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**Official Report  
of Debates  
(Hansard)**

Thursday 27 March 2014

**Journal  
des débats  
(Hansard)**

Jeudi 27 mars 2014

**Standing Committee on  
Finance and Economic Affairs**

Aggregate Recycling  
Promotion Act, 2013

**Comité permanent des finances  
et des affaires économiques**

Loi de 2013 sur la promotion  
du recyclage des agrégats

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## LEGISLATIVE ASSEMBLY OF ONTARIO

STANDING COMMITTEE ON  
FINANCE AND ECONOMIC AFFAIRS

Thursday 27 March 2014

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

COMITÉ PERMANENT DES FINANCES  
ET DES AFFAIRES ÉCONOMIQUES

Jeudi 27 mars 2014

*The committee met at 0901 in committee room 1.*

## SUBCOMMITTEE REPORTS

**The Vice-Chair (Ms. Soo Wong):** We're going to commence the Standing Committee on Finance and Economic Affairs with Bill 56, An Act to prohibit certain restrictions on the use of aggregates in performing public sector construction work.

I believe that we have two subcommittee reports. Ms. Jones, you're going to do the report on Bill 56.

**Ms. Sylvia Jones:** Thank you, Chair. Your subcommittee on committee business met on Thursday, March 20, 2014, to consider the method of proceeding on Bill 56, An Act to prohibit certain restrictions on the use of aggregates in performing public sector construction work, and recommends the following:

(1) That the committee meets in Toronto on Thursday, March 27, 2014, for the purpose of holding public hearings.

(2) That the Clerk of the Committee post information regarding public hearings on Bill 56 on the Ontario parliamentary channel, the Legislative Assembly's website and on Canada NewsWire.

(3) That the deadline for requests to appear be 5:00 p.m. on Tuesday, March 25, 2014.

(4) That witnesses be scheduled on a first-come, first-served basis.

(5) That all witnesses be offered 10 minutes and that questioning, should there be any time remaining following the presentation, be done on a rotational basis by caucus.

(6) That the deadline for written submissions on Bill 56 be 5 p.m. on Thursday, March 27, 2014.

(7) That a copy of the report on the review of the Aggregate Resources Act of the Standing Committee on General Government be provided to the committee.

(8) That a summary of the testimonies be provided by the research officer to the committee by Tuesday, April 1, 2014.

(9) That amendments to Bill 56 be filed with the Clerk of the Committee by 5 p.m. on Wednesday, April 2, 2014.

(10) That the committee meet for clause-by-clause consideration of Bill 56 on Thursday, April 3, 2014.

(11) That the Clerk of the Committee, in consultation with the Chair, be authorized prior to the adoption of the

report of the subcommittee to commence making any preliminary arrangements necessary to facilitate the committee's proceedings.

**The Vice-Chair (Ms. Soo Wong):** Thank you, Ms. Jones. Is there any discussion on the subcommittee report? Seeing none, I'm going to call the question.

All those in favour? Opposed? Carried. Thank you very much, Ms. Jones.

We have a subcommittee report on Bill 20. Mr. Prue?

**Mr. Michael Prue:** Thank you so much. Your subcommittee on committee business met on Thursday, March 20, 2014, to consider the method of proceeding on Bill 20, An Act respecting the City of Toronto and the Ontario Municipal Board, and recommends the following:

(1) That the committee meets in Toronto on Thursday, April 10, 2014, for the purpose of holding public hearings.

(2) That the Clerk of the Committee post information regarding public hearings on Bill 20 for one day in the Toronto Star, on the Ontario parliamentary channel, the Legislative Assembly's website and on Canada NewsWire.

(3) That the deadline for requests to appear be 5:00 p.m. on Monday, April 7, 2014.

(4) That the Clerk provide a list of all interested presenters to the subcommittee following the deadline for requests.

(5) That the Clerk be authorized to schedule the witnesses if everyone can be accommodated following the deadline and if all requests cannot be accommodated, each caucus is to provide their selections of witnesses based on the list of interested presenters received from the Clerk by 5:00 p.m. on Tuesday, April 8, 2014.

(6) That all witnesses be offered 15 minutes and that questioning, should there be any time remaining following the presentation, be done on a rotational basis by caucus.

(7) That the deadline for written submissions on Bill 20 be 5:00 p.m. on Thursday, April 10, 2014.

(8) That a summary of the testimonies be provided by the research officer to the committee by Tuesday, April 15, 2014.

(9) That amendments to Bill 20 be filed with the Clerk of the committee by 5 p.m. on Wednesday, April 16, 2014.

(10) That the committee meet for clause-by-clause consideration of Bill 20 on Thursday, April 17, 2014.

(11) That the Clerk of the committee, in consultation with the Chair, be authorized prior to the adoption of the report of the subcommittee to commence making any preliminary arrangements necessary to facilitate the committee's proceedings.

**The Vice-Chair (Ms. Soo Wong):** Okay. Do we have any discussion on the subcommittee report? Mr. Prue?

**Mr. Michael Prue:** Yes, I would like to move a very small amendment to item number 2 on the standing committee report. I would move that section 2 of the subcommittee report on Bill 20 be amended by adding "and l'Express" immediately after "the Toronto Star."

**The Vice-Chair (Ms. Soo Wong):** Okay. Is there any discussion on the amendment? Seeing none, can I call the question?

All those in favour? Opposed? Carried.

Can I have a vote on the amended motion to the subcommittee report?

All those in favour? Opposed? Carried.

Thank you very much, Mr. Prue.

We are a little ahead of schedule, so maybe we can get on the business of the committee's witnesses.

#### AGGREGATE RECYCLING PROMOTION ACT, 2014

#### LOI DE 2014 SUR LA PROMOTION DU RECYCLAGE DES AGRÉGATS

Consideration of the following bill:

Bill 56, An Act to prohibit certain restrictions on the use of aggregates in performing public sector construction work / Projet de loi 56, Loi interdisant certaines restrictions frappant l'utilisation d'agrégats lors de la réalisation de travaux de construction pour le secteur public.

#### AGGREGATE RECYCLING ONTARIO

**The Vice-Chair (Ms. Soo Wong):** Our first witness this morning is Aggregate Recycling Ontario, Mr. Brian Messerschmidt, executive director. I just want to review the timeline, sir. As you heard from our subcommittee report, you have 10 minutes for your presentation. With any time left on the 10 minutes, the first round of questions will come from the opposition party. I'm just waiting for the Clerk to hand out your presentation before we start.

Okay, you can commence. Welcome.

**Mr. Brian Messerschmidt:** Thank you. Good morning, my name is Brian Messerschmidt. I am the executive director of Aggregate Recycling Ontario, or ARO, an organization comprised of eight industry associations and 19 individual companies. Most of our member companies are producers of primary aggregates from pits and quarries and all member companies also recover and recycle used aggregate, generally in the form of reclaimed concrete and reclaimed asphalt, and build Ontario's roads,

highways, transit, sewers and water mains and other public infrastructure.

Representing a broad cross-section of the aggregates and infrastructure construction industry, ARO was created for the express purpose of breaking down the barriers to the use of recycled aggregates in projects where they are entirely appropriate. One thing I think we can all agree upon: recycling is the right thing to do. For every tonne of recycled aggregate used, one less tonne of primary aggregate is required from pits and quarries. The recent review of the Aggregate Resources Act by the Standing Committee on General Government brought this home. Nine of 38 recommendations were with respect to recycling, including a recommendation to support Bill 56.

Many organizations, including municipalities, have developed sustainability strategies, adopting a need to conduct themselves in a green manner, but not many go beyond water and energy conservation efforts and the seeking of LEED building certification. Sustainability includes sustainable management of material resources—what a growing number of experts are calling the circular economy.

#### 0910

Today's stockpiles of used aggregates are reminiscent of the early days of newspaper recycling and the introduction of the blue box. Once accepted as suitable, paper recycling quickly became standard practice. It took proactive government procurement policies to turn the corner.

Many of you have seen the huge mountains stockpiled in yards across the GTA and elsewhere. There are millions of tonnes available for use in construction that meet the required specifications, but are excluded from many public projects. These stockpiles are often located closer to market than primary sources and, when used, lessen truck traffic, reduce greenhouse gas emissions and conserve the resources available in pits and quarries.

These advantages are recognized by some. The Ontario Ministry of Transportation and some municipalities routinely allow and use recycled aggregates with a tremendous history of success. Recycled aggregates support sections of the provincial 400 series highways, the Don Valley Parkway and numerous arterial roads in the GTA and elsewhere.

Bill 56 goes a long way in pushing this agenda, and we commend Sylvia Jones and the many MPPs from all three parties who have supported this bill along the way.

Something I would like committee members to keep in mind as you listen to presentations today is that aggregates are generally used in three main products: as a granular product to form a base for construction; as the major constituent in concrete—normally more than 85% is aggregate; and as the major constituent in asphalt—normally more than 90% of that is aggregate.

Recycled aggregate can replace primary aggregate in all three products and is well established in Ontario in granular and asphalt products. I would also like you to think in terms of the recycled aggregate supply chain; that is, from the generation of materials suitable for

recycling to the processing of recycled aggregates to the consumption of recycled aggregates.

In this context I would like to discuss Bill 56 within a suite of at least five policy tools that are available to promote greater use of recycled aggregate in Ontario. Some tools are more suited to government to implement and some are more suited to producers and consumers of recycled aggregate to take the lead. A range of policy tools is necessary, and Bill 56 is complementary to the other tools.

The first is land use planning policy. The government is to be commended on the recent release of the PPS 2014. The provincial policy statement has recognized the importance of planning for recycling facilities within pits and quarries. Municipalities should also be encouraged to plan for stand-alone recycling facilities in urban and near-urban industrial zones.

The second policy tool is aggregate specifications. Ontario is fortunate to have an organization called Ontario Provincial Standards for Roads and Public Works, or OPS for short. It is jointly owned by the Ministry of Transportation and the Municipal Engineers Association. Many other organizations contribute to its success. A number of standard specifications address the engineering requirements of aggregates, including recycled aggregates. Of note is a specification referred to as OPSS 1010. This specification allows for 100% replacement of primary aggregate with a combination of up to 100% reclaimed concrete and/or up to 30% reclaimed asphalt in what are called granular A and granular B type I products. ARO has committed to collaborating with the Municipal Engineers Association and MTO to address additional opportunities for the use of recycled aggregate and in addressing any quality concerns that municipal engineers may have.

Also of note is a specification for the use of aggregate in asphalt pavements. The specification allows for the use of up to 15% RAP, or reclaimed asphalt pavement, in the surface course of a road pavement structure and as high as 50% in the lower base course pavement.

What has become evident is that many municipalities don't outright prohibit the use of RAP, but dabble with much lower percentages than the standard provincial specifications allow. It should be noted that use of these specifications is voluntary and many municipalities commonly amend specifications to suit their own needs and, unfortunately, sometimes biases.

On a positive note, there are many good examples where municipalities are prepared to consider going above and beyond the norm. For example, the city of Ottawa accepts reclaimed concrete into a product called granular B type II, which normally is restricted to crushed quarry rock. The city of Mississauga experimented in 2013 with the use of recycled aggregate in new concrete for a sidewalk project.

The third policy tool is best practices guidance. As an industry, we recognize that there have been examples where inferior recycled aggregates were used or brought to a job site. We recognize that oversight, attention to detail and quality of product are responsibilities that must

be taken seriously if we are to be effective stewards of this valuable resource. To that end our members are committed to quality controls, and ARO supports sanctions against those that fail to produce a product that meets the specifications for any job—sanctions that are already provided for in OPS standards. ARO members have produced a best practices guide, and we are currently updating it with a strengthened version—version 2—that is designed to enhance quality controls at recycling facilities.

The fourth policy tool is certification of recycling facilities. A number of municipalities have expressed support for a certification system to provide increased confidence in recycled products. ARO is currently examining those options.

The fifth and final policy tool is legislation and regulations. As in most legislation, the core principles are established in an act, with details provided in regulation. Bill 56 indeed establishes a principle of open and fair consideration of recycled aggregate. I believe this must be read within the context of detailed limitations already found within OPS standard specifications.

If there are reservations expressed today about Bill 56, it is ARO's contention that the bill should be supported and that specific concerns can and should be dealt with in regulation or in the OPS standard specifications. You may also question whether a separate bill is the place to consider recycled aggregate as opposed to the Aggregate Resources Act. ARO considers that the Aggregate Resources Act was designed to deal with the supply or production side of aggregates, whereas Bill 56 deals with the demand or consumption side. Bill 56 is the appropriate approach, and not just on an interim basis, as recommended by the Standing Committee on General Government. Thank you.

**The Vice-Chair (Ms. Soo Wong):** Thank you very much for your presentation. We have one minute for the opposition to ask the witness questions.

**Ms. Sylvia Jones:** All right. I will be brief. Do you have any specific recommendations for amendments that would need to be included in Bill 56?

**Mr. Brian Messerschmidt:** It is a short and sweet piece of legislation. If there is an area that could be enhanced, it might be on the question of enforceability: Would there be a need to develop enforcement provisions within the act, or could that be dealt with in the regulations themselves?

**Ms. Sylvia Jones:** Thank you.

**The Vice-Chair (Ms. Soo Wong):** Thank you very much. Thank you for your presentation. Ms. Jones, you could have another 30 seconds if you want.

**Ms. Sylvia Jones:** I'm good. Thanks for coming in.

**The Vice-Chair (Ms. Soo Wong):** That's great. Thank you very much for your presentation, sir.

ONTARIO STONE, SAND  
AND GRAVEL ASSOCIATION

**The Vice-Chair (Ms. Soo Wong):** Our next witness is from the Ontario Stone, Sand and Gravel Association:

Moreen Miller, the chief executive officer. Welcome. You have 10 minutes for your presentation, Ms. Miller. I look forward to hearing your presentation.

**Ms. Moreen Miller:** Good morning. Thank you for the opportunity to address the committee today with regard to Bill 56, the Aggregate Recycling Promotion Act.

My name is Moreen Miller. I am the president and CEO of the Ontario Stone, Sand and Gravel Association. Our association is a founding member of Aggregate Recycling Ontario, and I am the previous executive director of that group. You have just heard from ARO and now understand the important work that organization is doing on behalf of Ontarians to manage Ontario's non-renewable resources.

I am here today representing the OSSGA but I also bring support from member associations of Infrastructure Alliance, a group of five associations whose members build most of Ontario's infrastructure. Support for Bill 56 has been given by the Infrastructure Alliance members: the Ontario Road Builders' Association, the Ontario Hot Mix Producers Association, the Ready Mixed Concrete Association of Ontario, the Ontario Good Roads Association and the Ontario Stone, Sand and Gravel Association.

Bill 56 is supported by our industry as part of developing a robust, environmentally sound and economically viable aggregate recycling industry in Ontario. It does that by being an integral part in developing this industry.

Three key sectors play three key roles. The province plays a key role in the development of this industry both in the development of provincial regulations and legislation, but also as a role model of how to incorporate aggregate recycling as a mainstream infrastructure activity.

**0920**

The development of strong provincial legislation is imperative to engage all levels of government and industry in new recycling strategies. Until last month, Ontario's provincial policy statement did not even contain the words "aggregate recycling." The province's recent amendments to the PPS now articulate that aggregate recycling is becoming a key component to managing Ontario's non-renewable aggregate resources. Similarly, Bill 56 contains strategies for encouragement of integrating recycled aggregates where possible in infrastructure projects. This represents provincial leadership to make Ontario more sustainable.

While legislative proposals like Bill 56 will create a leadership role for the provincial government in encouraging recycling, the province itself holds the best example of practising what it is preaching. Ontario's Ministry of Transportation has led the way for decades in the use of recycled aggregates in its infrastructure projects. For over a decade, MTO has had an annual usage of approximately 2.2 million tonnes of reclaimed materials in its projects. If you drove here today, I am very sure that you drove on roads that contain recycled aggregates.

The province's role to both lead by example and provide a sound regulatory structure are very clear on this issue, and Bill 56 speaks to both.

Municipalities in Ontario also play a key role in implementing a strong and viable aggregate recycling sector. Their role is similar to the province's in that they must also regulate and use recycled aggregates to ensure that we're managing our resources wisely. However, research into this completed by ARO has revealed that most municipalities are lagging far behind the province and the private sector on the use of recycled aggregate products and developing a strong policy framework.

Asphalt pavement, which is 95% by volume made up of aggregate, is the most recycled product in North America, and yet some Ontario municipalities still refuse to use it in their paving contracts. There are millions of tonnes of concrete and asphalt salvaged from roads and sidewalks stockpiled in yards around the province just waiting to be recycled, yet there are still some municipalities that will not accept these materials for roads or engineered backfill. Recycling asphalt pavement and concrete aggregate may not be trendy or flashy, but it is one of the easiest and most effective ways to preserve our non-renewable resources, save on transportation costs, reduce greenhouse gas emissions and save taxpayers money.

Municipalities need to know that they're not breaking new ground through Bill 56. We have to acknowledge many municipalities, such as the city of Toronto, that have undertaken a leadership role and, by their example, shown that using recycled aggregate is not only the right thing to do environmentally; it's also the right thing to do technically and economically. To those municipalities that are wavering, Bill 56 is encouragement for them to explore that, turn for turn, lane for lane, traffic load to traffic load, roads built with recycled aggregates are every bit the equivalent to any other road in the province.

Municipal policies need to be developed that allow aggregate recycling to become a more accepted part of infrastructure development. Bill 56 speaks to this by not allowing tenders to be rejected due to the inclusion of recycled aggregate products.

The technical requirements for recycled aggregate, based on equivalence to virgin aggregates, are already reflected in standard specifications that you heard ARO speak of just before me. Municipalities need to develop a framework to depend on these specifications and ask materials in infrastructure projects to meet them. Municipalities also need to adopt a stringent quality and performance testing program to ensure that all of their infrastructure products meet the same high standards. This has already been done by MTO, and it has served provincial infrastructure projects well.

It would be our goal that, sometime in the very near future, municipalities will be tendering jobs and every tender they receive would have a recycled component. Rejecting bids that contain recycled products would not then be an issue. Bill 56 can help achieve this more actively.

Municipalities and public sector agencies considering using recycled products as outlined in Bill 56 also need confidence in the science of how the product will per-

form. This means that industry has to play the third key role. We need to ensure that the recycled products meet or exceed the very same specifications as primary aggregates, which means we have to continue to raise our level of technical proficiency.

Many municipal officials, thank goodness, have an aversion to risk. They are understandably concerned that if infrastructure constructed with recycled aggregates fails, they will have to answer to taxpayers. As an industry, we understand this and are ready to ensure that our products meet the required specifications.

We are ready to work with municipalities to develop high-quality materials through acceptable testing methods and a process in which they have confidence. We understand that we have to prove over and over again that recycled aggregate, properly processed in accordance with best practices, is the equivalent of virgin material. Bill 56 encourages us as an industry to continue to raise our standards and produce products that meet rigorous testing.

There's a fine line between supporting and challenging government on environmental issues. Industry acknowledges the leadership role that municipalities and public sector agencies have undertaken in promoting green initiatives while constructively challenging them to do more. This is what Bill 56 seeks to accomplish.

Chair and members of committee, industry supports Bill 56 in its intent and implementation, and we ask you to support this bill also. This will give us the opportunity to show you that industry has the science, the business model and the consensus for action and responsibility they can count on to build Ontario's aggregate recycling industry. Thank you for your time today.

**The Vice-Chair (Ms. Soo Wong):** Thank you very much, Ms. Miller. This round of questions is from the NDP. You have three minutes. Ms. Fife.

**Ms. Catherine Fife:** Thanks for the presentation, Ms. Miller. I think you've actually highlighted one of the biggest challenges: The government has to be involved and receptive to legislation that they're passing around Bill 56, and that also means accepting tenders, taking a leadership role in supporting the sort of circular economy the previous speaker spoke of.

I guess my question really comes down to enforcement, because you can have a good piece of legislation, but if it doesn't have the teeth to make sure that the government—whichever government it is—practises what it preaches, how successful can this legislation be?

Can you speak a little bit to enforcement?

**Ms. Moreen Miller:** Yes. I think that we're very, very close on every front—regional, municipal and provincial governments—to having everyone take the next step to accepting recycled aggregates as a part of our business going forward. I believe Bill 56 will allow that gentle nudge in the right direction.

One of the challenges we have is that in many parts of the province we have lots of recycled product ready to go; in other spots we have none. So the ability to hard-define, if you will, or to clearly define that they will use

it would be very difficult—and we'll continue to do that. You can imagine that for a project in Sault Ste. Marie, there might not be a ready source of recycled products because the building sector and development might not move as quickly there.

I think that enforcement, to be frank with you, will take care of itself once we build the confidence in the system and we all work together.

**Ms. Catherine Fife:** Okay. Thank you.

**The Vice-Chair (Ms. Soo Wong):** You've got one more minute. Any more questions?

**Ms. Catherine Fife:** No, we're good.

**The Vice-Chair (Ms. Soo Wong):** That's great. Thank you very much, Ms. Miller.

**Ms. Moreen Miller:** Thank you.

#### OXFORD COALITION FOR SOCIAL JUSTICE

**The Vice-Chair (Ms. Soo Wong):** Our next witness is from the Oxford Coalition for Social Justice: Mr. Bryan Smith, the chair. Mr. Smith, you have 10 minutes for your presentation. This round of questions will be coming from the government. Welcome.

**Mr. Bryan Smith:** Thank you very much.

On behalf of the Oxford Coalition for Social Justice, thanks very much for hearing me today. The promotion of recycling is a laudable goal. The reduction in the use of virgin aggregate is valuable to Ontario's financial and economic affairs because it will allow prime agricultural lands to be used for food production. The Oxford Coalition for Social Justice thanks the standing committee for allowing me to sit here.

The Oxford Coalition for Social Justice is a group that does several things. I've listed them on that first page and included an image, and I'll refer briefly to it. Yes, we are tree-huggers, but we are also a group of people who do a lot of research and a lot of education around numerous issues, including social justice issues, global issues and the issues of aggregate in this case.

I'll take you to the second page. I thought I should know what "recycled aggregate" means, and I thank Ms. Jones for pointing us to the Aggregate Resources Act, about the definition of it. It is sand, gravel, clay, earth and bedrock; I think we're sitting on some of it. It is, according to Bill 56, to be sourced from construction work, which means that it would include things like buildings, structures, roads, sewers, water/gas mains, pipelines, bridges, tunnels, canals and other works that are demolished. Demolition is one of the areas that this bill, we think, might better circumscribe, because demolition waste contains high quantities of heavy metals; I cite Dr. Ric Holt of the University of Waterloo.

In asterisks, I put three heavy metals I was aware of and that I thought you would know quite well, and then I did some research on thallium and vanadium. Thallium, which is used in the manufacture of glass, which is an aggregate, affects the nervous system, lungs, heart and liver and, quoting MedicineNet, "It has caused death."

Vanadium is known to interfere with our white blood cell count, which is necessary in terms of resistance to diseases. At 1.8 milligrams it is toxic, which I think means it causes death.

Recycled aggregate could potentially be hazardous in and of itself. Therefore, we suggest that we need to circumscribe our definitions of “aggregate” more carefully. Recycled aggregate from demolition will, by nature, be mixed, and so it will be very difficult to know its composition and thus the hazards involved in every case.

I picked up some asphalt instances. Those are all news references there as well. The top five all relate to chemical spills related to formaldehyde gas and oil going into road surfaces which, if recycled, then means you’re putting those back into the system. The last one is a sewage truck spilling in London, Ontario, a place I have some affection for, although it’s downstream from me.

**0930**

Precaution would be a good thing in the handling and use of these materials since their entry into human and other natural bodies would have huge costs to our health system and we hope they wouldn’t need to concern it. I’m quoting a fellow rural resident who says this bill “wants to open the barn door without the fences built.”

Where should aggregate recycling happen and where not—which is page 4? As currently written, Bill 56 contains not enough consideration about where the demolition debris, construction waste and road bed materials should be reprocessed to ensure the health of the residents and the environment. I quote Cheryl Connors, who’s a Canadian respiratory health expert who “raises concerns over the threat to human health posed by inappropriate siting.” She talks about “dust, fine particulate matter,” those things that are below 10 microns in size that get in your lungs and create what coal miners call black lung disease or silicosis. Diesel emissions and airborne silica are also issues as well.

The MOE already has criteria for dust which point to its concern with it, although there is a genuine lack of enforcement by the MOE on those requirements.

Specific requirements about containment in industrial buildings would be a wonderful addition to this bill. Their venting locations need to be part of this bill as precautions. I would suggest that, in addition, the creation and refurbishing of existing buildings to meet the necessary standards for filtering and containment would be a valuable economic activity in itself. It might use some aggregate in the process of building and would be an investment in infrastructure.

Industrial sites also offer the advantage of allowing materials for reprocessing to be sorted, selected and blended to suit the requirements of specific jobs. The people who have testified here before me probably know better than I the nature of all those different kinds of aggregate that are there and in fact that there are multiple kinds of asphalt that contain multiple things beyond aggregate and bitumen.

Where it should not be used—I’m on the next page. Because storing and processing of demolition waste for recycling involves a high risk of releasing heavy metals,

fly ash, oil products, fibre content, spills, asbestos, paint and coatings and biological content, these should not be in the open air, nor should they be in proximity to ground or surface water. Noise from the process also suggests that setbacks might need to be considered.

The Environmental Protection Act, under section 6, states that “No person shall discharge into the natural environment any contaminant . . .” and you probably know the rest of the bill by heart. It says that a “contaminant” is defined as “any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities.” I’d suggest to you that the recycling of aggregate involves all of those, and if you want more on the radiation, we’ll see if we have time at the end.

I’ll jump paragraphs. The aggregate industry in Ontario owns a significant number of active and inactive pits and there are some abandoned quarries around as well. To move a permanent industrial use into interim short-term extraction sites is to violate agreements with the communities in which they’re situated. Site plans for aggregate extraction require their rehabilitation to previous use or congruent uses. If you live in farm country, you expect that next to agricultural land. You might have recreational land which would restore the water table, but you may not have industrial things happening next door which have negative impacts.

Communities count on the return of that space to maintain food production and provide green space for those who live in close proximity to each other due to population growth and urban densification. In addition to the major health risks associated with industrial use of spaces with no ability to scrub the air or protect the water, there’s a covenant here to be practised.

Groundwater issues are a major concern in the establishment of pits and quarries. In Oxford county, agriculture is \$640 million a year and we would not like to see that risked.

I’ll go to the danger of counter-productivity on the next page. Bill 56 claims to remove barriers, but it does put some barriers in place for local decisions in specifying the kind of aggregate that must be used and it makes it more difficult for municipalities to sustain those local industries that in a full costing analysis are actually sustaining the communities in a multitude of ways and maybe outweigh lowest-bidder considerations.

When demolition occurs in large urban centres, then I do agree with the previous people who suggested that maybe that should be reprocessed in those urban centres as well because the haulage of it is additional cost and additional pollution as well.

My trip here was not by road; it was by train, but I’m aware that in proximity to the QEW there’s much more demolition going on than there is on County Road 6 near where I live.

The intent of the bill is that the “government of Ontario and the broader public sector, including government-funded institutions, will conduct business in a sustainable way”—wonderful—“that is both operationally and economically viable.”

The government of Ontario and the broader public sector purchases 60% of that aggregate, which means that the levy on the aggregate would be paid multiple times that you're recycling it in. I wonder about the economics on that.

I'm going to go to the last page because I just got the glance that tells me I'm close to the end of my time.

What kind of precautions should we practice? "Recycling of aggregate materials can be a good thing," says Dr. Ric Holt, who I quoted earlier. "Recycling is an important part of conserving resources." However, he adds that "how and where you do the recycling" is vital to the economic, financial, environmental and medical health of Ontario and its residents. He says that the term "recycling" is a Trojan horse. Indeed, without precautions, the practice of unsafe reprocessing of demolition waste into aggregate could be very counterproductive.

The Oxford Coalition for Social Justice makes several outrageous requests: One, that Bill 56 be thoroughly revised to include far more protection and far less risk of injury. Further, we request that these hearings, which are wonderful and are here in a lovely room, be offered in other settings to make commentary easier and perhaps more economical for people living in far-out parts of the province.

Finally I'd like to say that recycling is a sexy idea, but like all sexy things it should be done with protection even if the participants are eager.

**The Vice-Chair (Ms. Soo Wong):** Thank you very much, Mr. Smith. We have one minute for the government side to ask a question. Mrs. Albanese?

**Mrs. Laura Albanese:** Well, in one minute—that's really not a lot of time. I want to thank you, first of all, for coming all the way on the train here to present to us today. We do appreciate you coming in person and also delineating your concerns. We will read this much more carefully. You give good ideas on how to make this operation more clean and safe, because I believe that's your intent.

I don't know if there is any last word you want to say to the committee in maybe 30 or 20 seconds. Please go ahead.

**Mr. Bryan Smith:** I would just comment that we really like the notion of recycling. We are tree-huggers. We believe that the environment should be protected. We really hope that the intent of this bill can go forward in ways that are productive and that there's no room for counterproductive activities in it. We just thought that it might be useful to this committee to hear some concerns around that.

Thank you all very much for hearing me. Thank you very much for your commentary.

**The Vice-Chair (Ms. Soo Wong):** Thank you, Mr. Smith, for coming to the committee.

PITSENSE NIAGARA ESCARPMENT  
GROUP INC.

**The Vice-Chair (Ms. Soo Wong):** Our next witness is from PitSense Niagara Escarpment Group Inc., Mr.

Robert Shapton. Good morning and welcome. You have 10 minutes for your presentation. This round of questions is to the opposition party. Thank you, and welcome.

**Mr. Robert Shapton:** Good morning, Madam Chair and committee members. Thank you for the opportunity to make a submission today about Bill 56.

The group I represent was formed four years ago out of a growing concern for the adverse impacts caused by open-pit mining on the Niagara Escarpment. We soon discovered that our concerns are widely shared by many similar groups across Ontario.

I want to begin by stating that we clearly understand and welcome the intent of Bill 56 to encourage and enable increased utilization of recycled materials. Those intentions, however, when implemented, will have consequences that have not been adequately considered in Bill 56. Increased use of recycled materials will require increased processing of source materials, primarily demolition debris, construction waste and asphalt.

The question that concerns us most and is unaddressed in Bill 56 is where and by what means the reprocessing of this debris should occur. Under current legislation and regulation, an operation that undertakes to extract recyclable aggregate material from waste and debris—by crushing, grinding, sorting, washing etc.—would be designated as a class 3 industrial operation. It would be subject to MOE guidelines regarding suitability of location and separation distance from sensitive land uses.

However, while mining of virgin aggregate is a class 3 industrial activity, it is exempt from MOE guidelines because the extraction must occur where the aggregate deposits are found. That is not the case with the reprocessing of demolition debris, which may and, we suggest, must occur in carefully selected locations that will minimize the risks that come with processing material containing toxic components. This reprocessing should be done in proper recycling facilities where adequate and consistent safeguards and MOE oversight can occur.

**0940**

Our specific concerns are:

One, proximity of pits and quarries to aquifers and sensitive land uses: A large percentage of Ontario's pits and quarries are close to sensitive land uses, such as residential communities. They frequently occur below the water table or very close to it. Even without adding reprocessing facilities, there are significant risks to aquifers through leaching and surface contamination, and to air quality by wind dispersion of microscopic particulates. The importation of additional debris that contains components that are toxic will substantially increase these risks.

Two, toxic components of imported debris: Even if so-called pure concrete and pure asphalt were the only materials to be imported and reprocessed, such materials cannot be considered pure. Even if we disregard the presence of chemically coated rebar in virtually all concrete, the chemical composition of concrete includes many foreign ingredients, which are listed in the end notes of the presentation you have before you.

These contaminants are not native to pit and quarry sites and thus would be foreign to the local aquifer and airshed. Please consider the photos in the paper before you; it doesn't take much imagination to realize the perils that exist. When this debris is reprocessed to extract recyclable aggregates, you get dust and fine particulates dispersed into the air and leached into aquifers below. These are consequences that go hand-in-hand with promoting the increased use of recycled materials in Bill 56.

Unfortunately, concrete is not the only material of concern. There are many others, such as fly ash, which is listed as a material that may be imported into a pit or quarry for recycling purposes, but is not listed as an aggregate material in the MNR guidelines. Fine crystalline silica present in fly ash has been linked with lung damage, in particular silicosis.

Next, I want to talk about the genesis of Bill 56. As early as December 15, 2011, the intentions of the aggregate industry became apparent. An Aggregate Recycling Ontario news release stated, "Member companies would like to expand opportunities for recycling aggregates by permitting more recycling facilities, especially in pits and quarries where companies can better utilize mined primary aggregates by mixing them with reprocessed material."

An article entitled *The Last Word*, authored by Moreen Miller, president of Ontario Stone, Sand and Gravel Association, stated:

"Aggregate recycling should be considered a mainstream activity in every licensed pit and quarry. The technical requirements for a recycled aggregate ... should be in all provincial and municipal specifications. There should also be a firm policy that municipalities must allow aggregate recycling within their jurisdiction (a number of municipalities' land use regulations explicitly ban recycling facilities, effectively blocking the use of recycled materials). In order to use recycled materials, industry needs the space to process them as well."

It can hardly be a coincidence that the above clauses bear a close resemblance to what has appeared in Bill 56. Information releases about Bill 56 occurred at almost exactly the same time as OSSGA and ARO issued their releases, on September 26 and 27, 2013.

The impression is that Bill 56 is intended to further the goals of the aggregate industry. However, there is a crucial difference between industry efforts and Bill 56. Moreen Miller clearly links "provincial and municipal specifications" with the location of facilities. Then she incredibly claims that if municipalities "ban recycling facilities," they would be "effectively blocking the use of recycled materials."

Bill 56, on the other hand, avoids mention of suitable locations for reprocessing. We believe that these two aspects—location of reprocessing sites and increased usage—are closely related, and both should be dealt with in Bill 56. However, we disagree with the claims of ARO and OSSGA regarding the need for doing the reprocessing within pits and quarries. Increased usage does not depend upon locating facilities within pits and quarries;

rather, reprocessing should occur in dedicated and appropriately sited facilities.

Next, state-of-the-art processing of demolition debris: Industry positions revealed in the foregoing section are not supported by any technical, economic, environmental or sociological studies that we are aware of that would suggest pits and quarries as suitable locations for the reprocessing of demolition debris. Groups like ours have put forward examples of current best practices for this sort of activity, two of which are outlined in the position paper attached to our submission. We also draw attention to serious environmental and human health risks.

In summary, we assert that the declared intent of Bill 56 is commendable on the surface. However, the less obvious intent to enable the conversion of pits and quarries into industrial construction and demolition waste processing sites must be thoroughly investigated and, ultimately, opposed.

We firmly believe the consequences of proceeding with Bill 56, as it stands, without due consideration and rectification of the concerns presented here, would be dangerous folly. Thank you very much.

**The Vice-Chair (Ms. Soo Wong):** Thank you very much for your presentation. We have three minutes for Ms. Jones to ask you some questions.

**Ms. Sylvia Jones:** Thanks for your deputation, Bob. A couple of points of clarification: First of all, I introduced Bill 56 on Earth Day, so your suggestion—

**Mr. Robert Shapton:** I'm having trouble hearing you; I'm sorry.

**Ms. Sylvia Jones:** Your suggestion that, in some way, the Ontario Stone, Sand and Gravel Association, or ARO, were behind it is, quite frankly, something I find pretty offensive. I actually do a lot of reading—I do a lot of research—in my role as the MPP for Dufferin-Caledon, and I can assure you that Bill 56 and the idea behind it were mine and mine alone.

You make reference on page—when it talks about the genesis of Bill 56, where you say, "a number of municipalities' land use regulations explicitly ban recycling facilities, effectively blocking the use of recycled materials."

**Mr. Robert Shapton:** I don't say that. That is a quote from—

**Ms. Sylvia Jones:** In your presentation, you make reference to the fact—which is accurate. Where recycling occurs is actually a land-use issue that the municipalities make decisions on and incorporate into their planning decisions. So the suggestion that Bill 56 in some way is going to open up and allow recycling processing in 444 municipalities across Ontario is not accurate, and I want to have you understand that Bill 56 is not talking about the planning and the zoning process, which every recycling processor and aggregate producer has to go through.

**Mr. Robert Shapton:** I do understand that.

**Ms. Sylvia Jones:** Okay, so why are you suggesting that Bill 56 is going to allow it in every municipality?

**Mr. Robert Shapton:** I'm suggesting that Bill 56 should address that issue, not that it does.

**Ms. Sylvia Jones:** But Bill 56 is about the bidding and the tendering process. It's not about the processing—the land use.

**Mr. Robert Shapton:** I understand that.

**Ms. Sylvia Jones:** So are you suggesting that it has to be a wider—

**Mr. Robert Shapton:** And that seems to be an omission from the bill. It's a lack.

**Ms. Sylvia Jones:** But when we encouraged recycling of other products in Ontario—I'll pick on paper, because it's a relatively easy one. When the province of Ontario started using more recycled paper in their procurement process, there was no legislation that talked about who would do the reprocessing of the paper, who would do the manufacturing of it. I think they are two very separate processes. One is about encouraging municipalities and educating them on the use of it; the other is the manufacturing and processing.

**Mr. Robert Shapton:** I agree, but the—

**The Vice-Chair (Ms. Soo Wong):** It's 9:48. Sorry. Just finish the question. Do you want to answer this question for Ms. Jones?

**Mr. Robert Shapton:** Yes. I agree, but in your example of the processing of paper, the MOE guidelines would pertain. In the case of recycling in pits and quarries, it does not pertain.

**Ms. Sylvia Jones:** But it does.

**Mr. Robert Shapton:** No. It specifically excludes it—

**Ms. Sylvia Jones:** It does, because section 6 of the act says, "No person shall discharge into the natural environment any contaminant, and no person responsible for a source of contaminant"—

**The Vice-Chair (Ms. Soo Wong):** Okay. Ms. Jones—

**Ms. Sylvia Jones:** I mean, it's pretty specific.

**The Vice-Chair (Ms. Soo Wong):** I don't want to cross-talk. We just did hear your presentation. It's 9:48. We've got to get on to the next witness, okay? Thank you, Ms. Jones. Thank you, sir.

#### ONTARIO GOOD ROADS ASSOCIATION

**The Vice-Chair (Ms. Soo Wong):** Our next witness is from the Ontario Good Roads Association, Dr. James Smith, who is the manager, member/technical services. Dr. Smith, welcome.

I think there's a handout.

**Dr. James Smith:** Yes, there should be a handout.

**The Vice-Chair (Ms. Soo Wong):** Thank you very much. You can start. You have 10 minutes. This round of questioning will be coming from the NDP.

**Dr. James Smith:** Thank you for the opportunity to be here today and speak to you about Bill 56.

I want to first begin by telling you a little bit about Ontario Good Roads Association. We are one of the oldest and largest municipal associations in Canada, founded in 1894. Our mandate is to represent the infrastructure interests of municipalities through advocacy,

consultation, training and the delivery of member-identified services.

OGRA has had an active role in supporting and advancing the use of recycled aggregates. We were one of the founding association members of Aggregate Recycling Ontario. Our board unanimously endorsed Bill 56 both on political and technical merits. We also endorsed the findings from the Standing Committee on General Government's Report on the Review of the Aggregate Resources Act.

#### 0950

I also want to highlight that we have incorporated recycling material and content into a large number of our training courses that we do each year and also have developed some workshops and had a session, most recently, at our ROMA/OGRA conference devoted to recycling aggregates. So across Ontario, we've had about 1,000 people hear that message this year.

But what I'm really here to talk to you about today is some of the technical considerations. What I'd like to do is quickly go through a presentation that I gave at the ROMA/OGRA conference, which also served as my PhD dissertation at the University of Waterloo, looking at Recycled Concrete Aggregate: A Viable Aggregate Source for Concrete Pavements. I'm not going to go through this entire presentation; time will not permit that. I just want to kind of hit some of the key points.

If we look to, originally, slide 3, we see the research scope and objectives of what we were trying to do. They simply boil down to three key things: the development of recycled concrete aggregate, or RCA, concrete mixtures suitable for municipal environments; then to build test sections containing that material; and also to monitor their performance.

I'm now going to jump quickly to slide 5, where we talk a little bit about background and literature material. Through that process, what I found during that study was that there's a lot of contradictory research and findings out there related to the use of recycled aggregates. This has really produced a negative incentive for municipalities using the products. This can be closely tied to the incorporation of waste demolition as an aggregate source, which I do not believe Bill 56 is looking to incorporate. It's taking that high-quality aggregate that we use in our municipal infrastructure, then repurposing or reusing that.

I'm going to quickly jump to slide 7. In our project, we had waste concrete from sidewalks, curbs and gutters that had been taken up in the region of Waterloo. We had crushed them up and used them as a coarse aggregate source within our study. What you see on that slide there is—all of our aggregates were tested to the OPSS 1002, the material specification for aggregates. First, we were able to produce and grade our aggregate to an acceptable standard. That would be OPSS 1002. Then we also looked at some additional tests: specifically, materials finer than 75 microns, their absorption, flat and elongated particles and also micro-deval abrasion. Based upon the way that specification's written, there are no allowances for recycled content and, as a result, the aggregate, even

though it was really high quality, would not have been accepted on that project. But we went forward and we're going to use that in our study.

I'm going to quickly highlight some of the trends that we saw—slide 8—when we actually came up with our mixes that we wanted to come up with before actual placement in the field. We saw that all of the concrete mixes that we had come up with—it was a three-by-four factorial, so there were 12 mixes of different RCA contents: 0% coarse RCA, 15%, 30% and 50%. We found that all the mixes that we came up with had higher strengths for the mixes containing the recycled concrete aggregate. Depending on whatever it was—the 15%, 30%, or 50% mixes—they all relatively had the same concrete strength, so in properties, they were almost identical, initially.

I'm going to quickly lump slides 9, 10 and 11 together. Once we had our mixes, we actually placed four sections out at the University of Waterloo's Centre for Pavement and Transportation Technology's test track in Waterloo. We had four test sections. They were built according to and based off the MTO design methodology. They were placed with a slip form paver, tined as if we were creating a highway. It's also important to point out—slide 10—that we instrumented each one of these sections with a whole bunch of sensors to evaluate their performance and how they were operating.

In terms of the actual performance of the concrete that was placed at the test track—we're now looking at slide 12—we see in terms of compressive and flexural strength that higher strengths were achieved for the 30% coarse RCA material. The virgin aggregate—that's the darkest line—was the poorest-performing in terms of the strength development of the mixes that we placed.

Slide 13 looks at the coefficient of thermal expansion—how it moves in relationship to temperature. What we see is that the 15% and 30% coarse RCA mixes behaved in exactly the same way in terms of a range of how a concrete made with virgin limestone would behave, which is the control that we used in our study. We're seeing very, very similar performance and no difference through the incorporation of the recycled content.

Similarly, on slide 14, looking at the freeze-thaw—how it's going to react to the freezing and thawing cycles during winter—there was virtually no difference between any of our mixes: our virgin control versus the ones that incorporated the RCA.

Now, quickly, slides 15 through 17: As part of the study, we also looked at the performance of those test sections. We were out every two to three months during the first two years, and then it's become twice annually since then. The most recent study was done in September 2013, and what we're seeing is that there's really virtually no difference in the performance of the distresses that we're seeing—or, actually, the condition of those test sections—once again highlighting and showcasing the performance that we can get through our recycled aggregates.

The next couple of slides, 18 through 20, look at some of the sensor results. There's a lot of information there—

I apologize; that's kind of really small—but I just want to highlight that there was a consistent relationship in the readings between our control section and all of the sections that contain the coarse aggregate. We're seeing virtually no difference.

Slide 21: There had to be a large modelling component to the research. We used a mechanistic, empirical modelling tool. With this, it further supported the importance, and also the quality that you can get when incorporating recycled material into concrete products.

I'm going to quickly jump to slide 24—it's sort of the conclusions—just to highlight the first three. We were actually able to produce a concrete with the desired properties that we wanted. The concrete containing the recycled concrete aggregate exhibits improved or similar performance to that of regular concrete. Some of our tests indicate that there may actually be an optimum amount, somewhere around 30%, that we can put into that concrete.

With that, I'll just quickly tie up the presentation. In terms of conclusions, looking at Bill 56, it's just a good science-based policy. We have terminology, or kind of a—yes, we'll call it terminology. When we look at asset infrastructure, we talk about the right treatment to the right project at the right time; the same thing applies here with our aggregates. With the right aggregate on the right project at the right time, we can see substantial increases in its use.

I'll wrap up with this: OGRA fully endorses Bill 56.

**The Vice-Chair (Ms. Soo Wong):** Thank you, Dr. Smith. The NDP: one minute.

**Ms. Catherine Fife:** Thank you, James. Thank you for highlighting the research that's happening at the University of Waterloo. There are some things that I never expected to hear myself say on a Thursday morning. "Virgin aggregate" would be one of those things.

But I do appreciate the research piece, because what I'm interested to know is—and it goes back to some of the previous—the municipal resistance to using recycled aggregate. When you presented at ROMA, can you just give us some sense as to how it was received? Because that remains an obstacle.

**Dr. James Smith:** Okay. At the conference, in the room, it was most favourable. There were municipalities that sort of spoke out about it, and it really stems back from poor experiences when we think about recycled aggregate. What pops to a lot of people's minds is demolition waste. When we look at demolition waste, a lot of that would not meet the specifications to actually qualify as a recycled aggregate, according to the OPSS. There's just a lot of conflicting information.

People use the recycled aggregate terminology for multiple sources. I think from industry's perspective—ARO, Ontario Sand, Stone and Gravel Association—we're looking at that high-quality aggregate that was originally used. When we look at it in that context, there's absolutely—

**Ms. Catherine Fife:** So if you can demystify the quality assurance piece around recycled aggregate, you would see more municipalities embracing it? Municipalities are facing very high pressures on infrastructure investment

and they are thinking—I hope that they are thinking—long term. So if your research can actually be applied—

**Dr. James Smith:** Absolutely. We've seen that. It's trying to get them to dip their toe in the water, to do that first project. We've seen the city of Mississauga, which was quite resistant to recycled aggregate at one point, undertake their first project this year. I would like to believe that some of the research that we did at Waterloo may have actually played a role in that.

**Ms. Catherine Fife:** And just to be clear—

**The Vice-Chair (Ms. Soo Wong):** All right. That was one minute. Thank you, Dr. Smith, for your presentation.

I want to thank all the witnesses here today.

I believe the research officer is going to—there will be a report coming to the committee next Tuesday with regard to all the testimonials.

Ms. Jones, you have a question.

**Ms. Sylvia Jones:** Yes. I think for the purposes of the committee members, it might be helpful if the researcher could distribute the current OPSS standards so that we get an idea of what kind of standards MTO is using and recommending that the municipalities use.

**The Vice-Chair (Ms. Soo Wong):** Any other questions? All right.

Next Wednesday by 5 o'clock, which is April 2, any amendments to Bill 56 need to be filed with the Clerk.

We'll be back here next Thursday, April 3, to do clause-by-clause consideration for Bill 56.

Any other questions? Seeing none, thank you everybody. The committee is adjourned.

*The committee adjourned at 1002.*





## CONTENTS

Thursday 27 March 2014

|   |       |
|---|-------|
| Subcommittee reports .....  | F-811 |
| Aggregate Recycling Promotion Act, 2014, Bill 56, Ms. Jones / Loi de 2014 sur la<br>promotion du recyclage des agrégats, projet de loi 56, Mme Jones..... | F-812 |
| Aggregate Recycling Ontario.....  | F-812 |
| Mr. Brian Messerschmidt   |       |
| Ontario Stone, Sand and Gravel Association .....  | F-813 |
| Ms. Moreen Miller   |       |
| Oxford Coalition for Social Justice.....  | F-815 |
| Mr. Bryan Smith   |       |
| PitSense Niagara Escarpment Group Inc. ....   | F-817 |
| Mr. Robert Shapton  |       |
| Ontario Good Roads Association.....   | F-819 |
| Dr. James Smith   |       |

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