

Lower Fort Garry National Historic Site

Conservation of Buildings and Grounds

Environmental Protection Plan Template

Client Project No. 1603

Project No. 189-00014-00

Date:

Company Name:

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1. Introduction

This Environmental Protection Plan (EPP) describes site-specific environmental protection measures and responsibilities during the implementation of the project. The EPP is designed to ensure environmental mitigation commitments and measures outlined in the specifications are properly understood and implemented by the all employees of the Contractor. The EPP contains specific and direct guidelines to achieve the targeted environmental outcomes in the mitigation measures.

Throughout this document you will find red italicized text. In these areas company specific information will need to be added to the document.

2. Location and Scope of Work

Lower Fort Garry National Historic Site (NHS) is a former Hudson's Bay Company trading post located next to the Red River near the town of Selkirk, MB. It was designated a National Historic site in 1950 for its significances as the place where Treaty Number 1 was made between the Ojibway and Swampy Cree of Manitoba and the Crown, for its assemblage of fur trade structures which represent a significant example of early stone architecture and for the role the fort played as a supply centre for the fur trade of Western Canada.

Work of this Contract comprises restoration and rehabilitation work to various buildings at Lower Fort Garry National Historic Site.

- Following buildings are included in the rehabilitation work:
- Big House.
- Fur Loft.
- Visitor Centre and picnic shelter.
- Museum.
- Men's House.
- Warehouse.
- Farm Manager's House (also called Fraser House).
- Ross Cottage.
- Doctor's Office.
- Administration Building (Simkin House)
- Large Storage Building.

A separate tender will be used to address site rehabilitation work, which will include:

- Bank stabilization along Monkman Creek.
- New stairs to Monkman Creek.
- Pathway revisions.
- Culvert and bridge work at Monkman Creek.
- Site drainage recontouring.

This is an overall EPP for both components of the Project. The Contractor is required to complete information in this Template prior to the start-up of the project. Parks Canada has inserted site specific information and mitigation measures into this EPP, some are very general and others will be specific to the project and the site.

The range of activities on the Project includes:

- Scraping old paint and painting surfaces.
- Excavating sump pits and drainage lines.
- Installing sump pits and connecting sump drains to existing catchment basins.
- Masonry work.
- Demolition, reconstruction and repair of components of wood structures.
- Concrete work.
- Electrical, plumbing, HVAC and mechanical work.

The site rehabilitation work will include:

- Excavation and slope stabilization work.
- Landscaping to address drainage issues.
- Removal and re-sloping of asphalt path.
- Reconstruction of earth/wood stairs.
- Concrete and wood work.

Throughout the Project work there will be a need to manage waste products, hazardous/toxic and non-hazardous fluids and other products, erosion and sediment issues, noise, air quality and the protection of plants and animals.

3. EPP Schedule Impacts

The Fur Loft and the Museum buildings have been used by Chimney Swifts. The most western chimney on the Fur Loft is a nesting site and the western chimney on the Museum building is roosting habitat. These chimneys are both residences for chimney swifts and it is illegal to damage their residence.

Schedule any work on these two roofs to begin after the second week of July. Do not work on the roof surrounding the chimney or the chimney itself until after mid-August.

Maintain 5 m radius “no work zone” around chimneys on the west end of the roof on the Fur Loft and Museum until after mid-August.

Active Barn swallow nests may not be disturbed. **Delay any work in the vicinity of an active barn swallow nest until after young birds have left the nest.**

Earth work on Monkman Creek cannot occur until after the ground is frozen in late 2018.

4. Site Drawings

Drawing related to the environmental protection measures will need to be available on site in a location where all workers can access the drawings. A set of the drawing also needs to be provided attached to this EPP and provided to Parks Canada. These drawings will include:

- *Locations of spill response kits.*
- *Environmentally sensitive areas for Chimney Swifts and Barn Swallows.*
- *General site layout including laydown areas and staging areas.*
- *Erosion and sediment control locations.*
- *Waste storage locations for different types of waste material.*
- *Designated construction activity areas (PPE zones).*

5. Contact Information

The following Table lists the persons who hold responsibilities for implementing the mitigation measures described in this EPP.

Insert into the Table the name and contact information of the Contractor's representative(s) responsible for implementation of the EPP into the table below

Table 1 – Persons responsible for implementing the mitigation measures in the EPP.

Name	Organization/Company	Responsibility	Contact Information
	Parks Canada Agency	Project Manager	5925 Hwy 9, St. Andrews, MB R1A 4A8
	Parks Canada Agency	Environmental Impact Assessment and Monitoring	145 McDermot Avenue, Winnipeg, MB R3B 0R9
	Parks Canada Agency	Technical Services Officer – LFG site facilities management	5925 Highway 9, St. Andrews Manitoba R1A-4A8

6. Worker Awareness of EPP

Describe the Contractor's strategy to ensure its staff are aware of the content of the EPP, the environmental issues at the work site and are adequately trained to implement the EPP.

Provide the names and qualifications of persons responsible for training personnel.

Describe your Company's environmental protection training program.

Specifically, this section should include, but is not limited to:

- Strategy for training workers prior to work;
- The EPP communication strategy for workers, for example:
 - Review of environmental issues and measures at start-up and construction meetings.

7. Environmental Regulatory Framework

Comply with:

- *Migratory Birds Convention Act*, and *Species at Risk Act* for work taking place between mid-April and mid-August annually.
 - The *Migratory Birds Convention Act* (1994) prohibits the disturbance or destruction of nests and eggs of migratory birds. Respect nesting periods.
 - A list of safe dates for nesting birds and required buffer zones is provided here: <http://www.birdatlas.mb.ca/download/safedates.pdf>
- The *Species at Risk Act* (2002) requires that potential adverse effects on a listed species at risk and the nature of those effects be considered.
 - LFG has Chimney swifts (*Calcarius ornatus*), which is an endangered species, and Barn swallows (*Hirundo rustica*), which is a threatened species. Both have special protections under the *Species at Risk Act*.
- *Canadian Environmental Protection Act* (1999).
- *Transportation of Dangerous Goods Act* (1992).

Definitions:

Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.

Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

8. Potential Environmental Issues and Impacts

Potential Project environmental issues and impact include:

- Spills of hazardous or toxic materials that are used by the contractor during the project.
- Erosion of exposed soil areas where drainage work will occur and along Monkman creek.
- Sediment movement into Monkman Creek, Red River or Waste water treatment system
- Contamination of soils from leaded paint scrapings.
- Impacts on nesting migratory birds.
- Impacts on Species at Risk (chimney swifts and barn swallows).

- Waste management issues.
- Impacts on soils and vegetation on site.

9. Project Specific Mitigation Measures

General Project Management Mitigation Measures

- 1) Clearly mark the work site and restricted areas with stakes, biodegradable flagging tape or other means to minimize the disturbance footprint; remove when the project is completed.
- 2) Staging areas, material/equipment drop sites, and parking areas must be identified, including duration of use, within an existing disturbed footprint (e.g., roadway, gravel surface, previously disturbed area with high resiliency) or approved by designated Parks Canada staff.
- 3) Use existing roadways, trails, disturbed areas or other areas as approved by designated Parks Canada staff for site access, travel within the site and construction activities.
- 4) Select equipment appropriate to the nature of work being conducted (e.g., avoid using large scale machinery when hand tools or smaller scale machinery could be used).
- 5) Equipment must be properly tuned, clean and free of contaminants, in good operating order, free of leaks (e.g., fuel, oil or grease), and fitted with standard air emission control devices and spark arrestors prior to arrival on site.
- 6) Any required cleaning of tools and equipment should be done off-site. If it must be on-site, it must be in an appropriate area at least 30m from a water body.
- 7) Ensure machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species, noxious weeds and soils from off-site.
- 8) Delineate the work zone; clearly mark the limits to active construction and the access and egress locations.

Describe how you will protect the ground surface when using scaffolding, equipment, when there is a risk of spills, etc. (e.g., no stripping, padding, plywood sheeting, tarps, winter construction, etc).

Contaminant and Spill Response Mitigation Measures

All of the measures listed below need to be followed – where specific information for this project and how you as a contractor carryout the project can be added for clarity, please do so.

The Spill Response Plan will, at minimum, need to include the following information

- a) *List of products and materials considered or defined as hazardous or toxic to the environment. Such products include, but are not limited to, waterproofing agents, grout, cement, concrete finishing agents, hot poured rubber membrane materials, asphalt cement, sand blasting agents, paint, solvents, hydrocarbons, fuels oils and hydraulic fluids.*

- b) Provide information about product-specific spill kits to products and materials stored and used on site.*
 - c) Describe the size, type and location of spill kits. Spill kits shall be provided at re-fuelling, lubrication, and repair locations that are capable of dealing with 110% of the largest potential spill and shall be maintained in good working order. Site staff shall be informed of the location of the spill response kit(s) and be trained in its use.*
 - d) Spill response procedures.*
 - e) Spill reporting procedures.*
 - f) Management and disposal of materials collected from the spill.*
- 1) Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) and Material Safety Data Sheets (MSDS) regarding use, handling, and storage of materials.
 - 2) Ensure that all on-site workers receive a briefing about the Spill Response Plan and are aware of the location and use of spill kits and containment devices.
 - 3) Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
 - 4) Follow all applicable regulations and codes for the management and handling of hazardous waste.
 - a) Identify and handle all toxic/hazardous materials as required under the Canadian Environmental Protection Act, Transportation of Dangerous Goods Act and Workplace Hazardous Materials Information System.
 - b) Dispose of contaminated materials at provincially certified disposal sites outside of Parks Canada land.
 - 5) Petrochemical products, paints and chemicals must be stored a minimum of 30 meters away from water bodies and, if left overnight, they must be secured.
 - 6) For potentially hazardous materials (e.g. cement-based products, sealants or paints) used on site, the contractor shall ensure raw material, mixed compounds and wash water are not released to any watercourse or soils. Measures such as collection/drip trays and berms lined with occlusive material such as plastic and a layer of sand, and double-lined fuel tanks can prevent spills into the environment.
 - 7) The costs involved in a spill incident (the control, clean up, disposal of contaminants and site remediation to pre-spill conditions), shall be the responsibility of the proponent. The site will be inspected to ensure completion to the expected standard and to the satisfaction of Parks Canada.
 - 8) Refueling must take place on an impermeable fuel mat with a berm or within a container.
 - 9) Leaks and spills during refueling must be cleaned up and contaminated materials must be disposed of appropriately. Fuel must never be dispelled or deposited into the environment or any water body.

- 10) Machinery must be stored, maintained and refueled on a flat surface, outside the drip line¹ of trees and a minimum of 30m from water bodies, as measured from the High Water Mark. Increase the buffer zone depending on level of risk and site specific conditions.
- 11) Spill prevention procedures (i.e., containment and storage of materials, security, handling, use and disposal of empty containers, surplus product or waste generated in the application of these products in accordance with all applicable federal and provincial legislation).
- 12) Spill response (i.e., containment, clean-up, disposal of contaminated materials, etc.). All spills must be contained and cleaned-up as soon as it is possible to safely do so. In the event of a major spill, all other work must stop until the spill has been adequately contained and cleaned up. Contaminants must be recovered at source and disposed of according to applicable laws, policies and regulations. The site will be inspected by Parks Canada staff to ensure completion to expected standards.
- 13) Spill reporting procedure.
 - a) Notify the designated Parks Canada staff and the emergency contact immediately of any spill.
 - b) In the event of a major spill, call the first contact authority.
- 14) Up-to-date emergency response contact list including contact information for reporting spills. *(fill in additional emergency contacts into the list in Section 11)*

Earthwork, Erosion and Sediment Management Mitigation Measures

An Erosion and Sediment Control Plan will be required for all earthwork. The following mitigation measures need to be incorporated into the Erosion and Sediment Control Plan.

- 1) Develop restoration plan as part of the project scoping and specifications prior to project approvals.
- 2) Wet down dry materials, if appropriate, and cover waste to prevent the wind from blowing dust and debris. If necessary to protect the heritage buildings from excessive dust, control dust on roads used by the on-site workers (including temporary roads).
- 3) For water draining through an area of exposed soils or being pumped from an excavated area, provide a settling pond or pool to ensure that sediments are not introduced into the water treatment plant or simply drained down the river bank.
- 4) Organic material (e.g, topsoil, borrow and fill material, gravel) taken from the construction site will not be used in other parts of the protected heritage place unless approved by the designated Parks Canada staff.
- 5) Minimize ground disturbance and vegetation removal, when possible.
- 6) Minimize bare soil exposure (e.g., cover stockpiled material with tarps, plant native species, cover with natural mulch/ground coverings).

¹ The area defined by the outermost circumference of a tree canopy where water drips from and onto the ground.

- 7) Stabilize and re-vegetate disturbed areas as soon as possible, ideally with native plants, soil and seed mix or otherwise approved by designated Parks Canada staff. If there is insufficient time remaining in the growing season, stabilize the site to prevent erosion and vegetate the following spring.
 - a) If erosion control blankets or other erosion control materials are required, use only fully biodegradable materials.
- 8) Monitor disturbed and re-vegetated areas until the designated Parks Canada staff establishes that vegetation is growing successfully and invasive alien species spread is prevented.
- 9) Excavation
 - a) Materials shall be placed at storage sites or on the grade without spillage outside the working limits. Any material inadvertently falling outside the work limits is to be removed promptly in a manner that does not damage trees or vegetation.
 - b) All erosion and sediment control measures must be in place before starting work in the vicinity of rivers, water bodies, watercourses, and wetlands.
 - c) Special precautions may have to be taken during excavation in the vicinity of intermittent or active drainage channels.
 - d) Excavation plans must be compared to local archaeological resource inventories, if available. If no archaeological information is available for the work area, an Archaeological Overview Assessment (AOA) may be required to determine the archaeological potential of the work area. Based on the results from the AOA, an Archaeological Impact Assessment might be required. It would be time and cost efficient to refer the plan to Parks Canada's Terrestrial Archaeology section before conducting any excavation to determine the appropriate course of action.
 - e) If cultural resources (eg. archaeological resources) are discovered, immediately cease work, and alert PCA Project Manager.
 - f) Minimize changes to the ground surface that affects its infiltration and runoff characteristics and maintain/re-establish effective surface drainage on completion of the project.
 - g) Backfill and compact excavations as soon as possible. Optimize degree of compaction to minimize erosion and allow for re-vegetation.
 - h) All trenches or ditches left unattended overnight must be fenced or covered for public safety and to prevent wildlife entrapment.
- 10) Soil Stripping
 - a) Strip topsoil under dry conditions, whenever possible.
 - b) No stripping shall occur outside of the delineated work area or within 1 metre of the drip line of existing forest.

- c) In the event of a work program shutdown during inclement weather (e.g. winter conditions unfavourable for construction, heavy rain events, construction delays, etc.) erosion control of bared soils or excavated material stockpiles is required.
 - d) Salvage topsoil at all excavation sites for reclamation purposes.
 - e) Usually the upper 15 cm of soil, below the sod layer if present, is considered topsoil, where depths exceed 15cm salvage the entire depth of topsoil.
- 11) Vegetation restoration is most effective if seeded in the fall, this allows for full scarification of the seed over the winter and adequate moisture available. Spring and early summer will also work, consider using seed that requires shorter scarification times for these applications. Transplants will do best in the spring and summer and will require adequate watering.
- 12) Seeding
- a) Select seed lots based on indigenous species variety and quality (guaranteed weed seed free content and highest purity and germination), consult with Impact Assessment Officer.
 - b) Reject any seed lots containing any seed of undesirable crop or weed species.
 - c) Use approved native seed mixes developed for site-specific conditions for various elevations.
 - d) Seed and stabilize (e.g. mulch/tackifier) bare areas as soon as possible after disturbance, preferably as soon as a significant area is graded and finished and before the next rain event. If there is a risk of seedling mortality as a result of fall frost stabilize until appropriate growing conditions exist.
 - e) Use sod in high traffic areas or places that need extra erosion control. Source sod grown from native species (often called fescue sod) and ensure adequate anchoring and watering is in place.
 - f) Use temporary seeding when outside the seeding dates for permanent vegetation
 - g) Apply a seed mixture which is appropriate for the climate, soil, and drainage conditions of the site.
 - h) Apply seed at a rate appropriate to the seed mixture, seeding method and existing vegetation conditions.
 - i) Conduct broadcast seeding under calm wind conditions. Hydro-seeding is acceptable where access is available.
 - j) Avoid use of fertilizer to limit non-native vegetation growth and allow for local species to use available nutrients.
 - k) If needed use locally sourced mycorrhizae compost teas to improve vegetative success

Wildlife, Species at Risk and Migratory Birds Mitigation Measures

- 1) On-site workers must be made aware of Chimney swifts (*Calcarius ornatus*), which is an endangered species, and Barn swallows (*Hirundo rustica*), which is a threatened species and subsequently report any incidental sightings of species at risk immediately to designated Parks Canada staff.
- 2) Never approach or harass wildlife (e.g., feeding, baiting, luring).
- 3) Control materials that might attract wildlife (e.g. petroleum products, human food and garbage). Avoid or terminate activities on site that attract or disturb wildlife.
- 4) If a nest is found during the pre-work surveys, the vegetated area will be left intact with a suitable sized buffer of shrubs/trees around it until the young have fledged and left the nest. Size of buffer species dependent, to be determined in consultation with PCA Impact Assessment Officer and consulting <http://www.birdatlas.mb.ca/download/safedates.pdf>
- 5) If previously unknown active nests, dens or roosts are discovered during the project work, stop work and contact designated Parks Canada staff immediately for direction.
- 6) Comply with *Migratory Birds Convention Act*, and *Species at Risk Act* for work taking place between mid-April and mid-August annually.
 - a) The *Migratory Birds Convention Act* prohibits the disturbance or destruction of birds, their nests and eggs. Respect nesting periods.
 - b) Advise Parks Canada if an active nest or indicated nest (behaviour indicative of nesting such as aggression, distraction or territorial behaviour; carrying of fecal sacs, nesting material or food) is found outside the breeding and nesting season. Protect active and indicated nests with species-appropriate buffer in accordance with the Manitoba Breeding Bird Atlas – Safe Dates <http://www.birdatlas.mb.ca/download/safedates.pdf>
- 7) The *Species at Risk Act* provides protection for a listed species and for the habitat of the listed species. LFG has Chimney swifts (*Calcarius ornatus*), which is an endangered species, and Barn swallows (*Hirundo rustica*), which is a threatened species. Both have special protections under the *Species at Risk Act*.
 - a) Work with the Parks Canada Impact Assessment Officer to determine when it is safe to begin work where Species at Risk are present or migratory bird habitat may be affected.
 - b) The Fur Loft and the Museum have been used by Chimney Swifts. The most western chimney on the Fur Loft is a nesting site and the western chimney on the Museum building is roosting habitat. These chimneys are both residences for chimney swifts and it is illegal to damage their residence. Schedule any work on these two roofs to begin after the second week of July. Do not work on the roof surrounding the chimney or the chimney itself until after mid-August.
 - c) Maintain 5 m radius “no work zone” around chimneys on the west end of the roof on the Fur Loft and Museum until after mid-August.
 - d) Active Barn swallow nests may not be disturbed. Delay any work in the vicinity of an active barn swallow nest until after young birds have left the nest.

Waste Management Mitigation Measures

- 1) Follow waste management measures as outlined in Sections 01 74 11 Cleaning, and 01 74 21 Construction Demolition Waste Management and Disposal.
- 2) Contain and stabilize waste material (e.g., construction waste and materials, vegetation) at a minimum of 30m from a water body.
- 3) If present, portable sanitary facilities must be serviced on a regular basis and accumulated waste disposed of at a sanitary waste disposal facility. The portable facilities must have sufficient capacity and be managed to ensure waste is not discharged to the environment.
- 4) Follow all applicable regulations and codes for the management and handling of hazardous waste.
 - a) Identify and handle all toxic/hazardous materials as required under the *Canadian Environmental Protection Act, Transportation of Dangerous Goods Act* and Workplace Hazardous Materials Information System.
 - b) Dispose of contaminated materials at provincially certified disposal sites outside of Parks Canada land.
- 5) Site Cleanup/Waste Disposal
 - a) Clean tools and equipment off-site to prevent the release of wash water that may contain deleterious substances.
 - b) Where possible, sweep up loose material or debris. Any material thought to pose a risk of contamination to soils, surface water or groundwater should be disposed of appropriately off-site.
 - c) Construction, trade, hazardous waste and domestic waste materials shall not be burned, buried or discarded at the construction site or elsewhere in Parks Canada protected heritage places. These wastes shall be contained and removed in a timely and approved manner and disposed at an appropriate waste landfill site located outside the Parks Canada protected heritage place. Construction waste storage containers, shall be emptied when 90% full. Waste containers will have lids, be wildlife proof and waste loads shall be covered while being transported.
 - d) Remove excess excavated material from site where it cannot be used for the final grading of the area. Site specific arrangements must be made for disposal locations and procedures of overburden
- 6) All construction sites must be equipped with containers suitable for the secure, temporary storage of hazardous wastes, separated by type.

10. Monitoring and Reporting

Contractor should have someone identified as the primary person responsible for monitoring any issues that arise related to the mitigation measures in this EPP. Parks Canada staff will be monitoring the work on the project for a variety of potential issues and concerns. It is anticipated that the contractor will also

have a monitoring and reporting approach for any issues that might arise. Please describe the monitoring and reporting process here. If you have forms that you use, please attached a copy of your forms.

Monitoring plans should describe:

- what will be monitored and at what frequency, both during and following construction. Post construction monitoring should evaluate the success of mitigation and identify what further reclamation measures may be required;
- who will do the monitoring and his/her qualifications, or if unknown, the qualifications which the monitor will require;
- the monitor’s authority to halt construction or to make changes to avoid or reduce impacts. This authority should be provided in writing;
- Reporting procedures when the monitoring determines that some sort of remedial action is required.
- Post-remediation approval process.

Attach a monitoring form in an Appendix to this EPP.

11. Emergency Contact information

Local emergency response information is provided in the following Table.

Provide information about how your company will implement an emergency response plan. Information should address:

- Fires – include information about how flammable substances will be stored and documented so that immediate information can be provided to the Fire Department.
- Spills – minor and major – include information about how workers will be protected from potential harm when managing a spill. Include information about who would be called, the process of cleaning up a spill, how the material would be handled and disposed of, and how this would be documented and reported.

Table 2 – Emergency Contact List

Issue	Name	Number
Emergency Services – Fire, Ambulance, Police		911
Non-Emergency Contacts		
Hospital	Selkirk Regional Health Centre 120 Easton Dr., Selkirk, MB	(204) 482-5800
Police	RCMP 1019 Manitoba Ave., Selkirk, MB	(204) 482-1222
Fire Department	St. Andrews Fire Hall 5610 Highway #9, St. Andrews	(204) 757-4748

Spills	Parks Canada Impact Assessment Officer – Harv Sawatzky	(204) 984-8604 or (204) 481-1006
	<i>Insert company Contact name(s)</i>	<i>Number(s)</i>
Manitoba Hydro	24 Hour Emergency Line	1 (888) 474-0707
Emergency Measures Organization		(204) 945-4722
Manitoba Conservation and Water Stewardship Accident Reporting	24 Hour Emergency Line	(204) 945-4888