm locations will be investigated and PHC-impacted soil estimates will be refined. An updated, detailed landfarm design will be submitted to the NWB in advance of landfarm construction, in accordance with the Water Licence.

The preliminary design is based on existing records and the best available information at the time of report preparation. The design has been developed for the current regulatory requirements and to reflect Shear's commitment to the best practices in environmental stewardship. This plan supersedes all previous design submissions related to the landfarm.

1.2 Objectives of the Design Plan

This document provides a summary of the preliminary landfarm design. Operational considerations are discussed briefly in this document. A more comprehensive management and operational plan for the landfarm is available in the Jericho Landfarm Management Plan (EBA 2011f).

At the time of the water licence renewal application, mining operations have been suspended and the site is under care and maintenance. This document therefore reflects an estimation of the existing contaminated soil volumes on site, with provision for future spills during resumed operations.

1.3 Background Information

The Jericho Diamond Mine is located approximately 260 km southeast of Kugluktuk, NU, and 30 km north of the Lupin Mine. The Jericho Mine was constructed and operated by Tahera Diamond Corporation (TDC) between 2004 and 2008. In January 2008, mining operations were suspended by TDC, and the site was placed under care and maintenance. Shortly thereafter, Indian and Northern Affairs Canada (INAC) assumed control of the care and maintenance activities for the site. In August 2010, Shear purchased the Jericho Mine and its assets and assumed the responsibility for the site. An overall site plan showing the existing site infrastructure is provided on Figure 1.

Presently, the mine remains under care and maintenance as Shear evaluates the mineral resource. Once the evaluation is complete, a mine plan and operations schedule for the project may be established.

1.4 Linkages to Other Management Plans

The LFDP is part of the site wide management system. Other management plans that are related to or refer to the LFDP include:

- Landfarm Management Plan (LFMP);
- Site Water Management Plan (SWMP);
- Waste Management Plan (WMP); and
- Interim Closure and Reclamation Plan (ICRP).

2.0 PROJECT DETAILS

A concept level design for the landfarm was completed by AMEC Earth & Environmental (AMEC 2004) and included as part of the environmental impact assessment (EIS) submission. The plan called for the construction of a lined landfarm on the waste rock dump and the creation of a separate facility to accommodate contaminated snow. These separate facilities were incorporated into the conditions of the water licence.

The estimated contaminated snow volume for Jericho is relatively small. Shear proposes that limited contaminated snow volumes be admitted to the landfarm, as opposed to being dumped into a separate area. This allows for better control of contaminated meltwater, reduces monitoring requirements, and eliminates the need to maintain and monitor a second dump site.

The landfarm is designed to accommodate both the existing hydrocarbon contamination and future hydrocarbon contamination on site. Capacity is also provided for short-term containment of precipitation and runoff. Details of the expected inputs are provided in Section 4.0.

Only treatable soils will be admitted to the landfarm. Co-contaminated soils or heavy-end hydrocarbon-contaminated soils will be treated in a separate facility or disposed of off site. Treatment options for contaminated soils that cannot be admitted to the landfarm are discussed in the Jericho Waste Management Plan (EBA 2011j).

The landfarm location has not yet been determined. Shear is planning to relocate the landfarm from the location proposed in the EIS to provide better access for monitoring, and to avoid interference with future deposition in the waste rock pile. The landfarm location will be sited during the 2011 investigation work, with an anticipated summer 2012 construction date. The design will be completed once a landfarm location has been selected.

3.0 DESIGN INPUTS

The landfarm is required to provide containment for PHC-contaminated soils, meltwater from contaminated snow, and direct precipitation into the facility. The following section summarizes the required containment volumes in the facility.

3.1 PHC-Contaminated Soil

Under the previous mine owner several hydrocarbon spills occurred at the Jericho mine site. However, no landfarm was constructed to provide on-site remediation. Shear has compiled a list of the estimated PHC-contaminated soils that will require remediation (Table 1). The volumes presented in Table 1 are estimates based on historical records maintained by TDC. The actual contaminant volumes will be confirmed during the 2011 investigation work, before completing the detailed design.

Table 1: Hydrocarbon Contaminated Soil Expected for Site Life-of-Mine for Remediation Planning

Soil Source	Location	Approximate Soil Volume (m^3)
Hood River Spill	In WTA West Cell	14
Muskox Spill	In WTA West Cell	360
DC-4 Spill	In WTA West Cell	1,239
Airport Soil Spill	In Airport Tank Farm	4
Other Misc Small Spills	In WTA West Cell	20
Main Tank Farm – small tanks	In situ	1,026
Main Tank Farm – large tanks	In situ	1,312
Fuel Loading Area	In situ	552
Generator Tank Berm	In situ	113
Airport Tank Berm	In situ	203
Waste Transfer Berm – East Cell	In situ	911
Waste Transfer Berm – West Cell	In situ	720

The estimated existing PHC contamination volume is 6,500 m^3. Shear estimates an additional 2,500 m^3 of PHC-contaminated soil will be generated throughout the remaining mine life, for a total PHC-contaminated soil volume of 9,000 m^3.

3.2 Direct Precipitation

Direct precipitation into the landfarm facility results from both rainfall events and snowmelt from winter snow accumulation. SRK provided estimates for the annual and season precipitation at Jericho (SRK 2003). These estimates are summarized in Table 2.

Table 2: Adopted Precipitation Values for Jericho (SRK 2003)

Return Period	Annual Precipitation	Seasonal Precipitation
1:200 low	160	89
1:100 low	177	98
1:50 low	196	109
1:10 low	249	138
Mean annual	330	183
1:10 high	427	281
1:50 high	480	316
1:100 high	499	328
1:200 high	516	339

Runoff occurring from freshet and summer rainfall events will accumulate in a down-gradient recessed sump in the landfarm. Shear is planning to pump and treat contact water regularly to reduce water levels in the sump. However, for design purposes, sufficient sump capacity is provided to contain the precipitation volume for the 1:10 year event. This is a conservative estimate, given the proposed operational method, but it does provide emergency capacity in the case of pump breakdown or treatment delays.

The 1:10 year event has a 65% chance of occurring within the estimated remaining mine life. This probability is reduced to 18% when the 1:50 year event is considered. If the 1:10 year event is exceeded within the proposed landfarm service life, water from higher precipitation events will be contained in the up-gradient portion of the landfarm with no release to the surrounding environment. The increased cost associated with designing for higher design events is not warranted, given the expected service life of the facility, and the low risk of the landfarm facility overflowing.

For the proposed landfarm configuration, the estimated 1:10 annual precipitation is approximately 3,500 m^3. This number was based an annual precipitation value of 427 mm, less 110 mm of evapotranspiration.

3.3 Snow Contamination

The annual contaminated snow volume was estimated to be 400 m^3 (snow water equivalent of 250 m^3). This quantity is based on EBA's experience with other mines in the arctic. It assumes an area of 1,200 m^2 excavated to a depth of 0.3 m to contain the annual contaminated snow.

4.0 LANDFARM DESIGN

4.1 Design Concept

The proposed landfarm design comprises a bermed enclosure lined with an impermeable geomembrane liner. The up-gradient portion of the facility, comprising the landfarm, is designed for the placement and remediation of hydrocarbon-contaminated soil. The down-gradient portion is designed as a recessed sump area to contain runoff from the landfarm area and limited quantities of hydrocarbon-contaminated snow.

The sump area has been designed with sufficient capacity to contain the design runoff volume without saturating the up-gradient contaminated soil.

The design provided herein assumes a ground surface with a longitudinal grade of 2% and all volumes and design sections have been developed accordingly. Once the landfarm is sited, the design will be revised to accommodate site specific topography and foundation conditions.

4.2 Landfarm Location

The landfarm location will be selected as part of Shear's 2011 site investigation work. The following conditions will be considered when selecting a location:

- The landfarm should be more than 500 m from a permanent surface water body, in accordance with Federal Guidelines (SAIC 2006).
- The landfarm should be in a catchment that directs surface flow towards the pit catchment or PKCA catchment and away from potential environment receptors.
- The landfarm should be on a fill pad to reduce the potential degradation of ice-rich foundation soils.

4.3 Landfarm Sizing

The landfarm has a surface area of 11,000 m^2 and has been sized to accommodate approximately half the existing contaminated soil volume on site. This will require that the current estimated volume of hydrocarbon contaminated soils be treated in stages as detailed in the Jericho Landfarm Management Plan (EBA 2011f).

Consideration was given to constructing a landfarm with sufficient capacity for the entire estimated contaminated soil volume. However, there are limited locations where a landfill meeting the conditions in Section 4.2 can be effectively constructed and not interfere with site infrastructure and future operations. Given the expected remaining mine life, EBA considers there to be sufficient time to remediate the PHC contaminated soils using a staged approach.

4.4 Foundation Conditions

Foundation conditions under the proposed landfarm cannot be evaluated until the landfarm location is determined. However, as a conservative approach, the landfarm could be constructed on a waste rock pad a minimum of 3.0 m thick. This would maintain the seasonal active layer within the waste rock and protect any underlying ice-rich soils from thaw degradation and settlement. Foundations will be considered as part of the investigation work scheduled for 2011.

4.5 Facility Layout and Cross-Sections

The design layout and cross-sections for the landfarm are shown on Figures 2 and 3, respectively. The landfarm is designed with a centerline crown and 2% cross fall. A longitudinal grade of 2% directs runoff to the downstream sumps.

The cross fall divides the landfarm into two cells, with runoff being directed into two separate corners. A divider berm in the sump allows runoff from each of the landfarm cells to be collected separated. The

landfarm division is intended to allow materials with varying contamination levels to be treated separately, or to allow for new treatment methods to be employed on one site while using the other side as a control. The collected water will be tested and the impound water meeting the applicable discharge criteria will be discharged to the Jericho Processed Kimberlite Containment Area (PKCA).

The berm cross-section comprises 2H:1V slope with a 2.5 m top width. The berms underlying the liner will be constructed using 200 mm minus material. The liner system bedding and cover will comprise a 20 mm crush material. A minimum berm height of 0.8 m is maintained above the liner cover elevation through the landfarm area. This freeboard height increases somewhat through the sump area.

4.6 Liner System

The liner system will consist of a 60 mil textured HDPE liner sandwiched between a 540 g/m^2 nonwoven geotextile. The liner system will be supported on 20 mm granular fill material underlain by a layer of 200 mm material. The liner will be terminated in a key trench on the crest of the berms.

Liner cover will comprise 20 mm material. Cover thickness in all areas subject to vehicle traffic (maximum tire pressure of 350 kPa) should be a minimum 600 mm. On berm slopes where vehicles will not travel, the cover thickness can be reduced to 300 mm. During construction, minimum fill thicknesses over the liner should be adhered to in accordance with Table 3.

Table 3: Minimum Lift Thickness

Backfill Thickness	Placement Equipment
No backfill	Foot traffic or four-tire ATV vehicle only
150 mm or less	Hand placement
200 to 300 mm	D3 - D4 LGP Cat
300 mm	Bobcat (Skid-Steer)
300 mm	D4 - D6 Style Cat
600 mm	D300 haul truck with 350 kPa tire pressure

4.7 Material Volumes

The estimated material quantities are summarized in Table 4.

Table 3 – Estimated Landfarm Quantities

		Fill Material Type	
Geomembrane (m^2)	Geotextile (m^2)	200 mm Material (m^3)	20 mm Material (m^3)
16,300	32,600	11,500	10,200

4.8 Groundwater Monitoring

Groundwater monitoring will be implemented to evaluate any changes in water quality resulting from accidental landfarm release. The monitoring method depends on the foundation conditions of the landfarm and local topography. If the landfarm is constructed on a large waste rock pad or on the waste rock pile, monitoring wells may not effectively evaluate groundwater quality, so surface testing from the pad toe may

prove more effective. Shear will evaluate the monitoring method once the landfarm location has been determined. Additional details on groundwater monitoring are available in the Jericho LFMP (EBA 2011f).

5.0 OPERATIONAL CONSIDERATIONS

Containment within the facility is contingent on liner integrity. As such, care should be taken during construction and operation not to damage the liner.

Tire pressures within the landfarm should not exceed 350 kPa. Furthermore, turning within the facility should be limited to long radius turns to avoid inducing shear stresses in the underlying liner. If this cannot be accomplished with existing haul trucks, then contaminated material should be dumped near the facility entrance and smaller equipment used inside the landfarm to move contaminated material to its final destination.

Contaminated soil placement should be offset a minimum 1 m from the toe of the berm.

The landfarm sumps should be pumped out regularly to reduce the risk of inundating the upstream landfarm soils. At the end of summer, the landfarm should be pumped dry to provide maximum storage capacity for snowfall and contaminated snow placement.

Further details pertaining to the operation of the landfarm and monitoring of contaminated soils are available in the Jericho LFMP (EBA 2011f).

6.0 CLOSURE

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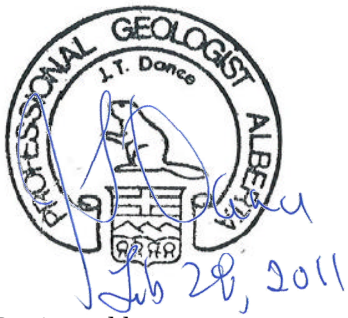

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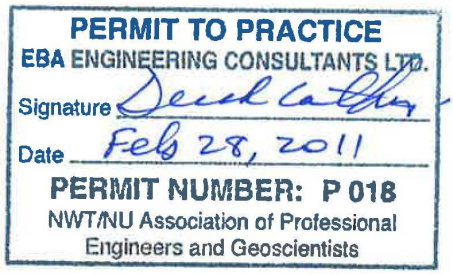

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2011 WATER LICENCE RENEWAL DOCUMENTS

Management Plans

EBA, A Tetra Tech Company (EBA), 2011a. Aquatic Effects Monitoring Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011b. Care and Maintenance Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011c. Contingency Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011d. General Monitoring Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011e. Interim Closure and Reclamation Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011f. Landfarm Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011g. Landfill Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011h. Processed Kimberlite Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

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EBA, A Tetra Tech Company (EBA), 2011j. Waste Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011k. Waste Rock Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011l. Wastewater Treatment Management Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

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EBA, A Tetra Tech Company (EBA), 2011o. Preliminary Landfarm Design Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011p. Preliminary Landfill Design Plan, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

Additional Plans

EBA, A Tetra Tech Company (EBA), 2011q. Operations, Surveillance, and Maintenance Manual, PCKA Dams, Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

EBA, A Tetra Tech Company (EBA), 2011r. Emergency Preparedness and Emergency Response Plan for Dam Emergencies at the Jericho Diamond Mine, Nunavut. Prepared for Shear Diamonds Ltd., February 2011.

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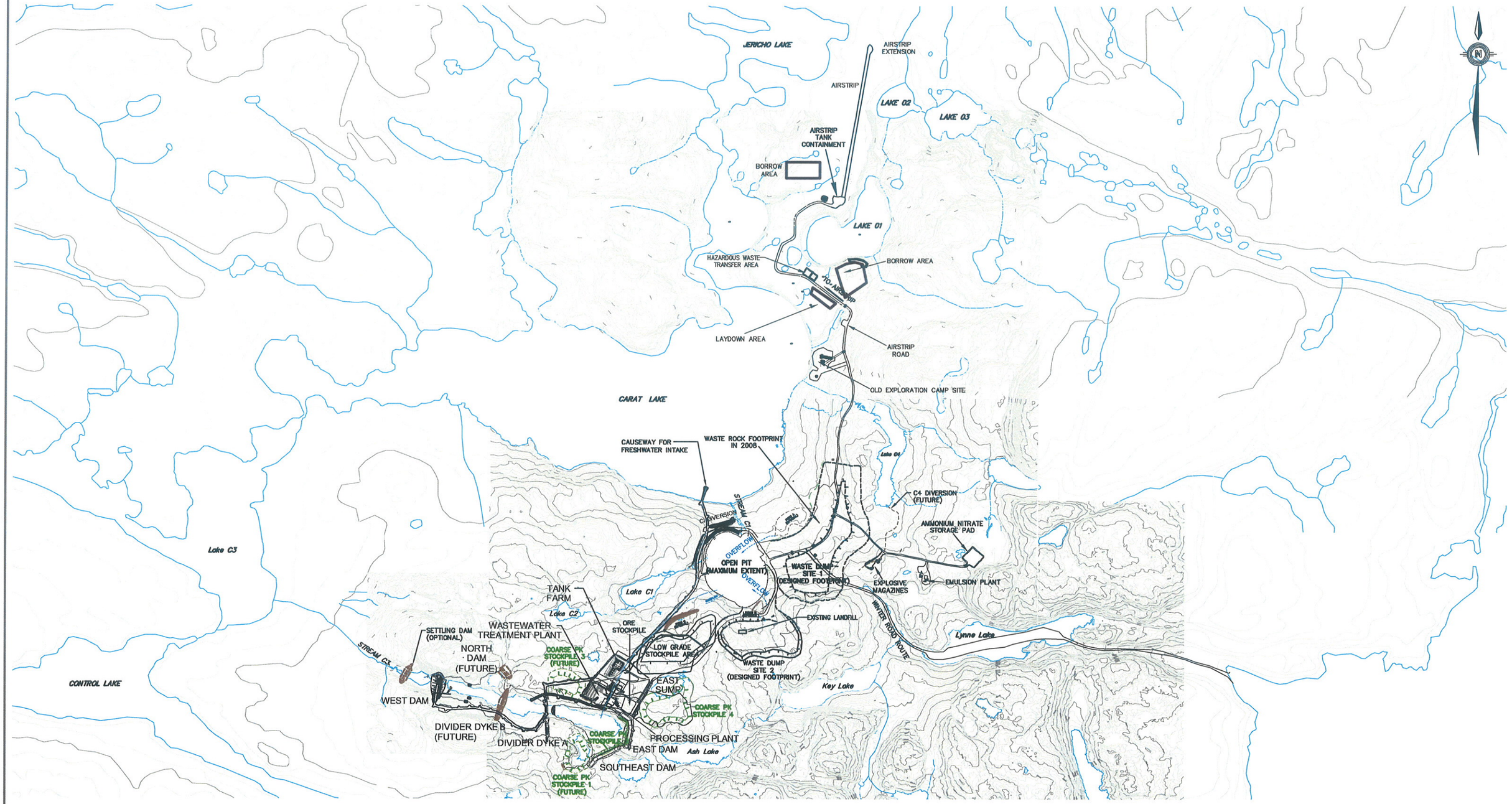
AMEC Earth & Environmental, 2004. Landfill Management Plan, Jericho Diamond Mine, Nunavut. Report submitted to Tahera Diamond Corporation, August 2004.

Science Applications International Corporation (SAIC), 2006. Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soil.

SRK Consulting Engineers and Scientists, 2003. Technical Memorandum C, Supplemental Climate and Hydrology, Jericho Project, Nunavut.

FIGURES



NOTES:

1. LAYOUTS ARE APPROXIMATE, AND MAY NOT REFLECT ACTUAL SIZE AND LOCATIONS
2. FOOTPRINTS OF WASTE ROCK PILES, COARSE PK STOCKPILES, AND ORE STOCKPILES ARE SHOWN IN MAXIMUM LIMITS, ACTUAL FOOTPRINTS MAY VARY

0 1 000

Scale: 1: 25 000 (metres)

STATUS
ISSUED FOR USE

CLIENT
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LANDFARM DESIGN PLAN
JERICHO DIAMOND MINE, NUNAVUT

GENERAL SITE PLAN

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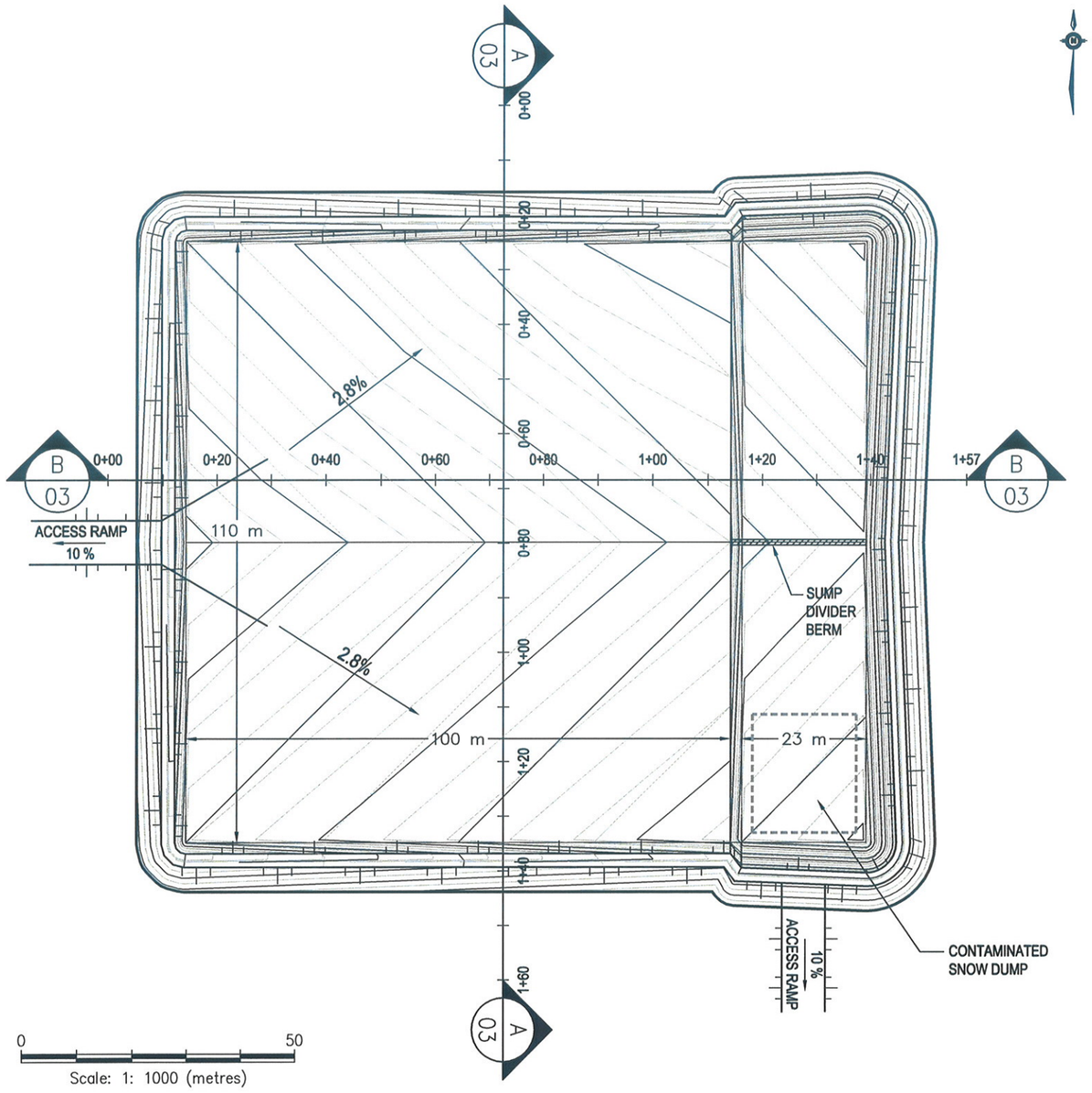
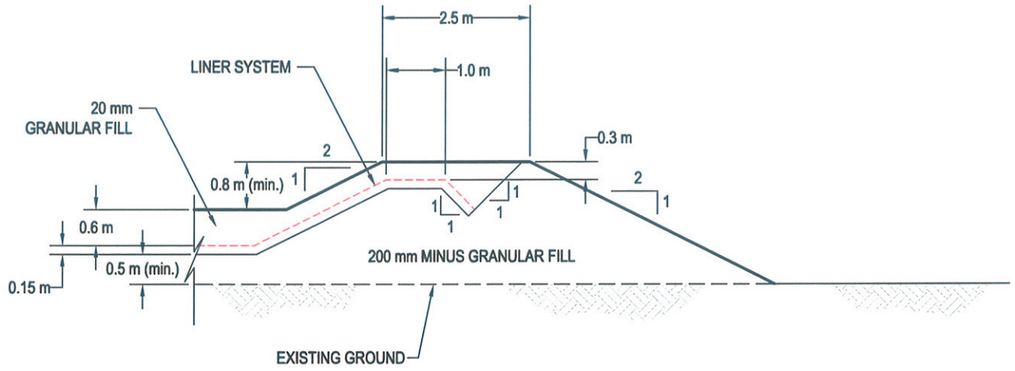
PROJECT NO.	DWN	CKD	REV
E14101118	TK	JS	0

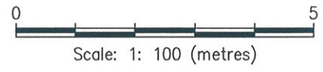
OFFICE	DATE
EBA-EDM	February 24, 2011

Figure 1





TYPICAL DETAIL



LEGEND

STATUS
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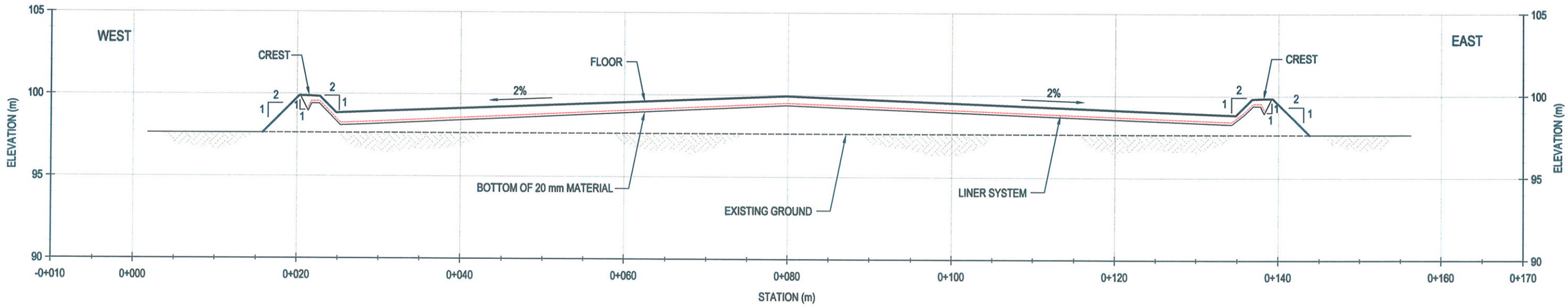
PRELIMINARY LANDFARM DESIGN
JERICHO DIAMOND MINE, NUNAVUT

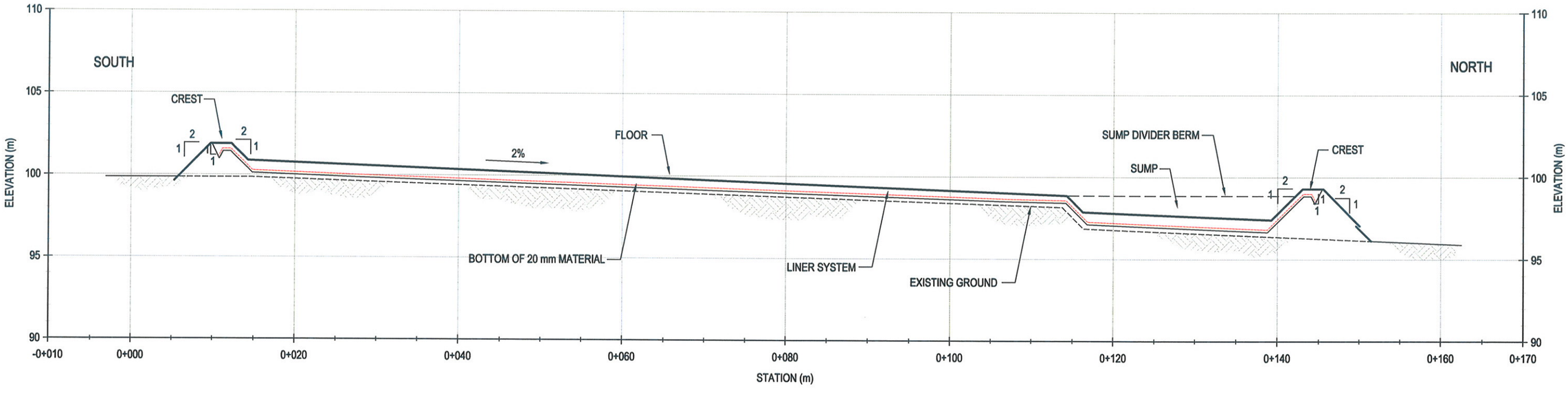
LANDFARM PLAN AND TYPICAL DETAIL

PROJECT NO.	DWN	CKD	REV
E14101118	DBD	GK	0
OFFICE: EBA-EDM	DATE: February 24, 2011		

Figure 2



Section A-A'



Section B-B'

LEGEND

NOTE: VERTICAL EXAGGERATION 2x

0 25

Scale: 1: 500 (metres)

STATUS
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PRELIMINARY LANDFARM DESIGN
JERICHO DIAMOND MINE, NUNAVUT

SECTIONS

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PROJECT NO.	DWN	CKD	REV
E14101118	DBD	GK	0

OFFICE	DATE
EBA-EDM	February 24, 2011

Figure 3

APPENDIX A

APPENDIX A EBA'S GENERAL CONDITIONS

GENERAL CONDITIONS

GEOTECHNICAL REPORT

This report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA’s Client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA’s Client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA’s instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA’s instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. EBA’s instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client’s current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

4.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

5.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

6.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

7.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

8.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

9.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

10.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

11.0 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

12.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

13.0 SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the Client's expense upon written request, otherwise samples will be discarded.

14.0 INFORMATION PROVIDED TO EBA BY OTHERS

During the performance of the work and the preparation of the report, EBA may rely on information provided by persons other than the Client. While EBA endeavours to verify the accuracy of such information when instructed to do so by the Client, EBA accepts no responsibility for the accuracy or the reliability of such information which may affect the report.