



green leaf  
resources

4 Lidstone Crescent  
Mount Pearl, NL A1N 4B6  
(709) 690-2200

November 24, 2017

Minister of Environment and Climate Change  
PO Box 8700 St. John's, NL A1B 4J6  
Attention: Director of Environmental Assessment

**Re: Registration for "The Old Trail" Development**

Ladies and Gentleman,

Please accept this registration for the development of the Old Trail – a 12 km hiking trail that connects the Town of Salvage to the Town of Sandy Cove. The proposed linear trail follows some existing paths as well as several kilometers of new trail.

I will take the lead in managing this project in behalf of the Town of Salvage and the Town of Sandy Cove. I have extensive knowledge of the trails in the region and am most familiar with the proposed new trail segments. The signature of both Town representatives below indicates their approval of this application which I am submitting in their behalf.

We look forward to continuing our efforts to enhance the tourism product of our region through the development of quality hiking trails. Detailed trail information and maps have been provided to assist you with your assessment of this project.

If you have any questions, or require additional information, please contact me at any time.

Best Regards,

Marc Poirier  
Green Leaf Resources

Maxine Stroud, Town Councillor, Town of Salvage

Kevin Moss, Town Councillor, Town of Sandy Cove

# ENVIRONMENTAL ASSESSMENT

**NAME OF UNDERTAKING:** The Old Trail

**CROWN LANDS REGISTRATION NUMBER:** 151655

**PROPONENT:**

<b>Name of Corporate Body:</b>	Town of Salvage	Town of Sandy Cove
<b>Address:</b>	General Delivery Salvage, NL A0G 3X0	Box 37, Suite 8 Eastport, NL A0G 1Z0

**Chief Executive Officer:**

<b>Name:</b>	Maxine Stroud
<b>Official Title:</b>	Town Councillor (Town of Salvage)
<b>Address:</b>	Same as above
<b>Telephone Number:</b>	(709) 677-2660

<b>Name:</b>	Kevin Moss
<b>Official Title:</b>	Town Councillor (Town of Sandy Cove)
<b>Address:</b>	Same as above
<b>Telephone Number:</b>	(709) 677-2854

**Principal Contact Person for purposes of environmental assessment:**

<b>Name:</b>	Marc Poirier, Green Leaf Resources
<b>Official Title:</b>	Hiking Trail Consultant
<b>Address:</b>	4 Lidstone Crescent Mount Pearl, NL A1N 4B6
<b>Telephone Number:</b>	(709) 690-2200

**THE UNDERTAKING:**

**Name of the Undertaking:** The Old Trail

**Purpose/Need for the Undertaking:**

Inclusion within the existing network of Salvage Trails the linear trail formerly known and redeveloped, in 1998, as the Old Trails.

Tourism is a major economic generator for many regions in the Province. Recent exit surveys suggest that the majority of visitors who come here either participate in hiking activities or even visit the Province with the main objective of hiking our coastline.

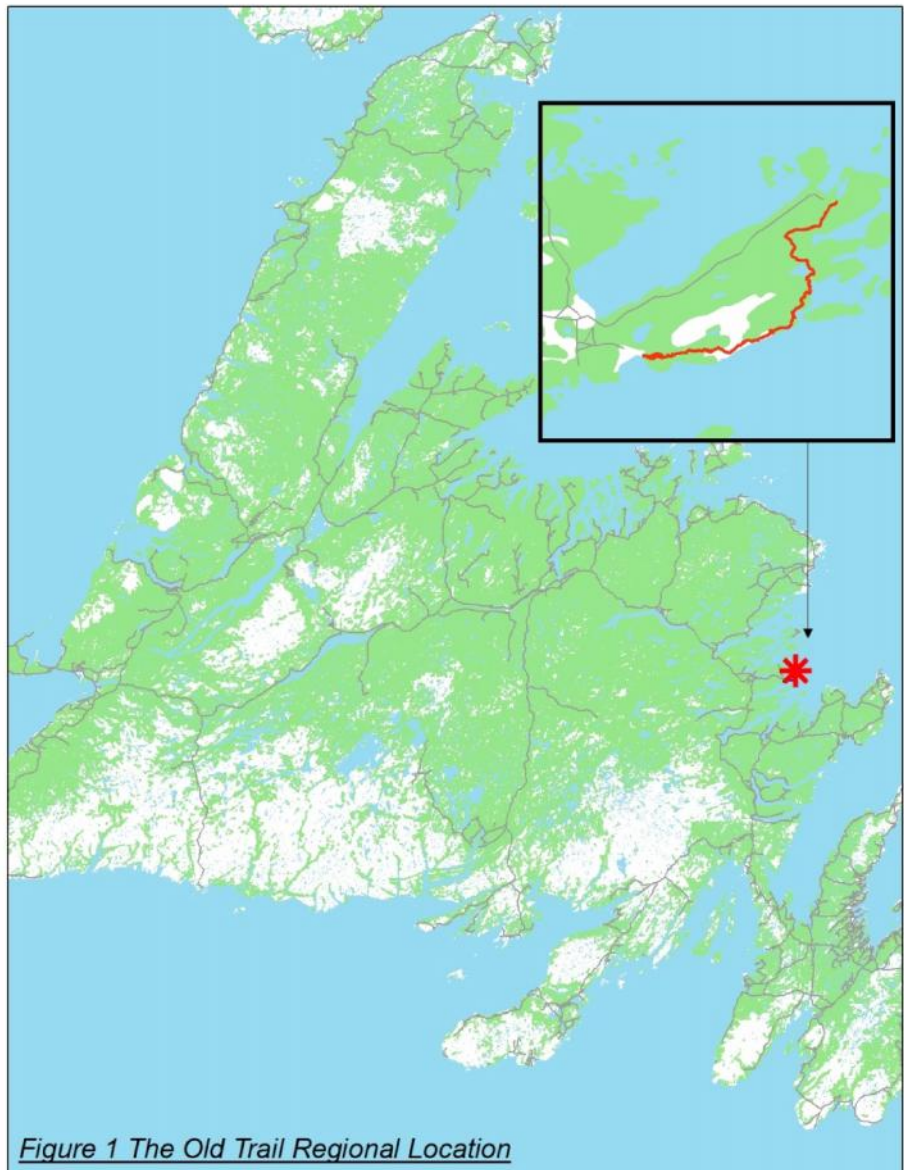
The purpose of this undertaking is to enhance the tourism product for the region. This trail project will provide about one full day of hiking along the coastline. It is our aim that this new trail project will extend visitor stay in the region by several days or perhaps even become the sole purpose for visiting the area.

## **DESCRIPTION OF THE UNDERTAKING:**

### **Geographical Location:**

"The Old Trails" trail system consists of one, approximately 11.6 kilometre long linear **hiking trail**, extending from within the Town of Salvage (terminus at the site of the town playground) to within the Town of Sandy Cove (terminus at the Sandy Cove Beach parking lot). This trail route exists at the most easterly end of the Eastport Peninsula, as located on Sheet 2c12 of the National Topographic Survey map edition. It is believed that the original trail was constructed around 1998 and has since fallen in to disrepair (See Figure 1 entitled the Old Trail Regional Location).

The original trail essentially travelled "up the middle" of the most easterly end of the Eastport Peninsula, bordered to the southeast by Bonavista Bay (Newman Sound) and to the northwest by Eastport Bay (Salvage Bay). However, following a detailed reconnaissance of the area where the trail



currently exists it was determined that roughly 6.5 kilometres of it should be abandoned in favour of constructing a new route. The section of trail from Salvage to Lind's Pond/ Barrow Harbour remains in good shape and can be restored to its original quality quite easily. **Note:** *This section of trail is identified by a purple line on the included map (see Figure 3: The Old Trail) and where that line intersects with the red line is the lower end of Lind's Pond, where the outflow of water runs into nearby Barrow Harbour.* However, the section from Lind's Pond/ Barrow Harbour to Sandy Cove Head (an existing trail identified by a blue line on the map) requires extensive upgrades and would prove very costly to restore. As an alternative to this extensive re-construction work, it has been suggested that a new route be developed; traversing an area of more open and barren landscape, closer to the East side of the Peninsula (i.e. along the Newman Sound coastline). This proposed route would see both a reduction in brushing/cutting requirements as well as minor infrastructure construction (i.e. boardwalks, foot bridges, etc.). Given the new proposed route (as seen on the attached satellite image), more open terrain (rock ridges) will be utilized as the walking surface for hikers to walk along. The abandoned section of trail will be left as is, allowing nature to reclaim the site (given the years of non-maintenance on the trail, this natural evolution of restoration is already occurring).

The existing as well as proposed trail route will be linear in nature, with a cleared width of between 1.0 and 1.5 metres (depending on surrounding terrain). The physical walking path within that cleared width will be approximately 0.6 metres wide. The "Old Trails" route crosses through/over two (2) municipal boundaries (Town of Salvage and Town of Sandy Cove). It traverses terrain ranging from thick forest cover, to areas of low, herbaceous shrub growth, to long expanses of open, rock barren. It passes by a number of ponds and wet areas, the closest and largest being Lind's Pond, (known by locals as Barrow Harbour Pond) near Barrow Harbour on the East (Newman's Sound) side of the Peninsula.

The nearest vehicular road to the "Old Trails" route is Route 310, which runs along the shoreline of Eastport Bay, connecting the Town of Salvage to the Town of Eastport (and ultimately the Trans Canada Highway). Numerous "local use" trails exist in the surrounding area; having been created as a result of long time usage by local people accessing the backcountry for recreational and domestic timber harvesting purposes (access by snowmobile, ATV, etc.).

As already noted, the trail is located on Sheet 2c12 of the National Topographic Survey map edition. Please see Figure 2 entitled "Old Trail on Topographic Map."



NTS Map Sheet 2c12

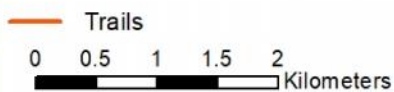


Figure 2: Old Trail on Topographic Map



## **Physical Features:**

As previously indicated, the "Old Trails" hiking trail route (existing and proposed re-route sections) meanders its way through numerous types of terrain. It runs through areas of dense over story forest cover, along bog/fen and similar wet areas, near ponds and across wide open stretches of rock barren - with minimal ground cover (moss, lichens, low lying herbaceous shrubs, etc.). The trail crosses over several small drainage channels (comprised of both seasonal and year-round water flow) along with one larger "brook". This brook crossing is located at the outflow of water from the Lind's Pond watershed system. Crossing this brook will require the restoration of a "backcountry type" bridge structure. Such a structure may simply consist of fallen trees with a deck like covering (wood) or a more elaborate beam type structure employing milled lumber as the structural component.

No major physical features exist within the scope of this project. There are no buildings, roads, etc. within (or adjacent to) the trail route. Other than small scale water crossings and placement of wooden boardwalks over pronounced wet areas (where possible re-routes around such areas will be utilized), no large-scale infrastructure will be built. In some instances, small scale drainage pipes (i.e. 4-inch diameter weeping tile) will be utilized in an effort to reduce surface water runoff and ground water seepage which would adversely affect the trail and walking surface present (i.e. drainage pipe would move water away from the trail surface thus preventing soil erosion of the path over time as well as maintaining a drier walking surface). Such systems will be utilized sparingly so as to reduce long term maintenance requirements.

As indicated previously, the Old Trails hiking path is a linear route, stretching approximately 11.6 kilometres in length. Being between 1.0 and 1.5 metres wide this trail will cover an area of approximately 17,000 sq. metres. Where the trail already exists and will continue to be utilized, any work in upgrading it (i.e. brushing, repair to boardwalks, etc.) will be limited to the existing corridor. For the new proposed re-route section, similar work will be carried out. Where severely eroded or very wet areas exist along the trail route, short re-routes will be constructed around them. Such re-routes would involve removal of vegetation and, in some cases, ground disturbance so as to delineate the actual walking surface for hikers to follow.

The route itself traverses a variety of terrain as already mentioned (wet areas, forest, rock barrens, etc.). Topography along the route varies from low lying valleys to the top of barren, rock capped hills. Changes in elevation are in the range of several hundred metres - from near sea level at Salvage and Sandy Cove, to the crest of hills along the eastern edge of the Eastport Peninsula (refer to Figure 2). Tree cover vegetation consists primarily of black spruce and balsam fir. Some locations along the route consist of patches of white birch, red maple and trembling aspen. Ground cover consists primarily of herbaceous shrubs in the drier areas (i.e. blueberry, Labrador tea, etc.), moss/grasses/sedges (in the wetter areas), and lichens (along the exposed rock barrens). Wildlife species are limited based on personal and third-party observations. Moose is the dominant large species with rabbit, fox, squirrel, and possibly coyote rounding off the smaller mammals present. Of note is the fact that there has been no evidence of black bear sightings or signs (scat) present along this trail route. Bird species are

limited to your standard Boreal Forest types - crows, gray jays, boreal chickadees, etc. Ruffed and Spruce Grouse have also been observed in the area. Although there are numerous ponds situated nearby and immediately adjacent to the trail route, the presence of fish species is very limited. Some ponds may possess brook trout and stickleback species in their waters but overall, fish presence is absent. The absence of fish is notable in the larger Lind's Pond, which the Old Trails route is present in close proximity.

The map on the following page (Figure 3: The Old Trail) outlines the trail route and breaks down the route into 1km segments. It also outlines the location of all main lookouts, wetland areas, and major stream crossings.



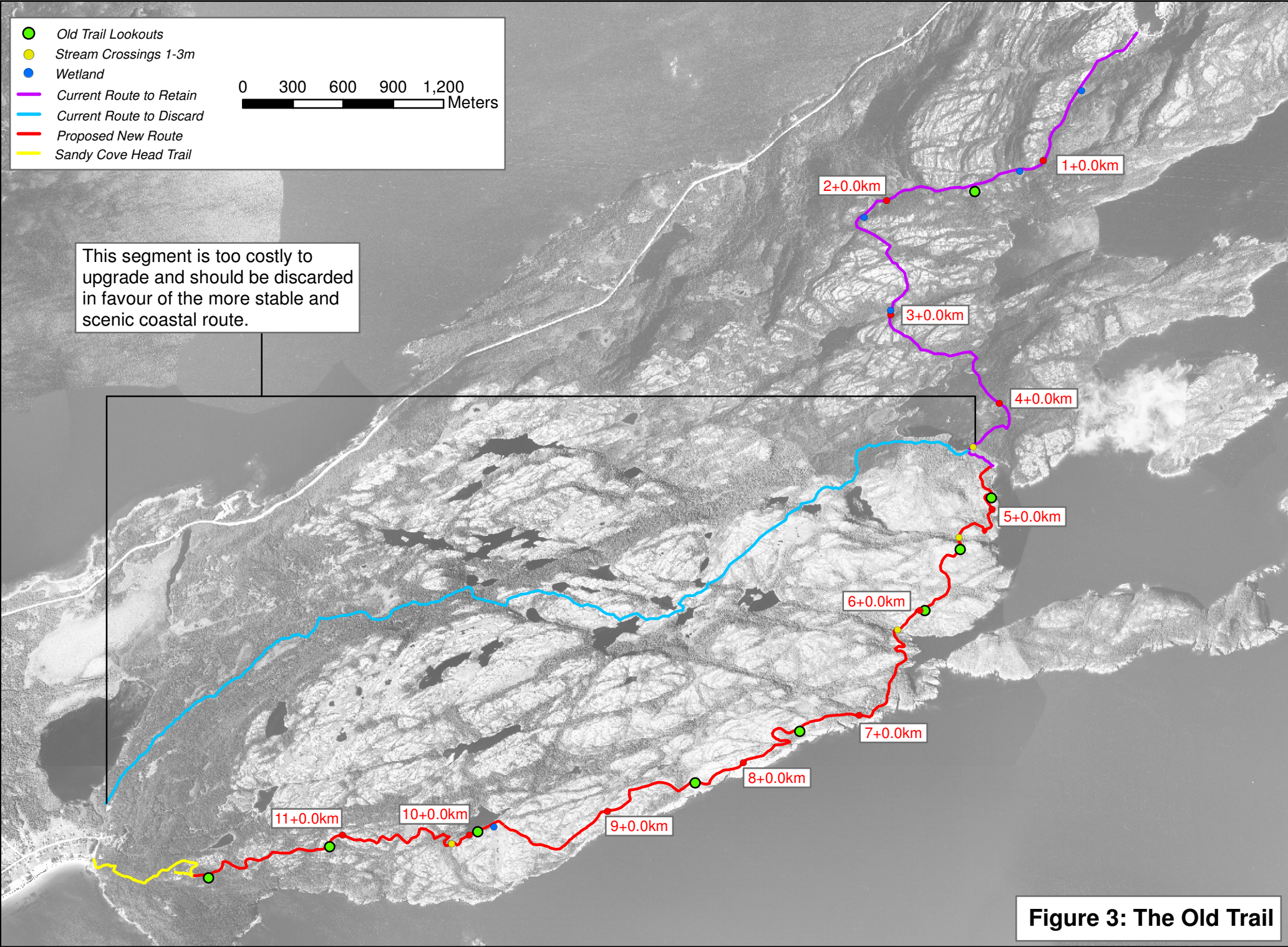
*The route follows bedrock and barren land for several kilometers. This open landscape allows for impressive views throughout.*



- Old Trail Lookouts
- Stream Crossings 1-3m
- Wetland
- Current Route to Retain
- Current Route to Discard
- Proposed New Route
- Sandy Cove Head Trail

0 300 600 900 1,200  
Meters

This segment is too costly to upgrade and should be discarded in favour of the more stable and scenic coastal route.



**Figure 3: The Old Trail**



## **Archaeological Resources:**

Given the route of the Old Trails hiking path, the presence of archaeological resources (pre-European and recent) is very unlikely. In the areas close to the communities of Salvage and Sandy Cove, some remnants of recent presence exist (i.e. rusted out tin cans, piles of cut logs, etc.). Even in the area of Barrow Harbour where a community once existed back in the 1800's, no presence of human occupation can be found.

As part of the Crown Lands Licence to Occupy process, the provincial archeology group have reviewed this trail proposal and subsequently signed off on the project, having no comments regarding archaeological resources being present along the route.

## **Construction:**

Given the length of the Old Trails hiking path, the logistical issues involved in accessing the site and the terrain which exists in the area, the work to be carried out will be undertaken over a two-year period. Work will take place on the Sandy Cove end of the trail, beginning in May of 2018. The new section of trail extending from Sandy Cove to Lind's Pond is estimated to take between 15 and 17 weeks to complete. From Lind's Pond to Salvage, another 14 weeks of work is proposed.

Since the nature of work being carried will almost entirely be completed by hand labour, the risk of pollutants entering the ecosystem is very low. The use of chainsaws and/or brush saws will result in airborne emissions but will be of a very low quantity. Although a possibility exists of gasoline and/or oil being released on to the ground or in to nearby water sources while equipment is being operated, measures will be in place to prevent such instances from occurring (i.e. spill response kit on site with the work crew, refuelling operations being carried out a minimum of 30 metres away from a water source, etc.). A risk of wildfire is possible but again measures will be in place to prevent and/or control such events from happening (i.e. fire bag suppressant present on the chainsaw/brush saw operator, fire extinguisher on site, stoppage of work during elevated fire hazard ratings, etc.). A strict "pack in/pack out" policy will be in place for all human generated waste that is created while work is being carried out.

Where large scale machinery will be used in the construction process - exclusively on the first 400 metres of trail at the Salvage end - they will be restricted to simply the transport and placement of materials (i.e. ATV for the entire length and mini-excavator for only 300 metres). This particular section of trail exists on mostly a bare rock surface, with only minimal vegetation being present). Again, a spill response kit and fire extinguisher will be on hand. Re-fuelling will occur in the Town of Salvage, at a designated work station near the playground structure.

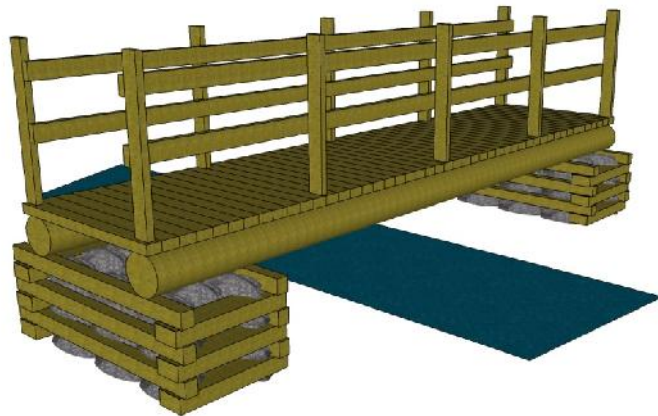
As the majority of work is hand labour, occurring in remote areas away from human habitation, it is not expected that any significant conflicts will occur. Wildlife species may be deterred from utilizing the area while work is ongoing due to noise and odours (exhaust fumes). Such impacts are short in nature and will be constantly changing location as work progresses. Since one-half

of the trail route already exists, no large-scale tree removal will be necessary. For the new proposed re-route, the vast majority of its length traverses open rock barrens, with the remaining section crossing through low, herbaceous shrub with minimal over story tree cover. Only that vegetation that exists on the trail or has fallen down across it will be disturbed.

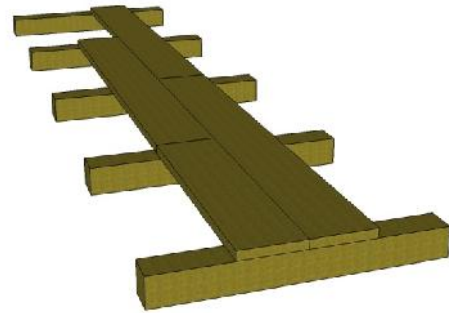
A majority of water crossing are quite small in nature and merely require a culvert to allow water to drain past the trail and prevent erosion. We are referring mainly to surface runoff and trickling brooks.

Please see Figure 3 entitled "The Old Trail" for a location of the major water crossings. Only four major crossings have been identified and they range between 1-3m. The average water depth at these locations is less than 0.15m (6 inches). In two instances all that is required is the placement of stepping stones to cross the water (In fact the streams can be easily crossed now without installing any crossing features). In at least two cases (near the 4.5 and 6km mark) a simple footbridge is needed. These footbridges will be installed above the high water mark. Minor abutments may be necessary but in both cases, the surrounding bedrock provides a solid foundation. These are very simple structures that will not disrupt the waterbody in any way. The following mitigation measures will be applied:

- Work around streams will not be completed during spring runoff or during spawning periods.
- Work will be done in the dry and during low water mark periods.
- Abutments will be filled with rock and installed on dry stable ground. Little disturbance of the stream is anticipated.
- Scarred areas of the landscape will be rehabilitated with soil and seed or capped with stone boulders to control erosion around the abutments. This is a simple small pedestrian bridge with little ground disturbance.
- Crossings are designed perpendicular to the stream with little removal of riparian vegetation.
- Water runoff from and approaching the bridge will be directed away from the watercourse towards vegetation.
- Install sediment and erosion control measures before work begins to prevent sedimentation in to the stream. These will be monitored regularly.



Whenever possible, wetland areas were avoided completely. That being said there are about 5 main wetlands identified along the route. In most cases, the trail skirts along the edge of the wetland. In these wetland areas the bullet points noted above will be applied (where applicable). Wetland areas will be crossed using simply plank style boardwalk placed along 6x6 stringers. Please see Figure 3 entitled "The Old Trail" for a location of the major wetland crossings.



### **Operation:**

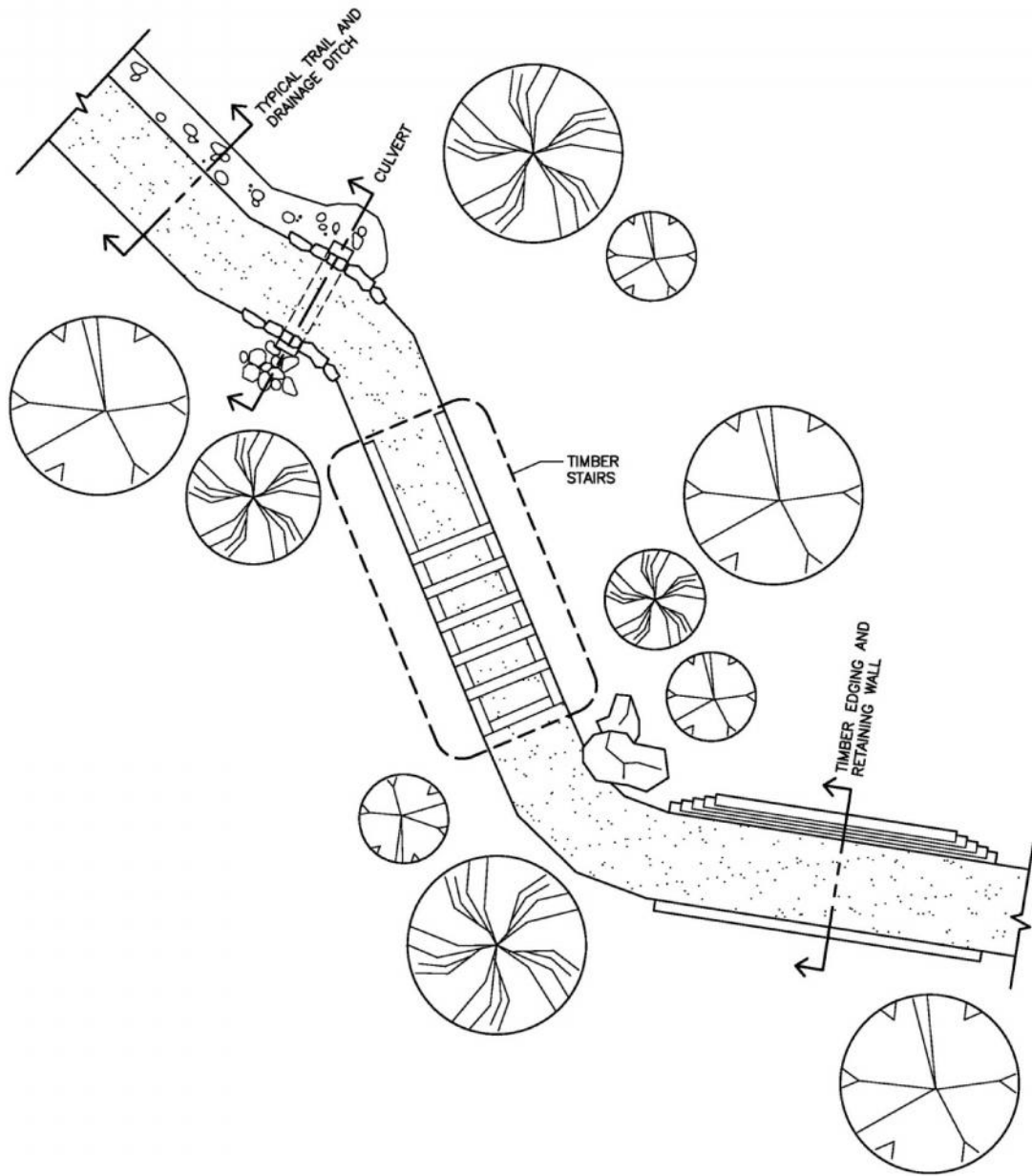
The project as planned will occur over a two year period. A work crew of between 4 and 5 people will walk along the trail, removing ground vegetation where required (utilizing a brush saw and hand pruners). Larger vegetation will be removed by chainsaw, utilizing only a trained and certified operator. Where required for structures to be built (i.e. boardwalks, bridge, etc.) the crew members will bring in lumber to the site by hand, where it will be sawn and placed appropriately. In the case of the ATV and mini-excavator equipment use, it is restricted to the first 300 to 400 metres of trail on the Salvage end of the system. Such use will be restricted to the existing disturbed trail corridor, with no off-road usage permitted. Use of the mini-excavator will be by trained operator only and will be in effect for one day. As stated above, creation of pollutants and wildlife/human conflicts will be minimal as part of the overall project construction period.

As the trail is a permanent facility, its operation will last in perpetuity. Use of the trail will be by pedestrian traffic only, with the hiking public utilizing only the trail surface and route as constructed. Hiker numbers on an annual basis along this trail route are expected to be within the low hundreds (200-300), increasing over time as the route becomes more known. No more than 1000 users per year are expected over the long run. Their use of the trail will be focussed to the period between mid-June and mid-October. Hikers will be asked to register at approved locations, prior to their travel along the route.

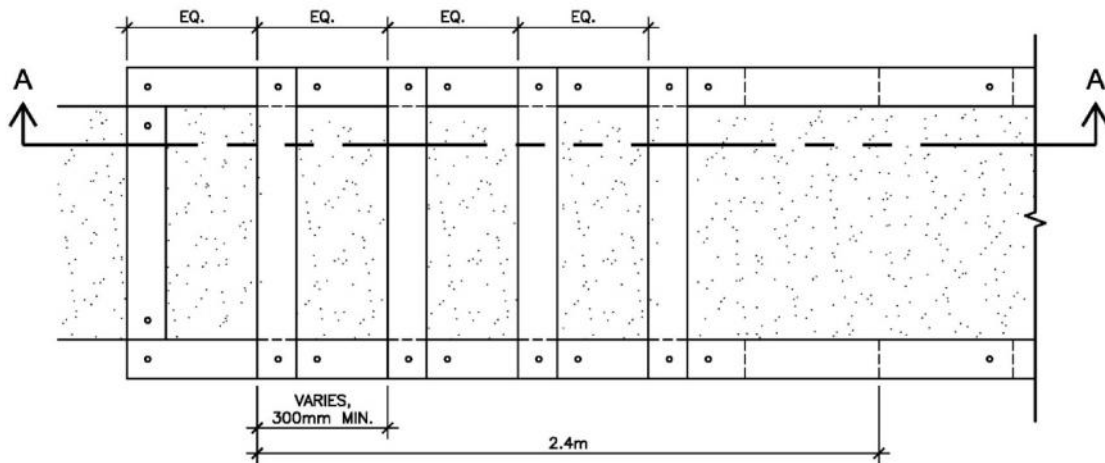
This is a non-intrusive tourism oriented hiking trail. The only ongoing operations will have to do with regular trail maintenance activities. Maintenance inspections will be completed at least twice a year (spring and fall-scheduled) and following major storm events (unscheduled). Seasonal maintenance activities include vegetation control, surface repairs due to washouts (good trail design should minimize this), general cleanup and structural maintenance/repairs of wooden structures.

Good trail design with adequate drainage features, edge retaining, ditching and a raised surface should minimize erosion problems and prevent accelerated erosion from water. Some general trail design techniques we will apply where needed are outlined on the following pages.

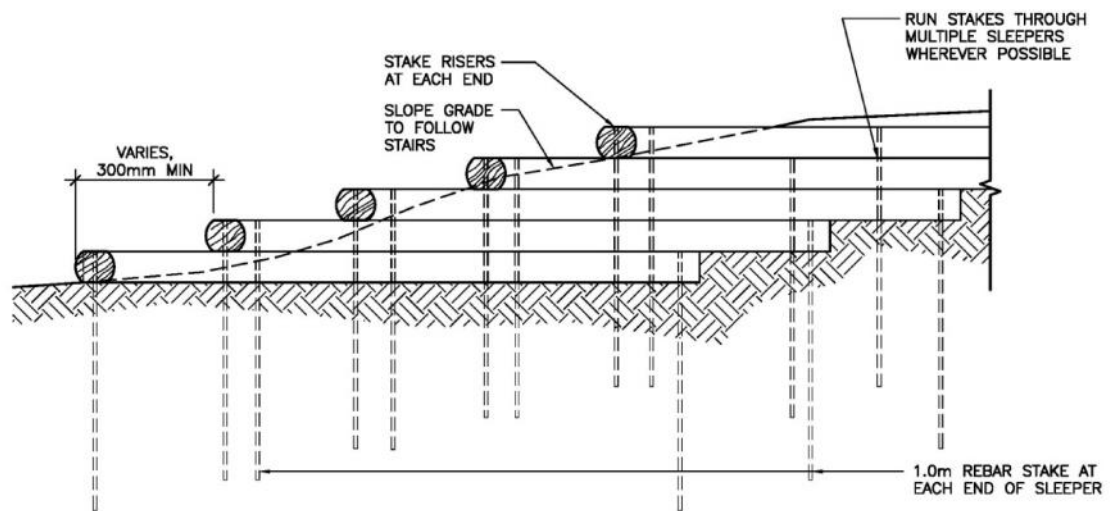




Typical Trail Features



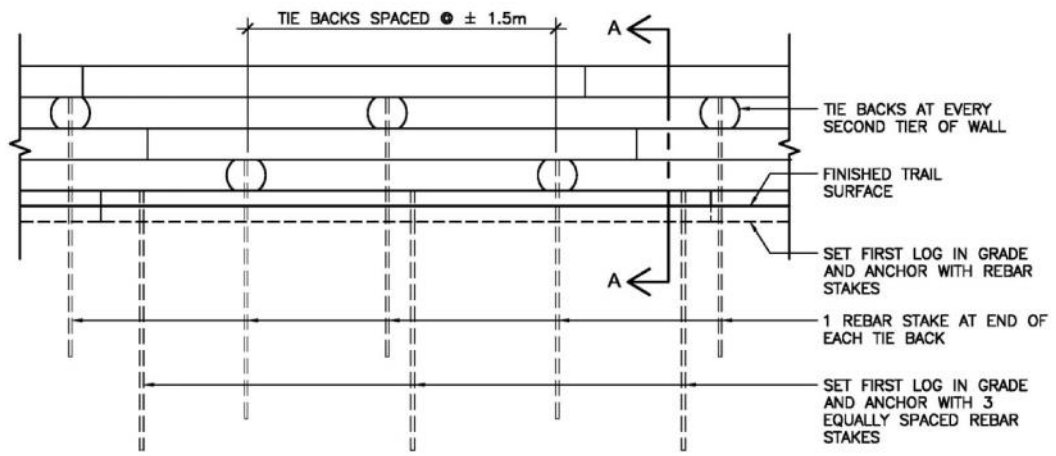
Stair Plan View



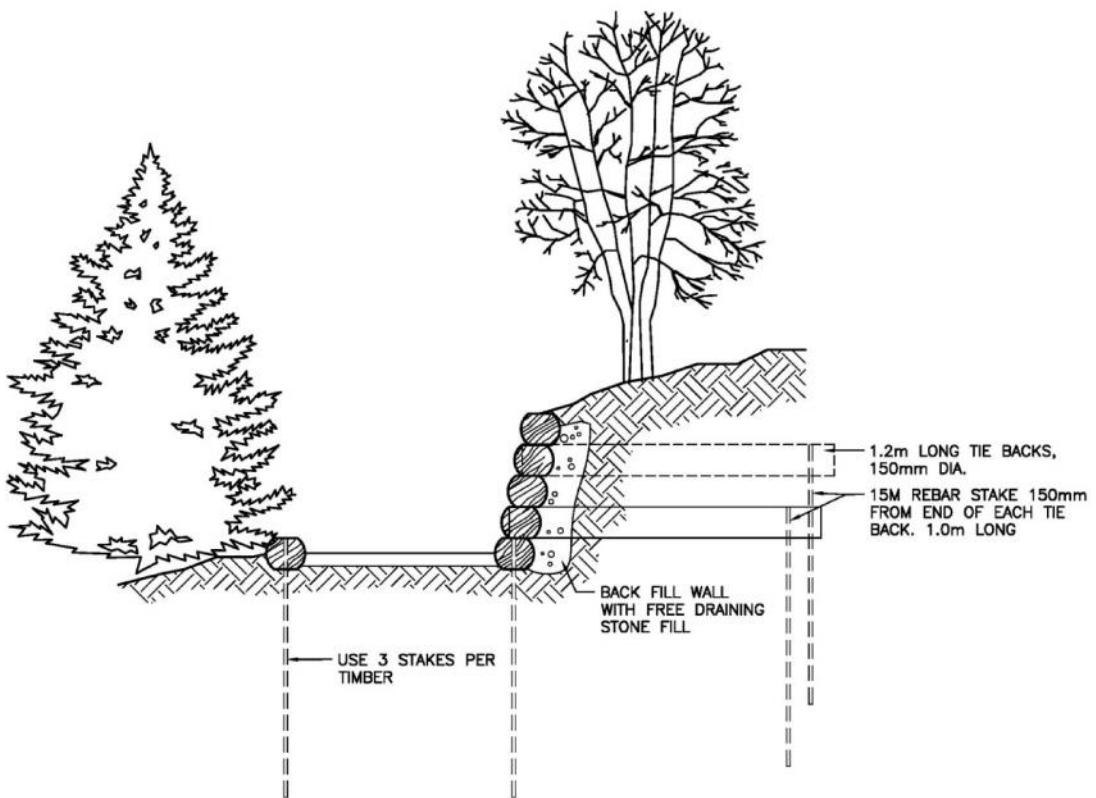
Section 'A'

NOTES:

1. ALL STAIR TREADS ARE TO BE OF EQUAL DEPTH, MINIMUM 300mm.
2. EACH SLEEPER MUST BE STAKED WITH REBAR AT EACH END AND HAVE 1 INTERMEDIATE STAKE LOCATED APPROXIMATELY AT MID SLEEPER. ALTER LOCATION OF INTERMEDIATE STAKE AS REQUIRED TO AVOID OTHER STAKES.
3. BACKFILL AND COMPACT FILL BETWEEN SLEEPERS PRIOR TO CONSTRUCTING NEXT STEP
4. USE 20M REBAR FOR STAKES
5. FINISH EACH STEP WITH GRANULAR MATERIAL

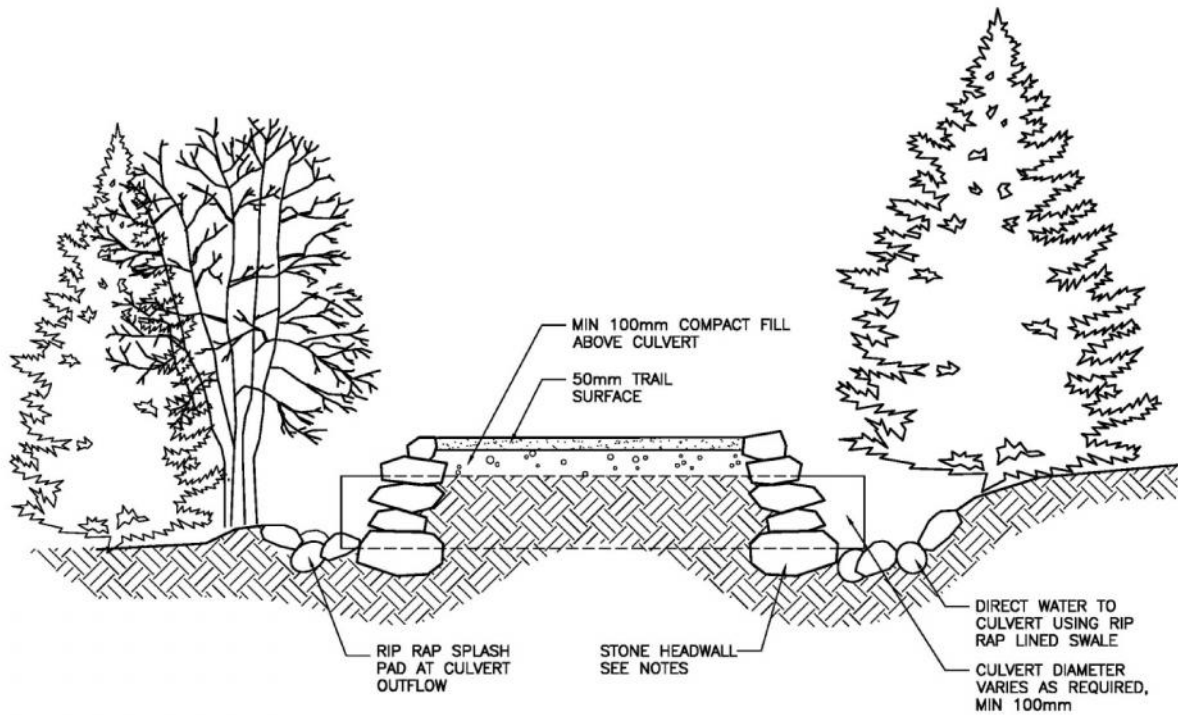


Retaining Wall Elevation



Section 'A'





### Section Through Culvert

1. AT CULVERT OUTFLOW CONSTRUCT A STONE PAD APPROXIMATELY 1.0m x 1.0m TO PREVENT EROSION
2. USE ANGULAR OR FLAT STONES FOR HEADWALL AND WHEREVER POSSIBLE CHOSE STONES THAT FIT TIGHTLY TOGETHER. USE STONES A MIN. OF 300mm LONG.
3. EXTEND CULVERT 100-200mm BEYOND HEADWALL.
4. ENSURE ADEQUATE SLOPE IN CULVERT TO MAINTAIN FLOW.

## Occupations:

The work crew involved in carrying out this trail 're-construction' will consist of 5 individuals. Ideally two crews will be established, with one crew of 2-3 people looking after vegetation removal with the second working on the trail and its requirements (placement of signage, trail surface modifications, boardwalk construction, etc.). Work periods should begin in late May and extend in to late November - depending on weather conditions. The work period will be 40 hours per week, either as 4, 10 hour work days or 5, 8 hour work days. As part of the work crew, one individual will be assigned the task of Crew Supervisor and will be responsible for ensuring workers meet the requirements as set out through the hiring process (i.e. work hours, time sheet recordings, etc.). That individual will work on-site, alongside the other crew members. In addition to the 5 person work crew, it is anticipated that one other individual will be hired to act in the role of Project Manager. That individual will oversee all aspects of the project (i.e. material/equipment acquisition, liaison with local communities, completions of permits and work authorization requirements, etc.). **Note:** *Please refer to the work position codes as identified by the National Occupational Classification (2006). They are presented below.*

All of the team members will be hired through a competitive process, whereby positions will be advertised and applicants apply accordingly. Interviews will be carried out to determine the best overall candidates. All candidates must either possess a valid First Aid certificate or be willing to participate in such training (to be provided at the employer's expense).

The salaries being paid to these various team members is still being developed although it is expected that on the ground workers will receive around \$15/hour, crew supervisor \$17/hour and Project Manager, in the range of \$22 to \$25/hour. Again, all will be employed based on a 40 hour work week with earnings being insurable for EI benefits once the work season is completed. No work benefits will be provided by the employer. Crew members will receive no leave credits but in lieu of will receive a 4% of earnings payment to cover vacation time. Workers will not be eligible for other paid leave (sickness, appointments, etc.) or medical/dental benefits.

In some instances, contracts and/or contractors will need to be administered/hired. Specialized material requirements such as the acquisition of lumber or trail surfacing material (gravel/rock) will need to go through a competitive pricing process. Local contractors will be invited to provide bid for the provision of such materials and, generally, the lowest bidder will be awarded the contract to supply said goods. It is expected that specialized workers such as licensed carpenters, excavator rental/operators, etc. will be required for short durations to carry out specific aspects of the project. The retention of such workers will follow the same process as above (competitive tender bids followed up with an award of contract to carry out the work).

All members of the work team will be hired based on their knowledge, skills/abilities and personal suitability. Given the nature of work (hard manual labour in a remote and harsh work environment) it may be necessary to restrict the age limit of those hired. There will be no distinction made between female and male candidates, with both being offered an equal

opportunity to occupy the positions as advertised. People of varying ethnic background are welcomed to apply and will follow the same hiring process.

National Occupational Classification Data:

- 1221 - Project Manager (Non-technical) (1)
- 7611 - Construction Labourers (3-4)
- 7204 - Carpenter (Contractor) (1)
- 7302 - Excavating Equipment Operator (Contractor) (1)
- 8255 - Labourer Supervisor (1)
- 8421 - Chainsaw Operator (1)

**Project Related Documents:**

Trails Along the Eastport Peninsula, Trail Network Recommendations, Green Leaf Resources, April 15, 2016

**APPROVAL OF THE UNDERTAKING:**

All necessary Licences to Occupy (LOO) will be acquired or updated accordingly as per guidelines set out by Crown Lands. The Department of Municipal Affairs and Environment environmental review process will be completed as required. Both the Town of Salvage and the Town of Sandy Cove, whose municipal boundaries the Old Trails trail route traverses, have approved the project as proposed.

Representatives of both communities (in addition to other communities on the Eastport Peninsula and surrounding area) sit as a member of the Trails' Sub-committee of the TerraNovas Tourism Association Inc. Progress and work supervision rests with this sub-committee, with the ultimate administrative responsibility resting with the TerraNovas Tourism Association Inc.

Funding for this project has been approved and announced by the Provincial Department of Tourism, Culture, Innovation and Industry (TCII) and the Atlantic Canada Opportunities Agency (ACOA), with a significant contribution being provided by the TerraNovas Tourism Association Inc. and supported by the local communities.

**SCHEDULE:**

Project construction is scheduled to occur on the Sandy Cove end of the Old Trails trail system starting in mid-May of 2018. This date is selected based on the hope that winter snow and ice has melted from the ground by that time, allowing work crews to initiate activities along the trail



route. At latest, work should be started by the 2nd week in June. Given the short "work season" that exists in Newfoundland, any delays in construction start-up will adversely impact the time available to complete the project (working on a project of this nature in winter months is not advisable, nor feasible).

Due to the non-intrusive nature of this undertaking we do not anticipate any interruption to bird breeding activities or habitat. There was no noted bird breeding locations identified during the trail scouting process. That being said, the following practices will be applied which may have an impact on the project schedule:

- Before trail clearing, advance trail scouting will be completed to determine if disruption to bird habitat is a possibility.
- Protective buffers will be applied to any identified bird breeding habitats or nests.
- Limit vegetation removal to the trail route only. Preserve perch and standing dead trees.
- If migratory bird nests/habitats are discovered, work in those areas will be completed after August 15<sup>th</sup>.
- Work completed between April 1<sup>st</sup> and August 15<sup>th</sup> will focus on areas where no known migratory bird habitat / nesting areas have been identified.

## **FUNDING:**

Funding for this project is part of a much larger trail based tourism initiative. Funding is being provided by three different groups; federal government (through ACOA), provincial government (through Department of Tourism, Culture, Innovation and Industry (TCII)) and by the proponent, (TerraNovas Tourism Association Inc.).

As approved, the total funding amounts are:

Department of Tourism, Culture, Innovation and Industry (TCII)	\$ 120,219.81
Atlantic Canada Opportunities Agency (ACOA)	\$ 312,571.51
TerraNovas Tourism Association	<u>\$ 70,892.18</u>
TOTAL	\$ 503,683.50

This represents the total capital cost of this project, which includes upgrading existing trails other than just the Old Trails system. Additional trails in the communities of Salvage, Sandy Cove, Happy Adventure and Eastport will also be upgraded as part of a larger tourism based project revolving around visitors and hiking in the Eastport Peninsula area. Except where necessary (i.e. Old Trails proposed re-route), all work being undertaken will address deficiencies in existing trails that have previously received the necessary approvals.



*Gorges and Boulders (near 5km)*



*Crossing (near 5.3km)*



*Bridge (near 7km)*



*View of Smokey Hole (at 6km)*

Best Regards,

Marc Poirier  
Trail Consultant, Green Leaf Resources. Nov 27, 2017





*Gorges and Boulders (near 5km)*



*Crossing (near 5.3km)*



*Bridge (near 7km)*



*View of Smokey Hole (at 6km)*

Best Regards,

Marc Poirier  
Trail Consultant, Green Leaf Resources. Nov 27, 2017