

## HEDGEROWS AND WOODLANDS

1220\_ Hedgerows and woodlands are important features in Rural London, and an integral part of the farm unit. Woodlands often serve as an important agricultural resource, and are to be harvested in accordance with good forestry practice and the *Tree Conservation By-law*. The continued use and sustainable management of woodlands supports agricultural operations.

1. Development within a farm parcel should in no instances damage the functional viability of woodlands either on the parcel or neighbouring parcels so as to respect their value as a part of the rural landscape and the city's Natural Heritage System.
2. Hedgerows and woodlands are to be maintained and, where possible, enhanced to bolster the image of the Forest City, enhance their environmental features and areas and their ecological functions, and connect to the city's Natural Heritage System.

1221\_ To promote the retention, responsible management and expansion of woodlands, the City, in cooperation with the conservation authorities, other agencies or groups and property owners, may:

1. Encourage the expansion or creation of woodlands on lands having poorer soil capability or other limitations for farmland, and on publicly-owned lands.
2. Support a tree planting program for Rural London.
3. Administer and enforce a by-law under the *Municipal Act* or other relevant legislation to limit the destruction of trees and to assist in ensuring the long-term health and productivity of woodlands.
4. Encourage property owners to make use of programs and services provided by the Ministry of Natural Resources and Forestry and the conservation authorities for the management of forests and woodlots.
5. Consider the use of other incentives for woodland retention and expansion by private property owners.

## PUBLIC REALM

1222\_ For the interface of Farmland and Green Space, efforts should be made to design and utilize Farmland areas in ways that prevent where possible, and mitigate where necessary, the effects of agricultural practices, soil run-off, and wind erosion on sensitive uses, as defined in the *Provincial Policy Statement*. Particular effort should be made to protect riparian areas.

1223\_ Where new public parkland and green space areas are proposed, suitable layout, design, and setbacks of amenities shall be required to ensure the viability of adjacent farm activities.

1224\_ Rural Thoroughfares and Rural Connectors should be clear to provide efficient movement for safe passing and allow for the movement of agricultural vehicles and agricultural products. Where there is a foreseeable conflict, agricultural vehicles will take precedence. Rural Thoroughfares and Rural Connectors will remain clear through measures including:

1. Proper drainage design.
2. Limiting farm units to a single access point with the exception of livestock operations and field access.
3. Providing off-street parking for non-agricultural uses.
4. Limiting the use of curbs and providing wide shoulders to accommodate large farm machinery.
5. Using "Slow Moving Vehicle" signage on roadways frequently used by the farming community.

## AGRICULTURAL LAND CONSENT

### GENERAL CONSENT POLICIES

1225\_ Within the Farmland Place Type consent to sever will be granted where consistent with the *Provincial Policy Statement* and only if the use of the land is in conformity with all applicable policies of this Plan, and in accordance with the provisions of the *Zoning By-law*, and it is clear that a plan of subdivision is not required for the orderly development of the lands. Where a consent contravenes the *Zoning By-law*, the granting of a consent will be conditional upon the approval of a zoning by-law amendment.

1226\_ Applications for consent will be reviewed for conformity with the following criteria:

1. An uneconomical extension of any major municipal service will not be required.
2. Ribbon development of any type along highways or major streets will be prevented.
3. As a condition of consent being granted, the applicant shall demonstrate that an adequate supply of potable water that meets the requirements of the *Ontario Drinking Water Standards* can be provided to the proposed lot(s), and that there will be no impacts on adjacent properties that are serviced by private water wells. The applicant shall also demonstrate that the development of private on-site waste water systems and private stormwater systems on the proposed lot(s) will not have an adverse impact on existing area properties serviced by private water wells. The reporting must meet the requirements of the Ministry of the Environment and Climate Change *Procedure D-5 Technical Guidelines for Private Wells: Water Supply Assessment*. A peer review by a qualified professional of this report may be required, at the applicant's expense.
4. As a condition of consent being granted, soils will be suitable or made suitable to support an individual on-site wastewater treatment system subject to the approval of the authority having jurisdiction.
5. All parcels must have access to a public street.
6. The Minimum Distance Separation policies in the Our Tools part of this Plan are complied with.
7. Both the severed and retained parcels created by the consent would conform with the provisions of the *Zoning By-law* and are appropriate for the use proposed.
8. The proposed consent will not detract from or result in the loss of area of any wetland, woodland, or other environmental feature identified or delineated on Map 5 - Natural Heritage.

9. Both the severed and retained parcels would conform with the Consent to Sever Lands policies in the Our Tools part of this Plan, where applicable.

1227\_ A consent to sever land in the Farmland Place Type may be granted only under the following circumstances and in conformity with the Rural Place Type policies of this Plan:

1. Consent for farming operations.
2. Lot corrections.
3. Surplus farm dwellings.
4. Agricultural-related commercial and industrial uses.

#### > CONSENTS FOR FARMING OPERATIONS

1228\_ It is the policy of this Plan to discourage the severing of smaller parcels from larger land holdings. In this regard, 40 hectares will be regarded as the minimum size for a basic farm parcel. City Council will discourage the severing of farm parcels which exceed 40 hectares in size. An application to sever may be permitted if the land is to be used for agricultural purposes and provided that the following criteria are met:

1. Both the severed and retained parcels are of sufficient size for the predominant type of agricultural uses common in the area, and are sufficiently large to maintain flexibility to provide for future changes in the type or size of agricultural operations.
2. The size of both the severed and retained parcels conforms with the provisions of the *Zoning By-law*. Should the severed or retained parcel not conform with the minimum lot area requirements of the *Zoning By-law*, a zoning by-law amendment will be required.

### > LOT CORRECTIONS

1229\_ The granting of consent for purposes of minor corrections or adjustments to lot boundaries will be permitted provided:

1. The conveyance does not lead to the creation of an undersized or irregularly shaped lot unsuited to the purpose for which it is being used or to be used.
2. The lands being conveyed will be registered in the same name and title as the lands to which they are being added and will be deemed from that date to be one parcel.

### > SURPLUS FARM DWELLINGS

1230\_ Consent to sever agricultural land to create a lot for an existing dwelling is permitted in conformity with the policies of the Farmland Place Type, where the land being severed from the dwelling lot is to be added to an adjoining parcel, subject to the following:

1. The land being conveyed from the dwelling lot parcel will be registered in the same name and title as the adjoining parcel and will be deemed from that date to be one parcel.
2. The retained dwelling lot will be kept to a minimum size necessary to comply with the *Zoning By-law* and to accommodate individual on-site waste water treatment and water supply.
3. The dwelling lot cannot be severed if it is part of the farm cluster. The farm cluster is the grouping of buildings and structures on the farm unit that would include the principal farm residence and any secondary dwelling unit and farm-related buildings and structures.
4. No new residential dwelling units are permitted on any remnant parcel of farmland created by the severance. Such restriction will be recognized in zoning.

### > LOT CREATION FOR AGRICULTURAL-RELATED USES

1231\_ A consent to sever agricultural land to create a lot for an agricultural-related commercial or industrial use may be permitted subject to the policies of the Farmland Place Type and provided the lot is kept to the minimum size necessary to support the use, comply with the *Zoning By-law*, and to accommodate individual on-site wastewater treatment and water supply.

## PLANNING AND DEVELOPMENT APPLICATIONS

1232\_ All planning and development applications will be evaluated based on the Planning and Development Applications section in the Our Tools part of this Plan.



## SPECIFIC POLICIES FOR THE FARMLAND PLACE TYPE

**1233\_** The following policies relate to specific sites or areas within the Farmland Place Type. These policies serve to augment the general policies for Farmland. Where there is a conflict between the following policies and the more general Farmland Place Type policies, these more specific policies shall prevail. Areas subject to specific policies are shown on Map 7 – Specific Policy Areas.

### 5067 AND 5221 COOK ROAD

**1234\_** In the Farmland Place Type located at 5067 Cook Road, the northerly portion of 5221 Cook Road, Con Gore E Pt Lot 10 and Con Gore W Pt Lot 10, in addition to the uses permitted in the Farmland Place Type, a pollution control plant may also be permitted, subject to the following:

1. The primary tanks of the facility are covered.
2. No incineration of biosolids shall occur on the site for a minimum of 20 years after the start-up date of the plant.
3. Any expansion of this facility beyond 4MIGD will be subject to an Environmental Assessment and full public review.

### 3345 GORE ROAD

**1235\_** In the Farmland Place Type applied to the lands located at 3345 Gore Road, a single detached dwelling may be permitted on a lot with a minimum lot area of 0.6 hectares with a minimum lot frontage of 44.5 metres.

### 2156 Highbury Avenue North

**1236\_** In the Farmland Place Type applied to the lands located at 2156 Highbury Avenue North (Part Lot 8, Concession 5), a severance to create three residential lots for non-farm dwellings will be permitted.

### 2701 Hyde Park Road

**1237\_** In the Farmland Place Type at 2701 Hyde Park Road, one consent to sever the existing non-farm residential use may be permitted.

### 6100 White Oak Road

**1238\_** In the Green Space and Farmland Place Types at 6100 White Oak Road, a cemetery use is permitted in addition to the uses permitted in the Farmland Place Type. Structures related to the cemetery use such as a place of worship, mausoleum or crematorium are prohibited.







# Rural Neighbourhoods

## OUR VISION FOR THE RURAL NEIGHBOURHOODS PLACE TYPE

**1239\_** Rural Neighbourhoods are the existing centres of non-agricultural activity in Rural London. They are expected to remain largely unchanged, particularly in terms of size, over the course of this Plan.

## ROLE WITHIN THE CITY STRUCTURE

**1240\_** Largely residential in character, Rural Neighbourhoods comprise existing historical rural villages and clusters or strips of non-farm settlement along some sections of streets outside of the Urban Growth Boundary. The Rural Neighbourhoods of Glanworth, Scottsville, and Brockley historically developed as farm service centres and currently exist as small residential communities with some small-scale commercial uses. These neighbourhoods are not regarded as centres for growth, and development will be limited to uses that can be accommodated on an infill basis and adequately served by on-site wastewater treatment systems and private wells in conformity with the Private Servicing Policies for Lands Outside of the Urban Growth Boundary in the Civic Infrastructure chapter of this Plan. There are also opportunities for infill lot creation within the identified established Rural Neighbourhoods.

## HOW WILL WE REALIZE OUR VISION?

1241\_ The Rural Neighbourhoods Place Type is applied only to the hamlets or residential settlement areas located outside of the Urban Growth Boundary. The primary intent of these policies is to direct urban development to the urban community and identified growth areas, and to discourage the creation of new rural settlement areas. Infill development will be permitted where possible but no extensions of existing rural neighbourhood areas for residential purposes will be permitted. Rural Neighbourhoods are expected to:

1. Provide opportunities for the location of new non-farm residential uses in the rural area of the city on an infill basis, to avoid the loss of productive agricultural lands.
2. Remain contiguous and maintain their existing boundaries.
3. Allow for the infill development of small-scale commercial, industrial, and institutional uses that serve the rural neighbourhood and surrounding rural community, which can be accommodated on individual on-site services in conformity with the policies of this Plan and are compatible with existing uses.
4. Minimize the potential for land use conflicts between residential uses of the settlement area and livestock facilities.





## PERMITTED USES

1242\_ The Rural Neighbourhoods Place Type may permit the following, in conformity with the policies of this Plan:

1. Single detached dwelling, including existing and infill development.
2. Secondary dwelling unit.
3. Home occupation.
4. Neighbourhood-scale needs including cemeteries.
5. Green space and conservation areas.
6. Recreational use.
7. Commercial and industrial uses related to the agricultural community.

## RESIDENTIAL USE

1243\_ Within the Rural Neighbourhoods Place Types shown on Map 1 – Place Types, the primary use of land will be single detached dwellings on lots suitably sized to allow for the proper siting and functioning of individual on-site water supply and wastewater treatment systems. Secondary residential units may be permitted subject to the ability of existing services to accommodate the proposed use.

## OTHER USES

1244\_ Small-scale facilities, group homes, and institutional and open space uses such as parks, community centres, day care centres, schools, and places of worship may be permitted in Rural Neighbourhoods Place Types.

## HOME OCCUPATIONS

1245\_ Home occupations which are secondary to a residential use may be permitted provided they are operated only by those residing on the property on which the home occupation is located and provided they are conducted entirely within the dwelling. The types of home occupation permitted and the standards applying to these uses will be set out in the *Zoning By-law*.

## RECREATIONAL USES

1246\_ Development of recreational facilities which enhance the rural character and viability of the rural neighbourhood may be supported provided they do not detract from the surrounding agricultural areas.

## COMMERCIAL AND INDUSTRIAL USES

1247\_ The establishment of new small-scale commercial or industrial uses or the conversion of an existing building to a small-scale commercial or industrial use may be permitted through a site-specific amendment to the *Zoning By-law* subject to compliance with the following criteria:

1. The use does not require municipal water or sewer and any industrial operation shall be limited to a “dry” use in that the use will not involve a significant number of employees, use significant amounts of water in its operations, or produce significant amounts of effluent.
2. The facility has direct access to a public street.
3. The adequacy and potability of water supply and the method of sewage disposal are satisfactory to the authority having approval jurisdiction.
4. Adequate buffering in the form of screening, landscaping, setbacks, outdoor storage restrictions, and similar measures to mitigate the potential adverse impacts of the proposed use on nearby residences can be provided, in conformity with the City Design policies of this Plan.
5. Adequate off-street parking is provided.
6. Adequate stormwater retention and drainage is available.
7. The Civic Infrastructure policies of this Plan are complied with.





## INTENSITY

1248\_ The Rural Neighbourhoods Place Type will contain:

1. Uses that enhance the rural character and viability of the rural neighbourhood and do not detract from the surrounding agricultural uses.
2. Small-scale commercial, recreational and institutional uses intended to meet local needs.
3. Uses and lot sizes that can be supported by adequate potable water supply and an adequate method of sewage disposal that are satisfactory to the authority having approval jurisdiction.
4. Contiguous development at densities to prevent estate lots and agricultural intrusions.

1249\_ Residential infill within the Rural Neighbourhoods Place Type will be permitted subject to the following criteria:

1. Consents should be granted only in areas where there will be no undue extension of, or requirement for, any major service.
2. The adequacy and potability of the water supply and method of sewage disposal are satisfactory to the authority having approval jurisdiction.
3. The site of the infill development is located within the limits of the Rural Neighbourhoods Place Type and does not represent an extension of the existing strip or node of non-farm development into the agricultural area.



## FORM

1250\_ The following form policies apply to the Rural Neighbourhoods Place Type:

1. Development in the Rural Neighbourhoods Place Type is to be street-oriented on all public rights-of-way, with buildings located consistent with the existing streetscape and front entrances oriented to the street.
2. Residential development will be the primary focus of the rural neighbourhood. New development will maintain the existing setbacks and street treatments present in the area.
3. Retail uses should be of a neighbourhood-scale to serve the rural neighbourhood and surrounding agricultural operations. Retail uses will maintain the rural character of their surroundings.
4. Institutional development will maintain the rural character of its surroundings.
5. Existing cultural heritage resources in the Rural Neighbourhoods Place Type should be evaluated, designated and conserved.
6. Where necessary to buffer a rural neighbourhood from adjacent noxious uses in the area, existing natural heritage features and areas, including hedgerows, woodlands and trees should be protected and enhanced to achieve this buffer.
7. Rural neighbourhoods should seek to create a unique and pleasant environment through:
  - a. Buildings approaching the street to distinguish the area from adjacent farmland and to create a sense of neighbourhood and identity.
  - b. Acknowledge transition to and from farmland through signage.
  - c. A compact rather than disjointed "ribbon" of housing.
  - d. Development that is scaled to encourage slower traffic.
  - e. Utilization of pedestrian amenities and street trees, in conformity with the City Design policies of this Plan.
8. Within Rural London consideration should be given to the designation of landscapes which have significant cultural heritage value. Those elements of Rural London already designated as having cultural heritage value will be conserved in accordance with provincial policies and in conformity with the relevant policies of this Plan.

## PLANNING AND DEVELOPMENT APPLICATIONS

1251\_ In addition to the Planning and Development Applications section in the Our Tools part of this Plan, the following policies apply to Planning and Development Applications within the Rural Neighbourhoods Place Type:

1. The area shown within the Rural Neighbourhoods Place Type on Map 1 – Place Types, will be considered a hard boundary. The expansion of the Rural Neighbourhoods Place Type will not be permitted.
2. Infill development will be permitted and encouraged provided all other applicable policies in this chapter are met.
3. Commercial uses should be in scale with the rural neighbourhood and designed to support the immediate area, but not intended to draw users from other parts of the city.
4. Industrial uses should be considered as though they are in the adjacent agricultural area, and developed in conformity with the Farmland Place Type policies.
5. Development will not be supported if it prevents the through movement of agricultural vehicles through the rural neighbourhood.
6. Any proposed planning and development application within a Rural Neighbourhoods Place Type shall meet the required Minimum Distance Separation (MDS I) policies in the Our Tools part of this Plan. Applications that would result in a development that imposes operating constraints on a livestock facility will be refused.
7. The City will not extend municipal water and sewer services beyond the limits of the lands identified for urban growth, except in conformity with the Civic Infrastructure policies of this Plan.
8. All planning and development applications will be evaluated based on the Planning and Development Applications section in the Our Tools part of this Plan.





## SPECIFIC POLICIES FOR THE RURAL NEIGHBOURHOODS PLACE TYPE

1252\_ The following policies relate to specific sites or areas within the Rural Neighbourhoods Place Type. These policies serve to augment the general policies for Rural Neighbourhoods. Where there is a conflict between the following policies and the more general Rural Neighbourhoods Place Type policies, these more specific policies shall prevail. Areas subject to specific policies are shown on Map 7 – Specific Policy Areas.

### CRUMLIN/GORE ROAD

1253\_ In the Rural Neighbourhoods Place Type located along the east side of Crumlin Road between Trafalgar Street and the Canadian National Railway lands, and along Gore Road between Crumlin Road and Wabuno Creek, lot creation may be considered subject to the policies of this Plan provided the lot shall have a minimum area of one hectare and have frontage on Crumlin Road or Gore Road.





# Waste Management Resource Recovery Area

## OUR VISION FOR THE WASTE MANAGEMENT RESOURCE RECOVERY AREA PLACE TYPE

**1254\_** The Waste Management Resource Recovery Area Place Type provides for the continued evolution of the W12A Landfill and surrounding area as an integrated waste management centre. Environmentally responsible and sustainable operations and practices, compatible land uses, and minimal impacts on the environment and surrounding properties will guide the future development of these lands. Landfills are important to the city's future growth and development, provide a necessary public benefit and the ability to manage the city's solid waste. All landfills will be designed to maximize utility and minimize negative impacts. Landfills will be maintained in accordance with the *Environmental Protection Act*, the *Ontario Water Resources Act*, the *Environmental Assessment Act* and all relevant federal, provincial and municipal legislation and regulations.

## ROLE WITHIN THE CITY STRUCTURE

**1255\_** Landfills are an important component of the City's infrastructure, and are intended to be situated in areas where, over the course of their useful life, they will have minimal impact on sensitive uses, including residential uses in the Neighbourhoods and Rural Neighbourhoods Place Types.

## HOW WILL WE REALIZE OUR VISION?

1256\_ The policies in this chapter are intended to:

1. Apply to lands that are either currently used as a landfill, are for potential landfill expansion, or a landfill in the process of remediation.
2. Facilitate the transition into productive use as a landfill and facilitate the transition out of productive landfill use to other valuable uses at appropriate times.
3. Promote best practices in site selection, site design, operation, and remediation.
4. Provide guidelines consistent with the *Provincial Policy Statement* and in accordance with other provincial policies.
5. Provide opportunities for industrial land uses that use materials diverted from the landfill operations or use outputs or materials generated by the landfill operations.

## LOCATION

1257\_ The lands affected by this policy are shown on Map 1 - Place Types, and include the lands generally bounded by Wellington Road South, Manning Drive, White Oak Road and Scotland Drive. The lands that contain the uses associated with the City's waste management and resource recovery operations are contained within these limits. Approximately half of these lands are occupied by the W12A waste disposal facility. Lands outside the active W12A waste disposal facility, but within the Waste Management Resource Recovery Area may be used for resource recovery and eco-industrial park uses, in conformity with the policies of this Plan, and subject to a zoning by-law amendment. Lands within the Waste Management Resource Recovery Area may be added to the area defined for the W12A landfill without an amendment to this Plan, subject to a zoning by-law amendment.





## PERMITTED USES

1258\_ The Waste Management Resource Recovery Area Place Type may permit the following, in conformity with the policies of this Plan:

1. Landfills.
2. Related uses necessary to the function, operation and education of all aspects of waste reduction, re-use, recycling, management, resource recovery, treatment and waste disposal.
3. Eco-Industrial Parks where industries are involved in the processing, fabricating, or manufacturing of products using materials available from the Waste Management Resource Recovery Area, including alternative energy sources.

## USES PERMITTED BY SITE-SPECIFIC ZONING

1259\_ In addition to the permitted uses listed under the Farmland Place Type, the following uses may be permitted on lands located within the Waste Management Resource Recovery Area by site-specific zoning, subject to the criteria listed in the Waste Management Resource Recovery Area policies, and the Civic Infrastructure policies of this Plan. Waste processing and other uses permitted by these policies shall require a component of municipal use :

1. Municipal waste disposal facility.
2. Landfill energy production system from landfill gas.
3. A leachate pre-treatment/hailed liquid waste facility.
4. Public drop-off depot for municipal hazardous or special waste.
5. Community recycling drop-off depot.
6. Material recovery facility.
7. Yard waste composting facility.

8. Source-separated organic composting facility.
9. Transfer stations associated with municipal waste disposal facilities.
10. Thermal, mechanical and biological processing of waste to reduce volumes, stabilize materials, treat residual waste and remove recyclables.
11. Other similar waste collection, processing and recovery functions.
12. Energy generation facilities, including wind and/or solar energy conversion system.
13. Eco-industrial park uses.

1260\_ Farm dwellings and secondary farm dwellings shall not be permitted within this area.

1261\_ Prior to the establishment of waste management activities, agricultural uses may be permitted. Waste management and resource recovery uses should be planned so as to cause the least disruption to existing agricultural uses and facilities.

1262\_ Recreational uses may be established on municipally-owned lands around the W12A landfill and in conformity with the policies of this Plan.



## INTENSITY

1263\_ The Waste Management Resource Recovery Area Place Type will contain landfill operations that are scaled and designed such that negative environmental effects can be mitigated.

## FORM

1264\_ The following form policies apply to the Waste Management Resource Recovery Area Place Type:

1. Landfills will be suitably buffered from adjacent surrounding lands.
2. Landfills will be served by a limited number of entrance access points.
3. On-site building and structure requirements will be addressed through the site plan approval process.
4. The public realm will be designed to have respect for existing rural landscapes. Efforts should be made to buffer and thereby reduce the visibility of operations or buildings which detract from the rural character of the area.

## APPLICATIONS TO ADD OR EXPAND THE WASTE MANAGEMENT RESOURCE RECOVERY AREA PLACE TYPE

1265\_ Applications to expand or add new landfills will be required to meet all applicable provincial legislation and regulations, including but not limited to the *Environmental Protection Act*, the *Environmental Assessment Act* and the *Ontario Water Resources Act*.

1266\_ Expansions will only be permitted where there is an identified need for additional land to be designated to accommodate the proposed expansion, and where consistent with the *Provincial Policy Statement*.



## PLANNING AND DEVELOPMENT APPLICATIONS

1267\_ In addition to meeting all applicable provincial legislation and regulations, all planning and development applications will be evaluated based on any City guideline for operating and closed landfill sites, and the following:

1. Provincial guidelines on landfill design.
2. Future rehabilitation.
3. Proximity to existing and future development.
4. Mitigation measures to address noise, dust, odour, litter and visual impacts.
5. Potential air quality, groundwater and surface water impacts.
6. The Planning and Development Applications policies of the Our Tools part of this Plan.

## IMPLEMENTATION OF THE WASTE MANAGEMENT RESOURCE RECOVERY AREA POLICY

1268\_ The process included below will be followed for all applications to add or expand an existing waste management and resource recovery use:

1. Lands within the Waste Management Resource Recovery Area will be zoned to reflect existing and approved uses. Residential uses, permanent or seasonal, will not be permitted. Existing residential uses will be subject to the Non-conforming Uses policies in the Our Tools part of this Plan.
2. Expansion of an existing waste management use or establishment of a new use must comply with the City's *Zoning By-law*.

3. Once the application has been accepted, City Council will consult with the Ministry of the Environment and Climate Change to determine which provincial approvals process will be followed and integrate the technical reviews and public consultation accordingly. Impact Assessments relating to groundwater, surface water and air quality, noise and dust may be required.
4. The Waste Management Resource Recovery Area will be subject to the site plan control provisions of the *Planning Act*. The City, through the development of this area, will incorporate landscape design measures to reduce the visual impact of the Waste Management Resource Recovery Area site.

1269\_ The City will establish a natural heritage strategy with respect to the protection of the Shore Drain and any required enhancement of the potential fish habitat.

## WASTE MANAGEMENT RESOURCE RECOVERY AREA TRUCK ROUTE

1270\_ It is the intention of City Council that all traffic destined for the Waste Management Resource Recovery Area use the route so designated in the W12A Landfill Area Study, unless noted otherwise in other policies.

1271\_ Appropriate signage for all truck route streets will be provided. City Council will ensure that Waste Management Resource Recovery Area traffic is monitored regularly and will take the appropriate action necessary to mitigate any negative impacts. City Council will further ensure that those streets on the designated route will be upgraded and maintained to the standard necessary for the type and volume of traffic generated by the Waste Management Resource Recovery Area.



## LOT CREATION

1272\_ Lot creation, either by consent or by plan of subdivision within the Waste Management Resource Recovery Area Place Type will not be permitted unless required to support approved landfill or resource recovery activities.

## SURROUNDING LANDS

1273\_ The following policies will apply to lands located within a 1,500 metre radius around the boundary of the Waste Management Resource Recovery Area Place Type.

1. The City will continue to work with property owners within a 1,500 metre radius of the Waste Management Resource Recovery Area to mitigate impacts related to odour, dust, litter and traffic.
2. Within the Farmland Place Type, the City will discourage new official plan and/or zoning by-law amendments to allow the development of new residential uses or other sensitive land uses within a 1,500 metre radius of the Waste Management Resource Recovery Area Place Type to provide appropriate separation distance to mitigate impacts.
3. The City will confine all municipal waste management and resource recovery uses and accessory uses to the Waste Management Resource Recovery Area Place Type.

1274\_ The principal use permitted will be in conformity with the Farmland Place Type, and the Farmland policies of this Plan will apply.

## ECO-INDUSTRIAL PARKS

1275\_ Eco-industrial parks are emerging as the primary areas for testing and implementing industrial ecology. Similar to standard industrial parks, eco-industrial parks are designed to allow businesses and industries located in the eco-industrial park to share infrastructure as a means of enhancing production and minimizing costs. Businesses and industries located in eco-industrial parks may also use materials available from the waste and recyclable streams within their production chain.

1276\_ A distinguishing feature of eco-industrial parks is their use of ecological design to foster collaboration between industries in managing environmental and energy issues. In an eco-industrial park setting, company production patterns and the maintenance of the eco-industrial park work together to follow the principles of a natural system through the recycling of resources and optimizing energy use within the constraints of the local and global ecosystem.

1277\_ Eco-industrial parks offer industries the opportunity to cooperatively enhance both their economic and environmental performance through increased efficiency, waste minimization, innovation and technology development and access to new markets.

1278\_ Eco-industrial parks may locate within the Waste Management Resource Recovery Area Place Type. The *Zoning By-law* will define the range of permitted uses, and may establish regulations and standards that require specific activities related to the landfill uses permitted in the place type. Permitted uses require the use of materials diverted from the landfill operations or materials or outputs generated by the landfill operations.





## SPECIFIC POLICIES FOR WASTE MANAGEMENT RESOURCE RECOVERY AREA PLACE TYPE

1279\_ The following policies relate to specific sites or areas within the Waste Management Resource Recovery Area Place Type. These policies serve to augment the general policies for Waste Management Resource Recovery Areas. Where there is a conflict between the following policies and the more general Waste Management Resource Recovery Area Place Type policies, these more specific policies shall prevail. Areas subject to specific policies are shown on Map 7 – Specific Policy Areas.

1280\_ The provisions in this section apply to a specific defined area where it is appropriate to address development opportunities and constraints through specific policies that provide guidance to other relevant policies of this Plan.

### W12A LANDFILL SITE

1281\_ The W12A Landfill is a waste management facility owned and operated by the City of London for the purpose of disposing of municipal solid waste.

1282\_ The City of London initiated the W12A Landfill Area Study to develop a plan for the evolution of this landfill facility as an integrated waste management and resource recovery centre and address land use impacts resulting from the continued use as a landfill facility and the added uses identified to maintain and expand the facility beyond 2023. The area study resulted in recommendations for inclusion of specific policies in the Official Plan and related guidelines to address matters such as impact mitigation, property acquisition, and the introduction of uses related to waste management, resource recovery, by-products and processes. The total area within the Waste Management Resource Recovery Area associated with the W12A landfill consists of 288 hectares of land.

### > LANDFILL OBJECTIVES

1283\_ The City of London recognizes the importance of the existing W12A landfill and the suitability of the existing location to minimize environmental and social impact while providing the important economic function of waste disposal. The other lands within the Waste Management and Resource Recovery Area are also a suitable location for landfilling and the expansion of an integrated Resource Recovery Centre for waste diversion, waste processing and waste disposal, using principles of sustainability which are socially, environmentally and fiscally responsible. The use of land within the Waste Management Resource Recovery Area will be directed toward the following objectives:

1. To support the environment, public health and safety, and the interests of residents by ensuring that all environmental, social and financial impacts of waste management/resource recovery activities are sufficiently controlled or mitigated in a timely manner.
2. To provide opportunities for future City of London waste management programs by defining and describing the land uses within the Waste Management Resource Recovery Area and securing an operating landfill site well into the future.
3. To provide continuing public input and consultation.
4. To provide flexibility to accommodate future changes in technology and market demand.
5. To promote a streamlined decision making process for new waste management/resource recovery activities.
6. To identify and promote economic development and public interest opportunities arising from waste management/resource recovery activities.



#### > MUNICIPAL WASTE DISPOSAL

1284\_ The following policies presume that waste disposal activities will be subject to an approval under the *Environmental Assessment Act*. Should the Ministry of the Environment and Climate Change not require an Environmental Assessment, the City may require studies regarding environmental, economic and social impact.

1285\_ The landfill site will consist of a landfill area and a peripheral area. The fill area is where actual land filling activity is undertaken. The peripheral area will contain setbacks from other place types, and will permit uses accessory to a landfill activity such as buildings, equipment and material storage, access roads, stormwater collection ponds, environmental remedial facilities such as leachate collection and treatment, environmental monitoring systems and nuisance control measures.

1286\_ Access to a waste disposal area is permitted only from an approved Waste Management Truck Route.

#### > RESOURCE RECOVERY

1287\_ Should the Ministry of the Environment and Climate Change not require approval under the *Environmental Assessment Act*, the City may require studies regarding environmental, economic and social impact.

1288\_ It is intended that a wide range of waste processing and accessory uses be permitted and that this policy be used to encourage the utilization of new technologies and innovation methods, subject to applicable approvals under the *Environmental Assessment Act*.

1289\_ Access to a waste processing area will be permitted only from an approved Waste Management Truck Route, subject to applicable approvals under the *Environmental Assessment Act*.



### > POST CLOSURE OF LANDFILL SITE

1290\_ The following policies presume that post closure activities will be subject to an Environmental Compliance Approval, and that the Province will have final approval of any end use on a closed landfill for a period of 25 years in accordance with Section 46 of the *Environmental Protection Act*.

1. The principal post closure use will be passive open space.
2. Uses that are compatible, or can be made compatible with neighbouring ongoing waste management activities and adjacent place types, such as agricultural uses and active recreational uses, may be permitted.
3. Uses accessory to a waste management activity may be permitted.

1291\_ Access to a closed landfill for uses not associated with a waste management activity will only be permitted from Manning Drive.

### > GUIDELINES FOR LANDFILL SITES

1292\_ A guideline document may be prepared, in conformity with the Our Tools part of this Plan, for operating landfill sites which produce gases, leachate, dust, odour, noise or litter impact. The guideline document will include:

1. The location of all known waste disposal sites together with their potential influence areas.
2. Minimum separation distances and buffering measures that may be required between the Waste Management Resource Recovery Area and future development.
3. Criteria which may be satisfied in order to allow for a reduction in separation distances.
4. The content of studies required to indicate how a site is secure, or can be made secure from contamination by leachate, methane, and/or other soil gases.
5. Guidelines for monitoring and/or remediating groundwater, surface water and air quality on an ongoing basis.
6. The role of the City, the Province, and other affected agencies in reviewing applications which may be affected by leachate, methane and/or other soil gases.
7. Other relevant information, as applicable.



The background is a green-tinted collage of various environmental photographs, including trees, a person in a field, and a person working with a bag. A white outline of the United States map is overlaid on the collage. The text "ENVIRONMENTAL POLICIES" is centered in white, bold, sans-serif font.

# ENVIRONMENTAL POLICIES



# Environmental Policies

## WHAT ARE ENVIRONMENTAL POLICIES?

1293\_ Protection, management and enhancement of the environment is central to all of the planning that we do. Our Environmental Policies provide direction for:

1. The identification, protection, conservation, enhancement, and management of our Natural Heritage System.
2. The minimization of risks associated with Natural and Human-made Hazards.
3. The identification, protection, and conservation of our Natural Resources.

## WHY ARE ENVIRONMENTAL POLICIES IMPORTANT TO OUR FUTURE?

1294\_ As London grows and develops, the policies for the protection, conservation, enhancement, and management of our Natural Heritage System will ensure that future generations will continue to enjoy our natural heritage features and areas of the city. Policies that direct development away from hazard areas will minimize risks to public health, safety, and property from both natural and human-made hazards. The Natural Resources policies will ensure that our drinking water supply will be protected, and that aggregate resources are protected and conserved to ensure that they are available for extraction over the long term, that impacts from extraction activities are minimized, and that sites will be restored and rehabilitated once the aggregate resource has been removed. These policies all work together to ensure that the City's Natural Heritage System is protected and that development is directed away from areas of significant natural or human-made hazards or natural resources.

## WHAT ARE WE TRYING TO ACHIEVE?

1295\_ Our Environmental Policies will provide clear direction for the long-term protection and conservation of our Natural Heritage System and our Natural Resources and ensure that development is directed away from Natural and Human-made Hazards.

## HOW ARE WE GOING TO ACHIEVE THIS?

1296\_ These policies must be read and considered in the review and evaluation of all planning and development applications, public projects, public works, or any other activity within or adjacent to any component of the Natural Heritage System, or on or within any lands identified as Natural and Human-made Hazards or Natural Resources. All applications, works and activities shall conform with these policies. Map 5 - Natural Heritage and Map 6 – Hazards and Natural Resources are to be used in conjunction with these policies.

1297\_ The Environmental Policies that follow address:

1. Natural Heritage
2. Natural and Human-made Hazards
3. Natural Resources









# Natural Heritage

## WHAT IS NATURAL HERITAGE?

**1298\_** The City's Natural Heritage System is a system of natural heritage features and areas and linkages intended to provide connectivity at the regional or site level and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of native species, and ecosystems. In London, this includes natural heritage features and areas, provincial parks, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions and working landscapes that enable ecological functions to continue. The City's Natural Heritage System is shown on Map 5 – Natural Heritage.

**1299\_** The natural heritage features and areas found in London include environmentally significant areas, provincially significant wetlands and wetlands, fish habitat, significant woodlands and woodlands, significant valleylands, the habitat of endangered and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are all important for their environmental and social values as a legacy of the natural landscapes of the City of London and the surrounding area.

**1300\_** London's natural environment has shaped the city since London was first founded along the banks of the Thames River. The City will consider how natural heritage features and areas relate to one another and the role each natural heritage feature or area plays within the Natural Heritage System. Many of these natural heritage features and areas and their associated functions have city-wide, regional or provincial significance, and many of the features extend beyond the city and form part of the broader Natural Heritage System of southwestern Ontario.

**1301\_** The diversity and connectivity of natural features and areas, and the long-term ecological function and biodiversity of Natural Heritage Systems, will 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 important to note that ecosystem processes are happening everywhere, not just in a defined Natural Heritage System, and that recognition of ecosystem based planning needs to account for all these processes across the City of London. Not all natural heritage features and areas are physically connected to each other. This is because there is a scattered pattern of remnant natural heritage features and areas across the landscape that has been modified over time by human activities.

**1302\_** Surface and groundwater features and their hydrological functions are to be considered as part of the systems approach to land use planning, consistent with the *Provincial Policy Statement* and in conformity with the City Structure Plan in the Our City part of this Plan, that establishes watersheds as a component of our City Structure. Factors to be considered in this systems approach include the surface water catchment areas of wetlands that are necessary to maintain a natural heritage feature and area, species or function, including the water balance and areas where natural heritage features and groundwater conditions or seepage areas are connected. Sensitive recharge or vulnerable aquifer features identified through *Source Protection Plans* are important water resource areas that may require additional consideration in conformity with the Natural Resources policies of this Plan.

**1303\_** The Natural Heritage policies establish requirements for the identification, delineation and protection of the natural heritage features and areas that form the City of London's Natural Heritage System. Policies establish how we identify and define the boundaries of the significant natural heritage features and areas, how we assess the impacts of development on them, and how we will protect them, restore them and mitigate the impacts of development on the natural heritage features and areas and the overall Natural Heritage System.

## WHY IS NATURAL HERITAGE IMPORTANT TO OUR FUTURE?

1304\_ One of the many assets that Londoners say makes London great is the Thames River Valley and its tributaries and our unique natural environment within the urban fabric of the city. Our Natural Heritage System contributes to both our high quality of life and our image as The Forest City. The significant valleylands of the Thames River Valley, the provincially significant wetlands of Westminster Ponds and Sifton Bog, and the significant woodlands of Warbler Woods, Meadowlily Woods and the Medway Valley are just some of the significant natural heritage features and areas that help to define London. These places are also key components of the City's Natural Heritage System and, like the many other natural heritage features and areas that form the Natural Heritage System, shall be protected and managed to improve their ecological integrity and to provide opportunities for public use where appropriate.

1305\_ London is located in the Carolinian Life Zone at the northern limit of the Eastern Deciduous Forest Region - the most biologically diverse in all of Canada. The Carolinian forest is a term used to describe the special plant and animal species that are found in our region – some of which are found only in the Carolinian Life Zone in Canada. London's biodiversity is our natural wealth, providing irreplaceable ecosystem functions like clean air and water, productive soils, and food. Greater biodiversity makes our Natural Heritage System more sustainable over the long term.

1306\_ In London, nature truly is at our doorstep, and these rich surroundings provide us with convenient access to natural features and areas. We are fortunate to have a Natural Heritage System that runs through the city and our neighbourhoods. This creates the opportunity for us to share these areas with the plants and animals that make them their home. Managed and appropriate access to these natural features and areas provides health and wellness benefits for all Londoners. These spaces are also important to London's sustainability and for a healthy urban and rural environment that is also resilient to the expected impacts of climate change.

## WHAT ARE WE TRYING TO ACHIEVE?

1307\_ The Natural Heritage policies of this Plan provide for the identification and protection of natural heritage features and areas and the ecological functions, processes, and linkages that they provide over the long term.

1308\_ We will plan for our city to ensure that London's Natural Heritage System is protected, conserved, enhanced, and managed for present and for future generations by taking the following actions:

1. Achieve healthy terrestrial and aquatic ecosystems in the city's subwatersheds.
2. Provide for the identification, protection, rehabilitation, and management of natural heritage features and areas and their ecological functions.
3. Protect, maintain, and improve surface and groundwater quality and quantity by protecting wetlands, groundwater recharge areas and headwater streams.
4. Enhance, protect and conserve the Natural Heritage System through well planned built form and community design.
5. Maintain, restore, monitor and improve the diversity and connectivity of natural heritage features and areas and the long-term ecological function and biodiversity of Natural Heritage Systems.
6. Encourage, through education and incentive programs, the cooperation of property owners in the maintenance of, or enhancement to, the naturalization of lands and the sustainable use of our Natural Heritage System.
7. Monitor the potential impacts of climate change to maintain the integrity and resiliency of the Natural Heritage System and adjust management activities accordingly.
8. Provide opportunities for appropriate recreational activities based on the ecological sensitivities of the area.

## HOW ARE WE GOING TO ACHIEVE THIS?

1309\_ The Natural Heritage policies are intended to protect the natural heritage features and areas over the long term by establishing requirements for the identification and protection of the Natural Heritage System through public ownership and acquisition, stewardship, management and rehabilitation, ecological buffers, and environmental studies including but not limited to conservation master plans, secondary plans, environmental impact studies, hydrogeological studies, environmental assessments, and subject lands status reports.

1310\_ The City of London Subwatershed Plans provide background, framework and broad direction for the content and implementation of the Natural Heritage and water resources management policies of this Plan. Since the original Subwatershed Plans were completed, the City has undertaken subwatershed studies for many of the subwatersheds. Information from these studies is one source that is used to ensure that the Natural Heritage policies and Map 5 - Natural Heritage, remain current.

1311\_ The Subwatershed Plans applied an ecosystem, water resources and landscape-based planning approach to: the identification of lands to be protected or conserved; criteria to be applied in the planning and design of development to protect and restore natural features and ecological functions; opportunities for enhancement and rehabilitation of natural features and ecological functions; management practices to mitigate impacts from existing and proposed land uses; and programs to promote education, awareness and stewardship. These Plans provide a generalized level of direction that continues to be refined through comprehensive area-specific assessments and studies, including secondary plans, conservation master plans, subwatershed updates and reviews, master drainage plans, environmental assessments, subject lands status reports, and environmental impact studies.

1312\_ Watershed report cards produced by the local conservation authorities provide a base level of monitoring for various ecological functions, from water quality to forest cover in each watershed. This information extends beyond London's boundaries. The City also carries out detailed water quality monitoring on the Thames River and many of its tributaries. These monitoring programs may provide baseline information to be used to evaluate the policies of this Plan.

1313\_ Most, but not all, natural heritage features and areas identified or delineated on Map 5 are within the Green Space Place Type or the Environmental Review Place Type on Map 1 – Place Types, depending on the attributes of the natural feature and the need for further evaluation to assess significance, refine boundaries, and determine the appropriate level of protection. Where natural heritage features and areas are within the Green Space or Environmental Review Place Type, the Natural Heritage policies shall be read in conjunction with the Green Space or Environmental Review policies of this Plan.

1314\_ Components of the Natural Heritage System that are identified or delineated on Map 5 but not within the Green Space or Environmental Review Place Types on Map 1, will be evaluated to further assess their significance and determine the need for protection under the policies of this Plan. Where appropriate, these features and functions may be protected in whole or in part through measures such as, but not limited to, Open Space zoning, tree preservation plans associated with subdivision or site plan applications, public land acquisition, site alteration and tree conservation by-laws, conservation easements, and private stewardship initiatives.

1315\_ Natural heritage areas that are within the Green Space Place Type represent significant natural features and ecological functions. In addition to the protection provided by their inclusion in the Green Space Place Type, additional measures to provide for their protection and rehabilitation are considered necessary.

## COMPONENTS OF THE NATURAL HERITAGE SYSTEM

1316\_ The policies in this chapter apply to recognized and potential or unevaluated components of the Natural Heritage System as identified or delineated on Map 5, or features that may be considered for inclusion on Map 5. Not all components of the Natural Heritage System are necessarily mapped on Map 5. In the review of any planning and development application, an initial review of the lands shall be undertaken to confirm the presence or absence of any natural features and areas that may be present that have not been mapped to determine if further evaluation of the feature is required.

1317\_ Where a new or expanded component of the Natural Heritage System has been identified through a required study associated with a planning and development application, environmental assessment or municipal infrastructure project, the natural heritage feature or area shall be added to Map 5 and identified as Green Space on Map 1.

1318\_ The following policies address the criteria used to identify and evaluate natural heritage areas for their significance, and may be complemented by *Environmental Management Guidelines* adopted by City Council. Significant components of the Natural Heritage System identified or delineated for protection will be shown as Green Space Place Type on Map 1. Certain components of the Natural Heritage System will be identified and evaluated in accordance with provincial requirements. These policies also address the protection of environmental quality and ecological function with respect to water quality, water quantity, groundwater recharge areas, headwater streams and highly vulnerable aquifers when read in conjunction with the Natural Resources policies of this Plan.

1319\_ Natural heritage features and areas and other areas included in the Green Space Place Type include:

1. Fish Habitat
2. Habitat of Endangered Species and Threatened Species
3. Provincially Significant Wetlands and Wetlands
4. Significant Woodlands and Woodlands
5. Significant Valleylands
6. Significant Wildlife Habitat
7. Areas of Natural and Scientific Interest
8. Water Resource Systems
9. Environmentally Significant Areas
10. Upland Corridors
11. Potential Naturalization Areas
12. Adjacent Lands

1320\_ Natural heritage features and areas included in the Environmental Review Place Type include:

1. Unevaluated Wetlands
2. Unevaluated Vegetation Patches
3. Other Vegetation Patches Larger than 0.5 Hectares
4. Valleylands
5. Potential Environmentally Significant Areas

1321\_ City Council may require or encourage the retention of natural features or functions other than the features listed above, through the planning and development application process.

1322\_ Where warranted on the basis of an environmental study accepted by the City, consistent with the relevant criteria of the Natural Heritage policies of this Plan, natural heritage features and areas may be identified and delineated on Map 5 and included in the Green Space Place Type on Map 1 by amendment to this Plan.

## FISH HABITAT

**1323\_** Fish habitat as defined in the *Fisheries Act*, means spawning grounds and any other areas, including nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes. Healthy aquatic communities are generally a good indicator of environmental health. The Thames River and London's creeks and streams support a variety of cold water and warm water fisheries; however, these fish habitats are vulnerable to degradation from factors such as channelization, loss of stream bank vegetation, untreated urban runoff, increased sedimentation and changes in the timing, temperature and amount of stormwater entering the watercourse. The harmful alteration, disruption or destruction of fish habitat is generally prohibited under the *Fisheries Act*. It is the City's intention to encourage improvement of productive capacity of this habitat. The extent and significance of fish habitat shall be determined in consultation with the Ministry of Natural Resources and Forestry, the conservation authority having jurisdiction over the area, and Fisheries and Oceans Canada.

**1324\_** Development and site alteration shall not be permitted in fish habitat except in accordance with relevant provincial and federal requirements.

## HABITAT OF ENDANGERED SPECIES AND THREATENED SPECIES

**1325\_** Provincially, species at risk are identified as extirpated, endangered, threatened or special concern on the *Species at Risk in Ontario* list. The Ministry of Natural Resources and Forestry administers the *Endangered Species Act*, to protect and conserve species at risk and their habitats. Guidance for surveying and determining habitat of endangered and threatened species may be provided by the Ministry of Natural Resources and Forestry. Federally protected aquatic species at risk need to be considered in a planning application. Federal species at risk are those listed under Schedule 1 of the federal *Species at Risk Act* (SARA). The Minister of Fisheries and Oceans administers the Act with respect to aquatic species at risk (fishes and mussels). The location of such waters and habitats is identified on Fisheries and Oceans Canada (DFO) *Aquatic Species at Risk Distribution and Critical Habitat* maps.

**1326\_** Secondary plans, subject lands status reports and/or environmental impact studies will delineate the extent of the habitat of endangered, threatened and special concern species.

**1327\_** The habitats of endangered and threatened species have habitat protection under the *Endangered Species Act*, while special concern species may qualify for habitat protection under significant wildlife habitat criteria, and will be based on an evaluation of the following considerations:

1. The identification and delineation of the presence and extent of habitat of endangered species and threatened species will be confirmed by the Ministry of Natural Resources and Forestry.
2. 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.
3. Species-specific requirements identified in action plans or recovery plans or management guidelines, or Department of Fisheries and Oceans (DFO) approvals, or through an approved environmental impact study.

**1328\_** Development and site alteration shall not be permitted in the habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

**1329\_** Development and site alteration shall not be permitted within waters supporting aquatic species at risk listed under Schedule 1 of SARA and their critical habitats unless an environmental impact study demonstrates that there will be no negative impacts on natural heritage features and areas and their ecological functions, and SARA provisions have been addressed.



## PROVINCIALY SIGNIFICANT WETLANDS, WETLANDS, AND UNEVALUATED WETLANDS

1330\_ Wetlands are defined as lands that are seasonally or permanently covered by shallow water, as well as lands where the water 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 main types of wetlands are swamps, marshes, bogs and fens. Periodically soaked or lands or wetlands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition.

1331\_ Wetlands provide important habitat for plants, fish and wildlife that are fully dependent on the presence of a wetland, and for wildlife that need wetlands to complete some life cycle requirements. Wetlands provide important staging and breeding areas for waterfowl. Wetlands also influence the quality, temperature and flow of water and provide storage capacity to offset peak flows associated with storm events. They are important source water protection areas and have groundwater recharge and discharge functions. Some types of wetlands have deep organic soils. Wetlands are also important for their cultural values including such activities as hunting, recreation, education and research, and cultural heritage.

1332\_ Development and site alteration shall not be permitted in provincially significant wetlands as identified on Map 5 or determined through environmental studies consistent with the *Provincial Policy Statement* and in conformity with this Plan. Wetlands evaluated using the *Ontario Wetland Evaluation System* are classified on the basis of scores determined through the evaluation. Wetlands meeting the criteria set forth by the Ministry of Natural Resources and Forestry shall be confirmed by the Ministry of Natural Resources and Forestry, and shall be mapped as provincially significant wetlands on Map 5 and included in the Green Space Place Type on Map 1. Wetlands can be identified using Ecological Land Classification. Where a wetland is identified through Ecological Land Classification, the significance of the wetland must be evaluated using the *Ontario Wetland Evaluation System*.

1333\_ For wetlands that are evaluated using the *Ontario Wetland Evaluation System* and confirmed by the Ministry of Natural Resources and Forestry to not be provincially significant, the City of London shall identify the wetland on Map 5 as wetland and include it in the Green Space Place Type on Map 1.

1334\_ Development or site alteration shall not be permitted within a wetland. There shall be no net loss of the wetland features or functions. In some instances, and in consultation with the conservation authority having jurisdiction, the City may consider the replacement of wetlands where the features and functions of the wetland may be provided elsewhere and would enhance or restore the Natural Heritage System.

1335\_ Development and site alteration shall not be permitted within and/or adjacent to an unevaluated wetland identified on Map 5 and/or if an Ecological Land Classification determines that a vegetation community is a wetland that has not been evaluated. City Council shall require that the unevaluated wetlands be evaluated by qualified persons in accordance with the *Ontario Wetlands Evaluation System*. The evaluation must be approved by the Ministry of Natural Resources and Forestry. Map 1 - Place Types and Map 5 - Natural Heritage shall be amended as required to reflect the results of the evaluation.

1336\_ Wetlands and their surrounding areas of interference are also subject to regulation under the *Conservation Authorities Act* and the Natural and Human-made Hazards policies of this Plan.

## SIGNIFICANT WOODLANDS AND WOODLANDS

1337\_ Woodlands are 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 product. Woodlands include treed areas, woodlots or forested areas that may vary in their level of significance at the local, regional and provincial levels.

1338\_ Woodlands identified through the Subwatershed Plans that have not been evaluated for significance and are located outside of the recognized environmentally significant

areas are identified as vegetation patches on Map 5. New woodlands may be added to Map 5 through an amendment to this Plan, on the basis of more detailed environmental studies.

**1339\_** Potentially significant woodlands and other vegetation forms that have not been evaluated are identified as unevaluated vegetation patches on Map 5 and may be shown as Environmental Review on Map 1.

**1340\_** A woodland will be considered significant if it achieves a minimum of one High or five Medium criteria scores as determined by application of the City Council approved *Guidelines for the Evaluation of Ecologically Significant Woodlands*. A significant woodland will be included in the Green Space Place Type on Map 1 and identified as significant woodlands on Map 5.

**1341\_** The significance of woodlands will be based on an evaluation of the following considerations:

1. The woodland contains natural features and ecological functions that are important to the environmental quality and integrity of the Natural Heritage System. These include site protection (hydrology and erosion/slope) and landscape integrity (richness, connectivity and distribution).
2. The woodland provides important ecological functions and has an age, size, site quality, diversity of biological communities and associated species that is uncommon for the planning area.
3. The woodland is important for the provision of a balanced distribution of open space amenities and passive recreational opportunities across the urban area.
4. The woodland provides significant habitat for species at risk.
5. The woodland contains distinctive, unusual or high-quality natural communities or landforms.

**1342\_** Woodlands that are determined to be ecologically significant on the basis of the criteria in this Plan and the application of the City Council approved *Guidelines for the Evaluation of*

*Ecologically Significant Woodlands* will be included in the Green Space Place Type on Map 1 and identified as significant woodlands on Map 5.

**1343\_** Woodlands that are not determined to be ecologically significant but are to be retained for public open space or park purposes according to criterion No. 3 above, or woodlands to be retained at the property owner's request as a private woodland, will be included in the Green Space Place Type on Map 1 and identified as woodlands on Map 5. If a woodland is evaluated and confirmed as not being ecologically significant, and the property owner or the City have no interest in its retention, the lands may be changed from the Environmental Review Place Type to another place type in conformity with the policies of this Plan, and the woodlands or unevaluated vegetation patch identified on Map 5 may be removed.

## **SIGNIFICANT VALLEYLANDS AND VALLEYLANDS**

**1344\_** Valleylands are defined as 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, and includes rivers, streams, other watercourses and ravines.

**1345\_** Valleylands provide a number of important natural heritage values and ecological functions. They also overlap and are an integral part with a number of different natural heritage features and areas, such as woodlands, wetlands, wildlife habitat, etc. Valleylands contain natural habitat or the potential to contain natural habitat, they link many aspects of the Natural Heritage System, and they facilitate species richness, movement and diversity. Valleylands are the water collection systems for watersheds, providing vital support to the city's natural environment. In addition to these ecological functions, valleylands may also provide protection from flooding and other natural hazard processes.

**1346\_** Significant valleylands have been identified on Map 5. Valleylands require further evaluation. Significant valleylands are included in the Green Space Place Type on Map 1. Valleylands are included in the Environmental Review Place Type, pending further evaluation.

### > IDENTIFICATION OF SIGNIFICANT VALLEYLANDS

1347\_ The identification of significant valleylands will be based on an evaluation of their ecological, hazard protection, recreational, aesthetic and water resources management functions including the following considerations:

1. The valleyland performs an important water resources role relating to surface drainage, groundwater recharge or discharge, and filtering of surface water sediments, or is located in a headwater area.
2. The valleyland contains distinctive, unusual natural communities or landforms of high quality.
3. The valleyland represents mostly continuous, large natural areas that provide for wildlife movement, linkages and connections that typically extend beyond the City or subwatershed boundaries.
4. The valleyland provides linkage or a corridor between significant natural heritage features and areas.
5. The valleyland provides opportunities to create linkages or corridors and opportunities for rehabilitation of the landform to a natural state, or to a state that can support healthy natural communities.
6. The valleyland serves as a visual amenity to the surrounding areas and plays an important role in minimizing land use impacts by providing a physical separation or buffer between incompatible forms of development.
7. The valleyland has physical characteristics, related to size, depth and slope gradient, that are susceptible to slope instability or erosion and that are expected to present constraints to development.
8. The valleyland provides opportunities for the logical extension of the City's trail and pathway systems.
9. Additional criteria as identified in the *Natural Heritage Reference Manual*.

1348\_ Within the City of London the entire length of the Thames River corridor is recognized as a significant valleyland on Map 5. Also, the main branches of Stoney Creek, Medway Creek, Dingman Creek, Pottersburg Creek, Wabuno Creek, Mud Creek, Stanton Drain, Kelly Drain and numerous tributary streams are significant valleylands as identified on Map 5.

1349\_ Development and site alteration shall not be permitted in significant valleylands unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

### > DETERMINATION OF THE WIDTH OF SIGNIFICANT VALLEYLANDS

1350\_ Significant valleylands are included in the Green Space Place Type on Map 1, and identified on Map 5 with the corridor width to be determined and delineated on the basis of the following criteria:

1. The valleyland width shall be sufficient to accommodate the natural features and ecological functions that contribute to its significance including water resource functions such as flood plain and erosion hazards, riparian buffers for natural features, ecological functions and water quality and quantity. This will be determined through the preparation of a secondary plan, environmental impact study and/or subject lands status report.
2. The minimum width of significant valleylands will be generally comprised of 30 metres on each side of the watercourse measured from the high water mark, consistent with the *Natural Heritage Reference Manual*. The ultimate width of a corridor will be established on a case-by-case basis to address the impacts of the adjacent development and the sensitivity of the features and functions through the application of the *Guidelines for Determining Setbacks and Ecological Buffers*, as part of an environmental impact study and/or subject lands status report approved by the City.
3. The valleyland width will be sufficient to support and provide corridor functions.

4. The width of the valleyland shall also consider the provision of pathways and trails, in accordance with the *Planning Act* and consistent with the policies of this Plan.

#### > ALTERATION TO RIVER OR STREAM VALLEYS AND WATERCOURSES

1351\_ City Council, in consultation with the conservation authority having jurisdiction, may consider alterations to river or stream valleys and watercourses to enhance, rehabilitate and restore the system through such measures as:

1. Bank stabilization
2. The creation of riffles and pools
3. Restoration of meandering and natural stream fluvial morphology
4. Plantings
5. Removal of barriers

#### SIGNIFICANT WILDLIFE HABITAT

1352\_ Wildlife habitat means areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle, and areas which are important to migratory or non-migratory species. Significant wildlife habitat is ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or Natural Heritage System.

1353\_ Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

1354\_ The significance of wildlife habitat will be assessed following the processes outlined in the *Natural Heritage Reference Manual*. Applicants shall evaluate the significance of wildlife habitat using criteria outlined in the Ministry of Natural Resources and Forestry's *Significant Wildlife Habitat Technical Guide*, the *Natural Heritage Reference Manual*, and associated Ecoregion 7E Criteria Schedule. The following will also be considered:

1. It is an area of habitat where particularly important wildlife species are concentrated or are particularly susceptible to impacts for a specific period of their life cycle. These areas include but are not limited to: seasonal concentration areas; rare vegetation communities; specialized habitat for wildlife; habitat for special concern species; habitat for species of conservation concern; and animal movement corridors.
2. The amount of the specific type of habitat that exists within the context of the ecological region and its representation within other components of the Natural Heritage System. In the City of London, examples of under-represented habitat types include marshes, tall grass prairie and savannah, bog, fen, bluff, shallow aquatic and open aquatic.
3. It is an area of habitat having a high diversity of species that are of value for research, conservation, education and passive recreation opportunities.

1355\_ Areas of significant wildlife habitat outside of any other natural heritage features and areas will be included in the Green Space Place Type on Map 1.

## AREAS OF NATURAL AND SCIENTIFIC INTEREST

1356\_ Areas of natural and scientific interest (ANSIs) represent high-quality and unique life science and earth science features across a variety of landscapes throughout the province. Life science areas of natural and scientific interest are significant representative segments of Ontario's biodiversity and natural landscapes including specific types of forests, valleys, prairies and wetlands, their native plants and animals, and their supporting environments. Earth science areas of natural and scientific interest include the best representative of bedrock, fossils and glacial landforms.

1357\_ There are two provincially significant life science ANSIs in London: Warbler Woods or the Byron Woods, and Komoka Provincial Park. The Komoka Provincial Park ANSI exhibits part of a Lake Maumee II bluff, which is a provincially significant earth science ANSI. Kilworth Lake Maumee provincially significant earth science ANSI also represents a Lake Maumee shoreline and bluff. There are several regionally significant life science ANSIs located within environmentally significant areas. These include Sifton Bog, Westminster Ponds, and Kains Road River Valley. These areas are included within recognized environmentally significant areas as identified on Map 5.

1358\_ Lands within the Komoka Provincial Park are not subject to the policies of the Plan as it is regulated under the *Provincial Parks and Conservation Reserves Act*. However, lands adjacent to the Park shall be addressed in conformity with the policies of this Plan and consistent with the *Provincial Policy Statement*.

1359\_ The significance of areas of natural and scientific interest will be evaluated in accordance with provincial criteria.

1360\_ Development and site alteration shall not be permitted in or adjacent to areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

## WATER RESOURCE SYSTEMS

1361\_ The water resource system is addressed from a number of perspectives in this Plan. The Natural Heritage chapter addresses water quality and quantity through the protection of natural heritage features and areas. Water quality and quantity are also protected through the Natural Resources policies, storm water management policies, water supply and sanitary sewerage policies, and water conservation policies of this Plan.

1362\_ Groundwater features include recharge/discharge areas, water tables, and aquifers. Surface water features include headwaters, rivers, stream channels, seepage areas, recharge/discharge areas, springs, wetlands and associated riparian lands. Groundwater and surface water features are key components in the functioning of the hydrologic cycle. Significant groundwater recharge areas and highly vulnerable areas have been identified through *Source Protection Plans*. Streams are shown as a base map feature on Maps 5 and 6 of this Plan. Headwater streams or other tributaries may be identified as a significant valleyland or a valleyland on Map 5 – Natural Heritage. The City will require that the hydrological function of these areas be protected and the linkages and related functions of these features be maintained through its planning approval processes.

1363\_ The City shall protect, improve or restore the quantity and quality of groundwater and surface water through its planning approval processes, consistent with the *Provincial Policy Statement* and in conformity with the Natural Resources policies of this Plan. The Subwatershed Plans and the stormwater management policies in the Civic Infrastructure chapter of this Plan also provide guidance for the measures necessary to achieve this interest. The City will also promote efficient and sustainable use of water resources including practices for water conservation and sustaining water quality.

1364\_ Development and site alteration will be restricted and mitigative measures or alternative development approaches may be required in or near sensitive surface water features and sensitive groundwater features in order to protect, improve and/or restore these features and their related hydrologic functions consistent with the *Provincial Policy Statement*. In accordance with

the *Source Protection Plans*, uses or activities that may be a significant drinking water threat may be prohibited, restricted or otherwise regulated by the policies of the *Source Protection Plan*. Areas of significant drinking water threat are identified in the *Source Protection Plans*.

1365\_ The City will implement *Source Protection Plans* under the provisions of the *Clean Water Act*, and this Plan will be amended, as required, to conform with relevant policies set out in the *Source Protection Plan*.

1366\_ The City will also cooperate with Middlesex County, the surrounding municipalities and the conservation authorities to ensure that water quality and quantity goals and objectives identified in the Subwatershed Plans are achieved across municipal boundaries.

## ENVIRONMENTALLY SIGNIFICANT AREAS

1367\_ Environmentally significant areas (ESAs) are large areas that contain natural features and perform ecological functions that warrant their retention in a natural state. Environmentally significant areas are large features of the Natural Heritage System, often represented by a complex of wetlands, woodlands, significant wildlife habitat or valleylands. Wetlands, areas of natural and scientific interest and species at risk will be identified and evaluated in accordance with provincial requirements. While environmentally significant areas are protected by their inclusion in the Green Space Place Type, additional measures to provide for their protection, management and utilization are considered necessary, and may include the preparation of conservation master plans. Environmentally significant areas are delineated through the application of the City Council approved *Guideline Documents for Environmentally Significant Areas Identification, Evaluation, and Boundary Delineation* and through the application of provincial guidelines.

1368\_ Environmentally significant areas that have been identified by City Council as being of city-wide, regional, or provincial significance are included in the Green Space Place Type on Map 1, and are identified on Map 5. New environmentally significant areas may be identified by Council and added to Map 5 by amendment to this Plan and in conformity with the criteria set out in the Environmentally Significant Areas policies of this Plan. Areas that have the potential to meet

the criteria for an environmentally significant area, but have not been thoroughly studied are identified as potential environmentally significant areas on Map 5 and are included in the Environmental Review Place Type on Map 1. Further study of these areas following City policies and guidelines is required through any planning and development application process. Environmentally significant areas recognized by Council are identified as Environmentally Significant Areas on Map 5 and included in the Green Space Place Type on Map 1.

1369\_ Certain lands adjacent to these recognized environmentally significant areas may have potential for inclusion in the environmentally significant area if warranted on the basis of site-specific evaluation, including the application of the *Guideline Documents for Environmentally Significant Areas Identification, Evaluation, and Boundary Delineation* that shall be undertaken in conjunction with secondary plans, subject lands status reports, or environmental impact studies associated with a development application.

1370\_ To assist in the consideration of proposals to recognize environmentally significant areas in *The London Plan*, City Council may request the submission of detailed supporting information from any agency, individual or group proposing the recognition of a candidate area. The evaluation criteria contained in the following paragraph will be used, together with more detailed criteria and application of environmental management guidelines contained in an associated guideline document, to recognize environmentally significant areas in this Plan.

1371\_ Candidate areas that clearly satisfy two or more of the following criteria will be considered for recognition as environmentally significant areas:

1. The area contains unusual landforms and/or rare to uncommon natural communities within the country, province or London subwatershed region.
2. The area contains high-quality natural landform-vegetation communities that are representative of typical pre-settlement conditions of the dominant physiographic units within the London subwatershed region, and/or that have been classified as distinctive in the Province of Ontario.

3. The area, due to its large size, generally more than 40 hectares, provides habitat for species intolerant of disturbance or for species that require extensive blocks of suitable habitat.
4. The area, due to its hydrologic characteristics, contributes significantly to the healthy maintenance (quality or quantity) of a natural system beyond its boundaries.
5. The area has a high biodiversity of biological communities and/or associated plant and animal species within the context of the London subwatershed region.
6. The area serves an important wildlife habitat or linkage function.
7. The area provides significant habitat for rare, threatened or endangered indigenous species of plants or animals that are rare within the country, province or county.

## UPLAND CORRIDORS

1372\_ Upland corridors are vegetated areas, or potentially revegetated areas, outside of significant valleylands and valleylands that link natural heritage features and areas of the Natural Heritage System, and are shown on Map 5. Not all upland corridors have been identified on Map 5.

1373\_ Upland corridors are an important component of the Natural Heritage System. They provide opportunities to maintain, restore, or where possible improve the diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of Natural Heritage Systems.

1374\_ Upland corridors support and connect valleylands to natural heritage features and areas where the valleylands do not directly connect. Valleylands are also essential for establishing connectivity for the Natural Heritage System, and they provide corridor and linkage functions between natural heritage features and areas. Both are essential in a highly fragmented or urban landscape.

1375\_ The creation of upland corridors will be addressed as part of a planning and development application, secondary planning

process or environmental study. Where a corridor is to be created, the environmental study will provide direction for the location, scale and function of the corridor.

1376\_ Upland corridors should be established through a variety of measures such as stewardship agreements or conservation easements with private property owners, planting programs, and acquisition by the City through purchase, dedication, donation and/or bequest.

1377\_ Upland corridors that have been established shall be included in the Green Space Place Type and zoned in a manner that will ensure their long-term protection.

## POTENTIAL NATURALIZATION AREAS

1378\_ Potential naturalization areas are defined as areas where the opportunity exists to enhance, restore, or where appropriate, expand the Natural Heritage System. These areas may include lands suitable to create natural habitats such as wetland habitat, pollinator habitat, wildlife habitat, or to compensate for trees lost to development. Locations identified as being suitable for the application of a naturalization strategy are identified as potential naturalization areas on Map 5. Not all potential naturalization areas have been identified on Map 5.

1379\_ Potential naturalization areas are an important component of the Natural Heritage System. Potential naturalization areas can include lands adjacent to natural heritage features and areas, other natural features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue. Potential naturalization areas may enhance, restore or strengthen and expand the health and viability of a natural heritage feature or area.

1380\_ Environmental studies including conservation master plans, secondary plans, environmental impact studies, hydrogeological studies, environmental assessments or subject lands status reports will address opportunities for creating naturalization areas that will form part of the Natural Heritage System.

1381\_ Naturalization areas that are established through planning and development applications shall be included in the Green Space Place Type on Map 1 and zoned in a manner that will ensure their long-term protection.





## ADJACENT LANDS

1382\_ Adjacent lands are defined as 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. The extent of the adjacent lands will be in conformity with the distances identified in Table 13 or as recommended by the Province.

## UNEVALUATED VEGETATION PATCHES

1383\_ Unevaluated vegetation patches, as identified on Map 5 were identified through the Subwatershed Plans or other environmental studies. These features may include treed areas, swamps, wetlands, savannahs, old field plantations, or other similar natural features. Unevaluated vegetation patches may be included in the Environmental Review Place Type on Map 1. Unevaluated vegetation patches previously identified for development or agricultural activity will be assessed for significance and protection as part of any development application or secondary planning study. Where all or a portion of an unevaluated vegetation patch is assessed and not found to be part of the Natural Heritage System, the removal of trees will be in conformity with the Forest City policies of this Plan.

1384\_ The Environmental Review Place Type and unevaluated vegetation patches identifications are considered to be interim in nature, until such time as the significance of these patches can be confirmed through the completion of an environmental study of the Environmental Review lands outside the Urban Growth Boundary, or a secondary plan, environmental impact study and/or subject lands status report accepted by the City, and Map 1 and Map 5 have been amended to reflect the final place type and natural heritage feature identification.

## OTHER VEGETATION PATCHES LARGER THAN 0.5 HECTARES

1385\_ In addition to areas that are included in the Environmental Review or Green Space Place Types, vegetation patches in other place types that are larger than 0.5 hectares in size shall be evaluated in conformity with the policies of this Plan to determine the significance of vegetation and identify the need for protection prior to planning and development approvals. Where it is considered appropriate, the protection



of trees or other vegetation will be required through measures such as, but not limited to, tree preservation plans for subdivision or site plan applications, acquisition of land through parkland dedication and/or purchase by the City, conservation easements, landowner stewardship initiatives and zoning regulations. Pending an evaluation and decision on long-term protection, vegetation patches that are larger than 0.5 hectares in size will be identified as unevaluated vegetation patches on Map 5 and may be regulated under the City of London *Tree Conservation By-law*.

**1386\_** Where a vegetation patch that is larger than 0.5 hectares has been evaluated and determined to be significant, the natural feature shall be retained and the natural feature shall be included in the Green Space Place Type on Map 1 and identified as the appropriate significant natural heritage feature on Map 5.

## OTHER DRAINAGE FEATURES

**1387\_** In addition to significant valleylands and unevaluated valleylands that comprise part of the Natural Heritage System, the base map features on Map 5 also identify watercourses/ponds to identify the location of municipal or agricultural drains, intermittent or headwater streams and man-made or natural ponds. These features are identified for information purposes and may be added or removed from the base map without an official plan amendment, to reflect changes over time in drainage patterns and features on the ground. The ecological contribution of these drainage features as headwaters, recharge areas and riparian corridors or valleylands, will be addressed as part of a secondary plan, Environmental Assessment and/or environmental impact study process. Through the City's agreement with the Ministry of Natural Resources and Forestry, additional environmental study and mitigation efforts are required when carrying out works along Municipal Drains under the *Drainage Act* to protect significant features, functions and wildlife habitat.

## PERMITTED USES AND ACTIVITIES

**1388\_** In the Green Space Place Type, certain activities or uses will not be permitted, or may be permitted only after studies have been undertaken and approved by the City. This policy of the Plan identifies those uses.

**1389\_** The following uses may be permitted in the Green Space Place Type:

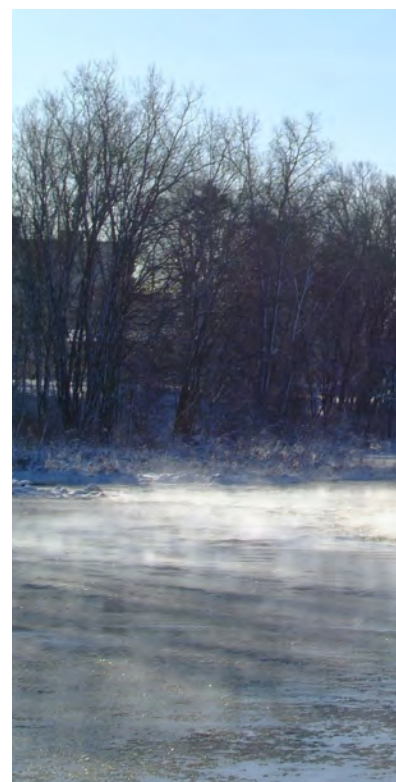
1. Expansion to existing development and uses provided that it can be demonstrated to the satisfaction of City Council that there will be no negative impacts on natural heritage features and areas or their ecological functions.
2. Recreational uses associated with the passive enjoyment of natural features including pathways and trails provided that such uses are designed, constructed and managed to protect the natural heritage features and their ecological functions.
3. Creation or maintenance of infrastructure subject to the infrastructure policies below.
4. The harvesting of trees in accordance with good forestry management practices and applicable federal, provincial and municipal requirements.
5. Conservation, mitigation and rehabilitation works.

## DEVELOPMENT AND SITE ALTERATION

**1390\_** Development and site alteration shall not be permitted within a provincially significant wetland.

**1391\_** Development and site alteration shall not be permitted in significant woodlands, significant valleylands, significant wildlife habitat, wetlands, and significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural heritage features or their ecological functions.

**1392\_** Development and site alteration shall not be permitted in fish habitat and in habitat of endangered species and threatened species, except in accordance with federal and provincial requirements.



1393\_ Development and site alteration shall not be permitted on adjacent lands to natural heritage features and areas until appropriate studies have been completed to satisfy provincial and municipal policy and the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural heritage features or on their ecological functions.

1394\_ Works may be required within or adjacent to wetland areas to fulfill the City's responsibilities under the *Drainage Act*. A protocol approved by the Ministry of Natural Resources and Forestry and the Ministry of Agriculture, Food and Rural Affairs will guide the City on how to proceed in such cases in order to help protect significant features, functions and wildlife habitat. Other federal, provincial and municipal regulations may be applicable for new drainage proposals within wetland areas, and must be considered prior to works proceeding.

## INFRASTRUCTURE

1395\_ Infrastructure should not be located within the Natural Heritage System.

1396\_ New or expanded infrastructure shall be permitted within the Natural Heritage System only where it is clearly demonstrated through an environmental assessment process under the *Environmental Assessment Act*, including an environmental impact study, that it is the preferred alternative for the location of the infrastructure.

1397\_ The environmental impact study undertaken as part of the Environmental Assessment shall be completed to further assess potential impacts, identify mitigation measures, and determine appropriate compensatory mitigation, if required. Any alternative where the impacts of the proposed works as identified in the environmental impact study would result in the loss of the ecological features or functions of the component of the Natural Heritage System affected by the proposed works, such that the natural heritage feature would no longer be determined to be significant, shall not be permitted.

1398\_ The City and other public authorities shall include methods for minimizing impacts when reviewing proposals to construct mobility, communication, sewerage or other infrastructure in the Natural Heritage System.

1399\_ Where there is more than one type of infrastructure, the rights-of-way shall be combined, wherever feasible, to reduce the extent of the intrusion into the area.

1400\_ For infrastructure projects within the Natural Heritage System, the City shall require specific mitigation and compensatory mitigation measures that are identified in the accepted environmental impact study to address impacts to natural features and functions caused by the construction or maintenance of the infrastructure.



1401\_ For the purposes of this Plan, mitigation shall mean the replacement of the natural heritage feature removed or disturbed on a one-for-one land area basis. Compensatory mitigation shall mean additional measures required to address impacts on the functions of the Natural Heritage System affected by the proposed works. The extent of the compensation required shall be identified in the environmental impact study, and shall be relative to both the degree of the proposed disturbance, and the component(s) of the Natural Heritage System removed and/or disturbed.

1402\_ Compensatory mitigation may be provided in forms such as, but not limited to:

1. Additional rehabilitation and/or remediation beyond the area directly affected by the proposed works.
2. Off-site works to restore, replace or enhance the ecological functions affected by the proposed works.
3. Replacement ratios greater than the one-for-one land area required to mitigate the impacts of the proposed works.

## HOW WILL WE PROTECT THE NATURAL HERITAGE SYSTEM?

1403\_ There are various measures that the City may use to protect lands that have been identified as part of our Natural Heritage System. These measures are described below:

### PUBLIC OWNERSHIP AND ACQUISITION

1404\_ It is not intended that all natural heritage areas shall be purchased or otherwise brought into public ownership, or that all such lands shall be open and accessible for public use. It may be determined, however, that certain areas should be in public ownership or accessible for passive recreational uses, where appropriate. In such cases, the City or other agencies shall explore options for purchasing, or otherwise acquiring, managing or providing access to these lands.

1405\_ The City shall develop a program for the long-term acquisition of natural heritage areas. Acquisition may occur as properties become available primarily through the following methods: purchase; dedication; and donation or bequest.

1406\_ City Council may accept natural heritage areas for parkland or conservation use in conformity with the provisions of the policies concerning parkland dedication.

1407\_ City Council may accept gifts of ecologically sensitive lands in accordance with the provisions of the Ecological Gifts Program administered by Environment Canada, or any other similar program administered by the provincial or federal governments.



## STEWARDSHIP

1408\_ Where natural heritage areas are privately-owned, the City will encourage individual property owners to provide for their protection and conservation. In this regard, the City may use all of the following techniques:

1. Stewardship agreements.
2. Conservation easements.
3. Programs to inform property owners of stewardship options available to protect or rehabilitate natural features and ecological functions.
4. Encourage the establishment of land trusts and the utilization of existing land trusts, as well as other mechanisms to purchase land and to rehabilitate, create or conserve natural heritage areas.
5. Encourage property owners to make use of programs and services provided by the Ministry of Natural Resources and Forestry and the conservation authorities for the management of forests and woodlots.
6. Modification of property tax assessment and/or facilitation of the *Provincial Conservation Land Tax Incentive Program* or the *Managed Forest Tax Incentive Program*.
7. Where privately-owned lands abut public lands, the City will provide signage or property demarcation to indicate the limits of publicly-owned lands.
8. Any other suitable techniques.

1409\_ Some lands within environmentally significant areas are privately-owned, and this categorization of the lands is not to be interpreted as permitting access or use by the general public. Permission for public access to privately-owned lands in environmentally significant areas shall be at the discretion of the property owner.

1410\_ Where necessary, public access to identified natural heritage features and areas within public ownership will be controlled such that access will not be detrimental to the significant features and ecological functions of the property.

1411\_ Where natural heritage features and areas are owned by the City, the City will encourage community groups and individuals to take an active role in their protection, rehabilitation and enhancement. The City may develop programs to facilitate community involvement in the protection and rehabilitation of these areas.

## ECOLOGICAL BUFFERS

1412\_ Ecological buffers are required to protect natural heritage features and areas, and their ecological functions and processes, to maintain the ecological integrity of the Natural Heritage System.

1413\_ Ecological buffers will be required on lands contiguous to a specific natural heritage feature or area.

1414\_ The location, width, composition and use of ecological buffers necessary to protect natural heritage areas from the impacts of development on adjacent lands will be specified through application of the City Council approved *Guidelines for Determining Setbacks and Ecological Buffers* as part of an approved secondary plan and/or an environmental impact study.

1415\_ In addition to buffer lands, additional techniques may be required to assist in minimizing the impact of development on the Natural Heritage System, including all of the following:

1. Discourage rear-lotting adjacent to the Natural Heritage System, and the use of site planning to orient the development away from natural heritage features and areas.
2. The acceptance of lands immediately adjacent to natural heritage areas as part of the required parkland dedication for the proposed development.
3. The use of a geotechnical setback from the boundary of natural heritage areas or natural hazard areas for construction purposes.
4. Restriction of public access by providing a limited number of access points to natural heritage areas.
5. Lands identified and delineated as ecological buffers may be zoned to permit their inclusion in calculating and applying zoning regulations applicable for the lot.

6. Development and site alteration on lands identified and delineated as an ecological buffer shall be prohibited unless specified as a permitted use in the Zoning By-law.
7. Setbacks shall apply from any lands identified as an ecological buffer.
8. The creation of individual lots that include lands identified and delineated as ecological buffers is not permitted.
9. Fencing (without gates) along all private lands abutting natural features.
10. Other measures, as determined through a detailed environmental study.

1416\_ Where different components of the Natural Heritage System overlap, the limit of development shall be set at the limit of the maximum ecological buffer as determined through an approved environmental impact study. Where the limits of a natural hazard overlap with the limits of an ecological buffer determined for a natural heritage feature, the development limit shall be set as the greater of the limit of the natural hazard corridor or the limit of the ecological buffer.

### MANAGEMENT, RESTORATION AND REHABILITATION PRIORITIES

1417\_ The City will encourage rehabilitation and enhancement measures that protect the ecological function and integrity of the Natural Heritage System. The City of London Subwatershed Plans provide guidance for the types of measures that may be identified through secondary plans, environmental impact studies, the Environmental Assessment process or other environmental studies or programs. Rehabilitation and enhancement measures may be implemented through conservation master plans, woodland management plans, or invasive species management plans on publicly-owned land and through stewardship and conservation programs for privately-owned lands.

1. The City's highest priority for restoring, rehabilitating and enhancing the Natural Heritage System shall be those areas linking or adjacent to natural heritage areas that are subject to flooding or erosion hazard constraints, such as the Thames Valley Corridor and other major tributaries of the Thames River.

2. With respect to specific components of the Natural Heritage System, the City's management, restoration and rehabilitation priorities are:
  - a. Fish and riparian habitat - to protect, rehabilitate and/or create fish and riparian habitat, and to encourage a net gain of productive capacity of habitat where possible.
  - b. Significant wetlands - to protect the natural features and ecological functions of all provincially significant wetlands and wetlands, and to restore disturbed areas.
  - c. Significant woodlands and woodlands - to protect and restore existing ecosystem features and functions, to increase the amount of interior forest habitat, and to retain or restore linkages between isolated natural areas.
  - d. Significant valleylands - to protect existing ecosystem features and functions, maintain water resource functions, and rehabilitate eroded banks and channels.
  - e. Significant wildlife habitat - to protect significant wildlife habitat and restore areas that have been degraded, including habitat of endangered species and threatened species.
  - f. Environmentally significant areas - to protect the existing ecosystem features and functions, to protect significant wildlife habitat, to restore areas that have been degraded or damaged, to increase the amount of interior forest habitat, and to strengthen significant valleylands, significant wetlands, and upland corridors.
  - g. Upland corridors - to retain or create linkages between isolated natural areas.
  - h. Potential naturalization areas – to restore, establish, or replace connections between and within vegetation patches, riparian corridors and wildlife habitat.

- i. Water resource systems – to protect, improve or restore the water resource system.
- j. The urban forest.

1418\_ In addressing opportunities, management, restoration and rehabilitation of the Natural Heritage System or for potential naturalization areas identified on Map 5, consideration will be given to the context of London within the surrounding ecological region that extends beyond the City limits. A concept plan prepared by Carolinian Canada identifies large core natural areas, other significant natural areas, and corridors and linkages connecting the system together. This concept, referred to as the “big picture” vision, is designed to complement other analyses of natural heritage conducted by municipalities, conservation authorities, and federal and provincial agencies, and includes the *Middlesex Natural Heritage System Study* (2014).

1419\_ The big picture meta-cores and meta-corridors have been refined to reflect local conditions and are identified on Figure 22. The core areas and corridors are represented conceptually, and not to be interpreted as rigid boundary delineations.

1420\_ The “big picture” concept provides direction for the location of upland corridors. Naturalization projects and landowner stewardship initiatives that support the “big picture” system of core natural areas and corridor connections will be encouraged.

**FIGURE 22 - BIG PICTURE META-CORES AND CORRIDORS**



## CONSERVATION MASTER PLANS

1421\_ City Council may request the preparation of conservation master plans for environmentally significant areas and other natural heritage areas. Conservation master plans may be adopted by Council, and will function as guideline documents for the purposes of providing direction on the management of these areas. The preparation of conservation master plans shall also consider the ecological principles as outlined in the City's *Planning and Design Standards for Trails in Environmentally Significant Areas*.

1422\_ Matters which may be addressed through conservation master plans include:

1. Refinement of the boundaries of the environmentally significant area, or other natural heritage areas.
2. Identification of programs for the acquisition of lands within, adjacent to, or providing a linkage to, the environmentally significant areas, or other natural heritage areas, by the City or other public body.
3. The identification of management zones based on ecological sensitivity, including descriptions of recreational uses and opportunities for eco-tourism to be provided if applicable, and details of access permitted to and within the area, including formalized pathways and trail systems.
4. Descriptions of proposed environmental management strategies for the area and the management considerations to be addressed in conjunction with the review of development proposals for adjacent lands.
5. Identification of opportunities to restore and rehabilitate degraded areas within natural heritage areas, and to establish or strengthen corridors or linkages between isolated natural heritage areas.
6. Background information including a description of the natural features and their significance to the Natural Heritage System.

7. Other relevant background information, as applicable.
8. Budgets will be prepared to implement the recommendations of conservation master plans.

## ENVIRONMENTAL MANAGEMENT GUIDELINES

1423\_ The City may prepare environmental management guidelines setting out in more detail the requirements of environmental studies for development and site alteration. Environmental studies are the means by which the City establishes the precise boundaries of natural features and areas and the significant ecological functions within them. They also assess the potential impacts of development and site alteration on the Natural Heritage System and on their adjacent lands, and are required prior to the approval of development to prevent negative impacts on the Natural Heritage System, and to demonstrate that there will be no negative impacts on the natural heritage features and areas or their ecological functions.

1424\_ These guidelines shall be updated as required to reflect changes to provincial policy and technical documents and to reflect improvements in scientific knowledge regarding natural features and ecological functions.

## SUBJECT LANDS STATUS REPORTS

1425\_ Where a secondary plan has not been completed the City may require the preparation of a subject lands status report. The work plan for the subject lands status report will be determined in consultation with the City and relevant public agencies.

1426\_ A subject lands status report shall provide an assessment of natural features and areas on the subject lands and within that part of the subwatershed catchment area that may be impacted by the new development including, but not limited, to those areas included in the Green Space or Environmental Review Place Types on Map 1 or a component of the Natural Heritage System identified or delineated on Map 5.

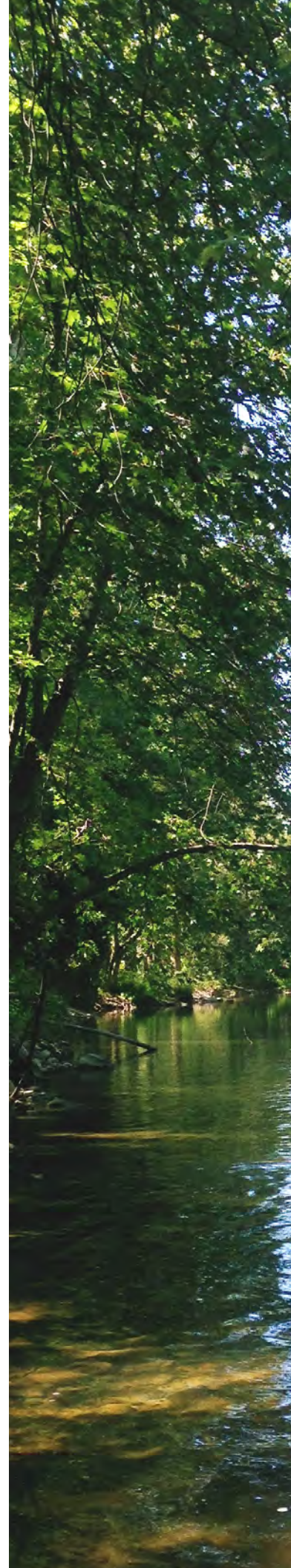




TABLE 13 - AREAS REQUIRING ENVIRONMENTAL STUDY

Component of Natural Heritage System	Trigger Distance Requiring Environmental Study and Area of Adjacent Lands
<ul style="list-style-type: none"> <li>• Fish Habitat</li> <li>• Habitat of Endangered Species and Threatened Species</li> <li>• Locations of Endangered Species and Threatened Species</li> <li>• Provincially Significant Wetlands and connecting lands in a Wetland complex</li> <li>• Wetlands and Unevaluated Wetlands</li> <li>• Significant Woodlands</li> <li>• Significant Valleylands and Valleylands</li> <li>• Significant Wildlife Habitat</li> <li>• Areas of Natural and Scientific Interest</li> <li>• Environmentally Significant Areas</li> <li>• Upland Corridors</li> </ul>	120m
<ul style="list-style-type: none"> <li>• Woodlands</li> <li>• Significant groundwater recharge areas, wellhead protection areas and highly vulnerable aquifers</li> <li>• Special Concern Species</li> </ul>	30m
<ul style="list-style-type: none"> <li>• Environmental Review lands</li> </ul>	As appropriate



1427\_ If the subject lands status report identifies any lands that, in the estimation of the City, may meet the criteria for determining significance for specific components of the Natural Heritage System, the City shall require the preparation of an environmental impact study for these lands. Lands that satisfy the criteria for significance shall be included in the Green Space Place Type in conjunction with any amendment to *The London Plan* required for the proposed development.

1428\_ Prior to initiation of the subject lands status report, a work plan and study scope shall be prepared to the satisfaction of the City, in consultation with the relevant public agencies. Generally, a subject lands status report will be required to:

1. Confirm and map boundaries of natural heritage features and areas.
2. Evaluate the significance of lands in the Environmental Review Place Type on Map 1.
3. Identify and evaluate the significance of other natural heritage features and areas which are not included in the Green Space or Environmental Review Place Types on Map 1 including those natural heritage features and areas shown on Map 5 and vegetation patches greater than 0.5 hectares in size.

1429\_ Where a subject lands status report has not been completed, the City may require that the matters to be addressed in a subject lands status report be undertaken as part of the environmental impact study.

1430\_ If a subject lands status report is completed as part of an environmental impact study, the results of this initial stage of the environmental impact study are to be reviewed and confirmed by the City, in consultation with relevant agencies, prior to completing the balance of the study.

## ENVIRONMENTAL IMPACT STUDIES

1431\_ Environmental impact studies are required to determine whether, or the extent to which, development may be permitted in areas within, or adjacent to, specific components of the Natural Heritage System. They will confirm or refine the boundaries of components of the Natural Heritage System, and will include conditions to ensure that development does not negatively impact the natural features and ecological functions for which the area is identified. City Council may adopt *Guidelines for the Preparation and Review of Environmental Impact Studies* to implement *The London Plan* policies.

1432\_ Environmental impact studies are required where development or site alteration is proposed within or adjacent to components of the Natural Heritage System. The City will require that an environmental impact study be completed to its satisfaction, and in accordance with provincial policy, in consultation with the relevant public agencies prior to the approval of a planning and development application, where development or site alteration is proposed entirely or partially within the distances adjacent to Natural Heritage System components set out in Table 13 – Areas Requiring Environmental Study.

1433\_ Development or site alteration on lands adjacent to features of the Natural Heritage System shall not be permitted unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions. Adjacent lands shall be identified and delineated by the trigger distances shown in Table 13 for requiring environmental evaluations.

1434\_ The City may require that the environmental impact study consider areas beyond those outlined in Table 13 to ensure the relevant context is established for the assessment of potential impacts which may be induced by proposed land uses and for the prescription of effective avoidance and mitigation measures.

1435\_ The Subwatershed Plans provide broad level subwatershed-by-subwatershed environmental information about the ecosystem, and established specific environmental targets that are to be considered in more detailed

studies. Secondary plans are also comprehensive in nature, and may include environmental management strategies to be considered at the site-specific level. An environmental impact study completed pursuant to this Plan shall have regard to both the ecosystem framework and specific environmental targets contained in the Subwatershed Plans or any other relevant Plan.

1436\_ An environmental impact study shall include all of the following, but not be limited to:

1. A description of the existing natural environment that will be affected or that might reasonably be expected to be affected, either directly or indirectly, including terrain and hydrological functions, vegetation and wildlife species and other features, corridors and linkages.
2. The environmental effects that might reasonably be expected to occur and their temporal and spatial scales.
3. Development criteria to maintain natural features and ecological functions, and mitigate the impacts of development within or on adjacent lands.
4. An Environmental Management Plan that includes requirements for restoration, mitigation and/or compensation, and a monitoring plan.

1437\_ Required public notices respecting all official plan and zoning by-law amendment applications and subdivision, consent, and site plan applications under the *Planning Act* shall indicate that an environmental impact study is being prepared to assist in the evaluation of the application.

## ENVIRONMENTAL ASSESSMENT

1438\_ When an Environmental Assessment of a proposal is carried out under the *Environmental Assessment Act* or relevant federal legislation, the requirements for an environmental impact study will be scoped to include issues that have not been adequately addressed through the Environmental Assessment process. Alternatives involving activities that create or maintain infrastructure that are proposed within the Natural Heritage System will be considered only after the evaluation of options that would avoid development and site alteration within the Natural Heritage System.

1439\_ Required public notices for projects carried out under the *Environmental Assessment Act* shall indicate when an environmental impact study is being prepared to assist in the evaluation of alternatives.

## SPECIFIC POLICIES FOR NATURAL HERITAGE

1440\_ The following policies relate to specific sites or areas affected by the Natural Heritage policies. These policies serve to augment the general policies for Natural Heritage. Where there is a conflict between the following policies and the more general Natural Heritage policies, these more specific policies shall prevail. Areas subject to specific policies are shown on Map 7 – Specific Policy Areas.

### SUNNINGDALE NORTH

1441\_ The Sunningdale North area includes lands on the north side of Sunningdale Road West, east of Wonderland Road North, and west of Richmond Street. Along the Medway Creek corridor, any expansion of the existing golf course operation within the distances specified in Table 13 - Areas Requiring Environmental Studies of this Plan, of the Medway Creek Significant Stream Corridor or lands adjacent to the corridor that are identified as woodlands, vegetation patches outside ESA's and wetlands, or environmentally significant area on Map 5, the following policies shall apply. Prior to any expansion, an environmental impact study shall be prepared for the Medway Creek Significant Stream Corridor and features described above. The recommendations of the environmental impact study may include changes to the limits or interior characteristics of the Dry-Fresh Sugar Maple-White Ash Deciduous Forest and the Willow Mineral Deciduous Forest and the Willow Mineral Deciduous Swamp on the north and south ends of the area, identified as FOD5-8 and SWD4-1 in the *Natural Heritage Study Addendum* (Stantec Consulting Ltd., July, 2004) provided adequate compensation is provided, including the implementation of vegetation management practices and significant renaturalization that will provide a net benefit to the riparian and terrestrial condition of the valley lands and associated upland woodlots to the satisfaction of the City of London and the Upper Thames River Conservation Authority.





# Natural and Human-made Hazards

## WHAT ARE NATURAL AND HUMAN-MADE HAZARDS?

1442\_ In addition to the natural heritage features and areas described in this Plan, land areas identified as Natural and Human-made Hazards may also be included in the City's Natural Heritage System, and will be shown on Map 6 – Hazards and Natural Resources. Natural and Human-made Hazard lands include flood plain lands, riverine erosion and wetland hazards, unstable soils and steep slopes, and contaminated lands and abandoned resource wells and are included in the Green Space Place Type on Map 1 – Place Types. Many of these hazards fall within the local conservation authority's regulation limit and within their jurisdiction regarding permitted uses. Former mineral aggregate operations may also be considered as human-made hazards. Policies regarding the rehabilitation of these areas are found in the Natural Resources chapter of this Plan.

1443\_ For the purposes of this Plan, the limit of development is established at the natural hazard limit or the limit of the natural heritage feature or area, including the lands required for any ecological buffer, in conformity with the Natural Heritage policies of this Plan, whichever is greater.

## WHY ARE NATURAL AND HUMAN-MADE HAZARDS IMPORTANT TO OUR FUTURE?

1444\_ Development shall be directed away from areas of natural or human-made hazards where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards. Natural and human-made hazards are to be identified and delineated through appropriate studies, and plans for their protection and/or avoidance are to be established. Often, natural heritage features overlap with natural hazard lands.

## WHAT ARE WE TRYING TO ACHIEVE?

1445\_ The policies of this Plan are intended to minimize the risks associated with natural hazard lands, and to meet the following objectives:

1. Identify and delineate flood plain, slope and erosion hazard areas, and prohibit or regulate land use activity in areas where public safety may be affected by natural hazards, in accordance with provincial natural hazard management policies, and regulations under the *Conservation Authorities Act*.
2. Minimize the possibility of property damage, social disruption and risk to public safety from natural hazard areas, by restricting the uses and activities permitted on lands susceptible to flooding and/or erosion processes.
3. Direct development away from natural hazard areas to minimize the risk to public safety and/or property damage.
4. Provide for limited and controlled development and site alteration on riverine hazard lands within the floodway, including flood and/or erosion control works, minor additions or passive non-structural uses which do not affect flood flows or reduce flood storage capacity.
5. Through acquisition and agreement, provide for the use of flood plain lands as public open space.
6. Consider the potential impacts of climate change that may result in an increase of the risk associated with natural hazards.

1446\_ The policies of this Plan are intended to minimize the risks associated with human-made hazards, and to meet the following objectives:

1. Minimize the potential for safety hazards from abandoned oil or gas wells.
2. Assess and remediate brownfield sites as necessary.
3. Direct development away from human-made hazards.



## HOW ARE WE GOING TO ACHIEVE THIS?

### FLOOD PLAIN LANDS

1447\_ The City of London falls within the jurisdiction of the Upper Thames River, Kettle Creek and Lower Thames Valley Conservation Authorities. The watershed boundaries of these three conservation authorities are shown on Map 6. The Regulatory Flood Standard for the Upper Thames River and Lower Thames Valley Conservation Authorities is based on the 1937 observed Flood Event. The Regulatory Flood Standard for the Kettle Creek Conservation Authority is based on the Hurricane Hazel Storm.

1448\_ The Flood Plain policies of this Plan regulate flood plain lands by restricting permitted uses located in the flood plain. The policies are structured around a “one-zone concept” based on the Regulatory Flood Standard. However, in some areas the flood plain is divided into two zones: the floodway, where no development will be permitted; and the flood fringe, where a limited amount of development may be permitted subject to appropriate floodproofing measures and approvals from the conservation authority having jurisdiction. An illustration of the one and two-zone flood plain concepts is provided below in Figures 23 and 24.

1449\_ Within the flood plain, there are some areas of well-established development where additional development would not normally be permitted due to flood plain restrictions. Application may be made to the provincial government for the approval of a “special policy area” status to permit controlled development in these areas, as exceptions to the normal provincial flood plain policies, subject to specific policies. Special policy areas are identified on Map 6.

1450\_ In addition to the Flood Plain policies of this Plan, all flood plain lands are subject to the regulations administered by the appropriate conservation authority pursuant to the *Conservation Authorities Act*. Under these regulations, development and site alteration is prohibited unless prior written consent has been received from the conservation authority.

### > AREAS IDENTIFIED AS FLOOD PLAIN

1451\_ Detailed flood line mapping studies have been completed for most of the tributaries in the Upper Thames watershed. Due to limited development pressure in these areas, studies have not been completed for the Kettle Creek and Lower Thames Valley Conservation Authority areas of jurisdiction within the City of London. The approximate boundaries of the flood plain, which contain those lands below the Regulatory Flood Standard, are identified on Map 6.

1452\_ Where a property owner is proposing to develop in close proximity to a watercourse where a flood line study has not been completed, the property owner may be required to undertake a detailed flood line study consistent with the requirements established in the *Technical Guide, River and Stream Systems: Flooding Hazard Limit* (OMNR, 2002). Flooding from watercourses with a drainage area less than 125 hectares is generally considered to be local or municipal flooding and the provisions of this paragraph do not apply.

1. The flood plain within London, as identified on Map 6, will be based on the Regulatory Flood Standard of the conservation authority having jurisdiction.
2. The precise delineation of the flood plain is shown on flood plain mapping available through the conservation authority having jurisdiction.
3. Flood plain mapping has not been prepared for the Kettle/Dodd Creek or Sharon Creek subwatersheds. Any proposal for development within, or partly within, regulated areas in the Kettle/Dodd Creek or Sharon Creek subwatersheds, as identified on Map 6, will be required to fulfill the requirements of the conservation authority having jurisdiction and applicants may be required to undertake studies necessary to delineate flood prone lands.



### > ONE-ZONE FLOOD PLAIN CONCEPT

1453\_ In keeping with provincial policies, the City of London and the conservation authorities have adopted a one-zone concept for the City of London, except in some cases where a two-zone concept is applied. See Figures 23 and 24 for reference.

1454\_ The zoning of flood plain lands will reflect the restricted use of these lands, and will prohibit any new development, with the exception of existing uses and minor additions and/or renovations to existing structures. A permit may be required from the appropriate conservation authority and floodproofing may be required.

1455\_ Development within the flood plain will be restricted to:

1. Flood and/or erosion control structures.
2. Facilities that, by their nature, must locate near water or traverse water.
3. Ancillary facilities of an adjacent land use which are of a passive, non-structural nature and do not adversely affect the natural hazard or natural features and areas or their functions.
4. Municipal infrastructure including roads and utilities/services.

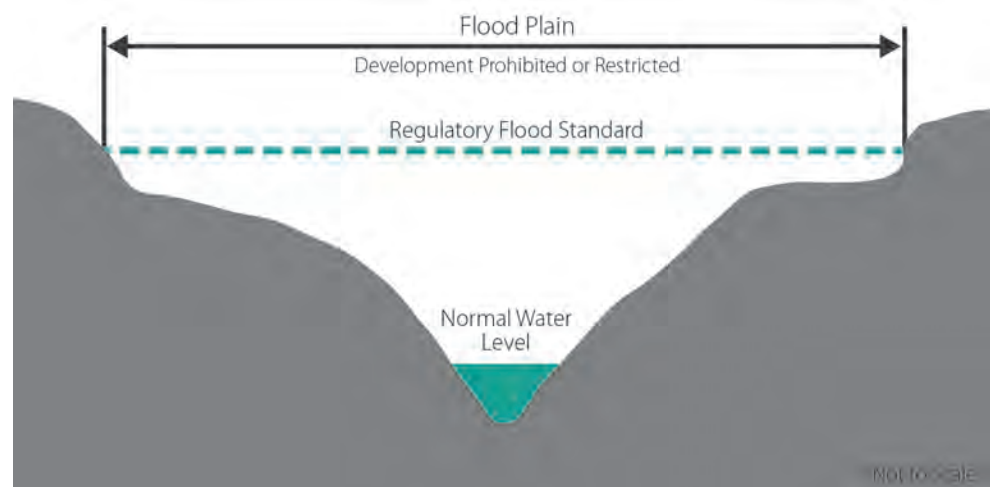
1456\_ The development of flood plain lands shall also be subject to the following conditions:

1. Construction of buildings or structures within the floodway is prohibited with the exception of buildings or structures associated with essential public infrastructure, flood and erosion control, bank stabilization, and watershed management works. Proposed structures will be evaluated in terms of their potential impact on upstream or downstream development of lands, and any new development will incorporate floodproofing measures in accordance with provincial requirements.
2. All new development or structures within the flood plain will require the approval of the appropriate conservation authority.
3. Minor renovations, alterations, or additions to existing buildings may be permitted subject to the approval of the City in cooperation with the appropriate conservation authority.

1457\_ Uses associated with the following are not permitted in the flood plain:

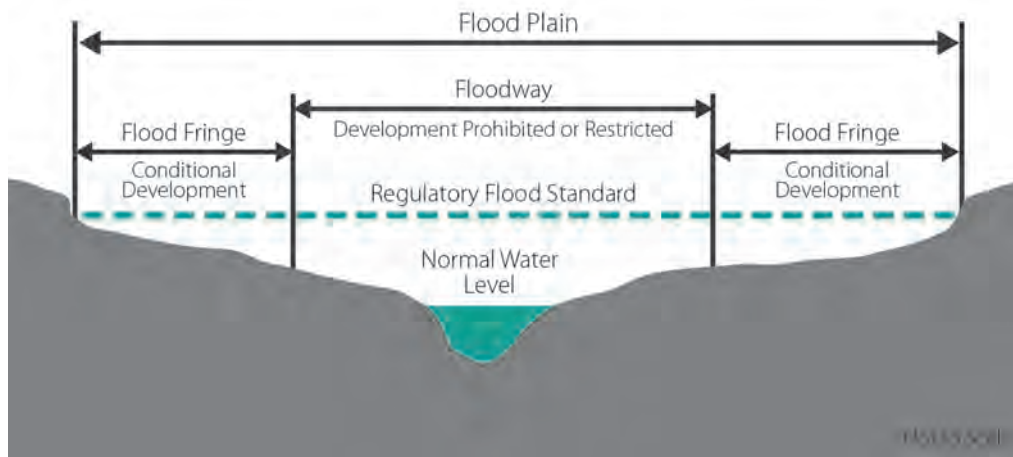
1. Institutional uses including hospitals, long-term care homes, retirement homes, pre-schools, school nurseries, day cares and schools.
2. Essential emergency services such as fire, police and ambulance stations and electrical substations.
3. Uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

FIGURE 23 - ONE ZONE CONCEPT



MUNICIPALITY OF LONDON

FIGURE 24 - TWO ZONE CONCEPT



> TWO-ZONE FLOODWAY - FLOOD FRINGE CONCEPT

1458\_ In keeping with provincial policies, the City of London and the Upper Thames River Conservation Authority have adopted a two-zone floodway-flood fringe concept to allow infill development and redevelopment of an existing use for identified areas along the Thames River and its tributaries where there is a significant difference between the One Hundred Year Flood Standard and the Regulatory Flood Standard or where a flood fringe has been delineated through hydraulic floodway analysis. Flood fringe areas may be identified and delineated by the Upper Thames River Conservation Authority and added to Map 6 by amendment to this Plan.

1459\_ In these areas where the two-zone concept is applied, the flood plain is divided into the floodway and the flood fringe. The use of the two-zone concept may allow for some new development within the flood fringe areas of the flood plain that can be safely developed with no adverse impacts.

1460\_ Under the two-zone concept, the floodway and the flood fringe shall be defined as follows:

1. Floodway - the contiguous inner portion of the flood plain, representing the area required for the safe passage of flood flow and/or the area where flood depths and/or velocities are considered to be such that they pose a potential threat to life and/or property damage. In some circumstances the floodway may be further delineated by depth and velocity parameters as provided for by provincial flood plain management policies.

2. Flood fringe - the portion of the flood plain between the floodway and the flooding hazard limit. Flood depth and velocity are generally less severe in this portion of the flood plain. The extent of the flood fringe is defined by depth and velocity parameters as provided for by provincial flood plain management policies. The delineation of the floodway and the flood fringe areas by the Upper Thames River Conservation Authority may require submission of geodetic survey information and/or a hydraulic floodway analysis by the applicant.

1461\_ The precise delineation of the floodway is the responsibility of the conservation authority having jurisdiction.



1462\_ The zoning of flood plain lands shall be subject to the following conditions:

1. The floodway - the zoning of lands in the floodway will be consistent with the One-Zone Flood Plain policies, and will prohibit development and site alteration.
2. The flood fringe - the zoning of lands in the flood fringe may utilize a holding zone to provide direction as to future permitted uses and to ensure that conditions of floodproofing and safe access are met or achieved prior to development. The *Zoning By-Law* will be amended to remove the holding symbol when the requirements of the Upper Thames River Conservation Authority with respect to floodproofing, and the provision of dry access to the proposed development, have been satisfied.

1463\_ Unless otherwise provided for under the Special Policy Area policies below, development within the flood plain will be restricted in accordance with the following conditions:

1. The floodway - the development of lands in the floodway will be consistent with the One-Zone Flood Plain policies.
2. The flood fringe - conditional development may occur subject to undertaking any necessary studies, meeting flood proofing and access requirements and obtaining the approval of the Upper Thames River Conservation Authority.
3. All new development or structures within the flood plain will require the approval of the Upper Thames River Conservation Authority.
4. Within the flood plain, minor renovations, alterations, or additions to existing buildings may be permitted subject to the approval of the City in cooperation with the Upper Thames River Conservation Authority.





## SPECIAL POLICY AREAS

1464\_ City Council, in accordance with provincial policy, may apply to the Province for approval of a “special policy area” status for specific areas of the city that have historically existed in the flood plain.

1465\_ The purpose of a special policy area is to establish site-specific policies, approved by the Province, that are intended to provide for the continued viability of existing uses and address the significant social and economic hardships to the community that would result from strict adherence to provincial policies concerning development.

1466\_ Areas of the city which may be considered for special policy area status include portions of West London immediately west of the Thames River, and the Ada Street area. Other proposed special policy areas, as may be determined by City Council and the appropriate conservation authority, will be incorporated into this Plan by amendment. Existing and potential special policy areas are identified on Map 6.

1467\_ On application for a special policy area status, City Council may, in conjunction with the appropriate conservation authority and other relevant agencies or provincial ministries, undertake studies to identify development control regulations and floodproofing measures that may allow for limited development in the special policy area in conformity with applicable policies of this Plan, and in accordance with provincial policies.

1468\_ On approval of a special policy area(s), this Plan will be amended to incorporate appropriate policies to address the following matters:

1. The circumstances under which new development will be considered in each special policy area.
2. The minimum acceptable level of floodproofing required for new development in each special policy area. In determining the minimum acceptable level of floodproofing required, the degree of flood protection provided by existing flood control works will be considered.
3. The permitted types and locations of new development.

4. Alternative means or measures of providing increased levels of flood protection.
5. Minimum elevations for the provision of safe ingress and egress within each area.

1469\_ On approval of the special policy area(s), Map 6 of this Plan will be amended to include the special policy area(s).

### > COVES SPECIAL POLICY AREA

1470\_ The Coves Special Policy Area, identified on Map 6, contains important natural heritage features and a viable low density residential neighbourhood that has historically existed within the flood plain of the Thames River. While a berm/dyke structure provides protection up to the Regulatory elevation of the Thames River, there continues to be a potential for flooding from the river, as well as from internal drainage sources in the Coves basin.

1471\_ The standard two-zone (floodway-flood fringe) cannot be reasonably applied to development in the area. In order to provide for the continued viability of the existing community and an appropriate level of flood damage reduction, the Coves is recognized as a special policy area pursuant to the *Provincial Policy Statement*. Accordingly, the following special policies will apply in the area:

1472\_ For the purposes of the Coves Special Policy Area:

1. “Development” shall mean the creation of a new lot, a change in the land use, or the construction of buildings or structures, requiring approval under the *Planning Act* but does not include activities that create or maintain infrastructure authorized under the Environmental Assessment process, or works subject to the *Drainage Act*.
2. “Essential Emergency Services” shall mean services such as those provided by fire, police and ambulance stations and electrical substations, which would be impaired during an emergency as a result of flooding, the failure of floodproofing measures and/or protection works, and/or erosion.

3. "Floodproofing" shall mean structural changes and/or adjustments incorporated into the basic design and/or construction or alteration or placement of individual buildings, structures or properties to protect them from flood damage, or to reduce or eliminate flood damages.
  4. "Hazardous Substances" shall mean 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.
  5. "Infilling" shall mean development on previously undeveloped lots, generally bounded by existing development on adjacent sites.
  6. "Institutional Uses" shall mean those uses, associated with hospitals, long-term care homes, pre-schools, school nurseries, day cares and schools where there is a threat to the safe evacuation of vulnerable populations such as older persons, persons with disabilities, and those who are young during an emergency as a result of flooding, failure of floodproofing measures or protection works, or erosion.
  7. "Regulatory Flood Standard" shall mean the level of flooding which has been calculated by the Upper Thames River Conservation Authority and recognized by the Province, to define the Thames River flood plain limits for regulatory purposes. The 1937 observed historical event, which represents the equivalent of a one in 250 year return flow occurrence, is recognized by the Province as the Regulatory Flood Standard for the Upper Thames watershed. The Regulatory Flood Standard for the Thames River is delineated by the 235.6 metre contour.
  8. "100-Year Flood Standard" shall mean the level of flooding which has been calculated by the Upper Thames River Conservation Authority for the Thames River flood plain based on an analysis of precipitation, snow melt, or a combination thereof, having a return occurrence of 100 years on average or having a 1% chance of occurring or being exceeded in any given year. The 100-Year Flood Standard for the Thames River is delineated by the 234.8 metre contour.
  9. "Coves Flood Standard" shall mean the level of flooding which has been calculated by the Upper Thames River Conservation Authority to define the flood plain limits from internal drainage sources within the Coves basin, based on a one in 250 year return flow occurrence. The Coves Flood Standard is delineated by the 232.33 metre contour.
  10. "Replacement" shall mean removing an existing structure and erecting a new structure.
  11. "Site Alteration" shall mean activities such as the placement of fill, grading and excavation that would change the landform and natural vegetative characteristics of a site.
- 1473\_ All development within the Coves Special Policy Area will be encouraged to incorporate floodproofing to the level of the Regulatory Flood Standard, if possible, and to the level of the 100 Year Flood Standard at a minimum.
- 1474\_ Applications for official plan and/or zoning by-law amendments, plans of subdivision and consents that would have the effect of increasing the amount or intensity of residential development within the Special Policy Area will not be supported.
- 1475\_ Applications for official plan and/or zoning by-law amendments that would have the effect of permitting institutional uses, essential emergency services or hazardous substances within the Special Policy Area will not be supported.

1476\_ On existing lots of record that are within a place type and zone that permits residential development, minor additions and alterations to existing structures will be permitted, in accordance with relevant zoning and building guidelines, provided it is floodproofed to the elevation of the main floor (first floor) of adjacent structures at a minimum, and in no case less than the elevation of the Coves Flood Standard.

1477\_ On existing lots of record that are within a place type and zone that permits residential development, infilling and replacement will be encouraged to incorporate floodproofing to the level of the Regulatory Flood Standard. Where this level of protection would be impractical, obtrusive, or out of context with adjacent development patterns, floodproofing shall be required to the elevation of the main floor (first floor) or adjacent structures at a minimum, and in no case less than the elevation of the Coves Flood Standard. Basements will not be permitted.

1478\_ Applications for official plan and/or zoning by-law amendments to permit open space uses will be evaluated on the basis of the relevant policies of this Plan. Development within the Green Space Place Type will generally be restricted to non-intensive or passive uses that are not susceptible to significant flood damages.

1479\_ Associated structures, uses and parking areas may be permitted only on lands that are above the elevation of the Coves Flood Standard.

1480\_ All infill, replacement, building additions and site alteration activity within the Coves Special Policy Area will continue to be regulated under the requirements of the *Conservation Authorities Act* and this will be denoted on zoning maps to increase the awareness of property owners and area residents.

1481\_ The City of London and Upper Thames River Conservation Authority will continue to cooperate in order to ensure the ongoing maintenance, repair and servicing of the Thames River dyke system, which provides flood damage reduction to the Coves Special Policy Area.

1482\_ The City of London, in cooperation with the Upper Thames River Conservation Authority, will maintain, update and enhance the local *Flood Contingency Plan* on an ongoing basis. The City will support the efforts of the conservation authority to maintain, update and enhance the *Flood Warning System Plan*, which provides flood forecasting, control and warning services in the watershed area.

## FLOOD PLAIN ACQUISITION

1483\_ Selected flood plain lands will be acquired through a long-term program of progressive acquisition, carried out in conjunction with the appropriate conservation authority.

1484\_ This flood plain acquisition program will be conducted in recognition of the limited development potential of flood plain lands, and as a means of achieving objectives for open space and recreational lands.

1485\_ For the purposes of flood plain acquisition, priorities will be established and evaluated on a regular basis according to the risk to public safety and/or for property damage in the case of a major flood event, and the potential contribution to the network of public open space within the city. Priorities for the acquisition of flood plain lands will be established by City Council in cooperation with the appropriate conservation authority.

1486\_ Acquisition will occur as properties become available primarily through the following methods: purchase; parkland dedication; and donation or bequest. In some cases where a property cannot be acquired through other means, the property may be acquired through expropriation.

## RIVERINE EROSION AND WETLAND HAZARDS

1487\_ Ravines, river valleys, stream corridors, valleylands, unstable slopes and wetlands are hazardous lands which may be subject to erosion and hazardous processes that preclude or restrict land use and development activity. These lands are identified or delineated on Map 6. In addition to satisfying the policies in this section, all site alteration, land use and development activity within the applicable regulation limit will be subject to review and approval by the conservation authority having jurisdiction.

1488\_ Most areas of riverine erosion hazards are included in the Green Space Place Type. In keeping with provincial policy, new development shall be directed away from lands that are subject to riverine erosion hazards. In areas of new development, the use of hazard avoidance, vegetative plantings and other non-structural solutions are the preferred method of addressing riverine erosion hazards.

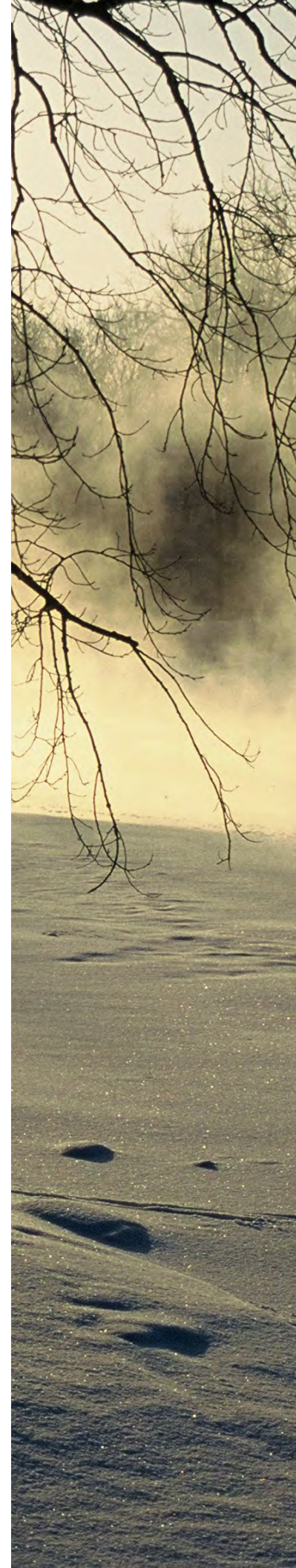
1489\_ In areas of existing development, uses permitted by an underlying place type may only be developed on lands that are subject to riverine erosion hazards if the following criteria can be addressed to the satisfaction of the City and the conservation authority having jurisdiction:

1. The riverine erosion hazard can be avoided and new or existing hazards are not created or aggravated.
2. Vehicles and people have a way of entering and exiting the area during times of emergencies.
3. The development does not involve institutional uses, essential emergency services or the storage of hazardous substances, which could pose an unacceptable threat to public safety if damaged or impacted by erosion forces.
4. Permitted uses may also include works required to be undertaken for the creation or maintenance of infrastructure authorized under an Environmental Assessment process, and works required for flood and erosion control and bank stabilization to protect areas of existing development.

### > LANDS WITHIN THE REGULATION LIMIT

1490\_ All natural hazard lands, including riverine flooding and erosion hazards as well as wetlands and the areas of interference surrounding wetlands are regulated by the respective conservation authorities having jurisdiction, in accordance with regulations made pursuant to Section 28 of *the Conservation Authorities Act*. This regulation requires property owners to obtain approval prior to undertaking any development and/or site alteration within these areas, including the placement of fill, grading, construction, alteration to a watercourse and/or interference with a wetland.

1491\_ The regulation limits are identified on Map 6 to illustrate the hazard lands regulated by the conservation authority having jurisdiction. The regulation limits are subject to interpretation and refinement, without an amendment to this Plan, to reflect changes that have been enacted by the conservation authority having jurisdiction.





## > RIVERINE EROSION HAZARDS

1492\_ The natural movement of watercourses and valley slopes due to erosion can be aggravated by human activities and the impact of the activity can be transferred some distance from the impact site. The risk of erosion is managed by planning for the 100 year erosion rate (the average annual rate or recession extended over a one hundred year time span). The extent of the riverine erosion hazard limit depends on whether the erosion is occurring in a confined system (where the physical presence of a valley corridor containing the system is visibly discernable), or an unconfined system (where there is no discernable valley slope or bank that can be detected from the surrounding landscape). In keeping with the hazard avoidance approach, development and site alteration is generally not permitted in areas that are subject to riverine erosion hazards. Riverine erosion hazards are further addressed by the following criteria and illustrations.

1493\_ The boundaries and alignment of the riverine erosion hazard limit shall be determined by the conservation authority having jurisdiction. The riverine erosion hazard limits identified on Map 6 are subject to interpretation and refinement without an amendment to this Plan, on the basis of a technical study prepared in conformity with the Maximum Hazard Line policies of this Plan and completed to the satisfaction of the City and the conservation authority having jurisdiction.

### > CONFINED SYSTEMS

1494\_ The riverine erosion hazard limit for confined systems, as shown on Figure 25, is comprised of the combined effect of the following:

1. In cases where valley slopes are found to be at a stable angle, and not subject to the potential influence of toe erosion, the Valley Top of Slope, located at the break in slope point between the valley side slope and the tableland, is the riverine erosion hazard limit.
2. In cases where there is a potential for erosion at the toe of the slope from natural processes, the riverine erosion hazard limit needs to be shifted to include a toe erosion allowance.
3. In cases where a slope is steeper than its determined long-term angle of stability, the riverine erosion hazard limit needs to be shifted to account for slope movement over time. In the absence of detailed geotechnical information, the stable slope allowance is based on an assumed stable slope gradient of three horizontal units to one vertical unit (3:1). For slopes having a steeper gradient, the allowance is equal to the distance between the actual valley top of slope and the point at which a slope at a 3:1 gradient, rising from the same toe position, would intersect the ground surface.
4. A six metre erosion access allowance added to the valley top of slope or the combined toe erosion and long term angle of stability, is required for the purposes of providing sufficient access for emergencies, maintenance, and construction activities.

FIGURE 25 - EROSION HAZARD LIMIT FOR CONFINED RIVERINE SYSTEM

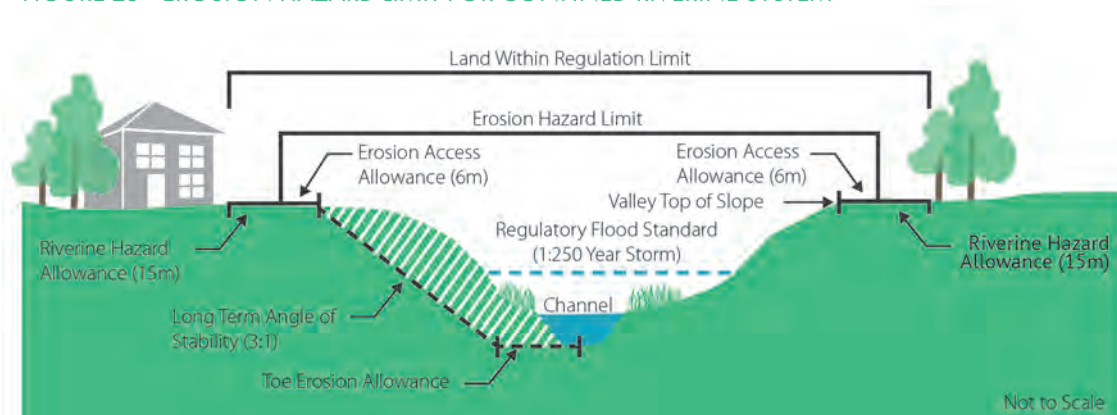
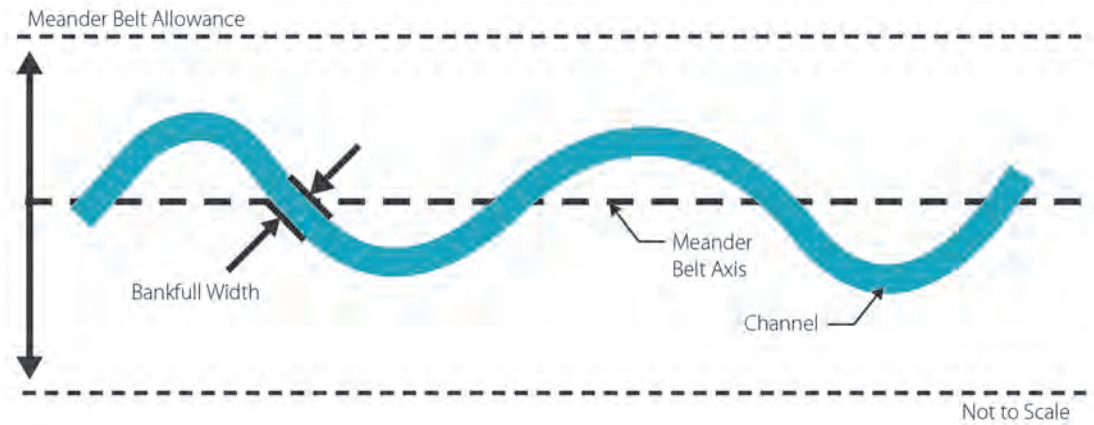


FIGURE 26 - EROSION HAZARD LIMIT FOR UNCONFINED RIVERINE SYSTEM



> UNCONFINED SYSTEMS

1495\_ The riverine erosion hazard limit for unconfined systems where there is no discernable valley slope or bank, as shown on Figure 26, is the combined limit of:

1. The meander belt allowance, which provides a limit to development within those areas where the river system is likely to shift. It is based on 20 times the bankfull channel width.
2. The erosion access allowance is a six metre allowance added to the meander belt. The erosion access allowance is required for the purpose of maintaining sufficient access for emergencies, maintenance, and construction activities.

> STEEP SLOPES OUTSIDE THE RIVERINE EROSION HAZARD LIMIT

1496\_ The riverine erosion hazard limit identifies the erosion hazard associated with slopes along the city's river and stream corridors. Steep slopes associated with other features such as moraines or remnant valley slopes that are no longer continuous with the river system exist within the city outside of the riverine erosion hazard limit. These features, identified on Map 6 will be assessed through the community planning process and appropriate measures will be taken to address erosion hazards and protect the natural vegetation associated with these features. Such measures may include the preparation of a geotechnical study and/or supporting technical study in conformity with the Maximum Hazard Line policies below.

1497\_ Applicants may be required to obtain the necessary approvals from the conservation authority having jurisdiction for development proposed within steep slopes outside of the riverine erosion hazard limit.

> WETLANDS AND AREAS OF INTERFERENCE

1498\_ Wetlands and their surrounding areas of interference are subject to regulation under the *Conservation Authorities Act* due to the potential hazards associated with flooding, organic soils and interference with water source/recharge areas. Filling or draining can have an impact on the hydrologic functions of a wetland which, in turn, may influence the flooding and erosion processes in the area. The incremental impact of widespread wetland interference can also have a significant impact on downstream hydrology. The regulation limit also applies to surrounding areas of interference, for a distance of 120 metres around provincially significant wetlands and other wetlands larger than two hectares in size, and 30 metres around wetlands that are less than two hectares in size and not provincially significant.

1499\_ Mapping for the wetlands and areas of interference included within the regulation limit, is maintained by the conservation authority having jurisdiction and may be reflected on Map 6 of this Plan as the conservation authority regulation limit for information purposes. Within regulated wetlands and their areas of interference, development or site alteration that is consistent with the underlying place type and zoning may be permitted only if prior approval is received from the conservation authority having jurisdiction, and in accordance with the recommendations of an environmental impact study.



## MAXIMUM HAZARD LINE

1500\_ The Maximum Hazard Line represents the outer limit of combined natural hazards including flood plains and areas of unstable or organic soils and steep slopes, including steep slopes outside of the riverine erosion hazard limit and wetlands, and is identified on Map 6 for information purposes. Regulated lands within the Maximum Hazard Line include riverine flooding and erosion hazards, wetlands and the areas of interference around wetlands. This identification is subject to interpretation and refinement without an amendment to this Plan, to reflect changes that have been enacted by the conservation authority having jurisdiction.

### > TECHNICAL STUDIES

1501\_ For new development, redevelopment, or expansions to existing development, geotechnical assessments, hydrogeological studies, river morphology studies, erosion control plans and/or other supporting technical studies will be required to:

1. Accurately delineate the riverine erosion hazard limit.
2. Identify existing erosion and/or slope hazards.
3. Assess the impact of the proposed development on existing hazards.
4. Assess the potential for the proposed development to create new hazards.
5. Identify measures to safely avoid the potential hazards, including appropriate development setback from the riverine erosion hazard limit.
6. Identify and address any associated impacts that development adjacent to the riverine erosion hazard limit will have on components of the Natural Heritage System.

1502\_ The City shall require that the geotechnical assessment and other technical studies be completed by a qualified professional to its satisfaction, in consultation with the relevant conservation authority and other public agencies, prior to the approval of an official plan amendment, zoning by-law amendment, subdivision application, consent to sever, or site plan application.

1503\_ A geotechnical assessment and other required technical studies may be completed as part of a secondary plan, Environmental Assessment and/or an environmental impact study in conformity with the policies in the Our Tools part of this Plan.

## HUMAN-MADE HAZARDS

1504\_ There are lands within the City of London that as a result of previous human activity may not be suitable for future development. These policies are intended to:

1. Minimize the potential for contaminated lands to create a hazard to public health and safety, to property or to the natural environment.
2. Encourage the restoration of contaminated land.
3. Support development and redevelopment proposals that will facilitate the remediation of vacant or underutilized brownfield sites.

### > CONTAMINATED LANDS

1505\_ Notwithstanding the place types on Map 1 of this Plan and any associated policies, future development will not be permitted on or in the vicinity of known or suspected contaminated sites, unless it is determined that the development satisfies the provisions of the *Environmental Protection Act*, and the development complies with any other provincial and municipal guidelines, as applicable.

1506\_ The City may consult with appropriate provincial agencies and may require an investigation, including testing of soil and groundwater samples, to:

1. Determine potential health concerns.
2. Demonstrate the site can be rehabilitated to meet appropriate federal, provincial and local standards.
3. Identify procedures for site remediation.

1507\_ The City shall cooperate and participate with other private or public agencies, in an effort to reduce adverse environmental impacts or health hazards associated with contaminated sites.

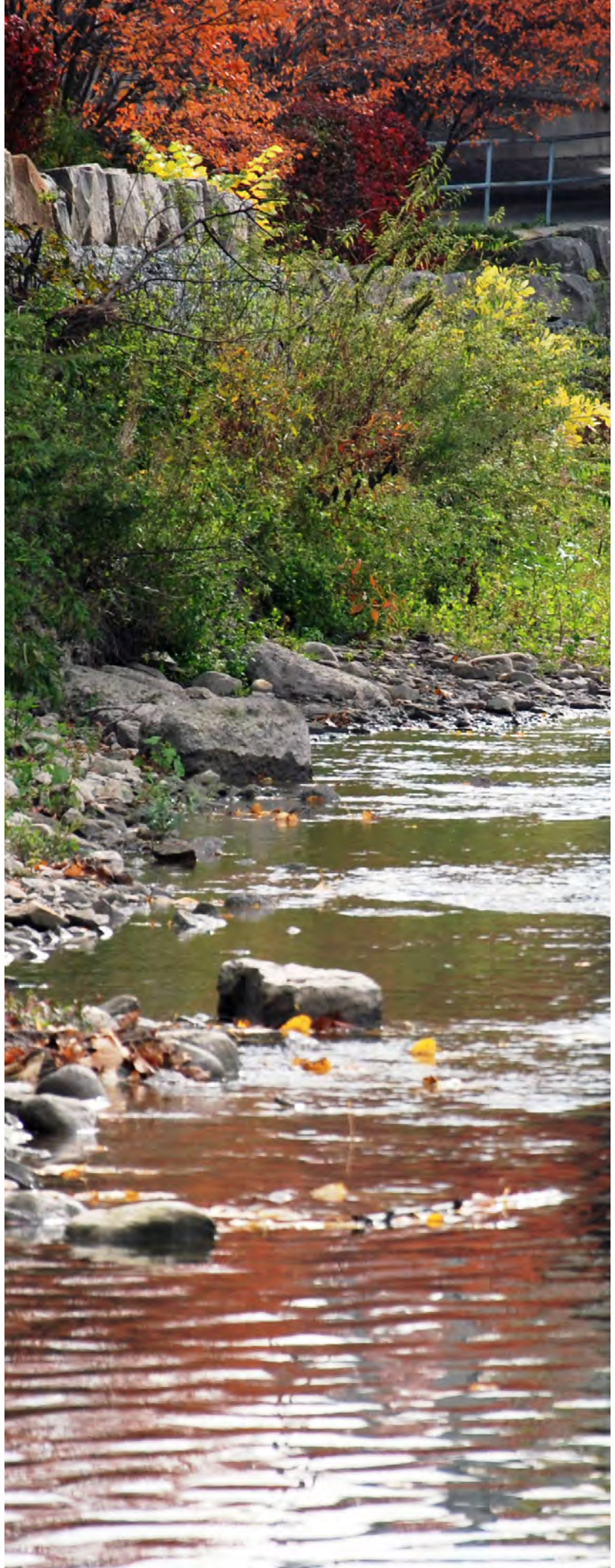
1508\_ In determining the standards to be used for the purposes of site remediation for Records of Site Condition on contaminated lands, water standards shall be used in accordance with the provisions of the *Environmental Protection Act* and any associated regulation.

> ABANDONED OIL OR GAS WELLS

1509\_ For information purposes, the approximate locations of known or suspected former petroleum wells are identified on Map 6. Prior to approving new development on or adjacent to known or former petroleum (oil and gas) well locations, the City will require the applicant to demonstrate that the known or suspected hazard has been mitigated in accordance with relevant provisions of the *Oil, Gas and Salt Resources Act*. Should previously unknown abandoned petroleum works be discovered during the course of a project, work shall be ceased until such time that hazards have been mitigated in accordance with relevant provisions of the *Oil, Gas and Salt Resources Act*.

> ABANDONED WATER WELLS

1510\_ Where there are known abandoned water wells, or prior to approving development on lands found to contain abandoned water wells, the City shall require the applicant to demonstrate that the wells have been properly decommissioned, in accordance with the provisions of the *Ontario Water Resources Act* and any associated regulation. It is the responsibility of the applicant and/or property owner to determine if any abandoned water wells exist within a development site.







# Natural Resources

## WHAT ARE NATURAL RESOURCES?

**1511\_** There are lands within the City of London that contain natural resources that are to be protected to ensure that the resources are available for extraction to support on-going development and infrastructure needs. In London, these lands include aggregate resource areas, extractive industrial areas, such as the Byron Gravel Pits, and potential mineral and petroleum resources. These resources require protection from development until such time as the resource is exhausted and rehabilitation of the resource area is complete.

**1512\_** Wellhead Protection Areas are zones around wells where land uses must be planned to protect the quality and quantity of the drinking water supply. These wells serve as emergency municipal water wells, and are located within the identified wellhead protection areas. *Source Protection Plans* identify areas where uses or activities may be prohibited, restricted, or otherwise regulated by the Source Protection Plan to protect our drinking water supply within highly vulnerable aquifers and significant groundwater recharge areas.

## WHY ARE NATURAL RESOURCES IMPORTANT TO OUR FUTURE?

**1513\_** Ready access to convenient resources is important to the continued growth and development of the city. Sand and gravel provide a valuable source of street and building construction material. Policies of this Plan provide for the protection of these resources, including the continuation and expansion of existing pits and quarries and the introduction of new pits and quarries. The Plan also provides policies to ensure that the potential impacts of pits and quarries on other land uses are also taken into account. There are no known mineral or petroleum resource operations in the city, however, in certain areas of London underground petroleum resources may exist. Access to high-quality drinking water that meets or exceeds all regulatory standards is important to the health and well-being of Londoners.

## WHAT ARE WE TRYING TO ACHIEVE?

**1514\_** To balance the needs of property owners, operators and residents, to facilitate the extraction of our natural resources, to provide access to aggregate resources as close to market as possible, and to ensure the rehabilitation of these lands, we will:

1. Promote aggregate resource conservation, including aggregate extraction and the recovery and recycling of manufactured materials derived from aggregates.
2. Provide for the continuation of existing extractive operations.
3. Provide for the expansion of existing pits and quarries, and the establishment of new pits and quarries, in accordance with provincial requirements and in conformity with the policies of this Plan.
4. Protect aggregate resources for long-term use from development and activities that would preclude or hinder the expansion or continued use of the operation, or would be incompatible for reasons of health, safety or environmental impact.
5. Minimize potential land use compatibility problems between pits and quarries and surrounding land uses.
6. Ensure that human health and safety impacts are mitigated.
7. Promote best practices in the operation, site design and after-use remediation of extractive industrial sites.
8. Provide for the sensitive rehabilitation of pits and quarries to an appropriate after-use compatible with the long-term intent of this Plan.

**1515\_** To protect drinking water resources and to ensure high-quality drinking water supply and to address significant drinking water threats, we will:

1. Implement *Source Protection Plans* as required by provincial regulations.
2. Prohibit, restrict, or otherwise regulate uses or activities where significant drinking water threats may occur as mapped in the *Source Protection Plans* and in accordance with *Source Protection Plan* policies.
3. In designated vulnerable areas identified through the *Assessment Report*, all planning decisions shall be in conformity with the policies of the *Source Protection Plan* that address significant drinking water threats.





## HOW ARE WE GOING TO ACHIEVE THIS?

1516\_ Map 6 – Hazards and Natural Resources, includes the following natural resources:

1. Aggregate Resources
2. Mineral and Petroleum Resources
3. Emergency Municipal Water Wells, Wellhead Protection Areas, Significant Groundwater Recharge Areas and Highly Vulnerable Aquifers

1517\_ Policies for Extractive Industrial Areas are included in the Aggregate Resources policies. Identified extractive industrial areas are aggregate resource areas that are licensed under the *Aggregate Resources Act*.

### AGGREGATE RESOURCES

1518\_ Aggregate extraction is a permitted interim use in all place types of this Plan. In prime agricultural areas, aggregate extraction sites shall be rehabilitated to an agricultural condition. The locations of aggregate resource areas, and licensed pits and quarries and properties appropriate for consideration for a license under the *Aggregate Resources Act* are identified on Map 6. The ultimate intended uses for lands identified as extractive industrial areas on Map 6, are shown on Map 1 – Place Types.

1519\_ In addition to the policies of this Plan, the operation of pits and quarries in London is also subject to the provisions of the *Aggregate Resources Act*.

1520\_ In evaluating proposals for change in land use within, or adjacent to, extractive industrial areas identified on Map 6, the potential impact of the proposed use on the pit or quarry and the future availability of aggregate resources for extraction will be considered. Existing aggregate extraction operations shall be protected from new development and activities that would preclude or hinder their expansion or continued use, or which would be incompatible for reasons of public health, public safety, or environmental impact. The following measures may be required to ensure that extraction is undertaken in a manner which minimizes social and environmental impacts between the aggregate resource extraction and new development:

1. Phasing of the proposed development, such that portions of the site furthest away from the pit or quarry are developed first. This will assist in the maintenance of a buffer area between the two uses.
2. Phasing of the proposed development, so that rehabilitation of portions of the pit or quarry precedes the development of adjacent residential uses.
3. The provision of berms, landscaping, and fencing.

1521\_ The City will promote the conservation of aggregate resources by making provision for the recovery of these resources, wherever possible. It is recognized that the extraction of these resources may occur during the life of this Plan. An amendment to *The London Plan* may be required to establish a new pit or quarry, or to substantially expand an existing pit or quarry, in conformity with the policies of this Plan. Map 6 may be amended to identify extractive industrial areas for a new or expanded pit or quarry, or to remove the extractive industrial areas for a closed pit or quarry. The foregoing notwithstanding, in the case of aggregate resource areas in the Byron Gravel Pits, only a zoning by-law amendment will be required to establish a new pit or expand an existing pit.

1522\_ In addition to aggregate resource extraction, the recovery and recycling of manufactured materials derived from aggregates for re-use is a permitted use within an aggregate operation.

1523\_ In areas within or adjacent to known aggregate resource areas, development and activities that would preclude the establishment of new aggregate extraction operations, or access to the resources, will be permitted only if one or more of the following criteria are met:

1. Resource use would not be feasible.
2. The proposed land use or development serves a greater long-term public interest.
3. Issues of public health, public safety and environmental impact are addressed.



> EXPANSIONS OF PITS AND QUARRIES OR NEW PITS AND QUARRIES

1524\_ In addition to the requirements of the *Aggregate Resources Act*:

1. An amendment to this Plan will be required in order to establish a new pit or quarry or to expand an existing pit or quarry beyond that area identified on Map 6 as extractive industrial areas except in the south-east Byron area.
2. In the case of lands in the Byron Gravel Pits identified on Map 6 as extractive industrial areas or aggregate resource areas, only a zoning by-law amendment will be required to establish a new pit or quarry or to expand an existing pit or quarry.

1525\_ Proposals will be evaluated in terms of their potential impact on surrounding land uses.

1526\_ In reviewing aggregate extraction proposals applied for under the *Aggregate Resources Act*, where an official plan amendment or zoning by-law amendment is required, City Council may require the applicant to submit the following information:

1. A report setting out the location, extent, amount, and quality of the aggregate resource to be extracted.

2. An inventory of existing site conditions, including the description and dimensions of the site, property ownership and area, adjacent land uses, vegetation, topography, soil conditions, ground and surface water, and other significant features.
3. An evaluation of potential noise and vibration impacts on adjacent land uses in conformity with the Noise, Vibration and Safety policies in the Our Tools part of this Plan.
4. The site plan of the extractive operation, as required by the *Aggregate Resources Act*, and showing the proposed development as planned and staged. Such site plans shall include: the location of structures, operating equipment, activity areas, points of access, and internal streets; the anticipated use of traffic routes to and from the site; the proposed use of measures to mitigate the potential impact of dust, noise, vibration, and other nuisances on sensitive receptors within 150 metres of the site; surrounding land uses; and the phasing of rehabilitation of the extractive operation.

1527\_ In place types other than Future Growth, applications for an amendment to this Plan to establish a new pit or quarry or to expand an existing pit or quarry will be subject to the Planning and Development Application policies in the Our Tools part of this Plan.

## > REHABILITATION OF PITS AND QUARRIES

1528\_ City Council, in considering an official plan amendment and/or zoning by-law amendment and an application under the *Aggregate Resources Act* to add or expand a pit or quarry, will require the applicant to submit a rehabilitation plan, as provided for by the *Aggregate Resources Act*, to ensure that the rehabilitation of a pit or quarry is in keeping with the relevant place type(s) shown on Map 1 and other relevant policies of this Plan.

1529\_ City Council may request that the following items be included in the rehabilitation plan: details of the proposed land use; final topographic contours; the expected depth and quality of topsoil; the expected depth and quality of ground water; the expected extent, depth, and quality of surface water; proposed measures to ensure slope stability; details of the landscaping or replanting program; and delineation of proposed drainage patterns.

1530\_ City Council may request that rehabilitation plans be based on an area study, prepared in conformity with the Secondary Plans policies of this Plan. Secondary plans intended to form the basis of a rehabilitation plan will address, in addition to those matters described in the Secondary Plans policies, methods of minimizing potential land use conflicts between proposed new development and existing land uses.

## > WAYSIDE PITS AND QUARRIES, PORTABLE ASPHALT AND CONCRETE PLANTS

1531\_ Wayside pits and quarries, and portable asphalt and concrete plants may be established in undeveloped areas within any place type of the Plan without the requirement for an amendment to *The London Plan* or the *Zoning By-law*, subject to the following provisions.

1532\_ For the purposes of this Plan, a wayside pit or quarry means a temporary pit or quarry opened and used by or for a public authority solely for the purpose of a particular project or contract of street construction and not located on the street right-of-way. A portable asphalt plant means a facility with equipment designed to heat and dry aggregate and mix aggregate with bituminous asphalt to produce asphalt paving material, and includes stockpiling and storage of bulk materials used in the process,

and which is not of permanent construction, but which is to be dismantled at the completion of the construction project. A portable concrete plant means a building or structure 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 which is not of permanent construction, but which is designed to be dismantled at the completion of the construction project.

1533\_ Wayside pits and quarries, and portable asphalt and concrete plants to be established within areas of the Green Space Place Type that have been recognized by City Council as Environmentally Significant Areas, or within areas of any place type that are subject to a regulation limit described by the conservation authority having jurisdiction, will require a zoning by-law amendment to permit a temporary use, in accordance with the provisions of the *Planning Act*. Applications for a zoning by-law amendment to permit wayside pits and quarries will be subject to the Planning and Development Application policies in the Our Tools part of this Plan.

1534\_ Wayside pits and quarries, and portable asphalt and concrete plants to be established within areas of existing development will require a zoning by-law amendment to permit a temporary use, in accordance with the provisions of the *Planning Act*. Applications for a zoning by-law amendment to permit wayside pits and quarries will be subject to the Planning and Development Application policies in the Our Tools part of this Plan.

1535\_ City Council, in reviewing applications under the *Aggregate Resources Act* for wayside permits, will require the submission of a rehabilitation plan prepared to Council's satisfaction, as provided for by the *Aggregate Resources Act*, to ensure that the rehabilitation of a pit or quarry is in conformity with the place types shown on Map 1 and other relevant policies of this Plan.



## SPECIFIC POLICIES FOR AGGREGATE RESOURCES

1536\_ The following policies relate to specific sites or areas affected by the Aggregate Resources policies. These policies serve to augment the general policies for Aggregate Resources. Where there is a conflict between the following policies and the more general Aggregate Resources policies, these more specific policies shall prevail. Areas subject to specific policies are shown on Map 7 – Specific Policy Areas.

### > BYRON GRAVEL PITS AND ADJACENT LANDS

1537\_ Within the Future Growth Place Type east of North Street, south of Byron Baseline Road and Commissioners Road West, known as the Byron Gravel Pits, it is anticipated that the long-term land use of this area will be a mix of mid-rise housing types and recreational uses. Redevelopment of this area will be based on a comprehensive rehabilitation and development plan. Expansion of the existing licensed aggregate area and the realignment of North Street may be considered if it can be demonstrated that this will assist in the rehabilitation of the existing gravel pits and that compatibility with surrounding land uses can be achieved.

1538\_ Aggregate resource areas adjacent to the Byron Gravel Pits are identified on Map 6. It is recognized that extraction of these resources may occur during the life of this Plan as a means of assisting in the overall rehabilitation of the Byron Gravel Pits. Consideration of the long-term development for the lands identified on Map 6 as aggregate resource areas adjacent to the Byron Gravel Pits will be incorporated and form a part of the studies being undertaken to achieve a comprehensive extraction, rehabilitation and development plan for the lands in the Future Growth and Neighbourhoods Place Types shown on Map 1.

1539\_ For lands identified as extractive industrial areas and aggregate resource areas in Byron, it is the intent of this Plan to minimize the impact of extraction activities upon surrounding land uses. Accordingly, in the Byron Gravel Pits, in addition to conformity with the Natural Resources policies of this Plan, the Ministry of Natural Resources and Forestry may be requested, through the licence and site plan approval process, to require any or all of the following:

1. The extraction and rehabilitation of extracted areas to be expedited to the extent possible through a phasing sequence on the site plans required by the *Aggregate Resources Act*.
2. The location of stockpiling, screening, mixing, crushing or other processing of materials at the lowest elevations that is reasonably possible.
3. To the extent possible, the use of common, paved entrances and exits as recommended by the City Engineer to be shared by extraction operations.
4. The retention of tree or other vegetative cover within the setback areas to the extent possible.

1540\_ The integration of rehabilitation plans for the extraction area will be achieved through the process of both new and replacement site plan approval by the Ministry of Natural Resources and Forestry. The integrated plans will provide an approximate indication of the rehabilitated landscape including limited peripheral areas that are intended for residential after-use, and the greater portion of the pit that will not be suitable for residential development because of slope or elevation constraints.

1541\_ Since the ultimate use of this area is likely to be open space and recreation, a more detailed level of site planning will have to be undertaken in the future involving the pit operators and land owners, the Ministry of Natural Resources and Forestry and the City. The resulting plan and related documentation will indicate:

1. An accurate delineation of the land intended to be rehabilitated as public open space.
2. Accurate contour information indicating the final grading of the rehabilitated areas.
3. The approximate configuration of any ponds to be incorporated in the rehabilitation scheme.
4. Street and trail access to and through the rehabilitated pit area including any required parking facilities.
5. The siting of any recreational facilities proposed for the rehabilitated pit area.
6. A planting scheme to provide for the stabilization of soils and reduced maintenance on rehabilitated slopes, the naturalization of lands at the edge of forest areas, and the creation of a visually attractive landscape suitable for passive recreation pursuits.

1542\_ The development of lands within the vicinity of the extractive industrial areas or aggregate resource areas, as identified on Map 6 for residential uses shall have regard for the mitigation of the noise and dust impact of extraction operations on the proposed residential development. The review of applications for rezoning or plan of subdivision approval will include the following considerations:

1. Prior to a zoning by-law amendment or final approval of a plan of subdivision within 300 metres of lands identified as extractive industrial areas or aggregate resource areas on Map 6, a noise and dust impact study shall be completed and any recommended mitigation measures contained therein will be carried out to the satisfaction of the City of London, the Ministry of the Environment and Climate Change and the Ministry of Natural Resources and Forestry. Furthermore, the subdivider

will notify prospective lot purchasers, in agreements of purchase and sale and in notices registered on title that are binding on successors and assigns to the subdivision lands and in a separate agreement with the City, of the potential for new licences in the identified aggregate resource area and of the long-term continuation of active aggregate operations in the Byron Gravel Pits and of the noise and dust impacts associated with extraction and related operations.

2. Residential subdivisions will be developed in phases so that the maximum possible separation distance between areas of residential development and extraction operations is maintained. A minimum separation distance of 150 metres between residential development and the maximum extent of extraction activity (this separation distance being measured from the limit of extraction, not the licensed area boundary) will normally be required.
3. As peripheral portions of the extraction area are rehabilitated, the separation area could shift to reflect any adjusted limits of active extraction operations. Any deviation from the 150 metre norm will be considered only on the basis of studies undertaken by a qualified consultant which demonstrate to the satisfaction of the City of London, the Ministry of the Environment and Climate Change and the Ministry of Natural Resources and Forestry that the deviation is satisfactory to protect the residential development from adverse impacts of extraction operations.