

#	Contact	Date	Question	Response	Action Item	Who
1	Region Halton	28-Jul-14	<p>Surface Water Features:</p> <ul style="list-style-type: none"> 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. 	<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 & Associates to GET and July 29, 2014 GRCA Signoff letter.</p>	JDCL
2	Region Halton	28-Jul-14	<ul style="list-style-type: none"> 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. 	<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>Groundwater Levels:</p> <ul style="list-style-type: none"> 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. 	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.	Attach June 10, 2014 Letter and Figures. Attach modified Figure 6.1 Well Survey Locations Figure.	JDCL
4	Region Halton	28-Jul-14	<p>Domestic Wells:</p> <ul style="list-style-type: none"> 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. 	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.	Attach June 10, 2014 Letter and Figures. Also attach Figure 4 Dec 2013 "Down Gradient Wells".	JDCL
5	Region Halton	28-Jul-14	<ul style="list-style-type: none"> 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). 	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.	Amend Figures to include two additional multi level monitors as indicated.	Harden
6	Region Halton	28-Jul-14	<p>Well Complaint Protocol:</p> <ul style="list-style-type: none"> 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. 	James Dick Construction Limited confirms that the "well complaint protocol" would encompass Halton residents.	None required.	

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"> • 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). 	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"> • 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. 	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"> • 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. 	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:</p> <p>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:</p> <p>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.</p> <p>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:</p> <p>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"> 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. 	<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"> 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? 	<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.	
----	---------------	-----------	---	--	-------	--

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	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.	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	
----	---------------	-----------	---	---	------	--

28	Halton Region	16-Sep-14	<p>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 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>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.</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>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.</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>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.</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	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.	Agree.	None.	
33	Halton Region	16-Sep-14	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 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	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).	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
----	---------------	-----------	--	---	---	------

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