

Appendix 1

Schedule of Accommodation and Electric Load of Indian New Research Station

Room/Accommodation	No	Approximate Area (m ²)		Approx. Electrical Requirement (KW)	
		Unit (m)	Total	Room Fittings	Oil Based Electric Radiators
Laboratories	6	7x4	168	12	12
Change Room	1	3x2	6	0.1	1
Lounge/Meeting Room	1	12x10	120	0.8	4
Kitchen	1	7x4	28	0.5	0
Dining Hall	1	10x10	100	0.5	4
Service Room	1	3x2	6	0.1	1
MI Room	2	7x4	56	1	2
Rest Rooms (Winter)	15	4x3	180	3	30
Rest Room (Guest/Summer)	10	4x3	120	1.0	10
Gymnasium	1	7x4	28	0.5	2
Entertainment Room	1	10x10	100	0.5	4
Workshop 3 no for electrical, carpentry and mechanical	1	10x6	60	0.5	3
Garage for ATV Dozer, Crane	1	10x6	60	0.5	0
Toilet Room (5 no)	1	10X6	60	0.5	0
Bathroom (4 No)	1	10X3	30	0.6	0
Laundry room including space to hang cloths , dryer and ironing space	1	7x4	28	2	0
Melt water/Boiler Room and RO Plant	1	7x4	28	15.5*	2*
Library	1	7x4	28	0.3	2
Office room	1	7x4	28	0.3	2
Prayer (Meditation) Room	1	4x3	12	0.2	1
Store Room inclusive of cold, warm, General and maintenance room	4	7x4	112	1.0	0
Communication Room	1	7x4	28	1.0	2
Computer Room	1	7x4	28	3.0	2
Generator Room	1	10x4	40	0.3	0

Room/Accommodation	No	Approximate Area (m ²)		Approx. Electrical Requirement (KW)	
		Unit (m)	Total	Room Fittings	Oil Based Electric Radiators
Storage room	1	7x4	28	0.2	0
Wastewater Treatment System Room	1	10x6	60	9.0	4
Incinerator Room	1	4x3	12	10.2*	0
Compactor and Solid Waste collection Room	1	4x3	12	0.2	0
Solar Energy/Wind turbine room	1	7x4	28	0.3	2
Cold storage room	1	7x4	28	2.5	0
Boat/Gemini Room	1	7x4	28	0.2	0
Total Room Area			1650		
Additional 10% for adjustment			165		
Area for corridor and staircase(15-20%) of total area			330		
TOTAL	63		2145	68.3	90
Module Outside of Main Building					
Food Depot (Separate)	2	7x4	28	0.2	0
Fuel Depot (Separate)	2	10x4	80	0.3	0
Laboratories (Separate)	3	7X4	84	6.0	6.0*
Total Including all Above	70		2337	74.8	96

Additional Requirement of Electrical Power

Trace heating element for outfall sewer line of 500 meters	-7 KW*
Trace heating element for water intake pipe line 200 meters	-3 KW*
Trace heating element for sea water intake pipe line 400 meters	-6KW*
Submersible pump for water intake	-2 KW*
Submersible pump for sea water intake	-2KW*
Unaccounted load	-10 KW*

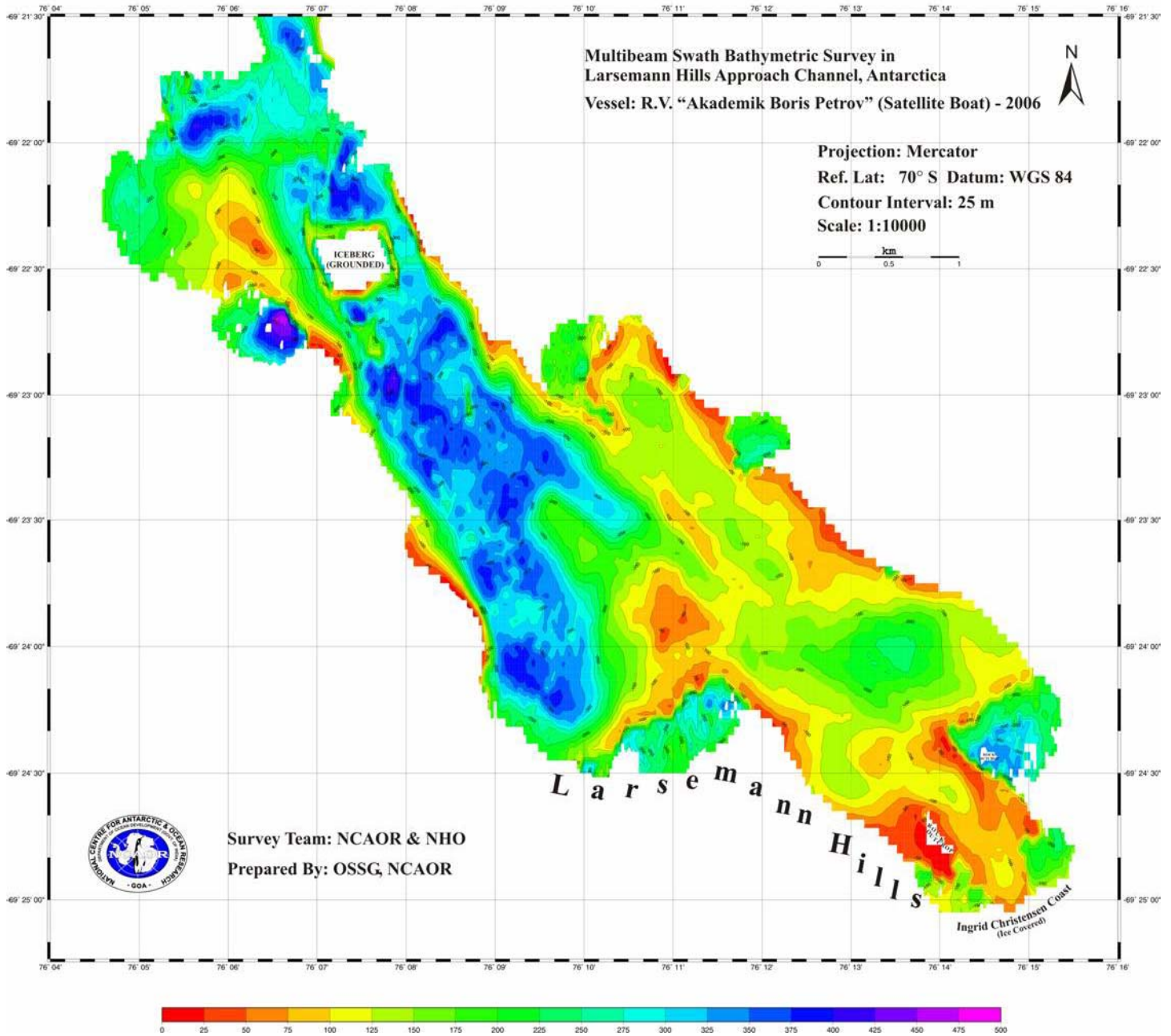
Total 30 KW

** Required only for 6-8 hours in a day*

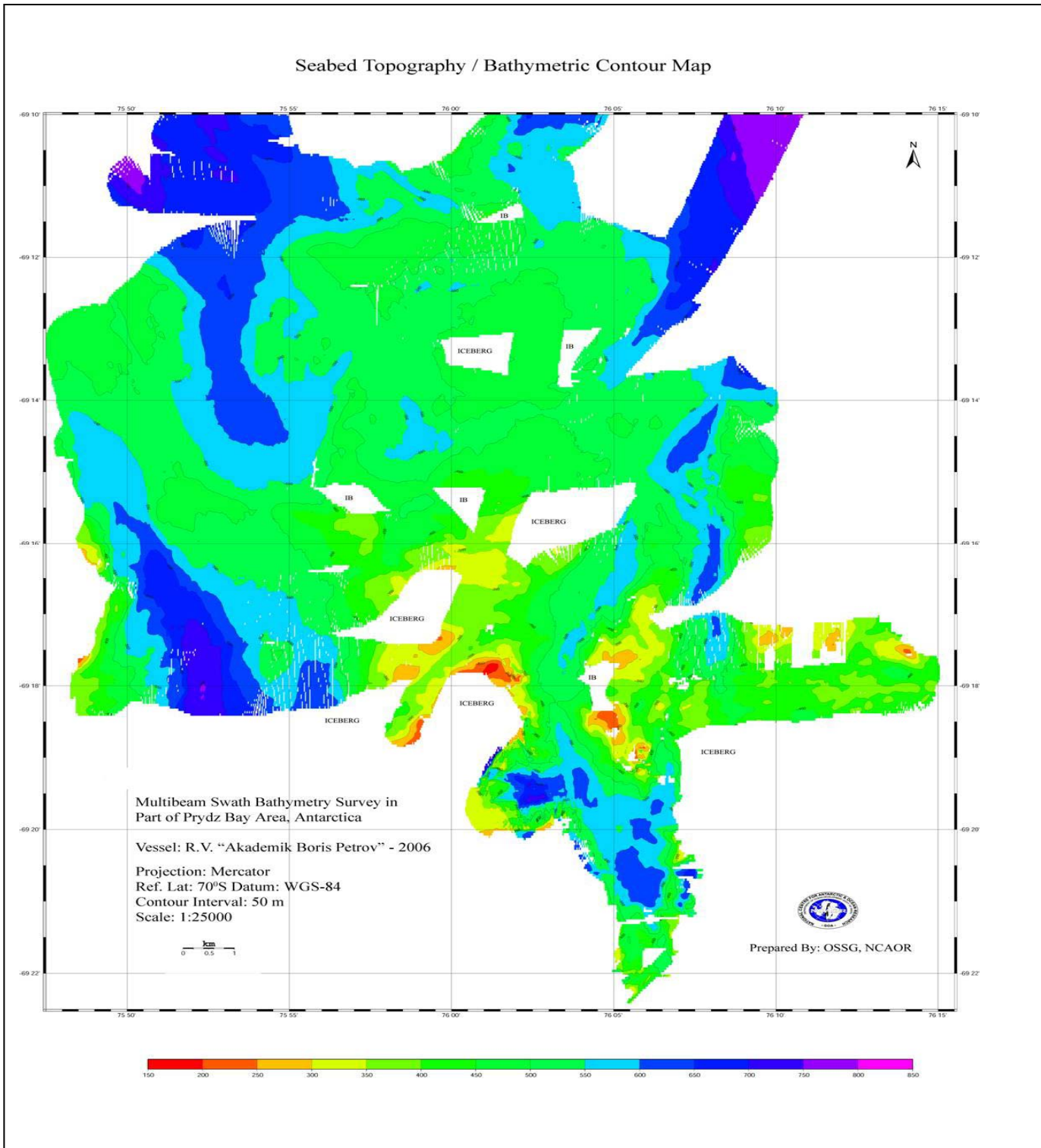
In winter season power demand will reduce by;

Laboratory – 12 KW
Guest Room - 11 KW
Laboratory (Separate) - 6 KW

Seabed Topography / Bathymetric Contour Map



Multibeam Swath Bathymetry in Other part of Prydz Bay



Appendix 4

Annual weather/climate characteristics at Zhongshan (after Turner and Pendlebury, 2004)

Month	Mean daily temperatures (°C)	Highest daily maximum temp. (°C)	Lowest daily minimum temp. (°C)	Mean relative humidity (%)	Mean cloud amount (oktas)	Mean wind direction	Mean wind speed (m s ⁻¹)	Maximum wind gust (m s ⁻¹)	No. of days of gales	Mean MSL pressure (hPa)
Jan	0.4	8.1	-6.8	61	5	E	5.3	33	9	987.9
Feb	-2.7	7.4	-10.6	56	5	E	7.1	33.8	13	985.4
Mar	-8.3	2.3	21.9	56	5.5	E	7.7	44.1	14	985.1
Apr	-12.4	4.8	-29.4	49	4.9	ESE	8	46.2	14	988
May	-16	1.9	-35	57	4.6	ESE	6.9	46	11	987.5
Jun	-14.4	1.2	-36.3	58	4.8	ESE	8	48.1	17	989.9
Jul	-15	2.2	-36.7	56	4.4	E	7.9	47.2	18	987.6
Aug	-15.6	0.9	-39	53	5	ESE	8.4	36.6	18	981.4
Sept	-16.3	0.9	-34.2	52	4.6	ESE	7.8	47.5	15	980
Oct	-11.6	1.7	-28.3	54	4.9	ESE	7.4	48.3	16	981.4
Nov	-5.7	5.1	-19.5	56	5.2	ESE	6.4	35.6	13	985.4
Dec	-0.2	9.6	-11.5	53	4.5	ESE	5.9	38.6	13	985.1
Yearly	-9.8	9.6	-39	55	4.9	ESE	7.2	48.3	171	985.6

Station (69° 22' S, 76° 22' E, 15 m AMSL), Princess Elizabeth Land (1989-95)