My concerns and recommendations stem from the fact that the vast majority of issues and shortcomings of the ARA have a common base. That base is that the aggregate industry is an ECONOMIC activity, pursued by private corporations for the purpose of PROFIT. Let me clearly state here that I have no quarrel with profit motives, nor with the need for aggregates. However I do wish to raise issues around how profitability is achieved. At present, there are many factors that contribute to the profitability of the industry but that are achieved at considerable expense to the environment, to the host municipalities, to their taxpayers, and to the health and economic well-being of community property owners and residents.

In the past couple of decades, and at an increasing pace, we have become more aware and sensitive to the social impacts of our individual, governmental, and corporate behaviours. It is no longer acceptable to carry on in reckless and irresponsible ways, oblivious to the negative impacts we are causing. Your committee has a very special opportunity and responsibility to craft legislative changes that will both recognize new paradigms and create an environment more in tune with our raised awareness and sense of duty to future generations.

So let’s look at some specific areas that need attention.

FULL COST ACCOUNTING (FCA)

As the heading suggests, the ARA needs to give due regard to ALL costs associated with aggregate applications, operations, rehabilitation, and site plan amendments. Both internal and external costs need to be accounted for and incorporated into calculations used to determine the viability and benefit of any aggregate operation being considered. Only when ALL costs are accounted for can a proper decision be made as to whether an operation is, on balance, a net benefit to society. Inevitably there will be instances where an alternative source, or material usage (such as recycled or substitute material) will prove more economically advantageous.

At present there are numerous factors that are not accounted for. The impact on our natural environment is an example. In recent years a number of organizations have been focusing on the concept of ‘Natural Capital’. These organizations are developing methods whereby the economic values obtained from nature can be part of calculations made for business planning. I urge you to consider these developments as a glimpse into the very
near future. These are leading edge concepts that WILL be incorporated more and more in the near future and can be a guide as you develop your recommendations. For information on these developments see:

The Gund Institute for Ecological Economics (http://www.uvm.edu/giee/) and see video at: http://video.vpt.org/video/1409029473/

The Economics of Ecosystems and Biodiversity (TEEB) (http://www.teebweb.org/Portals/25/TEEB%20Synthesis/TEEB_SynthReport_09_2010_online.pdf)

Green Initiatives for a Smart Tomorrow (GIST) (http://gistadvisory.com/aboutus.html)


The Natural Capital Declaration (http://www.naturalcapitaldeclaration.org/the-declaration/)

Another example is the serious cost imposed on a host municipality’s infrastructure.

,,, the costs of infrastructure damage resulting from the heavy truck traffic in the Town of Caledon are largely borne by municipal taxpayers.

For instance, in Caledon where I live there is a concentration of pits that supply aggregates to areas outside of Peel County. However the costs of infrastructure damage resulting from the heavy truck traffic in the Town of Caledon are largely borne by municipal taxpayers. There are better ways of dealing with this sort of issue. There has been mention of the possibility of a significant increase in tonnage fees to cover such costs. That is a compelling area needing remedy, but that is not all that can be done. In 1989, Sweden’s kilometer tax for heavy commercial vehicles was changed from a weight-distance tax to a weight-axle-distance tax in recognition of the fact that distributing a given load over more axles significantly reduces road damage. Other European countries have also introduced heavy-vehicle user registration fees/charges that rise steeply with axle weights. This can foster a shift to truck types that distribute the weight more evenly among more axles, thus prolonging the life span of the highway stock. Such policies may also promote a partial shift to rail or water transport under some circumstances.

A third area of increasing concern is the financial impact on individual property values.

...a desirable rural sanctuary, supposedly ‘protected’ by the Niagara Escarpment Plan, a ‘World Biosphere’ or ‘Greenbelt’ designation, becomes a difficult-to-sell liability.

When your ‘new neighbour’ happens to be an industrial open-pit mining operation that poses a risk to your water supply, your air quality, your peaceful enjoyment of life, the safety of your children, and your overall health, it is obvious that your property value will seriously decline. What is often a primary investment can suffer a loss to the tune of
hundreds of thousands of dollars, if not many millions. Suddenly a desirable rural sanctuary, supposedly ‘protected’ by the Niagara Escarpment Plan, a ‘World Biosphere’ or ‘Greenbelt’ designation, becomes a difficult-to-sell liability. This is magnified to an even greater extent by the desire of operators to pursue and maintain the profitability of ‘close-to-market’ (CTM) locations as the ‘market’ moves ever closer to convenient aggregate sources. This CTM mantra must no longer be permitted to trump all other considerations. Once ALL costs are calculated, and appropriate compensation made for negative impacts, the decisions on where to operate will be much easier to make. The financial numbers will help determine the best direction.

An open-pit mine or quarry that depends for its profitability on economic losses imposed on unwilling third parties is an UNECONOMIC mine.

An economic mine is one that can pay for all harm caused and still provide an attractive return for its investors. Uneconomic mines cause a **net loss to society** and therefore should not be permitted. Only by implementing FCA can economic mine operations be identified and licensed.

**HEALTH and SAFETY**

Of equal concern are the **health and safety costs** associated with aggregate operations.

> „„ the cost to implement effective monitoring must become part of an applicant’s or operator’s business plan, and government agencies’ expenses must be properly reimbursed by the industry.

Many have already talked about the inadequacy of current self-monitoring protocols that are loosely based on some sort of risk assessment. This is basically a reactive as opposed to a proactive methodology. Others, such as Ken Cressey, have documented the devastating non-monetary costs that can occur from fugitive emissions. The costs of avoiding such outcomes must be part of FCA. These costs will be the result of requiring rigorous and regular monitoring of airborne contaminants and water quality/quantity in areas surrounding pits and quarries. The extent of such monitoring will need to be determined by mapping the zones of influence and can possibly be informed by the work already being done by regional Conservation Authorities and Source Water Protection agencies. Weather patterns and seasonal effects will influence proper air monitoring. Standards need to be established and adhered to. The Ministries of Environment, Labour, and Health, as well as highly informed NGOs, some of which you have already heard from, should be cooperatively engaged. Please note the Health and Safety requirements regarding particulates such as crystalline silica that pertain to on-site workers but give no regard to neighbours only a few meters outside a site’s boundaries.

Again, the principles of FCA must be incorporated in the ARA such that the cost to implement effective monitoring becomes part of an applicant’s or operator’s business plan and government agencies’ expenses are properly reimbursed by the industry. This is very likely to increase the price to end users of aggregates, providing a real opportunity and incentive for the development of alternative materials, recycling, and conservation.
COMPETING LAND USE

Previous submissions have repeatedly mentioned the Melancthon Quarry proposals and the negative economic impacts that will occur.

…it is hard to conceive of a development of the magnitude of Melancthon being approved if ALL costs, and potential costs, of water and prime farmland are properly calculated.

Again it is essential that ALL costs be calculated before a decision is made that could irrevocably impose perpetual costs/losses on the citizens of Ontario. Considering the sensitive location, it is hard to conceive of a development of the magnitude of Melancthon being approved if ALL costs, and potential costs, of water and prime farmland are properly calculated. Applying the same calculations to all applications and amendments will surely help to determine the economic viability of each. Pertinent ‘tipping points’ will reveal themselves by subsequent cost-benefit analyses.

The same sort of analysis should apply across the board – economic impact on residential land uses, small businesses, institutions, recreational activities and tourism, to name a few, must all be calculated and incorporated.

TRANSPORTATION

The degree to which infrastructure costs/losses are currently not recovered, property value losses are not compensated, air and water monitoring costs are not assumed, health impacts are not prevented, safety lapses cause loss of lives, and conflicts with communities cause unnecessary expense, all represent a hidden public subsidy to the aggregate industry and their trucking operations, and an economic disadvantage to rail and/or water transport. If environmental costs are included, that subsidy is probably significantly larger. We need to level the playing field and include ALL pertinent costs in calculating the best locations and modes of transport for aggregates.

CONCLUSION

To fail to require aggregate APPLICANTS/LICENSEES/OPERATORS to engage in FULL COST ACCOUNTING and then fail to compensate all those who have incurred the aforementioned COSTS is a grossly unfair subsidy to wealthy operators, provided in the form of losses to innocent external parties.

Therefore, to qualify for a license, a mine applicant must demonstrate that all damage will be compensated for and that bond, sinking fund arrangements, or Financial Assurance Agreements have been established to ensure that damage will be paid for by the operator, and will be environmentally and socially restored regardless of the financial prudence of the mine operator.

Specifically the ARA or related regulations should require as part of an initial application or site plan amendment, and before issuing a license:
(i) A study of the drop in real estate values of all neighbouring properties and properties along land haul routes has been completed and purchase and/or settlement offers such as Property Value Guarantees have been made to all affected property owners.

(ii) Arrangements have been made with the local municipality to compensate for the drop in the property tax base, the cost of the road improvements and maintenance, the costs of reviewing the mine application and subsequent administrative costs.

(iii) A contingency fund has been established to provide piped water to all properties in the event that provisions to ensure that ground water quality and levels do not deteriorate prove to be inadequate.

(iv) A rehabilitation plan has been fully developed and a Financial Assurance Agreement established, similar to those used in the mining industry, to ensure that all restoration is done in a pre-determined time frame, regardless of the financial stability or personal consideration of the mine operator.

Thank you for your careful consideration. I sincerely invite and would welcome the opportunity to expand on these thoughts and recommendations.

Robert Shapton
Caledon, Ontario
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