LIFE ON THE BAY

A STEWARDSHIP GUIDE FOR EASTERN GEORGIAN BAY AND INLAND LAKES

United Nations Educational, Scientific and Cultural Organization

GEORGIAN BAY BIOSPHERE MNIDOO GAMII

Worksheet #2 - Construction on Land

Use this worksheet to assess potential opportunities and constraints regarding construction.

Why Should You Be Concerned?

- Your property is part of the larger landscape. Any project you undertake will not only affect your immediate neighbours, but also have important consequences for the land and water farther away.

- There may be existing legislation, regulations, and zoning that affect your project plans. Check with your municipal office and NDMNRF office to ensure that your project is permissible.

- You should ensure that your project is completely contained within your property. Often, property lines are not readily apparent or contain covenants with the Crown, easements, and/or rights of way. Check or have a lawyer check with the Land Registry Office for your area to see if your property has any of these constraints that may affect where you may build.

- Many lots on Georgian Bay have, or had, an original shore road allowance which means you may not own the waterfront.

- Shorelines and lake bottoms along the shore are protected under federal legislation including, but not limited to, the Fisheries Act. Under this legislation, the onus falls on water adjacent property owners to ensure that they do not “harmfully alter, disrupt, or destroy” fish habitat.

What Can You Do?

1. Make a plan including an inventory of existing plants, features, and structures. (Helpful hint: you could make a copy of your property map from Chapter 1). Include a photo log of your property from different angles. This will help your planning in the offseason. Strive to minimize your impact on existing trees and other natural features.

2. Start early and be organized. The permitting process may take more than several months.

3. Protect yourself: keep records, including permit applications, and take photos throughout the construction process. These can be useful if disputes should arise with agencies or neighbours in the future.

4. Ensure that all construction wastes are properly managed.

5. Be a land steward: contact your local NDMNRF office if you witness or observe shoreline alterations or potential environmental damage. You can call the NDMNRF toll-free reporting line (24 hours, 7 days a week) or for anonymity, contact Crime Stoppers. See resources list for information.

Construction on Land: How Do You Rate?

Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
PERMITS & REGULATIONS					
1. **Knowledge and understanding of the application process**	Planning begins at least one year before work is to begin. Check with local municipality to determine if a permit is required.			No planning involved. Expect an immediate start. **Necessary permits are not obtained.*	☐
PREPARING A SITE PLAN					
2. **Knowledge of existing natural features of the property**	Thorough understanding of natural features, including long-term history of water levels.	Identification of existing and/or sensitive natural features or areas.	General idea of existing natural features.	No knowledge of existing natural features or sensitive areas.	☐
Knowledge of the impact of construction on existing natural features of the property	Proposed construction will not harm sensitive natural features.	Awareness of the potential for construction impact and precautions taken.	Awareness of the potential for construction impact.	**Disregard of potential for construction impact. No precautions taken.*	☐

**These conditions may violate provincial legislation or municipal bylaws.*

Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
PREPARING A SITE PLAN					
3. **Size and location of various activity areas**	Intensively used areas and paths are concentrated and located away from the water's edge, away from steep slopes, and behind vegetation (if possible). Paths follow natural contours. Proposed construction areas are cognizant and respectful of where neighbours have located their existing structures/activity areas.		Intensively used areas are not near surface water but in locations that might cause erosion, affect natural water courses, and/or affect areas of vegetation.	Intensively used areas are near surface water, in locations which will result in erosion, and will significantly diminish existing natural vegetation. No thought is given to the impact of structures and/or activity areas on neighbours, existing vegetation, waterfowl, or animals.	
4. **Wind and sun**	Where possible, habitable structures are sheltered by existing vegetation so as to provide a sun shelter and resultant cooling. Permanent residences are situated to benefit from passive solar gain in winter.	Where possible, habitable structures are located in areas with minimal shelter, but where native tree species for wind and sun protection are planned.		No consideration given to location of structures relative to wind and sun protection.	

Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
DURING CONSTRUCTION					
5. **Minimize erosion and/or compaction**	Project area is divided into smaller projects and completed sequentially.	Only the area necessary for the project is cleared.	Large areas are cleared but vegetation is restored.	Entire property is cleared at once.	☐
	Where it exists, a buffer strip of natural vegetation as wide as possible is retained along shorelines.	Project plans require minimal removal of trees and shrubs in buffer strip.	Most vegetation in buffer strip is maintained but undercutting of limbs and clearing of underbrush occurs in large areas.	Buffer strip of natural vegetation is completely removed.	☐
	Project does not interfere with existing surface runoff patterns.		Project interferes minimally with existing surface runoff patterns.	Project interferes with existing surface runoff patterns.	☐
	Disturbed areas are replanted as quickly as possible with native species.	Disturbed areas are replanted as quickly as possible with non-invasive species.	Bare soil is covered immediately with burlap and/or mulch.	Bare soil is left exposed.	☐
	Use of machinery is minimal. Machinery used is appropriate for the size of the job.	Machinery is used but some measures are taken to utilize existing cleared corridors.	There is indiscriminate use of machinery and new corridors through vegetation are cut for convenience.	Heavy machinery is used excessively with significant clearing of vegetation.	☐

Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
DURING CONSTRUCTION					
6. Location of construction facilities and access	All construction materials are stored away from downspout openings and watercourses.	All construction materials are stored away from downspout openings.	Only hazardous construction materials are stored away from downspout openings and watercourses.	Construction materials are stored without regard for runoff patterns.	
	Vehicle access is restricted to designated areas to minimize site disturbance and soil compaction.	Vehicle access is kept away from steep edges, shorelines, slopes, and other sensitive areas.	Concern about compaction is limited to septic leaching bed.	Vehicles are parked or driven throughout site.	
	Toilet facilities are available.			Toilet facilities are not available.	
	Shoreline and watercourse features are not interfered with by the location of facilities and access.		The location of facilities and access minimally interfere with shoreline or watercourse features.	**Location of facilities and access interfere with shoreline and watercourse features.*	

**These conditions may violate provincial legislation or municipal bylaws.*

Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
DURING CONSTRUCTION					
7. **Protecting existing features**	Check if there is a municipal bylaw that protects the trees on your property. Design or plan accordingly.	Develop a plan or design first, then check if there is a municipal bylaw that protects the trees on your property. Proceed accordingly.		**Cut trees down on your property without checking if a municipal tree-cutting bylaw exists.*	☐
	Protect trees from damage caused by digging and heavy machinery. Avoid removal of any trees for construction.	Protect trees from damage caused by digging and heavy machinery. Clearly mark those trees that need to be felled to avoid unnecessary tree removal.	Trees are not protected during construction, but any damage incurred is immediately and appropriately handled.	Damage to tree trunks, limbs, and roots is left unattended.	☐
	Soil grade is not altered. Soil around trees is not compacted.	Soil grade is not altered within 3 metres (10 feet) of dripline of any trees to be preserved. There is minimal soil compaction near dripline.	Soil grade is partially altered in sections within dripline. Materials are stored within the dripline for limited periods of time.	Soil grade level within the dripline is permanently altered from pre-construction level. Soil is compacted around trees.	☐
	Septic bed, well(s), and environmentally sensitive features such as wetlands are protected from construction activity. Distance requirements are respected.	Septic bed, well(s), and environmentally sensitive features such as wetlands are protected from construction activity.	Septic bed and well(s) are protected from construction activity.	**Distance requirements are not considered in protected septic bed, well, or environmentally sensitive features.*	☐

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Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
DURING CONSTRUCTION					
8. **Purchasing and location of soil or fill**	No use of off-site soil or fill.	Limited use of off-site soil and/or fill. Awareness of the source of soil and/or fill. No excess or unnecessary fill is used. Approval is obtained.	Limited use of off-site soil and/or fill. No awareness of the source of soil and/or fill. Approval is obtained.	Excessive use of off-site soil and/or fill. **Fill is dumped in any fill-regulated area such as a shoreline.*	☐
9. **Blasting**	No blasting or removal of rock by any means.	Limited fracturing and removal of rock using a non-explosive demolition agent.	Limited blasting is completed. Blasting mats are used. Blasted rock is not placed in wetlands or in the nearshore area.	Multiple blasts are completed. *Blast rock is dumped in any fill-regulated area such as a shoreline.*	☐
10. **Construction materials**	Local non-hazardous materials used where possible. Materials obtained in a responsible and appropriate manner.	Non-hazardous materials used where possible. No use of oil-based paints or varnishes.	Minimal use of hazardous materials where necessary.	Hazardous materials are used. Materials sourced unnecessarily from far away or from environmentally damaging production practices.	☐

**These conditions may violate provincial legislation or municipal bylaws.*

Topic	Best 4	Good 3	Fair 2	Poor 1	Your Rating
DURING CONSTRUCTION					
11. Construction waste	Local municipality is contacted before construction to learn how to properly sort and dispose of construction waste. It is ensured that contractors dispose of waste appropriately.	Reputable waste removal/disposal company is hired to remove and appropriately dispose of all hazardous waste.	Care is taken to prevent paint or solvents from getting into wastewater, septic system, or open surface water.	**Waste material or excess fill is dumped into open surface water,* **Waste material is burned (including in burn barrels).*	☐
	Waste containers are clearly labelled and waste materials are recycled or repurposed where possible.	Waste containers are clearly labelled.		Waste is not sorted and recycling of material is not a priority.	☐
	Absolutely no concrete or construction wash water flows into open surface water, towards trees, or into septic system.			**Concrete or construction wash water is allowed to flow into open surface water or is drained into septic systems.*	☐

**These conditions may violate provincial legislation or municipal bylaws.*

Helpful Hints

Permits and Regulations

- Make sure you review an updated legal survey of your property before you begin construction. Property boundaries are often difficult to find.

- The Ontario Endangered Species Act, Section 9-1 states that “No person shall, kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species”. Section 10-1 states that “No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species”.

Preparing a Site Plan

- Hire qualified contractors who will respect your land and plans. Use written contracts to clearly outline responsibilities and expectations.

During Construction

- Protect all soil/sand piles from erosion and avoid construction during heavy rains (i.e. cover with tarps and/or locate in sheltered areas).

- Place straw bales around vulnerable features such as wetlands and between sand/dirt piles and shorelines. Heavy duty silt fencing can trap and kill snakes, it should only be used if maintained in an upright position and inspected daily.

- Plan to be on-site any time trees are to be removed.

- Know where your topsoil or fill is coming from – it may bring contaminants and invasive species onto your property.

- Keep in mind that the volume of rock displaced by blasting is 2-3 times greater than in its original state.

- Paint of any kind is a hazardous substance. Take unwanted paint to your local hazardous waste depot or return it to the place of purchase. It is illegal to pour paints or thinners into runoff channels or surface water. Inform your painting contractor of your need for compliance.

Resources List

Government

- Report Natural Resource Violations
  www.ontario.ca/page/solve-natural-resource-case

- How Species at Risk are Protected
  www.ontario.ca/page/how-species-risk-are-protected

- Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)
  www.ontario.ca/page/ministry-northern-development-mines-natural-resources-forestry

- Ontario Building Codes
  www.ontario.ca/page/ontarios-building-code

- Ontario Building Permits
  www.ontario.ca/document/citizens-guide-land-use-planning/building-permits

- Land Registry
  www.ontario.ca/page/land-registry-offices-lro

- Outdoor Fire Rules and Permits
  www.ontario.ca/page/outdoor-fire-rules-and-permits

Conservation & Stewardship

- Building in the Biosphere Habitat Screening Tool
  www.gbbr.ca/building-in-the-biosphere-habitat-screening-tool

- Living Alongside the Massasauga Rattlesnake
  www.youtube.com/watch?v=79qVL-ogUks

- Georgian Bay Biosphere Species at Risk Database
  www.gbbr.ca/species-at-risk

- Green Building Canada
  www.greenbuildingcanada.ca/green-building-guide

Action Plan Worksheet #2

Construction on Land

Any ratings of 1 or 2 indicate areas where your construction project may need to be changed to reduce the potential for environmental damage and water contamination. Use the information from the worksheet and the resource list to help analyze your potential problems and decide what you can do to solve or control them. Remember, this is YOUR action plan. It must suit you and your property.

Topic Number	Workshop Theme	My Rating	Short-term Action	Long-term Action
4	*Wind and sun*	*1*	*Identify where and which native tree species you will plant to gain protection from wind/sun and allow for winter solar gain.*	*Purchase, plant and care for trees, particularly their watering needs.*

Thank You
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The Georgian Bay Mnidoo Gamii Biosphere (GBB) is a community-based organization that builds capacity for regional sustainability in eastern Georgian Bay.

The GBB is a non-profit registered Canadian charity governed by a Board of Directors.

For more information, please visit:

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