

PART D: NATURAL HERITAGE, WATER AND NATURAL HAZARDS

D1.1 OBJECTIVES

It is the objective of this Plan to:

- a) identify known *natural heritage features* and to protect those features and their *ecological functions* from incompatible uses;
- b) raise the public's awareness that these *natural heritage features* are important to the County of Elgin and to its local municipalities and should be protected for future generations;
- c) maintain, restore or where possible, improve the diversity and connectivity of natural features in an area, and the *ecological function* and biodiversity of *natural heritage systems* recognizing linkages between and among *natural heritage features and areas*, *surface water features* and *ground water features*;
- d) protect, improve or restore the *quality and quantity of water*;
- e) identify *surface water features*, *ground water features*, *hydrologic functions* and *natural heritage features and areas* which are necessary for the ecological and hydrological integrity of the *watershed*;
- f) implementing necessary restrictions on *development* and *site alteration* to: protect all municipal drinking water supplies and designated vulnerable areas; and protect, improve or restore vulnerable surface and ground water, sensitive *surface water features* and sensitive ground water features, and their hydrologic functions;
- g) maintain linkages and related functions among *surface water features*, *ground water features*, *hydrologic functions* and *natural heritage features and areas*; and,
- h) direct *development* and site alternation to areas outside *hazardous lands* adjacent to the shorelines of Lake Erie which are impacted by *flooding hazards*, *erosion hazards* and/or dynamic beach hazards; *hazardous lands* adjacent to

river, stream and small inland lake systems which are impacted by *flooding hazards* and/or *erosion hazards*; and hazardous sites.

D1.2 NATURAL HERITAGE

D1.2.1 Natural Heritage Features and Areas

The County shall recognize and protect the *natural heritage features and areas* in the County. *Natural Heritage features and areas*, as defined by the Provincial Policy Statement and the Ministry of Natural Resources' Natural Heritage Reference Manual, as updated from time to time, include: *significant wetlands, significant coastal wetlands, significant habitat of endangered species and threatened species, significant woodlands, significant valleylands, significant wildlife habitat, fish habitat, and significant areas of natural and scientific interest (ANSIs)*. Many natural heritage features rely on the *ecological functions* provided by watercourses. Watercourses also connect natural heritage features and are especially important in fragmented landscapes where a watercourse may be the only remaining natural area left. *Natural heritage features and areas* can often, also, overlap with natural hazards.

The local municipalities in Elgin County have policies in the local Official Plans to protect significant *natural heritage features and areas*. Local municipalities will be encouraged to continue to identify and protect provincially and locally significant *natural heritage features and areas*. Nothing in this Plan is intended to limit local municipalities from providing more detailed policies or a higher level of protection of *natural heritage features and areas* and/ or *natural heritage systems* in the local Official Plans provided that the such policies maintain the minimum standards set out in this Plan.

D1.2.2 Defining Natural Heritage Significance

The determination of the areas and the significance of the *natural heritage features and areas* are described as follows.

D1.2.2.1 Significant Woodlands

A woodland is a treed area, woodlot or forested area that provides environmental and economic benefits to both the private landowner and the general public. Woodlands provide benefits such as clean air, *wildlife habitat*, and outdoor recreational opportunities.

In 2006, *woodlands* made up less than 20% of the land cover in the County of Elgin. The locations of *woodlands* in the County of Elgin are shown on Appendix Map 1.

Elgin County considers *woodlands* 10 hectares or greater as *significant woodland*. *Woodlands* between 2 hectares and 10 hectares are also *significant* if they are located within 30 metres of the boundary of a significant natural heritage feature (e.g. *significant wetland, significant valleyland, fish habitat and/ or watercourses*).

Other significant woodland criteria may be identified when a *natural heritage system* is established in accordance with Section D1.2.4 of this Plan.

D1.2.2.2 Significant Habitat of Endangered Species and Threatened Species

The *significant habitat of endangered species and threatened species* is not shown on Appendix Map 1. Species at Risk are identified as extirpated, endangered, threatened or species of special concern on the Species at Risk in Ontario List. The Ministry of Natural Resources (MNR) administers the *Endangered Species Act, 2007 (ESA)* to protect and conserve species at risk and their habitats. Under the ESA, the MNR is responsible for identifying and approving general and regulated habitat, as well as giving technical advice on species at risk and their habitats. The technical advice provided under the ESA supports the implementation of natural heritage policies found within the Provincial Policy Statement, 2005 (PPS). For the purposes of the PPS, MNR is responsible for approving the delineation of significant habitat for species identified as endangered and threatened.

Environmental Impact Studies or other planning reports may help with identifying the extent of the habitat of *endangered species* and threatened species.

The *significant habitat of endangered species and threatened species* will be based on an evaluation of the following considerations:

- a) assessments reviewed and approved by the Ministry of Natural Resources regarding the extent of the species'

- habitat;
- b) habitats or areas delineated by MNR and/ or regulated under the ESA; and,
- c) habitat that is necessary for the maintenance, survival, and/or the recovery of naturally occurring or reintroduced populations of *endangered species* or threatened species, and where those areas of occurrence are occupied or habitually occupied by the species during all or any part(s) of its life cycle.

D1.2.2.3 Significant Wetlands

Wetlands are lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four types of *wetlands* are swamps, marshes, bogs, and fens.

Wetlands play a very important role in the *natural heritage system*, since they:

- provide habitat for plants and animals;
- store water for groundwater recharge purposes;
- trap sediments, nutrients and contaminants thereby improving downstream water quality;
- provide corridors for plant and animal movements; and,
- provide flood control and protect shorelines from erosion.

Wetlands are evaluated as either provincially or locally significant. Many *provincially significant wetlands* occur across the County of Elgin (for example, the Calton Swamp, the Aylmer Wildlife Area, and the West Dutton Woodlot). *Wetlands* often overlap with other natural heritage features including *woodlands*. Wooded *wetlands* are known as swamps. Swamps are a predominate feature in Elgin County. *Wetlands* are also incredibly diverse and therefore provide wildlife habitat for a number of species of plants, mammals, birds, reptiles, amphibians and fish. Currently identified *provincially significant wetlands* are designated on Schedule A and shown on Appendix Map 1.

Locally significant or unevaluated *wetlands* may be identified and incorporated into the County's *natural heritage system* in accordance with Section D1.2.4 of this Plan.

D1.2.2.4 Significant Areas of Natural and Scientific Interest

Both Earth Science and Life Science Areas of Natural and Scientific Interest (ANSIs) are areas of land and water containing natural landscapes or features that have been identified as having values related to protection, natural heritage appreciation, scientific study, or education.

MNR ranks ANSIs as being provincially, regionally or locally significant. For the purpose of this Official Plan, and to ensure consistency with the Provincial Policy Statement, *significant ANSIs* include only ANSIs identified as provincially significant.

ANSIs play an important role in the protection of Ontario's natural heritage, since they best represent the full spectrum of biological communities, natural landforms and environments across Ontario (outside of Provincial Parks or Conservation Reserves). Although ANSI identified as regionally or locally significant are not included in the PPS definition, information about such ANSIs support the development of *natural heritage systems* and the identification of *significant wildlife habitat*. Many ANSIs overlap with other *natural heritage features and areas* such as *significant wetlands*, *significant woodlands*, and *significant valleylands*.

Regionally and locally significant ANSIs may be identified and incorporated into the County's *natural heritage system* in accordance with Section D1.2.4 of this Plan. *Significant ANSIs* are shown on Appendix Map 1.

D1.2.2.5 Significant Wildlife Habitat

Significant Wildlife habitat is an area of land where plants, animals, and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations.

Significant wildlife habitat is ecologically important in terms of features, functions, representation or amount. It contributes to the quality and diversity of an identifiable geographic area or *natural heritage system*.

Significant wildlife habitat frequently occurs in other *natural heritage*

features and areas such as *significant wetlands, significant woodlands, significant areas of natural and scientific interest and/or significant valleylands*. *Significant wildlife habitat* is not currently mapped in the Official Plan. The presence of *other natural heritage features and areas* can assist with the determination of *significant wildlife habitat*.

D1.2.2.6 Fish Habitat

Fish habitat is spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes.

The County is responsible for identifying *fish habitat* using criteria recommended in the Natural Heritage Reference Manual, in consultation with the appropriate *Conservation Authority*.

D1.2.2.7 Significant Valleylands

Valleylands are natural areas that occur in a valley or other landform depression that has water flowing through or standing for some period of the year. They connect *natural heritage features and areas* within the landscape over large distances (from headwaters to outlets). In urbanized areas or fragmented landscapes, *valleylands* often constitute, or are associated with, the remaining natural areas.

All *valleylands* which have a well-defined slope, with permanent or intermittent water flowing through and have an average width of 25 metres or more are significant. *Significant valleyland* boundaries will be defined by taking into consideration stable top of bank, riparian vegetation and flooding hazard limits.

Valleylands provide valuable *ecological functions*. They are also extremely important to the Elgin County social well-being and cultural history. *Valleylands* are an essential component for establishing connectivity in a *natural heritage system*. These features may be considered in greater detail when a *natural heritage system* is established in accordance with Section D1.2.4 of this Plan.

D1.2.2.8 Table, Criteria for Determining Significance

Natural Heritage Feature	The agencies responsible for determining significance:	Criteria and methods used to determine significance:
<i>Significant Woodlands</i>	County of Elgin	Using criteria recommended in the Natural Heritage Reference Manual.
<i>Significant Habitat of Endangered Species and Threatened Species</i>	MNR	Delineating/ describing, reviewing and approving the work of others or establishing methods such as training and standards that ensures that the work of others will be acceptable.
<i>Significant Wetlands and Significant Coastal Wetlands</i>	MNR	Delineating wetlands or reviewing and approving the work of others in accordance with the Ontario Wetland Evaluation System.
<i>Significant Areas of Natural and Scientific Interest</i>	MNR	In accordance with the ANSI confirmation process.
<i>Significant Wildlife Habitat</i>	County of Elgin	Using criteria recommended in the Natural Heritage Reference Manual, the Significant Wildlife Habitat Technical Guide and the Eco-Region Criteria Schedules and using Ecological Land Classification.
<i>Significant Valleylands</i>	County of Elgin	Using criteria recommended in the Natural Heritage Reference Manual.

D 1.2.3 Mapping of Natural Heritage Features in this Plan

All natural heritage features are considered to be important to the County. While the location and significance of these features has yet to be determined in some cases, all of these features need to be considered when applications for development and site alteration are being evaluated. It is recognized that additional natural heritage features will be identified by the County, local municipalities, applicable Conservation Authority's or the Ministry of Natural Resources.

Appendix Map 1 is intended to reflect the following *natural heritage features and areas*:

- a) *Provincially Significant Wetlands and Coastal Wetlands* (which are also designated on Schedule A);
- b) *Provincially Significant Areas of Natural and Scientific Interest and;*
- c) woodlands.

Other features such as *valleylands*, corridors, *significant woodlands*, *significant habitat of endangered species and threatened species*, *fish habitat* and *significant wildlife habitat* are not mapped. As more detailed mapping of *natural heritage features and areas* becomes available, the appropriate Schedules will be updated to include the more detailed information.

The boundaries of these features and areas are considered to be approximate.

D1.2.4 Establishing a Natural Heritage System

The County of Elgin is committed to maintaining and promoting a healthy natural environment and protecting its unique and special natural heritage features for the present generation and all successive generations. Therefore, an ecosystem based planning and management approach is required to guide the land use decision-making process. This approach must emphasize that *development* should not only protect and manage impacts to ecosystems but also include the objective of enhancing and restoring ecosystems appropriately.

The diversity and connectivity of natural features in an area, and the long term *ecological function* and biodiversity of *natural heritage systems*, should be maintained, restored or where possible, improved, recognizing linkages between and among *natural heritage features and areas*, *surface water features* and *groundwater features*. It is a policy of this Plan that the establishment of a *natural heritage system* be considered at the time of the next Official Plan Review.

After a Natural Heritage Study is completed the County Official Plan will be amended to implement the recommendations of the study. Local municipalities will also need to update their Official Plans to conform with the County Official Plan. The County will engage adjacent jurisdictions when developing its *natural heritage system*,

recognizing that *natural heritage features and areas* cross municipal boundaries.

D1.2.5 Potential Natural Corridors

Natural corridors are defined as linear natural features such as streams, *floodplains*, steep slopes, valleys, contiguous narrow *woodlands* and *wetlands* that connect two or more natural heritage features. While these corridors are not identified on the schedules to this Official Plan, nor within Appendix Map 1, it is the intent of the County to identify these corridors when a *natural heritage system* is developed in accordance with Section D1.2.1 of this Plan. These natural corridors should be identified since they:

- allow for the passage of animals requiring a variety of habitats for their survival;
- allow for the movement of plants and animals to other areas thereby increasing their population;
- provide for reproductive interchanges for plants and animals, thereby promoting genetic variations; and,
- provide escape routes for animals from predators and natural and human disturbances.

It is the policy of this Plan that the integrity of natural corridors be preserved wherever feasible to protect existing linkages and encourage the development of new linkages.

D1.2.6 Development and Site Alteration

- a) *Development and site alteration* shall not be permitted in *significant habitat of endangered species and threatened species, significant wetlands and significant coastal wetlands*.
- b) *Development and site alteration* shall not be permitted in
 - i) *significant woodlands;*
 - ii) *significant valleylands;*
 - iii) *significant wildlife habitat; and,*
 - iv) *significant areas of natural and scientific interest*unless it has been demonstrated through an Environmental Impact Study (EIS), that there will be no *negative impacts* on the natural features or their *ecological functions*.

- c) *Development and site alteration* shall not be permitted in *fish habitat* except in accordance with Provincial and Federal requirements.

D1.2.7 Adjacent Lands

Adjacent lands are the lands contiguous to a natural heritage feature or area where it is likely that *development or site alteration* would have a *negative impact* on the feature or area. For the purposes of this Official Plan, *adjacent lands* are defined as all lands within the specified distance of the boundary of *natural heritage features and areas* as set out in the following Table.

NATURAL HERITAGE FEATURE	ADJACENT LANDS (metres)
Provincially <i>Significant Wetlands</i>	120
Significant woodlands	120
Significant wildlife	120
Significant habitat of endangered species and threatened species	120
Provincially <i>Significant Areas of Natural Scientific Interest – Earth Science</i>	50
Provincially <i>Significant Areas of Natural and Scientific Interest – Life Science</i>	120
Significant Valleylands	120
Fish Habitat	120

No *development or site alteration* shall be permitted on these *adjacent lands* unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated, through an Environmental Impact Study (EIS), that there will be no *negative impact* on the natural features or their *ecological functions*.

D1.2.8 Environmental Impact Studies

Where the policies of this Plan require that an EIS be prepared, such an EIS shall be prepared in accordance with the requirements of this section and Appendix B of this Plan. A site inspection may be needed where there is insufficient natural heritage data to determine whether an EIS is triggered. The purpose of the site inspection is to identify potential *significant natural heritage features and areas* that may require further study and evaluation.

D1.2.8.1 Purpose of an Environmental Impact Study

The purpose of an EIS is to:

- a) collect and evaluate the appropriate information in order to have a complete understanding of the boundaries, attributes and functions of *natural heritage features* and associated ecological and *hydrological functions* that exist;
- b) to determine whether there are any additional *natural heritage features* on the lands and *adjacent lands*; and,
- c) make an informed decision as to whether or not the proposed *development* and/or *site alteration* will have a *negative impact* on the *natural heritage features* and ecological and *hydrological functions*.

The approval authority, in consultation with the appropriate *Conservation Authority*, must be satisfied with an EIS prior to the granting of *development* approvals. The recommendations of an EIS shall be implemented through Official Plan amendments, zoning by-laws, subdivision conditions, site plan control, and/or applicable regulations.

Where an Environmental Impact Study has been completed, the County, as the approval authority for land use planning applications, must be satisfied that it has been demonstrated that there will be no *negative impact* on the natural features or their *ecological functions*. A local Municipality, as the approval authority for zoning, minor variance, site plan and building permit applications will require Environmental Impact Studies to be completed, depending upon the feature and the policies of the local Official Plans.

D1.2.8.2 What an Environmental Impact Study Should Demonstrate

Before *development* is approved in the area subject to the EIS, the EIS shall demonstrate that the relevant policies of this Plan and the local Official Plan are met. The EIS should also demonstrate that *development* and *site alteration* will not have a *negative impact* on *significant natural heritage features* and related *ecological functions*.

D1.2.9 Use of Lands in Private Ownership

Where any land within the Provincially *Significant Wetlands* designation or identified on Appendix Map 1 is held under private ownership, this Plan shall not be construed as implying that such areas are free and open to the general public.

D1.2.10 Agricultural Uses.

Nothing in this Plan is intended to limit the ability of existing *agricultural uses* to continue on lands within, or adjacent to, *natural heritage features and areas*. New *agricultural uses* that require approval under the *Planning Act* will be permitted within, or adjacent to, *natural heritage features and areas* provided it has been demonstrated, to the satisfaction of the County or the local municipality, as the case may be, that there will be no *negative impact* on the natural heritage features or their *ecological functions*.

D2 WATER RESOURCES

D2.1 Watercourses

All of the watercourses in the County are considered to be environmentally *significant* since they:

- a) store storm and melt waters;
- b) contain fish and *wildlife habitat* areas;
- c) function as corridors for migrating *wildlife habitat* movement and vegetation dispersal;
- d) serve to maintain the *quality and quantity of water* (surface and ground water resources); and,
- e) assist in the improvement of air quality.

It is the intent of this Plan to protect all watercourses from incompatible *development* to minimize the impacts of such *development* on their function.

D2.2 Improving, Protecting and Restoring

The County and local municipalities shall protect, improve or restore the quality and quantity of water by:

- a) using a watershed as the ecologically meaningful scale for planning;
- b) minimizing potential *negative impacts*, including cross-jurisdictional and cross-watershed impacts;
- c) identifying *surface water features*, ground water features, hydrologic functions and *natural heritage features and areas* that are necessary for the ecological and hydrological integrity of the watershed;
- d) implementing necessary restrictions on *development* and *site alteration* to:
 - i) protect all municipal drinking water supplies and designated vulnerable areas; and,
 - ii) protect, improve or restore vulnerable surface and ground water, sensitive *surface water features* and sensitive ground water features, and their hydrologic functions;
- e) maintaining linkages and related functions among *surface water features*, ground water features, hydrologic functions and *natural heritage features and areas*;
- f) promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality;
- g) ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces; and,
- h) promoting the use of sustainable and low impact development stormwater strategies and practices.

Source water protection plans are currently being prepared for Elgin County. Appropriate and relevant policies and mapping from these source water protection plans will be implemented by way of amendment to this Plan.

D2.3 Restriction on Development and Site Alteration

- a) *Development and site alteration* shall be restricted in or near sensitive *surface water features* and sensitive ground water features such that these features and their related hydrologic

functions will be protected, improved or restored.

- b) Mitigative measures and/or alternative *development* approaches may be required in order to protect, improve or restore sensitive *surface water features*, sensitive ground water features, and their hydrologic functions.

D3 NATURAL AND MAN-MADE HAZARDS

D3.1 Hazardous Lands

Hazardous lands are lands that could be unsafe for *development* due to naturally occurring processes. Along the shoreline of Lake Erie, this means the land, including that covered by water and the furthest landward limit of the *flooding hazard*, *erosion hazard* or *dynamic beach hazard* limits. Along *river, stream and small inland lake systems*, this means the land, including that covered by water, to the furthest landward limit of the *flooding hazard* or *erosion hazard* limits.

D3.2 Shoreline of Lake Erie

The Conservation Authorities have commissioned Shoreline Management Plans for the Lake Erie shoreline within the boundaries of the County of Elgin. These management plans were prepared to balance the options of shoreline prevention, protection, environmental impact, monitoring, emergency response and public education in an overall management plan of the shoreline resources. The recommendations of these Shoreline Management Plans and the *Conservation Authority* regulations have resulted in *development* design standards and/or prohibition within the established shoreline hazard lands.

The shoreline hazard lands is not shown on this Plan. Instead, it is a policy of this Plan that this area be delineated in lower tier Official Plans and zoning by-laws.

D3.3 Development in a Floodplain

It is the intent of this Plan that no *development* or *site alteration* be permitted within the *floodplain* of a river or stream system to minimize and eliminate any risks to life and property resulting from flooding, in accordance with relevant *Conservation Authority* regulations. Buildings and structures are not permitted within the *floodplain*, except where written permission is obtained from the appropriate *Conservation Authority*.

D3.4 Erosion Hazard Limit

Development shall be directed to an area outside of the *erosion hazard* limit of a riverine valley slope. The *erosion hazard* limit distance shall be determined in consultation with the affected municipality and *Conservation Authority* and be subject to the following criteria as identified within the provincial technical guide for natural hazards:

- a) toe erosion allowance;
- b) stable slope allowance (3:1);
- c) *flooding hazard* limit or meander belt allowance; and,
- d) erosion/erosion access allowance.

The *erosion hazard* limit will be defined on a site-by-site basis in consultation with the appropriate *Conservation Authority*. Provincial guidelines related to natural hazards will be used as a basis in determining the *erosion hazard* limit.

D3.5 HAZARDOUS SLOPES

- a) *Development* shall be sufficiently setback from the top of bank of slopes greater than 3:1. The *development* setback distance shall be determined by a qualified geotechnical engineer in consultation with the local municipality and the appropriate *Conservation Authority* and be subject to the following criteria:
 - i) soil type and groundwater patterns;
 - ii) vegetation type and cover;
 - iii) severity of slope; and,
 - iv) nature of *development*;

D3.6 ONTARIO REGULATIONS

Certain lands within the County are subject to the Development, Interference with Wetlands and Alterations to Shorelines and Watercourse Regulation issued by the Province. The Regulation Limit represents a compilation of various information including

engineered *floodplain* mapping, estimated *floodplain* mapping and *erosion hazards*. The extent of these regulated areas and features are subject to adjustment as confirmed by site visits and studies. The respective Conservation Authorities should be consulted for details.

Development in a regulated area or the straightening, changing, diverting or interfering in any way with the existing channel or a river, creek, stream, watercourse or changing or interfering with a *wetland* shall require permission from the applicable *Conservation Authority*.

D3.7 WASTE DISPOSAL SITES

Known existing and former (closed) waste disposal sites are shown with a symbol on Schedule B.

The *development* of new uses or new or enlarged buildings or structures within an assessment area of 500 metres from the fill area of the waste disposal site may be permitted, provided an assessment is completed to determine:

- a) whether the proposed use will be adversely affected by noise, odour, dust or other nuisance factors from the *waste disposal site*;
- b) potential traffic impacts;
- c) whether the proposed use will be adversely affected by ground and surface water contamination by leachate migrating from the *waste disposal site*; and,
- d) the impact of the proposed use on leachate migration from the *landfill site*.

The assessment is intended to address these matters and other items outlined in the Province's Guideline D-4, April 1994, or its successor as required to ensure that the proposed land uses are *compatible* in nature and do not adversely impact upon each other.

In order to implement these policies, local municipal Zoning By-laws shall restrict the *development* of new uses or new or enlarged buildings or structures on lands within the 500 metre assessment area in accordance with this Plan. As an alternative, all lands within the assessment area shall be subject to a Holding provision in the Zoning By-law. The lifting of a Holding provision permitting the *development* of any new use or new or enlarged buildings or

structures within the assessment area shall not occur until *Council* is satisfied that all of the studies required by the Municipality and County have been completed.

D3.8 CONTAMINATED OR POTENTIALLY CONTAMINATED SITES

If the site of a proposed use or *development* is in the opinion of the County or other approval authority known or suspected to be a contaminated site, *Council* shall require that prior to permitting *development* on the site, the proponent shall complete the following to the satisfaction of the County or other approval authority:

- a) Environmental Site Assessment (ESA) in accordance with Ministry of Environment guidelines; and,
- b) site restoration in accordance with a remedial plan, where the need for remediation is identified.

Where an ESA has determined that contamination exists, no *development* shall be permitted until such time as the completion of any required decommissioning and/or remediation of the site, and a Record of Site Condition has been prepared by a Qualified Person confirming that site soil conditions meet Provincial criteria for the proposed use.

APPENDIX 'A' - DEFINED TERMS

Adjacent Lands

Means those lands contiguous to a specific *natural heritage feature or area* where it is likely that *development* or *site alteration* would have a *negative impact* on the feature or area.

Adverse Effects

Means, pursuant to the Environmental Protection Act one or more of:

- a) impairment of the quality of the natural environment for any use that can be made of it;
- b) injury or damage to property or plant or animal life;
- c) harm or material discomfort to any person;
- d) an adverse effect on the health of any person;
- e) impairment of the safety of any person;
- f) rendering any property or plant or animal life unfit for human use;
- g) loss of enjoyment or normal use of property; and,
- h) interference with normal conduct of business.

Agricultural Use

Means the growing of crops, including nursery and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including accommodation for full-time farm labour when the size and nature of the operation requires additional employment.

Airports

Means all Ontario *airports*, including designated lands for future *airports*, with Noise Exposure Forecast/Noise Exposure Projection mapping.

Alternative Energy Systems

Means sources of energy or energy conversion processes that significantly reduce the amount of harmful emissions to the environment (air, earth and water) when compared to conventional energy systems

Archaeological Resources

Means artifacts, archaeological sites and marine archaeological sites. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the Ontario Heritage Act.

Areas of Archaeological Potential

Means areas with the likelihood to contain *archaeological resources*. Criteria for determining archaeological potential are established by the Province, but municipal approaches which achieve the same objectives may also be used. Archaeological potential is confirmed through archaeological fieldwork undertaken in accordance with the Ontario Heritage Act.

Area of Natural and Scientific Interest

Means an area of land and water containing natural landscapes or features that has been identified as having earth or life science values related to protection, scientific study or education.

Brownfield Sites

Means undeveloped or previously developed properties that may be contaminated. These are usually, but not exclusively, former industrial or commercial properties that may be underutilized, derelict or vacant.

Built Heritage Resources

Means an individual or group of *significant* buildings, structures, monuments, installations, or remains, which are associated with architectural, cultural, social, political, economic, or military history and identified as being important to a community. These resources may be designated or subject to a conservation easement under the Ontario Heritage Act, or listed by the federal or provincial governments or the County.

Coastal Wetland

Means:

- a) any *wetland* that is located on one of the Great Lakes or their connecting channels (Lake St. Clair, St. Mary's, St. Clair, Detroit, Niagara and St. Lawrence Rivers); or,
- b) any other *wetland* that is on a tributary to any of the above-specified water bodies and lies, either wholly or in part, downstream of a line located 2 kilometres upstream of the 1:100 year floodline (plus wave

run-up) of the large water body to which the tributary is connected.

Compatible

Means the *development* or *redevelopment* of uses which may not necessarily be the same as or similar to the existing *development*, but can coexist with the surrounding area without *negative impact*.

Comprehensive Review

Means:

- a) for the purposes of Sections B2.8 and B2.7.1 of this Plan, an Official Plan Review which is initiated by a planning authority, or an Official Plan Amendment which is initiated or adopted by a planning authority, which:
 - i. is based on a review of population and growth projections and which reflect projections and allocations by upper-tier municipalities and *provincial plans*, where applicable; considers alternative directions for growth; and determines how best to accommodate this growth while protecting provincial interests;
 - ii. utilizes opportunities to accommodate projected growth through *intensification* and *redevelopment*;
 - iii. confirms that the lands to be developed do not comprise *specialty crop areas*;
 - iv. is integrated with planning for *infrastructure* and *public service facilities*; and,
 - v. considers cross-jurisdictional issues.

Conservation Authority

Means the Lower Thames *Conservation Authority*, the Kettle Creek *Conservation Authority*, the Catfish Creek *Conservation Authority* or the Long Point Region *Conservation Authority*.

Conserved

Means the identification, protection, use and/or management of cultural heritage and *archaeological resources* in such a way that their heritage values, attributes and integrity are retained. This may be addressed through a conservation plan or heritage impact assessment.

Contaminated Sites

Means property or lands that have not been rehabilitated and for reasons of public safety or environmental quality, are unsafe for use as a result of human activities, particularly those activities that have left a chemical or radioactive residue.

Council

Means the Municipal *Council* of the Corporation of the County of Elgin.

Cultural Heritage Landscape

Means a defined geographical area of heritage significance that has been modified by human activities and is valued by a community. It involves a grouping(s) of individual heritage features such as structures, spaces, archaeological sites and natural elements, which together form a *significant* type of heritage form, distinctive from that of its constituent elements or parts.

Deposits of Mineral Aggregate Resources

Means an area of identified *mineral aggregate resources*, as delineated in Aggregate Resource Inventory Papers or comprehensive studies prepared using evaluation procedures established by the Province for surficial and bedrock resources, as amended from time to time, that has a sufficient quantity and quality to warrant present or future extraction.

Designated and Available

Means lands designated in this Plan for urban and hamlet residential use.

Development

Means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act, but does not include:

- a) activities that create or maintain *infrastructure* authorized under an environmental assessment process; and,
- b) works subject to the Drainage Act.

Dynamic Beach Hazard

Means areas of inherently unstable accumulations of shoreline sediments along the Great Lakes - St. Lawrence River System and large inland lakes, as identified

by provincial standards, as amended from time to time. The *dynamic beach hazard* limit consists of the *flooding hazard* limit plus a dynamic beach allowance.

Ecological Function

Means the natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socio-economic interactions.

Emergency Housing

Means emergency shelters or facilities that accommodate not less than three and not more than ten residents, and provide temporary lodging, board, and/or personal support services to homeless individuals in a 24-hour supervised setting, for up to 30 days.

Employment Area

Means those areas designated in an official plan for clusters of business and economic activities including, but not limited to, manufacturing, warehousing, offices, and associated retail and ancillary facilities.

Endangered Species

Means a species that is listed or categorized an *Endangered species* on the Ministry of Natural Resources' official species at risk list, as updated and amended from time to time.

Enhance

Means, as applied to the natural heritage/environmental policies of this Plan, strengthening the components of a natural area through management measures to increase stability, biodiversity and long-term viability.

Means, in other respects, to complement and strengthen the character of the County, community, neighbourhood, site or structure.

Erosion Hazard

Means the loss of land, due to human or natural processes, that poses a threat to life and property. The *erosion hazard* limit is determined using considerations that include the 100 year erosion rate (the average annual rate of recession extended over an one hundred year time span), an allowance for slope stability, and an erosion/erosion access allowance.

Estate Winery

Means a secondary use to a vineyard, where wines are produced and may include storage, display, processing, *hospitality room*, administrative facilities, and outdoor patio area.

Farm Winery

Means a building or structure of part thereof, associated with *agricultural use(s)* on the same farm lot, where wines are produced and may include storage, display, processing, wine tasting, a tied house licensed by the Alcohol and Gaming Commission of Ontario, and retail, administrative facilities and outdoor patio area, but shall not include a restaurant, banquet facility, or on-site commercial kitchen. Wine tasting and the offering or sale of locally grown product samples is considered part of the *farm winery* activity.

Fish Habitat

As defined in the Fisheries Act, C. F- 14, means spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes.

Floodplain

For *river stream, and small inland lake systems*, means the area, usually low lands adjoining a watercourse, which has been or may be subject to *flooding hazards*.

Flooding Hazard

Means the inundation, under the conditions specified below, of areas adjacent to a shoreline or a river or stream system and not ordinarily covered by water:

- a) Along the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes, the *flooding hazard* limit is based on the one hundred year flood level plus an allowance for wave uprush and other water-related hazards;
- b) Along river, stream and small inland lake systems, the *flooding hazard* limit is the greater of:
 - i. the flood resulting from the rainfall actually experienced during a major storm such as the Hurricane Hazel storm (1954) or the Timmins storm (1961), transposed over a specific watershed and combined with the local conditions, where evidence suggests that the storm event could have potentially occurred over watersheds in the general area;

- ii. the one hundred year flood; and
- iii. a flood which is greater than 1. or 2. which was actually experienced in a particular watershed or portion thereof as a result of ice jams and which has been approved as the standard for that specific area by the Minister of Natural Resources; where the use of the one hundred year flood or the actually experienced event has been approved by the Minister of Natural Resources as the standard for a specific watershed (where the past history of flooding supports the lowering of the standard).

Groundwater Features

Refers to water-related features in the earth's subsurface, including recharge/discharge areas, water tables, unsaturated zones that can be defined by surface and subsurface hydrogeologic investigations.

Hazardous Lands

Means property or lands that could be unsafe for *development* due to naturally occurring processes. Along the shorelines of the Great Lakes - St. Lawrence River System, this means the land, including that covered by water, between the international boundary, where applicable, and the furthest landward limit of the *flooding hazard*, *erosion hazard* or *dynamic beach hazard* limits. Along the shorelines of large inland lakes, this means the land, including that covered by water, between a defined offshore distance or depth and the furthest landward limit of the *flooding hazard*, *erosion hazard* or *dynamic beach hazard* limits. Along river, stream and small inland lake systems, this means the land, including that covered by water, to the furthest landward limit of the *flooding hazard* or *erosion hazard* limits.

Hazardous Substances

Means substances which, individually, or in combination with other substances, are normally considered to pose a danger to public health, safety and the environment. These substances generally include a wide array of materials that are toxic, ignitable, corrosive, reactive, radioactive or pathological.

Heritage Attributes

Means the principal features, characteristics, context and appearance that contribute to the cultural heritage significance of a *protected heritage property*.

Heritage Conservation District

Means an area defined by the County to be of unique character to be *conserved* through a designation By-law pursuant to Part V of the Ontario Heritage Act.

Home Industry

Means a small-scale *industrial use*, including, but not limited to a carpentry, metal working, welding or electrical shop that provides services or wares to the rural community and which is an accessory use to an *agricultural use* or a single detached dwelling. For the purpose of this Official Plan, the sale, storage or repair of non-farm motor vehicles, mobile homes and/or trailers as well as a paint shop are not considered a *home industry*. The policies of each local Official Plan shall further detail the types of uses permitted or prohibited as part of a *home industry*.

Home Occupation

Means an occupation that provides a service as an accessory use within a dwelling unit performed by one or more of its residents. Such activities may include services performed by an accountant, architect, auditor, dentist, medical practitioner, engineer, insurance agent, land surveyor, lawyer, realtor, planner, hairdresser or a provider of private home daycare.

Hospitality Room

Means a designated area within the main winery building and/or patio attached to the main winery building where complementary food service is provided to patrons for the purpose of an accompaniment to the wine tasting experience, but shall not include a restaurant, banquet hall or conference facility.

Hydrological Functions

Means the functions of the hydrological cycle that include the occurrence, circulation, distribution, and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water's interaction with the environment including its relation to living things.

Infrastructure

Means physical structures that form the foundation for *development*. *Infrastructure* includes sewage and water works, waste management systems, electric power generation and transmission, communications/telecommunications, transit and transportation corridors and facilities, oil and gas pipelines and associated facilities.

Institutional Use

Means a use that caters to the social, educational and/or religious needs of humans.

Intensification

Means the *development* of a property, site or area at a higher density than currently exists through:

- a) *redevelopment*, including the reuse of *brownfield sites*;
- b) the *development* of vacant and/or underutilized lots within previously developed areas;
- c) *infill development*; and,
- d) the expansion or conversion of existing buildings.

Legal or Technical Reasons:

For the purposes of Section C1.2.2.4 of this Plan, means severances for purposes such as easements, corrections of deeds, quit claims, and minor boundary adjustments, which do not result in the creation of a new lot.

Low and Moderate Income Households

Means:

- a) in the case of ownership housing, households with incomes in the lowest 60 percent of the income distribution for the *regional market area*; or,
- b) in the case of rental housing, households with incomes in the lowest 60 percent of the income distribution for renter households for the *regional market area*.

Mineral Aggregate Operation

Means:

- a) lands under license or permit, other than for wayside pits and quarries, issued in accordance with the Aggregate Resource Act, or successors thereto; and,
- b) associated facilities use in extraction, transport, beneficiation, processing or recycling of *mineral aggregate resources* and derived products such as asphalt and concrete, or the production of secondary related products.

Mineral Aggregate Resources

Means gravel, sand, clay, earth, shale, stone, limestone, dolostone, sandstone, marble, granite, rock or other material prescribed under the Aggregate Resources Act suitable for construction, industrial, manufacturing and maintenance purposes but does not include metallic ores, asbestos, graphite, granite, mica, nepheline syenite, salt, talc, wollastonite, mine tailings or other material prescribed under the Mining Act.

Minimum Distance Separation (MDS) Formulae

Means formulae and associated guidelines developed by the Province to separate uses so as to reduce incompatibility concerns about odour from livestock facilities.

Natural Heritage Features and Areas

Means features and areas, including *significant wetlands*, *fish habitat*, *significant woodlands*, *significant valleylands*, *significant habitat of endangered species and threatened species*, *significant wildlife habitat*, and *significant areas of natural and scientific interest* that are important for their environmental and social values as a legacy of the natural landscapes of an area.

Natural Heritage System

Means a system made up of *natural heritage features and areas*, linked by natural corridors which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species and *ecosystems*. These systems can include lands that have been restored and areas with the potential to be restored to a natural state.

Negative Impact

Means:

- a) in regard to Section D2 degradation to the *quality and quantity of water*, *sensitive surface water features* and *sensitive ground water features*, and their related *hydrologic functions*, due to single, multiple or successive *development* or *site alteration* activities;
- b) in regard to *fish habitat*, the harmful alteration, disruption or destruction of *fish habitat*, except where, in conjunction with the appropriate authorities, it has been authorized under the Fisheries Act, using the guiding principle of no net loss of productive capacity; and,

- c) in regard to other *natural heritage features and areas* in Section D1 degradation that threatens the health and integrity of the natural features or *ecological functions* for which an area is identified due to single, multiple or successive *development* or *site alteration* activities.

Normal Farm Practices

Means a practice, as defined in the Farming and Food Production Protection Act, 1998, that is conducted in a manner consistent with proper and acceptable customs and standards as established and followed by similar agricultural operations under similar circumstances; or makes use of innovative technology in a manner consistent with proper advanced farm management practices. *Normal farm practices* shall be consistent with the Nutrient Management Act, 2002 and regulations made under that Act.

Partial Services

Means:

- a) municipal sewage services or private communal sewage services and individual on-site water services; or
- b) municipal water services or private communal water services and individual on-site sewage services.

Petroleum Resources

Means oil, gas, and brine resources which have been identified through exploration and verified by preliminary drilling or other forms of investigation. This may include sites of former operations where resources are still present or former sites that may be converted to underground storage for natural gas or other hydrocarbons.

Portable Asphalt Plant

Means a facility:

- a) with equipment designed to heat and dry aggregate and to mix aggregate with bituminous asphalt to produce asphalt paving material, and includes stockpiling and storage of bulk materials used in the process; and,
- b) which is not of permanent construction, but which is to be dismantled at the completion of the construction project.

Portable Concrete Plant

Means a building or structure:

- a) with equipment designed to mix cementing materials, aggregate, water and admixtures to produce concrete, and includes stockpiling and storage of bulk materials used in the process; and,
- b) which is not of permanent construction, but which is designed to be dismantled at the completion of the construction project.

Prime Agricultural Area

Means an area where *prime agricultural land* predominates. This includes: areas of *prime agricultural lands* and associated Canada Land Inventory Class 4-7 soils; and additional areas where there is a local concentration of farms which exhibit characteristics of on-going agriculture.

Prime Agricultural Land

Means land that includes specialty crop lands and/or Canada Land Inventory Classes 1, 2 and 3 soils, in this order for priority protection.

Protected Heritage Property

Means designated real property and heritage conservation easement property under the Ontario Heritage Act and property that is subject to a covenant or agreement between the property owner and a conservation body or level of government, registered on title, with the primary purpose of conserving a cultural heritage resource or preventing its destruction, demolition or loss.

Public Service Facilities

Means land, buildings and structures for the provision of programs and services provided or subsidized by a government or other body, such as social assistance, recreation, police and fire protection, health and educational programs, and cultural services. *Public service facilities* do not include *infrastructure*.

Redevelopment

Means the creation of new units, uses or lots on previously developed land in existing communities, including *brownfield sites*.

Reserve Sewage System Capacity

Means design or planned capacity in a centralized waste water treatment facility

which is not yet committed to existing or approved *development*. Reserve capacity for private communal sewage services and individual on-site sewage services is considered sufficient if the hauled sewage from the *development* can be treated or disposed of at sites approved under the Environmental Protection Act or the Ontario Water Resources Act, but not by land-applying untreated, hauled sewage.

Reserve Water System Capacity

Means design or planned capacity in a centralized water treatment facility which is not yet committed to existing or approved *development*.

Residential Intensification

Means *intensification* of a property, site or area which results in a net increase in residential units or accommodation and includes:

- a) redevelopment, including the *redevelopment* of *brownfield sites*;
- b) the *development* of vacant or underutilized lots within previously developed areas;
- c) infill *development*;
- d) the conversion or expansion of existing industrial, commercial and institutional buildings for residential use; and,
- e) the conversion or expansion of existing residential buildings to create new residential units or accommodation, including accessory apartments, secondary suites and rooming houses.

Secondary Uses

Means uses secondary to the principal use of the property, including, but not limited to, *home occupations*, *home industries* and uses that produce value-added agricultural products from the farm operation on the property.

Sensitive Land Use

Means buildings or structures or parts thereof, amenity areas or outdoor spaces where routine or normal activities occurring at reasonably expected times would experience one or more *adverse effects* from contaminant discharges generated by a major nearby facility. *Sensitive land uses* may be part of the natural or built environment. Examples include residences, day nurseries and educational and health facilities.

Settlement areas

Means urban areas and rural *settlement areas* within Municipalities, as depicted in Schedule A, such as cities, towns, villages and hamlets that are:

- a) built up areas where *development* is concentrated and which have a mix of land uses; and,
- b) lands which have been designated in an Official Plan for *development* over the long term planning horizon provided for in this Plan. In cases where land in designated growth areas is not available, the *settlement area* may be no larger than the area where *development* is concentrated.

Significant Wetland

Means a wetland area or *coastal wetland* approved as Provincially *significant* by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time.

Significant Woodland

Means a *woodland* 10 hectares or greater as a significant woodland. *Woodlands* between 2 hectares and 10 hectares are also *significant* if they are located within 30 metres of the boundary of a significant natural heritage feature (e.g. *significant wetland, significant valleyland*) *fish habitat and/ or watercourses*.

Significant Habitat of Endangered Species and Threatened Species

Means the habitat, as approved by the Ontario Ministry of Natural Resources, that is necessary for the maintenance, survival, and/or the recovery of naturally occurring or reintroduced populations of endangered and *threatened species*, and where those areas of occurrence are occupied or habitually occupied by the species during all or any part(s) of its life cycle.

Significant Wildlife Habitat

Means areas that are ecologically important in terms of features, functions, representation or amount, contributing to the quality and diversity of an identifiable geographic area or *natural heritage system*. In making this determination on significance, the approval authority will rely on the MNR Wildlife Habitat Technical Guide and the Natural Heritage Reference Manual and the Eco-Region Criteria Schedules and using Ecological Land Classification.

Significant Valleyland

Means a valleyland that has a well-defined slope, with permanent or intermittent water flowing through and has an average width of 25 metres or more. *Significant*

valleyland boundaries will be defined taking into consideration stable top of bank, riparian vegetation and flooding hazard limits.

Significant Area of Natural and Scientific Interest

Means an area identified as Provincially *significant* by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time.

Significant Built Heritage Resources, Cultural Heritage Landscapes, and Archaeological Resources

Means resources that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people.

Site Alteration

Means activities, such as the placement of fill, grading and excavation that would change the landform and natural vegetative characteristics of a site.

Special Needs

Means any housing, including dedicated facilities, in whole or in part, that is used by people who have specific needs beyond economic needs, including but not limited to, needs such as mobility requirements or support functions required for daily living. Examples of *special needs* housing may include, but are not limited to, housing for persons with disabilities such as physical, sensory or mental health disabilities, and housing for the elderly.

Specialty Crop Area

Means areas designated using evaluation procedures established by the province, as amended from time to time, where specialty crops such as tender fruits (peaches, cherries, plums), grapes, other fruit crops, vegetable crops, greenhouse crops, and crops from agriculturally developed organic soil lands are predominantly grown, usually resulting from:

- a) soils that have suitability to produce specialty crops, or lands that are subject to special climatic conditions, or a combination of both; and/or,
- b) a combination of farmers skilled in the production of specialty crops, and of capital investment in related facilities and services to produce, store, or process specialty crops.

Surface Water Feature

Means water-related features on the earth's surface including headwaters, rivers, stream channels, inland lakes, seepage areas recharge/discharge areas, springs, *wetlands*, and associated riparian lands that can be defined by their soil moisture, soil type, vegetation topographic characteristics.

Threatened Species

Means a species that is listed or categorized as a *Threatened species* on the Ontario Ministry of Natural Resources' official species at risk list, as updated and amended from time to time.

Valleylands

Means a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

Wayside Pit or Quarry

Means a temporary *pit or quarry* opened and used by or for a public authority solely for purpose of a particular project or contract of road construction and which is not located within the right-of-way of a public street.

Wetland

Means lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of *wetlands* are swamps, marshes, bogs and fens.

Wildlife Habitat

Means areas where plants, animals and other organisms live and find adequate amounts of food, water, shelter and space to sustain their populations. Specific *wildlife habitats* of concern, may include areas where a species concentrate at a vulnerable point in their annual or life cycle and an area that is important to a migratory or non-migratory species.

Woodlands

Means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrological and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of *wildlife habitat*, outdoor recreational opportunities, and the

sustainable harvest of a wide range of woodland products. *Woodlands* include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels.

APPENDIX 'B' – CONTENTS OF AN ENVIRONMENTAL IMPACT STUDY

The determination of the scope and content of an Environmental Impact Study (EIS) shall be in general accordance with the guidelines set out in this appendix and be agreed to in advance with the appropriate agencies and shall be scoped as required.

The area under study shall generally include the lands that are subject of the application and any lands that may be subject to impacts from the proposed *development*. Once agreement on the scope of the EIS is determined, all or some of the items below may need to be carried out:

- a) a description of the proposed undertaking;
- b) a three season survey of trees, shrubs and herbaceous vegetation on-site and classification of community types using criteria as standardized by the Ecological Land Classification for Southern Ontario (Lee, et al., 1998);
- c) a three season survey of bird, mammal and reptile and amphibian species and an assessment of potential wildlife species based on available habitat types with the bird survey being undertaken during the peak period for migratory and breeding bird activity (i.e. May and June for Breeding Bird Activities and May to October for peak migratory activity);
- d) a description which identifies and confirms candidate and significant wildlife habitat;
- e) a list based on the above mentioned inventories, of any vegetation or wildlife species observed and reported on-site that are designated rare, threatened or endangered by a government agency as well as a map illustrating the features and their locations;
- f) a description of the location and characteristics of all *wetlands*, all permanent and intermittent watercourses or waterbodies and the associated quality and type of aquatic or *fish habitat* (e.g., cold / warm water) including observed and recorded fish species present with reference to fish sampling data or benthic/invertebrate studies should accompany the field data on watercourses/fisheries.
- g) preparation of a *wetland* evaluation in accordance with the Ministry of Natural Resources evaluation system. In all cases, the Ministry of Natural Resources is responsible for reviewing and approving the wetland evaluations;
- h) an overview of site geology, topography and soil types, including data obtained from hand-augered holes or test pits;
- i) an overview of site hydrology describing recharge and discharge areas, and characteristics of existing or new wells;

- j) a discussion of existing and proposed sources of potential contamination (e.g. gas stations, machinery repair operations, etc.);
- k) a description of *ecological functions* and interrelationships for each natural heritage feature (e.g., ground water discharge maintaining a cold water trout stream, wildlife passage corridors, provision of habitat for rare species, vegetation of steeply-sloped lands that function to prevent erosion, etc.);
- l) how the proposed use affects the possibility of linking components of the significant natural heritage features and *natural heritage system* by natural corridors that may or may not be identified on the schedules to this Plan; and,
- m) a Management Plan (MP) identifying how the *adverse effects* will be avoided over the construction period and the life of the undertaking and how environmental features and functions will be enhanced where appropriate and describing the net effect of the undertaking after implementation of the MP. The MP shall also establish the limits of buffers and setbacks adjacent to watercourses, waterbodies, valleys, *wetlands* and vegetation to protect the natural feature and its attributes and/or function from the effects of *development*. Performance measures, monitoring and adaptive management (where appropriate) may also need to be considered.

As required, an EIS should also include mapping to illustrate the proposed development in relation to natural heritage features and areas. The mapping should include:

- known significant natural heritage features;
- the property boundary;
- the study area/adjacent lands; and
- all components of the project proposal.

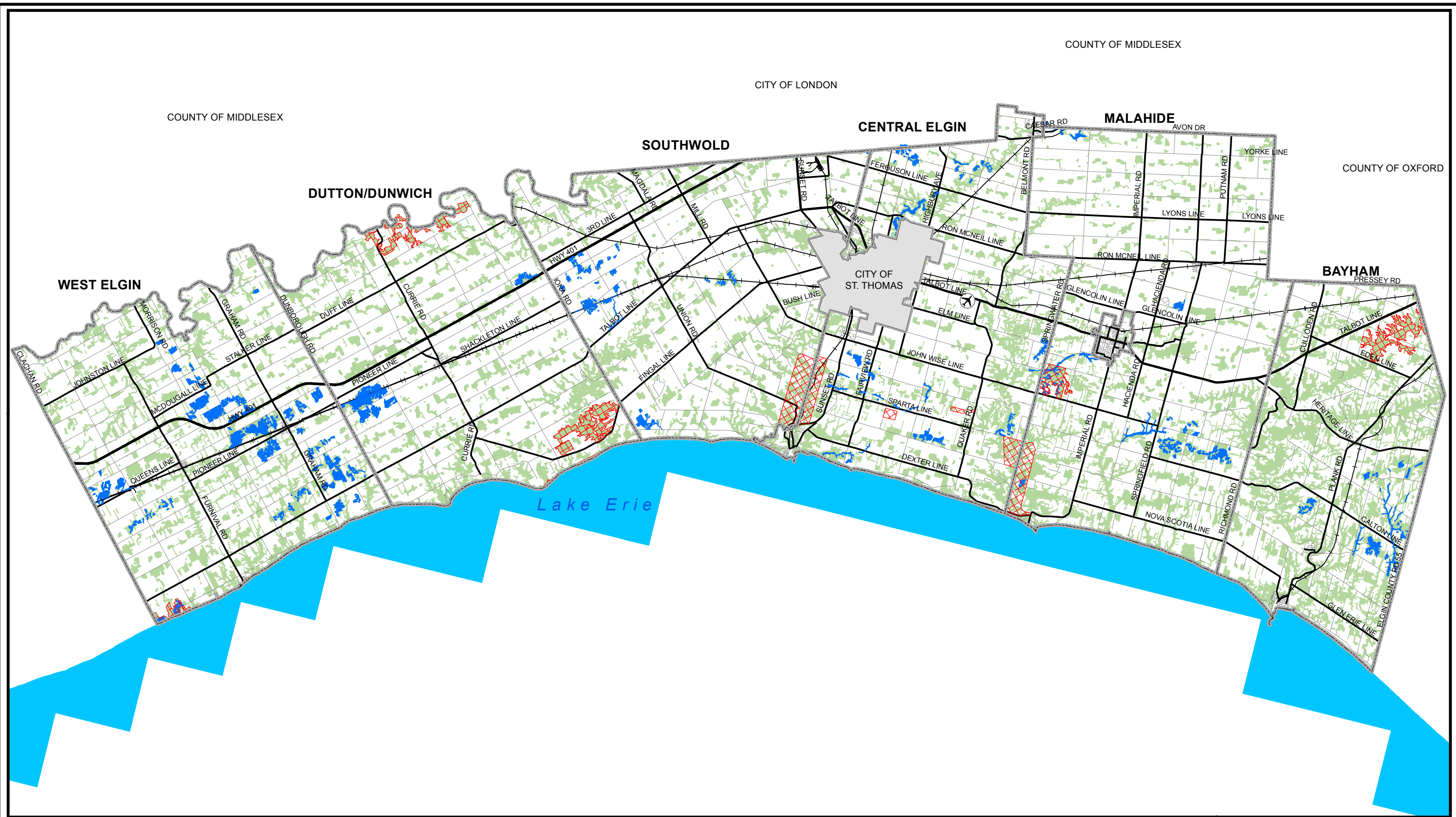
Description of Changes

Any EIS shall describe what changes the proposed *development* and/or *site alteration* will have on the following, if applicable:

- a) significant natural heritage features (i.e. those outlined in Section D1.2 of the Plan);
- b) ground and surface water recharge and discharge;
- c) predicted ground water use and potential for interference with nearby wells (e.g., well yield, water quality);
- d) ground water quality or quantity as it affects the natural environment (e.g. discharge to surface, aquifer conditions);
- e) surface water quality and quantity (e.g., sedimentation, temperature, flow volume);

- f) terrestrial *wildlife habitat* quantity or quality (e.g., loss of deer wintering yards, cover for wildlife movement, increased potential for bank erosion);
- g) aquatic or *fish habitat* quantity or quality (e.g., water warming from removal of stream bank vegetation, potential for destruction or alteration of a fisheries resource);
- h) wildlife movement corridors;
- i) the *ecological function* of the natural environmental features;
- j) noise and traffic levels and their impacts on wildlife as compared to existing conditions (e.g., truck traffic from excavation activities);
- k) the potential for fragmentation or isolation of portions of a *significant* natural heritage feature or breakage of an identified linkage as a result of the proposed change in land use;
- l) the potential for off-site discharge of materials (e.g., storm water runoff, effluent, odours, air emissions) as a result of the proposed *development*;
- m) erosion potential from grading and construction techniques and proposed mitigation measures for steep slopes or unstable soils;
- n) the compatibility of the proposed land use with surrounding land uses within the Greenlands system and/or associated linkages;
- o) flooding or changes in storm water retention capabilities as a result of the proposed land use or changes to flood attenuation capabilities of lands in the area; and,
- p) the duration of the effects, the size of the area affected, the sensitivity of the feature to change and any loss of *ecological functions* either within the area proposed for *development*.

In addition to the above, the EIS shall describe the positive impacts or enhancements that may occur as a result of mitigation.



County of Elgin Official Plan Appendix #1 Natural Heritage Features and Areas

Resource Areas

- Woodlands
- Provincially Significant Wetlands
- ANSI

St. Thomas Municipal Airport

0 5 10 15 20

km

Data Source:
Data provided by the County of Elgin and the Ministry of Natural Resources Land Information Ontario.
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