

Peregrine Diamonds Ltd.

ISSUED FOR USE

BASELINE HYDROLOGY ASSESSMENT
CHIDLIAK PROJECT, SOUTH BAFFIN ISLAND, NUNAVUT

Y22101137

February 2011

TABLE OF CONTENTS

	PAGE
1.0 INTRODUCTION.....	1
2.0 HYDROLOGICAL ANALYSIS	1
2.1 Analysis of Published Streamflow Data	1
2.2 Assessment of Local Streamflow Data	4
3.0 METEOROLOGICAL ANALYSIS	5
3.1 Temperature	6
3.2 Precipitation	7
3.3 Evapotranspiration	11
4.0 LIMITATIONS OF REPORT	12
5.0 CLOSURE.....	12
REFERENCES	13

TABLES

Table 1	WSC Hydrometric Stations
Table 2	2008 Monthly and Jun-Sep Runoff (mm) of Regional Hydrometric Stations
Table 3	Mean Annual Runoff (mm) of Regional Hydrometric Stations
Table 4	Monthly Runoff Distribution of Mckeand River Hydrometric Stations
Table 5	Monthly and Mean Annual Runoffs (mm) Estimated for the Project Site
Table 6	Local Stream Discharge Measurements and Runoff Calculations
Table 7	Regional Climate Station Summary
Table 8	Regional Climate Stations - Monthly Temperature
Table 9	Temperatures Measured On-site in 2010
Table 10	Monthly Precipitation Distribution (mm) for Regional Climate Stations
Table 11	Monthly Rainfall Distribution (mm) For Regional Climate Stations
Table 12	Monthly Snowfall Distribution (cm) For Regional Climate Stations
Table 13	Monthly Precipitation, Rainfall and Snowfall Distributions for the Project Site
Table 14	Rainfall (mm) Recorded on-site in 2010

TABLE OF CONTENTS

FIGURES

- Figure 1 Location of Regional Hydrometric Stations
- Figure 2 Location of On-Site Hydrometric Stations
- Figure 3 Location of Regional Climate Stations
- Figure 4 Mean Monthly Temperature of the Regional Climate Stations
- Figure 5 Iqaluit A Monthly Precipitation Distribution - 44% Rainfall, 56% Snowfall
- Figure 6 Brevoort Island Monthly Precipitation Distribution - 39% Rainfall, 61% Snowfall
- Figure 7 Dewar Lakes Monthly Precipitation Distribution - 42% Rainfall, 58% Snowfall
- Figure 8 Regional Climate Station - Elevation vs. Precipitation

APPENDICES

- Appendix A EBA's General Conditions

1.0 INTRODUCTION

EBA Engineering Consultants Ltd. (EBA) was retained by Ms. Shirley Standafer-Pfister, Peregrine Diamonds Ltd., to carry out a desktop baseline hydrology study at the Chidliak Project site, Baffin Island, Nunavut.

The Chidliak project site is situated on Hall Peninsula, southeast Baffin Island and is approximately 75 km east of Iqaluit. The study covers a rectangular area of approximately 1600 km², the centre of which is located about 120 km ENE of Iqaluit, on Hall Peninsula. The project area is generally about 600 to 900 m in elevation with higher land to the east, which is covered by glaciers. Approximately a third of the property drains northward while the remainder drains west via the McKeand River and its tributaries.

The objective of this study was to facilitate understanding of the hydrological and meteorological baseline conditions within the project area, by collection and analysis of the existing hydrological and meteorological data.

2.0 HYDROLOGICAL ANALYSIS

The hydrological study includes the analysis of published stream flow records for the area as well as limited data collected in the 2009 and 2010 environmental baseline studies. Average annual runoff, as well as the monthly distribution of runoff, was determined for the project area. Results were presented in terms of runoff per unit drainage area.

2.1 ANALYSIS OF PUBLISHED STREAMFLOW DATA

A regional analysis was undertaken based on the published Water Survey of Canada (WSC) streamflow database, which includes a total of 18 hydrometric stations on Baffin Island from the Northwest Passage to Davis Strait. The available stations were reviewed with respect to their proximity to the study area, terrain characteristics and the suitability of records for inclusion in the study. Due to the sparse nature of the hydrometric stations on Baffin Island, the selection process placed more weight on the location and terrain characteristics of the station than on its drainage area. As a result of the review, three stations are considered most applicable to the project area, as listed in Table 1. The location of the selected stations is shown on Figure 1.

TABLE 1: WSC HYDROMETRIC STATIONS

Station Name	Station ID	Period of Record	Drainage Area (km ²)	Latitude	Longitude
McKeand River near the South Confluence	10UG002	2008	4463*	N 64°15' 32"	W 68°10' 54"
McKeand River near the North Confluence	10UG001	2008	7609*	N 64°54' 44"	W 68°18' 49"
Sylvia Grinnell River Near Iqaluit	10UH001	1971-2009	2980	N 63°45'59"	W 68°34'50"

Note: * Approximate drainage areas were determined on the 1:250,000 NTS maps. WSC is in the process of estimating the drainage areas for these two McKeand River hydrometric stations.

As most of the project area drains to the McKeand River basin, the two hydrometric stations on the McKeand River are selected to best represent the site hydrological conditions. However both McKeand River stations have only one year of monthly discharge records in 2008. It is necessary to introduce another hydrometric station with long-term hydrometric records to improve the mean runoff analysis. The Sylvia Grinnell River hydrometric station near Iqaluit, located approximately 97 km southwest of the west boundary of the project study area, was selected as the most applicable. It has 30 years of monthly discharge records, which are suitable for long-term mean runoff estimates.

The WSC database does not provide drainage areas for the McKeand River hydrometric stations. The drainage areas were determined on the 1:250,000 scale NTS maps, as listed in Table 1. The 2008 monthly and June to September runoff at the selected stations were calculated by dividing the total flow volume by the drainage area, as provided in Table 2.

TABLE 2: 2008 MONTHLY AND JUN-SEP RUNOFF (MM) FOR REGIONAL HYDROMETRIC STATIONS

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jun-Sep Total
10UG002	-	-	-	-	0.2	144.3	54.8	52.6	29.7	9.0	2.2	0.4	281.4
10UG001	-	-	-	-	0.6	154.5	44.2	50.3	31.7	10.1	2.1	0.8	280.8
10UH001	-	-	-	0.0	7.6	160.0	49.8	25.5	35.4	11.3	4.7	1.8	296.2

Long-term runoff data from the Sylvia Grinnell River near Iqaluit (10UH001) hydrometric station was utilized to develop a correlation between the 2008 June to September runoff and the mean annual runoff. Based on the 1971-2009 monthly discharge record at the Sylvia Grinnell River station, the mean annual runoff, calculated to be 338 mm, is 1.25 times the 2008 June to September runoff. This factor was applied to the McKeand River hydrometric stations to compute the corresponding mean annual runoffs as listed in Table 3.

TABLE 3: MEAN ANNUAL RUNOFF (MM) OF REGIONAL HYDROMETRIC STATIONS

Station	Jun-Sep 2008 Runoff (mm)	Mean Annual Runoff (mm)	Ratio Mean Annual /Jun-Sep 2008
10UH001	271	338	125%
10UG002	281	$= 281 \times 1.25 = \mathbf{351}$	Assume same as above
10UG001	281	$= 281 \times 1.25 = \mathbf{351}$	Assume same as above

The mean annual runoffs at both McKeand River hydrometric stations were calculated to be 351 mm. This runoff depth is considered representative to the project site area as two thirds of the property lies within the McKeand River basin.

The monthly runoff distribution determined for the project area is listed in Table 4. It was estimated by taking the average of the 2008 monthly runoff distributions of the two McKeand River hydrometric stations.

TABLE 4: MONTHLY RUNOFF DISTRIBUTION OF MCKEAND RIVER HYDROMETRIC STATIONS

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
10UG002	0%	0%	0%	0%	0%	49%	19%	18%	10%	3%	1%	0%	100%
10UG001	0%	0%	0%	0%	0%	52%	15%	17%	11%	3%	1%	0%	100%
Average	0%	0%	0%	0%	0%	50%	17%	18%	11%	3%	1%	0%	100%

By applying the above distribution to the estimated mean annual runoff of 351 mm, the mean monthly runoff at the project area is presented in Table 5.

TABLE 5: MONTHLY AND MEAN ANNUAL RUNOFFS (MM) ESTIMATED FOR THE PROJECT SITE

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Project Site	0	0	0	0	0	175	60	63	39	11	3	0	351

Based on the above regional analysis, the hydrological regime of the McKeand River basin and project site area is dominated by the spring freshet resulting from snowmelt. The runoff peaks in June and declines from July to October. Low flow or freezing conditions can occur from early November through late May depending on prevailing climatic conditions. The amount of winter (November to May) low flow only accounts for about 1% of the annual discharge volume.

2.2 ASSESSMENT OF LOCAL STREAMFLOW DATA

Preliminary flow velocities were measured at two locations, Hydro 1 and Hydro 2, downstream of kimberlite pipes CH-1 and CH-2 during the June/July sampling events in 2009. By August, Hydro 1 and Hydro 2 stream channels were dry. As a result, streamflow measurements were collected at the Hydro 9 station located downstream of the Hydro 1 and Hydro 2 confluence. During the 2010 sampling events, all three stations were moved (either upstream or downstream) due to dry or flooding conditions at the former locations. Hydro 1 station was moved 2.4 km downstream of the 2009 location as the channel was dry or too shallow to measure. Hydro 2 station was moved 163 m downstream from the 2009 site as the stream was too shallow. Hydro 9 station was moved 68 m downstream from the 2009 site as the channel was too wide for the metre tape. In addition, measurements were taken at two new locations, namely Hydro 10 and Hydro 11, which are located downstream of the discovery camp and kimberlite pipe CH-6, respectively. The locations of all the hydrometric stations are on Figure 2. Flow velocities and stages were recorded and later converted to discharges, as listed in Table 6. Drainage area was determined on the 1:50,000 NTS map for each station for daily runoff calculation.

TABLE 6: LOCAL STREAM DISCHARGE MEASUREMENTS AND RUNOFF CALCULATIONS

Station	Date	Drainage Area (km ²)	Discharge (m ³ /s)	Daily Runoff (mm)
Hydro 1	Jun 30/09	2.6	0.340	11.3
	Jul 9/10	5.5	1.062	16.7
Hydro 2	Jun 30/09	6.4	0.634	8.6
	Jul 8/10	7.2	0.167	2.0
Hydro 9	Aug 28/09	28.2	0.088	0.3
	Jul 9/10		1.148	3.5
	Jul 26/10		0.065	0.2
Hydro 10	Jul 11/10	36.7	0.485	1.14
	Jul 26/10		0.035	0.08
Hydro 11	Jul 11/10	13.0	0.148	0.98
	Jul 27/10		0.021	0.14

It would be ideal to correlate the site discharge data with the concurrent regional hydrometric record to establish a synthetic long term discharge record for the project site. However, too few site discharge data are available for this exercise. In addition, daily discharges are not available from the regional hydrometric stations for the years of 2009 and 2010. The 10UG002 McKeand River near the South Confluence station

was discontinued in 2008. The 10UG001 McKeand River near the North Confluence station only has one measurement completed in 2009, which still has some reliability issues unresolved. As such, it is not possible to utilize the limited site discharge measurements at this moment. It is recommended that continuous gauge stations be installed on the project site for future hydrological analysis.

3.0 METEOROLOGICAL ANALYSIS

Baffin Island has an extremely cold climate. Snow occurs at any time of the year, although is least likely in July and August. There is a tripod-mounted meteorological station sited at Discovery Camp on the Chidliak property and data collection began in July 2010. Due to an as-yet undiagnosed transmission problem commencing in mid-November 2010, data has not been transmitted since mid-November 2010. In the absence of site-specific data, the meteorological study requires sourcing and analysis of regional climate data that are most applicable to predict the climate of the project site.

Meteorological data coverage in the Arctic region is widely scattered and mostly situated along the coastal low lands. A search of the climate stations within a 200 km radius from a project central location of N 64° 15' and W 66° 20' identified six regional climate stations relevant to the project site. They are operated by the Meteorological Service of Canada (MSC). Four of the stations are in the vicinity of Iqaluit. The remaining two stations are at Brevoort Island and Cape Mercy. All the Iqaluit climate stations are located on the west coast at sea level. Iqaluit A station has the longest period of record out of the four Iqaluit stations and was therefore selected for meteorological analysis. Brevoort Island climate station was also selected due to its long period of record and relatively high elevation. Cape Mercy climate station was not used because of missing precipitation records. However, both the Iqaluit A and Brevoort stations are located on the coastline, which tends to have mild temperatures compare to the interior of southern Baffin Island, where the project area is located. Therefore, the Dewar Lakes climate station, the only inland climate station with an adequate period of record on Baffin Island, was introduced to the climate analysis, despite its location 530 km north of the project site (4.5 degrees of latitude). The locations of the selected stations are shown on Figure 3. A summary of the selected climate stations is provided in Table 7.

TABLE 7: REGIONAL CLIMATE STATION SUMMARY

Station Name	Station ID	Record	Elevation(m)	Latitude	Longitude
Iqaluit A	2402590	1946-2007	33.5	N 63.75	W 68.55
Brevoort Island	2400565	1959-2007	377	N 63.34	W 64.15
Dewar Lakes	2401030	1958-2007	526.7	N 68.65	W 71.17

Selected meteorological records were analyzed to determine representative monthly temperature, precipitation, rainfall, snowfall and other climate parameters applicable to the study area.

3.1 TEMPERATURE

Mean monthly temperatures from the selected regional climate stations are presented in Figure 4. The graph indicates that temperature generally rises above zero from June to August and remains below zero for the rest of the year. The warmest and coldest months in the region are typically July and February, respectively.

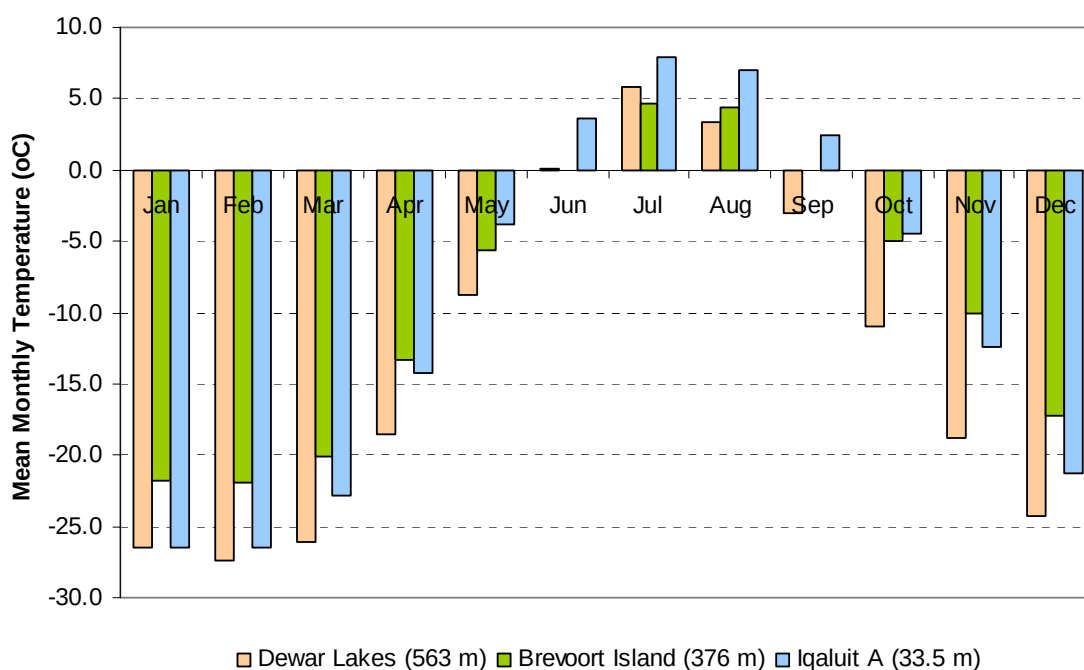


Figure 4
Mean Monthly Temperatures for the Regional Climate Stations

The mean monthly and annual temperatures were calculated for each regional station and are listed in Table 8.

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Iqaluit A	-26.4	-26.5	-22.9	-14.2	-3.8	3.6	7.9	7.0	2.4	-4.5	-12.4	-21.3	-9.3
Brevoort Island*	-21.8	-21.9	-20.1	-13.3	-5.6	0.0	4.7	4.4	0.0	-4.9	-10.1	-17.2	-8.8
Dewar Lakes	-26.5	-27.4	-26.1	-18.6	-8.7	0.2	5.8	3.3	-3.0	-11.0	-18.9	-24.2	-12.9
Project Site	-26.4	-26.9	-24.5	-16.4	-6.2	1.9	6.8	5.1	-0.3	-7.7	-15.6	-22.8	-11.1

Note: Brevoort Island climate station was not used to estimate the monthly temperatures at the project site.

All three stations have mean annual temperatures around -10°C , within a range of 4.1°C . Relatively, the Brevoort Island station shows the east coast island climate pattern, characterized by warmer winters and cooler summers. The Iqaluit A climate station, despite being located near the coast at sea level, has more land mass around it. It shows a similar climate pattern to the inland Dewar Lakes station, except that it is generally 3.6°C warmer due to the lower latitude.

Considering the locations and climate patterns, the Iqaluit A and Dewar Lakes stations are selected as most applicable to the project site. Therefore, the monthly and annual temperatures for the project site were calculated by taking the average of these two data sets, as shown Table 8.

Some temperature data was collected at a meteorological station on site during 2010 and the monthly minimum, mean and maximum temperatures are shown in Table 9 for comparison with the regional estimates.

TABLE 9: TEMPERATURES ($^{\circ}\text{C}$) MEASURED ON SITE IN 2010					
	Jul	Aug	Sep	Oct	Nov
Minimum	1.3	3.6	-4.1	-14.9	-19.7
Mean	7.5	9.6	1.7	-5.8	-8.3
Maximum	16.6	17.2	7.8	0.6	-1.7

3.2 PRECIPITATION

Monthly precipitation data, including rainfall and snowfall, were calculated for each selected regional station, as listed in Table 10. The Mean Annual Precipitation (MAP) values indicate that precipitation tends to be quite variable spatially on Baffin Island. Annual precipitation is higher on the southeast side of Baffin Island and decreases as latitude increases.

TABLE 10: MONTHLY PRECIPITATION DISTRIBUTION (MM) FOR REGIONAL CLIMATE STATIONS													
Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Iqaluit A	21.4	20.8	20.9	26.3	24.7	40.2	53.2	61.5	49.4	69.8	31.2	21.5	410.8
Brevoort Island	29.0	22.9	15.4	28.4	34.9	35.7	69.1	89.9	74.5	68.2	61.3	37.1	566.3
Dewar Lakes	5.1	3.8	5.4	11.8	23.3	19.5	42.4	57.0	35.1	31.1	14.4	6.6	255.5

Iqaluit A station, at the head of Frobisher Bay (at 33.5 m elevation), receives an average of 411 mm of precipitation, with 58% falling as snow, Brevoort Island station (at 376 m elevation) receives an average of 566 mm of precipitation with 61% falling as snow, while Dewar Lakes station (at 526.7 m elevation) receives an average of 256 mm of precipitation with 58% falling as snow. The monthly snowfall and rainfall distributions for these stations are listed in Table 11 and 12 and are shown graphically in Figures 5 to 7.

TABLE 11: MONTHLY RAINFALL DISTRIBUTION (MM) FOR REGIONAL CLIMATE STATIONS

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Iqaluit A	0.2	0.1	0	0.2	2.2	26.9	56.1	61.4	35.6	6.2	0.7	0	189.5
Brevoort Island	0	0.1	0	0.2	0.6	16.7	62.9	85.3	43.1	11.4	0.8	0.1	221.3
Dewar Lakes	0	0	0	0	0.4	7.2	38.7	49.5	10.2	0	0	0	106

TABLE 12: MONTHLY SNOWFALL DISTRIBUTION (CM) FOR REGIONAL CLIMATE STATIONS

Station	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Iqaluit A	23.5	22.8	23.8	28.5	23.2	9.1	0.2	0.5	14.4	34.7	34.4	24.6	239.4
Brevoort Island	29.8	22.8	15.4	28.2	33.4	18.3	6.2	4.4	31.3	56.8	60.4	37.0	344.1
Dewar Lakes	5.1	3.8	5.4	11.8	22.2	12.3	3.7	7.7	24.9	31.0	14.4	6.6	148.9

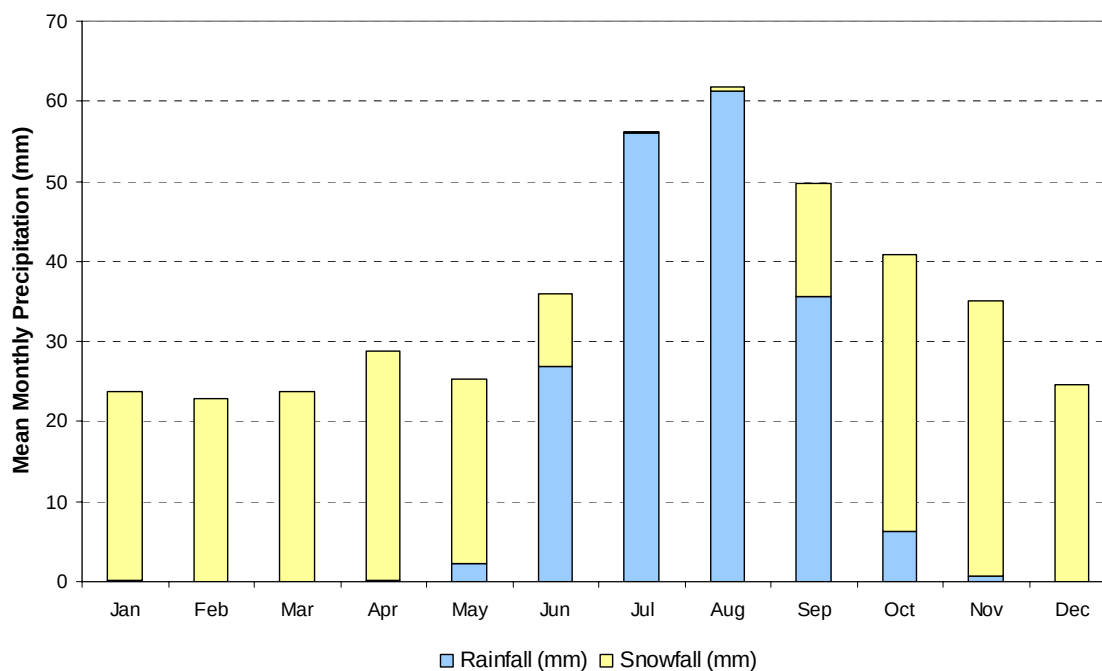


Figure 5
Iqaluit A Monthly Precipitation Distribution – 44% Rainfall, 56% Snowfall

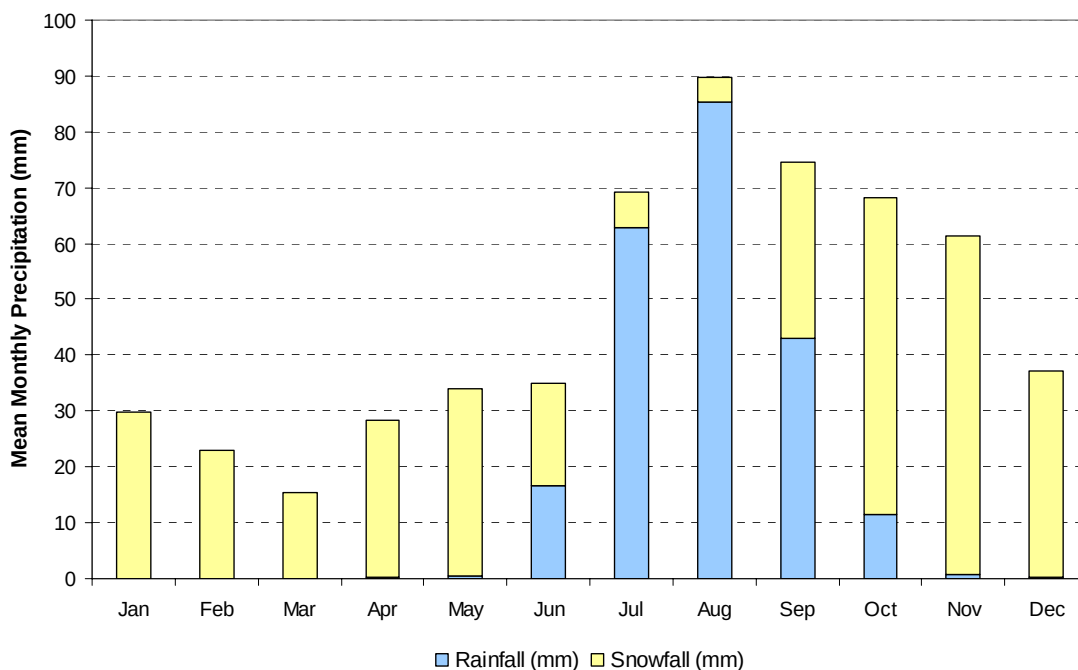


Figure 6
Brevoort Island Monthly Precipitation Distribution - 39% Rainfall, 61% Snowfall

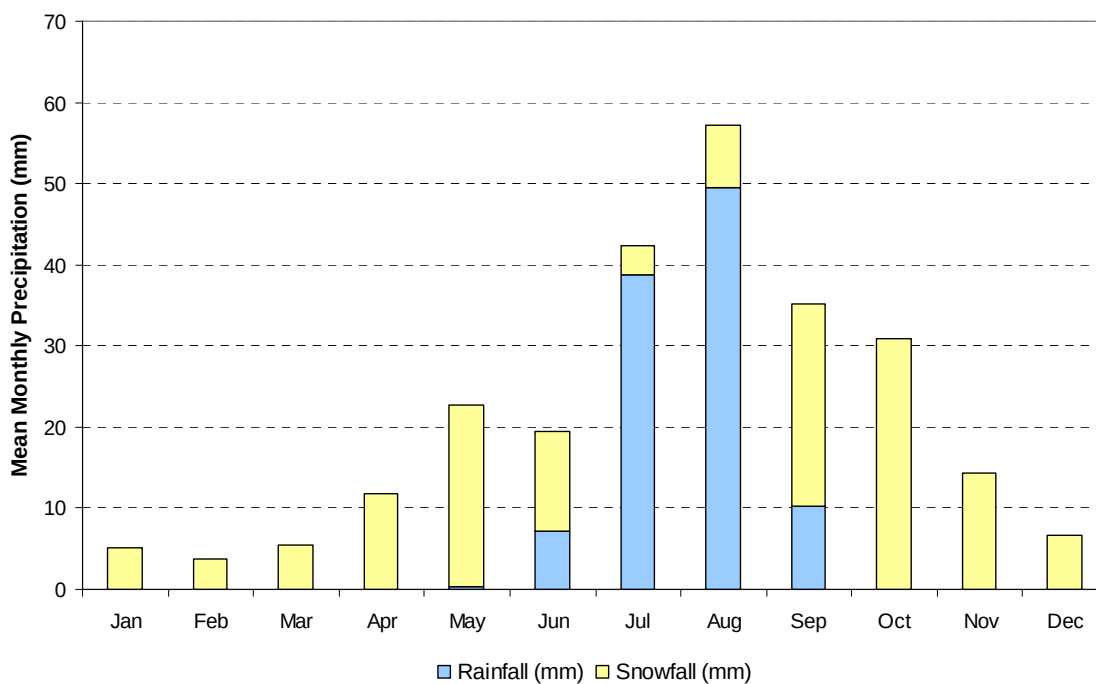


Figure 7
Dewar Lakes Monthly Precipitation Distribution - 42% Rainfall, 58% Snowfall

An attempt to identify orographic effects by plotting the MAP against station elevation showed a poor correlation for the project region, as shown in Figure 8.

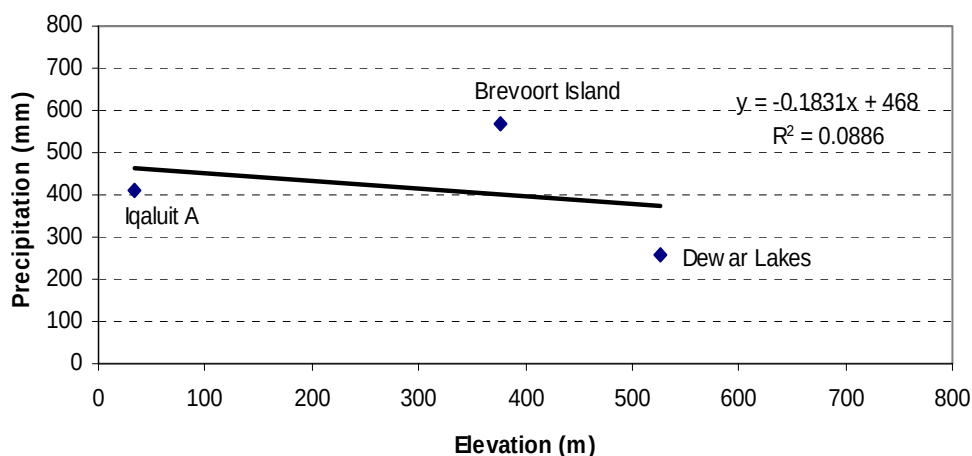


Figure 8
Regional Climate Station - Precipitation vs. Elevation

Putting orographic effects aside, location becomes the primary factor in selecting the appropriate climate stations. As the Iqaluit A and Brevoort Island stations are the closest stations with similar latitudes (within 1 degree difference) to the project site, the average MAP of these two stations was taken to represent the MAP of the project site. Monthly distributions of precipitation, snowfall and rainfall were also determined for the project site, as listed in Table 13. The distribution was solely based on the seasonal distribution of the Iqaluit A climate station.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Precipitation (mm)	39	38	40	48	42	60	94	103	83	68	58	41	489
Rainfall (mm)	0	0	0	0	2	31	64	70	41	7	1	0	215
Snowfall (mm)	27	26	27	32	26	10	0	1	16	40	39	28	274

The Hydrological Atlas of Canada (Fisheries and Environment Canada, 1978) was sourced as a reference to confirm the regional precipitation estimates. The project area is on the 500 mm isoline for mean annual precipitation and in the vicinity of the 280 mm isoline for mean annual snowfall. Both values are within 2.2% of the results of the regional analysis. This provides added confidence to the regional precipitation analysis.

Rainfall data was recorded at the meteorological station on site during 2010 and the data are summarized in Table 14 below.

TABLE 14: RAINFALL (MM) RECORDED ON SITE IN 2010					
	Jul	Aug	Sep	Oct	Nov
Rainfall (mm)	18	12	1	2	11

3.3 EVAPOTRANSPIRATION

The annual evapotranspiration loss was determined to be 138 mm by taking the difference of annual precipitation (489 mm) and net runoff values (351 mm). This value is in approximate agreement with the evaporation map in the Hydrological Atlas of Canada, where the project area is situated mid-way between the 100 mm and 200 mm isolines. The evapotranspiration is greatest during the summer growing season from June to August when the daily humidity is relatively high. No evapotranspiration occurs during the freezing period when the mean monthly temperature is below zero.

The monthly distribution of evapotranspiration was estimated by calculating the monthly distribution of evaporation during the summer period, using the Aerodynamic Method for pan evaporation (Cook, 2002). Climate parameters used in the following equation were obtained from the 1971-2000 climate normals for the Iqaluit A climate station.

$$E = - \rho * L * k * u_{star} * (q_2 - q_1) / \ln(z_2/z_1)$$

where

- E = energy flux for evaporation (cal/cm²/s),
- rho = air density,
- L = the latent heat of vaporization,
- k = von Karman's constant,
- ustar = the friction velocity,
- (q₂-q₁) = the specific humidity difference between the air and near water surface,
- ln = the natural log,
- z₂ = the height of the dew point temperature measurement,
- and z₁ = is a height near the water surface.

The monthly and annual evapotranspiration estimated for the project site is provided in Table 15.

TABLE 15: MONTHLY EVAPOTRANSPIRATION DISTRIBUTION FOR THE PROJECT SITE

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Distribution %	0	0	0	0	0	31	35	34	0	0	0	0	100
Evapotranspiration(mm)	0	0	0	0	0	43	48	47	0	0	0	0	138

4.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Peregrine Diamonds Ltd. and its agents. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Peregrine Diamonds Ltd., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in EBA's Services Agreement and in the General Conditions provided in Appendix A of this report.

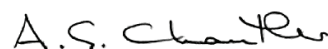
5.0 CLOSURE

We trust this report meets your present requirements. Should you have any questions or comments, please contact the undersigned at your convenience.

Sincerely,
EBA Engineering Consultants Ltd.



Eva Li, M.A.Sc., E.I.T.
Hydrotechnical Engineer
Phone: 604.685.0275 x297
eli@eba.ca



Adrian Chantler, Ph.D., P.Eng.
Principal Specialist
Phone: 604.685.0275 x258
achantler@eba.ca

EL/AGC/rbt

REFERENCES

David R. Cook, 2002. Aerodynamic Method for Evaporation Rates.

<http://www.newton.dep.anl.gov/askasci/wea00/wea00146>.

Fisheries and Environment Canada, 1978. Hydrological Atlas of Canada.

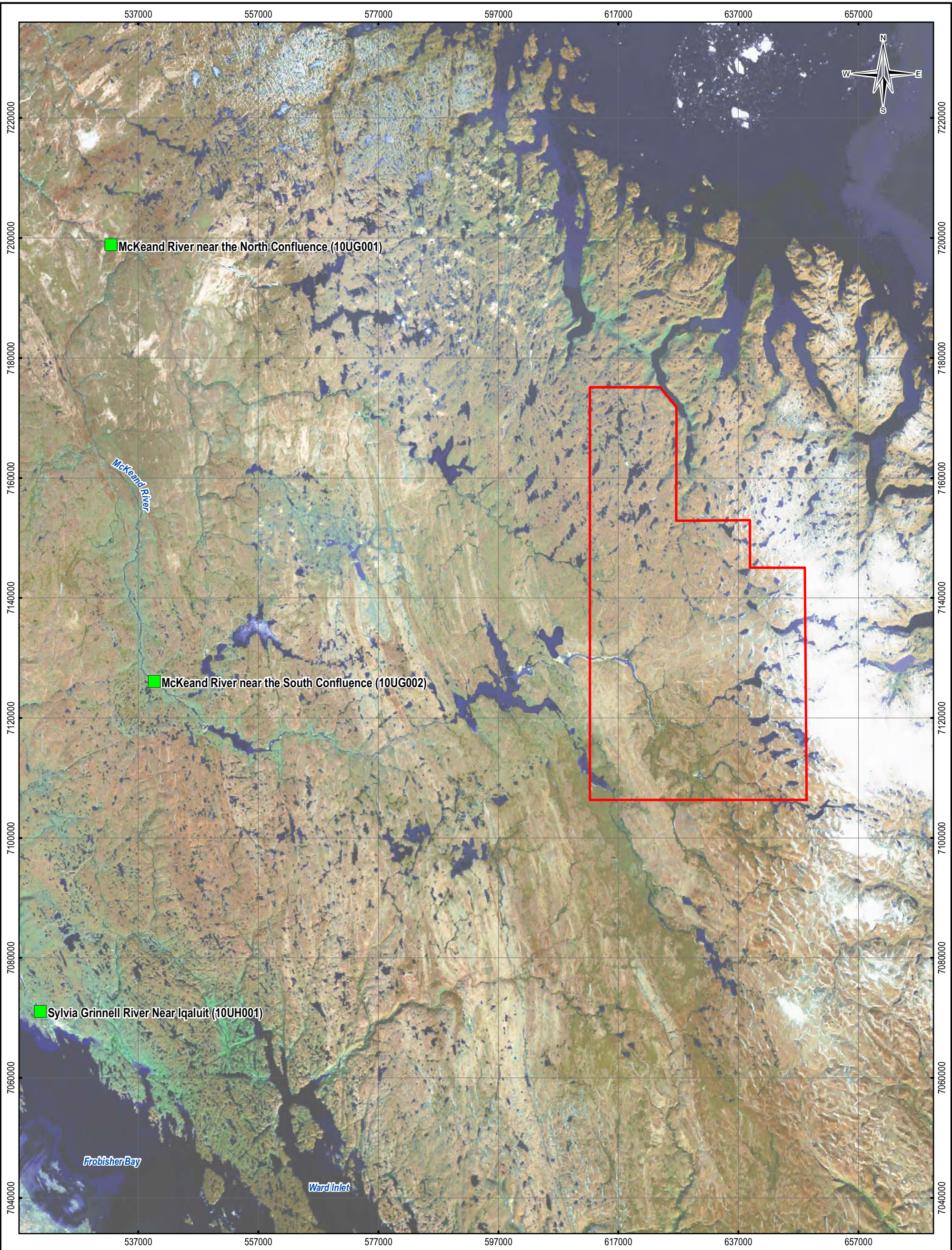
Jacobs, Headley, Maus, Mode and Simms, 1997. Climate and Vegetation of the Interior Lowlands of Southern Baffin Island: Long-term Stability at the Low Arctic Limit

National Climate Data and Information Archive, 2010. www.climate.weatheroffice.gc.ca

Water Survey of Canada - Archived Hydrometric Data, 2010. http://www.wsc.ec.gc.ca/hydat/H2O/index_e.cfm



FIGURES



LEGEND

- Regional Hydrometric Station
- 2010 Study Area

NOTES
Base Data Source: ESRI Data Maps

BASELINE HYDROLOGY ASSESSMENT
CHIDLIAK PROJECT, SOUTH BAFFIN ISLAND, NU

Location of Regional Hydrometric Stations

PROJECTION UTM Zone 19		DATUM NAD83	
Scale: 1:600,000 105000 0 10000 Kilometres			
FILE NO. Y22101137_Hydro_Figure01.mxd			
PROJECT NO. Y22101137	DWN MEZ	CKD EL	REV 0
OFFICE EBA-VANC	DATE December 9, 2010		



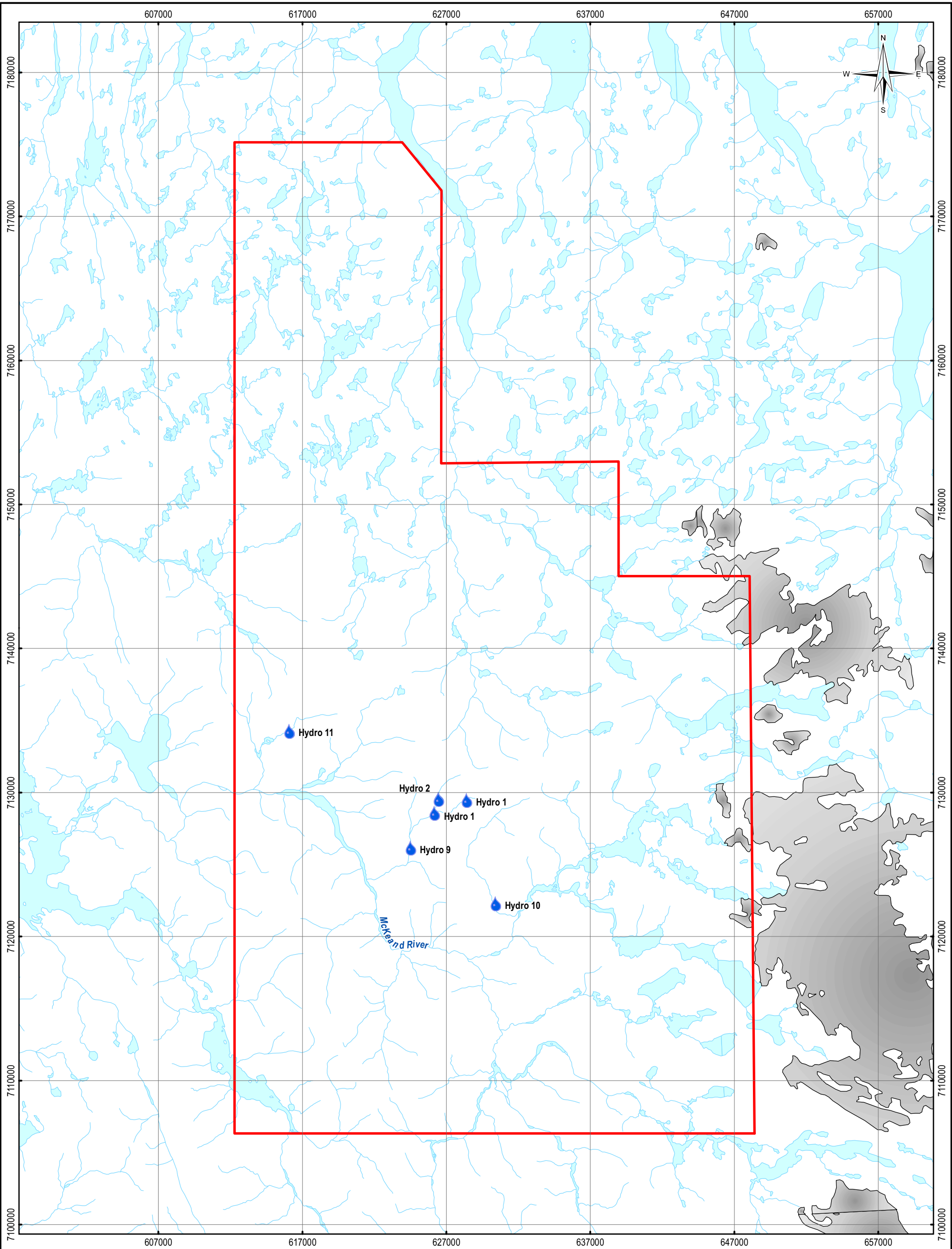
PEREGRINE
DIAMONDS LTD.



EBA Engineering
Consultants Ltd.

Figure 1

ISSUED FOR USE



LEGEND

- On-site Hydrometric Station
- 2010 Study Area
- Permanent Snow and Ice
- Watercourse
- Waterbody

NOTES
Base Data Source: 1:250,000 NTS

ISSUED FOR USE

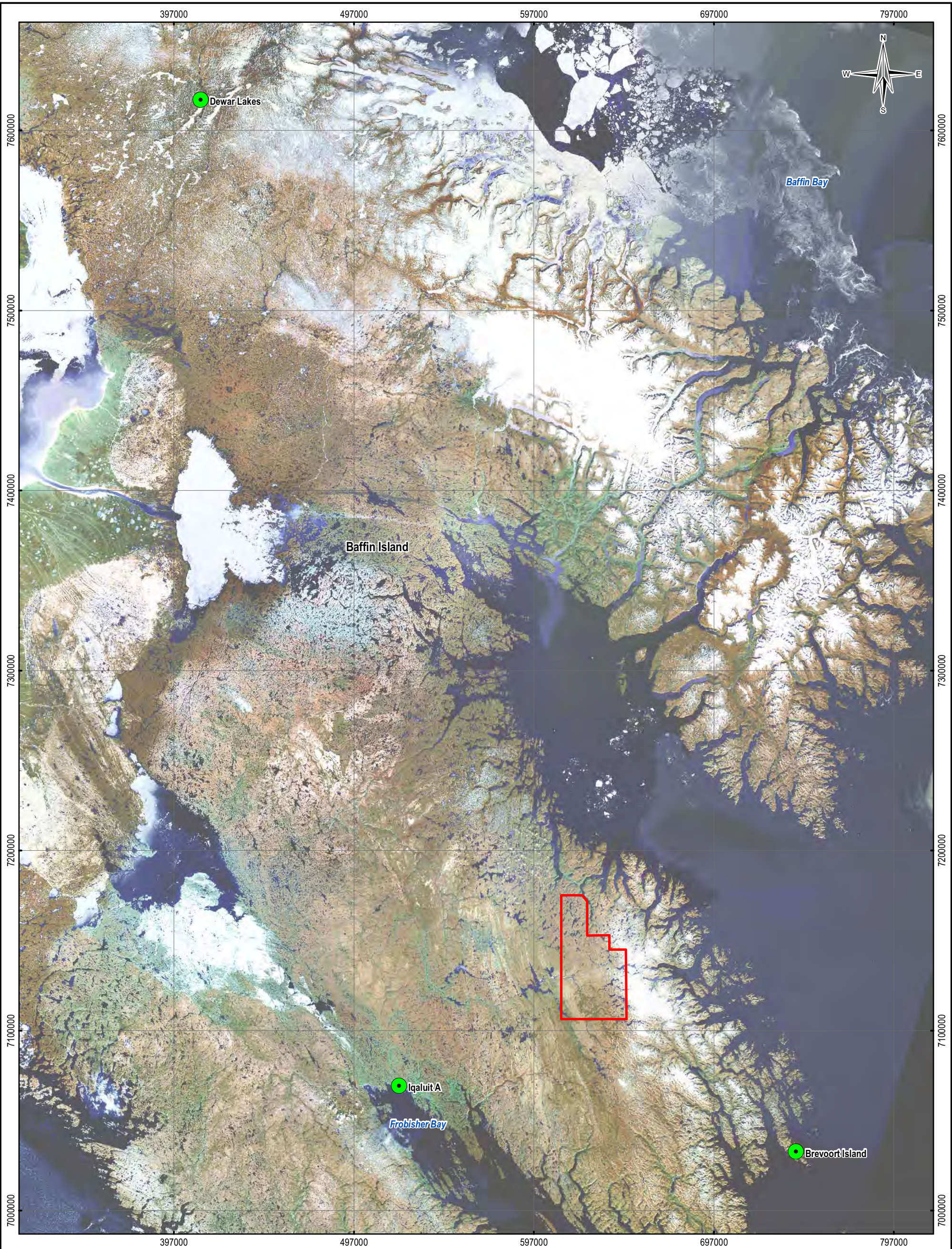
BASELINE HYDROLOGY ASSESSMENT
CHIDLIAK PROJECT, SOUTH BAFFIN ISLAND, NU

Location of On-Site Hydrometric Stations

PROJECTION UTM Zone 19	DATUM NAD83		
Scale: 1:250,000			
FILE NO. Y22101137_Hydro_Figure02.mxd			
PROJECT NO. Y22101137	DWN MEZ	CKD EL	REV 0
OFFICE EBA-VANC	DATE December 9, 2010		

EBA Engineering Consultants Ltd.

Figure 2



LEGEND

-  Regional Climate Station
-  2010 Study Area

NOTES
Base Data Source: ESRI Data Maps

ISSUED FOR USE

BASELINE HYDROLOGY ASSESSMENT
CHIDLIAK PROJECT, SOUTH BAFFIN ISLAND, NU

Location of Regional Climate Stations

PROJECTION UTM Zone 19		DATUM NAD83	
Scale: 1:2,000,000 25 12.5 0 25 Kilometres			
FILE NO. Y22101137_Hydro_Figure03.mxd			
PROJECT NO. Y22101137	DWN MEZ	CKD EL	REV 0
OFFICE EBA-VANC	DATE December 9, 2010		



PEREGRINE
DIAMONDS LTD.



EBA Engineering
Consultants Ltd. eba

Figure 3

APPENDIX A

APPENDIX A EBA'S GENERAL CONDITIONS

DESIGN REPORT – GENERAL CONDITIONS

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

1.0 USE OF REPORT AND OWNERSHIP

This Design Report pertains to a specific site, a specific development, and a specific scope of work. The Design Report may include plans, drawings, profiles and other support documents that collectively constitute the Design Report. The Report and all supporting documents are intended for the sole use of EBA’s Client. EBA does not accept any responsibility for the accuracy of any of the data, analyses or other contents of the Design Report when it is used or relied upon by any party other than EBA’s Client, unless authorized in writing by EBA. Any unauthorized use of the Design Report is at the sole risk of the user.

All reports, plans, and data generated by EBA during the performance of the work and other documents prepared by EBA are considered its professional work product and shall remain the copyright property of EBA.

2.0 ALTERNATIVE 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 so stipulated in the Design Report, EBA was not retained to investigate, address or consider, and has not investigated, addressed or considered any environmental or regulatory issues associated with the project specific design.

4.0 CALCULATIONS AND DESIGNS

EBA has undertaken design calculations and has prepared project specific designs in accordance with terms of reference that were previously set out in consultation with, and agreement of, EBA’s client. These designs have been prepared to a standard that is consistent with industry practice. Notwithstanding, if any error or omission is detected by EBA’s Client or any party that is authorized to use the Design Report, the error or omission should be immediately drawn to the attention of EBA.

5.0 GEOTECHNICAL CONDITIONS

A Geotechnical Report is commonly the basis upon which the specific project design has been completed. It is incumbent upon EBA’s Client, and any other authorized party, to be knowledgeable of the level of risk that has been incorporated into the project design, in consideration of the level of the geotechnical information that was reasonably acquired to facilitate completion of the design.

If a Geotechnical Report was prepared for the project by EBA, it will be included in the Design Report. The Geotechnical Report contains General Conditions that should be read in conjunction with these General Conditions for the Design Report.

6.0 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.