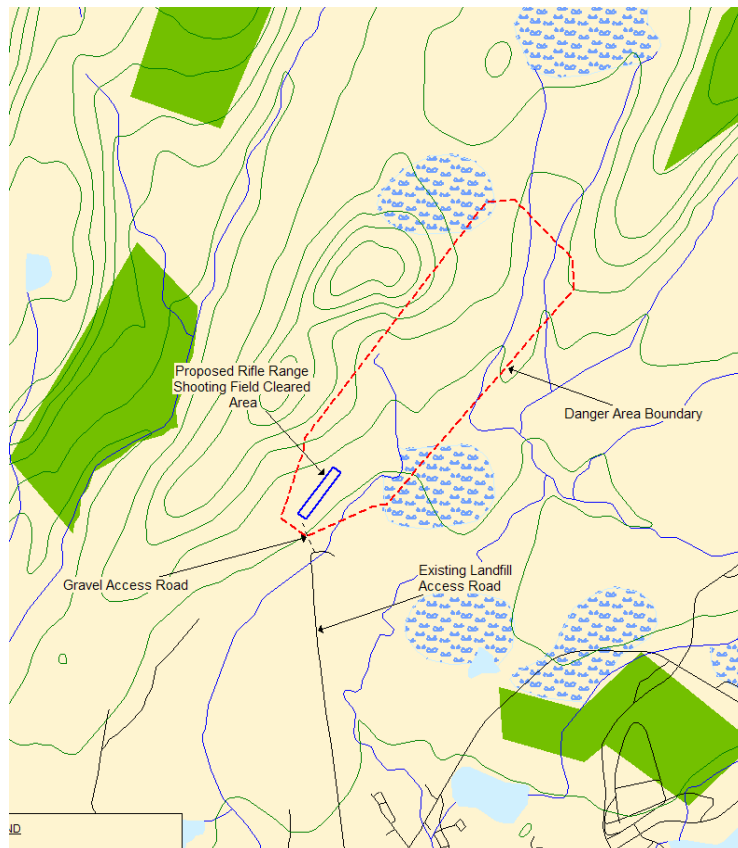

ENVIRONMENTAL ASSESSMENT REGISTRATION

STEPHENVILLE RIFLE RANGE FACILITY

Submitted to:

Department of Environment and Conservation
Environmental Assessment Division

December 2008



ENVIRONMENTAL ASSESSMENT REGISTRATION

Stephenville Rifle Range Facility

Prepared for:

Department of Environment
Environmental Assessment Division
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A1N 5G2

December 2008

Project No.: 723206-15

Title: **ENVIRONMENTAL ASSESSMENT REGISTRATION,
STEPHENVILLE RIFLE RANGE FACILITY**

Client: Town of Stephenville

Rev.	Date yyyy/mm/dd	Page No.	Description	Prepared By	Reviewed By	Approved By

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1.0 NAME OF THE UNDERTAKING

STEPHENVILLE RIFLE RANGE FACILITY

2.0 PROPONENT

2.1 *Name of Corporate Body*

Town of Stephenville

2.2 *Address*

Town of Stephenville
P.O. Box 420
125 Carolina Ave.
Stephenville, NL
A2N 2Z5

2.3 *Contact*

Name: Barry Coates
Official Title: Town Manager
Address: P. O. Box 420, Stephenville, NL
Telephone #: (709) 643-8366
Fax #: (709) 643-2770

2.4 *Principal Contact Person for Purposes of Environmental Registration*

Mr. Wayne Manuel, P. Eng.
BAE-Newplan Group Limited
1133 Topsail Road
Mount Pearl, NL
A1N 5G2
Telephone: (709) 368-0118 Fax: (709) 368-3541

3.0 THE UNDERTAKING

3.1 *Nature of the Undertaking*

The proposed project is to construct a 600 m Rifle Range, in Stephenville, NL, The range will be owned by the Town of Stephenville, it will be used by the Royal Newfoundland Constabulary (RNC), Royal Canadian Mounted Police (RCMP), wildlife and fisheries officers, Department of National Defence (DND) and registered public.

The Rifle Range will consist of the following components:

1. Gravel Access Road
2. Administration/Storage Building
3. Lunchroom
4. Sheltered Shooting Stand
5. 600 m Shooting field
6. Target holders
7. Signage on border of danger zone indicating location of rifle range
8. Stop Butt (bullet catch)
9. Gravel parking Lot

The newly constructed gravel access road will be gated for security control. The site will consist of 2 cinder block buildings, an administration building and lunchroom, a sheltered shooting stand at the head of a 600 m field, with a stop butt (bullet catch) and target holders at the opposite end. The stop butt and entrance will have safety flags. The danger zone area/buffer zone (approx 4 km²) will have signage every 20m-30m indicating the boundaries of the rifle range to control human and wildlife access, with routine patrols to ensure safety. There will be a small gravel parking area next to the gated entrance large enough to hold approximately 10 vehicles (See Appendix A, Figure 3).

3.2 *Need for the Undertaking*

The undertaking will provide a place that is designed for the safe discharge, on a regular and structured basis, of firearms for the purpose of target practice for local enforcement officials including the RNC, RCMP, wildlife and fisheries officers, DND officials and registered recreational users. There are currently no operating rifle ranges in the Stephenville area.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 *Geographic Location*

The proposed rifle range will be located approximately 1 km north of the town limits of the Community of Stephenville, on the west coast of NL (see Appendix A, Figure 1).

1. The proposed location is approximately 800 m north of the Port au Port Highway.
2. The proposed location is >1km from four Silviculture areas in the vicinity (see Appendix A, Figure 3).
3. The proposed location is > 300m from the nearest water shed.
4. The proposed location will be accessible by means of a new road to be constructed, branching from the existing road leading to the Town's current landfill.
5. The proposed location takes in a total area of approx 4 km². Within this area will be the cleared land for the 60,000 m² shooting field, parking area, access road and building locations. The remainder of the 4 km² will be the danger zone which will not be cleared.

(See Appendix A, Figure 2)

4.2 Physical Features of the Undertaking

The development will consist of the following components:

1. Gravel Access Road
2. Administration/Storage Building
3. Lunchroom
4. Sheltered Shooting Stand
5. 60,000 m² Shooting field
6. Target holders
7. Signage on border of danger zone indicating location of rifle range
8. Stop Butt (bullet catch)
9. Gravel Parking Lot

(See Appendix A, Figure 3)

Site Access

Access to the site will be by means of a newly constructed gravel access road which will extend from the existing Stephenville landfill access road (see Appendix A, Figure 2). The road will be graded gravel with all season access.

Site Electricity and Telephone

Two-phase power would be required to service the site. Telephone and electricity lines would be installed along the site access road from the municipal towers.

Site Buildings

There will be two buildings located on site. They will both be located close to the gated entrance to the site. One will be the administration/storage building and the other will be the lunchroom.

The administration building/storage building will be a free standing cinder block structure. It will house the users safety equipment, first aid kits, emergency response equipment, check-in desk, and storage of equipment required to operate and maintain the rifle range, such as lawnmowers, shovels, cleaning supplies and any other equipment required. In addition it would house an area for the storage and repairing of targets.

The lunchroom will be a smaller free standing cinder block building located adjacent to the registration building. The lunchroom would house the eating area, vending machines and bathrooms.

The buildings would be serviced with on-site water by means of a water storage tank with a separate holding tank for sewer storage. Sewage will be removed by a certified hauler and disposed in the municipal sewage system in Stephenville. The surrounding area will contain the water storage tank, holding tank and gravel parking area.

Waste Area

Located next to the storage shed would be a large garbage bin for on site garbage, which would be disposed of at an approved landfill facility by the Town of Stephenville.

Physical Features of the Proposed Location

Based on topographic features, ground slope and the shape of the available land and surface features, the proposed location has been deemed suitable for this type of development. The following are key physical features of the site:

- The site is undeveloped, consists of a wooded area and slopes towards the south.
- An access road is proposed to extend north from the existing landfill access road for a distance of approximately 250 m.
- The proposed site boundary is > 300 m from the nearest water shed (See Appendix A, Figure 2).

4.3 Construction Activities

Activities include the removal of vegetation, grubbing, and grading of soil material for the construction of the proposed structures on site.

This will be required for the construction of the two free standing cinder block buildings located close to the gated entrance of the site. There will be a gravel parking lot located next the building that will also require land clearing.

The 60,000m² shooting field will require land clearing, removal of vegetation and site grading. Within this area there will be the construction of a sheltered shooting stand, located at the head of the shooting field and target stands located at the other end.

Realizing some impact is likely on certain areas, the proponent is committed to keeping those impacts to a minimum. During the construction and operation of the rifle range, all efforts will be made to preserve and conserve the natural environment. Vegetation will be maintained to provide natural buffer zones, and any exposed slopes will be stabilized with natural vegetation where possible.

All construction activities will be conducted involving mitigation measures as per Section 4.3.2.

Vegetation Clearing

Potential concerns associated with vegetation clearing include loss of habitat, as well as sedimentation of watercourses. All vegetation clearing and associated activities will adhere to applicable acts, regulations, and permits. Also, mitigation measures will be implemented to reduce the potential effects of vegetation removal. A cutting permit will be obtained prior to the start of any site clearing. Clearing and removal of trees will be restricted to the minimum areas needed for the site requirements and will not be outside the permitted limits.

Vegetation will only be cleared for the 60,000 m² shooting field, the building locations, the parking area and access road. The remaining natural environment surrounding the site will serve as the danger area/buffer zone and will be left in its natural state. Limits of clearing will be as shown in Appendix A, Figure 3.

Disposal of cleared timber and slash will be in compliance with the Forest Fire Regulations, Environmental Code of Practice for Open Burning, and the Permit to Burn.

Grubbing and Disposal of Related Debris

The principal concerns associated with grubbing are the potential effects of erosion on marine and freshwater ecosystems, as well as water quality. All grubbing and disposal of related debris near watercourses will adhere to relevant regulatory requirements.

Grubbing activities shall be minimized where possible and limits of stripping shall be as shown in Appendix A, Figure 3.

Measures will be implemented to minimize and control runoff of sediment-laden water during grubbing, and the re-spreading of the grubbed material. Erosion control measures will be implemented in areas prone to soil loss.

Grubbed materials will be stockpiled for use in other areas of the project. Areas used for stockpiling will not be adjacent to any water bodies.

Filling, Excavation, Embankments, and Grading

Excavation, embankment, and grading will only be completed upon conclusion of grubbing and stripping. Where engineering requirements do not require grubbing and stripping, filling shall occur without any disturbance to the vegetation or upper soil horizons. Excavation, embankment, and grading shall be done in a manner that ensures that erosion and sedimentation will not impact watercourses in the area.

4.3.1 Potential Source of Pollutants during Construction

The potential sources of pollutants are generally those associated with land development and construction. Adherence to permit conditions and application of sound construction practices will protect against the release of pollutants into the surrounding environment.

Strict monitoring and sound construction practices will control activities to minimize risks associated with:

- Silt and sediment
- Dust
- Construction debris
- Risk of fuel, lubricant and hydraulic fluid release
- Airborne emissions from construction equipment
- Noise pollution from construction activities

4.3.2 Mitigation Measures during Construction

Mitigation measures to reduce the environmental concerns associated with construction activities include:

- Silt laden runoff from construction areas will not be permitted to discharge directly into any body of water or watercourse. Runoff will be diverted to settling basins to ensure silt is settled out prior to release into the water. Silt fence construction of filter fabric will be used where necessary to preclude release of construction water directly into any body of water. The measures will include natural vegetation buffer, stone rip rap, wire mesh, settling ponds, and/or drainage channels.

- Efforts will be made to minimize dust generation during the construction phase of the project. Dust from construction activities will be controlled using the frequent application of water. Any application of calcium chloride will be in accordance with applicable guidelines from the Department of Transportation and Works.
- Solid waste disposal practices will be in compliance with the *Environmental Protection Act* and associated regulations. Any construction debris generated during the course of the project will not be permitted to be disposed of on site, but will be contained in steel boxes on site for disposal at a municipal solid waste disposal facility. Where possible, construction waste will be recycled.
- All machinery will be inspected for leakage of lubricants or fuel and must be in good working order. Any accidental spills or leaks will be promptly contained, cleaned up, and reported to the 24-hour environmental emergencies report system (1-800-563-2444).
- All fuel handling and storage will be in compliance with *The Storage and Handling of Gasoline and Associated Products Regulations*. Also, to minimize the risk of fuel, lubricant or hydrocarbon release, construction equipment will not be permitted to be refuelled within 30 m of any water body. If fuel storage is necessary, it will be stored only in approved containers with all necessary permits in place. Basic petroleum spill clean-up equipment will be on-site and made accessible to all contractors and/or employees.
- Equipment exhaust systems will be maintained to provide emissions meeting the standards designed for the equipment by the manufacturer.
- Exhaust systems will be maintained to ensure noise levels are within the design specifications of the machinery.

4.4 Operations

The proposed Rifle Range is estimated to begin operations in June 2009 and be operational for approximately a 50-year period. The following provides a summary of the operations of the facility.

The proposed rifle range will be available for use to RNC, RCMP, wildlife and fisheries officers, DND officials and registered public during the predetermined hours of operation. Upon arrival each person must check in with the site official at the registration building. They can proceed to the shooting area after their rifle and safety equipment has been approved by the site official. The shooting area has specific safety regulations that will be strictly enforced and monitored.

All operational activities will be conducted involving mitigation measures as per Section 4.4.2

4.4.1 Potential Source of Pollutants during Operations

The potential sources of pollutants during operations will consist of those associated with daily operations and on-site maintenance. Strict monitoring and mitigation practices will control activities to minimize risks associated with:

- Silt and sediment
- Dust
- Sewage
- Risk of heating fuel and/or petroleum release
- Metal casing/shell debris (lead core)
- Noise pollution from daily activities
- Scattered debris

4.4.2 Mitigation Measures during Operations

The operation will be conducted in a fashion which protects public health and safety, minimizes fire hazard, does not create a nuisance to adjacent areas, and will not contaminate ground or surface waters off-site. All mitigation measures for vehicle use and silt/sediment controls that were implemented during the construction phases will also apply during operation of the facility. In addition, the following mitigation measures will be implemented during operation of the site to address potential impacts:

Removing Waste – All liquid waste generated on site will be contained in an underground holding tank with periodic disposal and transport to municipal sewer. All range users will be responsible for removing their own waste before leaving the facility.

Site Access – Public access to the site is to be controlled so that the general public does not have direct access to the facility unless accompanied by club members in good standing.

Contingency Plans – Up-to-date contingency plans must be in place to effectively handle the results from fire, flood, power outage, spill or any other accident which could cause a disruption to the facility operations.

Animal, Rodent, and Vector Control Program – An active vector and rodent control program is required.

Dust Control Program – Roads shall be properly maintained and dust control programs implemented as required.

Fire Safety Program – Develop fire safety program in consultation with the local fire department and, where required, the Department of Forest Resources and Agri-Foods.

Groundwater / Surface Water Monitoring Program – Where required, surface water control measures will be implemented to minimize the impact on the environment from the construction activities and general operation of the Range. The basic element of surface water controls is to maintain post-development flow rates at pre-development levels and not to alter the pre-development water quality. It is important to minimize the contact between sediment and surface water by:

- constructing ditches to intercept and divert surface water from areas of sediment;
- constructing temporary measures to separate surface water from high traffic areas;

In order to minimize the impact of lead on the surrounding environment from the lead core bullets used, the stop butt will be cleaned regularly. There will be monitoring wells established downgrade from the stop butts to ensure that lead is not leaching into any groundwater or surface water on site.

4.5 *Potential Valued Ecosystem Interactions and Mitigation*

4.5.1 Resource Conflicts

Fish & Fish Habitat

No bodies of water were identified within the shooting field proposed for clearing. There is a small stream located in the danger area/buffer zone surrounding the shooting field. No environmental conflicts are expected.

Construction activities will be conducted in such a manner as to prevent the release of sediment or other deleterious materials into water bodies. These measures are discussed in previous sections.

Wildlife

Noise will be generated on site; it is expected to be periodical and therefore not expected to create a concern for wildlife in the area.

The shooting field will be sufficient size to allow users to fire their weapons without causing any wildlife conflict.

Forestry

Construction activities will be such as to minimize the clearing of the forested areas. There are four Silviculture areas > 1km from the area of the proposed boundary. It is unlikely that these sites will be affected by the proposed rifle range. The majority of the forested area surrounding the rifle range will remain untouched to provide a danger area/ buffer zone.

Adjacent Areas

During operations, maintenance equipment will be confined to the areas of the site and will not be permitted in adjacent areas in order to conserve their natural state.

Human Activities

Human activities will place extra demand on the local services available; however, these activities are expected to have a positive economic impact.

Safety measures will be taken to ensure that any persons around the proposed rifle range boundary will be protected by the danger area/buffer zone surrounding the rifle range. Every 20m-30m on the perimeter of the danger zone there will be safety signage indicating the boundaries of the rifle range to ensure that any human activities in the area will have no conflict with the rifle range.

There is no expected conflict with the surrounding natural environment, as site-related activities will be conducted within the boundaries of the rifle range.

5.0 OCCUPATIONS

5.1 Construction Phase

It is expected that approximately thirty-six (36) people will be employed during the construction phase of the proposed Rifle Range. The Town of Stephenville offers an equal employment opportunity, free of gender-specific qualifications.

National Occupational Classification Group Title Code	Potential Positions (# Anticipated)	Description
0711	1	Construction Managers
2152	1	Landscape Architects
2154	2	Land Surveyors
7217	8	Contractors & Supervisors, Heavy Construction Equipment Crews
7219	3	Contractors & Supervisors, Other Construction Trades, Installers, Repairs & Services
7241	2	Electricians
7244	3	Electrical Power Lines & Cable Workers
7411	2	Truck Drivers
7412	3	Heavy Equipment Operators
7611	5	Construction Trades Helpers & Laborers

National Occupational Classification Group Title Code	Potential Positions (# Anticipated)	Description
2264	1	Construction Health & Safety Inspectors
7612	5	Other Trades Helpers and Laborers

5.2 Operational Phase

It is expected that a one (1) person will be employed full time during the facilities operational phase. With the potential for 2 part-time employees in the future.

1 Range Master – registration/safety/monitoring

National Occupational Classification Group Title Code	Potential Positions (# Anticipated)	Description
7421	1	Range Master*

*Responsible for operation of site.

6.0 APPROVAL REQUIRED FOR THE UNDERTAKING

The permits, approvals, and authorizations that may be necessary for the undertaking include:

Permit, Approval or Authorization	Issuing Agency
<ul style="list-style-type: none"> Approval for the Undertaking 	Minister of Environment and Conservation
<ul style="list-style-type: none"> Approval under the National Building Code of Canada Approval under the National Fire Code of Canada 	Engineering Services, Department of Government Services
<ul style="list-style-type: none"> Building Accessibility Design Registration 	Operations Division, Department of Government Services
<ul style="list-style-type: none"> Crown Lands Applications/Licenses Develop Land – Protected Road Zoning and Development Control Regulations – Preliminary Application to Develop Land Electrical Permit 	Customer Services, Department of Government Services
<ul style="list-style-type: none"> Permit to Burn 	Forest Fire Protection Specialist, Department of Natural Resources
<ul style="list-style-type: none"> Permit to Cut Crown Timber Operating Permit/Fire Season 	Newfoundland Forest Service, Department of Department of Natural Resources

Permit, Approval or Authorization	Issuing Agency
▪ Development Approvals	Respective Municipalities

7.0 BACKGROUND INFORMATION

7.1 *Summary of Findings*

The undertaking will provide a place that is designed for the safe discharge, on a regular and structured basis, of firearms for the purpose of target practice for local enforcement officials and registered recreational users.

The proposed location was chosen based on studies and projections that considered convenience to the users, local residents and governments, as well as the environmental impact it would have on the surrounding area.

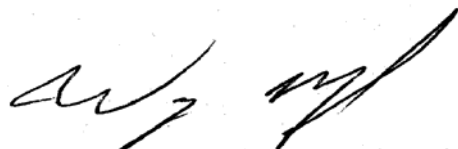
The subject property meets the size and location criteria established by the *Federal National Defence Range Construction and Operation Manual* (B-GL-381-002-TS-000, Chapter 3). The site access is feasible and will not interfere with any planned developments in the area.

8.0 SCHEDULE FOR RELEASE FROM ENVIRONMENTAL ASSESSMENT

Construction of this project is scheduled to begin in April 2009 with a completion date of June 2009. In order to meet this proposed scheduling, the requirements of the *Environmental Assessment Act* must be completed as soon as possible.

9.0 FUNDING

Financing of this project is expected from various government sources.



Wayne Manuel, P. Eng.
BAE-Newplan Group Limited

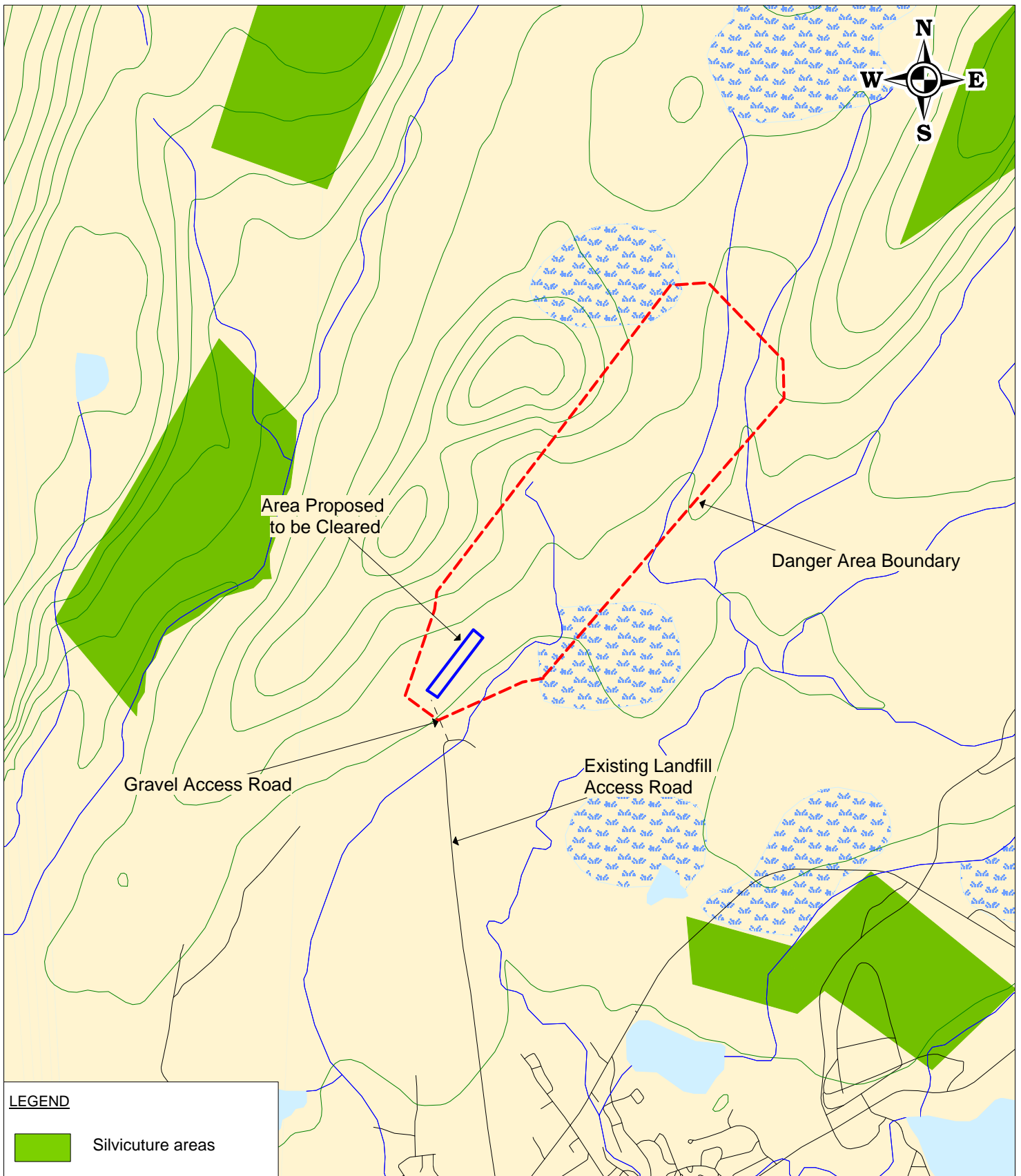
December 17, 2008
Date

APPENDIX A

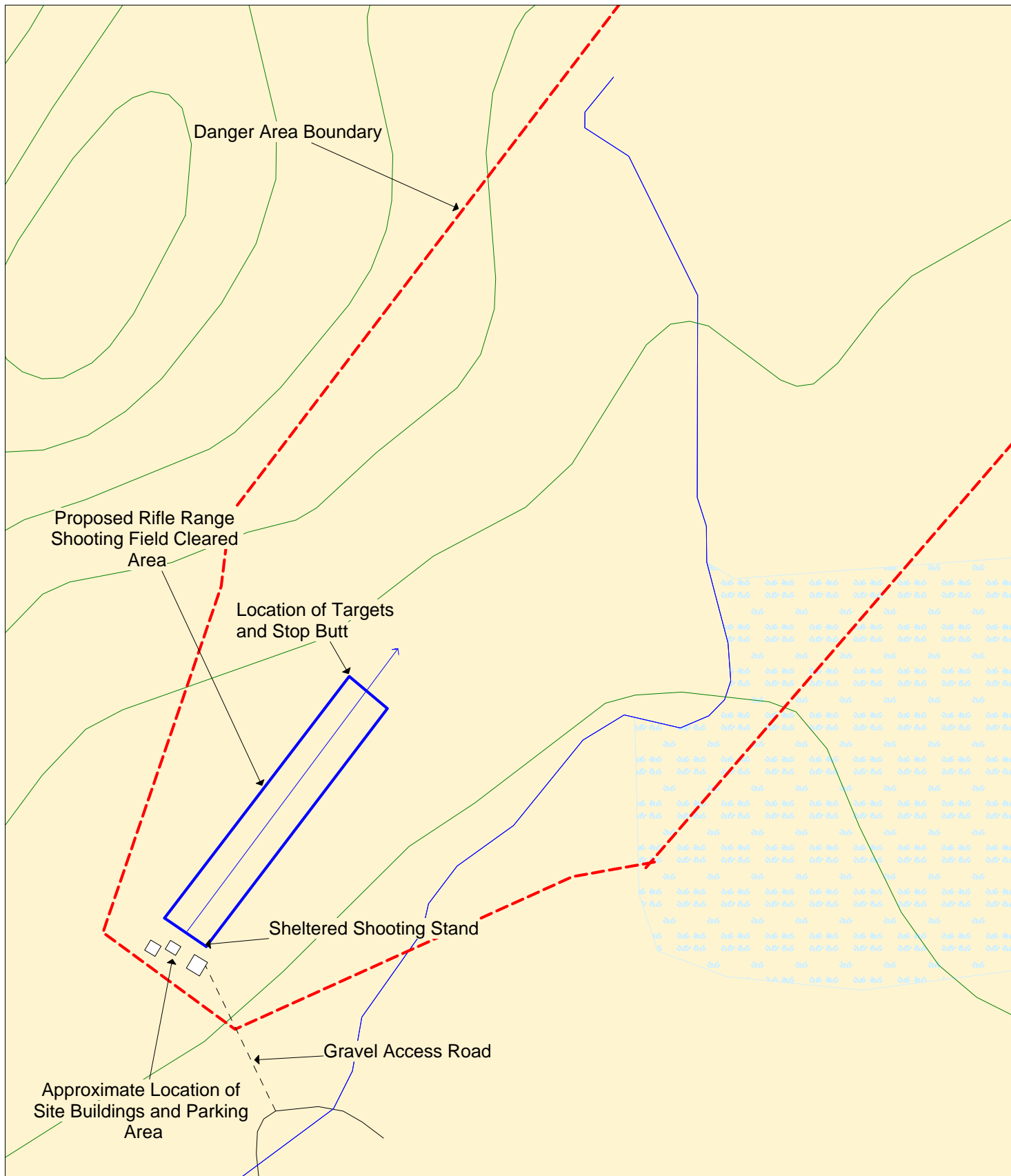
Figures



CLIENT Town of Stephenville	 SNC • LAVALIN 1133 Topsail Road Mount Pearl, NL A1N 5G2 Tel: (709) 368-0118 Fax: (709) 368-5410	DESIGNED AH	DATE 04/12/08	CHECKED RH	DATE 04/12/08	
PROJECT Environmental Registration, Rifle Range, Stephenville, NL		DRAWN AH	DATE 04/12/08	APPROVED RH	DATE 04/12/08	
DRAWING TITLE Figure 1. Stephenville, Newfoundland		SCALE AS SHOWN			PROJECT NO. 723206	
		FILENAME 723206 Stephenville NL-Fig-1.WOR				



CLIENT Town of Stephenville	 <div>BAE NEWPLAN GROUP</div> <div>1133 Topsail Road Mount Pearl, NL A1N 5G2</div> <div>Tel: (709) 368-0118 Fax: (709) 368-5410</div>	DESIGNED AH	DATE 05/12/08	CHECKED RH	DATE 10/12/08
PROJECT Environmental Registration, Rifle Range		DRAWN AH	DATE 05/12/08	APPROVED RH	DATE 10/12/08
DRAWING TITLE Figure 2. Site Plan		SCALE NTS		PROJECT NO. 723206	
		FILENAME 723206-figure 2.WOR			



CLIENT Town of Stephenville	 BAE NEWPLAN GROUP 1133 Topsail Road Mount Pearl, NL A1N 5G2 Tel: (709) 368-0118 Fax: (709) 368-5410	DESIGNED AH	DATE 06/09/08	CHECKED RH	DATE 05/12/08
PROJECT Environmental Registration, Rifle Range		DRAWN AH	DATE 06/09/08	APPROVED RH	DATE 05/12/08
DRAWING TITLE Figure 3. Site Detail		SCALE AS SHOWN		PROJECT NO. 723206	
		FILENAME 723206-figure 3.WOR			