



## The Regional Municipality of Halton

Report To:	Chair and Members of the Planning and Public Works Committee
From:	Mark G. Meneray, Commissioner, Legislative and Planning Services and Corporate Counsel
Date:	September 2, 2015
Report No. - Re:	LPS96-15 - State of Aggregate Resources within Halton Region

### RECOMMENDATION

1. THAT Report No. LPS96-15 re: "State of Aggregate Resources within Halton Region" be received for information.
2. THAT the Regional Clerk forward a copy of Report No. LPS96-15 to the City of Burlington, the Town of Oakville, the Town of Milton, the Town of Halton Hills, Conservation Halton, Credit Valley Conservation, the Grand River Conservation Authority, and the Niagara Escarpment Commission for their information.

### REPORT

#### **Executive Summary**

- The State of Aggregate Resources report provides an overview of aggregate operations in Halton Region on a bi-annual basis. This report covers the period between 2012 and 2014 and is an update to Report LPS06-12 re. "State of Aggregate Resources within Halton Region".
- Between 2012-2014, twelve of the twenty four existing *Aggregate Resources Act* (ARA) Licensed sites in Halton Region were active and two were subject to Adaptive Management Plan (AMP) Agreements with the Region.
- A total of 1,670 hectares (ha) were licensed under the ARA, and 1,352 ha were permitted for extraction under approved ARA site plans.
- Halton Region was the fourth highest aggregate producer in Ontario in 2012 and 2014, and the fifth in 2013.
- In 2012-2014, Halton Region was involved in the review of four active aggregate applications within and two applications adjacent to the Region.

## Background

The 2009 Regional Official Plan (November 2014, Interim Office Consolidation) (2009 ROP) directs staff to provide a State of Aggregate Resources in Halton report to Regional Council every two years. This report covers the period between 2012 and 2014 and is an update to Report LPS06-12 re. "State of Aggregate Resources within Halton Region".

Similar to previous years, this Report consolidates information from various sources and organizes it into eight main reporting themes in accordance with direction provided in Section 110(12) of the 2009 ROP to provide Regional Council with an update on aggregate operations in and adjacent to Halton Region.

## Discussion

The following information provides an overview of the aggregate operations in and adjacent to Halton Region in accordance with the State of Aggregate reporting themes identified in the 2009 ROP:

### a) Active, New, Suspended, Revoked and Surrendered Licences

At present, there are twenty four licensed sites in Halton Region. All licences were issued by the Ministry of Natural Resources and Forestry (MNRF) (formerly the Ministry of Natural Resources) under the *Aggregate Resources Act* (the ARA). Locations of licensed sites are shown on Map 1 contained in Attachment #1 to this Report. Location descriptions for each site are contained in Attachment #2 and the operational status of each site is provided in Attachment #3.

Twelve of the licensed sites had active aggregate extractions during the reporting period as noted in Table 1.

Table 1: Licensed Aggregate Sites in Halton Region with Active Extraction (2012-2014)

Area	Operation/Site Name (ARA Licence No.)	Current Owner/Operator	*Tonnes/ year (max)
Town of Halton Hills	<sup>1</sup> Acton Quarry (5492)	Holcim (Canada) Inc.	4,000,000
	<sup>2</sup> Brockton Farms Quarry (20660)	Brockton Farms	20,000
	<sup>2</sup> Hilltop Quarry (5720)	Brockton Farms	20,000
	<sup>3</sup> Limehouse Clay Quarry-south (5711)	Limehouse Clay Products	20,000
	<sup>3</sup> Limehouse Clay Quarry-north (5614)	Ltd. for both (5711 & 5614)	20,000
	<sup>2</sup> Rice & McHarg Quarry (5716)	Rice & McHarg Quarries	20,000
	<sup>4</sup> Bot-Duff Pit (5616)	Bot-Duff Resources Inc.	750,000
Town of Milton	<sup>1</sup> Milton Quarry – Main & North (5481)	Holcim (Canada) Inc.	Unlimited
	<sup>1</sup> Milton Quarry Extension (608621)	Holcim (Canada) Inc.	Unlimited
	<sup>1</sup> Halton Crushed Stone Quarry (5493)	Halton Crushed Stone Ltd.	2,000,000
City of Burlington	<sup>3</sup> Hanson Brick Aldershot Quarry(5500)	Hanson Brick Ltd.	Unlimited
	<sup>3</sup> Hanson Brick Tansley Quarry(613081)	Hanson Brick Ltd.	300,000**
Notes: <sup>1</sup> Dolostone Quarry, <sup>2</sup> Sandstone Quarry, <sup>3</sup> Shale Quarry, <sup>4</sup> Sand & Gravel Pit, <sup>4</sup> Bot-Duff Pit (5616) – active in 2012, inactive in 2013 and 2014.			

Information sources: ARA Licences, ARA Site Plans, and Compliance Assessment Reports (CARs)
*Max tonnes per year indicates extraction limit per year under the ARA licence. ** Maximum permitted extraction at Tansley Quarry is 150,000 tonnes/year until Tremaine Road is upgraded.
Nelson Aggregate Co. (Nelson) reported processing on-site stockpiles at the Burlington Quarry-The Majority (ARA 5499). St. Marys Cement Inc. reported processing material at the Acton Limehouse Pit (ARA5480) from their other aggregate sites.

While no active extraction occurred at nine licensed sites where resources had been depleted or operations completed, some sites continued with other permitted activities such as site rehabilitation, backfilling, grading, aggregate processing, stockpiling, and shipping (as indicated in Attachment #3).

Since 2007, no new ARA licences, aggregate permits or wayside permits have been issued in Halton Region.

The ARA Licence for Campbellville Pit (north) (ARA 5479) was suspended in March 2012 for contravention of Section 15 of the ARA and remains suspended. The suspension of the ARA Licence for 1294142 Ontario Limited Pit (ARA 5510) has remained in force since September 2010 due to non-compliance with the approved ARA Site Plan.

No ARA Licence surrenders occurred in Halton Region during the reporting period.

b) Overview of Active Extractive Operations in Halton

This section refers to active operations in Halton, including areas under extraction, the amount of aggregate produced, as well as extraction trends in the Region and its local municipalities, and other jurisdictions in Ontario. Information on active extractive operations is provided in Attachment #3.

Currently, 1,670 hectares (ha) of Halton are licensed under the ARA, of which 1,352 ha are permitted for extraction according to the ARA Site Plans. As of 2014, based on the information reported by operators in their annual Compliance Assessment Reports (CARs), about 848 ha were disturbed and progressive rehabilitation was undertaken on about 572 ha of the licensed sites. The sum of total disturbed and rehabilitated areas (1,420 ha in 2014) is higher than the total area permitted for extraction (1,352 ha), and this is in part due to inconsistent rehabilitation area reporting by operators.

Four ARA sites in Halton are over 100 ha in size, with a total licensed area of 1014 ha and total permitted extraction area of 882 ha. These are: Acton Quarry (ARA 5492), Halton Crushed Stone Quarry (ARA 5493), Milton Main and North Quarry (ARA 5481), Burlington Quarry (The Majority); and Nelson Quarry (ARA 5499). As of 2014, the approximate total extracted and rehabilitated areas at these four sites were 569 ha and 391 ha, respectively.

Annual extraction volumes for the Province and upper- and lower-tier municipalities are provided in the Mineral Aggregates of Ontario Statistical Update reports prepared by The Ontario Aggregate Resources Corporation (TOARC). Table 2 displays production tonnage statistics for the 2012 to 2014 period for Halton Region and the Local Municipalities.

Table 2: Aggregate Production in Halton Region and Local Municipalities in Metric Tonnes (2012-2014)

<b>Municipality</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Town of Milton	4,385,555	4,761,168	5,494,594
Town of Halton Hills and City of Burlington (total)	3,021,917	2,067,155	2,209,316
<b>Halton Region</b>	<b>7,407,473</b>	<b>6,828,323</b>	<b>7,703,910</b>
Note: Burlington's tonnage could not be separated as TOARC's guideline concerning minimum number of reporting producers for lower tier had not been met.			

Halton Region was the fourth highest aggregate producing municipality in Ontario in 2012 and 2014, and the fifth highest in 2013. Halton Region has consistently been among the highest producer in Ontario since annual production data became available in 1990. The top ten upper-and-single tier producing municipalities were as follows (production rounded to nearest million [M] tonnes): Simcoe County (11.4 M), Durham Region (10.3 M), City of Ottawa - Greater (10 M), Halton Region (7.7 M), Waterloo Region (6.9 M), Wellington County (6.4 M), Oxford County (6.3 M), City of Kawartha Lake (5.5 M), Hamilton City – Greater (5.2 M), and Niagara Region (4.3 M).

Among the single and lower-tier municipalities, Milton has consistently been among the highest producers in the Province since annual data for lower-tier municipalities became available in 1993. It was the second highest producing municipality in Ontario in 2014, the fourth highest in 2013, and the sixth highest in 2012.

c) History of Complaints on Extractive Operations and Transportation of Aggregate Products

In accordance with a MNR-MOE Agreement (2008), MNRF is the first responder to public complaints on extractive operations and aggregate transportation. MNRF has an administrative role under the ARA, while the Ministry of Environment and Climate Change (MOECC) (formerly the Ministry of Environment) has roles under the *Environmental Protection Act* (EPA) and the *Ontario Water Resources Act* (OWRA). The Ministry of Transportation (MTO) has delegated authority under the ARA to administer wayside permits and aggregate permits.

When public complaints are received in relation to sites where the Region is a party to an Adaptive Management Plan (AMP) Agreement, the Region notifies the operator first and then, if required, the MNRF or MOECC. The Region may undertake internal assessment and request further investigation and follow-ups from the operator until an issue is addressed.

Occasionally, the Region receives complaints on water quality and quantity from local residents living adjacent to aggregate operations. Water quality complaints are directed to Halton's Public Health Department where follow up is carried out by a Public Health Inspector. When a complaint pertains to water quantity, Public Health notifies the MOECC and, depending on the circumstances, may conduct well inspections jointly with Ministry staff. Following an inspection, the Ministry provides feedback directly to the resident regarding the water quantity issue.

The Region is aware of the following complaints against aggregate producers between 2012 and 2014:

- In March 2012, Hanson Brick's consultant informed the Region of prior communication with a property owner adjacent to Tansley Quarry (ARA 613081) who requested an extension of a new Private Communal Water System (PCWS) connection to the property's barns. The consultant noted that Hanson had previously supplied the property with a new water reservoir, connected the existing barn wells to this new reservoir (for additional water storage), and completed other upgrades. In response to the additional connection request, Hanson's consultant recommended utilization of the on-site domestic wells to increase the water supply for barn-related needs as residential dwellings receive water supply from the PCWS. They also noted that the Tremaine Neighbourhood Association Agreement (TNA) only provided for the on-site dwellings connections and that the additional request for barn connection would significantly increase demand on the PCWS. Monitoring indicated significant water taking increases from the barn wells over the prior several years and there was no influence from Hanson's Tansley Quarry dewatering. Hanson continues monitoring at this site to assess water taking and any changes resulting from both the groundwater uses at the subject property and the Tansley Quarry dewatering. The Region has not received any complaints concerning Tansley Quarry to date.
- In April 2013, following heavy rains, the Region received a "high water" complaint from a property owner near Dufferin's Milton Quarry (ARA 5481). Dufferin directed their consultant to evaluate all potential causes of the high water conditions utilising operational, precipitation and monitoring data. Shortly afterwards Dufferin's consultant, CRA, submitted the results of their evaluation, on behalf of Dufferin, to the resident and copied the Region, Conservation Halton, and the MNRF. CRA concluded that heavy precipitation and power outage in the area on the night of April 11, 2013 had contributed to water build-up and the need for extended sump-pump operation at the subject property.
- In June 2013, Dufferin's consultant, Conestoga Rovers & Associates (CRA), advised the Region that Dufferin responded to one complaint received in regards to the Acton Quarry (ARA 5492) in 2012 relating to "cloudy water". Although their investigation did not determine the exact cause of "cloudy water", Dufferin installed a water storage tank and filtration system to prevent similar issues in the future.

- In April 2014, Halton's Public Health responded to a sulphur-like water-odour concern from a Burlington resident who believed that activities at the Nelson Quarry (ARA 5499) were impacting the well-water supply at the subject property. A link between the Nelson Quarry and the resident's well water could not be established. Halton Public Health communicated potential causes and solutions to the resident. No quarry-related water quality or quantity complains were received by Public Health in 2012 or 2013.
- According to the 2014 Annual Water Monitoring Report for Acton Quarry (March 2015), one water supply complaint (excessive turbidity) was received by Dufferin in 2014 for the Acton Quarry (ARA 5492). Dufferin notified the MOECC and the resulting investigation determined that turbidity in the water system was caused by a water tank valve problem and not to the Acton Quarry operation. In June 2015, during a meeting attended by Regional staff regarding the Acton Quarry, Dufferin's representatives noted that two blast-related complaints (noise and/or vibration) were received from local residents in 2014. Dufferin noted that results of blast monitoring were within the MOECC's standards and that residents were satisfied with Dufferin's responses on the matter.

The Region is not aware of any other quarry-related public complaints that were received by other agencies or operators during the reporting period.

d) History of Violations of Site Plan or Conditions of Licence under the Aggregate Resources Act

Operations at the 1294142 Ontario Limited Pit (ARA 5510) were suspended on September 20, 2010 for non-compliance with the approved Site Plan, contrary to Section 15 of the ARA. As MNRF's proposed resolutions (from 2010 and 2011) have still not been met, this license remains suspended.

Campbellville Pit – North (ARA 5479) was suspended on March 9, 2012, due to contravention of Section 15 of the ARA, and specifically, for placing material or topsoil outside the approved area and above the approved final rehabilitation grades. This licence remains suspended.

For the remaining active ARA sites, most operators or their consultants have checked off "in compliance" or "not applicable" in their annual Compliance Assessment Reports (CAR) submissions. The "remedial action" notes in some of the 2012-2014 CARs generally refer to site maintenance, such as scrap removal, fencing repairs, marker-post installations, erosion controls, and timely submissions of CARs to MNRF. The "remedial actions" section includes due-dates for completion of the required actions. CARs are submitted by operators to MNRF with copies provided to the Region and local municipalities. MNRF oversees implementation of inspections' directives and CAR-related compliance matters by operators.

The Region is not aware of any “remedial actions” arising from the MNRF’s 2012-2014 site inspections. No violations, enforcements or rehabilitation orders have been posted on the Ministry’s website in regards to operators in Halton Region for the 2012-2014 reporting period.

e) Status of the Implementation of Approved Rehabilitation Plans

Historically, some degree of progressive rehabilitation has occurred at all licensed sites, except where extraction commenced in recent years (Dufferin Milton Extension Quarry and Hanson Tansley Quarry). Attachment #3 contains information on the 2012-2014 rehabilitation areas for all licensed sites in Halton Region. Descriptions of the status of the implementation of approved rehabilitation plans are provided in Attachment #5. As of 2014, rehabilitation was undertaken on 572.5 ha of licensed lands. The total rehabilitated area increased by about 15 ha between 2012 and 2014.

No changes to rehabilitated and disturbed areas have been reported for a number of years at the following sites: Hayward Pit (ARA 5507); Limehouse Clay Products Pit (ARA 5711), Brockton Farms Quarry (ARA 20660), Acton Limehouse Pit (ARA 5480), Willroy Brooks Pit (ARA 5546), Hilltop Quarry (ARA 5720), and Rice & McHarg Quarry (ARA 5716).

The nature of rehabilitation is governed by the approved ARA Site Plans. Attachment #5 provides post-rehabilitation end-use descriptions for licenced sites in Halton, in accordance with the individual site plan notes. For older (legacy) disturbed areas at these sites, rehabilitation is perpetuated by older standards (i.e. former *Pits & Quarries Control Act, 1971*).

*Former/Abandoned Aggregate Sites*

Part of the mandate of The Ontario Aggregate Resources Corporation’s (TORAC) Management of Abandoned Aggregate Properties (MAAP) program is rehabilitation of abandoned pits and quarries (i.e. former sites that have not had a valid licence issued under the ARA since 1990) in the ARA-designated areas of the province. This work is funded by the aggregate industry. According to TOARC, these former extraction sites are generally less than 2 ha in size, were created as a result of small-scale operations, and remain the property of individuals, corporate entities or other parties.

Based on TOARC’s MAAP program, Halton has 52 abandoned former aggregate extraction sites. As of 2014, one was classified LNI (*Landowner Not Interested*) and 34 were designated “closed” for various reasons: 4 had been developed, 2 were rehabilitated by MNR in 1994 and 1995, 2 were rehabilitated under the Management of Abandoned Aggregate Properties (MAAP) program in 1999 and 2011, 3 had no historical aggregate extraction, 18 had become naturalized, 4 had been rehabilitated by landowners, and 1 became licensed. Of the remaining sites, TOARC noted that 17 files remained open, of which 6 would require rehabilitation and 11 would require site visits to determine their status.

The location of sites in Halton is shown in Map 2 contained in Attachment #4.

f) Status of the Operation and Implementation of Approved Adaptive Management Plans

There are currently two Adaptive Management Plans in Halton Region: Dufferin's Milton Extension Quarry (ARA 608621) and Hanson Brick's Tansley Quarry (ARA 613081). While the AMPs are part of the operating licences and the associated site plan conditions, the Region has an on-going oversight role as set out in the AMP Agreements with the proponents relating to each operation.

***Dufferin Aggregates Milton Quarry AMP***

The AMP contains implementation requirements for the protection, mitigation and monitoring of water resources and groundwater-dependant ecological features adjacent to the quarry. Under the AMP Agreement, Halton Region and Conservation Halton are to perform an ongoing role of oversight of the effectiveness of the water management system implemented under the AMP.

Halton staff reviewed and provided comments on the Pre-Extraction Report submissions (2011 and 2012) and Annual Monitoring Reports, and has continued reviewing on-line (*WebDT*) information to assess performance of the water management system. Comments are provided as part of the annual review of monitoring reports or whenever deemed necessary.

No amendment to the Milton Expansion AMP was required during the 2012-2014 period.

***Tansley Quarry (Burlington) AMP; Hanson Brick Ltd.***

The Adaptive Groundwater Management Plan (AMP) for Hanson's Tansley Quarry sets out a program to monitor the potential effects of the quarry and to ensure that affected property owners have uninterrupted access to potable water. This is further guaranteed by the AMP Agreement and Private Communal Water System (PCWS) Agreement. The AMP Agreement obligates Hanson Brick to undertake actions set out in the AMP, including construction of the PCWS.

***Private Communal Water System***

Construction of the PCWS began in December 2011. The water distribution system to connect *Eligible Properties* (as per the AMP) was completed in March 2012 and the communal reservoir system was commissioned in February 2013. The PCWS has been in operation since May 2013. As of July 15, 2013, the System became "fully operational". Hanson Brick's *Non-municipal Year-round Residential Drinking Water System* provides potable water to 11 private residences and six vacant lots adjacent to Tansley Quarry. Hanson Brick is required to file annual financial and operating reports with the Commissioner of Legislative and Planning Services by April 30 of each year, following the year in which the PCWS became fully operational, beginning in 2014. The 2013

*Operations, Maintenance & Financial Annual Report*, prepared for Hanson Brick Ltd. by Ontario Clean Water Agency (OCWA, February 2014), was submitted to the Region in March 2014 and was reviewed by Halton staff. The 2014 *Operations, Maintenance & Financial Annual Report* has been reviewed by appropriate Halton Region staff and no issues that could affect the on-going PCWS operation have been identified.

#### *AMP Monitoring and Reporting*

The AMP requires Hanson to submit annual monitoring reports by April 30 of each year, for the preceding calendar year, to the MNRF, MOECC and the Region of Halton, and to report on any unusual water level and water quality data within 30 days of detection. Hanson is also required to submit pumping and discharge reports to the MOECC by March 31 of each year, in accordance with water taking and discharge permits (PTTW and C of A for Industrial Sewage Works). In accordance with the AMP, the Region also has a role in reviewing and approving Annual Monitoring Reports. The Region, along with Hanson and the MOECC, have a role in reviewing well restoration options if dewatering activities affect properties beyond the PCWS-serviced zone. In their annual monitoring reports, Hanson reported that there were no well interference complaints within or beyond the servicing zone between 2012 and 2014.

No amendments to the AMP or additional contingency actions have been required since commencement of site operations in 2007. Some modifications to the off-site private well monitoring were introduced by Hanson over the years due to changes in water supply (i.e. installation of cisterns, water delivery, connections to PCWS) at the *Eligible Properties*, and some well decommissioning carried out on the properties connected to the PCWS. In December 2014, the Region approved a revised monitoring plan for the Hanson Quarry.

#### *Site Plan Amendments*

In July 2012 MNRF advised Hanson Brick Ltd. of its approval of a site plan amendment to relocate the Private Communal Water System (PCWS) building on site and to remove 0.56 ha from the licensed area.

#### g) Assessment of the Cumulative Impact of Extraction Operations on both the Greenbelt and Regional Natural Heritage System

Active licences require some level of rehabilitation (in accordance with the approved site plans and the Greenbelt Plan, 2005) to be compatible with the surrounding land. Section 4.3.2.4 of the provincial Greenbelt Plan calls for the MNR's determination of the maximum allowable disturbed area of each mineral aggregate operation indicating that:

*“Any excess disturbed area, above the maximum, will be required to be rehabilitated. Existing operations have 10 years of the approval of the Greenbelt Plan to complete rehabilitation, with 50% requiring completion within six years. For new operations, including expansions, the total disturbed area shall not exceed an established maximum allowable disturbed area”.*

All twenty-four ARA sites in Halton Region are either within or adjacent to the Regional Natural Heritage System (RNHS), as shown on Map 1 of the 2009 ROP. Five ARA sites are either within or adjacent to the Greenbelt Plan NHS including: Acton Quarry (ARA 5492), Anderson Pit (ARA 5462) and the 1294142 Ontario Limited Pit (ARA 5510) in Halton Hills, and the Aldershot Quarry (ARA 5500) and Burlington Quarry (ARA 5605) in Burlington. Rehabilitation progress was reported at most of these sites in 2012-2014. Although no increase in rehabilitation area was reported for the Aldershot Quarry in recent years, the 2014 CAR notes indicate the site was under “final rehabilitation”. The 1294142 Ontario Limited Pit in Halton Hills was rehabilitated in 2008. As it was subsequently stripped of topsoil, the licence was suspended by MNR in 2010.

Three former ARA sites located within the Greenbelt Plan NHS had licences revoked, including the former Woodlawn Guelph Campbellville Pit (ARA 5574) in 2008, the former 555816 Ontario Inc. Campbell Pit (ARA 5477) in 2006, and the former R. Hess Pit (ARA 5495) in 1999. Five rehabilitated sites (*former ARA 5687, 5498, 5496, 5713*), are also within/surrounded by the Regional NHS.

h) Number and Status of Active and Potential Applications for Mineral Resource Extraction Areas

Four aggregate applications within and two adjacent to the Region were active during 2012-2014. Active applications within Halton Region included Dufferin’s Acton Quarry Expansion application; Nelson’s Burlington Quarry Expansion application; Limehouse Clay Products’ Extension application; and Hanson’s Burlington Pit site plan amendment application. Active applications adjacent to Halton Region included Brampton Brick’s Norval Quarry proposal in the Region of Peel (City of Brampton) and James Dick Construction Ltd.’s Hidden Quarry proposal in Wellington County (Township of Guelph/Eramosa).

***Active Applications within the Region of Halton***

• *Acton Quarry Expansion (Halton Hills), Dufferin Aggregates/Holcim (Canada) Inc.*

On July 15, 2015, Regional Council adopted staff recommendations in Report LPS61-15 re. “Expansion to the Acton Quarry - Adoption of Regional Official Plan Amendment No. 44 and Supporting Agreements” to permit expansion of the Acton Quarry subject to approval of Niagara Escarpment Plan Amendment (NEPA) No. 180 by the Niagara Escarpment Commission and execution of a series of legal implementation agreements. The Report also recommended that staff be directed to prepare the necessary By-law to adopt ROPA 44, and advise MNR that any licence issued to Dufferin/Holcim (Canada) Inc. under the ARA include conditions concerning implementation of an AMP, construction, operation and maintenance of a Water Management System, endorsement of a licence only after all necessary approvals are in place, and a requirement that the owner obtain any other necessary government approvals.

•*Burlington Quarry, Nelson Aggregate Co.*

The Nelson Aggregate Company's application for an extension to the existing Nelson Quarry in the Mount Nemo area, south of No. 2 Sideroad in Burlington, was subject to a Joint Board hearing between November 17, 2010 and February 29, 2012. The Board released its decision on October 11, 2012 in which it dismissed the application for an amendment to the Niagara Escarpment Plan (NEP) to re-designate part of the subject lands from Escarpment Rural Area to Mineral Resource Extraction Area, and to permit processing of aggregate at the existing quarry. The Board also dismissed the application for a Development Permit under the NEP, appeals regarding the Regional Official Plan Amendment (ROPA 25) and the City of Burlington Official Plan Amendment (OPA 25) for aggregate extraction purposes, and directed the MNR to refuse issuance of a Class 'A' licence under the ARA with respect to Nelson's application.

•*Limehouse Quarry (Halton Hills), Limehouse Clay Products Ltd.*

In early 2013, the Region concluded its review of additional technical submissions pertaining to both the Limehouse Quarry (ARA 5711) site plan amendment application and the Niagara Escarpment Permit application by Limehouse Clay Products Ltd.

The Limehouse Quarry is an existing above-water shale quarry within the NEC's designated Mineral Extraction Area. As noted in the Halton Region staff report LPS06-12 re. "State of Aggregate Resources in Halton Region", the proponent applied to the MNR for a site plan amendment under the ARA to deepen the smaller of their two quarries immediately east of the Henderson's Corner Minor Urban Centre in the Town of Halton Hills (Parts of Lot 23, Concession 8), by 5 metres. The application noted the potential of extraction below the water table within about 1 ha of this 3.2 ha quarry site and no increase in the annual extraction limit (currently 20,000 tonnes).

In May 2013, the Region advised MNRF that the Region's concerns relating to this application were addressed and that the Region had no further objections to the NEC's development permit. MNRF approved the site plan amendment in August 2013.

•*Burlington Pit; Hanson Brick Ltd.*

Shale extraction at Hanson Brick's Burlington Pit (ARA 5605) commenced in 1959 and concluded in 2009. The quarry, and Hanson's adjacent brick plant area, are zoned industrial (M2) in the City of Burlington By-Law 1642. Portions of the property are designated in the Parkway Belt West Plan (PBWP) and are subject to the Greenbelt Plan, 2005. There are two existing brick manufacturing plants on the property.

In June 2008, Hanson Brick Ltd. (Hanson) submitted a Site Plan Amendment application to the MNRF to change the 1992 Final Rehabilitation Plan. In January 2011, Hanson prepared a revised Progressive Rehabilitation and Final Rehabilitation Plan, which has not yet been approved by the MNRF. Hanson has since completed slope rehabilitation in accordance with this revised (unapproved) plan, which included the importation of

approximately 600,000 m<sup>3</sup> of fill (monitored in the past by the MNRF and MOECC, according to Hanson) to rehabilitate the quarry slopes. Hanson has also completed a tree planting program for a portion of the property located within the Greenbelt Plan area. Hanson plans to apply to the MNRF to surrender the quarry licence but first requires MNRF's approval of the Site Plan Amendment (including the Progressive Rehabilitation and Final Rehabilitation Plan). Regional staff submitted comments on the revised Site Plan in December 2014. The MNRF has not at this point in time rendered a decision on the Site Plan Amendment or the Licence surrender request.

- *Willroy-Brooks Pit Site Plan Amendment - St. Marys Cement Inc. (Canada)*

There were no activities associated with this amendment since the last update provided in Report LPS06-12.

### ***Active Applications outside Halton with Potential to Impact the Region of Halton***

Active applications adjacent to the Region have included Brampton Brick's proposal for a new shale quarry in Brampton (referred to as Norval Quarry) and James Dick Construction Limited's (JDCL) proposal for a new dolostone quarry in Guelph-Eramosa (referred to as Hidden Quarry).

- *Norval Quarry (Brampton), Brampton Brick Ltd. (Brampton Brick)*

Brampton Brick Ltd. (Brampton Brick) submitted a Zoning By-law amendment application to the City of Brampton in December 2008 and an ARA licence application to the MNR in August 2010 for a new shale quarry site on the east side of Winston Churchill Boulevard, immediately northeast of the Hamlet of Norval in the City of Brampton. As noted in Report LPS06-12, Halton Region, the Town of Halton Hills, CVC, the City of Brampton, and Peel Region objected to the ARA application during a formal Notification and Consultation process which concluded on December 20, 2010 (the Region's objection letter, containing Regional Council's Resolution, was issued on December 10, 2010). In January 2011, Brampton Brick appealed to the Ontario Municipal Board (OMB) for a decision on the re-zoning.

On September 8, 2014, Brampton City Council passed a motion arising from the August 11, 2014 Recommendation Report to not support the rezoning application for the development of a shale quarry and related uses, and directed City's Legal Counsel to oppose the Brampton Brick quarry application at the OMB. Halton staff continues to monitor this application, and will follow up on any new reviews to the City of Brampton and MNRF as applicable.

- *Hidden Quarry (Guelph/Eramosa), James Dick Construction Ltd.*

The site of a proposed quarry (known as Hidden Quarry) in the Township of Guelph/Eramosa (County of Wellington) is situated immediately north of Highway 7 and

along the municipal boundary with the Town of Milton. The site is owned by James Dick Construction Ltd. (JDCL). JDCL applied to the MNRF for a Class 'A' Category 2 Licence under the ARA, and applied to the Township for a Zoning By-law amendment to permit the proposed quarry.

The site is 39.4 ha in size, of which 24.8 ha are proposed for aggregate extraction. Approximately 12 million (M) tonnes of aggregate (i.e. 2M tonnes of unconsolidated material and 10M tonnes of bedrock) is planned for extraction (both above and below the water table with no dewatering and to a maximum annual limit of 700,000 tonnes). Three phases and two lifts are proposed, with extraction starting in the northwest portion of these lands.

During the ARA public notification and consultation process, letters of objection were submitted to the MNRF and JDCL by the Region of Halton on April 19, 2013, and the Town of Halton Hills on April 15, 2013. As no formal notifications on the quarry application had been provided to Halton municipalities and no formal inter-agency technical review committee has been established to coordinate the review process, the agencies requested to be informed by the Township of Guelph/Eramosa of any new submissions and developments concerning this site.

On May 29, 2013, Regional Council adopted staff recommendations in Report LPS40-13 re. "James Dick Construction Ltd. Hidden Quarry Proposal - Township of Guelph/Eramosa (File:ZBA 09/12)" to endorse Halton Region's Letter of Objection to the MNRF with respect the proposed Hidden Quarry application.

On June 10, 2015, Regional Council, through LPS62-15, directed staff to continue to work with all parties to protect Regional interests and to participate in any Ontario Municipal Board Hearing in this regard.

The application, technical reports, status reports, review comments and applicable correspondence are posted on the Township of Guelph/Eramosa website

## **Conclusion**

The Official Plan clearly demonstrates the Region's commitment to monitoring and reporting on the State of Aggregate Resources in Halton Region, in accordance with Sections 110(12), Section 112(3) and Section 206(1.1)a[iii] of the 2009 ROP. Halton Region is one of the top aggregate producers in Ontario and home to some of the province's largest aggregate sites. The Region will continue to actively monitor existing aggregate activities and any new aggregate proposals in and adjacent to the Region in furtherance of the objectives of the 2009 ROP and to report to Regional Council through the State of Aggregate Resources Report on a bi-annual basis or earlier as required, should circumstances warrant.

## FINANCIAL/PROGRAM IMPLICATIONS

The cost of monitoring aggregate operations in Halton is included in the Planning Services operating budgets. The costs related to AMP administration are recovered from the aggregate operators subject to AMP Agreements.

Respectfully submitted,



Ron Glenn  
Director, Planning Services and  
Planning Official



Mark G. Meneray  
Chief Commissioner, Legislative & Planning  
Services and Corporate Counsel

Approved by

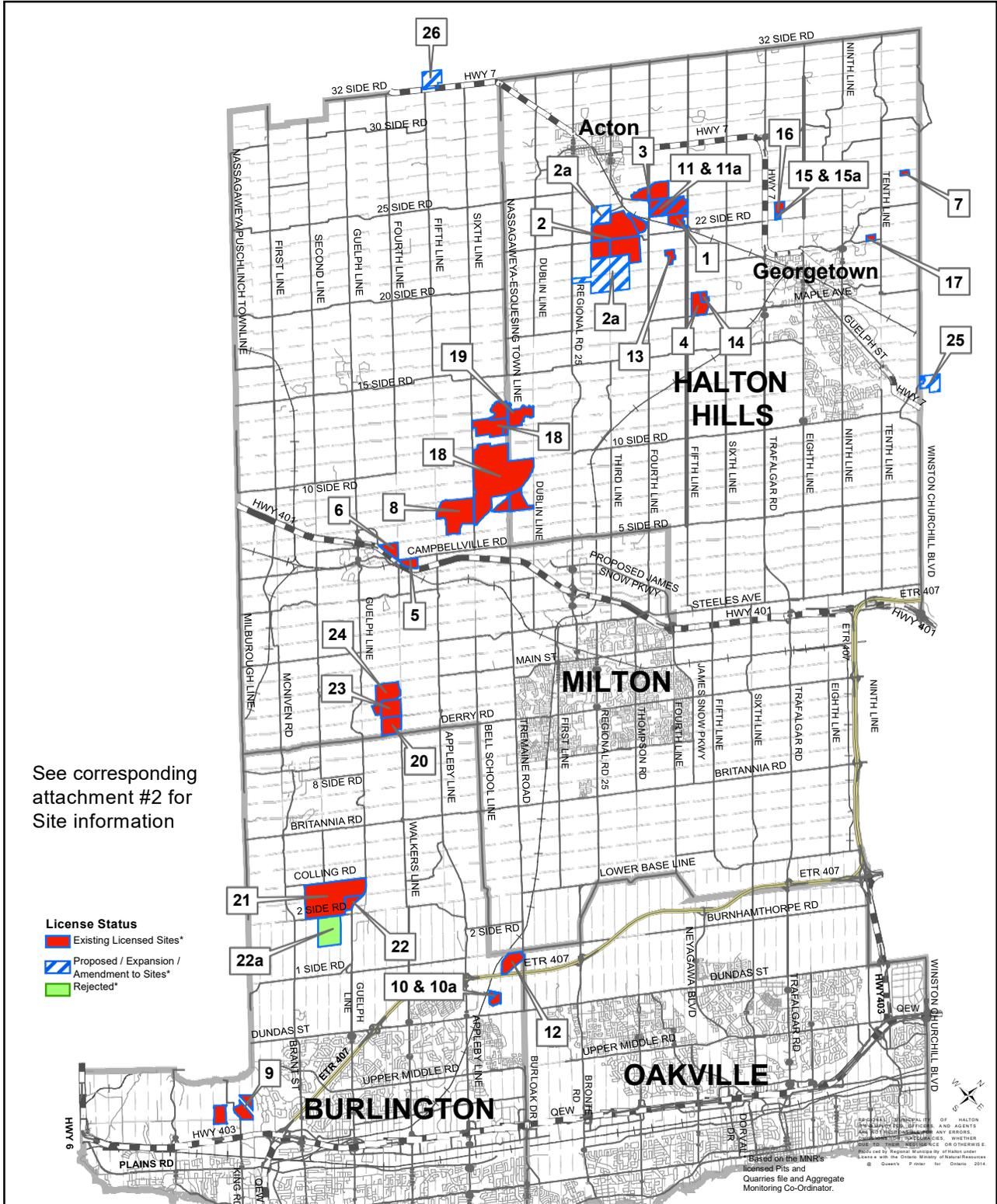


Jane MacCaskill  
Chief Administrative Officer

If you have any questions on the content of this report,  
please contact:

Ron Glenn	Tel. 7966
Gena Ali	Tel. 7865
Alina Korniluk	Tel. 7148

Attachments: Attachment #1 – Map 1 - Licensed Sites and Aggregate Applications in Halton Region – Key Map  
Attachment #2 – Licensed Sites and Aggregate Applications – Locations’ Descriptions  
Attachment #3 – Summary & Status of ARA Licences in the Region of Halton (2012-2014)  
Attachment #4 – Map 2 -Former, Closed, Abandoned Pits and Quarries in Halton Region (1982-2009)  
Attachment #5 – Status of Implementation of Approved Rehabilitation Plans: ARA Sites in Halton Region (2012-2014)



See corresponding attachment #2 for Site information



Map 1 - Licensed Sites and Aggregate Applications in Halton Region - Key Map

Sustainable Planning

July 2015

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**LICENSED SITES AND AGGREGATE APPLICATIONS - LOCATIONS' DESCRIPTIONS**

Map	ARA	Site Name	Current Owner	Location	Town
ID	Licence #			Lot/Concession	(former township)
1	5480	Acton Limehouse Pit	St. Mary's Cement Inc. (Canada)	Lot 23, Con. (Concession) 5	Halton Hills (Esquesing)
2	5492	Acton Quarry	Holcim (Canada) Inc. (Dufferin Aggregates)	Part of Lots 22 & 23; Con. 3; and Part of Lots 21- 24, Con. 4	Halton Hills (Esquesing)
3	5616	Bot-Duff Pit	St. Mary's Cement Inc. (Canada)	Parts of east half & west half of Lot 25, Con. 4 & 5	Halton Hills (Esquesing)
4	20660	Brockton Farms	Brockton Farms	Lot 18 & Part Lot 19; Con. 6	Halton Hills
5	5478	Campbellville Pit-south	4000 Campbellville Rd. Inc.	Part of Lot 5, Con. 5	Milton (Nassagaveya)
6	5479	Campbellville Pit-north	555816 Ontario Inc.	Part of Lot 6, Conc. 4	Milton (Nassagaveya)
7	5462	David Anderson Pit	David T. Anderson	Part of Lot 24, Con. 11	Halton Hills (Esquesing)
8	5493	Halton Crushed Stone Quarry	Halton Crushed Stone Ltd.	Part of Lots 7 & 8, Con. 6	Milton (Nassagaveya)
9	5500	Hanson Brick Aldershot Pit	Hanson Brick Ltd.	Part of Lots 2 & 3; Con. 1 and Part of Lots 1, 2, 3; Con. 2	Burlington (E. Flamborough)
10	5605	Hanson Brick Burlington Pit	Hanson Brick Ltd.	Lot 3, Conc. 1 North Dundas Street (NDS)	Burlington (Nelson)
11	5546	Willroy Brooks Pit	St. Mary's Cement Inc. (Canada)	Part of Lot 24, Con. 5	Halton Hills (Esquesing)
12	613081	Tansley Quarry	Hanson Brick Ltd.	Part of Lots 1 and 2, Conc. 1, North Dundas Street (NDS)	Burlington
13	5716	Rice & McHarg Quarry	Rice & McHarg Quarries Ltd.	Part of east half & Part of west half of Lot 21, Con. 5	Halton Hills (Esquesing)
14	5720	Hilltop Quarry	Brockton Farms	Part East & West half Lot 18, Part West half Lot 19, Conc. 6	Halton Hills (Esquesing)
15	5711	Limehouse Clay Products - south	Limehouse Clay Products Ltd.	Part of west half of Lot 23, Con.8	Halton Hills (Esquesing)
16	5614	Limehouse Clay Products - north	Limehouse Clay Products Ltd.	Part of Lot 23, Con. 8	Halton Hills (Esquesing)
17	5510	1294142 Ontario Pit	1294142 Ontario Ltd.	East Part of Lot 21, Con. 10	Halton Hills (Esquesing)
18	5481	Milton Quarry - Main & North	Holcim (Canada) Inc. (Dufferin Aggregates)	Part of Lots 7-13, Con. 7 (Milton) and Part of Lots 8-10, Con. 1 (Halton Hills)	Milton (Nassagaveya) and Halton Hills (Esquesing)
19	608621	Milton Quarry-Extension	Holcim (Canada) Inc. (Dufferin Aggregates)	Part of Lots 13-14; Con.(Halton Hills) & Part of Lots 12-14; Con. 7 (Milton)	Milton and Halton Hills
20	5484	Milton Pit	368574 & 579813 Ontario Inc.	Northeast half of Lot 11, Con. 4	Milton (Nelson)
21	5499	Burlington Quarry-The Majority	Nelson Aggregates Co.	Lot 2, Con 3; west half of Lot 1, Con. 3; and east half of Lots 1 & 2, Con. 2	Burlington (Nelson)
22	5657	Burlington Quarry-The Minority	Nelson Aggregates Co.	Part east half of Lot 1, Con. 3 (N.S.)	Burlington (Nelson)
23	5507	Hayward Pit	Springbank Sand & Gravel Ltd.	Northeast half of Lot 12, Con. 4	Milton (Nelson)
24	5619	Leaver Pit	Springbank Sand & Gravel Ltd.	Part of Lots 12 & 13, Con. 4	Milton (Nelson)
<b>Active (Recent) Applications in Halton Region</b>					
2a	-	Acton Quarry Expansion	Holcim (Canada) Inc. (Dufferin Aggregates)	Part of Lots 19-22 & 24, Con. 3 and Part of Lots 21 & 22 Con. 4	Halton Hills
10a	5605 (SPA)	Hanson Brick Burlington Pit	Hanson Brick Ltd.	Lot 3, Conc. 1 North Dundas Street (NDS)	Burlington
15a	5711 (SPA)	Limehouse Clay Products - south	Limehouse Clay Products Ltd.	Part of west half of Lot 23, Con.8	Halton Hills
11a	5546 (SPA)	Willroy Brooks Pit	St. Mary's Cement Inc. (Canada)	Part of Lot 24, Con. 5	Halton Hills
<b>Active Applications Boardering Halton Region</b>					
25	-	Norval Quarry Application	Brampton Brick Limited	West Half of Lot 12, Concession 6, WHS	Brampton: east side of Winston Churchill Boulevard
26	-	Hidden Quarry Application	James Dick Construction Ltd.	Part of Lot 6, Concession 1	Township of Guelph Eramosa

NOTES: SPA - Site Plan Amendment Application

### **Summary & Status of ARA Licences in the Region of Halton (2012-2014)**

ID # on a Key Map	ARA Licence No; Site Name { owner, where not part of site name}	Licensed- area and Extraction area (hectares)	Licence Class, Type (below/ above water) & Material Extracted	Extraction limit/annum (tonnes) [extraction status]	Total Disturbed Area (approx.) (hectares)	Total Rehabilita ted Area (approx.) (hectares)	Operational Status/Recent Activities (as per Compliance Assessment Reports (CARs), MNRF notices and/or other available information) (2011-2014)
1	5480 Acton Limehouse Pit {St. Marys Cement Inc. (Canada)}	L - 26.33 E - 22.6	Class A sand and gravel pit below water ▼	750,000  [no recent extraction]	15 (2014) 15 (2013) 15 (2012)	9 (2014) 9 (2013) 9 (2012)	The site is used for processing purposes with material being imported from other licensed sources. Dragline working onsite (rehabilitation pond extension). Portable plant and stockpiles present. Above water material exhausted, below water excavation remains on the easterly portion.
2	5492 Acton Quarry {Holcim (Canada) Inc.}	L-222.28 E-193.25	Class A dolostone quarry below water ▼	4,000,000  [quarry is near depletion]	144.7 (2014) 148 (2013) 148 (2012)	59.2 (2014) 58.1 (2013) 56.4 (2012)	Phase 3 lower-bench extraction continued with dewatering to Phase 1 pond & Phase 3 discharge works. Phase 2 extraction completed in early 2008 (dewatering continued to Black Creek Watershed and Escarpment Seeps (spring-fall)). Phase 1 extraction completed in 1995 (dewatering continued with discharge to Black Creek Watershed).
3) Inactive 2013/14  (Active in 2012)	5616 Bot-Duff Pit; {Bot Duff Resources Inc.}	L - 58.6 E - 49.2	Class A; sand & gravel pit above water ↑	750,000 [no extraction since 2006]	38.3 (2014) 39 (2013) 39 (2012)	23.2(2014) 22.5(2013) 22.5(2012)	MNRF approved site plan variance (2012) to remove part of common setback with licensee's Willroy Brooks Pit. In 2012, aggregate operations occurred along eastern boundary of west pit. Backfilling/grading occurred in east pit (north boundary). In 2013 and 2014, the site was reported inactive and there was no equipment operating on-site. Some rehabilitation occurred in East Pit in 2014.
4	20660 Brockton Farms Quarry {Brockton Farms}	L - 36.8 E - 25.7	Class B sandstone quarry above water ↑	20,000 [low extraction]	1 (2014) 1 (2013) 1 (2012)	0.6 (2014) 0.6 (2013) 0.6 (2012)	Small operation. Beds of stone cut and blasted. Material is hauled to the processing area in the adjacent Hilltop Quarry (#5720). Small excavating equipment on-site. Most of the worked areas of the quarry have been backfilled with waste rock and overburden. Formerly rehabilitated area vegetated and maintained.
5	5478 Campbellville Pit (SE); {4000 Campbellville Road Inc.*}	L - 15.88 E - 12.8	Class A sand & gravel pit below water ▼	unlimited [no extraction]	15.9 (2014) NA (2013) NA (2012) 15.9 (2011)	15.9 (2014) NA (2013) NA (2012) 15.9 (2011)	2012 CAR: rehabilitation to occur in accordance with Site Plan approved by MNRF on Dec.12/11, OMB decisions of 2006, and Provincial Officer Oder dated June 22, 2011. 2014 CAR: progressive rehabilitation in southwest area. Licence transfer occurred in 2014.
6	5479 Campbellville Pit (NE); {555816 Ontario	L- 22.19 E - 8.3	Class A sand & gravel pit above water ↑	unlimited [extraction completed]	NA (2014) NA (2013) NA (2012)	NA (2014) NA (2013) 16.7 (2012- final rehab)	MNRF: ARA Licence (suspended in 2012) remained suspended in 2014. 2012 CAR: application to surrender ARA license was submitted to the MNRF in May 2013. According to older CARs, site underwent rehabilitation of Phases 1, 2, 3 and 5 by 2003.

### **Summary & Status of ARA Licences in the Region of Halton (2012-2014)**

ID # on a Key Map	ARA Licence No; Site Name { owner, where not part of site name}	Licensed- area and Extraction area (hectares)	Licence Class, Type (below/ above water) & Material Extracted	Extraction limit/annum (tonnes) [extraction status]	Total Disturbed Area (approx.) (hectares)	Total Rehabilita ted Area (approx.) (hectares)	Operational Status/Recent Activities (as per Compliance Assessment Reports (CARs), MNRF notices and/or other available information) (2011-2014)
	Inc.}						
7	5462 -David T. Anderson Gravel Pit	L - 6.28 E - 2.75 (SW area)	Class A gravel pit above water ↑	unlimited [extraction ceased]	NA (2014) 6 (2013) 6 (2012)	5.5 (2014) 5.5 (2013) 0.7 (2012)	No extraction. Minimum rehabilitation took place in 2012 (some topsoil was brought in for rehabilitating northeast side of pit). 2014 CAR: no additional fill allowed until on-site material is used for south boundary slope.
8	 5493-Halton Crushed Stone (HCS) Quarry {HCS Ltd.}	L - 121.5 E - 113.0	Class A dolostone quarry below water ▼	2,000,000 [extraction completed]	100.5 (2014) 100.5(2013) 104(2012)	43 (2014) 43 (2013) 39 (2012)	2014 CAR: production completed (out of reserve); shipping the last of the inventories, and rehabilitation. 2013: Excavation faces at western portion of the quarry floor. 2012: Eastern floor extraction.
9	 5500 Aldershot Quarry; {Hanson Brick Ltd.}	L - 62.4 E - 62.1	Class A shale quarry above water ↑	unlimited [active extraction]	20.3 (2014) 30 (2013) 30 (2012)	8 (2014) 8 (2013) 8 (2012)	West and Centre quarries being mined while East Site being held in reserve. Industrial sewage permit for West Quarry in process. Progressive rehabilitation checked off 'in compliance' in the annual CARs.
10	5605 Burlington Pit; {Hanson Brick Ltd.}	L - 17.1 E - 16.0	Class A shale quarry below water ▼	195,000 [extraction ceased]	12.3 (2014) 12 (2013) 12 (2012)	12.3 (2014) 9 (2013) 9 (2012)	Mining operation at this quarry has ceased. The quarry has been rehabilitated, including 1 ha adjacent to the Bronte Creek. Hanson intends to surrender the licence and is awaiting finalization of the site amendment approval from MNRF.
11	5546 Willroy Brooks Pit {St. Marys Cement Inc. (Canada)}	L - 79.18 E - 28.3	Class A sand & gravel pit above water ↑	363,000 [no extraction since about 2005]	7.3 (2014) 7.3 (2013) 7.6 (2012)	15.3(2014) 15.3(2013) 15 (2012)	Pit was not active except for some rehabilitation by South Tower. An application was put forward in 2003 by J.C. Duff that would include the last of the extractable resources in the existing pit. The application was put on hold by the owner until 2006 and then again in 2011.
12	 613081 Tansley Quarry; {Hanson Brick Ltd.}	L - 37.8 E - 28.9	Class A shale quarry below water ▼	300,000 [Sinking Cut extraction started in Nov. 2007]	13 (2014) 13 (2013) 13 (2012)	0 (2014) 0 (2013) 0 (2012)	Extraction has occurred within the Sinking Cut Stage. As of 2013, excavation depth was 21m. The MOECC issued a PTTW to Hanson Brick in September 2012 for dewatering up to 3000L/min (4,320m <sup>3</sup> /day). The PCWS has been in operation since May 2013 (refer to the AMP-related summary).

### Summary & Status of ARA Licences in the Region of Halton (2012-20 4)

ID # on a Key Map	ARA licence No; Sit Name { owner, where not part of site name}	Licensed- area and Extraction area (hectares)	Licence Class, Type (below/ above water) & Material Extracted	Extraction limit/annum (tonnes) [extraction status]	Total Disturbed Area (approx.) (hectares)	Total Rehabilita ted Area (approx.) (hectares)	Operational Status/Recent Activities (as per Compliance Assessment Reports (CARs), MNRF notices and/or other available information) (2011-2014)
13 	5716 Rice & McHarg Quarry {R&McH}	L -12.85 E - 1.9	Class B sandstone quarry below water ▼	20,000 [resource almost depleted]	3.2 (2014) 3.2 (2013) 3.2 (2012)	6.2 (2014) 6.2 (2013) 6.2 (2012)	Extraction occurred along north-easterly limits of the quarry. Limited equipment used. Low volume of stone removed. The licensee has submitted a request to the MNRF to extract the easterly 15m setback adjacent to lands that are now under ownership by licensee. Extended summary in LPS06-12; no changes since.
14 	5720 Hilltop Quarry; {Brockton Farms}	L - 9.36 E - 1.5	Class B sandstone quarry below water ▼	20,000 [active sandstone quarry]	5.0 (2014) 5.0 (2013) 5.0 (2012)	0.7 (2014) 0.7 (2013) 0.7 (2012)	Extraction occurred in south-westerly direction. Stone processing equipment, saws, drills, etc. Stone is processed and stockpiled on pallets on site prior to being loaded onto trucks. CARs refer to progressive rehabilitation of quarry faces.
15 	5711 Limehouse Clay Products Ltd. Pit- south	L - 3.24 E - 3.2	Class B shale quarry above water ↑	20,000 [stockpiled material only]	1.7 (2014) 1.7 (2013) 1.7 (2012)	0.8 (2014) 0.8 (2013) 0.8 (2012)	MNRF approved site plan amendment application in August 2013 (refer to extended summary). No further details available (limited information in annual CARs).
16 	5614-Limehouse Clay Products Ltd. Pit - north	L - 12.8 E - 10.6	Class B shale quarry above water ↑	20,000 [active sandstone quarry]	2.7 (2014) 2.7 (2013) 2.7 (2012)	0.3 (2014) 0.3 (2013) 0.3 (2012)	Extraction close to setback in southeast area of this site. Settling pond on site. No further details available (limited information in annual CARs).
17 	5510 1294142 Ontario Limited Pit	L - 6.59 E - 6.5	Class B sand & gravel pit above water ↑	[20,000] [licence suspended in Sept./2010]	Licence suspended ( <u>Sep.20/10</u> ); same status as of 2014	Licence suspended ( <u>Sep.20/10</u> ); same status as of 2014	Site was fully rehabilitated in accordance with Site Plan in 2008 but stripped of topsoil & paved for an "aggregate transfer station". MNRF proposed resolution of compliance issues by Nov. 1, 2010, but the direction outlined in MNRF's suspension notice has not occurred. ARA Licence #5510 continued to be suspended.
18 	5481 Milton Quarry (Main & North {Holcim (Canada) Inc.}	L – 467.7 E - 382	Class A dolostone quarry below water ▼	Unlimited [extraction in North Quarry since early 2000s]	*204.2 (2014) 376.5 (2013) 376.5(2012)	177.3 (2014) 177.3 (2013) 173.3(2012)	2012: North Quarry extraction was advanced towards the west face; establishing the planned final face along the south portion of the west face and to the final south face of the East-West Pillar at the Extension boundary. 2013 & 2014 CARs: North Quarry (NQ) extraction - primarily in areas 1, 3a, 3b.
19 	608621 Milton Quarry (West & East); {Holcim (Canada) Inc.}	L - 84.5 E – 70.6	Class A dolostone quarry below water ▼	Unlimited [Phase 1 extraction; Phases 2 (West Cell)]	*33.1(2014) 36.3 (2013) 26.6(2012)	0 (2014) 0 (2013) 0 (2012)	Bedrock extraction conducted in the West Cell above the water table (to 2012); extraction below water begun in June 2013 and is ongoing. 2014: Townline Pillar and south side of west pillar buttress. On-going review of AMP-implementation & monitoring by the Region.

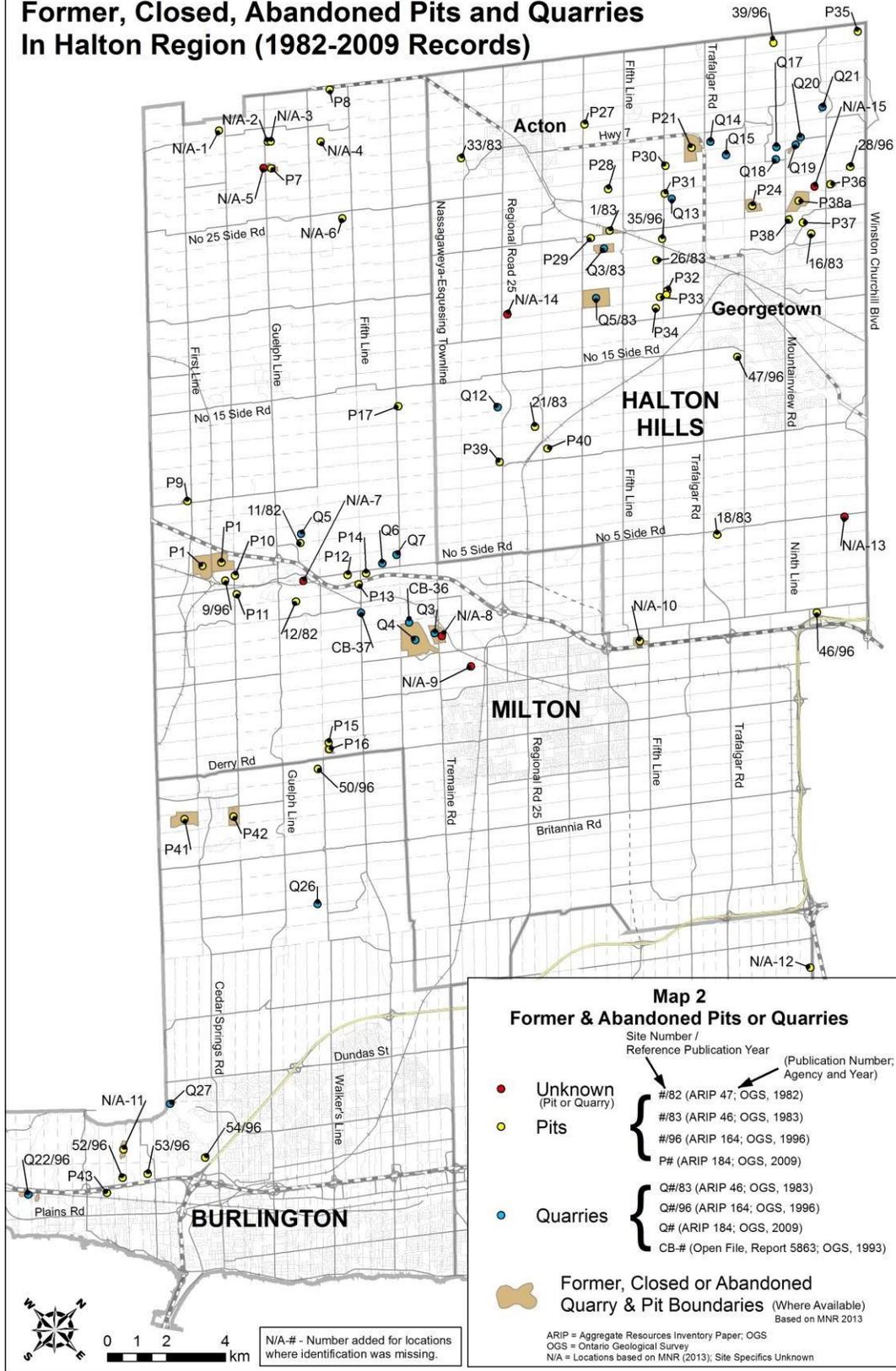
### Summary & Status of ARA Licences in the Region of Halton (2012-20 4)

ID # on a Key Map	ARA licence No; Sit Name { owner, where not part of site name}	Licensed- area and Extraction area (hectares)	Licence Class, Type (below/ above water) & Material Extracted	Extraction limit/annum (tonnes) [extraction status]	Total Disturbed Area (approx.) (hectares)	Total Rehabilita ted Area (approx.) (hectares)	Operational Status/Recent Activities (as per Compliance Assessment Reports (CARs), MNR notices and/or other available information) (2011-2014)
20	5484- Milton Pit - **368574 Ontario Ltd. and 5798813 Ontario Inc.	L - 40.7 E - 25.5	Class A sand & gravel pit above water ↑	unlimited [completed; stockpiles as resource]	5 (2014) 5 (2013) 13 (2012)	NA (2014) NA (2013) 2.5 (2012)	Licence transferred to 368574 Ontario Limited & 5798813 Ontario Inc. as of January 1, 2013. Site was inactive except for grading and leveling of part of pit floor and new internal road in 2013. No areas of progressive rehabilitation had been completed except for some sections of faces. Reduction in disturbed areas from 2012 to 2013 not clear.
21 	5499 Burlington Quarry – The Majority {Nelson Aggregate Co.}	L-202.5 E-193.8	Class A dolostone quarry below water ▼	unlimited [extraction completed; some resource stockpiles; & reserves]	120 (2014) 120 (2013) 120 (2012)	112 (2014) 112 (2013) 112 (2012)	Portable processing plant & stockpiles on quarry floor. Excavation not at final limits (2013 CAR). Progressive rehabilitation continued in the southwest corner and along the south wall (2012-2014). Application for Class A Licence to permit an extension of quarrying onto lands acquired immediately south was rejected by OMB in 2012.
22 	5657 Burlington Quarry – The Minority {Nelson Aggregate Co.}	L- 16.2 E- 16.2	Class A dolostone quarry below water ▼	up to 2,722,000 [operations completed]	16.2 (2014) 16.2 (2013) 16.2 (2012)	16.2 (2014) 16.2 (2013) 16.2 (2012)	Adjacent to and previously operated as one quarry with ARA 5499. Extraction at this site was completed more than 10 years ago and the quarry has been rehabilitated since. Inert fill, meeting the MOECC's Table 1 standards and Nelson Aggregate Co. procedures, was permitted for rehabilitation. Rehabilitated areas are vegetated.
23	5507 Hayward Pit {Springbank Sand & Gravel Ltd.}	L - 52.0 E - 19.5	Class A sand & gravel pit above water ↑	unlimited [operations completed]	21 (2014) 21 (2013) 21 (2012)	3.7 (2014) 3.7 (2013) 3.7 (2012)	Depleted, rehabilitation in progress. Based on the recent CAR sketches, it appears that some earth moving occurred in east-central area of the pit. Total rehabilitated area (3.65 ha) hasn't changed since 1997. Area to be rehabilitated as per Site Plan is 20.9 ha.
24	5619 Leaver Pit {Springbank Sand & Gravel Ltd.}	L - 54.27 E - 52.6	Class A sand & gravel pit above water ↑	1,500,000 [operations completed; pit depleted]	38 (2014) 38 (2013) 38 (2012)	38 (2014) 38 (2013) 38 (2012)	The 2012-2014 CAR s' sketch-notes indicate the following: depleted, sloped, being rehabilitated; no change to rehabilitated area has been noted in the 2012-2014 CARs.

Notes: L- licensed area; E – extraction area; NA – information not available; n/a – not applicable; CAR – Compliance Assessment Report;

▼ – extraction occurred below water; ↑- extraction permitted above water only;  -active extraction continued;  – disturbed area reduced by proponent following 2014 survey  -site rehabilitated;  -licence suspended. \* -555816 Ontario Inc. - up to 2014. \*\* Warren Paving & Material Group Ltd. - up to 2013.

## Map 2 Former, Closed, Abandoned Pits and Quarries In Halton Region (1982-2009 Records)



### Status of Implementation of Approved Rehabilitation Plans: ARA Sites in Halton Region (2012-2014)

Map	Site Name, ARA Licence No. & Current Owner	Rehabilitation/End-use Description	Status of Implementation of Approved Rehabilitation Plans
ID	Note: Site listing in consideration of adjoining sites, where applicable		Based on Compliance Assessment Reports (CARs) for 2012-2014
1	Acton Limehouse Pit (5480); St. Marys Cement Inc. (Canada)	7 features including ponds, protected dabbling area, meadow and deep water aquatic habitat, etc.	Total rehabilitated area (9 ha) has not changed since 2006. CAR notes have indicated: extracted areas above water had been sloped, rehabilitated, and had self-sustaining vegetation growth; the proposed final rehabilitation pond had been "expanding" slightly; the westerly limits of the pond had been vegetated to a "natural environment"; importation of material for rehabilitating was not proposed.
2 A	Acton Quarry (Phases 1, 2, 3) (5492); Holcim (Canada) Inc./ (Dufferin Aggregates)	Conservation and/or Recreation	Total rehabilitated area was 59.2 ha in 2014 (i.e. a total increase of 2.9 ha since 2012). [About 26.8 ha were rehabilitated in 2008-2010]. Rehabilitation specifics were not available in the annual monitoring reports or CARs, except that stripping in Phase 3 had been used for progressive rehabilitation; physical survey was carried out in 2014 providing actual disturbed and rehabilitated areas for the site.
3	Bot-Duff Pit (5616); Bot-Duff Resources Inc.	Agricultural	About 0.7 ha were rehabilitated between 2012 & 2014 to a total of 23.2 ha. The CAR notes indicated that portion of the north area in West Pit had been sloped and treed. The area along the north boundary of the East Pit was under progressive rehabilitation (backfilling, sloping and grading) in 2012-2013. Progressive rehabilitation continued in the northeast portion of East Pit in 2014. Rehabilitated and vegetated areas were in productive agricultural use (+pond).
4 A	Brockton Farms Quarry (20660); Brockton Farms	Agricultural	Total rehabilitated area (0.6 ha) has not changed since 2004. Annual CAR notes indicated that: topsoil stockpiles were seeded as required and/or used for progressive rehabilitation of the quarry; most of the worked areas of the quarry had been backfilled with waste rock and overburden; rehabilitated area was vegetated and maintained by licensee; importation of material was not proposed.
5	Campbellville Pit (southeast) (5478); 4000 Campbellville Road Inc. (formerly 555816 Ontario Inc.)	Agricultural, Reforestation/ Recreation, Residential/Commercial in conjunction with Reforestation/ Recreation uses. Note: the 1999 CAR indicates 'pond' for 'final rehabilitation'.	Based on the 2012 CAR notes: rehabilitation to occur in accordance with Site Plan approved by MNRF on December 12, 2011, the OMB decision (2006) and Provincial Officer Order of June 22, 2011. CAR was not available for 2013. The 2014 CAR indicated 1 ha of rehabilitation for that year with a grand total of 15.88 ha.
6 S	Campbellville Pit (northwest) (5479); 555816 Ontario Inc.	Agricultural, Reforestation/ Recreation, Residential/Commercial in conjunction with the Reforestation/ Recreation uses.	In March 2012, MNRF suspended the license for placing fill material/topsoil outside the approved area, and for importing excess fill/topsoil and depositing it above the approved final rehabilitation grades. On April 11, 2012, the suspension was rescinded on the basis that "absolutely no additional importation of fill material or topsoil to the site will occur without prior written approval from MNRF". The 2012 CAR notes indicated that application to surrender the licence was submitted to MNRF. The 2013-2014 CARs were not available. Based on MNRF (Nov., 2014), Licence remained suspended in 2014.

## Status of Implementation of Approved Rehabilitation Plans: ARA Sites in Halton Region (2012-2014)

Map	Site Name, ARA Licence No. & Current Owner	Rehabilitation/End-use Description	Status of Implementation of Approved Rehabilitation Plans
ID	Note: Site listing in consideration of adjoining sites, where applicable		Based on Compliance Assessment Reports (CARs) for 2012-2014
7	David T. Anderson Gravel Pit (5462); David T. Anderson	Agriculturally viable landscape. Based on the 1991 Site Plan, area to be rehabilitated is 5.65 ha. No earth berms were planned due to the site remote location and its nearness to exhaustion.	Minimal rehabilitation (about 0.2 ha) was carried in 2012 to a total of 0.7 ha. Based on the 2013 CAR, 0.2 ha was rehabilitated in 2013, and a grand total was reported as 5.5 ha (this is not clear). The 2013 CAR notes indicate: some topsoil was brought in for rehabilitation; northeast side of pit was "not finished". The 2014 CAR indicated that no additional fill was allowed until on-site material was used up for creation of south boundary slope.
8 A	Halton Crushed Stone (HCS) Quarry (5493); Halton Crushed Stone	The final rehabilitation is to re-establish water levels in a post-rehabilitation pond at about 301 m asl.	Additional 3.5 ha were rehabilitated in 2013 to a total of 42.8 ha (no change in 2014). Previous total rehabilitation area was 39.3 ha (no change was reported between 2004 and 2012). The former annual CARs indicated: north, west & south faces had been sloped and vegetated; the east-face sloping had been started. The 2013 CAR indicated that the new slope (northeast) had been completed and seeded and that the rest of the slopes were well vegetated. Based on the 2013/2014 CARs, all faces had been sloped.
9 A	Aldershot Quarry (5500); Hanson Brick Ltd.	Final after use will be determined upon completion of the extraction operation. Interim use will be open space. The Greenbelt Plan area (4.7 ha) is to be rehabilitated to 100% forest cover; all watercourse diversions and remaining SWM ponds to be rehabilitated to aquatic enhancement representative of the local natural ecosystem.	About 2 ha were rehabilitated between 2008 and 2010 to a total of 8 ha; no increase in rehabilitated area since. The 2012-2013 CARs had all rehabilitation items check-marked "in compliance". CAR notes indicated "west slopes seeded" and that on-going operation prevented final rehabilitation. The 2014 CARs "final rehabilitation" notes indicated "complete" (this is not consistent with CAR's general notes which indicated "West and Centre Quarries currently being mined" and "East Site is being held in reserve").
10	Burlington Pit/Quarry (5605); Hanson Brick Ltd.	Originally: Pond.	The 2012 CAR indicated that the quarry was being rehabilitated, including reforestation of 1 ha adjacent to the Bronte Creek, and that Hanson was awaiting approval of the site plan amendment from MNRF. The 2013 CAR indicated that final rehabilitation was completed including reforestation of 1 ha adjacent to the Bronte Creek. The 2014 CAR indicated that final rehabilitation was completed and that Hanson Brick intended to surrender the mining licence.
11	Willroy Brooks Pit (5546); St. Marys Cement Inc. (Canada)	Rural Residential and Agricultural	The same total rehabilitated area (15 ha) was reported for the 2006-2012 period. Additional +/-0.3 ha rehabilitation reported for 2013, with no change in 2014. The 2012-2014 CAR notes indicate: most pit faces are sloped or overgrown from inactivity; sloping/rehabilitation work completed around new south tower. Rehabilitation areas are well maintained with self-sustaining growth. Area 7 rehabilitated to an agricultural and natural environment use. Amendment submitted to MNRF to remove 15.5 ha from the ARA license. 2014 CAR: MNRF requested that existing pit faces be stabilized and seeded as per the Site Plan.

### Status of Implementation of Approved Rehabilitation Plans: ARA Sites in Halton Region (2012-2014)

Map	Site Name, ARA Licence No. & Current Owner	Rehabilitation/End-use Description	Status of Implementation of Approved Rehabilitation Plans
ID	Note: Site listing in consideration of adjoining sites, where applicable		Based on Compliance Assessment Reports (CARs) for 2012-2014
12 A	Tansley Quarry (613081); Hanson Brick Ltd.	The area to be rehabilitated is equal to the area to be excavated (28.9 ha) plus any areas within the setbacks which have been disturbed as a result of removing berms. The site to be rehabilitated to upland habitat with future lake surface area of 18.2 ha.	2012-2013 CARs: No rehabilitation areas provided as quarry is in Sinking Cut development stage. The 2012- 2014 CARs indicated "on-going tree-planting along boundary berm".
13 A	Rice & McHarg Quarry (5716); Rice & McHarg Quarries Ltd.	To be seeded.	The total rehabilitated area of 6.2 ha hasn't changed since 2009. The CAR notes indicate: when stripping occurs, the worked out areas of the quarry are backfilled with waste rock and covered with overburden and topsoil; previously rehabilitated areas are vegetated and have self-sustaining growth; some areas previously rehabilitated are in final rehabilitation conditions; natural regeneration of vegetation occurring in unworked areas of the quarry; importation of inert fill from off-site is allowed.
14 A	Hilltop Quarry (5720); Brockton Farms	Agricultural	Total rehabilitated area (0.7 ha) has not changed since 2007. Annual CAR notes indicate that: quarry faces are backfilled with waste rock and overburden on a progressive basis when stripping operations occur; grades, contours and quarry elevations are generally established as part of excavation operations; it is not proposed to import material for rehabilitation purposes; areas that are rehabilitated have been seeded and are self-sustaining.
15 A	Limehouse Clay Products Pit (southeast) (5711); Limehouse Clay Products Ltd.	Estate Residential, Agricultural (Pasture Land)	Total rehabilitated areas (0.8 ha for ARA 5711 and 0.3 ha for ARA 5614) haven't changed since 2003. No specific information in the 2012-2013 CARs (check-marks indicate "in compliance"). 2014 CAR: All rehabilitation items checked off 'in compliance'; no change to rehabilitation area. Based on the general notes in CARs: due to the nature of the operation, the staging and rehabilitation to be carried over a number of years; when extraction is completed in each stage, all sloped areas are to be graded to a maximum of 3:1 ratio and seeded to control erosion.
16 A	Limehouse Clay Products Pit (northwest) (5614); Limehouse Clay Products Ltd.	Estate Residential, Agricultural (Pasture Land)	

## Status of Implementation of Approved Rehabilitation Plans: ARA Sites in Halton Region (2012-2014)

Map	Site Name, ARA Licence No. & Current Owner	Rehabilitation/End-use Description	Status of Implementation of Approved Rehabilitation Plans
ID	Note: Site listing in consideration of adjoining sites, where applicable		Based on Compliance Assessment Reports (CARs) for 2012-2014
17 S	1294142 Ontario Ltd. Pit (5510); 1294142 Ontario Ltd.	The intension of final rehabilitation was to fill the site to a level so that it would blend with the surrounding fields.	Rehabilitation was completed in 2008 to MNRF's satisfaction but 60% of site was stripped of topsoil and surfaced with recycled asphalt pavement in August/September 2010 to accommodate operation of aggregate transfer station. The proponent applied to surrender ARA license and to operate the site in accordance with Halton Hills By-law 2010-0050. As the MNRF's issue-resolution direction of November 1, 2010 had not been met, the ARA licence remained suspended as of 2014.
18 A	Milton Quarry - Main and North (5481); Holcim (Canada) Inc./Dufferin Aggregates)	In 2000, Dufferin developed Final Rehabilitation Plan (FRP) superseding prior alternatives. Dufferin received MNRF's approval for the FRP (and related approvals under LIRA, OWRA and EPA). The key components of the FRP for the Main Quarry are: reservoir, lake and wetland on the west side and dry land after-uses on the east side.	Total progressive rehabilitation area was 177.3 ha in 2012- 2014. The 2012 CAR notes indicated that: unconsolidated (overburden) material had been used for progressive rehabilitation and acoustic/visual berm construction in the North Quarry; started progressive rehabilitation of the Townline Road pillar (continued in 2013); overburden slopes had been seeded (where complete). Annual tree planting: 2500 trees in 2014, 4000 in 2013; and 4000 in 2012 – all planting on 2-3 ha of the east side of the Main Quarry. Sloping of faces occurs as per the rehabilitation plans; no soil importation in 2012-2014.
19 A	Milton Quarry - Extension (608621); Holcim (Canada) Inc./ Dufferin Aggregates	Dufferin proposed to create two lakes in the two extension areas as an after-use, and 5 ha of wetlands. It was estimated that it would take between 15 and 48 years to fill the lakes depending on a number of factors including climate conditions and the approach in water management.	Based on the 2013 CAR: no new rehabilitation areas started; however, substantial material placed developing buttresses along Townline Rd. and East-West Pillar. The Milton Quarry Expansion licence was issued in 2007. In 2012, preparation for extraction in Phases 2 (West Cell) and 3 (East Cell) occurred, and it was noted that stripping volumes were used for progressive rehabilitation (not clear whether this refers to Townline Road's pillar construction).
20	Milton Pit (5484); 368574 Ontario Ltd. and 5798813 Ontario Inc. (formerly: The Warren Paving & Materials Group Ltd.)	Agricultural, Reforestation or Recreation	Total rehabilitation area of 2.5 ha hasn't changed since 2009. The 2012 CAR indicates that "final rehabilitation" had not been completed as "licence site was still active"; however, site operation notes indicate "site is presently inactive". The 2013 CAR comments indicated: "the site has been inactive since the transfer of the licence, except for grading and leveling of part of the pit floor and new internal road. Rehabilitation information for 2014 was not available.

### Status of Implementation of Approved Rehabilitation Plans: ARA Sites in Halton Region (2012-2014)

Map	Site Name, ARA Licence No. & Current Owner	Rehabilitation/End-use Description	Status of Implementation of Approved Rehabilitation Plans
ID	Note: Site listing in consideration of adjoining sites, where applicable		Based on Compliance Assessment Reports (CARs) for 2012-2014
21 A	Burlington Quarry - The Majority (5499); Nelson Aggregates Co.	Lake with vegetated slopes, residential, public and / or private recreational uses (i.e. sports fishing, swimming and boating).	Total rehabilitated areas increased from 70 ha in 2008 to 112 ha in 2012 with no change since (although the 2013 CAR indicated +/-2.5 ha under that year's rehabilitation). Based on the 2012-2013 CARs: progressive rehabilitation continued in the southwest corner and along the south wall. Inert fill, in accordance with the MOECC's Table 1 standards and Nelson Aggregate Co. procedures, may be brought in for rehabilitation.
22 R	Burlington Quarry - The Minority (5657); Nelson Aggregates Co.	Lake with vegetated slopes, residential, public and/or private recreational uses (i.e. sports fishing, swimming and boating).	Site fully rehabilitated; total area rehabilitated is 16.2 ha.
23	Hayward Pit (5507); Springbank Sand & Gravel Ltd.	Potential after uses include recreation/conservation. The pit floor grading to incorporate 'mounds' and 'depressions' that will increase the sites' potential for wildlife habitat.	Total rehabilitation area of 3.65 ha hasn't changed since 1997. The 2014 CAR sketch showed "rehabilitation in progress" in the southern portion of the extracted pit area.
24	Leaver Pit (5619); Springbank Sand & Gravel Ltd.	Potential after uses include recreation/conservation	Total rehabilitated area of 37.8 ha hasn't changed since 2010. The 2012 - 2014 CAR-sketch notes indicated the following: depleted, sloped, being rehabilitated. {Area to be rehabilitated as per Site Plan is 52.6 ha}.

Notes: **A** = active extraction; **R** = site rehabilitated; **S** = licence suspended