

CHAPTER 7: MINERAL AGGREGATE RESOURCE AREAS

7.1 PURPOSE

Portions of the township include *mineral aggregate resources* in the form of naturally occurring sand and gravel deposits. These aggregate resources provide material used in the construction of buildings and infrastructure. They also have the potential to support secondary industries that provide employment opportunities within the township.

To support the township's economic and growth needs, this Plan seeks to protect *mineral aggregate resources* for long-term use. The policies outlined below also provide for the orderly extraction and optimum utilization of *mineral aggregate resources* within the township, while preventing or minimizing the potential impacts of *mineral aggregate operations* on surface water and groundwater resources, surrounding communities, *cultural heritage resources*, *environmental features* and *ecological functions*, and agricultural lands and operations.

7.1.1 Designation and Protection

7.1.1.1 Mineral Aggregate Resource Areas are designated on Map 9 of this Plan. These areas have been identified by the *Province* as having a high potential to contain *mineral aggregate resources*. The identification of these resources in this Plan does not presume that all lands within these areas are suitable for *mineral aggregate operations*.

7.1.1.2 Extraction of *mineral aggregate resources* may be permitted in areas outside the Mineral Aggregate Resource Area, where there is a sufficient quantity and quality of resources to warrant extraction, as demonstrated to the satisfaction of the *Province*, the Region, and the Township and subject to the policies of this Plan.

7.1.1.3 The Township will prohibit development in areas located within or adjacent to Mineral Aggregate Resource Areas, which would preclude or hinder the establishment of *mineral aggregate operations* or access to the resources, except where:

- a) extraction would not be feasible;
- b) the proposed land use or development serves a greater long term interest of the general public than does extraction; and
- c) issues of public health, safety and environmental impacts are appropriately addressed.

7.1.1.4 Any new developments proposed within a Mineral Aggregate Resource Area in accordance with Policy 7.1.1.3 will minimize the amount of land needed for development to retain as much of the *mineral aggregate resource* potential as possible.

7.1.1.5 The Township will regulate uses associated with aggregate extraction through the Zoning By-law as follows:

- a) permit *accessory uses* associated with aggregate extraction operations and processing activities such as recycling, crushing, screening, washing, equipment storage, weigh scales, parking and office facilities;
- b) require site specific Zoning By-law amendments to permit ancillary land uses such as asphalt plants, concrete plants and aggregate depots that blend and stockpile aggregate materials with salt and aggregate transfer except where otherwise prohibited by the policies of this Plan, subject to:
 - i) the protection of adjoining lands from the negative effects of a reduced water supply, noise, dust, odour, lighting and outdoor storage;
 - ii) the protection of the environment from negative effects of dust, chemical spills, run-off, or contamination of surface or groundwater;
 - iii) access being obtained directly to a road capable of carrying the anticipated truck traffic; and,
- c) notwithstanding b) above, ancillary land uses will not be permitted where they are identified as a prohibited use in accordance with the Source Water Protection policies in Section 8.6 of this Plan and in Chapter 8 of the Regional Official Plan.

7.1.1.6 The Township encourages the recovery of *mineral aggregate resources* through the sequential use of developable land, whereby *mineral aggregate resources* are extracted prior to, or in conjunction with, development of the land.

7.1.1.7 The Township will plan for and regulate the subsequent use of rehabilitated *mineral aggregate operations* in accordance with the policies in this Plan.

7.1.2 Existing Mineral Aggregate Operations

7.1.2.1 The Township recognizes all *existing mineral aggregate operations* as legal uses of land and will endeavour through the policies of this Plan to ensure their continued viability and use for extractive purposes in accordance with license requirements established under the Aggregate Resources Act. The Township will ensure that appropriate zoning is maintained to recognize licensed *mineral aggregate extraction* operations as a permitted use, and all new development in the vicinity of an existing licensed pit or quarry will be subject to the Policies of 7.1.1.3 of this Plan.

7.1.2.2 *Development applications* to expand the boundaries of the licensed area of an *existing mineral aggregate operation*, or to increase the depth of extraction, will be subject to all policies in this Plan applicable to new *mineral aggregate operations*, as provided in Section 7.1.3, in addition to any requirements of the Aggregate Resources Act.

7.1.2.3 Where the licensee has circulated an application to expand an *existing licensed mineral aggregate operation* or to increase the depth of extraction which does not

require the approval of a *development application*, the Township will review and provide comments on the application to the *Province* in the context of all policies in this Plan that would apply to an application for a new *mineral aggregate operation*.

7.1.2.4 *Development applications* to expand an *existing mineral aggregate operation* located on lands designated as *Environmentally Sensitive Landscapes*, as illustrated on Map 7, will only be supported where:

- a) it can be demonstrated to the satisfaction of the Region and the *Province* that substantial progress has been made in the rehabilitation to viable after-use of the disturbed area within the existing licensed area; and
- b) the total active extraction area of the original licensed area and the proposed expansion area is not increasing over the long term. A lesser standard may be considered where it can be demonstrated that the overall rehabilitation goals of the site can be more effectively achieved by deferring rehabilitation until a later stage of the *mineral aggregate operation*.

7.1.2.5 The Township will co-operate with the aggregate industry in the development and maintenance of an inventory of all existing *mineral aggregate operations* within the Township. This inventory will be updated periodically to help monitor aggregate extraction activities in the Township.

7.1.3 New Mineral Aggregate Applications

7.1.3.1 New *mineral aggregate operations* will require a site-specific amendment to the zoning by-law, the approval of which will be subject to all applicable policies of this Plan and the Regional Official Plan, in addition to any requirements for a license under the Aggregate Resources Act. Site-specific zoning by-law amendments approved under this policy will apply only to the boundary of the licensed area, and will limit the depth of extraction to that which is specified on the proposed *site plan*.

7.1.3.2 Prior to the establishment of a new *mineral aggregate operation*, the applicant shall erect a sign satisfactory to the Township on the subject lands advising of the nature of the application, including area of the application, facilities to be located on the site, and where additional information may be obtained.

7.1.3.3 New mineral aggregate extraction within the Prime Agricultural Area and Rural Areas designation may be permitted as an interim use, subject to the policies of this Plan, provided that agricultural rehabilitation is maximized.

7.1.3.4 Within the Prime Agricultural Area designation as shown on Map 10, new *mineral aggregate operations* proposing extraction below the water table will require an amendment to this Plan to identify the area of extraction below the water table on Map 8. Such amendment will be subject to the policies in Section 7.1.6 and all other applicable policies in this Plan.

7.1.4 Required Technical Information

7.1.4.1 *Development applications* to permit a new *mineral aggregate operation*, expand an existing operation, or increase the depth of extraction, will only be permitted where the following studies have been submitted to the satisfaction of the Township, the Region or the appropriate agency having jurisdiction over the issue addressed by the study:

- a) noise, dust and vibration studies demonstrating that the proposed operation is appropriately designed, buffered and/or separated from any surrounding *sensitive land uses* to prevent any *adverse effects*;
- b) a hydrogeological study in accordance with the provisions of the Regional Implementation Guideline for Source Water Protection Studies, demonstrating, to the satisfaction of the Region, that the proposed operation will have no negative impacts on the quality and quantity of any surface water or groundwater resources;
- c) a Transportation Impact Study in accordance with the policies of this Plan, indicating how the proposed operation will address any potential impacts on Township roads, Regional roads and Provincial Highways;
- d) an *Environmental Impact Statement* prepared in accordance with the policies of this Plan, where the proposed *mineral aggregate operation* is *contiguous* to a Core Environmental Feature, or within or *contiguous* to a Supporting Environmental Feature;
- e) an *archaeological assessment* and/or *Cultural Heritage Impact Assessment* in accordance with the policies of this Plan;
- f) information on the estimated lifespan of the *mineral aggregate operation* and demonstration that the final rehabilitation plan is consistent with the policies in this Plan and the Regional Official Plan; and
- g) any other studies identified by the Township to meet requirements of a complete application under the provisions of the Planning Act.

7.1.4.2 To avoid potential overlap among the studies required under Policy 7.1.4.1 and similar studies that may be required by the Province, the Region or the GRCA, the Township will require the owner/applicant to participate in a *pre-submission consultation meeting* with each of these agencies prior to the submission of any supporting studies. The purpose of this *pre-submission consultation meeting* will be to identify the specific policy requirements of each of the agencies in each of the substantive areas being studied under Policies 7.1.4.1 and 7.1.6.1 such that a single study can satisfy all of the requirements identified by the agencies.

7.1.4.3 The studies identified in Section 7.1.4.1 will be required to take into account the potential *cumulative impacts* that may result from a proposed new *mineral aggregate operation* when added to other past, present and foreseeable future *mineral aggregate operations* in the vicinity of the proposed new operation. The appropriate level of detail, analysis, boundaries and baseline data to be used in

the cumulative impact assessment will be determined by the Township, the Region, the GRCA and the owner/applicant as part of the *pre-submission consultation meeting* provided for in Policy 7.1.4.2.

7.1.5 Review Criteria

7.1.5.1 New *mineral aggregate operations* will not be permitted on lands designated as Core Environmental Features in this Plan except in accordance with the following:

- a) within Significant Woodlands, new *mineral aggregate operations* may be permitted where the *woodland* consists of habitats that can be effectively replaced or restored in a short to medium time scale, such as a young plantation, small areas of non-provincially significant marsh or thicket *wetland*, or early successional *woodland*; or
- b) within Environmentally Significant Valley Features, new *mineral aggregate operations* may be permitted where the feature consists of habitats that can be effectively replaced or restored in a short to medium time scale, such as areas of crop or pasture, young plantation, early successional *woodland*, small areas of non-provincially significant marsh or thicket *wetland*, old field meadow, hedgerows and drainage swales; and
- c) the owner/applicant must demonstrate to the satisfaction of the Region that:
 - i) the area of the Significant Woodland or Environmentally Significant Valley Feature will be replaced with habitat of greater extent and/or ecological value as part of the rehabilitation plans to promote a net ecological gain;
 - ii) there will be no significant *adverse environmental impacts* to the *environmental features* or *ecological functions* and connectivity of the residual areas of the Significant Woodland or Environmentally Significant Valley Feature;
 - iii) the quantity, quality and direction of local surface water and groundwater will be maintained or enhanced; and
 - iv) the extraction of *mineral aggregate resources* will be completed, and the area will be rehabilitated, as early as possible in the life of the operation.

7.1.5.2 New *mineral aggregate operations* may be permitted within a Source Water Protection Area as illustrated on Map 8 of this Plan, except where such uses are prohibited in accordance with the source water protection policies in Section 8.6 of this Plan and in Chapter 8 of the Regional Official Plan.

7.1.5.3 New *mineral aggregate operations* proposed *contiguous* to Core Environmental Features as designated on Map 7 of this Plan, may be permitted, provided that

there will be no significant *adverse environmental impacts* to their features or *ecological functions* and *Environmental Linkages*.

7.1.5.4 The Township Zoning By-law will include site-specific regulations to restrict extraction below the water table where subwatershed-scale hydrogeological studies, prepared in accordance with Policy 7.1.6.1 b), have not demonstrated to the Region's satisfaction the acceptability of such extraction from a surface water and groundwater perspective.

7.1.5.5 New *mineral aggregate operations*, or *wayside pits and quarries*, may be permitted within *Environmentally Sensitive Landscapes* as illustrated on Map 7, in accordance with the policies in Section 9.C of the Regional Official Plan, where it can be demonstrated to the satisfaction of the Township, in consultation with the Region, the *Province* and the GRCA, that:

- a) where extraction is proposed *contiguous* to a Core Environmental Feature, there will be no significant *adverse environmental impacts* to their features or landscape level *ecological functions* and connectivity;
- b) where extraction is proposed within or *contiguous* to the following features, which are not included within a Core Environmental Feature:
 - i) rivers, stream valleys, *floodplains*, or associated *hazardous lands* or *hazardous sites*;
 - ii) *fish habitat*;
 - iii) meromictic and kettle lakes;
 - iv) *significant* wildlife habitat; or
 - v) savannas, tallgrass prairies, rare *woodland* types, cliffs, alvars, sand barrens, marl seeps, bogs and fens;

there will be no significant *adverse environmental impacts* to their features or landscape level *ecological functions* and connectivity, although extraction may be considered in habitats which can be effectively replaced or restored in a short to medium time scale such as areas of crop or pasture land, young plantation, early successional *woodland*, small areas of non-provincially significant marsh or thicket wetland, old field meadow, hedgerows and drainage swales; and

- c) the quantity and quality of local surface water and groundwater regimes can be maintained or enhanced.

7.1.5.6 Where a new *mineral aggregate operation* is proposed on lands designated as an *Environmentally Sensitive Landscape* as designated on Map 7 of this Plan, the Township will recommend to the *Province* that the Natural Environment Report required under the Aggregate Resources Act also address the following objectives:

- a) natural habitat that would be lost from the site will be replaced with equivalent habitat on the property or on *adjacent lands*, and no less than 35 per cent of the licensed area remaining after extraction will be rehabilitated to natural self-sustaining *woodland* habitat representative of the landscape in which it is located;
- b) the quantity and quality of surface and groundwater regimes and aquatic ecosystems are remaining after, or created by, extraction will be rehabilitated to self-sustaining natural aquatic ecosystems representative of the landscape in which they are located;
- c) the health, diversity, size, *ecological function* and connectivity of major natural features remaining on and *contiguous* to the proposed extraction area will be maintained and, where possible, enhanced before, during and after the extraction of aggregate resources;
- d) the rehabilitated area will be maximized and the disturbed area minimized on an ongoing basis during the life-cycle of the pit operation; and
- e) rehabilitation of any area once occupied by natural features or identified as potential enhancement/restoration and/or corridor/*linkage* areas is completed as early as possible in the life of the extraction operation.

7.1.5.7 *Development applications* that would establish an ancillary use to a *mineral aggregate operation* will only be permitted where applicable studies identified in Policy 7.1.4.1 demonstrate to the satisfaction of the Township and/or the Region that the proposed use will mitigate any potential *adverse effects*.

7.1.5.8 Prior to the establishment of a new *mineral aggregate operation*, Township support for the zone change application will be subject to the following:

- a) the submission and acceptance of any required studies identified in Policy 7.1.4.1;
- b) demonstration that the proposed rehabilitation is consistent with the policies of this Plan and the Regional Official Plan;
- c) the submission of all reports required by the Ministry of Natural Resources in accordance with the Aggregate Resources Act; and
- d) the Township being satisfied that the following conditions will be dealt with through the *site plan* approved under the Aggregate Resources Act, or other appropriate means:
 - i) to ensure provision of adequate buffering and/or screening along road rights-of-way, or adjacent to any *existing* or proposed sensitive uses, and implementation of any other necessary mitigation measures as determined through the approval of required studies to prevent where possible, or minimize any potential *adverse effects* on the surrounding *sensitive land uses*, to the satisfaction of the Township;

- ii) that no new excavation or processing will take place until all required buffers and/or screenings have been installed;
- iii) that no water or washing or screening operations will be discharged into any water course;
- iv) that the applicant, in co-operation with the Township and the Region, will establish all haul routes for truck traffic;
- v) that any required road improvements identified through the Transportation Impact Study noted in 7.1.4.1 c) above are in place prior to the removal of aggregates from the site; and,
- vi) that no new excavation or processing will take place until all required fencing and/or security measures have been put in place.

7.1.5.9 The Township will encourage and co-operate with the owners of licensed *mineral aggregate operations* to achieve orderly phased extraction of licensed areas based on practices that promote minimal active mining areas and progressive rehabilitation.

7.1.5.10 The Township will encourage the construction of intra-pit road systems and new roads to support the movement of *mineral aggregate resources* so as to lessen the impact of truck traffic on Township roads and *sensitive land uses*.

7.1.5.11 The Township will collaborate with the Region and the *Province* to ensure that all appropriate requirements resulting from the review of an application for a *mineral aggregate operation* are imposed and enforced as:

- a) conditions on the license or notes on the *site plan* required under the Aggregate Resources Act, including but not limited to spill protection measures to prevent discharges to surface water and groundwater resources from on-site fuel storage, vehicle or equipment repair and equipment operation, and spills from salt storage, use and transfer, and other best management practices; and regulations in site-specific zoning by-laws, development agreements and conservation easements, as may be applicable.

7.1.5.12 The Township will collaborate with the Region and the *Province* to ensure that all appropriate requirements resulting from the review of an application for a *mineral aggregate operation* are imposed and enforced as:

- a) conditions on the license or notes on the *site plan* required under the Aggregate Resources Act, including but not limited to spill protection measures to prevent discharges to surface water and groundwater resources from on-site fuel storage, vehicle or equipment repair and equipment operation, and spills from salt storage, use and transfer, and other best management practices; and

- b) regulations in site-specific zoning by-laws, development agreements and conservation easements, as may be applicable.

7.1.6 Extraction Below the Water Table

7.1.6.1 In addition to all other applicable policies of this Plan, *mineral aggregate extraction* below the water table will only be permitted through an amendment to this Plan and the Regional Official Plan, where:

- a) it is demonstrated to the satisfaction of the Township and the Region that there is a substantial quantity of high quality *mineral aggregate resources* below the water table warranting extraction;
- b) the completion of a subwatershed-scale hydrogeological study, which includes an evaluation of any potential *cumulative impacts* from past, present and reasonably foreseeable future *mineral aggregate operations*, has demonstrated to the satisfaction of the Township, Region and the Grand River Conservation Authority that the removal of the resource and the subsequent rehabilitation of the lands will not negatively impact the quantity and quality of surface or groundwater resources;
- c) if necessary to protect groundwater quality, post-extractive drainage is directed away from the resulting pond, the slopes of the pond are stabilized with appropriate native species, and a pond planting plan is prepared and implemented to the satisfaction of the Township and the Region;
- d) on lands identified as *prime agricultural lands*, other alternatives have been considered by the owner/applicant and found unsuitable, and agricultural rehabilitation in remaining areas will be maximized. The consideration of other alternatives will include investigation as to the availability of alternative resources on lands identified as Canada Land Inventory Class 4 to 7 soils, resources on lands committed to future urban uses, and resources on *prime agricultural lands* where rehabilitation to agriculture is feasible; and
- e) it is demonstrated to the satisfaction of the Region and the Township that the site will be rehabilitated in accordance with the policies in Section 7.1.8 of this Plan.

7.1.6.2 Where the results of an individual or sub-watershed scale hydrogeological study indicate that mineral aggregate extraction below the water table may have a negative impact on the quantity or quality of groundwater in an area, the Township will restrict extraction below the water table by means of a site-specific zoning by-law regulation in accordance with Policy 7.1.3.1. The purpose of this restriction is to maintain the depth of residual over burden necessary to protect the quality and quantity of groundwater.

7.1.6.3 Where the extraction of a proven significant quantity of high quality *mineral aggregate resources* located below the water table is not permitted in

accordance with Policy 7.1.6.1 and 7.1.6.2, this resource will continue to be protected from land uses incompatible with its future extraction.

7.1.7 Wayside Pits and Quarries, Portable Asphalt and Concrete Plants

7.1.7.1 The removal or leveling of a hill containing aggregate for the purpose of increasing or improving lands for *agricultural uses* will be permitted in any land use designation without the need for a Zoning By-law amendment provided that no excavation occurs below the average grade of land surrounding the hill. Such extraction is subject to support of the Region, the Township and the issuance of a wayside permit by the Ministry of Natural Resources.

7.1.7.2 The Township will request the Ministry of Natural Resources to include a notification on wayside permits for lands adjacent to Locally Significant Natural Areas that the Township should be contacted prior to excavation to obtain information on how to mitigate impacts on the Locally Significant Natural Areas.

7.1.7.3 *Wayside pits and quarries, portable asphalt plants and portable concrete plants* for the exclusive temporary use of a public road authority operating under an approved permit will be permitted on a temporary basis in all land use designations, without amendment to this Plan, or the Zoning By-law, except where:

- a) the use would be located within or adjacent to an area of *existing* development that would be incompatible with aggregate extraction and associated activities;
- b) the use would be located within a Core Environmental Feature as designated on Map 7; or
- c) the use is identified as a prohibited use by the policies of this Chapter.

7.1.7.4 *Portable asphalt plants and portable concrete plants* will be discouraged on lands containing active agricultural operations. If asphalt or concrete for a public road project cannot be obtained from an existing asphalt or concrete plant, attempts should be made to locate the portable plant in *wayside pits and quarries*, vacant industrial sites, or on inactive or less productive agricultural lands.

7.1.7.5 *Portable asphalt plants and portable concrete plants* will obtain a Certificate of Approval from the *Province* pursuant to the Environmental Protection Act and will include provisions to prevent spills of petroleum chemicals to surface and groundwater resources.

7.1.8 Rehabilitation of Aggregate Operations

7.1.8.1 The Township will co-operate with land owners, the Region, pit operators, and the Ministry of Natural Resources in efforts to rehabilitate existing and/or abandoned pits and quarries to reduce or eliminate dangerous or hazardous conditions and return the pit site to a suitable land use as determined by the Township in conformity with the policies of this Plan and the Regional Official Plan.

7.1.8.2 All proposals for new *mineral aggregate operations*, including *wayside pits and quarries*, will include a rehabilitation plan to the satisfaction of the Township and the Region, ensuring that:

- a) progressive rehabilitation will be carried out whenever feasible so that depleted areas are restored while extraction continues in other areas of the site;
- b) final rehabilitation will comply with the land use designations contained in this Plan or the Regional Official Plan, and be compatible with the character of surrounding land uses;
- c) within the Prime Agricultural Area and Rural Areas designations, rehabilitation to agriculture will be the first priority, as follows:
 - i) within the Prime Agricultural Area, substantially the same land area will be rehabilitated back to an agricultural condition to allow for the same range and productivity of crops common in the area; and
 - ii) within Rural Areas, rehabilitation of the site will be carried out so that substantially the same land area and same average soil quality for agriculture are restored.
- d) where mineral aggregate extraction has occurred below the water table, rehabilitation will be in accordance with Policy 7.1.6.1 c) to protect groundwater quality.

7.1.8.3 In the Prime Agricultural Area designation, rehabilitation to agriculture will be the first priority. Notwithstanding this, complete agricultural rehabilitation within the Prime Agricultural Area and Rural Areas designations not be required where:

- a) the depth of extraction makes restoration of pre-extraction agricultural capability impractical;
- b) hydrogeological investigations completed in accordance with the policies in this Plan and the Regional Official Plan, have demonstrated to the satisfaction of the Township and the Region that agricultural rehabilitation is not desirable due to groundwater protection requirements;
- c) the Region, in collaboration with the *Province*, the GRCA and the Township, have determined a suitable post-extractive use in conformity with the policies in this Plan and the Regional Official Plan; and
- d) aggregate extraction would remove natural features such as *woodlands*, *wetlands* and watercourses on lands not otherwise protected by the Greenlands Network policies of this Plan and the Regional Official Plan, in which case these natural features will be restored and, where possible, enhanced.

- 7.1.8.4 Where multiple *mineral aggregate operations* are located in close proximity to one another, the Township will collaborate with the Region, the *Province*, the GRCA and the affected owners/applicants to jointly develop comprehensive rehabilitation plans for multiple properties.