



JAMES DICK CONSTRUCTION LIMITED



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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 Where materials have been updated or correspondence has been superseded by updated letters, we have provided these as attachments to this letter.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

A handwritten signature in black ink, appearing to read 'Greg Sweetnam'.

Greg Sweetnam, V.P., Resources

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

| # | Contact | Date | Question | Response | Action Item | Who |
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| 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 |

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| 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. | |

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| 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 |

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| 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> | |

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| 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 |

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| 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. | |

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| 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:

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| 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)



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.

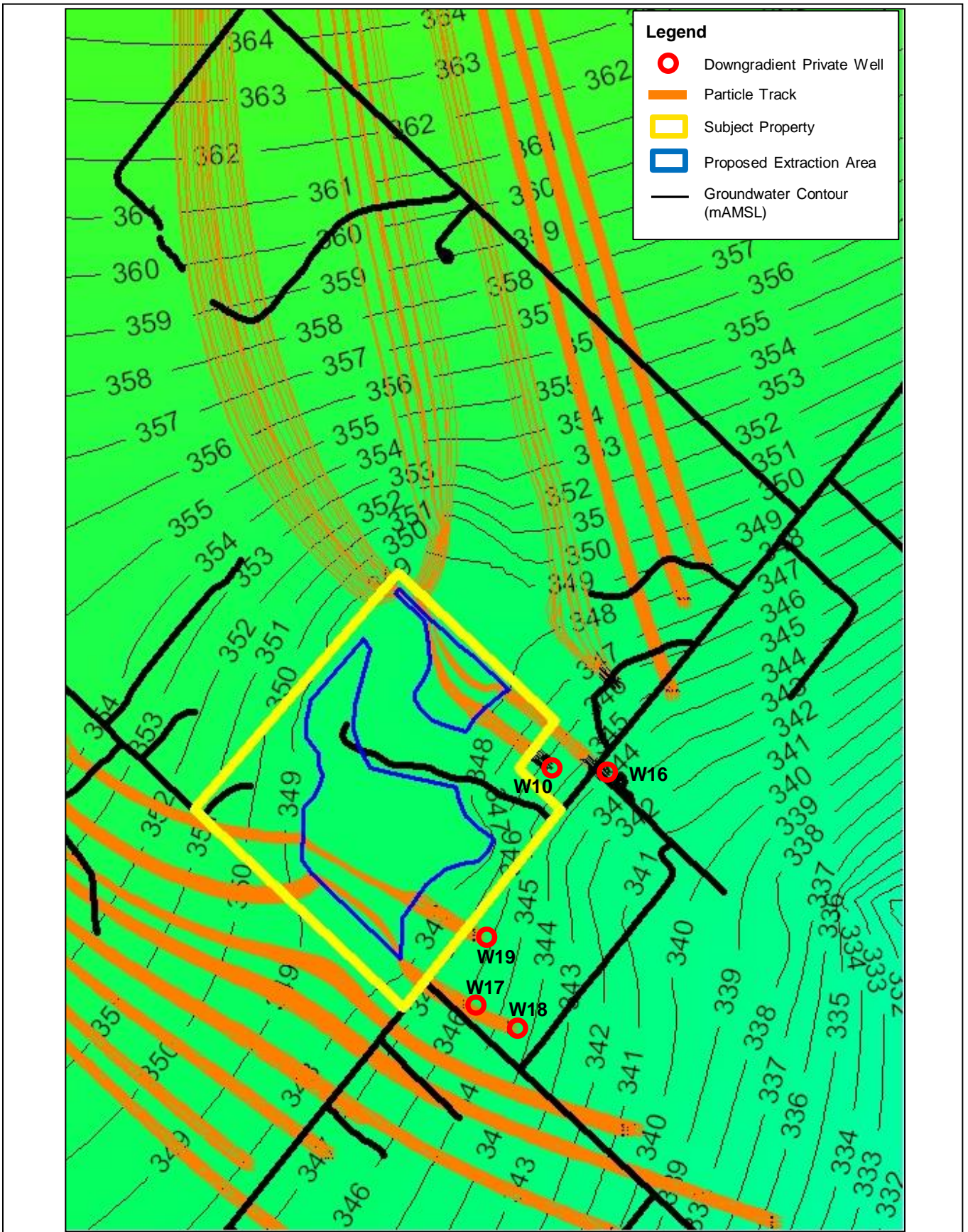
Please contact Jason Wagler at 519-621-2763 ext. 2320 if you have any questions or require clarification of the above.

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



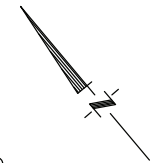
Harden Environmental Services Ltd.

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

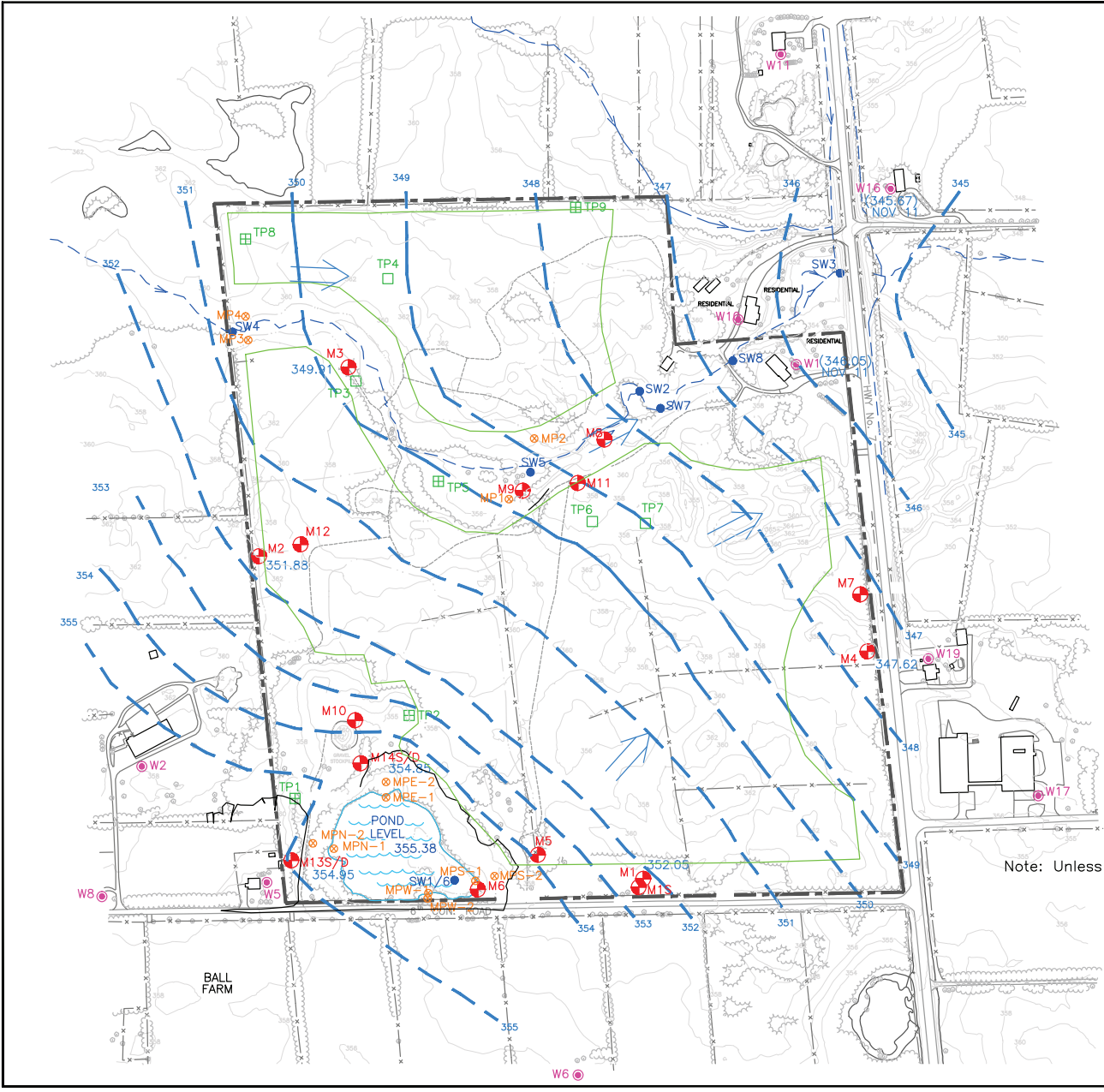
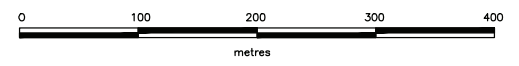
Figure 4:
Downgradient Private Wells

DRAFT



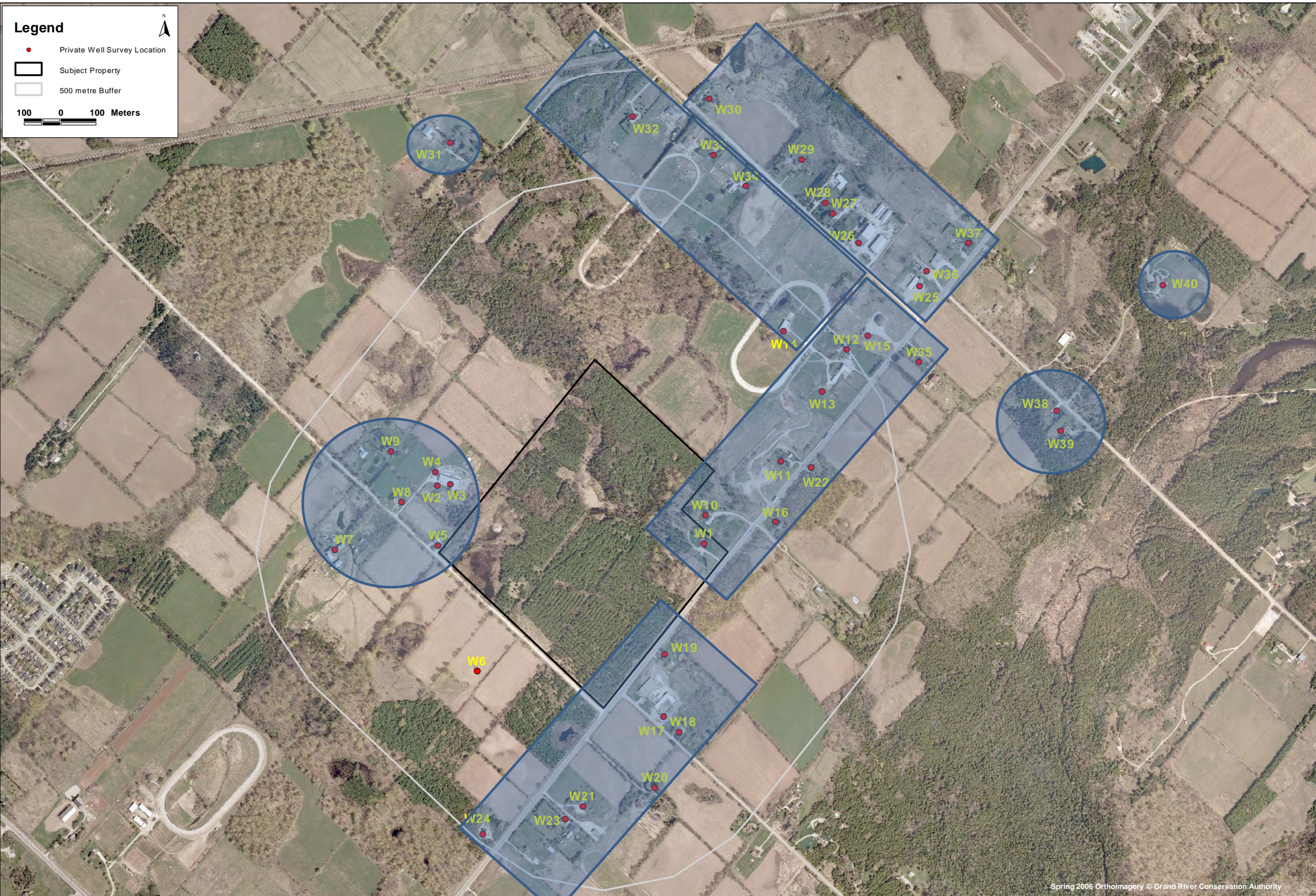
LEGEND

-  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 | | |




Legend

- Private Well Survey Location
- ▭ Subject Property
- ▭ 500 metre Buffer

100 0 100 Meters

Spring 2006 Orthoimagery © Grand River Conservation Authority

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

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