



G R E E R  
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July 5, 2017

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**Re: Technical Peer Review  
Natural Environment Levels 1 and 2 Technical Report  
Proposed Freymond Lumber Ltd. Quarry  
2287 Bay Lake Road, Part Lots 51 and 52, Concession WHR,  
Township of Faraday, County of Hastings  
GGG Project No. 17-3-8211**

Dear Ms. Heintzman,

Further to your request I have completed a technical peer review of the Natural Environment Levels 1 and 2 Technical Report prepared November 2016 by Robin E. Craig. The report was prepared as part of the information required to be submitted as per the Licence Applications: Natural Environment Report Standards, March 15, 2016.

Based on the review of the Natural Environmental Report, I have the following comments:

*Natural Environment Level 1:* Evaluate presence of significant natural features on-site or within 120 metres of the site.

1. **Significant Wetlands.** Background information and site visits were used to determine whether Provincially Significant Wetlands exist on-site or within 120 metres of the site. Based on the information from the MNRF-Make a Map: Natural Heritage Areas, I support the statement that the site and the 120 metres adjacent area are not within a PSW; however, species found in wetlands such as cattail, ferns, red osier dogwood, etc. are listed in Appendix 1: Vegetation Species List of the report. A description of where these species were found is not included in the report.
2. **Significant Woodlands and Valleylands.** The evaluation criteria for significant Woodlands and Valleylands is the responsibility of the planning authority. On page 19 of the report, Section 6, Subsections 6.4 and 6.5 state that "the site is on the Canadian Shield therefore significant woodland policies do not apply". Discussion of whether or not the site and surrounding area are within a significant Woodland or Valleyland should be based on the land use

designated in the official plan or communication with the MNRF and information from the surveys.

3. **Significant Habitat of Endangered and Threatened Species.** The analysis provided regarding the species is acceptable. The first sentence of Section 2.0 states that “all accessible natural heritage information was reviewed prior to on-site surveys” but the report does not indicate whether the MNRF was contacted to obtain information regarding SAR records.
4. **Fish Habitat.** The information provided in the report regarding description of the Fish Habitat is not sufficient, considering water from the SWMF will be discharged into the south stream which is within 120 metres of the site and discharges into the York River. Also, fish and fish habitat site locations are not included in any map included in the report. Additional information of the description of the fish habitat (including the area proposed for the discharge of the water from the SMWF) should be provided.

*Natural Environment Level 2:* Evaluation of negative impacts on the natural features or ecological functions, and any proposed preventive, mitigative or remedial measures.

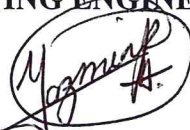
The following comments apply to the mitigation measures included in the report and the hydrogeological report (MTE, 2016):

1. Mr. Craig states that red pine will be used to reforest and create a forested condition in order to ensure the original forest community and its ecological functions are restored. It is recommended that reforestation of the affected areas includes species similar to those found in the site and surrounding area, and that the proposed species are included in the operation plan and/or rehabilitation plan as required by the MNRF letter dated April 3, 2017.
2. It is recommended that grass/legume species proposed for rehabilitation of Phase 1 be included in the report or in the rehabilitation plan as required by the MNRF letter dated April 3, 2017.
3. The Phase 1 extraction area is proposed to be rehabilitated with grass/legumes species as part of the Rehabilitation Plan and used as a storage area for logs. Rehabilitation using grass/legume species and the use of the Phase 1 area as a storage area for logs contradicts the statement in page 30, third paragraph of Section 10.0 Conclusions: “Progressive rehabilitation is proposed to restore the site to a forest ecosystem and forest habitats in the long term”.
4. The justification to use grass/legume species in the Phase 1 area instead of species characteristic of the existing forest community should be provided.
5. Discussion of how the use of grass/legume species will help to restore or improve the natural features and ecological functions is not discussed.
6. In the rehabilitation plan, the area to be used as storage is significant. The total area of the storage and its effect on the restoration of the natural features and ecological functions of the Phase 1 area are not mentioned in the report.

7. As part of the remedial measures, a monitoring program should be included in the report for monitoring of the rehabilitation planting and control of invasive and/or exotic species.
8. Page 28 Subsection 8.1.2, states that “there will be no negative impacts to significant Eastern Wood-pewee habitat”; however, the storage area designated for the overburden obtained from Phase 1 will be located on the Eastern Wood-pewee habitat. Impacts should be re-evaluated or more information provided to ensure Eastern Wood-pewee habitat will not be affected.
9. Page 29 Section 8.2 Fish Habitat of the report states that “the mitigation and monitoring program recommended in the Hydrogeological report (MTE, 2016) will ensure that there will be no negative impacts to quality and quantity of water flowing from the site, therefore will be no impacts to fish or fish habitat”. The hydrogeological report does not include monitoring of the fish habitat to ensure no impacts. A monitoring program for the SWMF, the pond, and the south creek should be prepared and submitted as part of the ECA application for the construction of the Ponds approval since residual ammonia and other chemicals from blasting (mentioned in the hydrogeological report) are toxic to fish or other aquatic organisms if present.
10. I agree that the creation of a pond will provide habitat for aquatic species. I recommend providing information regarding the size of the pond, the type of water to be found in the pond (surface water or groundwater) and how the chemistry of the water will be monitored to ensure no effects on flora and fauna.
11. Photographs of the natural features taken during the surveys should be provided as part of the supporting documentation.
12. A justification of the use of the term “Short term disruption” to describe the impact of land clearing for the extraction mentioned in page 28, subsection 8.1.1 General Wildlife Habitat Impact and Mitigation should be provided. The operation of each of the quarry phases has been estimated as more than 10 years.
13. Is the drainage collection swale described in the hydrogeological report the same as the watercourse mentioned in the natural environmental report? More information is needed.

If you have any questions, please do not hesitate to contact me.

**THE GREER GALLOWAY GROUP INC.  
CONSULTING ENGINEERS**



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April 9, 2018

Mr. L. Freymond  
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## **Re: Response to the Technical Peer Review Comments**

Dear Mr. Freymond;

This letter is in response to the comments made by The Greer Galloway Group Consulting Engineers Inc. in a letter dated July 5, 2017 regarding the Natural Environment Report (NETR) for the proposed Freymond Quarry from the County of Hastings. This response will address the concerns in the order in which they were presented in that letter.

### **1. Significant Wetlands**

**Reviewer concern:** "...species found in wetlands such as cattail, ferns, red osier dogwood, etc. are listed in Appendix 1: Vegetation Species List of the report. A description of where these species were found is not included in the report."

#### **Response**

The vegetation community on the site is a deciduous dominated forest consisting of Hard Maple (50%), Poplar (20%), White Birch (10%) and white Pine (10%) (NETR Section 5.3.1). Within this forest community there are 3 woodland ponds (Section 3.4) one of about 1250 sq m and 2 of about 1500 sq m and a permanent unnamed stream is found within 120 m south of the site (see Figure 2, page 7 of the NETR). Vegetation species that may be associated with wetlands were found in or near these ponds and the stream.

### **2. Significant Woodlands and Valleylands**

**Reviewer concern:** "Discussion of whether or not the site and surrounding area are within a significant Woodland or Valleyland should be based on the land use designated in the official plan or communications with the MNRF and information from the surveys."

### **Response**

OMNR Policy A.A. 2.01.07 provides the standards for the preparation of a Natural Environment Report to support an aggregate application. It states that “A Natural Environment Level 1 report determines whether one or more of the following features exist on or within 120 metres of the site: feature c) significant woodlands (south and east of the Canadian Shield) and d) significant valleylands (south and east of the Canadian Shield). Since the site is on the Canadian Shield significant woodlands and valleylands need not be determined.

With respect to consultation with the official plan for the site; The County of Hastings OP (2009) Schedule A 5-1 Township of Faraday, The County Interactive Mapping site and the 2014 Provincial Policy Statement (PPS) were reviewed (Section 2.0). The site is zoned “Rural” except along the eastern edge which is zoned “Industrial” (Section 2.7). There are no significant woodland or valleyland designations on or within 120 m of the site.

With respect to the Provincial Policy Statement the subject property is located north of the natural heritage line as shown on Figure 1 of the PPS and based on the policies of the PPS significant woodlands and valleylands are not applicable to the application.

For these reasons survey information was not used to determine the presence of significant woodlands or valleylands.

### **3. Significant Habitat of Endangered and Threatened Species**

**Reviewer concern:** “...the report does not indicate whether MNRF was contacted to obtain information regarding SAR records.”

### **Response**

In May 2009, prior to field work beginning on the site, the OMNRF on-line Species at Risk List for Ontario was consulted (Section 2.0). It was consulted regularly after this to ensure that surveys reflected the most update information about the site and species at risk. In 2010 OMNRF Bancroft District was contacted and responded providing a species at risk list for the site and general area (Section 2.0). These sources of information resulted in developing a list of 8 endangered and threatened species that were considered to have potential to be present on a forested environment such as is found on the site (Section 2.1).

The OMNRF Natural Heritage Information Centre (NHIC) web site was consulted regarding natural heritage information for the site. This resulted in one additional endangered species that had potential to be present on the site (Section 2.2).

The Atlas of Ontario Breeding Birds (OBBA), the Ontario Reptile and Amphibian Atlas (ORAA) and the Ontario Butterfly Atlas (OBA) were also consulted regarding species at risk (Sections 2.3, 2.4 and 2.5). No additional endangered or threatened species were found with potential to be found on or within 120 of the site.

After reviewing several OMNRF sources and 3 independent sources a total of 9 endangered and threatened species were identified with potential to be found on or within 120 m of the site and these are discussed in the report (Sections 6.2.1 and 6.2.2). In addition, at the request of OMNRF, the applicant has provided additional information related to the presence of Pale-bellied Frost Lichen and endangered bat habitat. This information is being reviewed by OMNRF and the applicant will comply with the provisions of the Endangered Species Act.

#### **4. Fish Habitat**

**Reviewer concern:** “Additional information of the description of fish habitat should be provided.”

**Response:** Additional work regarding fish habitat is being completed and this information will be provided to the County upon completion.

#### **Natural Environment Level 2:**

- 1. Reviewer concern:** “It is recommended that reforestation of the affected areas include species similar to those found in the site and surrounding area, and that the proposed species are included in the operation plan and/or rehabilitation plan as required by the MNRF letter dated April 3, 2017”

**Response:**

The rehabilitation plans have been revised to reflect both the OMNRF and peer reviewer comments. The following has also been presented to OMNRF and, if approved, will be included on the site and rehabilitation plans.

- The quarry floor in Phases 2, 3 and 4 will be planted with a cover crop of Oats. This will be followed by planting tree seedlings including Red Pine, Eastern White Pine, Red Oak and Sugar Maple. White Spruce seedlings will be considered for moist soil areas. All these species are currently found on the site.
- Plantings will be in nodes of about 900 sq m and each will include the four above mentioned tree species. The nodes will be placed in a linear crossing pattern to provide forested connectivity to adjacent lands. Spaces between the nodes will allow for re-naturalization of native shrubs and tree species from adjacent forest areas.
- Talus slopes will be created at the bases of quarry faces by backfilling 2:1 side slopes using on site materials. These slopes will be planted in nodes with the four above tree seedlings of the above described species and native shrubs such as Red Elderberry (*Sambucus racemosa*).
- Logs, stumps and rocks will be placed among the nodes to increase habitat diversity and encourage wildlife to distribute plant reproductive material from nearby areas.

- All tree planting will be implemented by an experienced professional who will, after assessing the site conditions and determining appropriate species, develop planting plans.
2. **Reviewers concern:** “It is recommended that grass/legume species proposed for the rehabilitation of Phase 1 be included in the report or in the rehabilitation plan as required by the MNRF letter dated April 3, 2017.”

**Response:**

The following has also been presented to OMNRF and, if approved, will be included on the site and rehabilitation plans.

- The quarry floor of Phase 1 will be vegetated with a grass/forb mixture which will include the following native and non-invasive, non-native species, subject to availability, substitutions may be required;
  - Oat (*Avena fatua*) for a cover crop along with
  - Perennial Rye (*Lolium perenne*)
  - Canada Wild Rye (*Elymus canadensis*)
  - White Clover (*Trifolium repens*)
  - Common Milkweed (*Asclepias syriaca*)
  - New England aster (*Symphiotrichum novae-angliae*)
  - Goldenrod (*Solidago sp.*)

- The planting of Phase 1 lands will be implemented by an experienced professional after determining the site conditions and the appropriate seeding rates

3. **Reviewer concern:** “Rehabilitation using grass/legume species and the use of the phase 1 area as a storage area for logs contradicts the statement in page 30, third paragraph of Section 10.0 Conclusions: “Progressive rehabilitation is proposed to restore the site to a forest ecosystem and forest habitat in the long term.”

**Response:**

Phase 1 area will be vegetated with a grass/forb mixture and used for log storage in the future. Progressive rehabilitation is proposed to restore Phases 2 – 4 of the site to a forest ecosystem and forest habitat in the long term.

4. **Reviewer concern:** “The justification to use grass/legume species in the Phase 1 area instead of species characteristic of the existing forest community should be provided.”

**Response:**

The current owners of the lands, Freymond Lumber Ltd., wish to expand the log storage area adjacent to their existing lumber mill. Therefore, the Phase 1 lands will not be restored to a forest community but will be vegetated with a grass/forb mixture to provide habitat for meadow species and log storage.

5. **Reviewer concern:** “Discussion of how the use of grass/legume species will help to restore or improve the natural features and ecological functions is not discussed.”

**Response:**

The grass/legume mixture proposed for the Phase 1 area of the site will improve habitat diversity by creating meadow habitat in a predominantly forested landscape. The area will be bordered by a forest community creating forest edge habitat along the intersection of the forest vegetation and the meadow. This edge habitat will provide increased habitat for certain special concern species such as the Eastern Wood-Pewee. The meadow will create habitat for a variety of insects thus providing foraging opportunities for many species. The inclusion of Common Milkweed in the meadow planting mixture will provide increased habitat for the Monarch, also a special concern species.

6. **Reviewer concern:** "...the area to be used for storage is significant. The total area of the storage and its effect on the restoration of the natural features and ecological functions of the Phase 1 area are not mentioned in the report."

**Response:**

See the responses proposed for concerns 4 and 5 above.

7. **Reviewer concern:** "As part of the remedial measures, a monitoring program should be included in the report for monitoring of the rehabilitation planting and control of invasive species."

**Response:**

With respect to monitoring the rehabilitation planting, the following has been presented to OMNRF and, if approved, will be included on the site and rehabilitation plans.

- All tree and shrub plantings will receive regular tending during the first growing season after planting.
- Tending will consist of the installation of tree guards around deciduous tree seedlings the maintenance of tree guards to protect the lower stem from rodents and watering the trees and shrubs during drought or low rainfall periods
- All tree and shrub plantings will be monitored each year for five years after planting to assess survival.
- Dead trees and shrubs will be replaced as required to ensure the area succeeds to a forest community.



With respect to invasive species, the following will be implemented and included on the site plans.

### **Invasive Species - General**

- All disturbed areas of the licence will be surveyed annually by an experienced professional to determine if individual or colonies of the following listed invasive species have become established;

**Common Buckthorn** (*Rhamnus cathartica*) and **Glossy Buckthorn** (*Frangula alnus*)

**Dog-strangling Vine** (*Cynanchum rossicum*)

**Garlic Mustard** (*Alliaria petiolata*)

**Japanese Knotweed** (*Polygonum cuspidatum*)

**Phragmites or Common Reed** (*Phragmites australis subsp. australis*)

**Giant Hogweed** (*Heracleum mantegazzianum*)

- If an individual or colony of any of the above listed invasive species is found within the licence area the individual or colony will be eradicated. The eradication method and/or methods will be determined and implemented by an experienced professional and may include manual, mechanical and/or chemical means.
  - Copies of “Clean Equipment Protocol for Industry, Inspecting and cleaning equipment for the purposes of invasive species prevention by Halloran, Joe, Anderson, Hayley and Tassie, Danielle. 2013. Clean Equipment Protocol for Industry. Peterborough, Stewardship Council and Ontario Invasive Plant Council. Peterborough, ON. Printed April 2013 Updated May 2016. Peterborough, Ontario.” will be present on the site at all times.
  - Operational staff will receive invasive species training if available and will be familiar with the above document and the recommended procedures.
8. **Reviewer concern:** “...the storage area designated for the overburden obtained from Phase 1 will be located on the Eastern Wood-pewee habitat. Impacts should be re-evaluated or more information provided to ensure Eastern Wood-pewee habitat will not be affected.”

### **Response:**

The Eastern Wood-Pewee is an insectivorous, migratory flycatcher that prefers to nest and forage along forest edges. It builds a nest on tree branches of the forest edge and forages for insects over the adjacent open areas. This habitat is only used for nesting from about April to July each year. Since the majority of the site is forested there is currently limited suitable forest edge habitat on the site. The habitat that is present exists along the east boundary where the forest meets the lumber yard. This is where Eastern Wood-Pewee were heard calling during avian surveys. They were likely nesting in the trees along the forest edge and foraging over the yard. The yard would

not provide high quality foraging habitat because of existing buildings and bare sandy areas used by equipment. To protect the nesting function of this edge habitat and other future habitat on the site the following will included on the site plans;

- No removal of vegetation or clearing of land will occur from April 1 to October 15.

As the land is cleared for the quarry between October 16 and March 31 new edge will be created between the forest that remains on site and along setbacks. This will be equal to or greater than the amount of forest edge currently available. This newly created edge will provide nesting habitat for Eastern Wood-Pewee in the spring of the year. Since the Phase 1 area will not be re-forested it will be surrounded by forest along its edges creating increased edge habitat for Wood-Pewee to nest. The Phase 1 meadow will provide increased high quality foraging opportunities compared with the lower quality opportunities currently available over the operating lumber yard.

The current habitat of Eastern Wood-Pewee will be altered in location on the site but will be protected during the critical nesting period by the restriction on timing of land clearing. With the development of the site as a quarry additional forest edge and nesting habitat will be created. The creation of the meadow will increase quality foraging opportunities. Therefore, there will be no negative impact to significant Eastern Wood-Pewee habitat on the site.

9. **Reviewer concern:** “A monitoring program for the SWMF, the pond, and the south creek should be prepared and submitted as part of the ECA application for the construction of the Ponds approval...”.

**Response:**

A monitoring plan for the SWMF, the pond and the south creek will be prepared and submitted as part of the ECA application.

10. **Reviewer concern:** “...information regarding the size of the pond, the type of water to be found in the pond (surface or groundwater) and how the chemistry will be monitored to ensure no effects on flora and fauna.”

**Response:** This will be part of the ECA application. The pond construction, monitoring and discharge provisions will be in accordance with MOECC requirements to ensure the adjacent natural environment is protected. Preliminary design information is included in the original MTE report and the attached MTE response.

11. **Reviewers concern:** “Photographs of the natural features taken during the surveys should be provided as part of the supporting documentation.”

**Response:**

To view 16 photographs that display some of the natural features of the site review the report “Proposed Freymond Quarry, Final Level 1 and Level 2 Hydrogeological Investigation Report, December 2016”.

12. **Reviewer concern:** A justification is requested for the use of the term “Short term disruption” to describe the impact of land clearing for the extraction..” in Subsection 8.1.1.

**Response:**

The phrase “short term” with respect to the disruption of the forest community is a relative term and implies that the disruption is not to be permanent. The land clearing is not unlike the disruption caused by a natural occurrence such as a forest fire or tornado or a man made cause such as clear cut logging. The Phase 1 area will become an ecologically functioning meadow depending upon the intensity of use for log storage. In time the Phase 2 – 4 areas of site will return to an ecologically functioning forest community. As the site is not being paved over it will return to ecologically functioning natural communities.

13. **Reviewer concern:** “Is the drainage swale described in the hydrogeological report the same as the watercourse mentioned in the natural environmental report?”

**Response:**

Yes, the drainage swale and the watercourse are one and the same.

**Conclusion:**

I believe this response addresses the concerns raised by Greer Galloway in their review of natural heritage information, impacts and mitigation as it relates to the proposed Freymond Quarry application.

Respectively submitted;

Robin E.  
Craig

Digitally signed by Robin E. Craig  
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