



# Township of Guelph/Eramosa

## Halton Region Review Document Book Index

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April 19, 2013

Mr. Stephen May  
Aggregate Resource Inspector  
Ministry of Natural Resources  
Regional Operations Division  
Southern Region  
Guelph District  
1 Stone Road West  
Guelph ON N1G 4Y2

Legislative & Planning Services  
Planning Services  
1151 Bronte Road  
Oakville ON L6M 3L1  
Fax: 905-825-8822

and

James Dick Construction Limited  
Box 470  
Bolton ON L7E 5T4  
Attn: Greg Sweetnam, Vice President

Dear Sirs:

**RE: Notice of Objection**  
**Application under the *Aggregate Resource Act* by James Dick Construction Limited for a Class 'A' Category 2 Licence – Aggregate Operation for a 24.8 hectares Quarry on the lands legally described as West Half Lot 1, Concession 6, former geographic area of the Township of Eramosa – Township of Guelph/Eramosa, County of Wellington**

Please be advised that Halton Region objects to the above-noted application for the following reasons:

1. The *Aggregate Resource Act (ARA)* application is premature while Halton Region's review is still ongoing and technical information and planning matters remain outstanding. Issues which remain to be resolved include concerns regarding impact on hydrogeology, transportation, noise, and natural environment.
2. The approval of the *ARA* application requires necessary planning approvals with the Township of Guelph/Eramosa which remains outstanding and, therefore, Halton Region is not able to take a position on this planning application at this time.
3. The required Development Application Review fee for the review of applications requiring *Planning Act* Approval in Bordering Municipalities, established through By-law No. 134-12, has not been received by Halton Region

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Due to above issues, the *Aggregate Resource Act* application should not be approved until the review process is completed.

Should you have any questions or require additional information, please contact Brian Hudson, Senior Planner, at Ext. 7209 or [brian.hudson@halton.ca](mailto:brian.hudson@halton.ca).

Yours truly,

Original signed by

Ron Glenn, MCIP, RPP  
Director of Planning Services and Chief Planning Official

c: Janice Sheppard, CAO, Township of Guelph/Eramosa  
Meaghen Reid, Clerk, Township of Guelph/Eramosa  
John Linhardt, Director of Planning, Development and Sustainability, Town of Halton Hills  
Barb Koopmans, Acting Director of Planning and Development, Town of Milton  
Nancy Davy, Director of Resource Management, Grand River Conservation Authority  
Gary Carr, Regional Chair, Halton Region  
Mark Meneray, Commissioner of Legislative and Planning Services and Corporate Counsel  
James Stiver, Manager of Community Planning, Halton Region  
Brian Hudson, Senior Planner, Region of Halton  
Mike Davis, Planner, Cuesta Planning Consultants



July 5, 2013

Ms. Meaghan Reid, Clerk  
Township of Guelph/Eramosa  
8348 Wellington Road 124  
P.O. Box 700  
Rockwood, ON N0B 2K0

Legislative & Planning Services  
Planning Services  
1151 Bronte Road  
Oakville ON L6M 3L1  
Fax: 905-825-8822

Dear Ms. Reid:

**RE: Region of Halton Request for Additional Information  
"Hidden Quarry" – James Dick Construction Ltd.  
Proposed Class 'A' Category 2 License – Aggregate Operation  
Township of Guelph/Eramosa Zoning By-law Amendment Application ZBA 09/12  
West Half Lot 1, Concession 6, former geographic area of the Township of Eramosa**

Further to the Region of Halton's receipt of the studies and reports submitted as part of the review process for the Hidden Quarry proposal, the following additional studies or study updates have been identified as being needed, and are hereby requested. These additional studies or study updates are required in order for Regional Staff to provide formal technical comments on the proposed quarry.

- Haul Route Study (terms of reference to be established based upon consultation with Regional Transportation Staff, the Town of Milton, and the Town of Halton Hills).
- Revisions to the Level I and II Hydrogeological Investigation dated September 2012, and completed by Harden Environmental Services Ltd. to include:
  - Detailed Baseline Well Survey for the lands within 1,000 m of the proposed quarry within Halton Region;
  - Details on the proposed Well Monitoring and Mitigation Program, and more detailed contingencies as they relate to private wells within Halton; and,
  - Detailed 'Well Complaint Protocol'.

The requested updates shall also include a consolidated version of the Hydrogeological Investigation which reflects and details all agency comments received to date.

- An Adaptive Environmental Management Plan.
- Given the potential of groundwater impact downstream in Milton/Halton Region, it is the expectation of the Region that a zone of influence for the proposed quarry be established based on a sound scientific and policy analysis. Once this basis is established to the satisfaction of the affected municipal partners, the Natural Environment Technical Report and any necessary field work will need to be revised or commissioned to assess the potential for impact.
- As is permitted by the policies of the Greenbelt Plan, 2005, the Natural Environment Technical Report, Hydrogeological Investigation, and the Planning Justification Report must be updated to reflect the policies and requirements of the Plan, and the potential impact of the proposed quarry development on the adjacent Key Natural Heritage System and Key Hydrologic Features located to the south of these lands (i.e. in Halton Region).

**The Regional Municipality of Halton**

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- Updated copy of the Operations Plan reflecting all agency comments received to date.

We look forward to receiving a response from you as to how these requests will be addressed and satisfied. The Region is not able to make a formal recommendation on this application at this time. Once we have received the additional requested information, we will proceed with a technical review which will culminate in comprehensive formal comments from the Region of Halton.

We respectfully request that the Region be copied on any correspondence to the proponent in this regard. We look forward to receiving any additional information related to this application.

Regards,



Brian Hudson, MCIP, RPP  
Senior Planner  
Brian.hudson@halton.ca

- C Barb Koopmans, Acting Director, Planning & Development, Town of Milton  
Stephanie Jarvis, Environmental and Sustainability Planner, Planning & Development, Town of Milton  
John Linhardt, Director of Planning/Development/Sustainability, Town of Halton Hills  
Fred Natolochny, Supervisor Resource Planning, Grand River Conservation Authority  
Janice Sheppard, CAO, Twp. of Guelph/Eramosa  
Mike Davis, Planner, Cuesta Planning Consultants (Consultant for the Township)  
James Stiver, Manager of Community Planning, Region of Halton  
Adam Huycke, Planner, Region of Halton



July 28, 2014

Ms. Kim Wingrove  
Township of Guelph/Eramosa  
8348 Wellington Road 124  
P.O. Box 700  
Rockwood, ON N0B 2K0

Legislative & Planning Services  
Planning Services  
1151 Bronte Road  
Oakville ON L6M 3L1  
Fax: 905-825-8822

Dear Ms. Wingrove:

**RE:       Region of Halton Technical Comments  
          “Hidden Quarry” – James Dick Construction Ltd.  
          Proposed Class ‘A’ Category 2 License – Aggregate Operation  
          Township of Guelph/Eramosa Zoning By-law Amendment Application ZBA 09/12  
          West Half Lot 1, Concession 6, former geographic area of the Township of Eramosa**

The following correspondence is provided to outline technical comments on the key hydrogeological-related matters as they relate to the above noted zoning by-law amendment application and Aggregate Resource Act application. These comments are not intended to supplant our July 5, 2013 letter as the requested additional studies and updates to the existing studies prepared in support of this proposal remain outstanding.

The following comments identify matters that require further clarification in order to protect Halton Region interests in relation to this proposal. These comments largely focus on water resources and potential sensitive receptors within Halton Region, including surface water features, groundwater levels, groundwater quality, domestic wells, on-site and off-site monitoring relevant to the Region, and reference to the site plan. The following materials have been reviewed as part of these comments:

- I. Letter from MOE’s Carl Slater to James Dick Construction Ltd. (JDCL), dated July 3, 2013.
- II. Letter-report from Harden Environmental Services Ltd. (Harden) to JDCL, dated July 15, 2013, responding to MOE’s comments of July 3, 2013.
- III. (i) Hydrogeological Summary (letter) Report for Township of Guelph Eramosa from Harden to JDCL, dated September 5, 2013; (ii) Burnside’s comments dated November 12, 2013 on Harden’s Hydrogeological Summary Report, and (iii) Burnside’s responses dated April 8, 2014 (C1) and April 9, 2014 (C2) to Harden’s letter (dated January 14, 2014) responding to Burnside’s comments of November 12, 2013.
- IV. (i) Letter from Grand River Conservation Authority (GRCA) to Township of Guelph/Eramosa dated November 4, 2013), and (ii) Letter from GRCA to Township of Guelph/Eramosa dated March 28, 2014; and (iii) Letter from GRCA to Township of Guelph/Eramosa dated April 23, 2014.
- V. Letter-report from Harden to JDCL, dated February 5, 2014, concerning “timeline for changes to monitoring plan”.
- VI. Site Plans; Stovel & Associates, June 6, 2014

**Surface Water Features:**

- Based on the GRCA's correspondence of April 15/13, Brydson Creek (i.e. an extension of Tributaries B+C south of Hwy 7) is classified as cold-water fish habitat. Except for SW3 at Hwy 7 crossing, there does not appear to be any surface water monitoring proposed at the Brydson Creek south of Hwy 7. Is SW3 representative of cold-water fish habitat at Brydson Creek? Are any fish habitat/ecological monitoring proposed along some specific section(s) of the creek? There is no evidence of such monitoring in any of the reviewed documents.
- Brydson Farm Spring is located south of Hwy 7 and within Halton Region. There does not appear to be any monitoring proposed in regards to groundwater spring which is apparently attributed to re-emergence of Tributary B about 400m south of the proposed quarry site (i.e. at the Brydson's Farm in Milton). Harden Environmental asserts that water levels at Brydson Spring will increase, if anything, as a result of the quarry and that 600 m travel-distance from the extraction edge to the Brydson Spring would be more than sufficient to attenuate thermal changes in the groundwater. A permanent monitoring station should be established (subject to property owners' permission) at spring re-emergence to monitor for flow, temperature, water quality and any groundwater-uses and groundwater-dependant habitats in this area.

**Groundwater Levels:**

- In their November 12, 2013 correspondence, Burnside indicated that there is significant potential for impacts from the proposed quarry activities on the groundwater resources in the surrounding area. This correspondence recommended, among other things, that all domestic wells within 500m of the quarry site be inspected and tested to evaluate how susceptible they are to water level variations, and that the proposed monitoring program should be expanded to include representative domestic wells. The groundwater levels and temperature monitoring at the south side of the subject lands should be expanded beyond M4, to all accessible domestic wells south of Hwy 7, as noted below.

**Domestic Wells:**

- Little is known of the current status of private wells in Halton Region south of Hwy 7 as the last well survey was conducted in mid-1990s. Both a survey and well assessment should be carried on all wells in Halton Region potentially under the influence of the flow from the quarry site. At a minimum, all properties that lie within the 500m zone should be subject to a well survey, including wells at these properties that might be located somewhat outside of the 500m zone.
- Burnside stated that the monitoring program should reference the pre-extraction well survey that would include water quality/quantity testing and indicate which wells will be potentially involved in the monitoring program. Should access be limited to private wells within the Region for the purpose of long-term monitoring and testing, then additional (multi-level) monitoring installations should be established along the southerly boundary of the subject lands for monitoring and "early warning" purposes (i.e. west and east of the existing monitoring well M4).

**Well Complaint Protocol:**

- JDCL proposed to involve Water Well Drilling Company and have Harden on stand-by to address any water quantity or quality issues that arise. We assume that the "well complaint protocol" would encompass Halton residences downgradient of the site. Confirmation of this understanding is required from both JDCL and Burnside.

**Water Quality:**

Burnside expressed concerns that quarrying activities could impact current concentrations of nitrate, iron and also introduce surface water pathogens into the nearby groundwater system. We agree with



Burnside's comments and recommendations on the protection, monitoring and mitigation of water quality, and recommends further improvements as summarized below:

- Burnside suggested the establishment and sampling of on-site multi-level M15 to determine nitrate concentrations with depth and that any nitrate contributed by the blasting should be quantified and included in the mass balance. We recommend installing an additional multi-level monitor at the southern site boundary and incorporating monitoring data (water level and quality) in the mass balance nitrate calculations to better understand nitrate concentrations leaving the site (pre- and during extraction).
- Burnside noted that Harden should provide commentary as to the impact of water fowl on surface water in the quarry and how this may impact downgradient wells. We agree that additional information on the matter is required.
- Burnside noted that Harden should provide additional detail on how the existing monitoring well network would provide sufficient early warning so that the treatment system can be installed in downgradient domestic wells before unacceptable impacts to drinking water occur, and also that Harden would need to qualify if any existing wells could be deepened or whether the installation of water treatment equipment would be the preferred option. We support a pro-active approach to protection and mitigation of private wells in Halton Region.

**Review of Monitoring Adjacent to Halton Region Lands:**

It appears that JDCL intends to utilize two established monitoring locations at the southern boundary of the proposed Hidden Quarry and immediately north of Hwy 7: (i) M4 – a 18.6m deep bedrock monitoring well south of the Phase 3 area and (ii) SW3 - surface water flow station at the Tributary B crossing Hwy 7. It appears that drive-point(s) M7/M7R (i.e. 2.8m/3.1m deep overburden piezometers just east of M4) are not proposed for monitoring (we assume they are mostly dry). Our comments regarding the proposed monitoring program are as follows:

***Groundwater monitoring program:***

The extraction depth of the proposed quarry is approximately 30 metres below the water table using subaqueous methods without dewatering. It is noted that fully-penetrating bedrock wells are not proposed along the southern property line adjacent to the Phase 3 lands. Therefore, the full influence on water resources south of the quarry would not be known unless adequate instrumentation is added downgradient of the Phase 3 lands.

As M4 (18.6m deep) is the only observation well proposed for monitoring in this area, we recommend additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations should be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile and to protect private wells and properties located downgradient of the site in Halton Region. The new wells should be established sufficiently ahead of the extraction in Phase 2 and 3 in order to collect representative baseline data (both water levels and water quality). The monitoring should provide information on changing groundwater regime and serve as “early warning” for downgradient private wells in Halton Region.

***Surface water monitoring program:***

Based on the GRCA's correspondence of April 15/13, Brydson Creek is classified as cold-water fish habitat south of Hwy 7. There does not appear to be any surface water monitoring proposed at the Brydson Creek south of Hwy 7. There does not appear to be any monitoring proposed in regards to the groundwater spring attributed to re-emergence of Tributary B about 400m south of the site in Halton Region (i.e. at the Brydson farm in Milton). Further Regional comments on surface water

monitoring program will be provided as part of our technical comments on the Natural Environment Technical Report (to be provided under separate cover).

***Private Well Monitoring:***

We note that the Harden Environmental February 5, 2014 letter indicates that a well monitoring program for water quality and an action plan to remedy any issues is proposed to protect neighbouring private wells. It is not clear to Regional Staff how this program protects or addresses private wells within the Region of Halton. Further, it is not clear to Regional Staff that all private wells in close proximity to the extraction site have been evaluated or are included in this program.

Additionally, the private well complaint protocol (Section 6.0 of the February 5, 2014 Harden letter) should be revised to include the Region of Halton and the Town of Milton as parties to be notified in the event that a water well complaint is received. Further, clarity on how the complaints will be handled should be provided.

**Other:**

- Trigger levels and contingency measures are proposed for northwest and north areas of the proposed quarry site, mainly in association with the on-site wetlands. No trigger water levels are proposed on at the south end of the extraction area. Further discussion to this point is requested.
- The apparent “benefits” of the on-site pond creation (subject to approval) on downstream wells, springs, ponds or streams, and properties should be subject to confirmation (through modeling) based on future (enhanced & multi-level) monitoring results; however, no off-site downgradient monitoring is proposed.
- The effects of blasting on private wells within Halton Region are not known and should be addressed.
- Based on *Site Plans*; Stovel & Associates, June 6, 2014: As the site plan does not refer to any downgradient private well/private property monitoring, the following issues need to be clarified:
  - *Page 2 of 5:* (i) “extraction footprint” on the site plan and in the latest hydrogeology reports do not align (ii) in regards to “*a main processing area will be developed in the southwestern portion of the site once a sufficient area had been cleared*”, this area is not identified as part of any extraction stage; does the extraction include overburden only? (iii) “spills” protocol should include immediate notification to downgradient properties utilizing domestic wells as their primary drinking water supply.
  - *Page 3 of 5:* (i) What are the anticipated “silt pond” depth/fill elevation in relation to groundwater levels to the south? The pond is proposed almost directly to the north of a sensitive receptor (private well W19 defined as R16 on the site plan) in Halton Region. Is M4 installed to monitor potential impact from this pond? In reference to a “blasting line” on the south side of the west extraction area, what monitoring is proposed to ensure that private wells and other structures to the south (i.e. in Halton Region) are not affected by blasting activities?

Further to our July 5, 2013 letter, Regional Staff requested that an Adaptive Management Plan (AMP) be prepared as part of the review process for this proposed quarry. Regional Staff believe that this plan would provide for an effective tool to formalize any resolutions and commitments to monitor and mitigate water resources issues which would include Halton Region lands.

It is noted that further technical comments with respect to other Regional interests on this proposed quarry will be forthcoming under separate cover.

Regional Staff note that the Region's Review fee (\$18,714.19) remains outstanding. As noted in our April 2, 2013 correspondence, we kindly request that James Dick Construction Limited submits this review fee to the Region in accordance with the Region's Development Application Requirements.

In the meantime, please forward any further materials to Adam Huycke, Planner at (905) 825-6000 Ext. 7604 ([adam.huycke@halton.ca](mailto:adam.huycke@halton.ca)).

Sincerely,



Brian Hudson, MCIP, RPP  
Senior Planner  
Ext. 7209  
[Brian.hudson@halton.ca](mailto:Brian.hudson@halton.ca)

Cc Greg Sweetman, James Dick Construction Limited  
Ron Glenn, Director of Planning Services and Chief Planning Official  
Adam Farr & Jeff Markowiak, Town of Halton Hills Planning Services  
Barb Koopmans, Town of Milton Planning and Development Department  
Liz Howson, Macaulay Shiomi Howson Ltd.  
Linda Sword, Concerned Residents Coalition



# JAMES DICK CONSTRUCTION LIMITED



MAIL: P.O. Box 470, Bolton, Ontario. L7E 5T4  
COURIER: 14442 Hwy. 50, Bolton, Ontario. L7E 3E2  
TELEPHONE: (905) 857-3500 FAX: (905) 857-4833

August 1, 2014

The Regional Municipality of Halton  
Legislative and Planning Services  
1151 Bronte Road  
Oakville Ontario  
L6M 3L1

**Attention: Mr. Adam Huycke  
Planner**

**RE: Zoning By-Law Application 09/12  
Hidden Quarry: Part Lot 1, Concession 6, Township of Guelph/Eramosa,  
County of Wellington**

Dear Adam,

Thank you for your letter dated July 2, 2014, addressed to Ms. Kimberly Wingrove at the Township of Guelph/ Eramosa concerning our application noted above. The Region had provided comments on ground and surface water in this letter.

Please find attached a response document where James Dick Construction Limited has provided a response for each of the comments made. Where materials have been updated or correspondence has been superseded by updated letters, we have provided these as attachments to this letter.

I am happy to report that we are in agreement with most of the comments made by the Region of Halton and we have indicated where changes will be made to site plans and programs. Once all agency comments have been addressed we will comprehensively compile final updated reports and plans embracing all changes and modifications committed to.

Sincerely,  
**JAMES DICK CONSTRUCTION LIMITED**

Greg Sweetnam, V.P., Resources

cc. Brian Hudson, Ron Glenn, Kimberly Wingrove, Liz Howson, Barb Koopmans

#	Contact	Date	Question	Response	Action Item	Who
1	Region Halton	28-Jul-14	<p><b>Surface Water Features:</b></p> <ul style="list-style-type: none"> <li>Based on the GRCA's correspondence of April 23, 2014, Brydson Creek (i.e. an extension of Tributaries B+C south of Hwy 7) is classified as cold-water fish habitat. Except for SW3 at Hwy 7 crossing, there does not appear to be any surface water monitoring proposed at the Brydson Creek south of Hwy 7. Is SW3 representative of cold-water fish habitat at Brydson Creek? Are any fish habitat/ecological monitoring proposed along some specific section(s) of the creek? There is no evidence of such monitoring in any of the reviewed documents.</li> </ul>	<p>James Dick Construction has agreed in correspondence (Harden response to Burnside June 10, 2014), providing that permission is given by the owner, to conduct flow and water quality testing of the spring to establish baseline conditions. The hydraulic potential at the southern edge of the quarry will increase, thereby increasing the hydraulic gradient between the quarry and the spring. If the hydraulic gradient is maintained at current or higher levels there will be no detrimental change to the Brydson Spring. SW3 is a monitoring station within 100 m downgradient of the Hidden Quarry Property. In this way SW3 is a good proxy monitoring location for Brydson Spring. In addition, the volume of water stored in the quarry will moderate seasonal groundwater level change, thereby providing a more stable source of water during drier conditions. It is likely that the infiltrating waters of Tributary B and C contribute significantly to the Brydson Spring discharge. Since flow in Tributary B and C will not be affected by the quarry operation, no change in the outflow from Brydson Spring will occur. As such, no fish habitat monitoring along the lower reaches of Brydson Creek is necessary or recommended. The Grand River Conservation Authority is aware of the Brydson Spring and has not recommended any biological or water quality/quantity monitoring of the spring. In correspondence dated April 7, 2014, R.J Burnside and Associates, the GET Peer Review consultant on the Natural Environment, also concurred that the application had satisfied all of their concerns, and no fisheries monitoring in the Brydson Creek was recommended. MOE has also indicated in correspondence dated October 10 2013 that the proposed monitoring plan is appropriate for ascertaining and addressing potential surface water impacts from quarrying activities.</p>	<p>Attach April 7, 2014 letter from Burnside &amp; Associates to GET and July 29, 2014 GRCA Signoff letter.</p>	JDCL
2	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Brydson Farm Spring is located south of Hwy 7 and within Halton Region. There does not appear to be any monitoring proposed in regards to groundwater spring which is apparently attributed to re-emergence of Tributary B about 400m south of the proposed quarry site (i.e. at the Brydson's Farm in Milton). Harden Environmental asserts that water levels at Brydson Spring will increase, if anything, as a result of the quarry and that 600 m travel-distance from the extraction edge to the Brydson Spring would be more than sufficient to attenuate thermal changes in the groundwater. A permanent monitoring station should be established (subject to property owners' permission) at spring re-emergence to monitor for flow, temperature, water quality and any groundwater-uses and groundwater-dependant habitats in this area.</li> </ul>	<p>James Dick Construction has agreed in correspondence (Harden response to Burnside June 10, 2014), providing that permission is given by the owner, to conduct flow and water quality testing of the Brydson Spring to establish baseline conditions, including temperature. This baseline data will be helpful should any issues arise in future concerning flow conditions at the Brydson Spring. Groundwater levels and groundwater quality including temperature will be measured at several groundwater monitors downgradient of the quarry (M15, M16, M4). This monitoring will allow JDCL to measure changes in the groundwater flow system several hundreds of metres from Brydson Spring. The additional monitoring at the Brydson Spring is redundant and unnecessary.</p>	<p>Attach June 10, 2014 Harden letter.</p>	JDCL

3	Region Halton	28-Jul-14	<p><b>Groundwater Levels:</b></p> <ul style="list-style-type: none"> <li>In their November 12, 2013 correspondence, Burnside indicated that there is significant potential for impacts from the proposed quarry activities on the groundwater resources in the surrounding area. This correspondence recommended, among other things, that all domestic wells within 500m of the quarry site be inspected and tested to evaluate how susceptible they are to water level variations, and that the proposed monitoring program should be expanded to include representative domestic wells. The groundwater levels and temperature monitoring at the south side of the subject lands should be expanded beyond M4, to all accessible domestic wells south of Hwy 7, as noted below.</li> </ul>	<p>James Dick Construction Ltd. has agreed to undertake a voluntary detailed well inventory and water quality assessment of wells within 500 m of the quarry, for residents who consent to give access to their wells for this purpose. This will be conducted to establish baseline water quality and quantity conditions. Harden Environmental has already undertaken three such studies as summarized in attached Table 9 and Figure 10. Since 1995, Harden has surveyed forty local residents and has on at least one occasion, visited every residence within 500 metres of the quarry. James Dick Construction Ltd. has agreed to upgrade wells, those in pits or buried, to facilitate water level monitoring of up-gradient wells, if agreed to by the home owner. Based on previous surveys, this will include wells W5, W8 and possibly W7. Down-gradient wells and those distant from the quarry are not expected to experience any significant water level change or will likely see a small increase in water level. Water quality samples can be obtained from the existing plumbing system. Residents at locations W25 to W30 and W36 to W40 (W38,39 and 40 located in Halton Region) will be asked if they are willing to participate in the voluntary baseline monitoring program. These wells are beyond the 500 metre distance and unlikely to be impacted by the quarry. However, a one-time baseline survey will be conducted. There will be a minimum period of two years after the quarry is given approval before below-water-table extraction can commence. This provides ample opportunity to obtain seasonal water quality data as recommended by Burnside and Associates.</p>	<p>Attach June 10, 2014 Letter and Figures. Attach modified Figure 6.1 Well Survey Locations Figure.</p>	JDCL
4	Region Halton	28-Jul-14	<p><b>Domestic Wells:</b></p> <ul style="list-style-type: none"> <li>Little is known of the current status of private wells in Halton Region south of Hwy 7 as the last well survey was conducted in mid-1990s. Both a survey and well assessment should be carried on all wells in Halton Region potentially under the influence of the flow from the quarry site. At a minimum, all properties that lie within the 500m zone should be subject to a well survey, including wells at these properties that might be located somewhat outside of the 500m zone.</li> </ul>	<p>Agreed. Please see Response #3 above. Also please find attached a figure entitled "Down Gradient Wells" that illustrates the four wells in Halton Region that are down gradient from the quarry. All of these wells have been included in the Voluntary Well Survey. Please also know that with the reduction in quarry depth, there remains considerable rock left in situ beneath the quarry to allow for groundwater to continue to underflow the Quarry in undisturbed fracture sets. This allows the opportunity to retrofit downgradient wells to access this lower area of the dolostone aquifer. In the Harden June 10, 2014 correspondence to Burnside, James Dick Construction Limited agreed to the following proactive approach, subject to the request of the landowner. Pro-active modifications or retrofitting of these down gradient wells such that they are only taking water from the deeper fracture sets will be undertaken at the request of the landowner. Out of an abundance of caution we have also recommended that at-source domestic UV treatment systems be installed at the downgradient wells. UV systems should be in place in this fractured bedrock environment area in any event even without a quarry. All modifications will be done at no cost to the landowners. With these measures in place it is Harden's opinion that there will remain access to abundant high quality domestic water supplies at all receptors.</p>	<p>Attach June 10, 2014 Letter and Figures. Also attach Figure 4 Dec 2013 "Down Gradient Wells".</p>	JDCL
5	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Burnside stated that the monitoring program should reference the pre-extraction well survey that would include water quality/quantity testing and indicate which wells will be potentially involved in the monitoring program. Should access be limited to private wells within the Region for the purpose of long-term monitoring and testing, then additional (multi-level) monitoring installations should be established along the southerly boundary of the subject lands for monitoring and "early warning" purposes (i.e. west and east of the existing monitoring well M4).</li> </ul>	<p>James Dick Construction Ltd. agrees to install additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations will be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile. JDCL has also agreed to incorporate the Voluntary Well Survey for properties within 500m of the quarry.</p>	<p>Amend Figures to include two additional multi level monitors as indicated.</p>	Harden
6	Region Halton	28-Jul-14	<p><b>Well Complaint Protocol:</b></p> <ul style="list-style-type: none"> <li>JDCL proposed to involve Water Well Drilling Company and have Harden on stand-by to address any water quantity or quality issues that arise. We assume that the "well complaint protocol" would encompass Halton residences downgradient of the site. Confirmation of this understanding is required from both JDCL and Burnside.</li> </ul>	<p>James Dick Construction Limited confirms that the "well complaint protocol" would encompass Halton residents.</p>	<p>None required.</p>	

7	Region Halton	28-Jul-14	<p>Water Quality: Burnside expressed concerns that quarrying activities could impact current concentrations of nitrate, iron and also introduce surface water pathogens into the nearby groundwater system. We agree with Burnside's comments and recommendations on the protection, monitoring and mitigation of water quality, and recommends further improvements as summarized below:</p> <ul style="list-style-type: none"> <li>• Burnside suggested the establishment and sampling of on-site multi-level MIS to determine nitrate concentrations with depth and that any nitrate contributed by the blasting should be quantified and included in the mass balance. We recommend installing an additional multi-level monitor at the southern site boundary and incorporating monitoring data (water level and quality) in the mass balance nitrate calculations to better understand nitrate concentrations leaving the site (pre- and during extraction).</li> </ul>	Please see attached response to Burnside dated June 10, 2014 that provides a detailed response to this issue. Specifically please see sections 2,3 and 4.	Attach June 10, 2014 Letter and Figures.	JDCL
8	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>• Burnside noted that Harden should provide commentary as to the impact of water fowl on surface water in the quarry and how this may impact downgradient wells. We agree that additional information on the matter is required.</li> </ul>	Please see attached response to Burnside dated June 10, 2014 that provides a detailed response to this issue. Specifically please see sections 2,3 and 4. The use of the East and West Pond by waterfowl will be limited by characteristics of the pond such as deep water, rocky shoreline and dense shoreline vegetation as discussed by GWS Ecological and Forestry Services. Waterfowl were observed in the Guelph Limestone Pond at the time of the water quality sampling for E. Coli, cryptosporidium and giardia. None of these bacteria were detected in the water. It is GWS's and Harden's conclusion that the natural introduction of nutrients and bacteria by waterfowl and wild mammals will not occur on a significant level.	Attach June 10, 2014 Letter and Figures.	JDCL
9	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>• Burnside noted that Harden should provide additional detail on how the existing monitoring well network would provide sufficient early warning so that the treatment system can be installed in downgradient domestic wells before unacceptable impacts to drinking water occur, and also that Harden would need to qualify if any existing wells could be deepened or whether the installation of water treatment equipment would be the preferred option. We support a pro-active approach to protection and mitigation of private wells in Halton Region.</li> </ul>	Please see response to Comment 4 above. Please also know that with the reduction in quarry depth, there remains considerable rock left in situ beneath the quarry to allow for groundwater to continue to underflow the Quarry in undisturbed fracture sets. This allows the opportunity to retrofit downgradient wells to access this lower area of the dolostone aquifer. Harden responded in detail to this issue in Section 4.4 of their June 10, 2014 letter to R.J. Burnside and Associates. In general, there will be several years of monitoring during Phase 1 of the quarry to observe water quality changes. In addition, at the end of Phase 1 there are only two wells downgradient of the quarry (W10 and W16). The detailed pre-quarry well survey will determine the construction details of the private wells and upon which mitigation strategies can be based, if needed. In the Harden June 10, 2014 correspondence to Burnside, James Dick Construction Limited agreed to the following pro active approach, subject to the request of the landowner. Pro-active modifications or retrofitting of these down gradient wells such that they are only taking water from the deeper fracture sets will be undertaken at the request of the landowner. Out of an abundance of caution we have also recommended that at-source domestic UV treatment systems be installed at the downgradient wells. UV systems should be in place in this fractured bedrock environment area in any event even without a quarry. All modifications will be done at no cost to the landowners. With these measures in place it is Harden's opinion that there will remain access to abundant high quality domestic water supplies at all receptors.	See Attachments in Response to Comment 4.	JDCL

10	Region Halton	28-Jul-14	<p>Review of Monitoring Adjacent to Halton Region Lands:  It appears that JDCL intends to utilize two established monitoring locations at the southern boundary of the proposed Hidden Quarry and immediately north of Hwy 7: (i) M4 - a 18.6m deep bedrock monitoring well south of the Phase 3 area and (ii) SW3 -surface water flow station at the Tributary B crossing Hwy 7. It appears that drive-point(s) M7/M7R (i.e. 2.8m/3.1 m deep overburden piezometers just east of M4) are not proposed for monitoring (we assume they are mostly dry). Our comments regarding the proposed monitoring program are as follows:Groundwater monitoring program:  The extraction depth of the proposed quarry is approximately 30 metres below the water table using subaqueous methods without dewatering. It is noted that fully-penetrating bedrock wells are not proposed along the southern property line adjacent to the Phase 3 lands. Therefore, the full influence on water resources south of the quarry would not be known unless adequate instrumentation is added downgradient of the Phase 3 lands.  As M4 (18.6m deep) is the only observation well proposed for monitoring in this area, we recommend additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations should be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile and to protect private wells and properties located downgradient of the site in Halton Region. The new wells should be established sufficiently ahead of the extraction in Phase 2 and 3 in order to collect representative baseline data (both water levels and water quality). The monitoring should provide information on changing groundwater regime and serve as "early warning" for downgradient private wells in Halton Region.</p>	<p>In response to comments by Burnside, James Dick Construction Ltd. has agreed to limit the depth of the quarry to a minimum elevation of 327 masl (a 7m reduction from the original proposal). Please see response to Comment 5 above where JDCL agrees to install additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations will be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile. Please also see the response to Comment 4 above.</p>	<p>Amend Figures to include two additional multi level monitors as indicated.</p>	Harden
11	Region Halton	28-Jul-14	<p>Surface water monitoring program:  Based on the GRCA's correspondence of April 15/13, Brydson Creek is classified as cold-water fish habitat south of Hwy 7. There does not appear to be any surface water monitoring proposed at the Brydson Creek south of Hwy 7. There does not appear to be any monitoring proposed in regards to the groundwater spring attributed to re-emergence of Tributary B about 400m south of the site in Halton Region (i.e. at the Brydson farm in Milton). Further Regional comments on surface water will be provided in our technical comments on the Natural Environment Technical Report (to be provided under separate cover).</p>	<p>James Dick Construction has agreed in correspondence (Harden response to Burnside June 10, 2014), providing that permission is given by the owner, to conduct flow and water quality testing of the spring to establish baseline conditions. The hydraulic potential at the southern edge of the quarry will increase, thereby increasing the hydraulic gradient between the quarry and the spring. If the hydraulic gradient is maintained at current or higher levels there will be no detrimental change to the Brydson Spring. SW3 is a monitoring station within 100 m downgradient of the Hidden Quarry Property. In this way SW3 is a good proxy monitoring location for Brydson Spring. In addition, the volume of water stored in the quarry will moderate seasonal groundwater level change, thereby providing a more stable source of water during drier conditions. It is likely that the infiltrating waters of Tributary B and C contribute significantly to the Brydson Spring discharge. Since flow in Tributary B and C will not be affected by the quarry operation, no change in the outflow from Brydson Spring will occur. As such, no fish habitat monitoring along the lower reaches of Brydson Creek is necessary or recommended. The Grand River Conservation Authority is aware of the Brydson Spring and has not recommended any biological or water quality/quantity monitoring of the spring. In correspondence dated April 7, 2014, R.J Burnside and Associates, the GET Peer Review consultant on the Natural Environment, also concurred that the application had satisfied all of their concerns, and no fisheries monitoring in the Brydson Creek was recommended. MOE has also indicated in correspondence dated October 10 2013 that the proposed monitoring plan is appropriate for ascertaining and addressing potential surface water impacts from quarrying activities.</p>	<p>None required. Brydson Spring has already been added to the monitoring program if the landowner grants access.</p>	



12	Region Halton	28-Jul-14	Private Well Monitoring: We note that the Harden Environmental February 5, 2014 letter indicates that a well monitoring program for water quality and an action plan to remedy any issues is proposed to protect neighbouring private wells. It is not clear to Regional Staff how this program protects or addresses private wells within the Region of Halton. Further, it is not clear to Regional Staff that all private wells in close proximity to the extraction site have been evaluated or are included in this program.	Please see attached Modified Figure 6.1 illustrating all wells located within the 500m Well Survey Zone. These wells include private wells located in the Region of Halton, specifically the Town of Milton.	Attach June 10, 2014 Letter and Figures 6.1.	JDCL
13	Region Halton	28-Jul-14	Additionally, the private well complaint protocol (Section 6.0 of the February 5, 2014 Harden letter) should be revised to include the Region of Halton and the Town of Milton as parties to be notified in the event that a water well complaint is received. Further, clarity on how the complaints will be handled should be provided.	James Dick Construction Agrees to include the Region of Halton and the Town of Milton as parties to be notified in the event that a water well complaint is received. A well complaint protocol was prepared in September 2013 and presented to R.J. Burnside. This protocol is attached.	Amend Well Complaint Protocol.	Harden
14	Region Halton	28-Jul-14	Other: • Trigger levels and contingency measures are proposed for northwest and north areas of the proposed quarry site, mainly in association with the on-site wetlands. No trigger water levels are proposed on at the south end of the extraction area. Further discussion to this point is requested.	Groundwater levels will rise at the south end of the quarry and since a) there are no water level sensitive features proximal to the south side of the quarry and b) the water level will not rise enough to cause issues in the root zone of the forest on the south side of Hwy 7; trigger levels are not necessary. Nonetheless, trigger levels set at the northern (upgradient) portion of the property are also protective of water levels at the south end of the property (the lake has a common elevation). The final water level in the quarry pond is estimated to be 348.6 m AMSL which is above the maximum high water elevation recorded at M4. These factors make trigger levels along the southern boundary, unnecessary. The trigger levels have been added on a table on Page 4 of the updated (July 14, 2014) site plans (attached) at the request of the GRCA.	Attach Updated Site Plans.	JDCL
15	Region Halton	28-Jul-14	• The apparent "benefits" of the on-site pond creation (subject to approval) on downstream wells, springs, ponds or streams, and properties should be subject to confirmation (through modeling) based on future (enhanced & multi-level) monitoring results; however, no off-site downgradient monitoring is proposed.	The water level at the south end of the property will increase with the creation of the lake and the leveling of the water table. As such basic engineering principals dictate that flow will increase to the south (Darcy's Law). No modeling is required. The groundwater model prepared for the site predicts a water level rise and the proposed detailed monitoring program will determine the actual water level rise. Additional modelling is not needed to confirm the benefits of the on-site pond, this will be achieved via the detailed groundwater and surface water monitoring program.	None.	
16	Region Halton	28-Jul-14	• The effects of blasting on private wells within Halton Region are not known and should be addressed.	No effect on the wells in Halton Region will occur due to blasting. Any impact on wells would be captured in the well complaint protocol. Explotech and the GET Peer review consultant Novus Environmental concur that blasting operations required for operations at the proposed James Dick Construction Ltd. Hidden Quarry site can be carried out safely and well within governing guidelines set by the Ministry of the Environment. In addition, quarrying will commence along the northern end of the quarry providing ample opportunity for monitoring water quality and observing the effects of blasting on on-site wells for several years before blasting near to Halton Region occurs. Please also see response to Comment 19 below for details of the Blast Monitoring.	None.	
17	Region Halton	28-Jul-14	Based on Site Plans; Stovel & Associates, June 6, 2014: As the site plan does not refer to any downgradient private well /private property monitoring.	The June 10, 2014 Harden response to Burnside details of the most-up-to-date monitoring program. The monitoring program has been updated (as of June 2014) to include monitoring of down gradient private well/private property monitoring as outlined in this response and the responses to other agencies and peer reviewers. This report is and will be referenced on the site plans. A summary table has been included on the site plans for onsite monitoring.	Update Monitoring Plan and reference Updated Plan on Site Plans	Harden, Stovel

18	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Page 2 of 5: (i) "extraction footprint" on the site plan and in the latest hydrogeology reports do not align (ii) in regards to "a main processing area will be developed in the southwestern portion of the site once a sufficient area had been cleared", this area is not identified as part of any extraction stage; does the extraction include overburden only? (iii) "spills" protocol should include immediate notification to downgradient properties utilizing domestic wells as their primary drinking water supply.</li> </ul>	<p>(i)The extraction footprint on the site plan has been revised and is shown on the updated site plans. Some figures in the hydrogeology report are symbolic and do not align exactly with the site plans which are the legal document that will govern extraction. (ii)The extraction in the main processing area involves removal of vegetation, topsoil and overburden as well as the extraction and processing of above water table gravel. In this way the processing plant can be located at as low an elevation possible for noise and visual mitigation purposes. (iii)James Dick Construction Limited agrees to amend the Spills Contingency Plan to include the immediate notification of downstream properties utilizing domestic wells as their primary drinking water supply. The Spills Contingency Plan will be updated following the baseline private well survey and will include the names, addresses and contact telephone numbers for the five wells downgradient that could be impacted. If a spill is reportable to the MOE, the neighbours will be notified immediately.</p>	Amend Spills Contingency Plan to include Halton Region and the Town of Milton as well as downstream domestic well users as parties to be notified (upon completion of the Baseline Private Well Survey).	Harden
19	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Page 3 of 5: (i) What are the anticipated "silt pond" depth/fill elevation in relation to groundwater levels to the south? The pond is proposed almost directly to the north of a sensitive receptor (private well W 19 defined as R16 on the site plan) in Halton Region. Is M4 installed to monitor potential impact from this pond? In reference to a "blasting line" on the south side of the west extraction area, what monitoring is proposed to ensure that private wells and other structures to the south (i.e. in Halton Region) are not affected by blasting activities?</li> </ul>	<p>The silt pond will be located above the bedrock and will be above water table (please note that the silt pond is generally located in the blasting setback where bedrock quarrying will not be taking place- Site Plan Page 3 of 5). Water in the washing system is closed loop and all water is recycled. Private well W19 is located to the south of the silt pond. Examination of bedrock ground water pre-extraction contours in this area (Figure 3.17 Bedrock Groundwater Contours of the September 2012 Harden Report ) demonstrate that groundwater flow is almost due east, not towards W19. The overburden is dry in this area. Only during the later stages of extraction, with the establishment of the lake, does this well begin to draw water directly from the quarry area (please see the figure "Downgradient Private Wells" attached). Monitor M4 is located between the quarry and well W19 and would function to ensure water quality and quantity in off site wells located in a southerly direction. Washing aggregates is a clean activity and no chemicals are added to the process. Water is used to physically sort virgin, native materials of different grain sizes. Water naturally infiltrating the site today comes into intimate contact with these particles prior to recharging the bedrock aquifer. Water quality and quantity will be assessed in private wells prior to blasting operations. A well complaint protocol has been established should a resident feel that their well has been affected by blasting or other quarry activities. Furthermore, on-site monitoring will assess water levels and groundwater quality before leaving the site on a regular basis. All blasting events will be monitored to ensure compliance with MOE Blasting Guidelines. All blasts shall be monitored for both ground vibration and overpressure at the closest privately owned sensitive receptors adjacent the site, or closer, with a minimum of two (2) digital seismographs – one installed in front of the blast and one installed behind the blast. Monitoring shall be performed by an independent third party engineering firm with specialization in blasting and monitoring.</p>	Attach Figure 4 "Downgradient Private Wells" and Figure 3.17 "Bedrock Groundwater Contours"	JDCL
20	Region Halton	28-Jul-14	<p>Further to our July 5, 2013 letter, Regional Staff requested that an Adaptive Management Plan (AMP) be prepared as part of the review process for this proposed quarry. Regional Staff believe that this plan would provide for an effective tool to formalize any resolutions and commitments to monitor and mitigate water resources issues which would include Halton Region lands.</p> <p>It is noted that further technical comments with respect to other Regional interests on this proposed quarry will be forthcoming under separate cover.</p>	<p>Given the minimal potential for off site groundwater impacts in Halton Region from this site, there is no need for an Adaptive Management Plan at this site. A detailed Groundwater and Surface Water Monitoring Plan has been presented along with a Well Complaint Protocol and Spills Contingency Plan. Threshold values for water level changes and water quality changes are found within these documents including details of the required response by JDCL. These commitments made by JDCL include wells within Halton Region. Various agencies noted in response to Comment 1 have indicated that the proposed monitoring program is appropriate.</p>	None.	

21	Region Halton	28-Jul-14	Regional Staff note that the Region 's Review fee (\$18,714.19) remains outstanding. As noted in our April 2, 2013 correspondence, we kindly request that James Dick Construction Limited submits this review fee to the Region in accordance with the Region's Development Application Requirements.	Respectfully, JDCL declines to pay a review fee to Halton Region. We have recieved advice that demand for such a fee is not legal according to the Municipal Act, given that the Hidden Quarry lands are outside the municipal boundary of Halton Region. All fees have been paid to the Township of Guelph/ Eramosa in accordance with their requirements, including robust Peer Review Fees. Additional substantial fees have also been paid to the GRCA. The application is also consistant with the Wellington County Official Plan which designates this property as a Mineral Resource Area.	None.	
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**The following materials have been reviewed as part of the Halton comments:**

22	Halton Region	28-Jul-14	Letter from MOE's Carl Slater to James Dick Construction Ltd. (JDCL), dated July 3, 2013.	This letter has been superceded by MOE correspondence dated October 10, 2013. This letter states that the surface water and groundwater outstanding items have been addressed to MOE satisfaction.	Attach October 10, 2013 Letter from MOE	JDCL
23	Halton Region	28-Jul-14	Letter-report from Harden Environmental Services Ltd. (Harden) to JDCL, dated July 15, 2013, responding to MOE's comments of July 3, 2013.	See Response 22 above. MOE has signed off on all outstanding surface water and groundwater items.	Attach October 10, 2013 Letter from MOE	JDCL
24	Halton Region	28-Jul-14	(i) Hydrogeological Summary (letter) Report for Township of Guelph Eramosa from Harden to JDCL, dated September 5, 2013; (ii) Burnside's comments dated November 12, 2013 on Harden's Hydrogeological Summary Report, and (iii) Burnside's responses dated April 8, 2014 (C1) and April9, 2014 (C2) to Harden's letter (dated January 14, 2014) responding to Burnside's comments of November 12,2013.	Latest Response to Burnside Comments April 8th and 9th comments are the June 10th, 2014 response from Harden Environmental.	Attach June 10th, 2014 response from Harden Environmental.	JDCL
25	Halton Region	28-Jul-14	(i) Letter from Grand River Conservation Authority (GRCA) to Township of Guelph/Eramosa dated November 4, 2013), and (ii) Letter from GRCA to Township of Guelph/Eramosa dated March 28, 2014; and (iii) Letter from GRCA to Township of Guelph!Eramosa dated April 23,2014	GRCA correspondence has been superceded by sign off from GRCA sent to Guelph/Eramosa dated July 29, 2014. This letter staes that GRCA has no further comments on the Hidden Quarry application and as such has no objection to the application being brought forward.	Attach July 29th, 2014 GRCA letter.	JDCL
26	Halton Region	28-Jul-14	Letter-report from Harden to JDCL, dated February 5, 2014, concerning "timeline for changes to monitoring plan"	This document will be updated, including revisions as requested by Halton that have been agreed to by James Dick Construction Limited as confirmed in this document.	Revise Monitoring Section of Hydrogeolical Investigation Report Level 1 and 2 with reccommended changes once agency reviews are complete.	Harden
26	Halton Region	28-Jul-14	Site Plans; Stovel & Associates, June 6, 2014	These site plans have been updated at the request of GRCA. Please see Site Plans dated Aug 1, 2014.	Attach Site Plans dated Aug 1, 2014.	JDCL



**BURNSIDE**

[ THE DIFFERENCE IS OUR PEOPLE ]

April 7, 2014

**Via: Email (kwingrove@get.on.ca)**

Ms. Kim Wingrove  
Chief Administrative Officer  
Township of Guelph/Eramosa  
P.O. Box 700  
Rockwood ON N0B 2K0

Dear Kim:

**Re: ZBA Hidden Quarry, Township of Guelph/Eramosa  
James Dick Construction  
File No.: 300032475.0000**

R.J. Burnside & Associates Limited (Burnside) has been retained by the Township of Guelph/Eramosa (Township) to compete a full technical peer review of all materials prepared in relation to the Zoning By-law Amendment (ZBA) for the subject lands (located on Part of Lot 6, Concession 1, Township of Guelph/Eramosa) herein referred to as the Hidden Quarry. The technical peer review was carried out by Dominique Evans, Environmental Technologist.

After review of the initial ZBA materials, along with the report updates, various meetings minutes, agency correspondence and updated plans, Burnside staff feel that James Dick Construction (James Dick) has adequately addressed all concerns as they related to the Natural Environment at the Hidden Quarry. Concerns included protection of wetlands, as well as Species At Risk and their habitat.

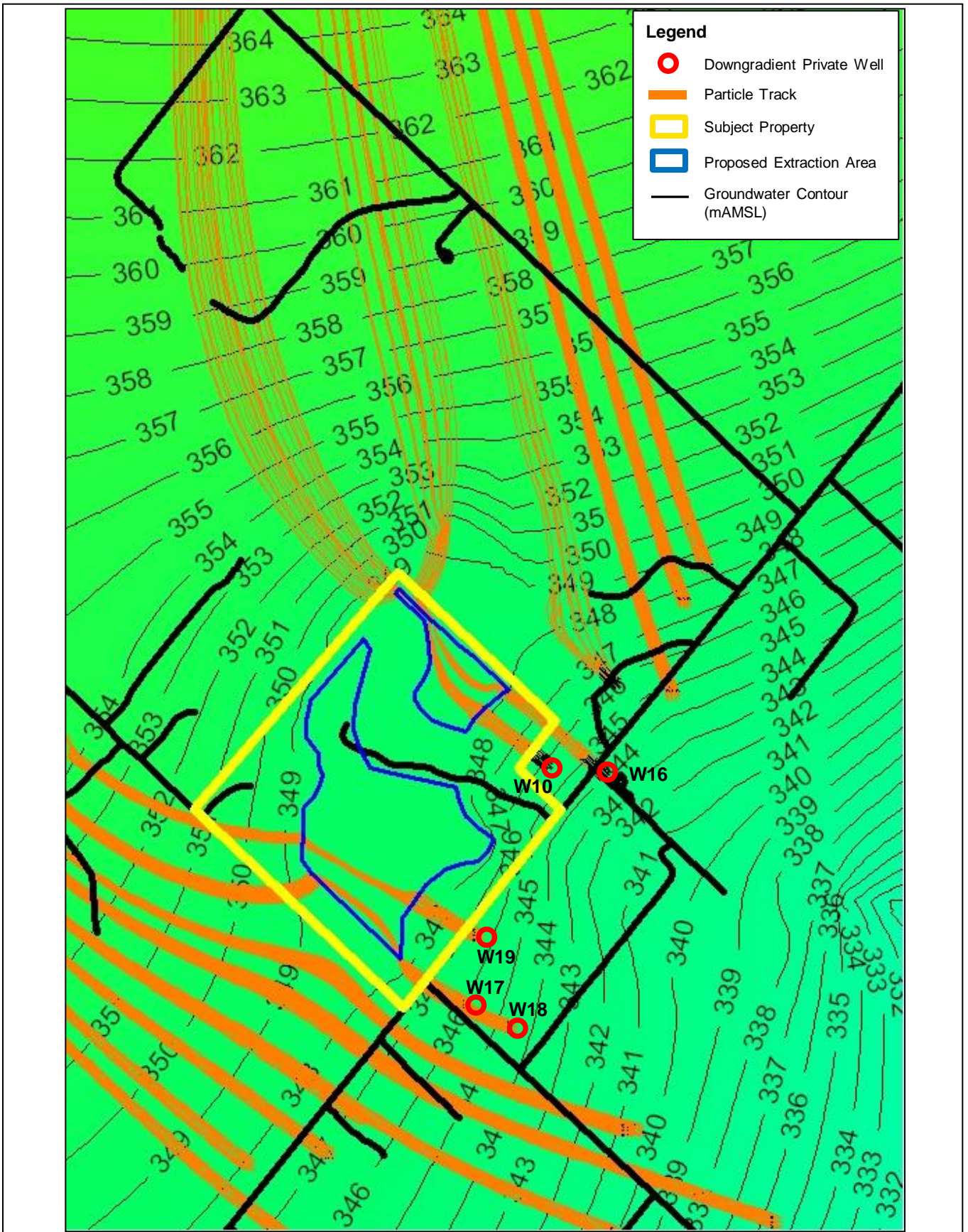
Should James Dick revise their approach, or alter their extraction plans, Township and Burnside staff reserves the right to complete additional review.

Yours truly,

**R.J. Burnside & Associates Limited**

Don McNalty, P.Eng.  
Vice President, Public Sector

cc: Saidur Rahman, Director of Public Works, Email (srahman@get.on.ca)  
Dominique Evans, Burnside, Email (dominique.evans@rjburnside.com)  
Leigh Mugford, James Dick Construction Ltd., Email (lmugford@jamesdick.com)



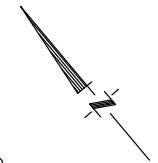
**Harden Environmental Services Ltd.**

Project No: 9506  
 Date: Dec 2013  
 Drawn By: SD
















Hydrogeologic Impact Assessment  
 Proposed Aggregate Extraction  
 Part of Lot 1, Concession 6  
 Township of Guelph/Eramosa, County of Wellington

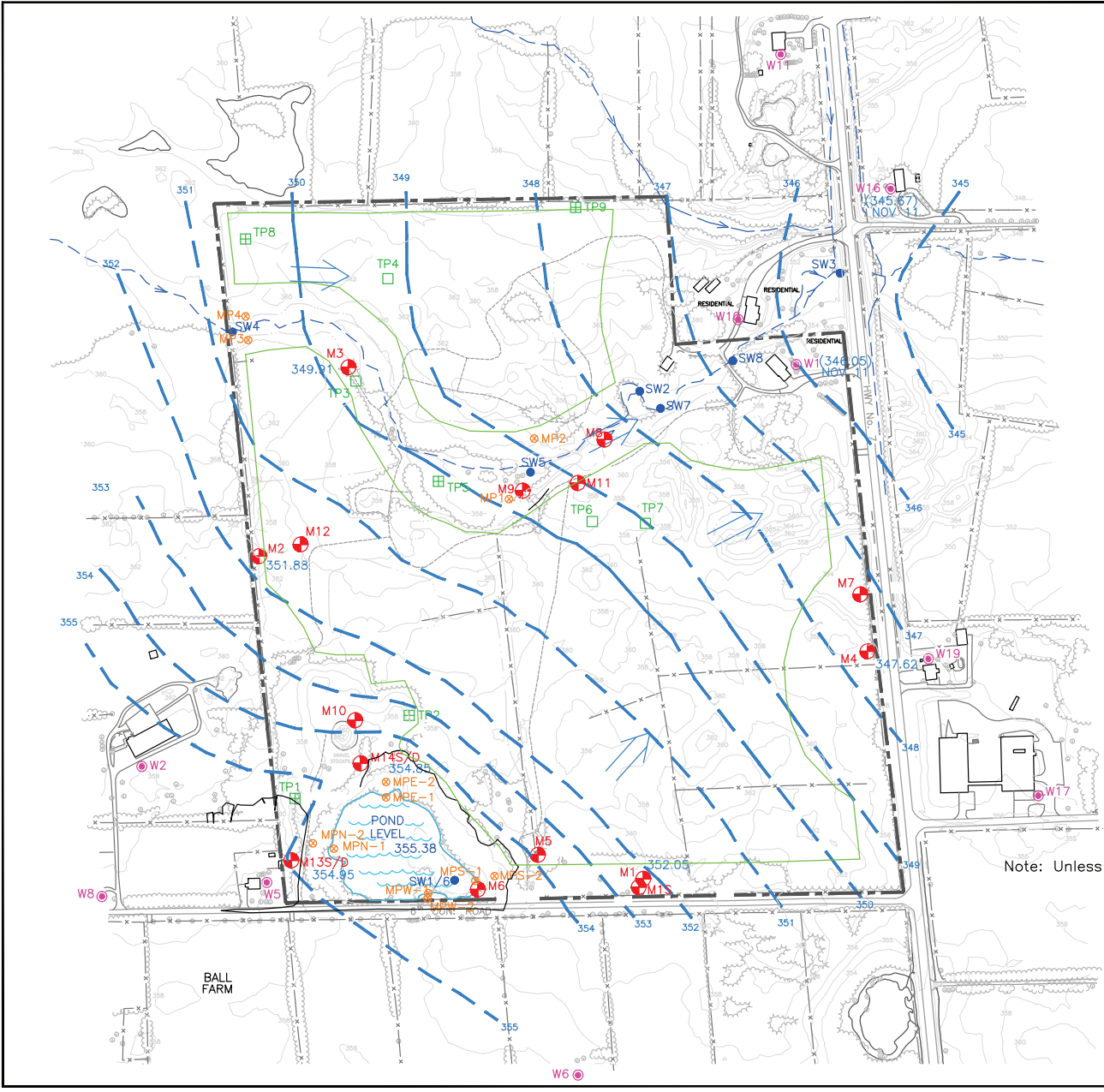
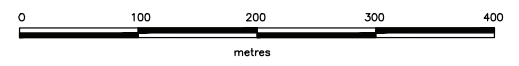
**Figure 4:**  
**Downgradient Private Wells**

DRAFT



LEGEND

-  PROPERTY BOUNDARY
-  FOREST EDGE
-  TRAIL
-  PERMANENT STREAM
-  INTERMITTENT STREAM
-  FENCELINE
-  BUILDINGS (TYPE)
-  M1 GROUNDWATER MONITOR LOCATION AND DESIGNATION
-  TP1 TEST PIT WITH WATER TABLE MONITOR LOCATION AND DESIGNATION
-  TP4 TEST PIT LOCATION AND DESIGNATION
-  SW1 SURFACE WATER LOCATION AND DESIGNATION
-  R1 RESIDENTIAL WELL LOCATION AND DESIGNATION
-  353.89 OBSERVED GROUNDWATER ELEVATION IN BEDROCK
-  INFERRED GROUNDWATER ELEVATION IN BEDROCK
-  BEDROCK GROUNDWATER FLOW DIRECTION

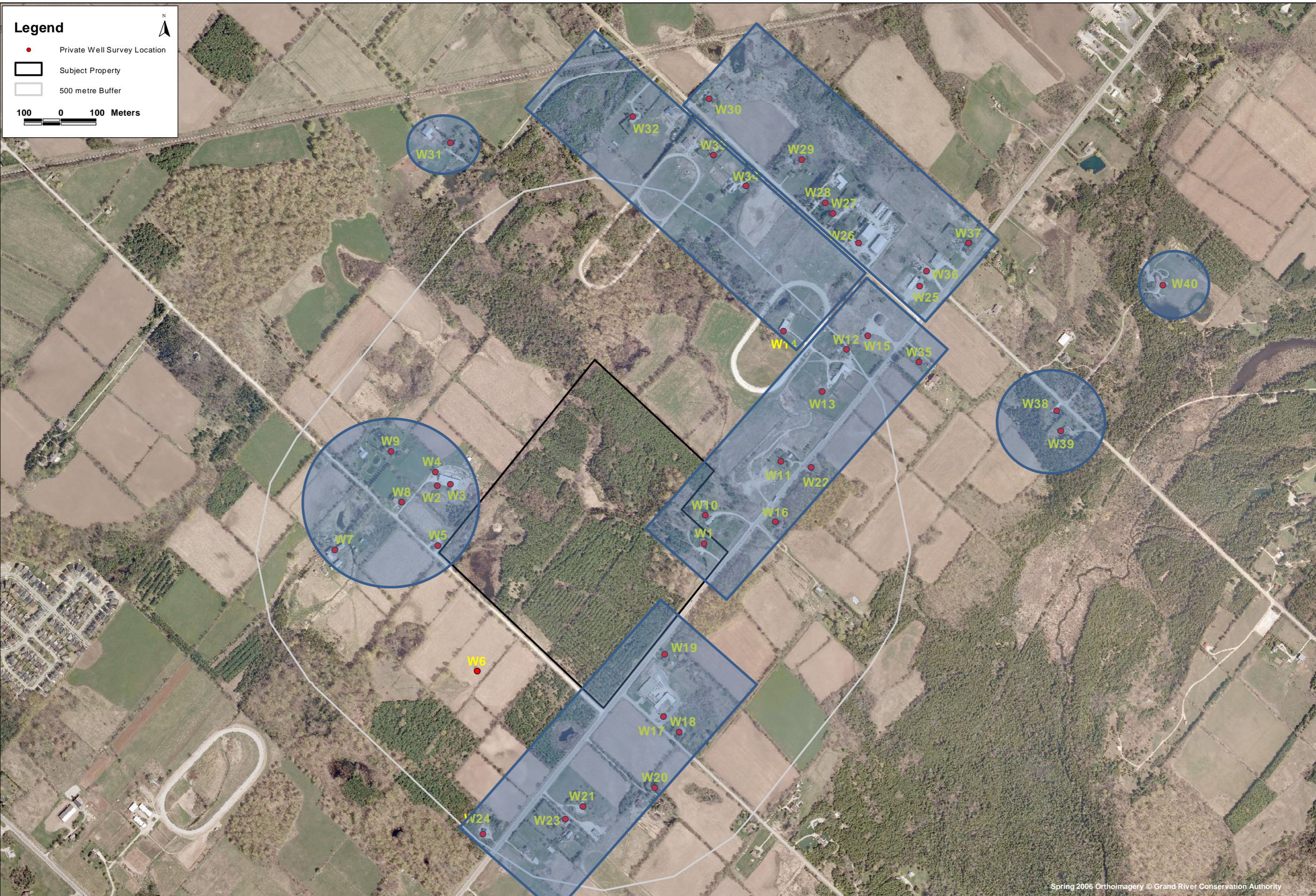


Note: Unless specified GW contours based on May 31, 2011 elevation data.


**HARDEN ENVIRONMENTAL**

BEDROCK GROUNDWATER CONTOURS

DATE: SEPT 2011	PROJECT: 9506	FIGURE 3.17
DRAWN: AW	SCALE: 1 : 4000	



Spring 2006 Orthoimagery © Grand River Conservation Authority

 <b>Harden Environmental Services Ltd.</b>	<b>Project No:</b> 9506	Hydrogeologic Impact Assessment Proposed Aggregate Extraction	<b>Figure 6.1:</b> <b>Proposed Pre Quarry Well Survey Locations</b>
	<b>Date:</b> Aug 2014	Part of Lot 1, Concession 6 Township of Guelph/Eramosa, County of Wellington	
	<b>Drawn By:</b> SD		



File: 3028  
By: Email

June 9, 2014

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

Attention: Greg Sweetnam

Dear: Mr. Sweetnam

**Re: Potential Waterfowl Use of Hidden Quarry**

It is anticipated that waterfowl will utilize the rehabilitated quarry ponds but not in large numbers. Habitat conditions will generally be unfavourable to heavy waterfowl use of the area, particularly during spring and summer. Habitat features which will discourage waterfowl nesting and feeding include the following.

- There will be 316m of exposed unvegetated cliff face that is unsuitable for waterfowl nesting or feeding.
- After quarry sideslopes are topsoiled and seeded with an upland meadow mix they will be densely reforested. Waterfowl, particularly geese, do not like nesting in treed areas and hence as the trees grow the quality of nesting habitat will decline.
- The grassy reforested sideslopes will not be mowed or fertilized. Geese are attracted to grassy areas that are mowed and fertilized (e.g. golf courses) as these areas provide very nutritious goose pasture.
- Aquatic emergent vegetation will become densely established in shallow shoreline areas adjacent to graded sideslopes and this vegetation will retard the movement of ducklings and goslings from backshore areas to open water. This shoreline vegetation will make waterfowl, particularly young birds, vulnerable to predation.
- The ponds will be about 22m deep and aquatic emergent and submergent vegetation will therefore be limited to the relatively narrow littoral zone where water depths are less than 2m. As a result, there will not be an abundance of food available that is attractive to waterfowl. The wetlands that may develop in the shallow areas will be below the minimum size necessary to support waterfowl broods. Dabbling ducks typically feed in the top 20cm of the water column, so there will be limited areas that are suitable for foraging for them. Most diving ducks can dive to depths of only about 5m, far less than the 22m depth of the quarry ponds, so they will not be able to access food on the ponds' substrate.



Given the above considerations waterfowl nesting and brood rearing in the quarry during the spring and summer months should be minimal. The greatest waterfowl use of the area will likely occur during the fall migration although the number of birds should still be relatively low.

Yours truly,

**GWS Ecological & Forestry Services Inc.**

A handwritten signature in black ink, reading "Greg Scheifele". The signature is written in a cursive style with a large, sweeping initial "G".

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



October 10, 2013

**Sent via e-mail to [sdenhoed@hardenv.com](mailto:sdenhoed@hardenv.com)**

Harden Environmental Services Ltd.  
4622 Nassagaweya-Puslinch Townline Road  
R.R. 1, Moffat, Ontario  
L0P 1J0

Dear Mr. Stan Denhoed,

**RE: Proposed Hidden Quarry – James Dick Construction Ltd.  
Part of Lot 1, Concession 6, Township of Guelph-Eramosa  
County of Wellington**

In a letter dated July 3, 2013, from C. Slater of the MOE to G. Sweetnam of James Dick Construction Ltd. (JDCL), this Ministry provided review comments on the supporting documentation to the Aggregate Resources Act License application for the proposed Hidden Quarry.

To address outstanding items in the MOE comments, Harden Environmental Services Ltd. (Harden) prepared the following:

- Letter report with Appendices A to D, dated July 15, 2013, prepared by S. Denhoed of Harden to G. Sweetnam of JDCL, RE: MOE Comments Hidden Quarry.
- Email dated October 9, 2013, from S. Denhoed of Harden to R. Stewart of MOE. RE: M16

The MOE has reviewed the above noted additional information and have the following comments:

**Surface Water Comments:**

1. It is the opinion of the MOE that the response to surface water comments from April 22, 2013 have been addressed and further comment to the aforementioned report is not required.
2. Based on the surface water evaluation provided and proposed mitigation measures, the risk for significant environmental impact in regards to Tributary B and the Northwest Wetland are perceived to be low, which is attributable to the length of hydrological and hydrogeological data that is available and the conceptual understanding of the site.

3. Further to the previous comment, the proposed monitoring program is appropriate for ascertaining and addressing potential surface water impacts attributable to quarry activities.

**Groundwater Comments:**

1. The MOE agrees with Harden's assessment of the groundwater thermal impacts of the proposed quarry on the Brydson Spring and the Blue Spring Creek.
2. Based on the information presented in Appendix B – Summary of Drilling and Testing of New Well M15 at Hidden Quarry Site – the MOE agrees with Harden's assessment that the groundwater movement in the bedrock is mainly controlled by fractures and not by karst features.
3. The Revised Monitoring Program presented in Appendix D, and the information presented in the email dated October 9, 2013, has incorporated the groundwater MOE recommendations to the monitoring program for the site. These changes should be included in the Site Plans.

In summary, the surface water and groundwater outstanding items have been addressed to MOE satisfaction.

Respectfully,



Rosa C. Stewart, P.Geo.  
Hydrogeologist  
T: (905) 521-7592  
E: rosa.stewart@ontario.ca

C G. Sweetnam, L. Mugford / James Dick Construction Ltd.  
Lorraine Norminton, Sarah DeBortoli, Ministry of Natural Resources  
L. Armour, Guelph District Office, MOE  
C. Slater, C. Fowler / Technical Support Section, MOE  
File WE GE 04/ IDS TSP Ref No: 3776-96LHPQ



July 29, 2014

Ms. Kimberly Wingrove  
Township of Guelph/Eramosa  
8348 Wellington Road 124  
P.O Box 124  
Rockwood, ON  
N0B 2K0

Mr. Jason McLay  
Ministry of Natural Resources  
1 Stone Road West  
Guelph, ON  
N1G 4Y2

Dear Ms. Wingrove & Mr. McLay:

**Re: Review of Revised Materials**

**Proposed Hidden Quarry - 634745 Ontario Limited (James Dick Construction)  
Class A, Category 2 Pit and Quarry License Application and Zoning By-law Amendment  
Application ZBA 09/12 (Hidden Quarry)  
Lot 1, Concession 6, Former Township of Eramosa  
8352 Highway 7, Township of Guelph/Eramosa**

Grand River Conservation Authority (GRCA) staff has reviewed the following revised materials provided in support of the proposed Hidden Quarry:

- Response Letter to GRCA Comments, prepared by James Dick Construction Limited, dated July 10, 2014;
- Pages 1 to 5, Hidden Quarry Site Plans, prepared by Stovel & Associates, dated July 14, 2014.

Based on the submission of the above noted materials, our comments dated July 8, 2014 have been addressed as follows:

1. The notes on the revised Operations Plan now include the appropriate fisheries timing window for the culvert construction.
2. The established Trigger Levels and Contingency Measures have been added to the plans under a single table on Page 4.
3. We note that reference to White Ash species has been removed from the plans. We also note that tree protection fencing has been added under the Sediment and Erosion Control section and a note has been added to the Operations Plan indicating that no tree removals will take place during the bird breeding period of May 15-July 31.

At this time, GRCA has no further comments on the application. As such, GRCA has no objection to the application being taken forward for consideration.

GRCA would be open to review and comment on any additional information circulated by the Township.

Please contact Jason Wagler at 519-621-2763 ext. 2320 if you have any questions or require clarification of the above.

Yours truly,



Jason Wagler MCIP RPP  
Resource Planner  
Grand River Conservation Authority

- cc. MSH Planning c/o Liz Howson  
County of Wellington c/o Aldo Salis  
Regional Municipality of Halton c/o Adam Huycke  
Burnside c/o Carley Dixon  
James Dick Construction c/o Greg Sweetnam & Leigh Mugford – Box 470 Bolton ON L7E 5T4



Legislative & Planning Services  
Planning Services  
1151 Bronte Road  
Oakville ON L6M 3L1  
Fax: 905-825-8822

September 16, 2014

Ms. Kim Wingrove  
Township of Guelph/Eramosa  
8348 Wellington Road 124  
P.O. Box 700  
Rockwood, ON N0B 2K0

Dear Ms. Wingrove:

**RE:       Region of Halton Technical Comments**  
**“Hidden Quarry” – James Dick Construction Ltd.**  
**Proposed Class ‘A’ Category 2 License – Aggregate Operation**  
**Township of Guelph/Eramosa Zoning By-law Amendment Application ZBA 09/12**  
**West Half Lot 1, Concession 6, former geographic area of the Township of Eramosa**

The following correspondence is provided to outline technical comments on the natural heritage related matters as they relate to the above noted Zoning By-law Amendment application and *Aggregate Resource Act* application. These comments are not intended to supplant our July 5, 2013 letter as the requested additional studies and updates to the existing studies prepared in support of this proposal remain outstanding.

**NATURAL HERITAGE SYSTEM RELATED TECHNICAL COMMENTS:**

- a) **Field Survey on Adjacent Lands:** Wildlife Survey records contained in Appendix C of the NE Report indicate whether species were observed on adjacent lands but do not indicate on which area of adjacent lands (i.e. north, south, east, west side?). The extent of Field Surveys and Species observations conducted on adjacent lands in Halton Region should be clarified and detailed.
- b) **Significant Woodlands on Adjacent Lands:** According to our mapping, candidate significant woodlands are located just south of the property, along the south side of Highway 7, within the 120m Adjacent Lands study area surrounding the proposed new extraction operation. This woodland is identified as vegetation community FOD5-6 in the NE Report. A portion of this woodland area would likely meet criteria for designation as significant woodland in accordance with Section 277 of the 2006 Regional Official Plan (Interim Office Consolidated Official Plan). Regional Staff note that the Level II Report should have assessed the significance of this feature in accordance with Regional Significant Woodlands Criteria and demonstrated no negative impact in accordance with the Provincial Policy Statement. However, it is recognized that the potential to negatively impact this feature is low given the substantial setback from quarry operations, physical separation from the quarry site by Highway 7, and mitigation measures already proposed. Therefore no further assessment of this feature is required in regard to the present application.

- c) **Surface Water/Fish Habitat Monitoring:** Regional Staff recognize that JDCL has agreed in correspondence (Harden response to Burnside June 10, 2014) to conduct flow and water quality testing of the Brydson Spring to establish baseline conditions including temperature, but not to undertake ongoing monitoring of the spring. Staff note that the Brydson Spring may contribute to base flow and water temperature attenuation of sensitive ecological receptors downstream of the subject property (Blue Springs coldwater fishery, PSW) and therefore recommend that ongoing monitoring of the spring (including water flow, quality and temperature) be undertaken in addition to baseline characterization of the spring, particularly given that no direct monitoring of downstream ecological receptors is planned.

Please note that Regional Staff do not concur with the statement (provided by JDCL correspondence dated August 1, 2014 in response to Halton Region Comments) that monitoring of this feature is redundant, because the source of the spring has not been satisfactorily identified. Staff recognizes that baseline characterization and ongoing monitoring are subject to landowner permission to access the spring.

- d) **Haul Route Study:** Regional Comments of July 5, 2013, requested a Haul Route Study, prepared in accordance with Terms of Reference to be prepared in consultation with staff from Halton Region, Milton, and Halton Hills. Although this request remains outstanding, Regional Staff understands that the Terms of Reference for this study are currently being developed. It is recommended that the Terms of Reference require criteria for route selection to include impact minimization and avoidance for environmental features and functions in Halton Region and that any negative environmental impacts resulting from the chosen route should be identified and evaluated, be deemed unavoidable, and mitigated as appropriate.
- e) **Blue Springs Creek Tributary and Associated Wetlands:** The proposed quarry operation has requested a reduced setback to a tributary of Blue Springs Creek traversing the subject lands. Typically, setbacks to watercourses are applied buffers for their protection from development related impacts and to ensure maintenance of their ecological functions. The Natural Heritage Reference Manual provides guidance to municipalities on appropriate buffer widths to achieve this objective.

In considering this requested setback, Regional Staff understands that the GRCA and MNR have evaluated and provide comments/clearance on this reduced setback/buffer. Regional Staff encourage the proponent to maintain the greatest setback possible to this tributary in order to implement the Natural Heritage Reference Manual and the PPS to minimize impacts Blue Springs Tributary and downstream significant features.

- f) **Greenbelt Plan - External Connections Policies:** Regional Comments of July 5, 2013, request that various supporting materials be updated to reflect the policies of the Greenbelt Plan, 2005. On further review, staff notes that lands within Halton Region immediately to the south of Highway 7 are within the Greenbelt Plan's Protected Countryside and are designated Greenbelt Natural Heritage System (NHS). As such, Key Natural Heritage Features (KNHF) and Key Hydrologic Features (KHF) within the NHS are located on adjacent lands south of Highway 7 (i.e. the tributary and woodland area referred to above), along the south side of Highway 7. The proposed quarry, however, is outside of the Greenbelt Plan Protected Countryside; therefore the only policies in the Greenbelt Plan, 2005, that may apply would be those policies pertaining to External Connections (Sec. 3.2.5). Policies within the Greenbelt Plan related to External Connections beyond the boundaries of the Greenbelt were reviewed. The external connections to

which these policies apply are illustrated on Schedules 1 and 4 of the Greenbelt Plan. As no external connections are shown in the vicinity of the subject property, External Connection policies of the Greenbelt Plan would not apply in this instance.

- g) Missing Materials/Correspondence:** Regional Staff note that the following materials were not copied to the Region or provided through the Township's website. To complete regional records to this point, the following materials are requested:
- i. Figures 10 and 11 were missing from the Natural Environment Report (the NE Report).
  - ii. Peer Review Comments prepared by Williams & Associates Forestry Consultants Ltd., dated June 13, 2013.
  - iii. Agency Review Comment prepared by GRCA, to GWS, dated July 15, 2013.
  - iv. MNR Comments to JDCL, dated July 11, 2013.
  - v. MOE Comments to MNR, dated April 15, 2013
  - vi. Response Letter regarding "Hidden Quarry – Response to MNR Comments" to JDCL prepared by GWS, dated May 27, 2013.
  - vii. Response Letter regarding "Burnside Review of Summary of Drilling and Testing of New Well M15 at Hidden Quarry Site" to Burnside, prepared by Harden, dated January 14, 2014.
  - viii. Response Letter regarding "GRCA's Letter of July 8, 2014", to GRCA, prepared by JDCL, dated July 10, 2014.
  - ix. Site Visit Notes regarding "June 7, 2014, Site Visit" prepared by JDCL, dated August 22, 2013.
  - x. Materials in response to GRCA's Letter of November 4, 2013, dated December 5, 2013.
  - xi. Materials in response to GRCA's Letter of November 4, 2013, dated January 23, 2014.
  - xii. Drawings submitted to GRCA on March 19, 2014.

In the meantime, please forward any further materials to Adam Huycke, Planner at (905) 825-6000 Ext. 7604 ([adam.huycke@halton.ca](mailto:adam.huycke@halton.ca)).

Sincerely,



Brian Hudson, MCIP, RPP  
Senior Planner  
Ext. 7209  
[Brian.hudson@halton.ca](mailto:Brian.hudson@halton.ca)

Cc Greg Sweetman, James Dick Construction Limited  
Ron Glenn, Director of Planning Services and Chief Planning Official  
Adam Farr & Jeff Markowiak, Town of Halton Hills Planning Services  
Barb Koopmans, Town of Milton Planning and Development Department  
Liz Howson, Macaulay Shiomi Howson Ltd.  
Linda Sword, Concerned Residents Coalition



#	Contact	Date	Question	Response	Action Item	Who
1	Region Halton	28-Jul-14	<p><b>Surface Water Features:</b></p> <ul style="list-style-type: none"> <li>Based on the GRCA's correspondence of April 23, 2014, Brydson Creek (i.e. an extension of Tributaries B+C south of Hwy 7) is classified as cold-water fish habitat. Except for SW3 at Hwy 7 crossing, there does not appear to be any surface water monitoring proposed at the Brydson Creek south of Hwy 7. Is SW3 representative of cold-water fish habitat at Brydson Creek? Are any fish habitat/ecological monitoring proposed along some specific section(s) of the creek? There is no evidence of such monitoring in any of the reviewed documents.</li> </ul>	<p>James Dick Construction has agreed in correspondence (Harden response to Burnside June 10, 2014), providing that permission is given by the owner, to conduct flow and water quality testing of the spring to establish baseline conditions. The hydraulic potential at the southern edge of the quarry will increase, thereby increasing the hydraulic gradient between the quarry and the spring. If the hydraulic gradient is maintained at current or higher levels there will be no detrimental change to the Brydson Spring. SW3 is a monitoring station within 100 m downgradient of the Hidden Quarry Property. In this way SW3 is a good proxy monitoring location for Brydson Spring. In addition, the volume of water stored in the quarry will moderate seasonal groundwater level change, thereby providing a more stable source of water during drier conditions. It is likely that the infiltrating waters of Tributary B and C contribute significantly to the Brydson Spring discharge. Since flow in Tributary B and C will not be affected by the quarry operation, no change in the outflow from Brydson Spring will occur. As such, no fish habitat monitoring along the lower reaches of Brydson Creek is necessary or recommended. The Grand River Conservation Authority is aware of the Brydson Spring and has not recommended any biological or water quality/quantity monitoring of the spring. In correspondence dated April 7, 2014, R.J Burnside and Associates, the GET Peer Review consultant on the Natural Environment, also concurred that the application had satisfied all of their concerns, and no fisheries monitoring in the Brydson Creek was recommended. MOE has also indicated in correspondence dated October 10 2013 that the proposed monitoring plan is appropriate for ascertaining and addressing potential surface water impacts from quarrying activities.</p>	<p>Attach April 7, 2014 letter from Burnside &amp; Associates to GET and July 29, 2014 GRCA Signoff letter.</p>	JDCL
2	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Brydson Farm Spring is located south of Hwy 7 and within Halton Region. There does not appear to be any monitoring proposed in regards to groundwater spring which is apparently attributed to re-emergence of Tributary B about 400m south of the proposed quarry site (i.e. at the Brydson's Farm in Milton). Harden Environmental asserts that water levels at Brydson Spring will increase, if anything, as a result of the quarry and that 600 m travel-distance from the extraction edge to the Brydson Spring would be more than sufficient to attenuate thermal changes in the groundwater. A permanent monitoring station should be established (subject to property owners' permission) at spring re-emergence to monitor for flow, temperature, water quality and any groundwater-uses and groundwater-dependant habitats in this area.</li> </ul>	<p>James Dick Construction has agreed in correspondence (Harden response to Burnside June 10, 2014), providing that permission is given by the owner, to conduct flow and water quality testing of the Brydson Spring to establish baseline conditions, including temperature. This baseline data will be helpful should any issues arise in future concerning flow conditions at the Brydson Spring. Groundwater levels and groundwater quality including temperature will be measured at several groundwater monitors downgradient of the quarry (M15, M16, M4). This monitoring will allow JDCL to measure changes in the groundwater flow system several hundreds of metres from Brydson Spring. The additional monitoring at the Brydson Spring is redundant and unnecessary.</p>	<p>Attach June 10, 2014 Harden letter.</p>	JDCL

3	Region Halton	28-Jul-14	<p><b>Groundwater Levels:</b></p> <ul style="list-style-type: none"> <li>In their November 12, 2013 correspondence, Burnside indicated that there is significant potential for impacts from the proposed quarry activities on the groundwater resources in the surrounding area. This correspondence recommended, among other things, that all domestic wells within 500m of the quarry site be inspected and tested to evaluate how susceptible they are to water level variations, and that the proposed monitoring program should be expanded to include representative domestic wells. The groundwater levels and temperature monitoring at the south side of the subject lands should be expanded beyond M4, to all accessible domestic wells south of Hwy 7, as noted below.</li> </ul>	<p>James Dick Construction Ltd. has agreed to undertake a voluntary detailed well inventory and water quality assessment of wells within 500 m of the quarry, for residents who consent to give access to their wells for this purpose. This will be conducted to establish baseline water quality and quantity conditions. Harden Environmental has already undertaken three such studies as summarized in attached Table 9 and Figure 10. Since 1995, Harden has surveyed forty local residents and has on at least one occasion, visited every residence within 500 metres of the quarry. James Dick Construction Ltd. has agreed to upgrade wells, those in pits or buried, to facilitate water level monitoring of up-gradient wells, if agreed to by the home owner. Based on previous surveys, this will include wells W5, W8 and possibly W7. Down-gradient wells and those distant from the quarry are not expected to experience any significant water level change or will likely see a small increase in water level. Water quality samples can be obtained from the existing plumbing system. Residents at locations W25 to W30 and W36 to W40 (W38,39 and 40 located in Halton Region) will be asked if they are willing to participate in the voluntary baseline monitoring program. These wells are beyond the 500 metre distance and unlikely to be impacted by the quarry. However, a one-time baseline survey will be conducted. There will be a minimum period of two years after the quarry is given approval before below-water-table extraction can commence. This provides ample opportunity to obtain seasonal water quality data as recommended by Burnside and Associates.</p>	<p>Attach June 10, 2014 Letter and Figures. Attach modified Figure 6.1 Well Survey Locations Figure.</p>	JDCL
4	Region Halton	28-Jul-14	<p><b>Domestic Wells:</b></p> <ul style="list-style-type: none"> <li>Little is known of the current status of private wells in Halton Region south of Hwy 7 as the last well survey was conducted in mid-1990s. Both a survey and well assessment should be carried on all wells in Halton Region potentially under the influence of the flow from the quarry site. At a minimum, all properties that lie within the 500m zone should be subject to a well survey, including wells at these properties that might be located somewhat outside of the 500m zone.</li> </ul>	<p>Agreed. Please see Response #3 above. Also please find attached a figure entitled "Down Gradient Wells" that illustrates the four wells in Halton Region that are down gradient from the quarry. All of these wells have been included in the Voluntary Well Survey. Please also know that with the reduction in quarry depth, there remains considerable rock left in situ beneath the quarry to allow for groundwater to continue to underflow the Quarry in undisturbed fracture sets. This allows the opportunity to retrofit downgradient wells to access this lower area of the dolostone aquifer. In the Harden June 10, 2014 correspondence to Burnside, James Dick Construction Limited agreed to the following proactive approach, subject to the request of the landowner. Pro-active modifications or retrofitting of these down gradient wells such that they are only taking water from the deeper fracture sets will be undertaken at the request of the landowner. Out of an abundance of caution we have also recommended that at-source domestic UV treatment systems be installed at the downgradient wells. UV systems should be in place in this fractured bedrock environment area in any event even without a quarry. All modifications will be done at no cost to the landowners. With these measures in place it is Harden's opinion that there will remain access to abundant high quality domestic water supplies at all receptors.</p>	<p>Attach June 10, 2014 Letter and Figures. Also attach Figure 4 Dec 2013 "Down Gradient Wells".</p>	JDCL
5	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Burnside stated that the monitoring program should reference the pre-extraction well survey that would include water quality/quantity testing and indicate which wells will be potentially involved in the monitoring program. Should access be limited to private wells within the Region for the purpose of long-term monitoring and testing, then additional (multi-level) monitoring installations should be established along the southerly boundary of the subject lands for monitoring and "early warning" purposes (i.e. west and east of the existing monitoring well M4).</li> </ul>	<p>James Dick Construction Ltd. agrees to install additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations will be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile. JDCL has also agreed to incorporate the Voluntary Well Survey for properties within 500m of the quarry.</p>	<p>Amend Figures to include two additional multi level monitors as indicated.</p>	Harden
6	Region Halton	28-Jul-14	<p><b>Well Complaint Protocol:</b></p> <ul style="list-style-type: none"> <li>JDCL proposed to involve Water Well Drilling Company and have Harden on stand-by to address any water quantity or quality issues that arise. We assume that the "well complaint protocol" would encompass Halton residences downgradient of the site. Confirmation of this understanding is required from both JDCL and Burnside.</li> </ul>	<p>James Dick Construction Limited confirms that the "well complaint protocol" would encompass Halton residents.</p>	<p>None required.</p>	

7	Region Halton	28-Jul-14	<p>Water Quality: Burnside expressed concerns that quarrying activities could impact current concentrations of nitrate, iron and also introduce surface water pathogens into the nearby groundwater system. We agree with Burnside's comments and recommendations on the protection, monitoring and mitigation of water quality, and recommends further improvements as summarized below:</p> <ul style="list-style-type: none"> <li>• Burnside suggested the establishment and sampling of on-site multi-level MIS to determine nitrate concentrations with depth and that any nitrate contributed by the blasting should be quantified and included in the mass balance. We recommend installing an additional multi-level monitor at the southern site boundary and incorporating monitoring data (water level and quality) in the mass balance nitrate calculations to better understand nitrate concentrations leaving the site (pre- and during extraction).</li> </ul>	Please see attached response to Burnside dated June 10, 2014 that provides a detailed response to this issue. Specifically please see sections 2,3 and 4.	Attach June 10, 2014 Letter and Figures.	JDCL
8	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>• Burnside noted that Harden should provide commentary as to the impact of water fowl on surface water in the quarry and how this may impact downgradient wells. We agree that additional information on the matter is required.</li> </ul>	Please see attached response to Burnside dated June 10, 2014 that provides a detailed response to this issue. Specifically please see sections 2,3 and 4. The use of the East and West Pond by waterfowl will be limited by characteristics of the pond such as deep water, rocky shoreline and dense shoreline vegetation as discussed by GWS Ecological and Forestry Services. Waterfowl were observed in the Guelph Limestone Pond at the time of the water quality sampling for E. Coli, cryptosporidium and giardia. None of these bacteria were detected in the water. It is GWS's and Harden's conclusion that the natural introduction of nutrients and bacteria by waterfowl and wild mammals will not occur on a significant level.	Attach June 10, 2014 Letter and Figures.	JDCL
9	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>• Burnside noted that Harden should provide additional detail on how the existing monitoring well network would provide sufficient early warning so that the treatment system can be installed in downgradient domestic wells before unacceptable impacts to drinking water occur, and also that Harden would need to qualify if any existing wells could be deepened or whether the installation of water treatment equipment would be the preferred option. We support a pro-active approach to protection and mitigation of private wells in Halton Region.</li> </ul>	Please see response to Comment 4 above. Please also know that with the reduction in quarry depth, there remains considerable rock left in situ beneath the quarry to allow for groundwater to continue to underflow the Quarry in undisturbed fracture sets. This allows the opportunity to retrofit downgradient wells to access this lower area of the dolostone aquifer. Harden responded in detail to this issue in Section 4.4 of their June 10, 2014 letter to R.J. Burnside and Associates. In general, there will be several years of monitoring during Phase 1 of the quarry to observe water quality changes. In addition, at the end of Phase 1 there are only two wells downgradient of the quarry (W10 and W16). The detailed pre-quarry well survey will determine the construction details of the private wells and upon which mitigation strategies can be based, if needed. In the Harden June 10, 2014 correspondence to Burnside, James Dick Construction Limited agreed to the following pro active approach, subject to the request of the landowner. Pro-active modifications or retrofitting of these down gradient wells such that they are only taking water from the deeper fracture sets will be undertaken at the request of the landowner. Out of an abundance of caution we have also recommended that at-source domestic UV treatment systems be installed at the downgradient wells. UV systems should be in place in this fractured bedrock environment area in any event even without a quarry. All modifications will be done at no cost to the landowners. With these measures in place it is Harden's opinion that there will remain access to abundant high quality domestic water supplies at all receptors.	See Attachments in Response to Comment 4.	JDCL

10	Region Halton	28-Jul-14	<p>Review of Monitoring Adjacent to Halton Region Lands:  It appears that JDCL intends to utilize two established monitoring locations at the southern boundary of the proposed Hidden Quarry and immediately north of Hwy 7: (i) M4 - a 18.6m deep bedrock monitoring well south of the Phase 3 area and (ii) SW3 -surface water flow station at the Tributary B crossing Hwy 7. It appears that drive-point(s) M7/M7R (i.e. 2.8m/3.1 m deep overburden piezometers just east of M4) are not proposed for monitoring (we assume they are mostly dry). Our comments regarding the proposed monitoring program are as follows:Groundwater monitoring program:  The extraction depth of the proposed quarry is approximately 30 metres below the water table using subaqueous methods without dewatering. It is noted that fully-penetrating bedrock wells are not proposed along the southern property line adjacent to the Phase 3 lands. Therefore, the full influence on water resources south of the quarry would not be known unless adequate instrumentation is added downgradient of the Phase 3 lands.  As M4 (18.6m deep) is the only observation well proposed for monitoring in this area, we recommend additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations should be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile and to protect private wells and properties located downgradient of the site in Halton Region. The new wells should be established sufficiently ahead of the extraction in Phase 2 and 3 in order to collect representative baseline data (both water levels and water quality). The monitoring should provide information on changing groundwater regime and serve as "early warning" for downgradient private wells in Halton Region.</p>	<p>In response to comments by Burnside, James Dick Construction Ltd. has agreed to limit the depth of the quarry to a minimum elevation of 327 masl (a 7m reduction from the original proposal). Please see response to Comment 5 above where JDCL agrees to install additional groundwater monitoring locations along the southern property line (i.e. approximately mid-way between M7 and SW3 and west of M4) prior to extraction in this area. The installations will be multi-level to adequately represent groundwater levels and quality throughout the bedrock profile. Please also see the response to Comment 4 above.</p>	<p>Amend Figures to include two additional multi level monitors as indicated.</p>	Harden
11	Region Halton	28-Jul-14	<p>Surface water monitoring program:  Based on the GRCA's correspondence of April 15/13, Brydson Creek is classified as cold-water fish habitat south of Hwy 7. There does not appear to be any surface water monitoring proposed at the Brydson Creek south of Hwy 7. There does not appear to be any monitoring proposed in regards to the groundwater spring attributed to re-emergence of Tributary B about 400m south of the site in Halton Region (i.e. at the Brydson farm in Milton). Further Regional comments on surface water will be provided in our technical comments on the Natural Environment Technical Report (to be provided under separate cover).</p>	<p>James Dick Construction has agreed in correspondence (Harden response to Burnside June 10, 2014), providing that permission is given by the owner, to conduct flow and water quality testing of the spring to establish baseline conditions. The hydraulic potential at the southern edge of the quarry will increase, thereby increasing the hydraulic gradient between the quarry and the spring. If the hydraulic gradient is maintained at current or higher levels there will be no detrimental change to the Brydson Spring. SW3 is a monitoring station within 100 m downgradient of the Hidden Quarry Property. In this way SW3 is a good proxy monitoring location for Brydson Spring. In addition, the volume of water stored in the quarry will moderate seasonal groundwater level change, thereby providing a more stable source of water during drier conditions. It is likely that the infiltrating waters of Tributary B and C contribute significantly to the Brydson Spring discharge. Since flow in Tributary B and C will not be affected by the quarry operation, no change in the outflow from Brydson Spring will occur. As such, no fish habitat monitoring along the lower reaches of Brydson Creek is necessary or recommended. The Grand River Conservation Authority is aware of the Brydson Spring and has not recommended any biological or water quality/quantity monitoring of the spring. In correspondence dated April 7, 2014, R.J Burnside and Associates, the GET Peer Review consultant on the Natural Environment, also concurred that the application had satisfied all of their concerns, and no fisheries monitoring in the Brydson Creek was recommended. MOE has also indicated in correspondence dated October 10 2013 that the proposed monitoring plan is appropriate for ascertaining and addressing potential surface water impacts from quarrying activities.</p>	<p>None required. Brydson Spring has already been added to the monitoring program if the landowner grants access.</p>	

12	Region Halton	28-Jul-14	Private Well Monitoring: We note that the Harden Environmental February 5, 2014 letter indicates that a well monitoring program for water quality and an action plan to remedy any issues is proposed to protect neighbouring private wells. It is not clear to Regional Staff how this program protects or addresses private wells within the Region of Halton. Further, it is not clear to Regional Staff that all private wells in close proximity to the extraction site have been evaluated or are included in this program.	Please see attached Modified Figure 6.1 illustrating all wells located within the 500m Well Survey Zone. These wells include private wells located in the Region of Halton, specifically the Town of Milton.	Attach June 10, 2014 Letter and Figures 6.1.	JDCL
13	Region Halton	28-Jul-14	Additionally, the private well complaint protocol (Section 6.0 of the February 5, 2014 Harden letter) should be revised to include the Region of Halton and the Town of Milton as parties to be notified in the event that a water well complaint is received. Further, clarity on how the complaints will be handled should be provided.	James Dick Construction Agrees to include the Region of Halton and the Town of Milton as parties to be notified in the event that a water well complaint is received. A well complaint protocol was prepared in September 2013 and presented to R.J. Burnside. This protocol is attached.	Amend Well Complaint Protocol.	Harden
14	Region Halton	28-Jul-14	Other: • Trigger levels and contingency measures are proposed for northwest and north areas of the proposed quarry site, mainly in association with the on-site wetlands. No trigger water levels are proposed on at the south end of the extraction area. Further discussion to this point is requested.	Groundwater levels will rise at the south end of the quarry and since a) there are no water level sensitive features proximal to the south side of the quarry and b) the water level will not rise enough to cause issues in the root zone of the forest on the south side of Hwy 7; trigger levels are not necessary. Nonetheless, trigger levels set at the northern (upgradient) portion of the property are also protective of water levels at the south end of the property (the lake has a common elevation). The final water level in the quarry pond is estimated to be 348.6 m AMSL which is above the maximum high water elevation recorded at M4. These factors make trigger levels along the southern boundary, unnecessary. The trigger levels have been added on a table on Page 4 of the updated (July 14, 2014) site plans (attached) at the request of the GRCA.	Attach Updated Site Plans.	JDCL
15	Region Halton	28-Jul-14	• The apparent "benefits" of the on-site pond creation (subject to approval) on downstream wells, springs, ponds or streams, and properties should be subject to confirmation (through modeling) based on future (enhanced & multi-level) monitoring results; however, no off-site downgradient monitoring is proposed.	The water level at the south end of the property will increase with the creation of the lake and the leveling of the water table. As such basic engineering principals dictate that flow will increase to the south (Darcy's Law). No modeling is required. The groundwater model prepared for the site predicts a water level rise and the proposed detailed monitoring program will determine the actual water level rise. Additional modelling is not needed to confirm the benefits of the on-site pond, this will be achieved via the detailed groundwater and surface water monitoring program.	None.	
16	Region Halton	28-Jul-14	• The effects of blasting on private wells within Halton Region are not known and should be addressed.	No effect on the wells in Halton Region will occur due to blasting. Any impact on wells would be captured in the well complaint protocol. Explotech and the GET Peer review consultant Novus Environmental concur that blasting operations required for operations at the proposed James Dick Construction Ltd. Hidden Quarry site can be carried out safely and well within governing guidelines set by the Ministry of the Environment. In addition, quarrying will commence along the northern end of the quarry providing ample opportunity for monitoring water quality and observing the effects of blasting on on-site wells for several years before blasting near to Halton Region occurs. Please also see response to Comment 19 below for details of the Blast Monitoring.	None.	
17	Region Halton	28-Jul-14	Based on Site Plans; Stovel & Associates, June 6, 2014: As the site plan does not refer to any downgradient private well /private property monitoring.	The June 10, 2014 Harden response to Burnside details of the most-up-to-date monitoring program. The monitoring program has been updated (as of June 2014) to include monitoring of down gradient private well/private property monitoring as outlined in this response and the responses to other agencies and peer reviewers. This report is and will be referenced on the site plans. A summary table has been included on the site plans for onsite monitoring.	Update Monitoring Plan and reference Updated Plan on Site Plans	Harden, Stovel

18	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Page 2 of 5: (i) "extraction footprint" on the site plan and in the latest hydrogeology reports do not align (ii) in regards to "a main processing area will be developed in the southwestern portion of the site once a sufficient area had been cleared", this area is not identified as part of any extraction stage; does the extraction include overburden only? (iii) "spills" protocol should include immediate notification to downgradient properties utilizing domestic wells as their primary drinking water supply.</li> </ul>	<p>(i)The extraction footprint on the site plan has been revised and is shown on the updated site plans. Some figures in the hydrogeology report are symbolic and do not align exactly with the site plans which are the legal document that will govern extraction. (ii)The extraction in the main processing area involves removal of vegetation, topsoil and overburden as well as the extraction and processing of above water table gravel. In this way the processing plant can be located at as low an elevation possible for noise and visual mitigation purposes. (iii)James Dick Construction Limited agrees to amend the Spills Contingency Plan to include the immediate notification of downstream properties utilizing domestic wells as their primary drinking water supply. The Spills Contingency Plan will be updated following the baseline private well survey and will include the names, addresses and contact telephone numbers for the five wells downgradient that could be impacted. If a spill is reportable to the MOE, the neighbours will be notified immediately.</p>	Amend Spills Contingency Plan to include Halton Region and the Town of Milton as well as downstream domestic well users as parties to be notified (upon completion of the Baseline Private Well Survey).	Harden
19	Region Halton	28-Jul-14	<ul style="list-style-type: none"> <li>Page 3 of 5: (i) What are the anticipated "silt pond" depth/fill elevation in relation to groundwater levels to the south? The pond is proposed almost directly to the north of a sensitive receptor (private well W 19 defined as R16 on the site plan) in Halton Region. Is M4 installed to monitor potential impact from this pond? In reference to a "blasting line" on the south side of the west extraction area, what monitoring is proposed to ensure that private wells and other structures to the south (i.e. in Halton Region) are not affected by blasting activities?</li> </ul>	<p>The silt pond will be located above the bedrock and will be above water table (please note that the silt pond is generally located in the blasting setback where bedrock quarrying will not be taking place- Site Plan Page 3 of 5). Water in the washing system is closed loop and all water is recycled. Private well W19 is located to the south of the silt pond. Examination of bedrock ground water pre-extraction contours in this area (Figure 3.17 Bedrock Groundwater Contours of the September 2012 Harden Report ) demonstrate that groundwater flow is almost due east, not towards W19. The overburden is dry in this area. Only during the later stages of extraction, with the establishment of the lake, does this well begin to draw water directly from the quarry area (please see the figure "Downgradient Private Wells" attached). Monitor M4 is located between the quarry and well W19 and would function to ensure water quality and quantity in off site wells located in a southerly direction. Washing aggregates is a clean activity and no chemicals are added to the process. Water is used to physically sort virgin, native materials of different grain sizes. Water naturally infiltrating the site today comes into intimate contact with these particles prior to recharging the bedrock aquifer. Water quality and quantity will be assessed in private wells prior to blasting operations. A well complaint protocol has been established should a resident feel that their well has been affected by blasting or other quarry activities. Furthermore, on-site monitoring will assess water levels and groundwater quality before leaving the site on a regular basis. All blasting events will be monitored to ensure compliance with MOE Blasting Guidelines. All blasts shall be monitored for both ground vibration and overpressure at the closest privately owned sensitive receptors adjacent the site, or closer, with a minimum of two (2) digital seismographs – one installed in front of the blast and one installed behind the blast. Monitoring shall be performed by an independent third party engineering firm with specialization in blasting and monitoring.</p>	Attach Figure 4 "Downgradient Private Wells" and Figure 3.17 "Bedrock Groundwater Contours"	JDCL
20	Region Halton	28-Jul-14	<p>Further to our July 5, 2013 letter, Regional Staff requested that an Adaptive Management Plan (AMP) be prepared as part of the review process for this proposed quarry. Regional Staff believe that this plan would provide for an effective tool to formalize any resolutions and commitments to monitor and mitigate water resources issues which would include Halton Region lands.</p> <p>It is noted that further technical comments with respect to other Regional interests on this proposed quarry will be forthcoming under separate cover.</p>	<p>Given the minimal potential for off site groundwater impacts in Halton Region from this site, there is no need for an Adaptive Management Plan at this site. A detailed Groundwater and Surface Water Monitoring Plan has been presented along with a Well Complaint Protocol and Spills Contingency Plan. Threshold values for water level changes and water quality changes are found within these documents including details of the required response by JDCL. These commitments made by JDCL include wells within Halton Region. Various agencies noted in response to Comment 1 have indicated that the proposed monitoring program is appropriate.</p>	None.	

21	Region Halton	28-Jul-14	Regional Staff note that the Region 's Review fee (\$18,714.19) remains outstanding. As noted in our April 2, 2013 correspondence, we kindly request that James Dick Construction Limited submits this review fee to the Region in accordance with the Region's Development Application Requirements.	Respectfully, JDCL declines to pay a review fee to Halton Region. We have recieved advice that demand for such a fee is not legal according to the Municipal Act, given that the Hidden Quarry lands are outside the municipal boundary of Halton Region. All fees have been paid to the Township of Guelph/ Eramosa in accordance with their requirements, including robust Peer Review Fees. Additional substantial fees have also been paid to the GRCA. The application is also consistant with the Wellington County Official Plan which designates this property as a Mineral Resource Area.	None.	
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**The following materials have been reviewed as part of the Halton comments:**

22	Halton Region	28-Jul-14	Letter from MOE's Carl Slater to James Dick Construction Ltd. (JDCL), dated July 3, 2013.	This letter has been superceded by MOE correspondence dated October 10, 2013. This letter states that the surface water and groundwater outstanding items have been addressed to MOE satisfaction.	Attach October 10, 2013 Letter from MOE	JDCL
23	Halton Region	28-Jul-14	Letter-report from Harden Environmental Services Ltd. (Harden) to JDCL, dated July 15, 2013, responding to MOE's comments of July 3, 2013.	See Response 22 above. MOE has signed off on all outstanding surface water and groundwater items.	Attach October 10, 2013 Letter from MOE	JDCL
24	Halton Region	28-Jul-14	(i) Hydrogeological Summary (letter) Report for Township of Guelph Eramosa from Harden to JDCL, dated September 5, 2013; (ii) Burnside's comments dated November 12, 2013 on Harden's Hydrogeological Summary Report, and (iii) Burnside's responses dated April 8, 2014 (C1) and April9, 2014 (C2) to Harden's letter (dated January 14, 2014) responding to Burnside's comments of November 12,2013.	Latest Response to Burnside Comments April 8th and 9th comments are the June 10th, 2014 response from Harden Environmental.	Attach June 10th, 2014 response from Harden Environmental.	JDCL
25	Halton Region	28-Jul-14	(i) Letter from Grand River Conservation Authority (GRCA) to Township of Guelph/Eramosa dated November 4, 2013), and (ii) Letter from GRCA to Township of Guelph/Eramosa dated March 28, 2014; and (iii) Letter from GRCA to Township of Guelph!Eramosa dated April 23,2014	GRCA correspondence has been superceded by sign off from GRCA sent to Guelph/Eramosa dated July 29, 2014. This letter staes that GRCA has no further comments on the Hidden Quarry application and as such has no objection to the application being brought forward.	Attach July 29th, 2014 GRCA letter.	JDCL
26	Halton Region	28-Jul-14	Letter-report from Harden to JDCL, dated February 5, 2014, concerning "timeline for changes to monitoring plan"	This document will be updated, including revisions as requested by Halton that have been agreed to by James Dick Construction Limited as confirmed in this document.	Revise Monitoring Section of Hydrogeolical Investigation Report Level 1 and 2 with reccommended changes once agency reviews are complete.	Harden
26	Halton Region	28-Jul-14	Site Plans; Stovel & Associates, June 6, 2014	These site plans have been updated at the request of GRCA. Please see Site Plans dated Aug	Attach Site Plans dated Aug 1, 2014.	JDCL

**NATURAL HERITAGE SYSTEM RELATED TECHNICAL COMMENTS September 16, 2014**

Response Date September 23, 2014

27	Halton Region	16-Sep-14	<b>Field Survey on Adjacent Lands:</b> Wildlife Survey records contained in Appendix C of the NE Report indicate whether species were observed on adjacent lands but do not indicate on which area of adjacent lands (i.e. north, south, east, west side?). The extent of Field Surveys and Species observations conducted on adjacent lands in Halton Region should be clarified and detailed.	From GWS: "In response to the September 16, 2014 comments made by staff of Halton Region regarding our wildlife observations on adjacent lands, we normally do not record off-site data by property ownership. Furthermore, in this case our observations were only made from Highway 7, which forms a significant obstruction to wildlife movements, except in the case of the Brydson Farm where we are managing their woodlands under the Management Forest Tax Incentive Program (MFTIP). In any event, only common species of birds and mammals were observed utilizing properties in Halton Region. All reported Species at Risk were found inhabiting lands in Wellington County."	None	
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28	Halton Region	16-Sep-14	<p><b>Significant Woodlands on Adjacent Lands:</b> According to our mapping, candidate significant woodlands are located just south of the property, along the south side of Highway 7, within the 120m Adjacent Lands study area surrounding the proposed new extraction operation. This woodland is identified as vegetation community FODS-6 in the NE Rep011. A portion of this woodland area would likely meet criteria for designation as significant woodland in accordance with Section 277 of the 2006 Regional Official Plan (Interim Office Consolidated Official Plan). Regional Staff note that the Level II Report should have assessed the significance of this feature in accordance with Regional Significant Woodlands Criteria and demonstrated no negative impact in accordance with the Provincial Policy Statement. However, it is recognized that the potential to negatively impact this feature is low given the substantial setback from quarry operations, physical separation from the quarry site by Highway 7, and mitigation measures already proposed. Therefore no further assessment of this feature is required in regard to the present application.</p>	Agree.	None.	
29	Halton Region	16-Sep-14	<p><b>Surface Water/Fish Habitat Monitoring:</b> Regional Staff recognize that JDCL has agreed in correspondence (Harden response to Burnside June 10, 2014) to conduct flow and water quality testing of the Brydson Spring to establish baseline conditions including temperature, but not to undertake ongoing monitoring of the spring. Staff note that the Brydson Spring may contribute to base flow and water temperature attenuation of sensitive ecological receptors downstream of the subject property (Blue Springs coldwater fishery, PSW) and therefore recommend that ongoing monitoring of the spring (including water flow, quality and temperature) be undertaken in addition to baseline characterization of the spring, particularly given that no direct monitoring of downstream ecological receptors is planned.</p> <p>Please note that Regional Staff do not concur with the statement (provided by JDCL correspondence dated August 1, 2014 in response to Halton Region Comments) that monitoring of this feature is redundant, because the source of the spring has not been satisfactorily identified. Staff recognizes that baseline characterization and ongoing monitoring are subject to landowner permission to access the spring.</p>	Agree. Water levels at the south end of the property are expected to rise over time as the quarry is excavated. As such, no decrease in flow is expected at the Brydson Spring. Notwithstanding the above, subject to landowner permission, JDCL agrees to include quarterly monitoring of the Brydson Spring for flow, quality and temperature, in the Monitoring Program. For clarity, if the landowner does not grant permission to access the spring, it will be deleted from the monit	Include new Surface Water Monitoring point at Brydson Spring	Harden
30	Halton Region	16-Sep-14	<p><b>Haul Route Study:</b> Regional Comments of July 5, 2013, requested a Haul Route Study, prepared in accordance with Terms of Reference to be prepared in consultation with staff from Halton Region, Milton, and Halton Hills. Although this request remains outstanding, Regional Staff understands that the Terms of Reference for this study are currently being developed. It is recommended that the Terms of Reference require criteria for route selection to include impact minimization and avoidance for environmental features and functions in Halton Region and that any negative environmental impacts resulting from the chosen route should be identified and evaluated, be deemed unavoidable, and mitigated as appropriate.</p>	All Highways and Arterials that Hidden Quarry will be using have the planned function of carrying trucks and truck use is currently permitted. There are no new routes proposed that do not already carry significant volumes of truck traffic. As such there will be no "change in use" that would trigger an EA type assessment.	None.	
31	Halton Region	16-Sep-14	<p><b>Blue Springs Creek Tributary and Associated Wetlands:</b> The proposed quarry operation has requested a reduced setback to a tributary of Blue Springs Creek traversing the subject lands. Typically, setbacks to watercourses are applied buffers for their protection from development related impacts and to ensure maintenance of their ecological functions. The Natural Heritage Reference Manual provides guidance to municipalities on appropriate buffer widths to achieve this objective.</p> <p>In considering this requested setback, Regional Staff understands that the GRCA and MNR have evaluated and provide comments/clearance on this reduced setback/buffer. Regional Staff encourage the proponent to maintain the greatest setback possible to this tributary in order to implement the Natural Heritage Reference Manual and the PPS to minimize impacts Blue Springs Tributary and downstream significant features.</p>	MNR and GRCA have reviewed and cleared the proposed setbacks.	None.	



32	Halton Region	16-Sep-14	<b>Greenbelt Plan - External Connections Policies:</b> Regional Comments of July 5, 2013, request that various supporting materials be updated to reflect the policies of the Greenbelt Plan, 2005. On further review, staff notes that lands within Halton Region immediately to the south of Highway 7 are within the Greenbelt Plan's Protected Countryside and are designated Greenbelt Natural Heritage System (NHS). As such, Key Natural Heritage Features (KNHF) and Key Hydrologic Features (KHF) within the NHS are located on adjacent lands south of Highway 7 (i.e. the tributary and woodland area referred to above), along the south side of Highway 7. The proposed quarry, however, is outside of the Greenbelt Plan Protected Countryside; therefore the only policies in the Greenbelt Plan, 2005, that may apply would be those policies pertaining to External Connections (Sec. 3.2.5). Policies within the Greenbelt Plan related to External Connections beyond the boundaries of the Greenbelt were reviewed. The external connections to which these policies apply are illustrated on Schedules 1 and 4 of the Greenbelt Plan. As no external connections are shown in the vicinity of the subject property, External Connection policies of the Greenbelt Plan would not apply in this instance.	Agree.	None.	
33	Halton Region	16-Sep-14	<b>Missing Materials/Correspondence:</b> Regional Staff note that the following materials were not copied to the Region or provided through the Township's website. To complete regional records to this point, the following materials are requested: i. Figures 10 and II were missing from the Natural Environment Report (the NE Report). ii. Peer Review Comments prepared by Williams & Associates Forestry Consultants Ltd., dated June 13,2013. iii. Agency Review Comment prepared by GRCA, to GWS, dated July 15,2013. iv.MNR Comments to JDCL, dated July 11, 2013. v. MOE Comments to MNR, dated April 15,2013 vi. Response Letter regarding "Hidden Quarry Response to MNR Comments" to JDCL prepared by GWS. dated May 27,2013. vii. Response Letter regarding "Burnside Review of Summary of Drilling and Testing of New Well M 15 at Hidden Quarry Site" to Burnside, prepared by Harden, dated January 14, 2014. viii. Response Letter regarding "GRCA 's Letter of July 8, 2014" , to GRCA, prepared by JDCL, dated July 10,2014. ix. Site Visit Notes regarding "June 7, 2014, Site Visit" prepared by JDCL, dated August 22, 2013. x. Materials in response to GRCA's Letter ofNovember 4, 2013, dated December 5, 2013. xi.Materials in response to GRCA's Letter ofNovember 4, 2013, dated January 23.2014. xii.Drawings submitted to GRCA on March 19, 2014.	Township of Guelph/Eramosa is providing additional documents, JDCL will assist if required.	Done	K. Lang GET JDCL

Regon of Halton General Comments July 5, 2013

Response Date September 23, 2014

34	Halton Region	05-Jul-13	<b>Haul Route Study</b> (terms of reference to be established based upon consultation with Regional Transportation Staff, the Town of Milton, and the Town of Halton Hills).	In general we believe that a haul route study is inappropriate given the fact that the Hidden Quarry is on a Provincial Highway with an established history of carrying inter-regional truck traffic. MTO has been circulated and has no objection to re-zoning the property to permit the establishment of a mineral aggregate operation. Notwithstanding the above, we will undertake to outline routes to various markets with a view to minimizing traffic through the central areas of Acton and Georgetown.	Identify existing truck routes to be used by Hidden Quarry traffic.	JDCL
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35	Halton Region	05-Jul-13	Revisions to the Level I and II Hydrogeological Investigation dated September 2012, and completed by Harden Environmental Services Ltd. to include: o Detailed Baseline Well Survey for the lands within 1,000 m of the proposed quarry within Halton Region; o Details on the proposed Well Monitoring and Mitigation Program, and more detailed contingencies as they relate to private wells within Halton; and o Detailed 'Well Complaint Protocol'.	See response to Comments 3 , 4 and 13 above.	None	
36	Halton Region	05-Jul-13	The requested updates shall also include a consolidated version of the Hydrogeological Investigation which reflects and details all agency comments received to date.	Once all comments have been finalized a consolidated version will be available.	Consolidate all changes made in response to various agencies and reviewers into final report.	Harden
37	Halton Region	05-Jul-13	An Adaptive Environmental Management Plan.	See response to Comment 20 above.	None.	
38	Halton Region	05-Jul-13	Given the potential of groundwater impact downstream in Milton/Hatton Region, it is the expectation of the Region that a zone of influence for the proposed quarry be established based on a sound scientific and policy analysis. Once this basis is established to the satisfaction of the affected municipal partners, the Natural Environment Technical Report and any necessary field work will need to be revised or commissioned to assess the potential for impact.	The Hydrogeological Study and the natural Environment Study have been prepared based on sound scientific principles. GRCA, MNR, MOE are satisfied with the information provided.	None	
39	Halton Region	05-Jul-13	As is permitted by the policies of the Greenbelt Plan, 2005, the Natural Environment Technical Report, Hydrogeological Investigation, and the Planning Justification Report must be updated to reflect the policies and requirements of the Plan, and the potential impact of the proposed quarry development on the adjacent Key Natural Heritage System and Key Hydrologic Features located to the south of these lands (i.e. in Halton Region).	Please see Comment 32 above.	None.	
40	Halton Region	05-Jul-13	Updated copy of the Operations Plan reflecting all agency comments received to date.	Site Plans are updated from time to time and the updated version is available on the Township of Guelph/Eramosa website. A final version will be prepared once all comments have been considered.	Prepare final version of site plans once all comments received.	Stovel



March 4, 2015

**Via: Email**

Ms. Kim Wingrove  
Chief Administrative Officer  
The Township of Guelph-Eramosa  
8348 Wellington Road 124,  
Rockwood, ON N0B 2K0

Dear Ms. Wingrove:

**Re: James Dick Construction Limited Proposed Hidden Quarry,  
Ecological Comments Response and Additional Studies Review  
Project No.: 300032475.0000**

**Introduction**

This letter has been compiled to summarize R.J. Burnside & Associates' (Burnside) additional technical Peer Review of the James Dick Construction application for licensing under the Aggregate Resources Act (ARA) to extract below the water table at their proposed Hidden Quarry location between Acton and Rockwood. Burnside has been retained to act as the Ecology reviewer by the Township of Guelph-Eramosa. These comments are further to Burnside comments related to the Natural Environment of April 7, 2014.

The following provides peer review comments for the Response Matrix prepared by James Dick Construction Limited (JDCL) which provided comments submitted by Adam Huycke, Acting Intermediate Planner, Community Development at the Regional Municipality of Halton, dated September 23, 2014 and respective responses prepared by GWS Ecological & Forestry Services Inc. (GWS) dated September 23, 2014 on behalf of JDCL. In addition to the JDCL Response Matrix, this letter also responds to additional studies provided by the Concerned Residents Coalition (CRC), including:

- Species at Risk Evaluation, July 4, 2014 (Bill McMartin, GAIA EcoConsultants); and,
- Aquatic Habitat and Fish Survey of Brydson Creek, January 2015 (K. Schiefer, Ph.D., Aquatic Ecologist).

**Regional Municipality of Halton Comments and JDCL Response Matrix**

The following responses have been labelled to correspond with the numbering system applied to the matrix provided by JDCL. It should be noted that the comments provided in this letter are limited to the natural heritage ecology concerns raised in items numbered 27 to 38 of the matrix.

**Comment 27:** In general, Halton Region wished to have additional detail regarding the extent of Field Surveys and Species observations conducted on adjacent lands in Halton Region. GWS responded that their normal practice is to not record off-site data by property ownership and further that Highway 7 forms a significant obstruction to wildlife movement. GWS has also made a statement that only common birds and mammals were observed utilizing properties in Halton and that all reported Species at Risk were found inhabiting lands in Wellington County (north side of Highway 7). Burnside suggests that the locations of the species documented during field data collections should be mapped, especially for species that are sensitive, rare, threatened or endangered, or field data sheets should be included as an appendix. However, we do not believe the inclusion of these resources within the report would change the findings presented.

**Comment 28:** We agree with the conclusions presented for the Significant Woodland feature located on the lands adjacent to the site. No negative impacts are predicted provided that adequate buffers are established, mitigation measures are followed and that the existing water balance is maintained. We note that there is agreement between the Halton Region comment and the GWS response.

**Comment 29:** It would appear that the GWS response to the Halton Region comment is incomplete within the matrix. We note that JDCL undertakes that quarterly monitoring of the Brysdon Spring for surface water conditions, including temperature, quality and flow will be included in the monitoring program. We suggest that more frequent monitoring may be appropriate seasonally and in the early stages of development. Monthly monitoring is a more typical monitoring standard for aggregate operations.

**Comment 30:** Halton Region notes that a Haul Route Study has been requested and notes that the Terms of Reference should include criteria for route selection to include impact minimization and avoidance of environmental features and functions. The response notes that the Highways and Arterials that will be used by the proponent have the planned function of carrying trucks and truck use as currently permitted. As such no change in use on the haul routes is proposed. The Terms of Reference for the Haul Route Study requires an assessment of anticipated truck traffic volumes and if the truck volumes attributable to this proposal will increase that the evaluation approach for reviewing the alternative routes will include environmental criteria including disruption to sensitive land uses, impacts to residents, property impacts and disturbance to built heritage features and archaeological resources. It is suggested that matters related to the Haul Route Study will be dealt with through the review of that study.

**Comment 31:** As both MNRF and GRCA are satisfied with the proposed setbacks then we have no further comment.

**Comment 32:** Regarding the Greenbelt Planning designations related to the Site, we note that the Region has provided some explanation of the policies with specific references. The comments conclude, however, that there are no external connections in the vicinity of the subject property and hence the External Connections policies of the Greenbelt Plan would not apply for this proposal. GWS on behalf of JDCL agrees with this analysis.

**Comment 33:** No comments required regarding additional documents as we understand that they have been made available to Halton Region for review.

## **Summary of Matrix Comments Responses**

In general Burnside feels based on our review that the findings of the Natural Heritage Reporting are accurate and provide appropriate recommendations for both protection (setbacks and buffers) and mitigation measures to minimize or negate any potential effects to the features and functions of the natural heritage system on and surrounding the proposed Hidden Quarry. Additional information may be helpful to the reader, as discussed above, to round out the technical reporting for this Site.

## **Species at Risk Evaluation**

This report prepared by Mr. McMartin of GAIA EcoConsultants includes additional field data collection to determine if the Site and surrounding lands provide habitat for any Species at Risk (SAR) that may be located within the study area. The potential list of SAR is determined through a desktop review and verified through site specific surveys and ground truthing of habitat features. During this site visit a list of breeding birds and other incidental wildlife observations was compiled. Mr. McMartin then assessed the habitat conditions provided both within the Hidden Quarry site and on the adjacent lands.

Mr. McMartin did not find breeding evidence of any birds listed under the Endangered Species Act 2007 as Threatened or Endangered. He assessed that the Site has potential to provide feeding and foraging habitat for a number of these species; however, this was not confirmed during his Site visit. Snapping turtle, a species listed as Special Concern was documented on and in the immediate vicinity of the Site. This species is not regulated under the ESA 2007; however, its habitat may be considered Significant Wildlife Habitat, and should be discussed in further detail. We are not suggesting additional field data collection and mapping but rather that additional mitigation measures would minimize the potential for adverse effects. Potential impacts to this habitat may be mitigated through exclusion fencing, best management practices, worker education programs and pre-construction SAR surveys, minimizing the potential for any adverse effects. Rehabilitation and mitigation plans are required under the Aggregate Resources act and are expected to be included as notes on the application (site) plans.

According to the Site Plans date July 14, 2014, tree removal will not occur during the breeding bird season. Therefore, additional mitigation measures to ensure that the proposal is in accordance with the Migratory Birds Convention Act are not required.

## **Aquatic Habitat and Fish Survey of Brydson Creek**

This survey and assessment included field classification of aquatic habitats and an opportunistic fish species inventory completed using dip nets in Brydson Creek. Through this assessment it was determined that this watercourse, originating on the lands located to the south west of the Hidden Quarry Site, provides coldwater habitat for brook trout. A number of different age classes of fish were captured using dip nets and redds (brook trout spawning beds) as noted during the survey. The frequency of redds and the health and abundance of fish specimens indicates that this watercourse provides preferred habitat for brook trout.

This report also provides landscape scale assessment of the potential significance of the aquatic habitat within Brydson Creek and the existing brook trout fishery. Much of this assessment is not referenced adequately and would require additional background study support to confirm its conclusions.

In Section 5.0 Concerns of the Schiefer Report it discusses that "...the future well-being of the stream ecosystem and brook trout population is strongly linked to maintaining the quantities and quality of groundwater discharge..." Potential impacts to the brook trout habitat include: changes to water quality and quantity and temperature. Schiefer notes that "...bedrock blasting and excavation well below the water table, raises serious concerns related to the future hydrogeological conditions in the downstream area...need for very detailed and reliable sampling, measurement, modelling and assessment of these hydrogeological features as a precondition..." However, based on Burnside's detailed peer reviews of the proposed quarry application and supporting technical studies to date, including the Hydrogeology and Hydrology Study and the Level 2 Natural Environment Report, it is our opinion that the proposed quarry operations will not cause a change that is significant enough to result in adverse effects to the resident fish population.

This assessment is based on the conclusion that the water balance to the watercourse will be maintained with no predicted decrease in flow. The existing background studies did not definitively determine if water from the open water area of the quarry will be connected through groundwater to Brydson Creek beyond incidental infiltration. The outflow from the quarry will result in a localized increase to surface water temperatures in the Creek, however the extensive groundwater discharge to the Creek will quickly mitigate that temperature change. Any change in temperature will be within the preferred range for brook trout, and any additional species for which Brydson Creek may provide habitat. Water quality will not be affected by any discharge from the proposed open aquatic features in the quarry if the water quality parameters of the license are met. Therefore, it is not expected that the proposed Hidden Quarry will result in an adverse effect to the local brook trout fishery provided that best management practices and standard Erosion and Sediment Control mitigation measures are followed.

### Summary

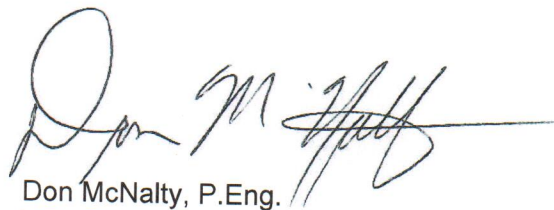
The Hidden Quarry site is located in an area that is surrounded by features that may provide habitat for a number of species; however, extraction of stone below the water table is an interim land use, which, through the application of the ARA required mitigation and rehabilitation plans, is not likely to result in a measurable impact to the natural heritage features or functions at a landscape scale.

Yours truly,

**R.J. Burnside & Associates Limited**



Nicholle Smith  
Senior Terrestrial Ecologist  
NJS/DM:sd



Don McNalty, P.Eng.  
VP - Public Sector

cc: Liz Howson, MSH Planning (enc.) (Via: Email)



Legislative & Planning Services  
Planning Services  
1151 Bronte Road  
Oakville ON L6M 3L1  
Fax: 905-825-8822

April 22, 2015

Ms. Kim Wingrove  
Township of Guelph/Eramosa  
8348 Wellington Road 124  
P.O. Box 700  
Rockwood, ON N0B 2K0

Dear Ms. Wingrove:

**RE:       Region of Halton Additional Technical Comments  
          “Hidden Quarry” – James Dick Construction Ltd.  
          Proposed Class ‘A’ Category 2 License – Aggregate Operation  
          Township of Guelph/Eramosa Zoning By-law Amendment Application ZBA 09/12  
          West Half Lot 1, Concession 6, former geographic area of the Township of Eramosa**

This letter is further to our previous Regional comments dated July 5, 2013 and is being provided to add additional clarification to earlier comments related to the above noted Zoning By-law Amendment application and *Aggregate Resource Act* application. These comments are provided in response to the correspondence submitted to the Region of Halton directly from Eramosa and correspondence obtained directly from the Township’s website.

**NATURAL HERITAGE SYSTEM RELATED TECHNICAL COMMENTS:**

Item # 29 on the response matrix dated August 1, 2015 appears to contain an incomplete response. Please clarify the commitment in relation to monitoring and describe the access arrangements relating to the proposed new monitoring locations. It is requested that the updated monitoring program be submitted to the appropriate monitoring agencies for review. Regional Staff may have further comment following our review of this material.

It is noted that R.J. Burnside staff (N. Smith and Don McNalty) provided peer review comments to the Township of Guelph-Eramosa relating to the same JDCL response item. In their response, R.J. Burnside staff suggested that more frequent monitoring may be appropriate ‘seasonally and in the early stages of the development’. They also noted that monthly monitoring is a more typical monitoring standard for aggregate operations. Regional staff recommends that the updated monitoring program include more frequent monitoring as suggested by R.J. Burnside staff.

### **DOMESTIC WELLS AND BRYSDON SPRING/CREEK COMMENTS:**

The following is a summary of additional comments on the impact on private wells and Brydson Spring/Creek in Halton Region based on the review of applicable documents since August, 2014. Additional information in support of these comments is provided below in Appendix 'A'.

1. The "Contingency Plan" in Table 1 of Harden's January 8, 2015 memorandum to Burnside Consultants, recommends modification/retrofit/water-treatment installation at specific private wells located in Halton Region. Will there be a formal protocol/agreement in place to ensure eligibility for modifications at no-cost to the well owners? Halton residents should be aware of their eligibility and any required process.
2. The *Revised Monitoring Program and Contingency Measures* (June 2014) or a separate off-site monitoring program encompassing all potential down gradient monitoring stations (i.e. including those beyond 120m from the site's southern boundary) should be available and/or referenced as a key document on the ARA site plan once the new survey is completed and all suitable locations are identified.
3. As noted in our previous comments, any future well surveys and monitoring should encompass properties extending somewhat outside of the 500m zone of the site's southern boundary to ensure that suitable and accessible down gradient private wells, within such properties, are not excluded from baseline and long-term off-site monitoring programs.
4. What is JDCL's approach to implementing a "well-complaint protocol"? Are Halton residents aware of this protocol and its applicability? The protocol was referenced in the August 1, 2014 response to Halton's comments; however, the protocol has not been provided to the Region.
5. The Region recognizes JDCL's willingness to include quarterly monitoring of Brydson Creek, subject to landowners permission. It is not clear, however, if JDCL plans to conduct ecological/fish habitat assessment to ensure that current conditions are maintained long-term.

In summary, it is not clear what JDCL's approach is to finalizing their commitments concerning down gradient property protection, mitigation and monitoring. In the absence of an Adaptive Management Plan (AMP) and key references identified on a site plan, it is not clear how off-site monitoring and implementation matters are to be applied and fulfilled.

### **REGIONAL TRANSPORTATION & HAUL ROUTE STUDY COMEMNTS:**

Regional Transportation Planning has commenced its review of the updated Haul Route Study for the Eramosa Quarry dated March 2015 as prepared by Cole Engineering. In an effort to provide consolidated comments with the Town of Halton Hills and the Town of Milton, staff will be meeting internally with our municipal partners to review and discuss the updated Haul Route Study. It is expected that comments will be issued in late spring 2015.



**CONCLUSIONS:**

The above matters require clarification from the proponent in order for the Region to complete its assessment of this ARA application.

In the meantime, please forward any further materials to Adam Huycke, Planner at (905) 825-6000 Ext. 7604 ([adam.huycke@halton.ca](mailto:adam.huycke@halton.ca)).

Sincerely,



Brian Hudson, MCIP, RPP  
Senior Planner  
Ext. 7209  
[Brian.hudson@halton.ca](mailto:Brian.hudson@halton.ca)

- c. Greg Sweetman, James Dick Construction Limited  
Ron Glenn, Director of Planning Services and Chief Planning Official  
Adam Farr & Jeff Markowiak, Town of Halton Hills Planning Services  
Barb Koopmans, Town of Milton Planning and Development Department  
Liz Howson, Macaulay Shiomi Howson Ltd.  
Linda Sword, Concerned Residents Coalition

## APPENDIX 'A'

### COMMENTS ON PRIVATE WELLS AND BRYDSON SPRING/CREEK IN HALTON REGION

The following information is provided to support the above-noted comments and additional issues raised with regards to private wells and Brydson Spring/Creek within Halton Region:

#### Private Wells and Brydson Creek/Spring in Halton Region:

The following provides additional information in support of Halton Region comments concerning protection and mitigation of private water supply wells and Brydson Creek/Spring in the Region:

- 1) In their June 10, 2014 correspondence to Burnside, JDCL agreed to follow a pro-active approach to modification or retrofitting of four down gradient wells in Halton Region (W16, W17, W18, and W19 located directly down gradient of the subject site) at no cost to landowners, subject to request of the landowner.

Additionally, *Table 1 – Results of Private Well Survey* in Harden's January 8, 2015 memorandum to Burnside, summarizes well-specific contingency plan for the above-noted four wells (W16 to W19) and other wells in Halton Region (i.e. W20, W21, W22, W23 and W38) located within the 500m zone of the proposed quarry site. Would these other wells be eligible for improvements at no cost as well?

Have residents been made aware of the recommendations and eligibility circumstances? Is there a process, protocol or agreement in place regarding this matter?

- 2) JDCL's August 1, 2014 response concerning "Groundwater Levels" in private wells indicates that the (seasonal) baseline data collection is proposed "for a minimum 2 years prior to quarry start-up and discontinued when the extraction begins". We assume that all locations shown in in Figure 1 (January 8, 2015) would be subject to (seasonal) baseline data collection. The long-term onsite and off-site monitoring would be required to confirm or refine the JDCL's non-impact assumptions and/or guide further corrective actions in the event of unanticipated impacts (if quarry is approved).

The Site Plan shows monitoring locations within 120m from the site and includes one private well in Halton Region (i.e. W19 or receptor R16 directly downgradient of the proposed "main processing" and "silt pond" area). The frequency of monitoring at this location is not clear (i.e. it is not identified in the Site Plan or in any other "monitoring plan").

Although the final list of down gradient private wells to be included in a long-term monitoring program may not be available until a survey is completed and all potential impacted wells are identified, the fact that there are no recommendations for off-site monitoring in the *Revised Monitoring Program and Contingency Measures* (June 2014) and no separate 'off-site monitoring plan' is a concern to the Region.

JDCL, in their August 1, 2014 response to the Region, agreed to install additional multi-level monitoring wells along the southern boundary of the proposed quarry (i.e. as per Region's July 28, 2014 comments). The December 29, 2014 Site Plan (page 1 of 5) shows the location of M18 and M19 along the southern site boundary. We assume that these are (would be) multi-level

installations as previously recommended by the Region (i.e. these wells are not listed in *Table 1 - Description of Wells* in the Site Plan (page 1 of 5)).

The *Revised Monitoring Program and Contingency Measures* program encompassing all down gradient wells (on-site and off-site) should be prepared once a new survey is completed and all suitable locations are identified.

- 3) Harden's August 1, 2014 response to the Region indicated that W38, W39 and W40 located outside the 500m zone from the proposed quarry boundary would be asked to participate in the seasonal baseline monitoring program and one-time baseline survey. *Figure 1 – Proposed Pre-Quarry Well Survey Locations* (January 8, 2015) shows more residential wells in Halton Region (i.e. Wells 42, 43 and 44 east of 6<sup>th</sup> Line) than the August 2014 Figure 6.1 of the same title. We assume that wells W42 to W44 will be added to survey and seasonal baseline monitoring program if quarry is approved and if access is available.

Additionally, based on an aerial base map, there appear to be building structures at the limit of the 500m zone (i.e. along 5<sup>th</sup> Line Nassagaveya, at the south end of the Brydson's property, and east of W23). As noted in our previous comments, any future survey and monitoring should encompass properties extending somewhat outside the 500m zone from the proposed site's southern boundary to ensure that suitable and accessible wells within this zone are not excluded from the baseline and the potential long-term monitoring.

- 4) In their August 1, 2014 response, JDCL confirmed that the "well complaint protocol" would encompass Halton residents. JDCL referred to the "attached" September 2013 protocol presented to R.J. Burnside; however, no protocol was attached with the August 1<sup>st</sup>, 2014 response to the Region. Has the protocol and its applicability, limitations, etc. been communicated to Halton residents?

- 5) Brydson Creek and Brydson Spring:

In the August 1, 2014 responses to Halton's July 28, 2014 comments, JLDS indicated that 'no fish habitat monitoring' along the lower reaches of Brydson Creek was necessary or recommended; that neither Town's consultants, nor GRCA or MOE requested such monitoring; that monitoring of groundwater at down gradient on-site observation wells (M15, M16, and M4) would be sufficient to detect any changes before groundwater reaches the spring; and that any additional monitoring at Brydson Spring would be unnecessary and redundant. However, we understand that groundwater contributing zones/areas to the spring are not fully understood at this time and, as such, these monitoring locations may not be representative of the spring inflow.

The need for a permanent monitoring station and on-going monitoring of the spring was further communicated in Halton's correspondence (September 16<sup>th</sup>, 2014) to the Township. Burnside Consultants concurred with Halton Region staff in their November 20<sup>th</sup>, 2014 correspondence to the Township. In their response to Region's September 16, 2014 comments, JLDC agreed to include quarterly monitoring of the Brydson Spring for flow, quality and temperature in the monitoring program, subject to landowner's permission. It is not clear; however, if JDCL plans to conduct ecological and fish habitat assessment to ensure that current conditions are maintained or improved over a long-term.

Summary:

At this point in time, information on the off-site (down gradient) conditions and potential monitoring/mitigation needs in this area is fragmented (i.e. contained in various pieces of correspondence/memorandums, etc., or missing) and is non-conclusive, especially the information outside/beyond the 120m site-plan related assessment area. The fact that there is no formal off-site (down gradient) monitoring and management plan is of concern to the Region. Also, in the absence of an AMP and any references to off-site (down gradient) matters in a site plan or a notation on a site plan, it is not clear how any of the off-site implementation matters are to be fulfilled?

1	Halton Region	22-Apr-15	Item # 29 on the response matrix dated August 1, 2015 appears to contain an incomplete response. Please clarify the commitment in relation to monitoring and describe the access arrangements relating to the proposed new monitoring locations. It is requested that the updated monitoring program be submitted to the appropriate monitoring agencies for review. Regional Staff may have further comment following our review of this material.	Response No. 29 had some text cut off. The complete response should read as follows: ``Agree. Water levels at the south end of the property are expected to rise over time as the quarry is excavated. As such, no decrease in flow is expected at the Brydson Spring. Notwithstanding the above, subject to landowner permission, JDCL agrees to include quarterly monitoring of the Brydson Spring for flow, quality and temperature, in the Monitoring Program. For clarity, if the landowner does not grant permission to access the spring, it will be deleted from the monitoring program``. The Monitoring Program is found on Page 2 of 5 of the Site Plans.	Submit updated Site Plan to Halton Region	JDCL
2	Halton Region	22-Apr-15	It is noted that R.J. Burnside staff (N. Smith and Don McNalty) provided peer review comments to the Township of Guelph-Eramosa relating to the same JDCL response item. In their response, R.J. Burnside staff suggested that more frequent monitoring may be appropriate 'seasonally and in the early stages of the development'. They also noted that monthly monitoring is a more typical monitoring standard for aggregate operations. Regional staff recommends that the updated monitoring program include more frequent monitoring as suggested by R.J. Burnside staff.	To Clarify, The Brydson Spring will be monitored monthly so long as we have permission from the property owner. This frequency of monitoring may be revisited in future based on a demonstrated lack of impact from the quarry.	Add this monitoring point and note regarding frequency to the Water Monitoring Program on Page 2 of 5 on the Site Plans.	Stovel
3	Halton Region	22-Apr-15	The "Contingency Plan" in Table 1 of Harden's January 8, 2015 memorandum to Burnside Consultants, recommends modification/retrofit/water-treatment installation at specific private wells located in Halton Region. Will there be a formal protocol/agreement in place to eligibility for modifications at no-cost to the well owners? Halton residents should be aware of their eligibility and any required process.	JDCL has committed to offer these programs to specific Halton Region residents. These actions are to occur "Post Approval" and as such will be included as conditions of approval. All eligible Halton Residents will be contacted and made aware of the program. Most residents have already been contacted as part of the Baseline Survey. At the time of doing the work an agreement between JDCL and the homeowner will be drafted. Any monitoring of water quality or quantity or modifications to wells is strictly voluntary on behalf of the residents.	No action required.	JDCL
4	Halton Region	22-Apr-15	The Revised Monitoring Program and Contingency Measures (June 2014) or a separate off-site monitoring program encompassing all potential down gradient monitoring stations (i.e. including those beyond 120m from the site's southern boundary) should be available and/or referenced as a key document on the ARA site plan once the new survey is completed and all suitable locations are identified.	The Water Monitoring Program Table on Page 2 of 5 of the ARA Site plans includes the Halton Region domestic well locations. The table also references the Key Document: "Monitoring Locations are shown on Figures C1 and C8 of Harden Report December 9, 2014 "	Send Figure C-1 and C-8 and December 9, 2014 Harden Response to Burnside to Halton Region.	JDCL
5	Halton Region	22-Apr-15	As noted in our previous comments, any future well surveys and monitoring should encompass properties extending somewhat outside of the 500m zone of the site's southern boundary to ensure that suitable and accessible down gradient private wells, within such properties, are not excluded from baseline and long-term off-site monitoring programs.	Please see attached Figure C-8 which includes specific wells within Halton Region that are outside of the 500m Radius. These are specifically W35,W38,W39,W40,W42,W43 and W44	See Above	JDCL
6	Halton Region	22-Apr-15	What is JDCL's approach to implementing a "well-complaint protocol"? Are Halton residents aware of this protocol and its applicability? The protocol was referenced in the August 1, 2014 response to Halton's comments; however, the protocol has not been provided to the Region.	Please see attached the "Well Complaint Protocol" to be implemented post approval. This protocol will be widely distributed to all nearby private well users immediately upon issuance of the ARA license.	Send "Well Complaint Protocol" to Halton Region.	JDCL
7	Halton Region	22-Apr-15	The Region recognizes JDCL's willingness to include quarterly monitoring of Brydson Creek, subject to landowners permission. It is not clear, however, if JDCL plans to conduct ecological /fish habitat assessment to ensure that current conditions are maintained long-term.	Detailed studies to date have indicated that there is not expected to be any significant change to the hydrogeological or hydrogeological regime that contributes water flow to the Brydson Creek. The monthly monitoring at the Brydson Spring along with the other monitoring locations will ensure that the current conditions are maintained long term. For clarity, JDCL does not propose to conduct any downstream ecological fish habitat assessments or monitoring. Ecological / fish habitat assessment of downstream reaches of the Brydson Creek can be subject to fluctuations based on ecological factors unrelated to the quarry (ie over- predation can clean out a stream of fish unrelated to quarrying activity), and hence are far less accurate predictors of quarry impact. Halton Region may take some comfort from R.J.Burnside Associates, the Townships Peer Reviewer, in a memorandum dated March 4, 2015 on this issue states,"However, based on Burnside's detailed peer reviews of the proposed quarry application and supporting technical studies to date, including the Hydrogeology and Hydrology Study and the Level 2 Natural Environment report, it is our opinion that the proposed quarry operations will not cause a change that is significant enough to result in adverse effects to the resident fish population."	No action required.	JDCL
8	Halton Region	22-Apr-15	Regional Transportation Planning has commenced its review of the updated Haul Route Study for the Eramosa Quarry dated March 2015 as prepared by Cole Engineering. In an effort to provide consolidated comments with the Town of Halton Hills and the Town of Milton, staff will be meeting internally with our municipal partners to review and discuss the updated Haul Route Study. It is expected that comments will be issued in late spring 2015.	In general we believe that a haul route study is inappropriate given the fact that the Hidden Quarry is on a Provincial Highway with an established history of carrying inter-regional truck traffic. MTO has been circulated and has no objection to re-zoning the property to permit the establishment of a mineral aggregate operation. Notwithstanding the above, JDCL has undertaken a Haul Route Study and has provided this to the Township of Guelph/Eramosa for distribution to Halton municipalities.	No action required.	JDCL

# Water Well Complaint Protocol

## Hidden Quarry

James Dick Construction Ltd. has committed to remedying any and all issues arising as a result of quarry activities. The following complaint protocol will be followed;

Complaints about water well issues will be received any time at \_\_\_\_\_. Text messages can be sent to \_\_\_\_\_ or email to \_\_\_\_\_@\_\_\_\_\_.

James Dick Construction Ltd. has a water well contractor on stand-by to address any water quantity or quality issue that arises.

In the event of a water shortage a supply of bottled water for drinking/cooking will be delivered within 12 hours of the complaint and an alternative water supply will be delivered within 24 hours of the complaint being received.

Within 48 hours, JDCL will initiate a hydrogeological investigation conducted by an independent hydrogeologist to determine the cause of the water issue. The investigation will include but not be limited to the following actions;

- Confirmation of water levels in on-site groundwater monitoring wells
- Review of historical trends in groundwater levels and groundwater quality obtained in on-site groundwater monitoring wells.
- Review of historical measured precipitation rates
- Interview with resident regarding well complaint
- Investigation of subject well including flow testing, water level measurements and water quality testing if necessary
- Written report summarizing the findings.

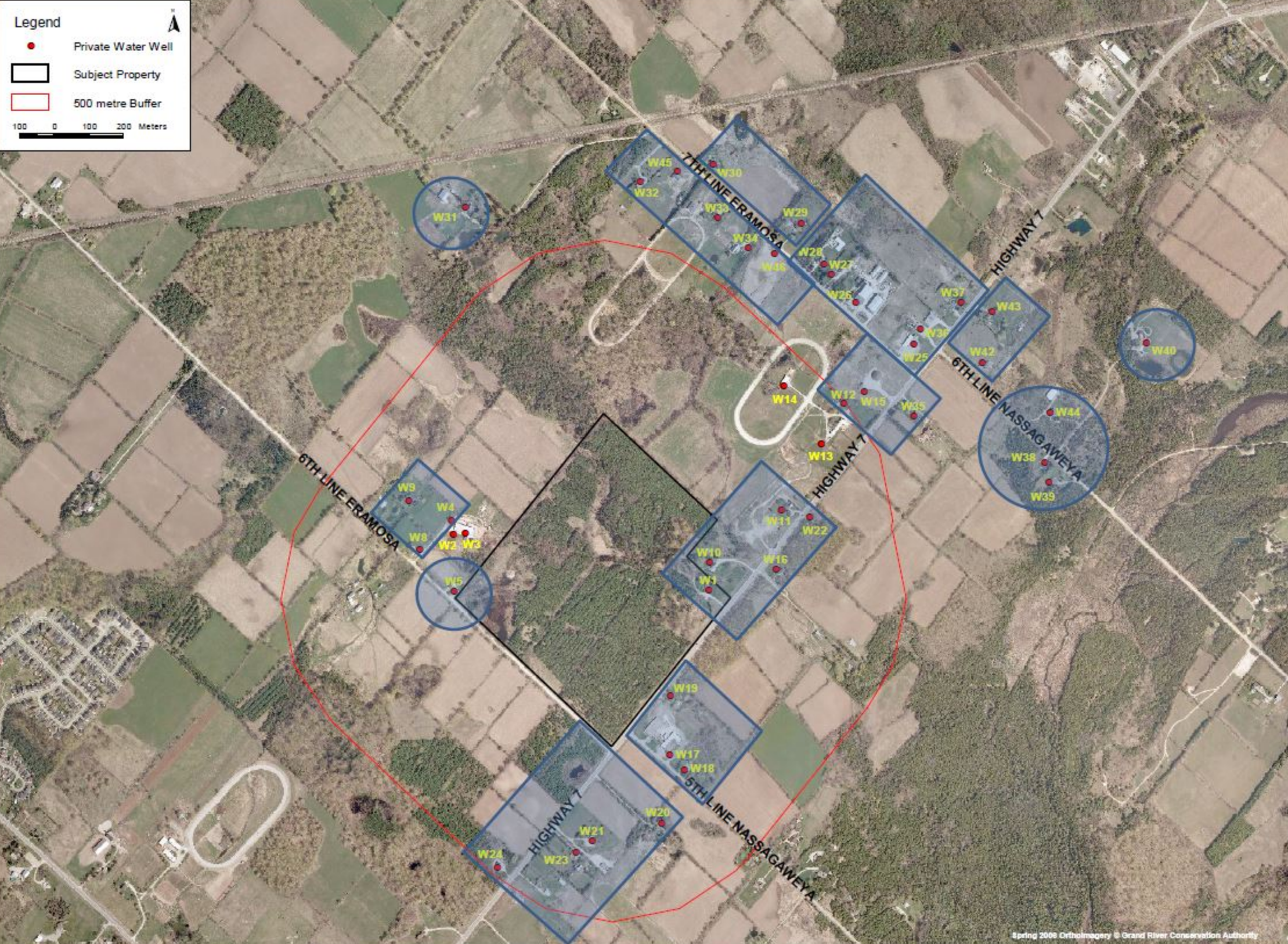
In the event that quarry activities are likely to be the cause of the complaint, James Dick Construction will undertake appropriate mitigative measures such as;

- Lowering the level of the pump within the well
- Extending the cased portion of the well
- Deepening the well
- Well replacement
- Water Treatment
- Modification of quarry activities.

**Legend**

- Private Water Well
- Subject Property
- 500 metre Buffer

100 0 100 200 Meters



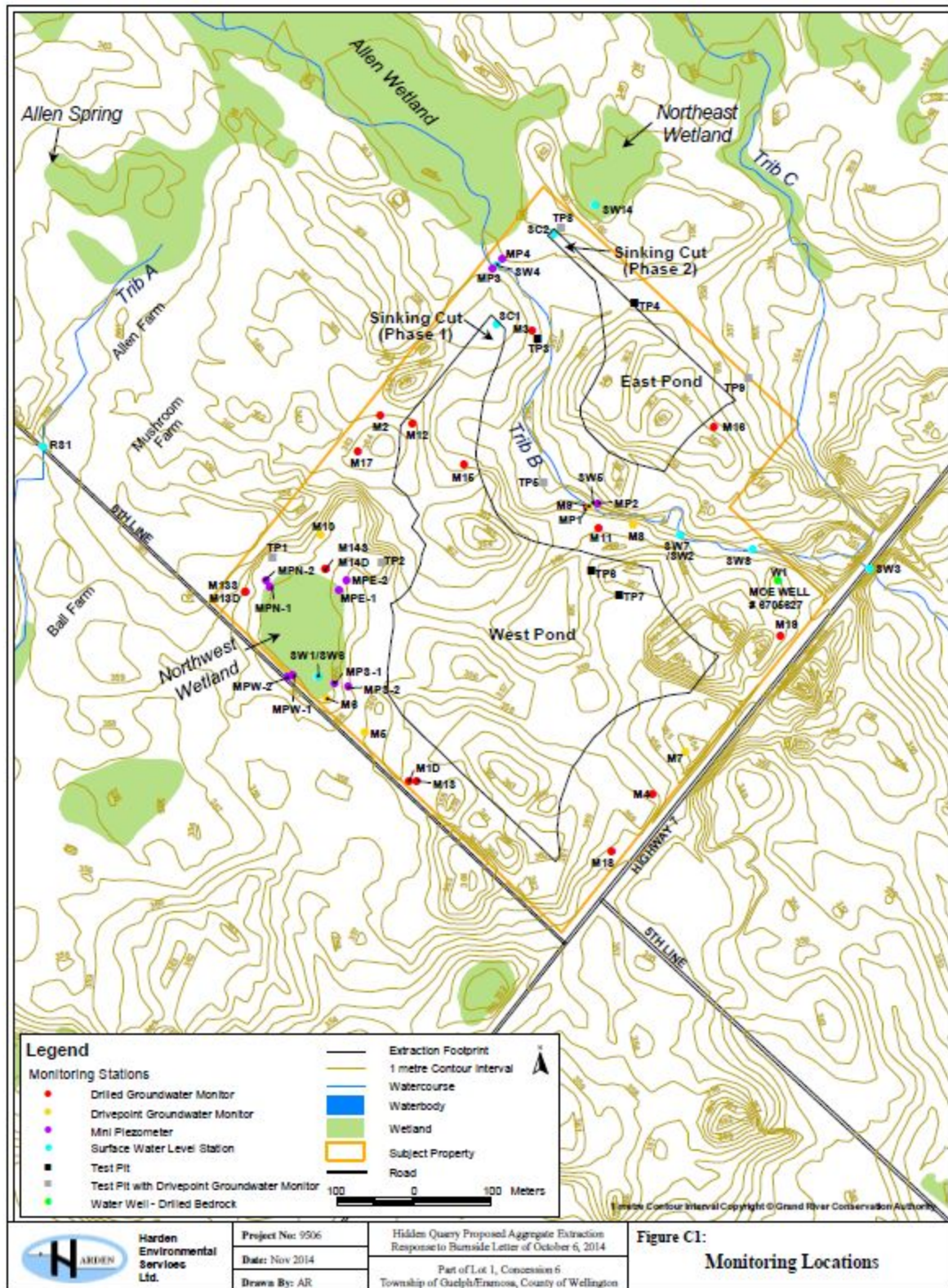
Spring 2008 Orthomagey © Grand River Conservation Authority

**HARDEN**  
Harden Environmental Services Ltd.

Project No: 9506  
Date: Dec 2014  
Drawn By: SD

Hydrogeologic Impact Assessment  
Proposed Aggregate Extraction  
Part of Lot 1, Concession 6  
Township of Guelph/Eramosa, County of Wellington

Figure C8:  
Proposed Pre Quarry Well Survey Locations



**Harden**  
Environmental  
Services  
Ltd.

Project No: 9506  
Date: Nov 2014  
Drawn By: AR

Hidden Quarry Proposed Aggregate Extraction  
Response to Burnside Letter of October 6, 2014  
Part of Lot 1, Concession 6  
Township of Guelph/Eramosa, County of Wellington

**Figure C1:**  
**Monitoring Locations**



*Jeffrey J. Wilker*  
416-868-3118  
*jwilker@thomsonrogers.com*

**SENT BY EMAIL ONLY**

October 6, 2015

Ms. Eileen Costello  
Aird & Berlis LLP  
181 Bay Street  
Suite 1800  
Toronto, ON  
M5J 2T9

Dear Ms. Costello,

**Zoning By-law Amendment Application Township File ZBA09/12  
James Dick Construction -- Hidden Quarry Proposal  
Our File No. 500143**

We are the solicitors for the Town of Halton Hills (“Town”) and Halton Region (“Region”) in this matter. We are writing regarding the zoning by-law amendment applied for by James Dick Construction Inc. (“JDCl”) in connection with its proposed Hidden Quarry.

The Town and Region have serious concerns with the recommendations of the September 1, 2015 planning report prepared by Elizabeth Howson for Township Council. That report recommends that the proposed rezoning be “recommended to the Ontario Municipal Board **for approval in principle**, subject to detailed conditions of development being developed to the satisfaction of the Township in consultation with the Region of Halton, Town of Halton Hills and Town of Milton and County of Wellington ....” [Our Emphasis].

In our view, approval of the proposed quarry, as well as any recommendation for approval in principle are premature.

There remain fundamental issues regarding the haul route study that the Township’s own peer review consultant, Burnside has “concluded that matters remain outstanding which need to be addressed before the study is approved.” [at 14]. Further the Howson report

states: “We confirm that the safety issue identified already exists for large trucks turning at this location (Main Street/Mill Street in downtown Acton).” [at 30]. Until this issue has been addressed, the principle of the proposed use cannot be justified. Further examination is therefore required.

With respect to other technical matters, the Town and Region are concerned by the inappropriately narrow scope of the natural heritage and related ground and surface water investigations that have been undertaken to date. Again, further examination of these issues is required.

The outstanding matters are significant, and therefore, any recommendation for approval, even in principle, remains premature. Therefore, for the foregoing reasons, we respectfully request that this recommendation for approval in principle not be adopted by Township Council.

The Town and Region remain prepared to meet to discuss these outstanding matters. Further the Town and Region support the recommendation of the Township Planning Report for a request being made to the Ontario Municipal Board for mediation of this matter.

We ask that you please provide this letter to Township Council prior to its determination of the position the Township will take at the upcoming OMB hearing in this matter.

Yours very truly,



Jeffrey J. Wilker

*Jeffrey Wilker Law Professional Corporation*

JJW/jjw

cc: Clients  
cc: Greg Sweetnam, James Dick Construction Ltd.