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March 14, 2025

PRESS RELEASE

NDACT eases the way forward towards approval of the deepest Below the Water Table Quarry in the Ontario Niagara Escarpment geological area

At 5:33 pm on March 10, 2025, I (Garry Hunter) received the following email communication from North Dufferin Agricultural and Community Taskforce (NDACT):

> ***As a Community Group, NDACT could not be more grateful for your efforts as our Community Trusted Consultant. For over 3 years now, you have diligently worked on the file, educated NDACT and Strada on the pitfalls of such an application and you have done it selflessly and with great candor.***
>
> ***At this time, NDACT's goal for clarity on the Application has been achieved and we no longer require your services.***

NDACT subsequently confirmed that my joint Peer Review services to Strada Aggregates were also simultaneously terminated. I acknowledge that up to my March 10, 2025 termination, I was actively making submissions to Strada's appointed adjudicator to constructively address outstanding Quarry Site Plan Application Issues.

My understanding is that I was terminated due to my strenuous objection to Strada's filing of the Quarry Site Plan Application on January 31, 2025, and my direct request to Strada that the Application be withdrawn and let the scientific process play out in accordance with the Community Engagement Agreement, which I had supported throughout my retainer.

The NDACT / Strada Community Engagement Agreement of December 20, 2022 contained, among others, the following provisions:

> ***At the conclusion of the Community Peer-Review of the Studies, one of two events will occur:***
>
> ***1. If the Studies or peer reviews conclude that the Proposed Quarry would cause unreasonable adverse environmental effects, Strada will not proceed with a formal application.***

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2. ***If the Studies or peer reviews conclude that the Proposed Quarry <u>would not cause</u> unreasonable adverse environmental effects, Strada shall proceed with a formal ARA Application. NDACT will not object to the Application.***

Strada filed their Application for a License to extract below the water-table with the Ministry of Natural Resources on Friday January 31, 2025. This is the first step in the Aggregate Resources Act - Application Process. In this step the Ministry reviews the materials filed and confirms whether the Application is "Complete". (*https://www.ndact.ca/strada-faqs*)

In my view, Strada's arbitrary filing of the formal ARA Application on or about January 31, 2025, prior to resolution of the two fundamental either/or events was 'heavy handed', a 'breach of the public trust' and cast a biased 'dark shadow' over the subsequent objective determination of the 'either/or events' of the Community Engagement Agreement.

In response to the Strada Quarry Site Plan application filing with the Ministry, the Application is not complete. There are No Adjacent Agriculture Lands, No Headwater Tributary Fish Population, No Aquatic Life Water Quality, No Drinking Water Quality, and No Quarry Ammonium Nitrate / Fuel Oil Emulsifier (AN/FO) impact studies included.

The NDACT chair, at a February 20, 2025 Township of Melancthon Council Meeting (quoted from the Hamilton Spectator, March 7, 2025) :

"But there's a big piece missing in the scientific investigation, Mr. Cosack said at the Feb 20 Council Meeting (at Melancthon), and that's the "hydro-g" water studies.

The NDACT rep confirmed that there is no agreement by his group on those studies. He said that Strada notified NDACT that it was going to submit the application.

He said he did not know the reason for the company's action. ***But he confirmed that NDACT will oppose the pit expansion under the water table if its peer-reviewer for the water studies is not satisfied.***

He said the board of NDACT felt that the condition of the endorsement of water studies was enough protection that it was not worth trying to argue over the application being submitted."

My understanding is that NDACT failed to *'argue over the application being submitted'* due to primary concerns about losses of community financial compensation and offset benefits and not about water resource impacts.

In effect, NDACT's deferral to Strada's breach of the Community Engagement Agreement combined with shooting of the messenger (NDACT's Community Trusted Consultant) undermines the credibility of this agreement. There can be little confidence that NDACT will not capitulate to Strada again with respect to protection of the Pine River Headwater and Horning's Mills Community Water Resources from the adverse environmental effects of the proposed Quarry Site Plans as filed by Strada on January 31, 2025.

At the Horning's Mills NDACT Community Meeting on the evening of March 5, 2025, with the permission of the NDACT Chair, I distributed relevant Peer Review Hydrogeology handouts including Visuals (17 pages), the Proposed Quarry - Major Issues List, and the Quarry Mandatory Operational Principles. Copies are available on request.

The Strada filing of the ARA Site Plan on or about January 31, 2025 does have the benefit of now placing the Quarry Application fully in the public domain. This is further emphasized by the Strada February 1, 2025 News Release which stated:

> *Strada has engaged in ongoing discussions with NDACT and the local community,* ***reinforcing its commitment to openness, science-based decision-making, and meaningful community engagement.***
>
> ***As per its agreement, Strada remains committed to holding off on submitting the application for formal review until any outstanding issues with NDACT's peer reviewer have been resolved.***

This past NDACT Peer Reviewer, through now four iterations of rejected submissions, is also not satisfied with the Strada consultant January 31, 2025 supporting component studies largely prepared by aggregate industry 'strangers from away' but technically qualified to meet aggregate industry standards. **However, local experience and values are missing from most of the component studies.**

As this Strada ARA Application is now in the public domain and as I have been released by NDACT (and Strada) as the Trusted Community Peer Reviewer, I continue to standby and be available to support the Horning's Mills community at large.

Garry T. Hunter, M.A.Sc., P.Eng.
Environmental Systems Planner, Hydrogeologist and Civil Engineer
Email: ghunter@hunter-gis.com

Mr. Hunter is from the Mulmur Melancthon farming community and went to public school in Honeywood and high school in Honeywood and Shelburne.

Mr. Hunter received his Master of Applied Science degree (Civil Engineering) from the University of Toronto (and Purdue University, Indiana) in 1969 and is a registered member of the Association of Professional Engineers of Ontario.

Mr. Hunter has been specifically recognized by the Ontario Municipal Board and/or the Ontario Superior Court of Justice as an expert in law and qualified to give opinion evidence as a Civil Engineer and in the fields of airphoto interpretation, geology, hydrogeology, hydrogeochemistry, the collection and mining of geographic data for hydrogeological purposes, stormwater management and solar shadowing.

During Ontario Superior Court of Justice proceedings (Feb 8 and 9, 2001), the Ministry of Municipal Affairs and Housing stated: "Mr. Hunter brings a unique ability to explain interdisciplinary co-relations and a unique experience with the area (Oak Ridges Moraine) under consideration" - Ontario (Ministry of Municipal Affairs and Housing) v. Ontario (Municipal Board).

Mr. Hunter has worked on many of the Niagara Escarpment geological area Quarries and most of the Quarries in the Ottawa Region.

Mr. Hunter was the NDACT Trusted Community Consultant from about 2006 to 2012 in relation to the failed Melancthon Mega Quarry Application.

He has recently appeared (Feb 2025) at a 16 day Ontario Land Tribunal Hearing in Caledon.

Enclosures: *Major Issues List*
Mandatory Operational Principles

Garry Hunter
January 10, 2025

Strada Proposed Quarry Major Issues List

1. Is the current Oct 2024 Groundwater Model Fit for Predictive Purposes?

The current model, despite the four cycles of Peer Review comments, have not incorporated any change in Model Layer Aquifer Parameters since the 2022 Shelburne Report or any change in Calibration statistics since my first cycle Peer Review.

The current model underestimates dry weather groundwater and stream flows by two to three times where direct comparison of Model STR virtual and actual dry weather stream flows are available.

No confirming on site pump tests have been provided.

My Dec 10 request to Strada sought to systematically compare the Strada Model dry weather STRs to observed dry weather flows at Mega Quarry (Genivar), NVCA and Strada stream gauging sites.

The current model underestimate of groundwater flows likely means that the Oct 2024 Site Plan Infiltration Capacity is undersized and the Impact Assessments compromised.

2. Is Quarry Diversion of Pine River groundwater headwater tributary stream flows to the Boyne River tributaries acceptable?

Strada's current Oct 2024 Groundwater Model (at face value) and Oct 2024 Site Plan infiltration Design reduces groundwater and stream flows at Hornings Mills Main Street by as much as 50 % for some extraction phases. This reduction has adverse implications for dilution of village effluents and for maintenance of Brook Trout Habitat. Corresponding measurable decreasing flow reductions may be anticipated as far downstream as the Pine River Provincial Fishing Area.

Corresponding flow increases and water table rises may be anticipated in the Boyne River headwater and tributaries and wetlands with adverse implications for residential lots, lots of record and contiguous agricultural fields and tile drainage outlets.

Strada may not have even modelled the critical groundwater and stream flow reduction scenario. My Dec 10 request for supplemental Model Runs included a contingency for Lift 2 Quarry floor rupture (analogy Woods Quarry west of Kingston) and for the period immediately following Quarry Closure when the Site Plans contemplate Strada's ill-advised complete, withdrawal from Infiltration compensation for Horning's Mills community and Pine River headwater streams.

Optimal Site Plan relocation of Infiltration infrastructure would significantly reduce the hydrogeological impacts and improve the acceptability of this Quarry Site Plan proposal.

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3. **Do the October 2024 Site Plans incorporate appropriate Water Quantity Management and Operational Performance Criteria?**

   The October 2024 Site Plans are based on 'Run of the Quarry' water management. Quarry sump contact water pumped to infiltration infrastructure facilities as required to keep the operating quarry floor dry and intercepted 4th line upper aquifer water as available passively by gravity flow to injection wells. No consideration in Site Plan notes to the 24/7/365 need for infiltration compensation as required to maintain existing groundwater flows to the Hornings Mills community and Pine River headwater streams for the life of the Quarry and beyond.

   No operational quantity performance criteria and infraction penalties are proposed by the Oct 2024 Site Plan notes.

4. **Do the October 2024 Site Plans incorporate appropriate Drinking Water Aquifer and Protection of Aquatic Life Water Quality Infiltration / Injection Operational Performance Criteria?**

   Strada's October 2024 Level 1 and 2 Hydrogeological Assessment is devoid of water quality data and analysis despite the collection of considerable data during Pit Compliance Monitoring and in September 2024.

   The October 2024 Site Plans do not include any Drinking Water Quality performance criteria for proposed infiltration / injection of Quarry contact and non contact agriculturally contaminated water into the community Drinking Water Aquifers via the 4th Line Interceptor Drain. No water treatment has been proposed.

   Strada might also consider the alternative use of SCADA controlled extraction (Pressure Relief in Geotechnical vernacular) Wells to bypass the high quality Gasport Aquifer flows through the proposed Quarry. This would reduce the need for Vertical Hydraulic Barriers.

   My Dec 10 request for additional deep aquifer water quality information was intended to further evaluate Strada's single Sept 2024 water quality sample analyses on the 4th Line deep aquifer monitors as well as complete deep aquifer natural water quality analyses in the southeast corner of Melancthon Pit No 2 area.

5. **Do the October 2024 Site Plan Notes Adequately incorporate the Geotechnical Consultant Contingencies?**

   The Site Plan notes do not incorporate the full range of Geotechnical Consultant contingencies with respect to the proposed vertical Hydraulic Barrier wedges and the potential for Lift 2 Quarry Floor rupture (analogy Woods Quarry west of Kingston).

The variable conditions described by the Geotechnical Consultant are unlikely to have been captured by Strada's groundwater model which contemplates uniform underground conditions not affected by blasting events.

6. **Does the Quarry Groundwater Monitoring Network meet the requirements for Efficient Long Term water level (potentials) monitoring requirements?**

   The Site Plan groundwater monitoring network has not been rationalized to long term efficient Quarry needs. Many monitors are located in areas not protected from future quarry activities including a number of deep recently constructed expensive multi-level monitors. There are a number of redundant legacy pit monitors which may be eliminated.

   Legacy pit monitor nomenclature is confusing and does not reflect the now accepted geological formation / model layer nomenclature.

   There are significant monitor screen network gaps within the Model Aquifer Layers, especially in the underground stream area.

   Monitor screen vertical and horizontal location needs to be rationalized by Model Layer to provide full site coverage while at the same time reducing Strada's monitoring and agency review efforts.

February 7, 2025
QUARRY ADAPTIVE OPERATIONAL PRINCIPLES
(Preliminary - Evolving)

The following Mandatory and Adaptive Discretional Quarry operation principles are proposed.

Mandatory Principles

The Mandatory Operational Principles are:

1. Implementation of an Adaptive Management Plan.
2. Performance Criteria to protect Horning's Mills Community and Pine River headwaters from water quantity and quality degradation.
3. No diversion of surface or groundwater flows from the Pine River headwaters to the Boyne River headwaters.
4. No raising of water tables on Duivenwoorden Pit lands or in NAT-01 Wetland.
5. No root zone flooding of agricultural fields.
6. Removal of Deep (Gasport) Aquifer Hydraulic Barriers prior to closure.
7. Termination of quarry and / or groundwater extraction if Performance Criteria are breached by Quarry operations.

Operational Discretionary – Design Principles

The following discretionary solutions may be implemented based on operational experience for conditions 'as found' or reasonably anticipated and as determined by Strada to be necessary to meet Performance criteria. Typical Design Details to be shown on the Site Plans.

8. Provision for separation (or merging) of Upper Aquifer (Guelph), Deep Aquifer Non- Contact Water and Quarry Sump Contact Water based on operating conditions as found or as anticipated.
9. Ground Water Extraction and Infiltration Infrastructure and transmission components to be implemented when there are excess quantity and/or adverse quality inflows into the Quarry excavation or as anticipated.
10. Implementation of Pressure Relief Wells as required to facilitate Lift 2 / Lift 3 extraction and construct Lift 3 Hydraulic Barriers if deemed necessary.
11. Implementation of vertical Hydraulic Barrier Walls for Lift 1 or Lift 3 (High or Low Pressure) if deemed necessary.
12. Provision of stormwater quality treatment (denitrification) riparian wetland storage pond for Quarry contact water and contaminated Upper Aquifer non-contact water as may be required.
13. Provision of surface pond and/or aquifer storage to support continuous 24/7/365 groundwater infiltration to Pine River headwaters.
14. Implementation of pathogenic treatment of surface water discharge to Infiltration media as required.
15. Implementation of SCADA and hydraulic controls for water management and maintenance of downgradient dry weather flows to the Pine River headwaters and Horning's Mills community.