

**TERRA SERVICES INC.
2.5 KM SOUTH OF LEWISPORTE
QUARRY PERMIT 71112151**

***Environmental Assessment
Registration Document***

Submitted by:
Terra Services Inc.
PO Box, 422
Lewisporte, NL
A0G 3A0

Prepared by Terra Services Inc

TABLE OF CONTENTS

	Page
1.0 NAME OF UNDERTAKING	1
2.0 PROPONENT	1
2.1 Name of Corporate Body.....	1
2.2 Address	1
2.3 Chief Executive Officer.....	1
2.4 Principal Contact Person.....	1
3.0 THE UNDERTAKING	2
3.1 Nature of the Undertaking	2
3.2 Purpose/ Rationale/ Need for the Undertaking.....	2
4.0 DESCRIPTION OF THE UNDERTAKING.....	2
4.1 Geographic Location	2
4.2 Physical Features.....	2
4.2.1 Project Site Description	2
4.2.2 Existing Biophysical Environment.....	2
4.3 Construction and Operation	2
4.4	Site Access
.....	3
4.5 Site Clearing.....	3
4.6 Quarry Development and Operation.....	3
4.7 Potential Sources of Pollution During Construction and Operation.....	3
4.8 Potential Resource Conflicts During Operation	4
4.9 Occupation	5
5. Reclamation and Closure	5
6. LIMITATIONS.....	6
7. Co-ordinates - Zone 21U.....	6

LIST OF FIGURES

Figure 1: Project Location Map	7
Figure 2: Detailed Project Location Map	8
Figure 3: Quarry Permit Location and Human Receptor Map.....	9

1.0 NAME OF UNDERTAKING

2.5 km South of Lewisporte Quarry 71112151

- Quarry Permit Identification
File 71112151: covering 5.0 ha

2.0 PROPONENT

2.1 Name of Corporate Body

Terra Services Inc.

2.2 Address

PO Box 422
Lewisporte, NL
A0G 3A0

2.3 Chief Executive Officer

Mr. David Roberts
Owner
PO Box 422, Lewisporte, NL
A0G 3A0

2.4 Principal Contact Person

Mr. David Roberts
PO Box 422
Lewisporte, NL
A0G 3A0
(709) 691-2333
terrased@yahoo.ca

3.0 THE UNDERTAKING

3.1 Nature of the Undertaking

The proposed project is a 5.0 ha (4+1) quarry site that will be developed for its sand and gravel resources to be used in road maintenance during winter for ice control, and for Class A/B material used in the construction industry for the public and private sectors.

The site is located adjacent to Terra Services Inc's existing quarry permits #139381/ file No. 7119921 that serve the same purpose.

3.2 Purpose/Rationale/Requirement for the Undertaking

The main purpose and rationale for the proposed 5.0 ha quarry area is to develop additional sand and gravel resources similar in nature to Terra Services adjacent quarries to continue supplying material to the public and private sectors.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 Geographic Location

The proposed project is located in a rural area 2.5 km south of Lewisporte, off junction road route 340, Newfoundland. The site is not located within any municipal boundaries but is within and surrounded by undeveloped Crown Land. The nearest sensitive human receptor is Lewisporte mall area, 2.5 km north of the project area.

4.2 Project Site Description

The southern boundary of the proposed quarry area is adjacent to Terra Services existing quarry (file 7119921). The primary physical feature of this project will be the quarry itself. This includes the quarrying of identified aggregate material and the stockpiling of material.

4.3 Existing Biophysical Environment

The proposed quarry site is located east of the old Junction road and 0.2 km east of Southwest brook, .North, East and West is crown Lands, South is Terra Services Quarry.

The proposed quarry area is underlain by cobble sand and gravel material and is mostly devoid of finer material such as silt and clay. The material is covered by organic matter varying from generally 15 to 30 cm in thickness. Tree cover is present on a small section of the project area.

4.4 Site Access

The site is accessible through Terra Services existing quarry permit (File 7119921) quarry entrance is located 2 km South of Lewisporte on the junction Road, leading to the Trans-Canada Highway along Route 340.

4.5 Site Clearing

Any merchantable timber will be initially cleared and will be harvested under a cutting permit issued by the Department of Fisheries and Land Resources. The wood will be stacked in 6 to 8 feet lengths and subsequently removed from site. Surficial soils subsoil and grubbing will be stripped and windrowed to the permit boundary. This windrowed material will be used to construct perimeter berms as required.

4.6 Quarry Development and Operation

The location of the 5.0 ha area boundary was defined as precisely as possible by estimating the location of aggregate resource from the trend observed within the currently active quarries. Development of the quarry will start from the north-northeast side of Terra Services existing Quarry permit area.

Development activities to be undertaken will consist of the removal and stockpiling of organics to the perimeter of the site. Operational activities will consist of pit run removal and/or screening a stockpiling of aggregate material to produce materials of required specifications. This will be performed using heavy equipment such as excavators, front end loaders and dump trucks. Due to the clean nature, low silt content, of the aggregate present on site, no wash plant is required to process the aggregate. Quarrying activity will take place approximately between May and December of each year. However, this will ultimately be dictated by the timing of seasonal spring melt and the onset of winter conditions.

4.7 Potential Sources of Pollution During Construction and Operation

The construction phase of the development will consist of the removal of trees and the subsequent removal and stockpiling of organic material. The equipment used for these activities will consist of, chainsaws, front end loaders and excavators. This equipment represents a potential source of noise disturbance, exhaust emissions, the potential release of petroleum hydrocarbons, domestic waste and general refuse.

Air pollution will be controlled by having all equipment on site fitted with the appropriate emission-control equipment. Noise levels associated with the work are not expected to reach harmful levels. As this is adjacent to an existing quarry site there will not be any additional equipment required as this project is an expansion of the existing quarry area.

Site clearing will occur in phases, as previously done, and thus noise levels are not anticipated to exceed previous maximum levels reached. Also, this is a sand and gravel quarry and no blasting is required. There is no historical noise monitoring data available and there have been no documented complaints of noise being an issue in or around the quarry site area. Workers will have the proper hearing protection at the work site, as noted above, in a controlled work environment. Domestic waste generated during construction will be collected and disposed of in accordance with the Waste Material Disposal Act. Onsite sewage will be handled and maintained by an approved sewage service provider.

Fuel will not be stored on site but will be brought in as required by a petroleum product service company. The handling of petroleum products on site will comply with the Storage and Handling of Gasoline and Associated Products Regulations. Complete and regularly checked emergency spill kits will always be available on site for containment and cleanup of any hydrocarbon leaks.

The erosion and transport of fine-grained particles during construction and operational activities will be controlled by using appropriate mitigating measures such as erosion control ditches, hay bales, silt fencing and berms.

Potential Resource Conflicts During Operation

Potential resource conflicts during operations could include the use of the area for recreational purposes. There are currently no dirt roads or ATV trails inside the permit boundaries and the area is not historically known to be used for such purposes.

The closest point at which the quarry permit area is located to South West Brook is 200m. The Newfoundland and Labrador Mining Act guidelines state that a buffer zone of 30 m must be maintained between any new project and a watercourse. This project is beyond the 30 m buffer. In order to prevent sediment runoff, berms will be constructed on the west end of the project.

Should water runoff become a problem, erosion and sediment control measures in line with industry best management practices will be utilized. This will include silt fencing, hay bales and erosion control ditches to prevent drainage into South West Brook or any other sensitive area identified. Also, a settling pond may be constructed to temporarily hold water within the quarry and allow for natural seepage into the underlying permeable aggregate if required.

4.8 Occupation

The occupations required for the proponent's site are listed below and classified as per the National Occupational Classification (2011):

Construction

- 1 Site Foreman/Supervisor (7302)
- 1 Heavy Equipment Operator – Loader/Excavator (7521)

Operation

- 1 Pit Manager (7302)
- 1-2 Heavy Equipment Operators – Loader, Excavator, Screening (7521)
- 1 Heavy Equipment Operator– Tandem, Tandem-Tandem and/or Semi Dump Trailers (7521)

Operation of the quarry will necessitate one full time employee, with one seasonal employee hired as needed who will be employed full time while working. These employees will be utilized to both clear the quarry site area (Construction Phase) and extract/process the aggregate material (Operation Phase). This dual role is possible based on the phased development of the site over years which enables the quarry site to operate efficiently. All required personnel will be hired and paid directly by Terra Services Inc.

The noted required occupations for the site will be filled with current staff based on the current demand.

5. Reclamation and Closure

Upon completion of the project, the quarry will be rehabilitated within the Department of Natural Resources' quarry permit guidelines. Quarry faces will be resurfaced to implement 30 degree sloping. Subsequently, the previously windrowed and preserved

organic material that was stripped during the construction phase will be re-spread to promote natural revegetation. Also, once the quarry reaches a development phase that will not require additional expansion than progressive reclamation will begin to allow for revegetation of the site as quickly as possible.

6. Limitations

The Environmental Registration document was prepared by Terra Services Inc, who has extensive knowledge in quarry development and potential environment related concerns as accurately as possible.

7. Co-ordinates - Zone 21U

North	---	5451272.00m N	-----	642182.00m E
East	---	5451153.00m N	-----	642454.00m E
South	---	5450933.00m N	-----	642328.00m E
West	---	5451038.00m N	-----	642050.00m E



Figure 1: Project Location Map



Figure 2: Detailed Project Location Map



Figure 3: Quarry Permit Location and Human Receptor Map