

Acton Quarry – Proposed Extension

Natural Environment

Pre-Submission Liaison Committee Information Session

January 22, 2009



Session Summary

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- 2. Site Characteristics**
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1.1 Welcome

- Thank you for joining us today.
- Dufferin is committed to the public consultation process and working with you as representatives of the community
- We hope today's discussion offers an opportunity to familiarize yourself with Natural Environment related matters
- We appreciate your continued participation in this standing committee over the next 2+ years.
- Please don't hesitate to contact Dufferin:
 - Andrea Bourrie, MCIP, RPP Property & Resource Manager
 - Enzo Bertucci, BLA, Property & Resource Project Manager



1.2 Introduction

- Natural Environment Team: Stantec, Ecoplans, and Goodban Ecological Consulting.
- Working in close collaboration with water resources, engineering, planning and operations.
- Studies completed during 2001 – 2008; with ongoing data collection.



1.3 Study Background

- Multi-Year effort that includes data collection on the following:
 - ▶ Vegetation and flora
 - ▶ Soils
 - ▶ Fish and aquatic habitat
 - ▶ Benthic macroinvertebrates
 - ▶ Insects (butterflies, dragonflies and damselflies)
 - ▶ Frogs and toads
 - ▶ Salamanders
 - ▶ Reptiles (snakes, turtles)
 - ▶ Breeding birds
 - ▶ mammals



2.1 Site Characteristics

- Study Area situated within two main watersheds: Black Creek and Sixteen Mile Creek.
- Black Creek drains into Lake Ontario via Credit River.
- Sixteen Mile Creek tributaries drain into Scotch Block Reservoir, eventually drains into Lake Ontario.



Black Creek Valley



3.1 Wetlands



- Many wetlands associated with Escarpment forests
- Important wetlands will be protected and buffered
- Additional wetlands will be created as enhancement areas and as part of the rehabilitation plan.



4.1 Woodlands



- Major forest blocks associated with Halton Forest, which covers 35 square km.
- Sugar Maple dominates most forests; Hemlock occurs locally.
- White Cedar and Poplar dominate younger forests on former agricultural land.
- Key forest blocks are protected and buffered.
- Enhancement & Rehabilitation Plan provides for reforestation and active forest management.



5.1 Endangered Species

- Endangered/threatened species in the study area include:

- ▶ Butternut
- ▶ American Ginseng
- ▶ Jefferson Salamander
- ▶ Hooded Warbler



- Important habitats of endangered/threatened species are protected and enhanced.



6.1 Wildlife Habitat



American Toad



Garter Snake

- Area-sensitive bird species associated with large forest blocks.
- Amphibian woodland breeding pools within large forest blocks.
- West Virginia White butterfly habitat.
- All important wildlife habitats are protected.

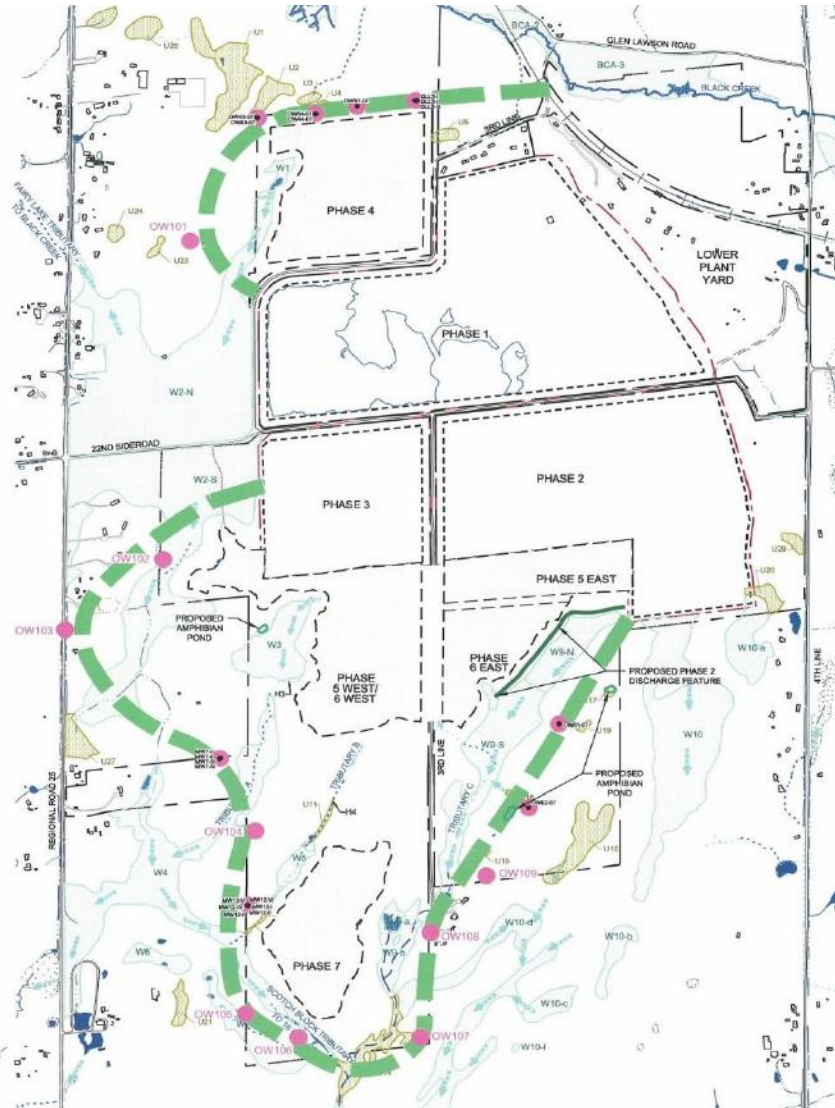


7.1 Quarry Footprint

- Mainly active or former agricultural lands.
- Removal of woodlands and wetlands within the footprint will be offset by creation of new features.
- Mitigation through avoidance; all important natural features and functions are protected from direct impacts.



7.2 Mitigation – Water Management & Adaptive Management Plan (AMP)

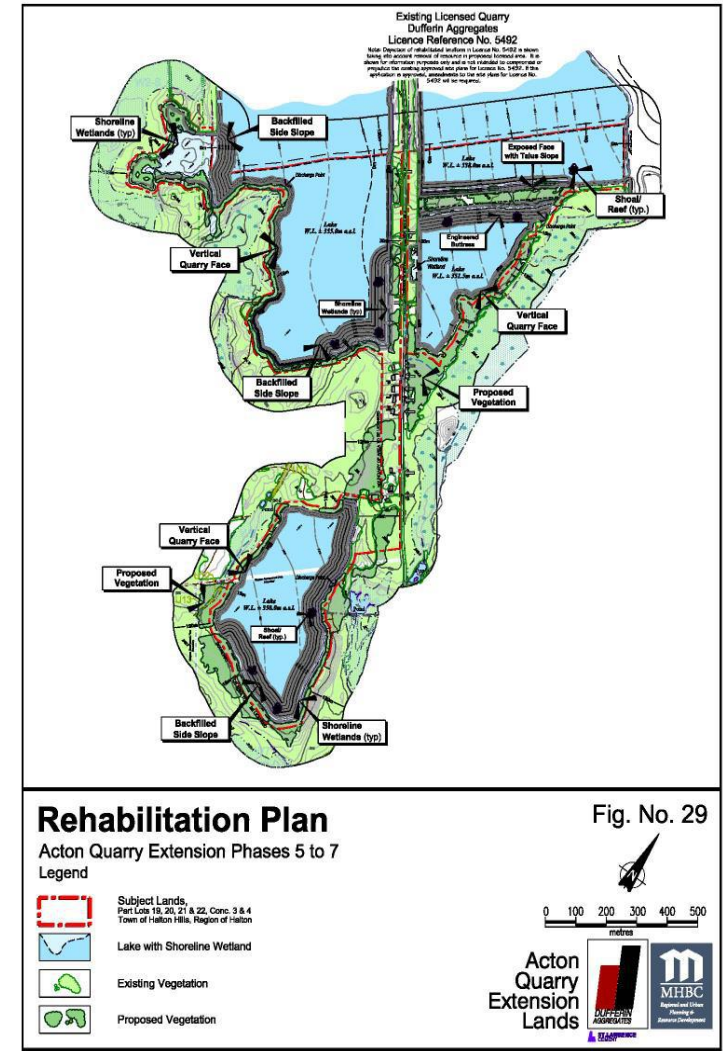


- Ensure protection of wells, water related ecological features and support Regional groundwater levels.
- Includes 3 key elements:
 - ▶ Performance Based Targets (PBT's);
 - ▶ Interim mitigation measures;
 - ▶ ongoing monitoring and extensive reporting requirements.



7.3 Rehabilitation & Enhancement Plan

- Key components of Rehabilitation are:
 - ▶ Diverse landforms, vegetation and natural environment linkages are created/enhanced.
 - ▶ Integration within the surrounding area.
 - ▶ Enlarge significant woodlands and improve the habitat for target species using locally-sourced native plants and active restoration techniques.



7.4 Net Environmental Gain

- 49.4 ha of new woodlands that enlarge important woodlands and improve linkages.
- 56.7 ha of active forest management aimed at improving vegetation characteristics and habitat for specific bird and amphibian species.
- 0.3 ha of new wetland that provides potential habitat for Jefferson Salamander.
- 6.5 ha of new shoreline wetlands around lakes;
- 2.7 km of dolostone cliff, complementary to the Escarpment landscape;
- 680 m of talus slope;
- 90 ha of lakes - aquatic habitat and future fisheries resource;
- 11.8 ha of grassland management - habitat for birds, small mammals and snakes.

