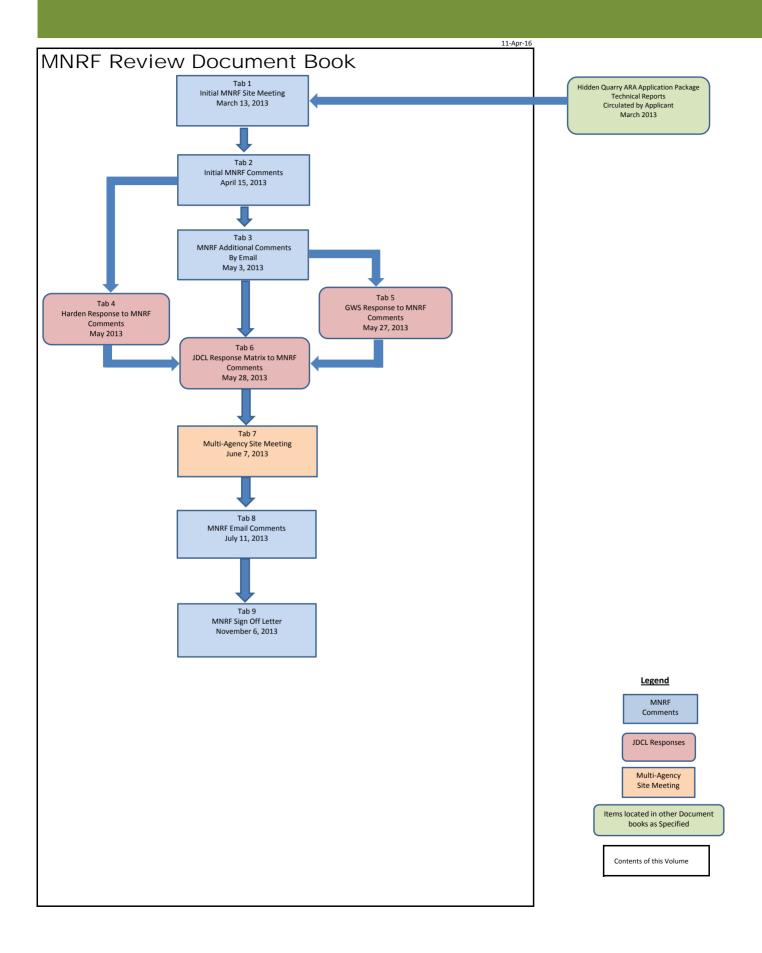
# **Evidence Book 1**



# MNRF Review Document Book Index

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# **Greg Sweetnam**

From:
Leigh Mugford

Sent:
April-11-16 3:10 PM

To:
Greg Sweetnam

**Subject:** FW: Hidden Quarry Site Visit

From: Leigh Mugford

**Sent:** Monday, March 11, 2013 12:00 PM

**To:** 'Ivanov, Oleg (MNR)'; Schwan, Terry (MNR); Marriott, David (MNR)

**Cc:** Greg Sweetnam; May, Stephen (MNR) **Subject:** RE: Hidden Quarry Site Visit

That's ok for Greg and myself,

Leigh

From: Ivanov, Oleg (MNR) [mailto:Oleq.Ivanov@ontario.ca]

**Sent:** March-11-13 11:58 AM

To: Leigh Mugford; Schwan, Terry (MNR); Marriott, David (MNR)

**Cc:** Greg Sweetnam; May, Stephen (MNR) **Subject:** RE: Hidden Quarry Site Visit

Would meeting at the site at 1:30 (Wednesday) work for everyone?

From: Leigh Mugford [mailto:lmugford@jamesdick.com]

Sent: March-08-13 3:44 PM

To: Ivanov, Oleg (MNR); Schwan, Terry (MNR); Marriott, David (MNR)

**Cc:** Greg Sweetnam; May, Stephen (MNR) **Subject:** Re: Hidden Quarry Site Visit

Sounds good

From: Ivanov, Oleg (MNR) [mailto:Oleq.Ivanov@ontario.ca]

**Sent**: Friday, March 08, 2013 03:42 PM

**To**: Leigh Mugford; Schwan, Terry (MNR) < <a href="mailto:terry.schwan@ontario.ca">terry.schwan@ontario.ca</a>; Marriott, David (MNR)

<<u>David.Marriott@ontario.ca</u>>

Cc: Greg Sweetnam; May, Stephen (MNR) < Stephen. May@ontario.ca>

Subject: Re: Hidden Quarry Site Visit

This sounds good to me. It looks like I would be able to arrive to the site earlier, around 1 pm (Wednesday)so if this time is convenient for everyone we can meet then

Oleg

Oleg Ivanov

Regional Hydrogeologist

Southern Region

From: Leigh Mugford [mailto:lmugford@jamesdick.com]

**Sent**: Friday, March 08, 2013 03:07 PM

**To**: Ivanov, Oleg (MNR); Schwan, Terry (MNR); Marriott, David (MNR) **Cc**: Greg Sweetnam < gsweetnam@jamesdick.com >; May, Stephen (MNR)

Subject: RE: Hidden Quarry Site Visit

We can meet you at the house our company owns and rents to a tenant, at 8532 Highway 7 which is on the quarry property site.

From: Ivanov, Oleg (MNR) [mailto:Oleg.Ivanov@ontario.ca]

Sent: March-07-13 6:04 PM

**To:** Leigh Mugford; May, Stephen (MNR)

Cc: Marriott, David (MNR); Schwan, Terry (MNR); Greg Sweetnam

Subject: Re: Hidden Quarry Site Visit

I apologize I meant Wednesday 2-3 pm

Oleg

Oleg Ivanov

Regional Hydrogeologist

Southern Region

From: Ivanov, Oleg (MNR)

**Sent**: Thursday, March 07, 2013 04:13 PM

**To**: Leigh Mugford < <a href="mailto:lmugford@jamesdick.com">! May, Stephen (MNR)</a>

Cc: Marriott, David (MNR); Schwan, Terry (MNR); Greg Sweetnam <gsweetnam@jamesdick.com>

**Subject**: RE: Hidden Quarry Site Visit

I would be available to meet around 2-3 pm on site if it works for everyone.

Thanks Oleg

# Oleg Ivanov, P.Geo.

Regional Hydrogeologist

Southern Region

Ministry of Natural Resources

51 Heakes Lane

Kingston, ON, K7M 9B1

w.613-531-5705

oleg.ivanov@ontario.ca

**From:** Leigh Mugford [mailto:lmugford@jamesdick.com]

**Sent:** March-07-13 3:47 PM **To:** May, Stephen (MNR)

Cc: Ivanov, Oleg (MNR); Marriott, David (MNR); Schwan, Terry (MNR); Greg Sweetnam

Subject: RE: Hidden Quarry Site Visit

We would be glad to meet the MNR team on site next week. We are fairly open next week except for the morning of Wed and Thursday.

An ideal time to meet for us would be Wednesday afternoon as we have a meeting in the morning in Rockwood near the site, we could meet as early as noon that day. I can bring a hard copy with digital files as well.

Let me know if this will work.

Thanks,

Leigh Mugford

Quality Control & Project Manager James Dick Construction Ltd Imugford@jamesdick.com office 905-857-3500 cell 416-579-9426 fax 905-857-9085

From: May, Stephen (MNR) [mailto:Stephen.May@ontario.ca]

**Sent:** March-07-13 1:58 PM

To: Leigh Mugford

Cc: Ivanov, Oleg (MNR); Marriott, David (MNR); Schwan, Terry (MNR)

**Subject:** Hidden Quarry Site Visit

#### Leigh,

Steve

The local planner reviewing the Hidden Quarry file indicated that the MNR hydrogeologist and forester would like to do a site visit at the Hidden Quarry. Oleg will be in the area next week. Is there any issue with MNR staff reviewing the application entering the site to complete this work without supervision, or would you like to work with them to join them on the visit? I will be away next week, but Dave Marriot, Terry and Oleg would like to take a look. Also, was a hard copy of the Hydrogeological report circulated to our MNR Hydrogeologist, or would you like him to use one of our hard copies of the report for his review. I believe there is a disk with a digital copy we can circulate internally as well. Talk to you soon,

# Stephen May

A/Aggregates Technical Specialist Guelph District MNR (519) 826-4927 (519) 212-1963

#### Ministry of Natural Resources

Ministère des Richesses naturelles

Guelph District 1 Stone Road West Guelph, Ontario N1G 4Y2 Telephone: (519) 826-4955 Facsimile: (519) 826-4929



April 15, 2013

Greg Sweetnam
James Dick Construction
P.O. Box 470
Bolton, ON
L7E 5T4

Re:

Hidden Quarry – License Application for a Category 2, Class A License under the Aggregate Resources Act – Part Lot 1, Concession 6, Township of Guelph/Eramosa in the County of Wellington

Dear Mr. Sweetnam,

The Ministry of Natural Resources Guelph District Office is in receipt of the application for the proposed Hidden Quarry – Category 2, Class A License under the Aggregate Resources Act. Ministry staff have reviewed the Site Plans and the technical reports and offer the following comments for your consideration.

# Level II Natural Environment Technical Report

#### 2.2.4 & Figure 5

We note that no amphibian surveys were conducted near online unevaluated wetland MAM3-2 however no explanation was provided. We would like this explained.

# 3.1

Section 1.3 on p. 2 and Section 5.0 on p. 52 both refer to the need to assess significant natural heritage features as listed in the Provincial Policy Statement. However, in Section 3.1 on page 16 the report lists the "Designated Natural Features" as watercourse, wetlands, areas of natural and scientific interest, environmentally sensitive areas, greenlands and landscape connectivity assessment. This classification of natural heritage features is not consistent with the sections 1.3 and 5.0 and causes confusion for reviewers.

#### 3.1.2 & 5.1.1 and Figure 6

The wetland in the approximate centre of the site was coded as an unevaluated wetland. We have now added this 0.4ha wetland to the Eramosa River – Blue Springs Creek Provincially Significant Wetland complex. The wetland is described as an MAM3-2 community by GWS who state it is 0.4ha in size (see also section 5.1.1). We have also revised the outer boundary of this wetland based on our site visit of March 12. GWS provide an argument that this wetland should not be included as part of the Eramosa River – Blue Springs Creek PSW. Based on that argument, the current guidance provided in the Ontario Wetland Evaluation Manual, and

consistent with our approach of not evaluating wetlands less than 0.5 ha in size, we agree with their assessment. However, we will first require an explanation as to why amphibian surveys were not conducted at or near this feature. Nevertheless, this wetland will not be altered and it will be protected by a 20m buffer that will maintain much of the wetland's current catchment area (see7.1.1). We have also revised the boundary of the existing PSW along the 6<sup>th</sup> Line.

#### 4.5.5

We observed a lot of deer signs during our field visit on March 12. However, the consultant is correct in stating that the area has not been identified as a deer wintering area by MNR.

#### 5.1.3

We do not necessarily agree that the stream on site is not fish habitat. At minimum it supplies food supply at least during certain periods of the year.

#### 5.1.4

The report states that the woodland covers 33.5 ha. It goes on to describe the County Greenland System and that the woodlands on site were not mapped as part of the Greenlands system likely because the site was designated as Mineral Aggregate Area. The original County Greenlands were mapped based on the 1978 photography and the OBM system and likely did not include plantations of that age.

Using County Greenlands criteria, this woodland qualifies as Significant Woodland due to its size (33 ha) and amount of interior forest (7ha). According to the Natural Heritage Reference Manual, woodlands are significant when there are 20 hectares or more of woodland, and/or two hectares or more of woodland interior habitat, where woodland cover is 15 to 30% as in Wellington County.

Since most of the woodland is 30-year-old pine or spruce plantation there is not a large amount of diversity in the forest, at present, to support a variety of wildlife. For this reason we have no objection to its removal. However there is a net loss of forest here amounting to about 19 hectares. We recommend that James Dick Construction Ltd replace this area of forest elsewhere on another site. Ideally the replanted areas should be located to improve natural heritage features such as a providing or enhancing a linkage or enlarging a current forest area. We will be pleased to discuss this with you.

# 5.1.6

The consultant's description of the deer wintering use of the site is somewhat inaccurate. The MNR has not identified the site as a "confirmed significant wildlife habitat" most likely for the simple reason that deer were not observed on site during the very rare occasions when aerial or ground surveys were done to identify Deer Congregation Areas. It was not because the size of the herd was relatively small. On a township basis, numerous areas in the township have been designated by MNR as confirmed significant wildlife habitat because of their value as deer congregation areas. Most of these areas are much larger than the wooded area on this site. On a relative basis, this area would not be one of the "best examples" of congregation areas but still may function as such.

#### 7.1

There is no Figure 10 in Appendix A. It would be helpful to see a figure illustrating that the proposed buffer closely approximates the existing catchment area of wetland MAS2-1.

# Species At Risk Surveys

- Little Brown Myotis was detected on the subject property during the bat survey. The
  report was evidently prepared before this species was listed as Endangered. Now that it
  is protected under the Endangered Species Act, the proponent should provide
  information on the species' use of the property (the report simply states that it is
  present).
- 2. Rusty-patched Bumble Bee (EN) is not addressed in the report. It would be useful for the proponent to indicate if and why they are of the opinion that it is not present on site.
- 3. West Virginia White (SC) is not addressed in the report however habitat is likely present given that its host plant Cardamine diphylla is listed in the Vascular Plant list. We would like an assessment on the potential for Significant Wildlife Habitat on site for this Special Concern species. It is not listed in the report's Lepidoptera species list.
- 4. The report concludes that Blanding's Turtle and Spotted Turtle are absent from the site. However the rationale for this conclusion is not robust given that suitable habitat is present and no targeted surveys were conducted. The survey protocols for these species are very specific. The report implies that the consultants relied on the absence of incidental observations while carrying out surveys for other taxa, namely salamanders, fish, marsh birds and presumably Lepidoptera and Odonata. The problem with that approach is that the monitoring dates, times and methodology would either not have been appropriate for the turtles (e.g. marsh bird surveys ended well before 9am; temperature on April 18, 2011 egg-mass survey was much too cold) or were not provided (e.g. times when the salamander and fish traps were checked). We request that the following additional information be provided:
  - a. Whether targeted turtle surveys were conducted;
  - b. Time, temperature and weather on April 3-8, 2011 when the salamander traps were checked:
  - Time, temperature and weather on June 6-10, 2011, when the fish traps were checked;
  - Details on the snapping turtle observation: date, time, temperature, weather, methodology (incidental?);
  - e. Details on survey time and methodology for the Lepidoptera and Odonata surveys conducted at the cattail marsh.

#### Level I and II Hydrogeological Investigation

Please note that our comments do not address any potential impact on water supply.

In general, the report presents facts in a straight forward and professional manner.

We would appreciate clarification with regards to the purpose of the proposed monitoring for each of the monitoring locations. It would be beneficial to create another column in the table that describes the rationale for inclusion of the specific monitoring points as well as the rationale for frequency and timing of the monitoring. We would also like to know how the monitoring data will be used.

We would also like it clarified if the proposed contingency measures outlined on page 43 will be incorporated into the site plans.

We would also appreciate clarification of the statement on page 31, which states; "It is unlikely that the runoff from area D1 would contribute to Tributary C given the loss of water observed in Tributary C in that area".

We also note that the final copy of the report should be stamped.

### Site Plans

Ministry staff are not in a position to fully review the Site Plans, and the accompanying technical notes until the above noted concerns with the technical studies have been addressed. Please be advised that changes to the Site Plans may be required to address these concerns. The Ministry can however offer the following preliminary comments.

#### Rehabilitation plan

The plan identifies that a minimum of 100mm of topsoil will be applied to the graded side slopes. Soils that are one meter over bedrock are notoriously droughty because there is little or no ground water. Trees will rely totally on snowmelt and rain fall in the early years. Trees planted in this situation will have a hard time establishing themselves.

The plan proposes to place soil over bedrock in the rehabilitation. Soils will have to be of sufficient depths to ensure long-term tree growth. Watering will be required in the first number of years to ensure survival if there is insufficient rainfall. Top soil should be 20 cm in depth.

Areas where soil is added should not be excessively compacted. The final surface should be loose and rough with undulations so that the soil over bedrock is of varying depths.

It is not sufficient to just replace dead planted vegetation as stated in the Note #12 on page 2 of the site plans. A monitoring plan should be part of this rehabilitation. It should consider species diversity, survival, height and stocking and provide targets for an extended length of time. Assurance should be provided that vegetation will be monitored for 10 years to ensure survival and good growth. Dead woody material should be spread over the site to provide shade and protect from the sun.

Red pine should not be used on this site because it requires acidic soil conditions and this is a limestone site. Poplar is a more suitable species.

# Summary

In light of the above comments, the Ministry is not in a position to support the Category 2, Class A license application at this time.

We would appreciate a response to the comments provided on the technical reports and the Site Plans. Please be advised that we may have additional comments on the license application when these concerns have been addressed.

We would be pleased to discuss any of the above issues further with the proponent or consultant(s) and ask that you please contact David Marriott, District Planner at 519-826-4926 if you have questions or require clarification.

Respectively submitted,

Ian Thornton

Planning and Information Management Supervisor

Cc Al Murray, MNR

Steve May, MNR

**From:** Timmerman, Art (MNR) [mailto:art.timmerman@ontario.ca]

**Sent:** May-03-13 9:43 AM

**To:** Leigh Mugford; Marriott, David (MNR); May, Stephen (MNR)

Subject: RE: dates for site meeting Hidden Quarry

**Leigh,** in advance of my commitment to attend, could you let me know if the site visit will address any of the comments/concerns I have previously raised (see below). With my heavy workload at this time I have to be strategic about what meetings I chose to attend.

Thank you

Art

#### 2.2.4 & Figure 5

Why were no amphibian surveys conducted near online unevaluated wetland MAM3-2?

### 3.1.2 & 5.1.1 and Figure 6

The wetland in the approximate centre of the site was coded as an unevaluated wetland. I have now added this 0.4ha wetland to the Eramosa River – Blue Springs Creek PSW. The wetland was described as an MAM3-2 community by GWS who said is was 0.4ha in size (see also section 5.1.1). I have also revised the outer boundary of this wetland based on our site visit of March 12. The consultants have provided an argument why this wetland should not be included as part of the Eramosa River – Blue Springs Creek PSW. Based on that argument, the current guidance provided in the Wetland Evaluation Manual, and consistent with our usual approach to wetlands less than 0.5 ha in size, I agree with their assessment. However, I first need an answer as to why amphibian surveys were not conducted at/near this feature. Nevertheless, this wetland will not be altered and it will be protected by a 20m buffer that will maintain much of the wetlands current catchment area (see7.1.1). I have also revised the boundary of the existing PSW along the 6<sup>th</sup> Line.

#### 4.5.5

We observed a lot of deer sign during our visit on March 12. However, the consultant is correct in stating that the area has not been identified as a deer wintering area by MNR.

#### 5.1.3

I do not necessarily agree that the stream on site is not fish habitat. At minimum it supplies food supply at least during certain periods of the year.

#### 5.1.6

The consultant's description of the deer wintering use of the site is a bit inaccurate. The MNR has not identified the site as a "confirmed significant wildlife habitat" probably for the simple reason that deer were not observed on site during the very rare occasion when aerial or ground surveys were done to identify **Deer Congregation Areas.** It was **not** because the size of the herd was relatively small. On a township basis, numerous areas in the township have been designated by MNR as confirmed significant wildlife habitat because of their value as deer congregation areas. Most of these areas are much larger than the wooded area on site. On a relative basis, this area would not be one of the "best examples" of congregation areas.

#### 7.1

There is no Figure 10 in Appendix A. It would be helpful to see a figure illustrating that the proposed buffer closely approximates the existing catchment area of wetland MAS2-1.

**From:** Leigh Mugford [mailto:lmuqford@jamesdick.com]

Sent: Monday, April 29, 2013 12:40 PM

**To:** 'Greg Scheifele'; 'hireland@grandriver.ca'; Timmerman, Art (MNR)

Cc: May, Stephen (MNR); Greg Sweetnam; 'Dominique.Evans@rjburnside.com';

'Carley.Dixon@rjburnside.com'; 'Mike Davis' **Subject:** dates for site meeting Hidden Quarry

Hello everyone, can you please advise on who would be attending a site visit and their available dates in the first week of June 3-7 at the proposed James Dick Hidden Quarry site?

The meeting is intended to address the peer review comments pertaining to the natural environment. I will be sending out a draft agenda later as well.

Thanks,

**Leigh Mugford** 

Quality Control & Project Manager James Dick Construction Ltd Imugford@jamesdick.com office 905-857-3500 cell 416-579-9426 fax 905-857-9085

# Response to 140

Parameter	Monitoring Locations	Purpose	Frequency
Groundwater Levels	M1 S/D	Overburden/Bedrock	Monthly April to
	M2	Bedrock	November, February
	M3	Bedrock	
	M4	Bedrock	
	M6	Wetland Overburden	
	M13S/D	Overburden/Bedrock	
	M14S/D	Overburden/Bedrock	
	M15	Bedrock	
	M16	Bedrock	
	MPN1	Wetland Overburden	
	MPN2	Wetland Overburden	
	MPS1	Wetland Overburden	
	MPS2	Wetland Overburden	
	MPE1	Wetland Overburden	
	MPE2	Wetland Overburden	
	MPW1	Wetland Overburden	
	MPW2	Wetland Overburden	
	TP1	Overburden	
	TP8	Overburden	
	TP9	Overburden	
		Active extraction to	
		occur April to	
		November and	
		monthly	
		measurements	
		adequate to verify	
		impact to aquifer and	
		wetland. One mid-	
		winter reading	
		proposed as due	
		diligence check of	
		water levels during	
		inactive period.	
Groundwater Levels	M2, M3, TP1, M13	Bedrock and	Weekly during first 3
	S/D M14 S/D	Overburden near	months of bedrock

		sinking cut. Greatest	extraction.
		potential change in	
		water levels expected	
		during the extraction	
		of the sinking cut.	
Surface Water Flow	SW4, SW8, SW3	Monitoring of flow in	Monthly April to
		Tributary B as	November.
		verification that	
		quarry is not	
		impacting streamflow.	
Groundwater Quality	M2, M4, M15, M16	Parameters to include	Annually.
		BTEX, anions,	
		metals, general	
		chemistry, bacteria.	
		Purpose is to establish	
		and confirm that	
		quarry activity not	
		impacting water	
		quality downgradient	
		of ponds.	
Surface Water Quality	West Pond, East Pond	Quarry Pond	Annually.
		Allows assessment of	
		blasting on pond	
		water quality.	

The purpose of the monitoring is to provide a public document of water quantity and quality in the bedrock aquifer and water quantity in the overburden aquifer. The data will be used to establish a baseline level (quantity and quality) prior to extraction and to monitor trends in quality and quantity data allowing for modifications to the mining operation if necessary or implementation of mitigation if necessary.

# Response to 141

The contingency plans as shown on Page 43 have been incorporated on the Site Plans on Page 4 of 5.

# Response to 142

The analysis of micro-drainage areas was conducted to determine if there are areas that presently contribute runoff to off-site areas. We found that a portion of micro drainage area D1 has the potential to contribute surface runoff to Tributary C. This then raises the possibility of a decrease in surface water flow in Tributary C. However, Tributary C loses water in the vicinity of D1 indicating relatively permeable conditions and this tributary rarely flows as far as Hwy 7. Thus other than during frozen ground conditions, it is unlikely that surface water from micro drainage area D1 would make it overland all the way to Tributary C. It is thus our opinion that there is no significant impact to Tributary C from this loss of potential surface water catchment area. The area of micro drainage area D1 that could be removed from the catchment of Tributary C is small relative to the overall catchment area.

### Response to 143

We have attached a stamped copy of our final page



File: 3028 By: Email

Tel.: (519) 651-2224 Fax: (519) 651-2002

Email: gwsefs@sympatico.ca

May 27, 2013

James Dick Construction Limited P.O. Box 470 Bolton, Ontario L7E 5T4

Attention: Mr. Greg Sweetnam

Dear: Mr. Sweetnam

# Re: Hidden Quarry – Response to MNR Comments

With respect to MNR comments on our level II Natural Environment Technical Report we offer the following explanations in the same order as given by MNR

# 2.2.4 & Figure 5

During our spring site visits standing water was not observed in MAM3-2 so there was little merit in listening for calling amphibians at this location. Furthermore, when wood frogs were reported at Station A1 on April 28, 2011 they were actually heard calling from an upstream area in the vicinity of MAM3-2 which is only about 150 m from this Station.

#### 3.1

Our apology for any confusion caused by the discussion of locally designated natural features, but we felt it was important to note those features which had previously been identified as being important on the local landscape. In retrospect, this discussion could have perhaps been included in Section 5.0.

#### 3.1.2 & 5.1.1 and Figure 6

GWS and MNR agree that the wetland should not be included in the PSW and the proposed 20m buffer will provide ample protection for this wetland. See above comment regarding amphibian surveys.

#### 4.5.5

MNR and GWS agree that the property is not an important deer wintering area.

### 5.13

Although the intermittent stream may possibly provide a seasonal source of insect food for downstream fish it does not support an on–site fish population. The existing ecological function of this stream will nonetheless be maintained during aggregate extraction.

#### 5.14

James Dick Construction Limited is prepared to discuss the feasibility of forest compensation at another site.

#### 5.16

We acknowledge that a small population of deer utilize the subject property and surrounding lands during the winter and anticipate they will continue to do so in the future even though the amount of on–site forest cover will be reduced.

#### 7.1

Figure 10, the Operations Plan and Figure 11, the Progressive and Final Rehabilitation Plan were provided to MNR as a separate attachment instead of being enclosed in the report

Species at Risk Surveys.

# 1. Little Brown Myotis

As noted by MNR, this species was not listed as Endangered when the surveys were undertaken. Nonetheless, a special survey was completed for this and other species of bats, recognizing that several bat species were in decline and likely to be protected under the *Endangered Species Act*, 2007.

The Little Brown Myotis hibernates in caves. There is no suitable hibernation habitat on site, and it is likely that local bats hibernate in caves near Rockwood. Maternal roosts occur most commonly in buildings and less frequently in natural habitats (van Zyll de Jong 1985). The only on-site building is a house fronting on Highway 7. This house appears to be relatively intact and it is unlikely that bats can access the interior of the house, although they may be able to enter the garage through a hole in the door. If the site is being used for maternal roosts, it is more likely that they are using natural cavities on site. According to the MNR (2011) bat monitoring protocol, maternity roosts are likely to occur in deciduous and mixed forests (FOD, FOM). Single deciduous and mixed forest stands occur on the subject lands close to the abandoned building. Both of these forest stands will be retained.

We conclude that there will be no impact on the Little Brown Myotis as a result of the proposed Hidden Quarry. There are no areas present that provide suitable hibernation sites. All potential natural maternal roosts will be retained. In the event that some bats are roosting within the existing building, alternative natural roosts will be available to them once the house is removed. Maternal roosts may be used from April when bats come out of hibernation until September (van Zyll de Jong 1985). It is recommended that the house be removed outside of this window when bats are likely to be absent from the site.

# 2. Rusty-patched Bumble Bee

Although the Rusty-patched Bumble Bee was listed as Endangered in September 2010, it was not on MNR's list of Species at Risk in Wellington County when we did most of our inventories in 2011. Consequently, we were not aware that specific surveys should have been undertaken for this species.

We are of the opinion that this species is absent from the site. The Rusty-patched Bumble Bee is typically associated with large deciduous forests and it may be found both within forested habitat and around forest margins. Although once a very common species in southern Ontario, it has declined significantly and appears to be confined to large habitat patches that are remote from agricultural operations. All recent records are from Pinery Provincial Park. From 1971 to 1973, the Rusty-patched Bumble Bee represented 14% of all bumble bees collected at Guelph and Rockwood. Extensive targeted searches for this species from 2005 to 2008 found only three specimens. A sample of 1,195 bumble bees from Guelph and Rockwood during that period did not contain any Rusty-patched Bumble Bees (Colla 2010; Colla and Taylor-Pindar 2011).

Our conclusion that the Rusty-patched Bumble Bee is absent is based on two factors. The on-site habitat is poor for this species and bumble bees in general. The forest cover is predominantly coniferous plantation which is unsuitable habitat for the species. There are two deciduous/mixed forest stands, but these are very small remnants that are unlikely to provide sufficient habitat for the species. The site is also situated within an agricultural setting that is likely to expose this species to deleterious chemicals.

The second reason why we are of the opinion that the Rusty-patched Bumble Bee is absent is that targeted searches in Guelph and Rockwood from 2005 to 2008 failed to find this species. These surveys were undertaken in locations where the species was formerly common and it was locally extirpated.

# 3. West Virginia White

As noted in the list of vascular plants (Appendix B), the two species of toothworts were observed during the 1997 inventories but not in 2011. It appears as though these species have become locally extirpated from the site. Consequently, there is no suitable habitat present for the West Virginia White. Even if toothworts were present, the habitat is very marginal for this species on the subject lands. The two forest patches that have the potential to support it are very small. The West Virginia White does not do well from a competitive standpoint when dealing with the cabbage white. The latter species is abundant on the site and the West Virginia white would be unlikely to persist in such small forest fragments where the cabbage white was present.

#### 4. Blanding's Turtle and Spotted Turtle

We believe that the protocols for searching for these turtle species were developed after our surveys were completed, but are uncertain if this is correct. The protocols for surveying for Species at Risk do not appear to be readily available on the MNR's website.

# a. Targeted Turtle Surveys

In addition to looking for amphibian egg masses during the April 18, 2011 search in the cattail marsh, turtles were actively searched for. Searching within ponds is an effective method of finding turtles and this search resulted in the snapping turtle observation. Without the in-pond search, it is unlikely that the snapping turtle would have been detected, as this is a highly aquatic species that seldom basks. In-pond searches are the best method for finding the snapping turtle. If this method were used more frequently, it would be realized that this species occurs in a very high proportion of permanent water bodies. However, it goes undetected in most of the areas where it is actually present.

Searching within the pond is also the most effective method for finding spotted turtles. We have searched for spotted turtles with Dr. Jackie Litzgus, who is one of the North American experts on this species. The method that she uses to detect this species is to walk through ponds to search for it within the water column or on the bottom. This is typically done in early to mid-April shortly after ice-out. This is another species that rarely basks and surveys conducted from the shoreline are unlikely to detect it. In addition, once temperatures rise, it often aestivates or remains buried within pond sediments where it will not be observed using standard shoreline surveys.

The April 18, 2011 survey of the cattail marsh was considered a targeted turtle survey as well as an amphibian egg-mass survey. Two individuals spent a total of 1.5 hours each searching for a total effort of 3 person-hours.

b. Weather Conditions during the April 3-8, 2011Salamander Trap Observations On April 4, it was overcast with a very light breeze, the temperature was −2°C, and there were approximately 2 cm of snow on the ground. On April 5, it was calm and overcast with

a temperature of 2°C. On April 6, it was sunny with a light breeze, the temperature was 1°C, and ice had formed on the marsh and in-stream pool overnight. On April 7, it was overcast with a light breeze and a temperature of 1°C in the morning; the site was revisited in the afternoon and it was 8°C and sunny at that time. On April 8, it was overcast with no wind and the temperature was 5°C.

Weather conditions during most of these visits were not suitable for observing turtles, with the exception of the afternoon of April 7.

c. Weather Conditions during the June 7-10, 2011 Fish Trap Observations
The weather conditions were warm and sunny during days that the fish traps were checked.
Mean daily temperatures on those days for Guelph taken from the National Climate and Information Archive website indicate that the mean temperatures were 20.5°C on June 7, 24.2°C on June 8, 17.8°C on June 9, and 13.1°C on June 10, 2011.

Conditions were suitable for turtle basking during the fish trap observation periods.

#### d. Snapping Turtle Observation

overlooked had it been present.

The snapping turtle was observed on April 18, 2011 during the targeted search within the cattail marsh. The weather was cloudy and calm during the survey and the air temperature ranged from −1 to 0°C.

### e. Weather Conditions during Bird, Butterfly, and Odonate Surveys

It is correct that the marsh bird surveys were completed well before 9 a.m., but two of the three visits extended beyond that time. The following are descriptions of relevant visits made in 2011. The May 20 survey extended from 0722 to 0953 hours and the weather was sunny, the wind was 1-2 on the Beaufort scale, and the temperature ranged from 12 to 16°C. The May 30 visit was from 0640 to 1025 and the weather was a mix of sun and cloud, wind was 1-2, and the temperature was 18 to 22°C. The June 17 survey was from 0704 to 1138 and the weather was sunny, the wind was 1-2, and the temperature was 14 to 25°C. The June 26 visit was from 0643 to 1043 hours, the weather was a mix of sun and cloud, the wind was 1-2 early on and 2-3 later, and the temperature was 16 to 22°C. The July 27 visit was from 0953 to 1412 and the weather was mostly sunny, the wind was 0 to 1, and the temperature was 20 to 27°C.

Conditions were suitable for observing basking turtles on all of these visits. On almost every visit, the observer parked on the Sixth Line near the cattail marsh and the marsh was searched for all types of wildlife on each visit.

# f. Conclusions Regarding the Blanding's Turtle and Spotted Turtle We still consider these two species to be absent. The Blanding's turtle basks frequently and is typically highly conspicuous when it is present. It is highly unlikely that it would have been

We consider the spotted turtle to be absent for three reasons: it was not observed, the habitat is not suitable, and there are no nearby records of this species. The latter two facts are very important given that this is an extremely difficult species to detect. In the one study that we were involved in, released turtles often disappeared immediately into the sediments and under the vegetation and could only be found again because they were radio-tagged.

Habitat for the spotted turtle is considered unsuitable at the landscape level and marginal within the cattail marsh itself. As can be seen in the air photos presented in the Level II Natural Environment Technical Report, the on-site cattail marsh is isolated within an agricultural landscape. From probably the mid-1800s until the early 1980s, the landscape

was essentially devoid of substantial tree cover. Any spotted turtles that might have existed in the cattail marsh at that time would have been isolated from any other natural habitat by extensive expanses of agricultural land, which is unsuitable habitat for dispersal by this species. Although the spotted turtle has a relatively small home range, it migrates hundreds of metres among aquatic sites and between aquatic and terrestrial sites. Until tree planting occurred on the site and adjacent lands in the early 1980s, it is unlikely that spotted turtles would have been able to move among habitats given the intensive agricultural lands between potential habitat pockets. Even with the existing forest cover, intervening habitat is harsh for spotted turtles between potentially suitable habitat patches. It seems highly unlikely that an isolated population of this species could have persisted in this landscape, if such a population existed in the first place.

The cattail marsh is marginal habitat for the spotted turtle. It is typically associated with highly organic habitats, especially bogs and fens. It does occur in cattail marshes, but usually only those with a high organic content (Litzgus 2004). Soils within the on-site cattail marsh are mineral and may actually be gravel. The substrate was very firm while walking through it and these conditions are generally unsuitable for the spotted turtle. In addition, water levels in this marsh may become quite low during drought years, but it is unknown if it ever dries up completely.

The only records of the spotted turtle for Wellington County appear to be the observation by one of the team members at Luther Marsh on June 12, 1975 and another by MNR staff in June of another year in the 1970s. Although the current Ontario Reptile and Amphibian Atlas does not show a map of the distribution of the spotted turtle for confidentiality reasons, the Ontario Herpetofaunal Atlas on the NHIC website (which was updated in 2010) does. There are no records for the spotted turtle in Waterloo, Halton, Peel, or Hamilton. The nearest records for this species are in excess of 50 km away. There appears to be a broad swath through southern Ontario where the species is absent, including Huron, Perth, Waterloo, Brant, Hamilton, almost all of Wellington, Halton, and Peel. These are some of the more intensively farmed areas in the province. If the spotted turtle ever occurred within this general region, it was probably extirpated as a result of forest clearing and agricultural activities.

#### Rehabilitation Plan

We agree that soil depth over bedrock must be of sufficient depth in tableland areas to ensure long-term tree growth and feel that this can be achieved by first of all applying overburden to side slopes followed by topsoil as stated on the Rehabilitation Plan. The objective should be to achieve a soil mass that is 50 to 100cm in depth with a topsoil layer that is at least 10cm in depth and preferably 20cm or more as recommended by MNR. We acknowledge that watering may be required during drought periods to ensure tree survival and agree that the final surface should be loose and rough with undulations so that soil depth over bedrock is variable and micro-habitats are created. If soil becomes significantly compacted deep ripping will be required to make it more permeable and plantable. The Rehabilitation Plan will be revised to reflect these desirable site preparation treatments.

With respect to the use of red pine for reforestation purposes on this site, we acknowledge that red pine generally does not sustain good long-term growth on calcareous sites. It has, however performed reasonably well on several properties located elsewhere in Wellington County that are characterized by well drained Dumfries sandy loam soil which is found on the subject property. The intent was to simply incorporate red pine as a minor component in the species mix to enhance biodiversity and help to provide a nurse crop for the eventual establishment of a native hardwood or mixedwood forest. It would not be used in monoculture blocks and it would mainly be planted on the warmer, dryer south facing

slopes. However, if MNR still feels that red pine should not be planted on this site it will be deleted from the species list.

It was anticipated that vegetation monitoring would be carried out to ensure that the survival and growth of planted trees, shrubs and groundcovers was sufficient to effectively restore desired woodland and wetland vegetation. It was assumed that monitoring would be carried out until trees and shrubs are considered free to grow which means their root systems are well established and their shoots extend above the height of competing herbaceous vegetation, particularly grass and goldenrod (i.e. about 3 feet in height). This usually takes about 5 years on most old field sites but may take somewhat longer on rehabilitated gravel pits. A seedling survival census will be carried out annually during late summer/early fall to determine the need for refill planting in fail areas the following spring. The same species will be used for refill planting as were used in the original planting unless there are good reasons for changing. Bareroot transplant stock 20-40cm in height is recommended for planting on these difficult sites. To ensure adequate stocking in reforested areas there must be at least 80% seedling survival after 5 years or when the trees are considered free to Assuming an original planting density of 600 trees/acre at 80% survival = 480 trees/acre which qualifies the area for protection under the County's Forest Conservation By-law. The above details on reforestation procedures and follow-up monitoring can be added to the rehabilitation plan assuming MNR Staff concur with this approach.

We trust the above information adequately addresses the concerns raised by MNR.

Yours truly,

**GWS Ecological & Forestry Services Inc.** 

Greg W. Scheifele, M. A., R.P.F. Principal Ecologist/Forester

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# **Hidden Quarry Comment Documentation**

Agency	#	Comment	Response	Action Item	Who
MNR Comments	123		2.2.4 & Figure 5  During our spring site visits standing water was not observed in MAM3-2 so there was little merit in listening for calling amphibians at this location. Furthermore, when wood frogs were reported at Station A1 on April 28, 2011 they were actually heard calling from an upstream area in the vicinity of MAM3-2 which is only about 150 m from this Station.		GWS
MNR Comments	124		3.1 Our apology for any confusion caused by the discussion of locally designated natural features, but we felt it was important to note those features which had previously been identified as being important on the local landscape. In retrospect, this discussion could have perhaps been included in Section 5.0.		GWS
MNR Comments	125		3.1.2 & 5.1.1 and Figure 6 GWS and MNR agree that the wetland should not be included in the PSW and the proposed 20m buffer will provide ample protection for this wetland. See above comment regarding amphibian surveys.		GWS
MNR Comments	126	<b>4.5.5</b> We observed a lot of deer signs during our field visit on March 12. However, the consultant is correct in stating that the area has not been identified as a deer wintering area by MNR.	4.5.5  MNR and GWS agree that the property is not an important deer wintering area.		GWS
MNR Comments	127		5.13 Although the intermittent stream may possibly provide a seasonal source of insect food for downstream fish it does not support an on–site fish population. The existing ecological function of this stream will nonetheless be maintained during aggregate extraction.		GWS
MNR Comments	128	<b>5.1.4</b> The report states that the woodland covers 33.5 ha. It goes on to describe the County Greenland System and that the woodlands on site were not mapped as part of the Greenlands system likely because the site was designated as Mineral Aggregate Area. The original County Greenlands were mapped based on the 1978 photography and the OBM system and likely did not include plantations of that age. Using County Greenlands criteria, this woodland qualifies as Significant Woodland due to its size (33 ha) and amount of interior forest (7ha). According to the Natural Heritage Reference Manual, woodlands are significant when there are 20 hectares or more of woodland, and/or two hectares or more of woodland interior habitat, where woodland cover is 15 to 30% as in Wellington County. Since most of the woodland is 30-year-old pine or spruce plantation there is not a large amount of diversity in the forest, at present, to support a variety of wildlife. For this reason we have no objection to its removal. However there is a net loss of forest here amounting to about 19 hectares. We recommend that James Dick Construction Ltd replace this area of forest elsewhere on another site. Ideally the replanted areas should be located to improve natural heritage features such as a providing or enhancing a linkage or enlarging a current forest area. We will be pleased to discuss this with you.	James Dick Construction Limited is prepared to discuss the feasibility of forest compensation at another site.		GWS
MNR Comments	129	identified the site as a "confirmed significant wildlife habitat" most likely for the simple reason that deer were not	5.16 We acknowledge that a small population of deer utilize the subject property and surrounding lands during the winter and anticipate they will continue to do so in the future even though the amount of on–site forest cover will be reduced.		GWS
MNR Comments	130		7.1 Figure 10, the Operations Plan and Figure 11, the Progressive and Final Rehabilitation Plan were provided to MNR as a separate attachment instead of being enclosed in the report.		GWS

			1. Little Brown Myotis As noted by MNR, this species was not listed as Endangered when the surveys were undertaken. Nonetheless, a special survey was completed for this and other species of bats, recognizing that several bat species were in decline and likely to be protected under the Endangered Species Act, 2007.		
	131	Species At Risk Surveys 1. Little Brown Myotis was detected on the subject property during the bat survey. The report was evidently prepared before this species was listed as Endangered. Now that it is protected under the Endangered Species Act, the proponent should provide information on the species' use of the property (the report simply states that it is present).	The Little Brown Myotis hibernates in caves. There is no suitable hibernation habitat on site, and it is likely that local bats hibernate in caves near Rockwood. Maternal roosts occur most commonly in buildings and less frequently in natural habitats (van Zyll de Jong 1985). The only on-site building is a house fronting on Highway 7. This house appears to be relatively intact and it is unlikely that bats can access the interior of the house, although they may be able to enter the garage through a hole in the door. If the site is being used for maternal roosts, it is more likely that they are using natural cavities on site. According to the MNR (2011) bat monitoring protocol, maternity roosts are likely to occur in deciduous and mixed forests (FOD, FOM). Single deciduous and mixed forest stands occur on the subject lands close to the abandoned building. Both of these forest stands will be retained.		
			We conclude that there will be no impact on the Little Brown Myotis as a result of the proposed Hidden Quarry. There are no areas present that provide suitable hibernation sites. All potential natural maternal roosts will be retained. In the event that some bats are roosting within the existing building, alternative natural roosts will be available to them once the house is removed. Maternal roosts may be used from April when bats come out of hibernation until September (van Zyll de Jong 1985). It is recommended that the house be removed outside of this window when bats are likely to be absent from the site.		GWS
MNR Comments		2.Rusty-patched Bumble Bee (EN) is not addressed in the report. It would be useful for the proponent to indicate if and why they are of the opinion that it is not present on site.	2. Rusty-patched Bumble Bee Although the Rusty-patched Bumble Bee was listed as Endangered in September 2010, it was not on MNR's list of Species at Risk in Wellington County when we did most of our inventories in 2011. Consequently, we were not aware that specific surveys should have been undertaken for this species.		
	132		We are of the opinion that this species is absent from the site. The Rusty-patched Bumble Bee is typically associated with large deciduous forests and it may be found both within forested habitat and around forest margins. Although once a very common species in southern Ontario, it has declined significantly and appears to be confined to large habitat patches that are remote from agricultural operations. All recent records are from Pinery Provincial Park. From 1971 to 1973, the Rusty-patched Bumble Bee represented 14% of all bumble bees collected at Guelph and Rockwood. Extensive targeted searches for this species from 2005 to 2008 found only three specimens. A sample of 1,195 bumble bees from Guelph and Rockwood during that period did not contain any Rusty-patched Bumble Bees (Colla 2010; Colla and Taylor-Pindar 2011).		
			Our conclusion that the Rusty-patched Bumble Bee is absent is based on two factors. The on-site habitat is poor for this species and bumble bees in general. The forest cover is predominantly coniferous plantation which is unsuitable habitat for the species. There are two deciduous/mixed forest stands, but these are very small remnants that are unlikely to provide sufficient habitat for the species. The site is also situated within an agricultural setting that is likely to expose this species to deleterious chemicals.		GWS
MNR Comments	133	West Virginia White (SC) is not addressed in the report however habitat is likely present given that its host plant Cardamine diphyl/a is listed in the Vascular Plant list. We would like an assessment on the potential for Significant Wildlife Habitat on site for this Special Concern species. It is not listed in the report's Lepidoptera species list.	3. West Virginia White As noted in the list of vascular plants (Appendix B), the two species of toothworts were observed during the 1997 inventories but not in 2011. It appears as though these species have become locally extirpated from the site. Consequently, there is no suitable habitat present for the West Virginia White. Even if toothworts were present, the habitat is very marginal for this species on the subject lands. The two forest patches that have the potential to support it are very small. The West Virginia White does not do well from a competitive standpoint when dealing with the cabbage white. The latter species is abundant on the site and the West Virginia white would be unlikely to persist in such small forest fragments where the cabbage white was present.		GWS
MNR Comments	134	The report concludes that Blanding's Turtle and Spotted Turtle are absent from the site. However the rationale for this conclusion is not robust given that suitable habitat is present and no targeted surveys were conducted. The	4. Blanding's Turtle and Spotted Turtle We believe that the protocols for searching for these turtle species were developed after our surveys were completed, but are uncertain if this is correct. The protocols for surveying for Species at Risk do not appear to be readily available on the MNR's website.		GWS
MNR Comments		a. Whether targeted turtle surveys were conducted;	a. Targeted Turtle Surveys In addition to looking for amphibian egg masses during the April 18, 2011 search in the cattail marsh, turtles were actively searched for. Searching within ponds is an effective method of finding turtles and this search resulted in the snapping turtle observation. Without the in-pond search, it is unlikely that the snapping turtle would have been detected, as this is a highly aquatic species that seldom basks. In-pond searches are the best method for finding the snapping turtle. If this method were used more frequently, it would be realized that this species occurs in a very high proportion of permanent water bodies. However, it goes undetected in most of the areas where it is actually present.		
	135		Searching within the pond is also the most effective method for finding spotted turtles. We have searched for spotted turtles with Dr. Jackie Litzgus, who is one of the North American experts on this species. The method that she uses to detect this species is to walk through ponds to search for it within the water column or on the bottom. This is typically done in early to mid-April shortly after ice-out. This is another species that rarely basks and surveys conducted from the shoreline are unlikely to detect it. In addition, once temperatures rise, it often aestivates or remains buried within pond sediments where it will not be observed using standard shoreline surveys.		
			The April 18, 2011 survey of the cattail marsh was considered a targeted turtle survey as well as an amphibian egg-mass survey. Two individuals spent a total of 1.5 hours each searching for a total effort of 3 person-hours.	G	GWS

			h w d a bu d d d d a a a a a a a a a a a a a a a		
MNR Comments	136	b. Time, temperature and weather on April 3-8, 2011 when the salamander traps were checked;	b. Weather Conditions during the April 3-8, 2011Salamander Trap Observations On April 4, it was overcast with a very light breeze, the temperature was –2°C, and there were approximately 2 cm of snow on the ground. On April 5, it was calm and overcast with a temperature of 2°C. On April 6, it was sunny with a light breeze, the temperature was 1°C, and ice had formed on the marsh and in-stream pool overnight. On April 7, it was overcast with a light breeze and a temperature of 1°C in the morning; the site was revisited in the afternoon and it was 8°C and sunny at that time. On April 8, it was overcast with no wind and the temperature was 5°C.  Weather conditions during most of these visits were not suitable for observing turtles, with the exception of the afternoon of April 7.		sws
MNR Comments		c. Time, temperature and weather on June 6-10, 2011, when the fish traps were checked;	c. Weather Conditions during the June 7-10, 2011 Fish Trap Observations	G.	1003
	137		The weather conditions were warm and sunny during days that the fish traps were checked. Mean daily temperatures on those days for Guelph taken from the National Climate and Information Archive website indicate that the mean temperatures were 20.5°C on June 7, 24.2°C on June 8, 17.8°C on June 9, and 13.1°C on June 10, 2011.		
			Conditions were suitable for turtle basking during the fish trap observation periods.	G	iws
MNR Comments		d. Details on the snapping turtle observation: date, time, temperature, weather, methodology (incidental?);	d. Snapping Turtle Observation		
	138		The snapping turtle was observed on April 18, 2011 during the targeted search within the cattail marsh. The weather was cloudy and calm during the survey and the air temperature ranged from–1 to 0°C.		
				G	iws
MNR Comments		e. Details on survey time and methodology for the Lepidoptera and Odonata surveys conducted at the cattail marsh.	e. Weather Conditions during Bird, Butterfly, and Odonate Surveys  It is correct that the marsh bird surveys were completed well before 9 a.m., but two of the three visits extended beyond that time. The following are descriptions of relevant visits made in 2011. The May 20 survey extended		
			from 0722 to 0953 hours and the weather was sunny, the wind was 1-2 on the Beaufort scale, and the temperature ranged from 12 to 16°C. The May 30 visit was from 0640 to 1025 and the weather was a mix of sun and cloud, wind was 1-2, and the temperature was 18 to 22°C. The June 17 survey was from 0704 to 1138 and		
	139		the weather was sunny, the wind was 1-2, and the temperature was 14 to 25°C. The June 26 visit was from 0643 to 1043 hours, the weather was a mix of sun and cloud, the wind was 1-2 early on and 2-3 later, and the temperature was 16 to 22°C. The July 27 visit was from 0953 to 1412 and the weather was mostly sunny, the wind was 0 to 1, and the temperature was 20 to 27°C.		
			Conditions were suitable for observing basking turtles on all of these visits. On almost every visit, the observer parked on the Sixth Line near the cattail marsh and the marsh was searched for all types of wildlife on each visit.		
				G	iWS
		turtle conclusions	f. Conclusions Regarding the Blanding's Turtle and Spotted Turtle We still consider these two species to be absent. The Blanding's turtle basks frequently and is typically highly conspicuous when it is present. It is highly unlikely that it would have been overlooked had it been present.		
			We consider the spotted turtle to be absent for three reasons: it was not observed, the habitat is not suitable, and there are no nearby records of this species. The latter two facts are very important given that this is an extremely difficult species to detect. In the one study that we were involved in, released turtles often disappeared immediately into the sediments and under the vegetation and could only be found again because they were radio-tagged.		
			Habitat for the spotted turtle is considered unsuitable at the landscape level and marginal within the cattail marsh itself. As can be seen in the air photos presented in the Level II Natural Environment Technical Report, the on-site cattail marsh is isolated within an agricultural landscape. From probably the mid-1800s until the early 1980s, the landscape was essentially devoid of substantial tree cover. Any spotted turtles that might have		
			existed in the cattail marsh at that time would have been isolated from any other natural habitat by extensive expanses of agricultural land, which is unsuitable habitat for dispersal by this species. Although the spotted turtle has a relatively small home range, it migrates hundreds of metres among aquatic sites and between aquatic and terrestrial sites. Until tree planting occurred on the site and adjacent lands in the early 1980s, it is		
			unlikely that spotted turtles would have been able to move among habitats given the intensive agricultural lands between potential habitat pockets. Even with the existing forest cover, intervening habitat is harsh for spotted turtles between potentially suitable habitat patches. It seems highly unlikely that an isolated population of this species could have persisted in this landscape, if such a population existed in the first place.		

		turtle conclusions	The cattail marsh is marginal habitat for the spotted turtle. It is typically associated with highly organic habitats, especially bogs and fens. It does occur in cattail marshes, but usually only those with a high organic content (Litzgus 2004). Soils within the on-site cattail marsh are mineral and may actually be gravel. The substrate was very firm while walking through it and these conditions are generally unsuitable for the spotted turtle. In addition, water levels in this marsh may become quite low during drought years, but it is unknown if it ever dries up completely.  The only records of the spotted turtle for Wellington County appear to be the observation by one of the team members at Luther Marsh on June 12, 1975 and another by MNR staff in June of another year in the 1970s. Although the current Ontario Reptile and Amphibian Atlas does not show a map of the distribution of the spotted turtle for confidentiality reasons, the Ontario Herpetofaunal Atlas on the NHIC website (which was updated in 2010) does. There are no records for the spotted turtle in Waterloo, Halton, Peel, or Hamilton. The nearest records for this species are in excess of 50 km away. There appears to be a broad swath through southern Ontario where the species is absent, including Huron, Perth, Waterloo, Brant, Hamilton, almost all of Wellington, Halton, and Peel. These are some of the more intensively farmed areas in the province. If the spotted turtle ever occurred within this general region, it was probably extirpated as a result of forest clearing and agricultural activities.		
MNR Comments	140	Level I and II Hydrogeological Investigation Please note that our comments do not address any potential impact on water supply. In general, the report presents facts in a straight forward and professional manner. We would appreciate clarification with regards to the purpose of the proposed monitoring for each of the monitoring locations. It would be beneficial to create another column in the table that describes the rationale for inclusion of the specific monitoring points as well as the rationale for frequency and timing of the monitoring. We would also like to know how the monitoring data will be used.	Harden has supplied a revised table with additional information as requested		Harden
MNR Comments	141	We would also like it clarified if the proposed contingency measures outlined on page 43 will be incorporated into the site plans.	Yes the proposed contingencies will be included on the site plans.	have the contingency measures included on page 2	Stovel
MNR Comments	142	We would also appreciate clarification of the statement on page 31, which states; "It is unlikely that the runoff from	The analysis of micro-drainage areas was conducted to determine if there are areas that presently contribute runoff to off-site areas. We found that a portion of micro drainage area D1 has the potential to contribute surface runoff to Tributary C. This then raises the possibility of a decrease in surface water flow in Tributary C. However, Tributary C loses water in the vicinity of D1 indicating relatively permeable conditions and this tributary rarely flows as far as Hwy 7. Thus other than during frozen ground conditions, it is unlikely that surface water from micro drainage area D1 would make it overland all the way to Tributary C. It is thus our opinion that there is no significant impact to Tributary C from this loss of potential surface water catchment area. The area of micro drainage area D1 that could be removed from the catchment of Tributary C is small relative to the overall catchment area.		Harden
MNR Comments	143	We also note that the final copy of the report should be stamped.	Harden has supplied a stamped page from the report.		Harden
MNR Comments	144	Site Plans Ministry staff are not in a position to fully review the Site Plans, and the accompanying technical notes until the above noted concerns with the technical studies have been addressed. Please be advised that changes to the Site Plans may be required to address these concerns. The Ministry can however offer the following preliminary comments. Rehabilitation plan The plan identifies that a minimum of 100mm of topsoil will be applied to the graded sideslopes. Soils that are one meter over bedrock are notoriously droughty because there is little or no ground water. Trees will rely totally on snowmelt and rain fall in the early years. Trees planted in this situation will have a hard time establishing themselves. The plan proposes to place soil over bedrock in the rehabilitation. Soils will have to be of sufficient depths to ensure long-term tree growth. Watering will be required in the first number of years to ensure survival if there is insufficient rainfall. Top soil should be 20 cm in depth.	Rehabilitation Plan  We agree that soil depth over bedrock must be of sufficient depth in tableland areas to ensure long-term tree growth and feel that this can be achieved by first of all applying overburden to side slopes followed by topsoil as stated on the Rehabilitation Plan. The objective should be to achieve a soil mass that is 50 to 100cm in depth with a topsoil layer that is at least 10cm in depth and preferably 20cm or more as recommended by MNR. We acknowledge that watering may be required during drought periods to ensure tree survival and agree that the final surface should be loose and rough with undulations so that soil depth over bedrock is variable and micro-habitats are created. If soil becomes significantly compacted deep ripping will be required to make it more permeable and plantable. The Rehabilitation Plan will be revised to reflect these desirable site preparation treatments.		Stovel
MNR Comments	145	Areas where soil is added should not be excessively compacted. The final surface should be loose and rough with undulations so that the soil over bedrock is of varying depths	as above		Stovel
MNR Comments		It is not sufficient to just replace dead planted vegetation as stated in the Note #12 on page 2 of the site plans. A monitoring plan should be part of this rehabilitation. It should consider species diversity, survival, height and stocking and provide targets for an extended length of time. Assurance should be provided that vegetation will be monitored for 10 years to ensure survival and good growth. Dead woody material should be spread over the site to provide shade and protect from the sun.	It was anticipated that vegetation monitoring would be carried out to ensure that the survival and growth of planted trees, shrubs and groundcovers was sufficient to effectively restore desired woodland and wetland vegetation. It was assumed that monitoring would be carried out until trees and shrubs are considered free to grow which means their root systems are well established and their shoots extend above the height of competing herbaceous vegetation, particularly grass and goldenrod (i.e. about 3 feet in height). This usually takes about 5 years on most old field sites but may take somewhat longer on rehabilitated gravel pits. A seedling survival census will be carried out annually during late summer/early fall to determine the need for refill planting in fail areas the following spring. The same species will be used for refill planting as were used in the original planting unless there are good reasons for changing. Bareroot transplant stock 20-40cm in height is recommended for planting on these difficult sites. To ensure adequate stocking in reforested areas there must be at least 80% seedling survival after 5 years or when the trees are considered free to grow. Assuming an original planting density of 600 trees/acre at 80% survival = 480 trees/acre which qualifies the area for protection under the County's Forest Conservation By-law. The above details on reforestation procedures and follow-up monitoring can be added to the rehabilitation plan assuming MNR Staff concur with this approach.		Stovel

MNR Comments			With respect to the use of red pine for reforestation purposes on this site, we acknowledge that red	
WINK COMMENTS				1
			pine generally does not sustain good long-term growth on calcareous sites. It has, however	1
			performed reasonably well on several properties located elsewhere in Wellington County that are	1
			characterized by well drained Dumfries sandy loam soil which is found on the subject property. The	1
	1.47	Red pine should not be used on this site because it requires acidic soil conditions and this is a limestone site. Poplar	intent was to simply incorporate red pine as a minor component in the species mix to enhance	1
	147	is a more suitable species.	biodiversity and help to provide a nurse crop for the eventual establishment of a native hardwood or	1
			mixedwood forest. It would not be used in monoculture blocks and it would mainly be planted on the	1
			warmer, dryer south facing slopes. <b>However, if MNR still feels that red pine should not be planted</b>	1
			on this site it will be deleted from the species list.	1 '
				Stovel

# **Hidden Quarry Site Meeting Notes for June 7 @ 1:00 PM**

In Attendance:

GRCA-Fred Natolochny, Tony Zammit
Wellington County- Peter Williams, Williams Forestry Services
Township of Guelph Eramosa- Domenique Evans and Don McNaulty, RJ Burnside
Ministry of Natural Resources- Steve May
James Dick Construction Limited- Greg Sweetnam, Leigh Mugford
Stan Denhoed, Harden Environmental
Rob Stovel, Stovel Associates

Greg Scheifele, GWS Ecological and Forestry Services

All in attendance by 1:15. Brief welcome and site orientation. Generally the site walk started at the on site contemporary home, proceeded to the west along the woodland border, crossed the creek and followed the woodland border to the east property limit. Then the group walked the east watercourse limit to the north property boundary, crossed the creek and proceeded down the west creek boundary to the central wetland. The wetland boundary was viewed and the group returned to their cars. The walk reconvened in the old gravel pit in the northwest corner of the site. The boundary of the MAS 2-1 wetland was walked and the location of the berms and hydraulic buffer was pointed out. Details of discussions of various features are listed below. All had left the site by 4:15 pm.

# The notes below were written by L Mugford James Dick Construction Ltd, with additional content below that from GRCA and Wellington County.

- 1. <u>Woodland Boundary south east area-</u>Identify and flag the limits of the woodland areas to be retained and removed and review linkages with off property areas.
- The group was led around the flagged limits by GWS. Discussion regarding saving large mature maple as a seed source in the vicinity of HQ 1. This was agreed to by JDC subject to monitoring of the condition of the tree as it will likely naturally decline over the coming decade.
- JDC also agreed that where there was a steep slope down into the extraction area it would not make sense to disturb the vegetation on the existing westerly slope of FOM 2-2.
- 2. <u>Tributary B and MAM3-2 Wetland-</u>Identify the limit of Tributary B including the MAM3-2 wetland area, the associated floodplain, set back requirements (20m vs 30m) and whether the services of a geomorphologist are required for this task.

- The setbacks from the stream and wetlands were staked and viewed in the field.
   There appeared to be a general agreement that the setbacks were appropriately staked.
- GRCA advised that as long as the floodplain was within the setbacks the services of a geomorphologist were not required.
- The installation of silt fence to protect the creek should be located inside the extraction area rather than inside the setback zone. All areas on the setback side of the silt fence as well as a 2m buffer outside the silt fence designated as 'no touch' areas. Stovel to provide design cross section.
- 3. Clarify GRCA April 15 2013 comment #10 regarding the 'unevaluated' wetland (MAM3-2) and application of the complexing rules from the Ontario Wetland Evaluation Manual?
  - MNR written comments indicated that "Given that the MAM3-2 wetland is less than 0.5 Ha and in accordance with the OWEM and MNR policy the MNR has commented that this wetland feature will not be considered part of the Eramosa River- Blue Springs Creek PSW."
- 4. Identify whether the cedar stand (FOC2-2) beside Tributary B can be trimmed to a 20m setback.
- After review in the field with GRCA and the Professional Forester hired by Wellington County, no objections were raised regarding the staking locations as laid out in the field.
- 5. Discuss Tributary B crossing requirements.
- Discussion with the GRCA explored the use of a CSP type crossing with footing
  on either side, leaving the stream bed intact, constructed in the dry period. JDC
  will provide a design detail. GRCA advised to leave a low area on one side of the
  culvert in case of flooding or culvert blockage and install a steel or stone wing
  wall to protect the creek from erosion.
- 6. Burnside comment regarding the thickness of basal silt till near Tributary B and the effective "k" values that will affect where the water from Tributary B is going.
- Discussion with Stan Denhoed clarified evidence of basal silt layer in borehole logs on a monitor by monitor basis as each monitor was passed during the site walk.
- 7. <u>PSW and Other Wetlands- North West Area</u>-Flag, stake the limits of the PSW (MAS2-1).

- The boundary of the wetland was flagged and walked by GRCA and GWS and general consensus was reached.
- 8. Identify the adjacent wetland boundaries to be enhanced and removed (0.2Ha of the man-made wetland area is proposed to be removed) and the proposed enhancement proposal in relation to meeting GRCA Wetlands Policy.
- Discussion around the merits of the enhancement versus leaving the wetland in its current condition resulted in agreement to preserve the wetland enhancement part of the project and preserve the man-made current condition with small area of the manmade wetland to be removed.
- 9. Review the proposed location for the Hydraulic Barrier proposal as there may be a mapping issue. Also may discuss the need for the Barrier as an optional belt and suspenders approach. Is there groundwater flow out of the wetland etc.
- JDC agrees that the hydraulic buffer would be relocated slightly to underlie the acoustic berm in order to minimize the overall disturbance of vegetation and wetland.

# Feedback to Notes from GRCA 7/15/2013 Fred Natolochny:

Thank you for providing the minutes from our site meeting for the Hidden Quarry. I hope you wouldn't mind distributing the comments below as appropriate/required.

We have reviewed the minutes and Tony Zammit has identified a couple of points where modification of the minutes may be warranted.

Point #1 - GRCA is satisfied with the boundary along the ridgeline, but in other areas the line seemed arbitrary. This was conveyed to GWS. Furthermore, I do not recall that we reviewed or discussed linkages with off-site property areas.

Point #2 - Agreement/approval of setbacks was not an objective of the site visit. A buffer analysis is required prior to approval of extraction limits.

Point #7 - Although mapped by GWS in his Level 2 Natural Environment Report, the boundary of the man-made wetland was not staked in the field and thus was not verified by the GRCA, this should be noted.

The intent of the on-site inspection was to become familiar with the features and to review the staking/limits of the features and proposed limits in the field. We would expect that rational for the woodland area and review of linkage to offsite areas would be provided in a written response. The buffer analysis should be provided in response to our prior comments and the in-field findings.

Trusting these comments are helpful, and looking forward to a response to our prior comments when they are available.

# <u>Feedback from Wellington County – July 18, 2013 from Aldo Salis</u>

Please find attached the comments provided by our consultant, Peter Williams, Williams & Associates Forestry Consultants Ltd., regarding the proposed Hidden Quarry application.

Williams & Associates was retained by this office to assist with the review of the woodlands on the subject property. As you know, Mr. Williams attended the site meeting on June 7, 2013 together with representatives from the municipality and the other public agencies. While Mr. Williams was generally in agreement with the results of the woodlands assessment, he did request additional information. If you have any questions with this request or the attached report, please contact me.



5369 Wellington Rd 27, R.R.#1, Rockwood, ON N0B 2K0 Tel (519) 856-1286 Fax (519) 856-9728

\* \* \* \*

Website www.forestar.ca
Email forstar@execulink.com

June 13, 2013

Aldo Salis, Planner
Wellington County, Planning and Development Department,
74 Woolwich St.
Guelph, Ont
N1H 3T9

Re: Hidden Quarry (Rockwood) Site Meeting, June 7

At the County's request, I reviewed the documentation sent and other materials regarding the Hidden Quarry proposal near Rockwood and attended a site meeting. The material was mainly technical reports from the proponents and material in my files regarding forests and natural areas in the vicinity.

On June 7, 2013, I attended a site meeting and tour hosted by the proponent and their consulting team. Representatives from the Grand River Conservation Authority and Ministry of Natural Resources were also in attendance. My understanding is that the County wanted my presence at the site meeting to review/confirm that the woodland boundaries were satisfactorily represented in the proponent's assessment and to report on other aspects of the woodland evaluation conducted by the proponent.

I reviewed the technical reports regarding the vegetation and wildlife on the site and found that the survey and inventory work was professionally done and represents the existing conditions of the subject property. While not all of the woodlands on the property are currently mapped as Core Greenlands or Greenlands in the County Official Plan, in my opinion the woodlands appear to meet the size requirements of the Official Plan policies, contribute to local forest cover, provide linkage to neighbouring woodlands, and provide important ecological connection to the nearby natural areas (i.e. Eramosa/ Blue Springs Creek corridors).

In my view, the technical reports provide inadequate discussion as to the importance of the woodlands on the property relative to nearby natural areas, and incorrectly suggested negligible linkages to the Blue Springs Creek to the south. They justify the lack of connectivity because the property is cut off by Highway 7, and limited linkages to other woodlands to the north and west. I disagree with this assessment and suggest that with the exception of the proximity of urban areas associated with Rockwood, the complex of natural areas and agricultural land is well-connected. The natural areas between the Eramosa River and Blue Springs Creek channels become more important closer to their confluence around Rockwood and Eden Mills. With the high proportion of natural areas between the subject property and the confluence of two waterways, I believe that the woodlands on the subject property provide important connectivity to surrounding natural areas.

Notwithstanding the preceding discussion, it is my opinion that the proposed project would have limited negative impacts on the functions discussed above. While these woodland functions would be temporarily affected by the project, I believe that the basic linkages can be maintained by the vegetative corridors on the north and east side of the property and stream channel as proposed. The affects on connectivity can be further mitigated through other operational considerations such as retaining the current vegetation until just prior to extraction, expeditious restoration back to natural cover and enhancing tree/natural vegetation along the 6<sup>th</sup> Line would help maintain these connections.

I trust that this information is helpful. Please contact me if you have any questions.

Sincerely,

Peter A. Williams, M.Sc., R.P.F.

Consulting Forester/Arborist

Petalliom



# **Leigh Mugford**

From: Greg Sweetnam
Sent: October-24-13 3:23 PM

To: Leigh Mugford

Subject: FW: Hidden Quarry - License Application for a Category 2, Class A License under the

Aggregate Resources Act - MNR Repsonse to Comments - July 2013

Attachments: Blanding's Turtle Survey Protocol April 2012 Guelph District.doc; Little Brown Myotis &

Northern Myotis- Building use.doc; Little Brown Myotis and Northern Myotis 2013 Guelph District.doc; Draft Survey Protocol for Spotted Turtle 2013 01 31.pdf; Rusty-patched

Bumblebee survey methodology in Guelph District\_2013.doc

From: Norminton, Lorraine (MNR) [mailto:lorraine.norminton@ontario.ca]

**Sent:** July-11-13 9:40 AM **To:** Greg Sweetnam

Cc: May, Stephen (MNR); Timmerman, Art (MNR); Ivanov, Oleg (MNR); Pickett, Karolyne (MNR); Murray, Al (MNR) Subject: Hidden Quarry - License Application for a Category 2, Class A License under the Aggregate Resources Act -

MNR Repsonse to Comments - July 2013

July 11, 2013

Greg Sweetnam
James Dick Construction
P.O. Box 470
Bolton, ON
L7E 5T4

Re: Hidden Quarry – License Application for a Category2, Class A License under the Aggregate Resources Act – Part Lot 1, concession 6, Township of Guelph/Eramosa in the County of Wellington

Dear Mr. Sweetnam

Thank you for the opportunity to review the information that was been submitted in reply to our April 15, 2013 comments. We have reviewed the explanations and provide the following comments.

#### **Level II Natural Environment Technical Report**

- **4.5.5** MNR would like to note that although the intermittent stream may possibly provide a seasonal source of insect food for downstream fish it does not support an on-site fish population. The existing ecological function of this stream will nonetheless be maintained during aggregate extraction.
- **5.1.4** In regards to the net loss of approximately 19 hectares of woodland and the recommendation to replant the areas at a site that would improve natural heritage features such as providing or enhancing a linkage or enlarging the current forest area. We would be happy to meet with you to discuss.

#### **Species at Risk**

**Little Brown Myotis**: Given that the building on site could provide bat maternal roost habitat (2<sup>nd</sup> paragraph, p.2), <u>and</u> given that it is proposed to be demolished, the building should be surveyed for LBM. The survey protocol for buildings is attached.

The wooded area (i.e. coniferous and deciduous/mixed stands) should be surveyed for the presence of maternal roosts. Survey principles for woodlands are also attached.

**Rusty-patched Bumble Bee**: We note that your letter is contradicting itself. Page 3 states "targeted searches in Guelph and Rockwood from 2005 to 2008 failed to find this species." But previously on page 2 it states "Extensive targeted searches for this species from 2005 to 2008 found only three specimens." We would appreciate some clarification on this. Notwithstanding this ambiguity, the criterion for surveying for a species is whether suitable habitat is present, unless the specific property has been surveyed for previously in an appropriate fashion. The draft habitat regulation proposal includes woodland as one of the types of areas that are suitable for foraging, and does exclude coniferous woodlands. Habitat suitability is further described in the Guelph District survey protocol based on presence of suitable forage species. We suggest you cross-reference the property's plant list with the species forage list to determine whether suitable habitat is present within the coniferous plantation, deciduous/mixed forest stands, and any other area listed in the draft habitat regulation. If suitable habitat is present on the property the proponent is expected to conduct a survey for the species. The protocol is attached.

**West Virginia White**: We note that you state that the host plant that was documented on site is now extirpated from the site. We would appreciate knowing the dates that the botanical surveys were done in 2011? This is relevant because if the survey was done outside of the flowering period the plants could have easily been missed.

# Blanding's Turtle and Spotted Turtle:

Survey protocols are indeed not available on the MNR website. They are provided to consultants when required. Regardless, the absence of an MNR survey protocol or the timing at which one is developed by the MNR has no bearing on whether a survey ought to be carried out on a particular site.

It is stated that the on-site visit on April 18 is considered a targeted turtle survey. However, the temperature on that day (-1 to  $0^{\circ}$ C) was not suitable to detect either species. No other site visits are identified as targeted turtle surveys. Given that both species are highly <u>inconspicuous</u>, it is important that targeted surveys be conducted during appropriate weather conditions in order to detect either species.

MNR maintains that suitable habitat is present on site for both species.

Therefore, MNR is of the opinion that <u>it is not reasonable to conclude that the species are absent from the site based on the field work</u> that has been conducted to date. Survey protocols are attached.

If you have any questions in regards to Species at Risk or the survey protocols attached please feel free to contact Karolyne Pickett, Species at Risk Biologist at 519-826-4961.

# Level I and II Hydrogeological Investigation

The Ministry has no further concerns in regards to the Hydrogeological Investigation.

#### Site Plans - Rehabilitation Plans

Vegetation Monitoring- the Ministry approves the details given on reforestation procedures and follow-up monitoring. We look forward to reviewing the revised site plans and rehabiliation plans at your earliest convenience.

In light of the above comments, the Ministry is not in a position to support the Category 2, Class A license application at this time.

We would be pleased to discuss any of the above issues further with the proponent or consultants.

Respectively submitted,

# Original Signed

Lorraine Norminton A/District Planner

cc. Steve May, MNR
Al Murray, MNR
Art Timmerman, MNR
Oleg Ivanov, MNR
Karolyne Pickett, MNR

#### **Lorraine Norminton**

District Planner
Ministry of Natural Resources, Guelph District
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Ministry of Natural Resources Ministère des Richesses naturelles

Guelph District 1 Stone Road West Guelph, Ontario N1G 4Y2 Telephone: (519) 826-4912 Facsimile: (519) 826-4929



November 6, 2013

Greg Sweetnam
James Dick Construction
P.O. Box 470
Bolton, ON
L7E 5T4

REGISTERED LETTER

Re: Hidden Quarry - License Application for a Category 2, Class A License under the Aggregate Resources Act - Part Lot 1, Concession 6, Township of Guelph/Eramosa in the County of Wellington

Dear Mr. Sweetnam

Thank you for the opportunity to review the information that was been submitted in reply to our April 15, 2013 comments. We sent a letter to you dated July 11, 2013 at which time Karolyne Pickett our Species at Risk Biologist reviewed the file and provided comments. Since then we have had a staff change and Graham Buck reviewed the file and reported that based on the site investigation record (Table 1) the team did a very detailed and robust study of all taxa.

### Level II Natural Environment Technical Report

The Ministry has no further concerns with the Natural Environment Report.

### Level I and II Hydrogeological Investigation

The Ministry has no further concerns in regards to the Hydrogeological Investigation.

#### Site Plans - Rehabilitation Plans

**Vegetation Monitoring**- the Ministry approves the details given on reforestation procedures and follow-up monitoring.

After review, Ministry staff are satisfied that the outstanding objections noted on July 11, 2013 have been satisfactorily resolved.

Respectively submitted,

Lorraine Norminton A/District Planner

cc. Sarah DeBortoli, MNR Al Murray, MNR Art Timmerman, MNR Oleg Ivanov, MNR Graham Buck, MNR

Leigh Mugford, James Dick Construction Ltd.