

## **ADDITIONAL PROJECT DESCRIPTION AND SUPPLEMENTAL INFORMATION**

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## **GENERAL**

NORTHERN EXERCISE 2015 (NOEX 15) will involve up to 220 Canadian Armed Forces personnel from the Regular and Reserve Forces and 16 Canadian Rangers conducting a Defence of Canada Exercise which will include surveillance patrols, survival training, and weapons training in the vicinity of Resolute Bay, Nunavut from 20 March 2015 through 04 April 2015. During that same time period, elements from the exercise will perform sovereignty style patrols to Ellesmere Island, Griffith Island, Little Cornwallis Island and Gascoyne Inlet, Nunavut.

The main focus of training will be to practice the deployment of Canadian Army elements into Canada's High Arctic Region, reaffirming soldier skills while operating in the harsh climatic conditions of the Arctic. The exercise personnel will comprise Canadian Rangers, Arctic Response Company Group, and an element of the Immediate Response Unit, with overall command and control being provided by a Land Component Commander.

Additionally, a small support organization will remain static at the Canadian Armed Forces Arctic Training Centre (CAFATC) in Resolute Bay. During the initial phase of the exercise, all 220 personnel will operate in the vicinity CAFATC in Resolute Bay.

A small activation team of approximately three (3) personnel will arrive in Resolute Bay on approximately 10 March, followed by an advance support party of seventeen (17)

personnel arriving on approximately 16 March 2015. On or about 20 March 2015, the remainder of the exercise participants begin to arrive.

The training audience is comprised of the following organizations:

**Canadian Rangers:** There will be approximately 16 Canadian Rangers from various northern communities around the vicinity of Resolute Bay. Canadian Rangers will be deployed with all field units. Their mission is to provide leadership in terms of arctic survival skills, traditional knowledge, and predator control. No field units will travel or operate outside of established camps without a Canadian Ranger to guide them.

**Arctic Response Company Group (ARCG):** Comprised of a Headquarters (HQ) consisting of approximately 15 personnel, and three Platoons (PI), each of 35 personnel. Throughout the exercise, the ARCG will move both dismounted by foot and mounted via snowmobile between the areas of Ellesmere Island, Griffith Island, Little Cornwallis Island and Gascoyne Inlet; and will set up base camps in and around pre-determined areas.

**Immediate Response Unit (DRC):** Comprised of approximately 36 personnel, will move dis-mounted (via foot) with limited snowmobile support within the vicinity of Resolute Bay.

**Land Component Command (LCC) and the Exercise Control (EXCON):** Enablers comprising of approximately 33 personnel will establish a base camp of operation utilizing the CAFATC in Resolute Bay. The LCC / EXCON will be the controlling HQ for all Canadian Armed Forces personnel participating in NOREX 15.

The Canadian Armed Forces elements as part of NOREX 15 will operate within the Qikiqtaaluk Region of Nunavut, and will be centered on Resolute Bay and the CAFATC. The exercise is bounded to the north by Ellesmere Island, to the East by Devon Island, to the West by Little Cornwallis Island, and to the South by Griffith Island. and be centred on Resolute Bay and the CAFATC.

To accommodate all of the soldiers and support personnel, a Main Operating Base Camp will be established at the CAFATC. Smaller field camp and temporary outposts will be created in and around Cornwallis Island, Little Cornwallis Island and Devon Island. At the outpost sites, only temporary (i.e. non-permanent) structures including tents will be erected.

In addition to exercising in the harsh winter environment of the arctic, a Defence of Canada scenario will be established and utilized, including presence patrolling, the establishment of observation posts, sovereignty patrols and intelligence gathering patrols in and around the entire exercise area.

Concurrent to the above training, the Platoons will conduct live fire weapons training, snowmobile training, survival training and other Platoon and Company level exercises, the training evolutions will be conducted in a round-robin style, with the platoons moving

separately through each location or iteration of the training all within the 10-day training window. All training activities will occur within pre-defined area (Op Boxes), and mitigation measures will be implemented to avoid negative environment impacts

The areas being utilized, as well as specific activity focus areas are shown in the attached site plan at the end of this document; a more detailed Map will be provided separately.

## **TRAINING SCENARIO & ACTIVITY DETAILS**

### **Training Objectives**

Between the periods of 01 March through 08 March 2015 the ARCG will be advised of the need to deploy to Canada's High Arctic in order to enhance their skills in extreme cold weather operations with a view towards testing the sustainment, mobility and survivability of the ARCG.

Between the periods of 19 – 20 March 2015, the main exercise participants will be inserted via aircraft into Resolute Bay. The ARCG complete will consolidate at the CAFATC and conduct equipment and preparatory training events.

Commencing 21 March 2015, the ARCG will begin an acclimatization and equipment testing phase in and around the vicinity of CAFATC / Resolute Bay. This phase will continue until such time as the ARCG has proven equipment and personnel readiness for the next iteration of the exercise. Through the period of 22 -29 March 2015, the ARCG will conduct a series of short, medium and longer range patrols utilizing snowmobiles and aircraft insertion.

### **Live Fire Range**

Each day from 22 – 29 March 2015, platoons will cycle through a live fire range located in the field firing locations. The range rotations will commence at first light and conclude before last light. The platoons will move to a designated distance within the field firing locations and engage targets with .303, 5.56mm, 7.62 and shot gun rounds. No pyrotechnics, fires, or explosives will be used.

It is important to note that the CAF operates ranges in an extremely safe manner. There will be a designated Range Officer in Charge, Range Safety Officer and additional Range Staff as required based on the type of ammunition being fired. The range staff will ensure the area is free of personnel, wildlife, aircraft or any other objects prior to conducting the range. They will ensure the range remains safe during its use and ensure that all waste produced by the range is removed as part of the range clean up.

### **Survival Training**

Additionally, throughout each day from 22-29 March 2015 the ARCG will be instructed in Arctic survival techniques by the local Canadian Rangers. The topics to be covered will vary by both location and terrain, but will include traditional construction of shelters.

Photographs will be taken of all training location sites, and temporary camp locations before during and after use.

### Community Outreach

A cultural awareness day is planned to take place at the CAFATC with a view of introducing CAF members into the culture and traditions of the Inuit.

### ENVIRONMENTAL CONSIDERATIONS

It is understood that the permitting process requires detailed information regarding the nature and locations of the operation, and the information contained in the following document is all known information at the time of production. In order to achieve the intent of the exercise, some decisions must remain with the Commander. As such, minor variances may occur during the conduct of the exercise. Such variances will be captured in a Post-Operation Environmental Report which will include the precise locations used during the exercise, along with an overall review of the execution.

The following is a list of potential impacts that could result from the proposed activities:

- Increased activity and vehicle traffic from the proposed activities is expected to increase ambient noise levels and may also cause minor disturbance to the wildlife within the vicinity of activity locations. However, since there will be local Canadian Rangers accompanying all patrols, and all activities will be temporary, impacts are expected to be minimal. Further the advance liaison with the local HTA will ensure the exercise participants remain cognizant and respectful of the wildlife and environment at all times.
- Vehicles involved in the operation will release particulate into the atmosphere and contribute to greenhouse gas (GHG) emissions. Air quality in the vicinity of activities may be temporarily reduced due to the increased fumes. However, due to the relatively short duration of the activity, and the use of new, lower emission vehicles, impacts to the atmosphere are expected to be minimal.
- Despite direction to ensure that all waste material is to be properly contained and transported for disposal, the potential exists for waste material produced during the exercise to litter property or be windblown onto surrounding locations. Regardless of the circumstance, every effort will be made to ensure this does not happen; therefore the impact is considered to be easily mitigated and insignificant.
- Should fuel leak and/or spill occur from vehicles, equipment, etc., the possibility exists for contamination of ground water resources, soil and/or surface water. To mitigate this concern, all CAF vehicles will have spill cleanup supplies, and all exercise participants will be instructed on their

proper usage. Therefore the potential for a malfunction and/or accident to cause any significant impact is low.

While there is potential for activities to impact the environment, mitigation measures have been established to minimize their significance. These mitigation measures include, but are not limited to:

- An environmental brief will be provided upon arrival to personnel involved in the exercise to ensure they have a general level of environmental awareness and knowledge, and are aware of the requirements related to wildlife prevention, response and reporting.
- Vehicle movement will be restricted in sensitive areas. In the event that established trails are impassable, personnel will be instructed to use alternate routes for as limited a distance as necessary.
- Individuals will be tasked to ensure that waste material and litter is collected on the site prior to departing the camp or firing range location. All waste, including sanitary waste, produced on site will be removed for proper disposal.
- In order to prevent any unnecessary wildlife encounters, all waste will be appropriately contained, stored and removed from the sites as soon as possible.
- Personnel will be made aware of the potential for threats from local wildlife and will be instructed to avoid encounters or disrupt any wildlife unless absolutely necessary.
- All noise making activities will be limited to occur during daylight hours whenever possible.
- As much as possible, vehicles and equipment will be maintained in good repair to prevent leakage of fuel, oil, etc.
- All vehicle/equipment refueling will occur in one allocated location at each camp.
- Use of spill containment items including drip pans or mobile plastic berms will be maximized during refueling. Within camps all fueling will be done within containment areas.
- All fuel storage systems and containers used in the proposed operation will be transported, stored, protected etc according to proper legislation, regulation, codes and guidelines.
- HAZMAT prevention/response resources (spill pans, hydrocarbon spill pads, absorbent, etc) will be available and ready for use if required. Spill kits will be

specifically located at all fuel storage areas, vehicle maintenance areas and refueling areas.

- Photographs will be taken of all training location sites, and temporary camp locations before during and after use.

The proposed operation has been designed based upon the training requirements focusing on minimizing the impacts to the surrounding environment utilizing the knowledge and experience of Joint Task Force North (JTFN), CAFATC and the ARCG with a reliance on the knowledge of the local Canadian Rangers. Through this focus and in to addition to the identified mitigation measures, follow-up programs and monitoring, it is estimated that the operation is not likely to cause any significant effect / nor impact to the environment.

### RESTORATION PLAN

In order to ensure that any impacts are avoided or appropriately mitigated, a rear party remediation team will be established. They will be responsible for completing a thorough inspection of each location used prior to departure, and will be provided with appropriate equipment and resources to complete minor site remediation and restoration work at each site used during the Exercise. The general principle is to return the camp site to the same condition as when first occupied by the platoon ( i.e as documented during the in clearance process). A rear-party team will be embedded within each Platoon and will be responsible for completing a thorough inspection and clean-up of each camp location prior to departure from the site (e.g., waste collection, clean-up of minor fuel spills). Site condition at the time of departure will be documented by the rear-party as part of the out-clearance process and reported back to the LCC at CAFATC.

If the Platoon cannot restore a camp site to its pre-occupation condition, it will document the specific concerns on the out-clearance form and notify the LCC at CAFATC of the need for additional follow-up at the site. CAFATC will then develop a remediation plan to address the issue. The relevant authorities will be notified and consulted as required. DND environmental support staff will remain engaged throughout the planning and execution of all phases of NOREX, and are available to deploy to Resolute Bay if needed.

### LOCATIONS

Despite best efforts to identify all bivouac locations, weather and ground terrain will dictate the final bivouac site. It is therefore possible that the final locations will differ from the coordinates identified below. Primary bivouac sites are identified below. For the purposes of this application, bivouac areas are identified as those locations outside of the permanent facility of CAFATC and will be an area where potential temporary arctic tents / camps will be located. In addition to the bivouac sites, Op Boxes have been identified below. These Op Boxes define the area within which training activities will occur.

BIVOUAC CORNWALLIS ISLAND				
BIVOUAC SITE	FUEL	DMS	UTM	MGRS
RESOLUTE BAY Biv 1	No	74° 43' 17.598" N 94° 59' 12.504" W	15N 441570 8293517	15X VC 41570 93517
RESOLUTE BAY Biv 2	No	74° 44' 59.431" N 95° 00' 02.703" W	15N 441756 8296669	15X VC 41266 96685
RESOLUTE BAY Biv 4	No	74° 46' 02.297" N 93° 38' 12.54" W	15N 481324 8297744	15X VC 81323 97744
RESOLUTE BAY Biv 5	No	75° 01' 58.051" N 96° 27' 26.247" W	14N 573282 8328837	14X NJ 73282 28836
RESOLUTE BAY Biv 8	No	75° 36' 45.271" N 95° 00' 17.631" W	15N 444401 8392898.3	15X VD 44401 92898
RESOLUTE BAY Biv 9	No	75° 37' 57.447" N 94° 56' 49.929" W	15N 446074.1 8395081	15X VD 46074 95080
RESOLUTE BAY Biv 10	No	75° 37' 46.779" N 94° 46' 08.445" W	15N 450997 8394595	15X VD 50997 94595
RESOLUTE BAY Biv 11	No	75° 24' 15.279" N 93° 51' 30.038" W	15N 475856 8368886	15X VD 75856 68885

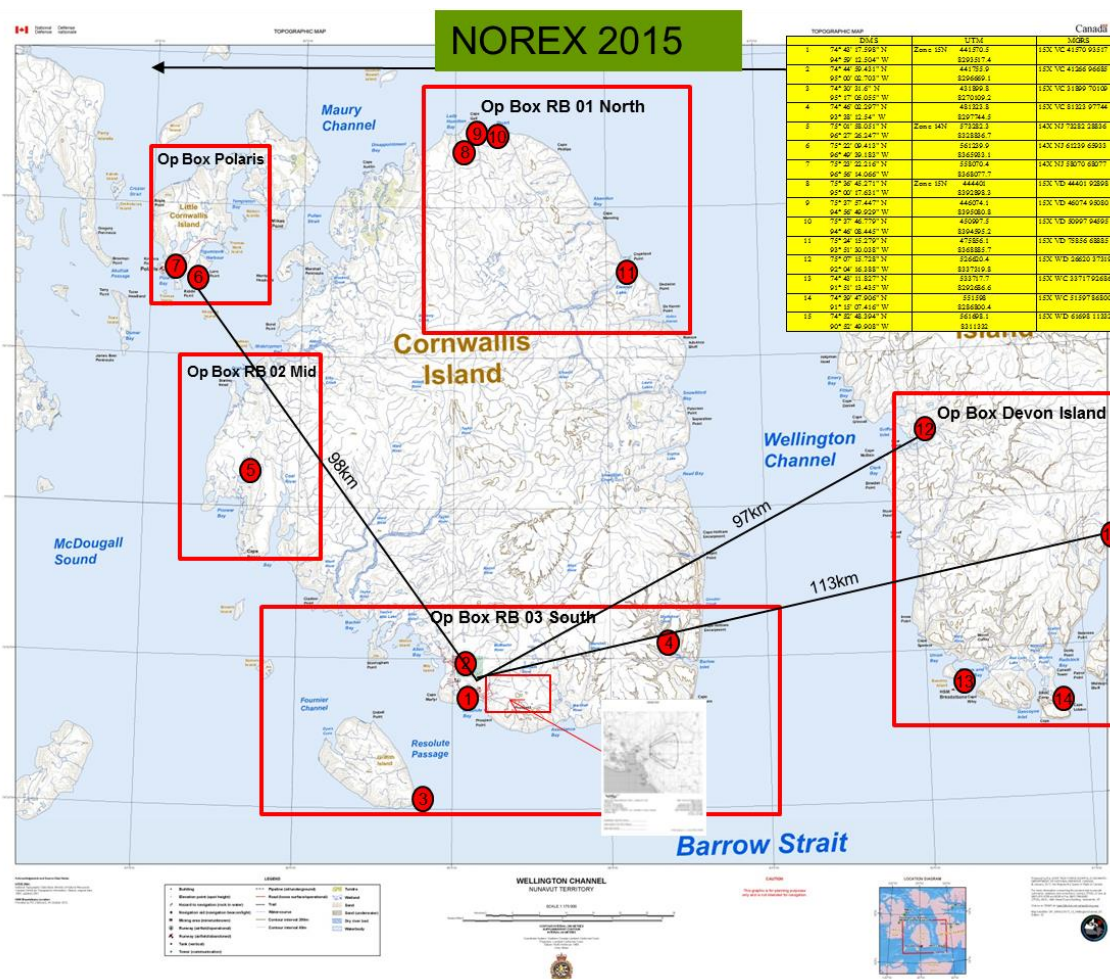
**BIVOUAC LOCATIONS Griffith Island // Little  
Cornwallis Island // Devon Island**

<b>BIVOUAC SITE</b>	<b>FUEL</b>	<b>DMS</b>	<b>UTM</b>	<b>MGRS</b>
Griffith Island Biv 3	No	74° 30' 31.6" N 95° 17' 05.055" W	15N 4318900 8270109	15X VC 31899 70109
Little Cornwallis Island Biv 6	No	75° 22' 09.413" N 96° 49' 39.183" W	14N 561240 8365933	14X NJ 61239 65933
Little Cornwallis Island Biv 7	No	75° 23' 22.216" N 96° 56' 14.066" W	14N 558070 8368078	14X NJ 58070 68077
Devon Island Biv 12	No	75° 07' 15.728" N 92° 04' 16.388" W	15N 526620 8337320	15X WD 26620 37319
Devon Island Biv 13	No	74° 43' 11.827" N 91° 51' 13.435" W	15N 533718 8292687	15X WC 33717 92686
Devon Island Biv 14	No	74° 39' 47.906" N 91° 15' 07.416" W	15N 551598 8286800.4	15X WC 51597 86800
Devon Island Biv 15	No	74° 52' 48.394" N 90° 52' 49.908" W	15N 561698 8311332	15X WD 61698 11332



## Op Box Representation

### NOREX 2015



## CAMP DETAILS

### General

Despite best efforts to identify all bivouac sites, weather and ground terrain will dictate the final bivouac location. It is therefore possible that the locations identified in the Post-Operation Environmental Report will differ from those identified below. Primary bivouac locations are the preferred locations. Alternative sites will only be utilized in extreme conditions. The actual site used will be identified in all post-exercise evaluation reports. Op Boxes have been identified below. These Op Boxes define the area within which all training activities will occur. In managing the use of alternate locations, Op Boxes have been identified; Op Boxes will be provided to those participating in the Exercise to ensure that all activities identified in this application occur within the boundaries identified in the Op Boxes and ideally at the specific locations identified. All areas that

have been used will be identified by GPS location with pictures and ground / terrain reports being provided to the LCC for record-keeping.

#### NOREX 2015 MAIN OPERATING BASE (MOB) – CAFATC RESOLUTE BAY

The Main Camp from which all elements will deploy will be located at the DND / NRCan-owned facility, CAFATC, near the Resolute Bay Airport (Coordinates: 74° 43' 07.39" N 94° 58' 57.29" W). A small advanced party of approximately 20 personnel will arrive between 10-16 March 2015 and will establish the MOB. The MOB will surge to a maximum of 220 people during the early stage of the exercise (19 - 20 Mar 15). However, during the main exercise period from 20- 30 March 2015, the MOB (Resolute Bay) will consist of a maximum of 45 soldiers and support personnel. A further surge will be seen as soldiers prepare to depart the exercise on or around 30 March 2015. A rear party consisting of approx. 20 support staff will remain at CAFATC from 30 March until 04 April to complete the out-clearance process.

Potable water will be delivered from the Hamlet of Resolute Bay and frozen into ice blocks. All waste generated at the site will be removed in accordance with the contracted waste removal service through NRCan (PCSP). Power and heating will be provided via the existing infrastructure within the CAFATC facility. The following table represents the number of persons staying at the CAFATC facility in accommodation / quarters exclusive of the permit requirements for the periods defined below. The maximum number of person-days the camp (MOB) will be occupied during the main exercise period is shown in the following table:

Date (March 2015)	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL
Max People on Site	200	200	45	45	45	45	200	45	45	200	45	45	<b>1160</b>

The proposed location of the MOB (Resolute Bay CAFATC) is shown in the image below (source: Google maps).



#### CAMP SITE – Op BOX RB 03 South

There are a number of proposed non-permanent bivouac sites (i.e. temporary camp sites) proposed in the vicinity of Op BOX RB 03 South. The sites will be located at or near the areas defined as Bivouac 1, Bivouac 2, Bivouac 3, and Bivouac 4. The OP BOX RB 03 South site will consist of approximately 120 soldiers rotating between four separate and distinct bivouac sites. Maximum number of person-days occupied is shown in the following table:

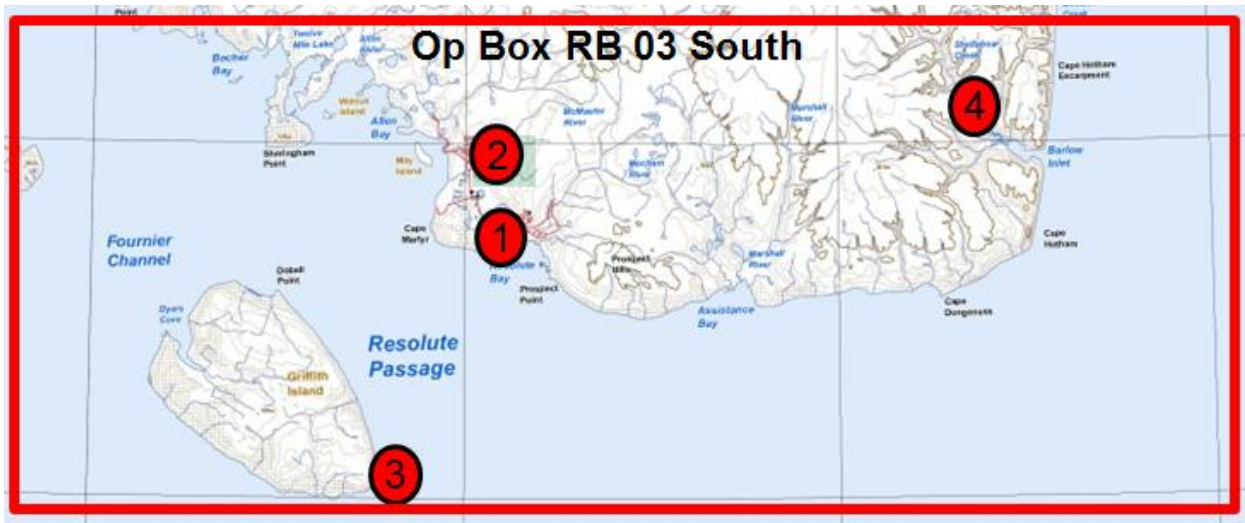
Bivouac Site 1			
	Dates		Total
March 2015	21	22	
Max People	120	120	240

Bivouac Site 2			
	Dates		Total
March 2015	23	24	
Max People	120	120	240

Bivouac Site 3			
	Dates		Total
March 2015	23	24	
Max People	120	120	240

Bivouac Site 4			
	Dates		Total
March 2015	25	26	
Max People	80	80	160

The proposed location of the Camp site – Op Box RB 03 South is shown in the image below (source: Military Charting Establishment maps)



Occupants of the Camp Op Box RB 03 South will be provided with portable toilets and potable water, but will not be provided ablutions areas. As such, they will produce little grey water. Potable water will be provided in the form of ice blocks. All generated waste, including sanitary waste, will be removed from the site and disposed of through the contracted services in CAFATC. Power for essential systems, ie communications equipment may be provided using a small generator, however the intent is to have light and heat provided only using Coleman stoves and lanterns.

#### CAMP SITE – Op Box RB 02 Mid

There is one proposed non-permanent bivouac site proposed in the vicinity of Op Box RB 02 Mid. This will be located at or around (coordinates: 75° 01' 58.051" N96° 27' 26.247" W, and will be used as a temporary camp site by units participating in the exercise. The Op Box RB 02 Mid Bivouac site will be occupied, by approximately 80 soldiers over a period of 48 hours. The maximum number of person-days the site will be occupied is shown in the following table:

Bivouac Site 5			
	Dates		Total
March 2015	23	24	
Max People	40	40	80

The proposed location of the Camp site – Op Box RB 02 Mid is shown in the image below (source: Military Charting Establishment maps)



Occupants of the Camp Op Box RB 02 Mid will be provided with portable toilets and potable water, but will not be provided ablutions areas. As such, they will produce little grey water. Potable water will be provided in the form of ice blocks. All generated waste, including sanitary waste, will be removed from the site and disposed of through the contracted services in CAFATC. Power for communications equipment may be provided using a small generator, however the intent is to have light and heat provided only using Coleman stoves and lanterns.

#### . CAMP SITE – Op Box Polaris

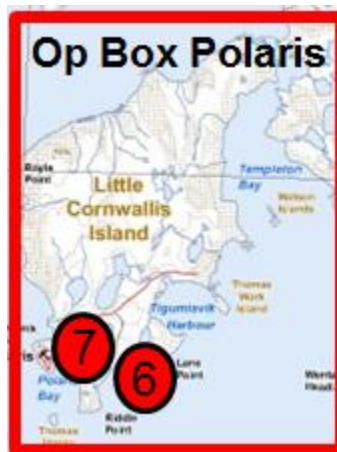
There are two proposed non-permanent bivouac sites proposed in the vicinity of Op Box Polaris These will be located at or near the (coordinates: 75° 23' 22.216" N 96° 56' 14.066" W") and will be used as temporary camp sites by units participating in the exercise. The Op Box Polaris site will be occupied by approximately 40 soldiers over a period of 48 hours The maximum number of person-days the site will be occupied is shown in the following table:

Bivouac Site 6			
	Dates		Total
March 2015	24	25	
Max People	40	40	80



Bivouac Site 7			
	Dates		Total
March 2015	24	25	
Max People	40	40	80

The proposed location of the Camp site – Op Box Polaris is shown in the image below (source: Military Charting Establishment maps)



Occupants of the Camp Op Box Polaris will be provided with portable toilets and potable water, but will not be provided ablutions areas. As such, they will produce little grey water. Potable water will be provided in the form of ice blocks. All generated waste, including sanitary waste, will be removed from the site and disposed of through the contracted services in CAFATC. Power for communications equipment may be provided using a small generator, however the intent is to have light and heat provided only using Coleman stoves and lanterns.

#### CAMP SITE – Op Box RB 01 North

There are four proposed non-permanent bivouac sites proposed in the vicinity of Op Box RB 01 North. These will be located at or near the areas defined as Bivouac 8, Bivouac 9, Bivouac 10, Bivouac 11 (coordinates: 75° 36' 45.271" N 95° 00' 17.631" W; 75° 37' 57.447" N 94° 56' 49.929" W ; 75° 37' 46.779" N 94° 46' 08.445" W; 75° 24' 15.279" N 93° 51' 30.038" W; and 75° 23' 22.216" N 96° 56' 14.066" W") and will be used as temporary camp sites by units participating in the exercise. The Op Box RB 01 North sites will be occupied by approximately 120 soldiers for a period of 72 hours. The maximum number of person days occupied is shown in the following table:

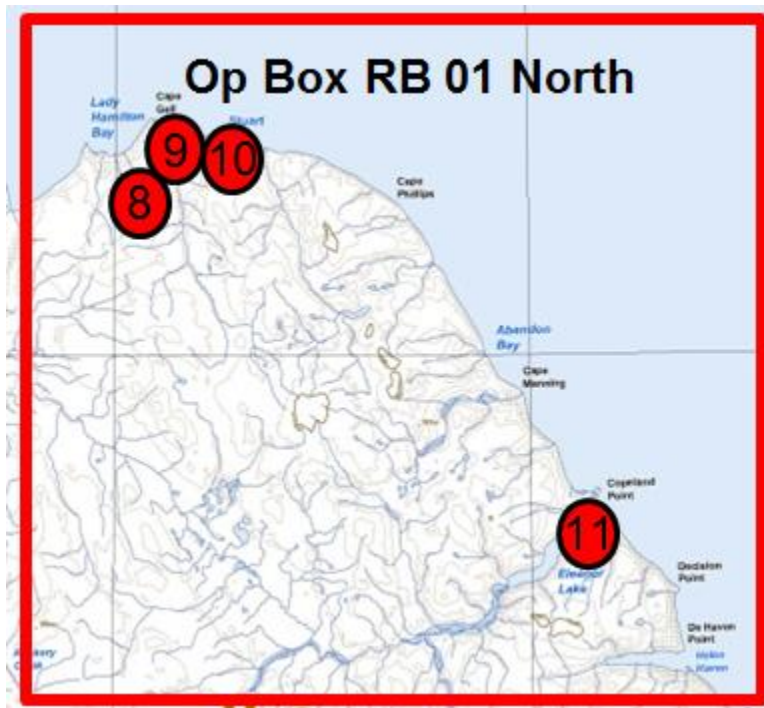
Bivouac Site 8				
	Dates			Total
March 2015	25	26	27	
Max People	40	40	40	120

Bivouac Site 9				
	Dates			Total
March 2015	25	26	27	
Max People	40	40	40	120

Bivouac Site 10				
	Dates			Total
March 2015	25	26	27	
Max People	40	40	40	120

Bivouac Site 11				
	Dates			Total
March 2015	25	26	27	
Max People	40	40	40	120

The proposed location of the Camp site – Op Box RB 01 North is shown in the image below (source: Military Charting Establishment maps)



Occupants of the Camp Op Box RB 01 North will be provided with portable toilets and potable water, but will not be provided ablutions areas. As such, they will produce little grey water. Potable water will be provided in the form of ice blocks. All generated waste, including sanitary waste, will be removed from the site and disposed of through the contracted services in CAFATC. Power for essential systems, ie communications may be provided using a small generator, however the intent is to have light and heat provided only using Coleman stoves and lanterns.

#### CAMP SITE – Op Box Devon Island

There are four proposed non-permanent bivouac sites proposed in the vicinity of Op Box Devon Island. These will be located at or near the areas defined as Bivouac 12, Bivouac 13, Bivouac 14, Bivouac 15 (coordinates: 75° 07' 15.728" N 92° 04' 16.388" W ; 74° 43' 11.827" N 91° 51' 13.435" W ; 74° 39' 47.906" N 91° 15' 07.416" W ; and 74° 52' 48.394" N 90° 52' 49.908" W) and will be used as temporary camp sites by units participating in the exercise. The Op Box Devon Island sites will be occupied by approximately 120 soldiers for a period of 72 hours. The maximum number of person-days the site will be occupied is shown in the following table:

Bivouac Site 12				
	Dates			Total
March 2015	27	28	29	
Max People	40	40	40	120

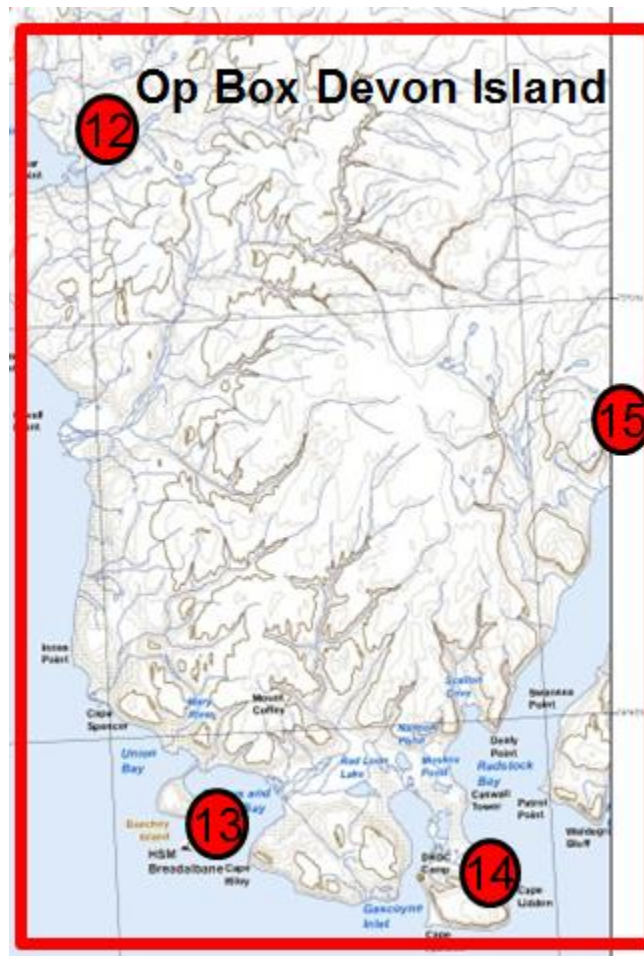
Bivouac Site 13				
	Dates			Total
March 2015	27	28	29	
Max People	40	40	40	120

Bivouac Site 14				
	Dates			Total
March 2015	27	28	29	
Max People	40	40	40	120

Bivouac Site 15				
	Dates			Total
March 2015	27	28	29	
Max People	40	40	40	120

The proposed location of the Camp site – Op Box Devon Island is shown in the image below (source: Military Charting Establishment maps)





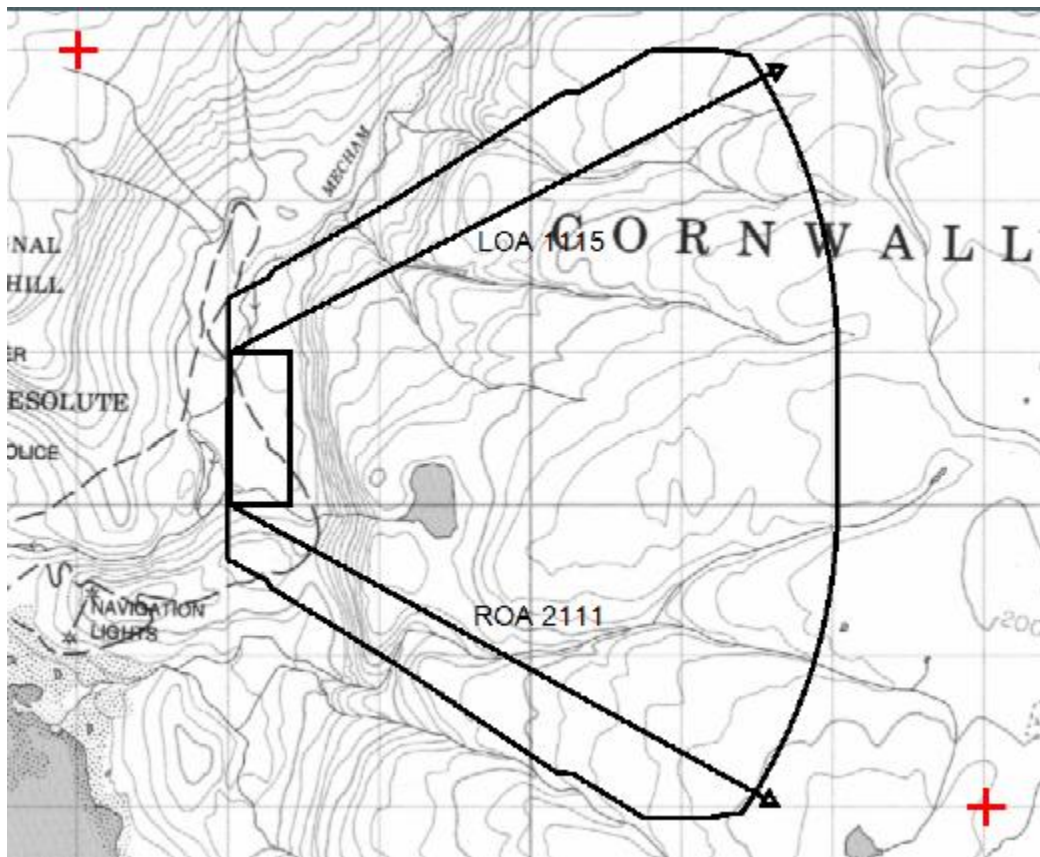
Occupants of the Camp Op Box Devon Island will be provided with portable toilets and potable water, but will not be provided ablutions areas. As such, they will produce little grey water. Potable water will be provided in the form of ice blocks. All generated waste, including sanitary waste, will be removed from the site and disposed of through the contracted services in CAFATC. Power for communications equipment may be provided using a small generator, however the intent is to have light and heat provided only using Coleman stoves and lanterns.

### OTHER TRAINING AREAS

In addition to the aforementioned bivouac sites, an austere range will be established within Op Box RB 03 South. The range will be located in the vicinity of 74° 42' 02.97" N 94° 45' 56.80" W. The range will conform to all safety guidelines as prescribe in the Canadian Forces Manual of Range and Training Safety. Additionally and as previously indicated, it is important to note that the CAF conducts range operations in an extremely safe manner. There will be a designated Ranger Officer in Charge, Range Safety Officer and additional Range Staff as required based on the use of the range. The

range staff will ensure the area is free of personnel, wildlife, aircraft or any other objects prior to conducting the firing exercises. They will ensure the range remains safe during its operation and will ensure that all waste produced at the range, including sanitary waste, is removed as part of the range clean up.

The proposed location of the Range contained within Op Box RB 03 South is shown in the image below (source: Canadian Forces Range Information System (CFRIS)).



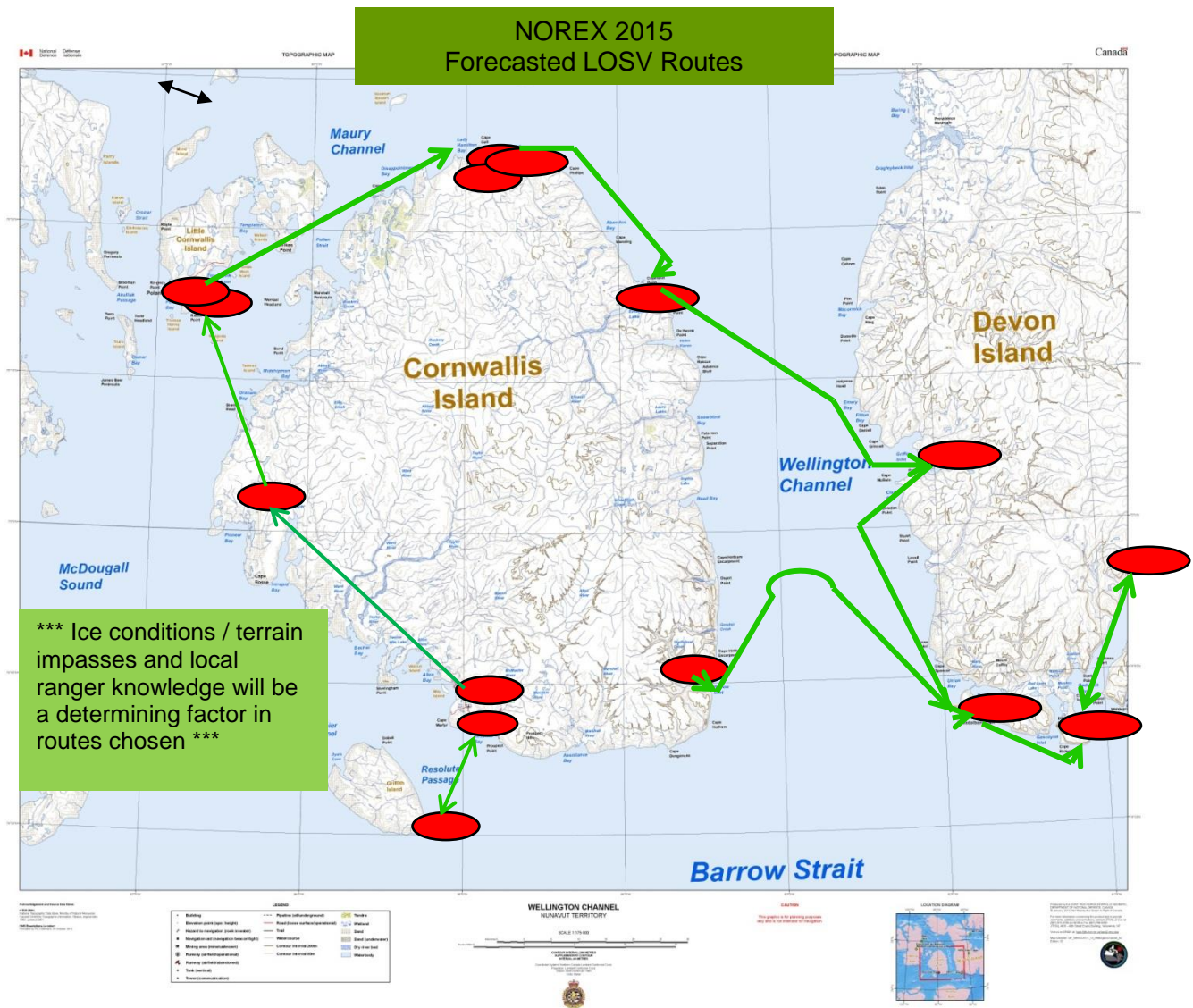
## FUEL CACHES

No fuel caching is proposed along any of the routes or at any of the proposed bivouac locations. A central fuel storage and supply point will be set up at CAFATC. The location will see the initial storage of Naphtha and limited quantities of gasoline and diesel for use during the exercise. Fuel for the exercise will be drawn from CAFATC in coordination with NRCan..

Fuel required at the bivouac sites will be delivered via snowmobile. Refueling of the snowmobiles will be done via jerry cans. All fuel will be dispensed utilizing drip trays, and spill kits will be located with each vehicle.

## ROUTES

An aerial reconnaissance will be conducted to provide likely routes to and from all locations. Movement to the Op Boxes will be conducted via a combination of snow mobile and aircraft insertion. A map of potential routes is included. It is important to note that routes will likely differ slightly from those provided as the ground and ice will dictate the route that is most easily traversed.



## MAJOR EQUIPMENT INVOLVED

<b>Equipment type and number</b>	<b>Size – dimensions</b>	<b>Proposed use</b>
<b>100 x Light Over Snow Vehicle (Snowmobile)</b>	<b>L3.00m/W1.30m/H1.20m/Wt140kg</b>	<b>Transportation of troops and equipment</b>
<b>2 x Ford F150 Crew Cab</b>	<b>L5.69m/W2.00m/H1.36m/Wt2800kg</b>	<b>Transportation of troops and equipment around RESOLUTE BAY</b>
<b>10 x Honda 5k Generators</b>	<b>Example Dimensions: L1.0m/W.7m/H.75m</b>	<b>Temporary power</b>
<b>2 x CC-138 Twin Otter Aircraft</b>	<b>L15.1m/W9.81m/H5.66m/Wt5600kg</b>	<b>Transportation of troops and equipment</b>
<b>4 x BV 206</b>	<b>L6.98m/W1.87m/H2.45/Wt6540kg</b>	<b>Transportation of troops and equipment</b>

## FUEL INVOLVED

<b>Fuel</b>	<b>Number of Containers and Capacity of Containers</b>	<b>Total Amount of Fuel (in Litres)</b>	<b>Proposed Storage Methods</b>
Diesel	50 x 40L per Jerry cans	2000L	For use in BV206. Will be properly stored and transported – stored in drums at CAFATC
Gasoline	788 x 40L per Jerry cans	31,500L	For use in snowmobiles. Will be properly stored and transported – stored in drums at CAFATC
Propane	3 x 100lb tanks	300lbs	Stored in certified vertical tanks – stored at CAFATC
Naptha	3193 x 4L cans	12,775L	For use in tent group equipment. Will be properly stored and transported – stored in drums at CAFATC



Hazardous Materials and Chemicals	Number of Containers and Capacity of Containers	Total Amount of Hazardous Materials and Chemicals (in Litres)	Proposed Storage Methods
Oil	Max 10000L in various sized containers	10000L	For use in snowmobiles. Will be properly stored and transported.
Hazardous Waste	TBD		By-products of maintenance operations. Any waste oil or other hazardous materials, such as lithium batteries, will be stored within a designated HAZMAT storage area with proper containment. Hazardous waste not eligible for disposal locally will be packaged and returned to Ontario for disposal.

## COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

The ARCG has been tasked by the CAF with being able to operate in year round Arctic conditions. NOREX 2015 will provide the opportunity for the ARCG to test their mobility, sustainability and survivability in the Arctic during the winter season.

Community	Name	Organization	Date Contacted
Resolute Bay	Mavis Manik	Mayor	29 Aug 14
Resolute Bay	Martha Manik	SAO Resolute Bay	29 Aug 14
Resolute Bay	Philip Manik	Hunters Trappers Org	29 Aug 14

**NOREX 2015**

**Op Box RB 01 North**

**Op Box RB 02 Mid**

**Op Box RB 03 South**

**Op Box Polaris**

**Devon Island**

**Cornwallis Island**

**Wellington Channel**

**Barrow Strait**

**McDougall Sound**

**Maury Channel**

**Resolute Passage**

**97km**

**113km**

**98km**

**Legend**

- 1. Mission
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- 100. Mission Area

OP BOX		DMS	UTM	MGRS
OP BOX RB 01 NORTH	NW	75° 43' 09.169" N 95° 12' 54.156" W	15N 439021 8404997	15X VE 39021 04997
	SW	75° 15' 58.763" N 95° 08' 55.914" W	15N 439008 8354428	15X VD 39007 54428
	NE	75° 42' 17.713" N 93° 25' 17.69" W	15N 488380 8402301	15X VE 88380 02301
	SE	75° 16' 55.631" N 93° 22' 21.226" W	15N 489434 8355118	15X VD 89434 55117
OP BOX RB 02 MID	NW	75° 14' 48.095" N 96° 46' 15.951" W	14N 563345 8352323	14X NJ 63345 52323
	SW	74° 54' 24.716" N 96° 52' 28.407" W	14N 557760 8425832	14X NK 57760 25832
	NE	75° 15' 33.79" N 95° 47' 15.652" W	15N 420851 8354410	15X VD 20850 54410
	SE	74° 55' 34.686" N 95° 45' 25.504" W	15N 425186 8428708	15X VE 25186 28708

OP BOX RB 03 SOUTH	NW	74° 49' 43.79" N 96° 10' 12.094" W	14N 582641 8306479	14X NJ 82640 06479
	SW	74° 29' 20.069" N 96° 13' 57.911" W	14N 582576 8268506	14X NH 82576 68505
	NE	74° 49' 15.183" N 92° 55' 37.771" W	15N 502129 8303624	15X WD 02128 03623
	SE	74° 29' 20.146" N 92° 56' 20.107" W	15N 501823 8266587	15X WC 01823 66586
OP BOX POLARIS	NW	75° 36' 42.464" N 97° 03' 00.944" W	14N 554073 8392760	14X NJ 54072 92760
	SW	75° 20' 54.093" N 96° 59' 38.361" W	14N 556621 8363434	14X NJ 56621 63434
	NE	75° 36' 20.042" N 96° 14' 06.22" W	14N 576700 8392967	14X NJ 76700 92966
	SE	75° 21' 45.182" N 96° 17' 04.106" W	14N 576574 8365815	14X NJ 76574 65814
	NW	75° 22' 00.036" N	15N 524535	15X WD 24535 64699



<div>OP BOX</div> <div>DEVON ISLAND</div>		<b>92° 07'</b> <b>47.736" W</b>	<b>8364699</b>	
	SW	<b>74° 33'</b> <b>39.898" N</b> <b>92° 16' 52.181"</b>	<b>15N 521360</b> <b>8274765</b>	<b>15X WC 21359</b> <b>74765</b>
	NE	<b>75° 08' 55.562"</b> <b>N</b> <b>88° 15'</b> <b>29.206" W</b>	<b>16N 464007</b> <b>8340587</b>	<b>16X DJ 64007</b> <b>40587</b>
	SE	<b>74° 36' 40.599"</b> <b>N</b> <b>90° 48'</b> <b>21.846" W</b>	<b>15N 564973</b> <b>8281436</b>	<b>15X WC 64972</b> <b>81435</b>

#### SIGNATURE BLOCK:

<u>Colonel Darlene Quinn</u> <b>Name (Print)</b>	<u>Commander Real</u> <u>Property Ops Group</u> <b>Title (Print)</b>	_____	_____
		<b>Signature</b>	<b>Date</b>
<u>Colonel Kevin Bertoia</u> <b>Name (Print)</b>	<u>Commander</u> <u>31 Cdn Brigade Group</u> <b>Title (Print)</b>	_____	_____
		<b>Signature</b>	<b>Date</b>