

City of Cambridge

**Official Plan Review**

**Natural Heritage and Environmental Management  
Draft Policy Paper**



**May 2011**

**Please note that policy numbers and cross references are subject to change when the overall draft Official Plan is prepared**

## TABLE OF CONTENTS

1. Overview.....	1
2. Rationale for Changes.....	1
3. Proposed Official Plan Policies .....	3
3.0 Objectives .....	3
3.A Natural Heritage System .....	4
3.A.1 Natural Heritage System Components .....	4
3.A.2 Landscape Level Systems .....	5
Environmentally Sensitive Landscapes .....	5
General.....	5
Blair Village Blair-Bechtel-Cruickston ESL Policies.....	7
Significant Valleys (Grand and Speed).....	8
3.A.3 Core Environmental Features.....	8
3.A.4 Locally Significant Natural Areas .....	12
3.A.5 Natural Features Linkages .....	16
3.A.6 Restoration Areas and Vegetative Management.....	16
3.A.7 Fish Habitat .....	17
3.A.8 Environmental Impact Statements .....	17
3.B Environmental Management .....	19
3.B.1 Master Environmental Servicing Plans .....	19
3.B.2 Subwatershed Planning .....	19
3.B.3 Stormwater Management .....	22
3.B.4 Urban Forest and Biodiversity .....	22
3.B.5 Source Water Protection.....	23
3.B.6 Environmental Hazards.....	24
3.B.6.1 Natural Hazards.....	24
3.B.6.1.1 Floodplains .....	24
General.....	24
One-Zone Floodplain Policies .....	26
Two-Zone Floodplain Policies.....	27
Galt City Centre Floodplain Special Policy Area .....	28
Implementation of Floodplain Management.....	30
3.B.6.1.2 Watercourses and Shorelines .....	32
3.B.6.1.3 Erosion and Steep Slopes .....	33
3.B.6.1.4 High Water Table .....	34
3.B.6.2 Human-Made Hazards.....	35
3.B.6.2.1 Contaminated Sites.....	35
3.B.6.2.2 Former Waste Disposal Sites .....	36
3.B.6.2.3 Noise, Vibration and Light Emissions .....	36
Noise and Vibration General .....	36
Noise and Vibration from Transportation Sources .....	37
Noise and Vibration from Region of Waterloo International Airport.....	38

	Noise and Vibration from a Stationary Source .....	38
	Light Emissions .....	39
	3.B.7 Mineral Aggregates .....	39
4.	Glossary .....	40
5.	Appendices for Chapter 3 .....	40
	Appendix A: ROP Policies Modified for Source Water Protection in Cambridge.....	40
	General.....	40
	Source Water Protection Land Use Categories.....	41
	Wellhead Protection Areas .....	41
	GUDI Wells and High Microbial Risk Management Zones.....	44
	Surface Water Intake Protection Zones .....	44
	Schedule B: Source Water Protection Land Use Categories .....	45
	Source Water Protection Glossary .....	46
6.	Mapping Updates .....	47
7.	Policies Recommended for Deletion .....	48



## 1. Overview

The draft Chapter 3 of the revised Cambridge Official Plan presented in this paper will provide policy direction with respect to the protection and management of the natural environment as well as managing environmental health and safety. Many of the policies in this chapter are directed by the Provincial Policy Statement (2005) and the accompanying Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition (2010) and the Provincially-approved Regional Official Plan (ROP) (2011). Guidance is also found in the Grand River Conservation Authority's (GRCA) Policies for the Administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (2009) and Wetlands Policy (2003).

This policy paper is structured such that Section 2 outlines the rationale for changes recommended to the policies of the current Cambridge Official Plan and Section 3 presents the draft policies based on this rationale. Section 4 provides definitions for the new glossary as well as terms which are defined in the current plan recommended for deletion. Section 5 presents draft appendices for the revised plan. Section 6 outlines mapping updates anticipated as a result of draft revised policies and Section 7 lists policies in the current Plan recommended for deletion.

## 2. Rationale for Changes

Many of the changes recommended for the natural heritage policies of the Cambridge Official Plan stem from the 2005 Provincial Policy Statement which emphasizes the importance of diversity and connectivity of natural features in an area and the long-term ecological function and biodiversity of natural heritage systems. This has resulted in the separation of the “environmental” *natural heritage system* (found in this chapter) from the “recreational” open space system (found in new Chapter 7). However, it must continue to be recognized that all “open space”, including parks and agricultural lands can contribute to a robust natural environment system. Also, the Provincially-approved ROP (2011) makes significant changes to the natural environment policies, detailing a new Regional Greenlands Network (Landscape Level System, Core Environmental Features and Linkages) and introducing the requirement of minimum buffers. The new regionally significant Core Environmental Features and Linkages category has necessitated a re-thinking of what natural features are locally significant and has resulted in new definitions here.

A new section on Environmental Management consolidates many existing Official Plan policies into this topic area, as well as adding some new policies on Master Environmental Servicing Plans, Source Water Protection, Erosion and Steep Slopes and Light Emissions. The Master Environmental Servicing Plan policies stem from experience gained in planning for new developing areas of the city and implementation of subwatershed plans. The Source Water Protection Policies (proposed to be found in a Cambridge-specific appendix) reflect the Provincially-approved ROP (2011) and represent “state-of-the-art” land use planning for protection of existing and future drinking-water supplies. This policy section also recognizes that

the Source Protection Plan being developed under the Clean Water Act may necessitate changes in the future. The section on Erosion and Steep Slopes and High Water Tables recognizes these naturally occurring environmental hazards and the GRCA’s policy direction. Finally, the section on Noise, Vibration and Light Emissions brings these policies into the Environmental Management area of the Official Plan and introduces the concept of light pollution.

The Mineral Aggregate Policies of the Cambridge Official Plan (Chapter 7) have been deferred since approval of the Plan by the Region in 1999. The Provincially-approved ROP (2011) provides some direction for this challenging area of policy. The challenge arises from the importance of aggregates as the “foundation” of the construction and infrastructure industries on which growth depends and the potential impacts of mineral aggregate operations on natural heritage systems, surface and groundwater resources and existing communities. The Province has recommended modifications to the ROP that Regional staff has found to be inconsistent with the policy direction as adopted by Regional Council with respect to source water protection. Regional staff is also in discussion with the Province related to several other issues also associated with aggregate extraction. As this matter is not concluded, mineral aggregate policies are not able to come forward in this policy paper but will be drafted once the negotiations between Regional and Provincial staff have concluded and clear policy direction is established.

Note: Margin notes are included to indicate if a proposed policy is:

- taken from the existing Official Plan; or
- new.

If the policy is from the existing Official Plan, the margin notes will indicate whether it has been revised or updated. The margin notes will also indicate the source for new policies only where the policy is based on provincial, regional or municipal policies, documents or studies.

## 3. Proposed Official Plan Policies

### CHAPTER 3: NATURAL HERITAGE AND ENVIRONMENTAL MANAGEMENT

Revised Chapter 6  
Introduction - expanded  
to include  
environmental  
management.

The protection and enhancement of Cambridge's natural heritage is a priority for the *City*. Cambridge contains a diversity of natural heritage resources which together help to sustain its urban areas. Through the application of the natural heritage and environmental management policies of this Plan, the *City* will endeavour to ensure that *development* will maintain and improve the natural environment of the city while protecting and contributing to the health and well-being of its residents.

#### **3.0 Objectives**

The following are objectives of the natural heritage and environmental management section of this Plan:

- a) To maintain and improve the city's natural environment, including the linked *natural heritage system* of the Grand and Speed Rivers and their tributaries, *fish habitat*, wetlands, *woodlands*, remnant prairie and savannah habitat, groundwater, and atmospheric resources in the interests of overall ecosystem integrity;
- b) To integrate the city's built environment with its *natural features* in a manner that respects, protects and enhances *natural features* and their *ecological functions* wherever possible;
- c) To promote the Grand River as a nationally designated Canadian Heritage River;
- d) To recognize and protect Landscape Level Systems, Core Environmental Features, Locally Significant Natural Areas, *Natural Features Linkages* and *Fish Habitat* as key elements of the city's *natural heritage system*;
- e) To protect flood and erosion prone areas in co-operation with the Grand River Conservation Authority and other agencies;
- f) To undertake watershed and *subwatershed*-based planning as a means of sustainably integrating future areas of development with the natural environment; (i)

From existing 2.3, with  
updates to Natural  
Heritage System.

Added remnant prairie  
and savannah habitat to  
a).

Added trees on municipal property to h)  
Note change from “native” species to “indigenous” species throughout

Added k)

- g) To plan for, construct and operate local *infrastructure* in an environmentally sensitive manner, such as the use of natural channel design and where possible, protecting, rehabilitating or re-establishing *natural features*; (j)
- h) To maintain and replace street trees and trees on municipal property, with an emphasis on indigenous species; (l)
- i) To encourage and support positive community action for the city’s environment, including actions to reduce, reuse, recycle and recover; and (m)
- j) To identify and protect *mineral aggregate* resource areas and to establish conditions under which extraction may be permitted.(n)
- k) To support a culture of stewardship amongst citizens and the *City*.

### 3.A Natural Heritage System

Revised 6.1 - removed reference to parks.  
Updated Natural Habitat Network to Greenlands Network in ROP. Added remnant prairies and savannah habitat.

The *Natural Heritage System* within Cambridge is a network of *natural features*, in which the Grand River and its tributaries predominate. Other *natural features*, such as wooded lands, wetlands, remnant prairie and savannah habitat also form part of the *Natural Heritage System*. The natural environment in Cambridge is linked to other elements of the larger Grand River watershed and expands on the *Region’s* Greenlands Network described in the Regional Official Plan. The *Natural Heritage System* policies recognize the significant elements of the system and the interrelationships of these elements to each other and to surrounding areas.

Revised 6.1.1.1 and 6.1.1.2 - updated to include ROP categories

#### 3.A.1 Natural Heritage System Components

1. The *Natural Heritage System* consists of *natural features* that have been identified at the federal, *provincial*, *regional* and local levels. They are categorized in policy as Landscape Level Systems, Core Environmental Features, Locally Significant Natural Areas, *Fish Habitat*, the *natural features linkages* between them and lands that may be suitable or required for restoration.
2. The boundaries of *natural features* are dynamic in some cases and may change over time. The *City* will work with the *Region*, *Province* and Grand River Conservation Authority to review and provide updates at the 5-year Official Plan review. The

New

interpretation policies of this Plan will be used for boundaries of *natural features*.

### 3.A.2 Landscape Level Systems

New - ROP  
7.B.1

1. Landscape Level Systems are large-scale *natural features* or significant concentrations of *natural features*. They are identified and designated by the *Region* and shown on Map 4 of the Regional Official Plan. The south half of Cambridge is surrounded by three *Environmentally Sensitive Landscapes*, all of which encompass some lands within the city. The valleys of the Grand and the Speed are identified as Significant Valleys.

New - ROP 7.B.2

2. The designation of lands as Landscape Level System will not affect agricultural uses and associated normal farm practices as defined in applicable *Provincial* legislation and regulations in conformity with this Plan and the *City's Zoning By-law* as well as statutes, policies and regulations of other government agencies including agricultural drainage through municipal or agreement drains.

#### *Environmentally Sensitive Landscapes*

New - ROP 7.B.4  
and 7.B.5

3. *Environmentally Sensitive Landscapes (ESLs)* are designated in accordance with the Regional Official Plan. There are three *ESLs* located partially within Cambridge: Blair-Bechtel-Cruickston, Dumfries Carolinian and Beverly (see Map 9).

New - ROP 7.B.9  
\* more restrictive  
– not permitting  
new or expanded  
recreational and  
tourism uses or  
rural institutional  
uses, creation of a  
new lot or lot  
addition for same  
or new ag-related  
uses or 2<sup>o</sup> uses  
since this is Blair.

#### *General*

4. The following uses may be permitted within the *ESLs* in accordance with the policies of this Plan and the policies and regulations of other public agencies having jurisdiction:
  - a) minor intensification of existing industrial, commercial, recreational and/or institutional uses, including minor changes in the uses thereof, subject to additional criteria found in Regional Official Plan Section 7.B.
5. Notwithstanding Policy 3.A.2.3, the list of land uses that are explicitly prohibited within *ESLs* in the Regional Official Plan Section 7.B will not be permitted within the portions of the *ESLs* located within the city.

New - ROP  
7.B.10

New - ROP  
7.B.12

6. *Development or site alteration* will only be permitted within or *contiguous* to *ESLs* where it is demonstrated through an *Environmental Impact Statement* or other appropriate study accepted by the *Region* in consultation with the *City* and the *GRCA* that there will be no *adverse environmental impacts* on the *natural features* or *ecological functions* of the *ESLs*. The *Environmental Impact Statement* will address landscape level impacts.

New - ROP  
7.B.18

7. The designation of an *ESL* will not affect existing aggregate extraction and processing operations licensed under the Aggregate Resources Act.

New

8. The locating of new *infrastructure* within an *ESL* is discouraged.

New - ROP  
7.B.15

9. Where construction of *infrastructure* is proposed within or *contiguous* to the portions of the *ESL* located within the city, the submission of an *Environmental Impact Statement* or other appropriate study to the satisfaction of the *Region* in consultation with the *City* and the *GRCA* which evaluates landscape level impacts, will be required, unless the proponent is expressly exempt by other legislation.

New - ROP  
7.B.16 –  
removed  
“without  
amendment to  
this plan”  
throughout this  
policy  
(redundant).

10. Where review of a study, completed in accordance with Policy 3.A.2.9, demonstrates to the satisfaction of the *City* and the *Region* that the construction of the *infrastructure* project will:

a) result in localized and/or reversible impacts to the *natural features* and *ecological functions* of the *ESL*, and that other alternatives are reasonably less feasible from a technical, environmental and/or financial perspective, the *City* and the *Region* will:

- i. require that the appropriate mitigation measures be implemented; and
- ii. approve the undertaking; or
- iii. support the undertaking in comments, submissions or recommendations; or

b) result in widespread *adverse environmental impacts* to the *natural features* and *ecological functions* of the *ESL* or result in long-term damage to its significant features and functions, and that other technically and financially feasible alternatives exist

that would have less negative impact on the *ESL*, the *City* and the *Region* will:

- i. not approve the undertaking; or
  - ii. not support the undertaking in comments, submissions or recommendations; or
- c) result in widespread *adverse environmental impacts* to the *natural features* and *ecological functions* of the *ESL*, or result in long-term damage to its significant features and functions, but that there is a clearly demonstrated need for the undertaking, and that all other alternatives to the recommended undertaking are substantially less reasonably feasible from a technical, environmental, and/or financial perspective, the *City* and the *Region* will:
- i. require that appropriate mitigation measures be implemented to reduce the impact of the undertaking to the greatest extent feasible; and
  - ii. approve the undertaking; or
  - iii. support the undertaking in comments, submissions or recommendations.

***Blair Village Blair-Bechtel-Cruickston ESL Policies***

New - ROP 7.B.7

11. *Development* may be considered within the Blair-Bechtel-Cruickston *ESL* on lands designated to permit urban and recreational *development* within the Blair Village as designated in this Plan, subject to the other policies of this Plan, the Regional Official Plan and the policies and regulations of other government agencies.

New - ROP 7.B.8

12. The creation of new lots for non-farm-related residential units is permitted within the Blair-Bechtel-Cruickston *ESL* on lands designated to permit *development* within the Blair Village as designated in this Plan, subject to the other policies of this Plan, the Regional Official Plan and the policies and regulation of other government agencies.

New - ROP 7.B.6

13. Urban and recreational *development* beyond the boundaries of Blair Village as designated in this Plan are not permitted within the Blair-Bechtel-Cruickston *ESL*.

### ***Significant Valleys (Grand and Speed)***

Revised Policy  
3.2.3 and ROP  
7.B.20 and 21

14. Significant Valleys are designated in accordance with Section 7.B of the Regional Official Plan. Within the city, the valleys of the Grand and Speed Rivers are designated as Significant Valleys (see Map 9) and are part of the Grand River’s national recognition as a Canadian Heritage River.
15. The *City* will collaborate with the *Region* and the GRCA in an effort to maintain the character of the Grand and Speed Rivers by identifying, conserving, interpreting and enhancing *cultural heritage resources* of recreational and scenic value.

### **3.A.3 Core Environmental Features**

Revised  
Policy  
6.1.1.2 to  
6.1.1.5

1. Core Environmental Features are those *natural features* identified or approved as being *provincially* or *regionally* significant. These features are the most significant elements of the *regional* landscape in terms of maintaining, protecting and enhancing *biodiversity* and important *ecological functions*. They are identified and designated by the *Region* and, with the exception of the significant habitat of *endangered or threatened species*, shown on Map 9. The Core Environmental Features policies apply to lands that meet the criteria as:
  - a) Significant Habitat of *Endangered or Threatened Species*;
  - b) *Provincially Significant Wetlands*;
  - c) *Environmentally Sensitive Policy Areas*;
  - d) *Significant Woodlands*; or
  - e) *Environmentally Significant Valley Features*.

New (PPS  
2.1.7)

2. Core Environmental Features are designated in accordance with Section 7.C of the Regional Official Plan.
3. The designation of lands as Core Environmental Features will not affect agricultural uses and associated normal farm practices as defined in applicable *Provincial* legislation and regulations in conformity with this Plan and the *City’s Zoning By-law* as well as statutes, policies and regulations of other government agencies including agricultural drainage through municipal or agreement drains.

Revised  
Policy  
6.1.2.1 to  
6.1.2.5 and  
6.1.3.1 to  
6.1.3.5  
ROP 7.C.8

4. *Development* or *site alteration* will not be permitted within Core Environmental Features, except for:

- a) Restorative, scientific and educational uses, including forest, *fish* or wildlife management and conservation;
- b) Flood or erosion control projects demonstrated to be in the public interest and for which no other alternative is feasible;
- c) Essential public *infrastructure* projects (in accordance with 3.A.3.15 and 3.A.3.16);
- d) New *mineral aggregate operations* in accordance with Section 9.C of the Regional Official Plan; or
- e) *Minor alterations* to legal non-conforming uses.

New –  
ROP 7.C.8

5. Any application for *development* or *site alteration* for the above uses within a Core Environmental Feature will require the submission of an *Environmental Impact Statement*, to the satisfaction of the *City, Region, GRCA* and/or *Province*, as appropriate, to determine the mitigation measures to be implemented, as appropriate, through the *development* review process.

Revised  
Policy  
6.1.2.4 and  
6.1.3.3

6. *Development* or *site alteration* will only be permitted on land *contiguous* to a Core Environmental Feature where an *Environmental Impact Statement*, or similar study, submitted in accordance with the policies in Section 3.A.8, has determined to the satisfaction of the *City, Region, GRCA* and/or *Province*, as appropriate, that approval of the proposed *development* or *site alteration* would not result in *adverse environmental impacts* on the *natural features* and *ecological functions* of the Core Environmental Feature. The *City* may require conditions of approval to implement such recommendations.

New - ROP  
7.C.10

7. An *Environmental Impact Statement* submitted in accordance with Policy 3.A.3.4 will identify appropriate buffers to Core Environmental Features to the satisfaction of the *City, Region, GRCA* and *Province*, as appropriate. The location, width, composition and use of buffers will be in accordance with the approved *Environmental Impact Statement*, with buffers being a minimum of 10 metres as measured from the outside boundary of the Core Environmental Feature. This minimum buffer is meant to protect significant *natural features* from increased pressure from human intrusion and the negative effects of development which is expected to be increasingly urban and dense, given the density targets and intensification requirements. Buffers will be established and maintained with appropriate self-sustaining indigenous vegetation.

New

8. The following buffer width guidelines will be evaluated and addressed through the *Environmental Impact Statement*:

- a) Significant Habitat of *Endangered or Threatened Species* – species specific;
- b) *Provincially Significant Wetlands* – 30 metres;
- c) *Environmentally Sensitive Policy Areas* – 10 metres;
- d) *Significant Woodlands* – 10 metres (measured from the drip line);
- f) *Environmentally Significant Valley Features* – 10 metres.

New

9. Buffer widths different than those in Policy 3.A.3.8 for Core Environmental Features may be required if the *natural features* and *ecological functions* warrant it, as determined through the *Environmental Impact Statement*. Modified buffer widths will be determined on a site-specific basis by considering the sensitivity of the *natural features*, their *ecological functions*, the potential impacts of the proposed *development* and/or land use, the intended function of the buffer and the physiography of the site.

New

10. Buffers are for protection and restoration of habitat. Permitted uses within the buffers of Core Environmental Features will be limited to low impact uses, such as *resource management*, vegetation restoration, open space, recreational trails and stormwater management facilities.

New

11. The use of the buffer for recreational trails and stormwater management facilities will be subject to an *Environmental Impact Statement* to the satisfaction of the *City, Region, GRCA* and/or *Province*, as appropriate, which contains an engineering and environmental compatibility analysis. Impervious surfaces and grading will not be permitted within buffers, except for works associated with trails and stormwater management facilities approved through this analysis.

New

12. Existing community trails and/or stormwater management facilities located within Core Environmental Features and/or the buffers are recognized as existing uses. Expansions will be subject to an *Environmental Impact Statement* to the satisfaction of the *City, Region, GRCA* and/or *Province*, as appropriate, which contains an engineering and environmental compatibility analysis.

New

13. The *City* may require applicants to complete and implement a restoration or management plan for buffer areas as a condition of *development* approval.

New

14. Buffers required to ensure the protection of Core Environmental Features will generally be secured in public ownership and will not

be considered as contributing to the parkland dedication requirements under the Planning Act.

New

15. The locating of new *infrastructure* within a Core Environmental Feature is discouraged.

New - ROP  
7.C.11

16. Where construction of *infrastructure* is proposed within or *contiguous* to a Core Environmental Feature, the submission of an *Environmental Impact Statement* or other appropriate study to the satisfaction of the *City, Region, GRCA* and/or *Province*, as appropriate, will be required, unless the proponent is expressly exempt by other legislation.

New - ROP  
7.C.12

17. Where review of a study, completed in accordance with Policy 3.A.3.15, demonstrates to the satisfaction of the *City* and the *Region* that the construction of the *infrastructure* project will:

- a) result in localized and/or reversible impacts to the *natural features* and *ecological functions* of the Core Environmental Feature, and that other alternatives are less feasible from a technical, environmental and/or financial perspective, the *City* and the *Region* will:
  - i. require that the appropriate mitigation measures be implemented; and
  - ii. approve the undertaking; or
  - iii. support the undertaking in comments, submissions or recommendations; or
- b) result in widespread *adverse environmental impacts* to the *natural features* and *ecological functions* of the Core Environmental Feature or result in long-term damage to its significant features and functions, and that other technically and financially feasible alternatives exist that would have fewer *adverse environmental impacts*, the *City* and the *Region* will:
  - i. not approve the undertaking; or
  - ii. not support the undertaking in comments, submissions or recommendations; or
- c) result in widespread *adverse environmental impacts* to the *natural features* and *ecological functions* of the Core Environmental Feature, or result in long-term damage to its significant features and functions, but that there is a clearly demonstrated need for the undertaking, and that all other alternatives to the recommended undertaking are substantially

less feasible from a technical, environmental, and/or financial perspective, the *City* and the *Region* will:

- i. require that appropriate mitigation measures be implemented to reduce the impact of the undertaking to the greatest extent feasible; and
- ii. approve the undertaking; or
- iii. support the undertaking in comments, submissions or recommendations.

### 3.A.4 Locally Significant Natural Areas

Revised 6.1.4

1. Locally Significant Natural Areas (LSNAs) are those *natural features* not meeting the criteria for recognition as being *provincially* or *regionally* significant. LSNAs play an important role in maintaining the *ecological functions* provided by the *Natural Heritage System*.

Revised 6.1.4.2

2. To qualify for recognition as a LSNA, a *natural feature* must be:
- a) A wetland which is regulated by the GRCA but which does not qualify as a Core Environmental Feature;
  - b) A wooded area identified by the Ministry of Natural Resources but which does not qualify as a Core Environmental Feature;
  - c) *Significant wildlife habitat* generally consisting of one or more of the following:
    - i) Seasonal concentration areas;
    - ii) Rare vegetation communities or specialized habitats for wildlife;
    - iii) Habitats of species of conservation concern; or
    - iv) Wildlife movement corridors;
  - d) Perennial or Intermittent Watercourse(s);
  - e) *Environmentally Significant Groundwater Discharge and Recharge Areas*.

Revised 6.1.4.7  
and 6.1.4.8

3. *Development* and *site alteration* will avoid LSNAs wherever feasible. *Development* or *site alteration* proposed within or *contiguous* to a LSNA will require an *Environmental Impact Statement*. The determination of boundaries and buffers will be done through this study and it must show to the satisfaction of the *City* that the *ecological function* of the LSNA will be maintained,

enhanced or where feasible, restored.

New  
Revised 6.1.4.3

4. On lands where LSNAs have not been adequately identified and evaluated through a *subwatershed study*, master environmental servicing plan or any other appropriate natural heritage review, *development* or *site alteration* will be prohibited until such time as an *Environmental Impact Statement* has been prepared by an owner/applicant in accordance with the Policies in 3.A.8 to identify and evaluate any such elements located on the subject lands.

Revised 6.1.4.9

5. The form of LSNAs may be modified through *development* or *site alteration* provided it is demonstrated through an *Environmental Impact Statement* that *ecological function* of the *natural feature* is maintained, enhanced or where feasible, restored.

GRCA Wetland  
Policy

6. Further to Policy 3.A.4.5, *development* or *site alteration* may only be permitted within LSNAs that are wetlands where it is demonstrated through an *Environmental Impact Statement* that the wetland is not:

- a) located within a riparian community;
- b) *hazardous land* or a *hazardous site*;
- c) a bog or fen;
- d) *fish habitat*; or
- e) part of a functional linkage between larger wetlands or natural features;
- f) *significant wildlife habitat*;
- g) confirmed habitat for a *provincially* or *regionally* significant species as determined by the *Province* or the *Region*;
- h) part of a groundwater recharge area; or
- i) a groundwater discharge area associated with any of the above.

New ROP 7.E.4

7. Further to Policy 3.A.4.5, where *Environmentally Significant Discharge Areas* or *Environmentally Significant Recharge Areas* sustain Core Environmental Features, as determined through a *subwatershed study* or other appropriate study accepted by the *City* and/or the *Region*, *development* and *site alteration* may only be permitted within the *Environmentally Significant Discharge Areas* or *Environmentally Significant Recharge Areas* where it is demonstrated through an *Environmental Impact Statement* or other appropriate study accepted by the *City* and/or the *Region* that there will be no *adverse environmental impacts* on the Core Environmental Features or their *ecological functions*.

Revised 6.3.3 and  
6.2.4.4

8. Further to Policy 3.A.4.5, where the form of a Perennial or Intermittent Watercourse is to be maintained or realigned through *development* or *site alteration* and where buffer widths have not been specified through a *subwatershed study*, a minimum buffer width guideline of 30 metres for Permanent Watercourses and 15 metres for Intermittent Watercourses, applied to each side of the watercourse, will be evaluated and addressed through an *Environmental Impact Statement* to the satisfaction of the *City* and the GRCA.

6.1.4.9 revised  
(remove “without  
amendment to  
this plan”)

9. Where an *Environmental Impact Statement* has demonstrated to the satisfaction of the *City* that a *development* or *site alteration* application would have no *adverse environmental impact* upon the *natural features* and *ecological functions* of a LSNA, the *City* may, subject to appropriate conditions, approve, or recommend approval of the application.

6.1.4.10 revised  
(removed 6 mo.  
deadline)

10. Where an *Environmental Impact Statement* has demonstrated to the satisfaction of the *City* that a *development* or *site alteration* application may have an *adverse environmental impact* upon the *natural features* and *ecological functions* of a LSNA, the *City* will undertake at least one of the following:

- a) require conditions of approval, or require dedication(s) of land to protect lands supporting the *natural features* and *ecological functions* of the LSNA;
- b) request the *Province*, the *Region*, or the GRCA to invoke any applicable statutory authority to enable acquisition for the protection of the LSNA;
- c) consult with the *Region*, the GRCA and/or other agencies to acquire the lands;
- d) consider the acquisition of all or the affected portion of the LSNA; or
- e) refuse all or part of the application.

6.1.4.11

11. Where construction of *infrastructure* is proposed within or *contiguous* to a LSNA, the submission of an *Environmental Impact Statement* or other appropriate study accepted by the *City*, in accordance with Policy 3.A.4.5 will be required, unless the proponent is expressly exempt by other legislation.

6.1.4.12

12. Where review of a study completed in accordance with Policy 3.A.4.11 demonstrates to the satisfaction of the *City* that the construction of the *infrastructure* project will:

- a) result in localized and/or reversible impacts to the *natural features* and *ecological functions* of the LSNA, and that other alternatives are reasonably less feasible from a technical, environmental and/or financial perspective, the *City* will:
  - i. require that the appropriate mitigation measures be implemented; and
  - ii. approve the undertaking; or
  - iii. support the undertaking in comments, submissions or recommendations; or
  
- b) result in widespread *adverse environmental impacts* to the *natural features* and *ecological functions* of the LSNA or result in long-term damage to its significant features and functions, and that other technically and financially feasible alternatives exist that would have less negative impact on the LSNA, the *City* will:
  - i. not approve the undertaking; or
  - ii. not support the undertaking in comments, submissions or recommendations; or
  
- c) result in widespread *adverse environmental impacts* to the *natural features* and *ecological functions* of the LSNA, or result in long-term damage to its significant features and functions, but that there is a clearly demonstrated need for the undertaking, and that all other alternatives to the recommended undertaking are substantially less feasible from a technical, environmental, and/or financial perspective, the *City* will:
  - i. require that appropriate mitigation measures be implemented to reduce the impact of the undertaking to the greatest extent feasible; and
  - ii. approve the undertaking; or
  - iii. support the undertaking in comments, submissions or recommendations.

6.1.4.5 revised

13. Where lands identified as LSNA are subsequently designated by the *Region* as Core Environmental Feature through a Regional Official Plan update or other studies that require an amendment to the Regional Official Plan, the provisions of 3.A.3 will apply.

### 3.A.5 Natural Features Linkages

6.1.1.5 revised

1. The *City* will encourage the connection of *natural features* within the municipality and across its boundaries through the identification of *natural features linkages*. These areas are intended to provide opportunities for plant and animal movement among *natural features*, support hydrological and nutrient cycling and contribute to the overall integrity and connectivity of the *Natural Heritage System*. Landowners will be encouraged to protect the identified corridors and *natural features linkages* through private stewardship.

New ROP 7.E.6  
and 7.E.7

2. *Natural features linkages* will be identified through *subwatershed studies*, *Environmental Impact Statements* or other appropriate studies by the *City*, the *Region*, the GRCA or through the *development* review process. Where *natural features linkages* are identified through the *development* review process, the lands will be incorporated in the design of the *development* and protected through zoning and/or conservation easements, as appropriate, on private lands.

New ROP 7.E.6  
and 7.E.7

3. Once identified, *natural features linkages* will be maintained, enhanced or where feasible, restored. The introduction of uses that could harm these areas will generally not be supported. Some *natural features linkages* may need to be created over time through stewardship initiatives such as reforestation or regeneration projects.

New ROP 7.E.8  
– may be more  
appropriate in  
Parks and Open  
Space section

4. The *City* will enhance *natural features linkages*, where appropriate, by restoring natural habitat on lands owned by the *City* such as inactive sections of parks and open space.

### 3.A.6 Restoration Areas and Vegetative Management

6.4

1. The protection, preservation and restoration of indigenous vegetative cover is a priority for the *City*. This priority ranges from the protection of significant *natural features* described in the *Natural Heritage System* to general vegetative cover across the municipality. Private development and public works projects are seen as opportunities to increase the vegetative cover quantity and quality in the municipality, as well as *biodiversity*.

6.4.1.2

2. The *City* shall require as necessary the preparation and submission of a tree management plan prior to draft approval of a plan of

subdivision or site plan approval. Tree management plans submitted to the *City* shall be prepared in a manner consistent with the “Tree Management Policies and Guidelines for New Developments”.

6.4.1.4

3. The “Tree Management Policies and Guidelines for New Developments” shall also guide the *City* in the preservation, protection, management, replacement and possible acquisition of significant tree stands, hedgerows, woodlots and forested areas. They will be applied to tree management practices carried out by the *City* on *City*-owned lands.

6.4.1.5 with addition of Woodland Conservation by-law and designation of heritage trees.

4. In addition to the “Tree Management Policies and Guidelines for New Developments”, the *City* will consider other measures, such as a the *Region’s* Woodland Conservation By-law, a local tree protection/preservation by-law under the Municipal Act, designation of heritage trees under the Heritage Act and/or stewardship programs to aid in policy implementation.

### 3.A.7 Fish Habitat

Revised 6.3  
ROP 7.D.1

*Development or site alteration* will not be permitted within *fish habitat*, except in accordance with *Provincial* and Federal requirements to the satisfaction of the federal Department of Fisheries and Oceans or its delegate.

### 3.A.8 Environmental Impact Statements

6.1.5.1

1. An *Environmental Impact Statement* will be required in accordance with the policies of this Plan, to identify and evaluate the potential effects of a *development* application on elements of the significant *natural features* as described in Policies 3.A.2, 3.A.3, and 3.A.4 to recommend: means of preventing, minimizing or mitigating impacts; opportunities for enhancement; and where appropriate, to interpret the boundaries of the elements. A *Comprehensive Environmental Impact Statement* is a broader scale study.

6.1.5.7

2. The *City* requires the completion of a *Comprehensive Environmental Impact Statement* where;
  - a) the proposed *development* may affect a variety of elements of the *Natural Heritage System*;

- b) multiple contiguous properties containing elements of the *Natural Heritage System* are proposed for *development*;
- c) a Community Plan or Secondary Plan is being prepared;
- d) environmental studies are required to examine changes to the City Urban Area boundaries; or
- e) previously completed *subwatershed studies* have not adequately addressed the identification of elements of the *Natural Heritage System*.

6.1.5.8

- 3. Terms of reference for *Comprehensive Environmental Impact Statements* will be established in consultation with the *City*, the *Region*, the *Province* and the GRCA and abutting municipalities, if applicable.

6.1.5.9

- 4. *Comprehensive Environmental Impact Statements* may be used to fulfill all other requirements for site-specific *Environmental Impact Statements* that should otherwise be required, or for scoping future *Environmental Impact Statements*.

Revised 6.1.5.1,  
2, 3 and 4  
New ROP 7.G.3

- 5. The need for, scope and acceptability of site-specific *Environmental Impact Statements* will be determined in collaboration with the *City*, the *Region*, the *Province* and the GRCA. If the significant *natural feature* extends beyond the boundaries of the city, the adjacent municipality will be offered the opportunity to participate in this determination.

Revised 6.1.5.5  
and 6.1.5.6

- 6. A reduction in the scope and/or content or waiving of the *Environmental Impact Statement* may be authorized by the Commissioner of Planning Services in collaboration with the *Region*, the *Province* and/or the GRCA where the impacts of a *development* or *site alteration* upon a LSNA are expected to be limited in area and/or scope, or where other environmental studies fulfilling the requirements of an *Environmental Impact Statement* have previously been prepared.

New

- 7. The *City* will collaborate with the *Region* and the GRCA to develop a guideline for the preparation of *Environmental Impact Statements* required by the policies of this Plan.

### **3.B Environmental Management**

As the city develops, environmental management of air, water and land resources becomes increasingly important. Urban development and intensification requires control and mitigation of environmental impacts such as deteriorating air and water quality, noise and light pollution, contaminated land and growth in energy and resource consumption. The *City's* environmental management policies aim to address these issues in a comprehensive, sustainable way.

New Section

#### **3.B.1 Master Environmental Servicing Plans**

1. Master Environmental Servicing Plans are long range plans which integrate *infrastructure* requirements for existing and future land uses with *environmental assessment* planning principles. They examine related *infrastructure* systems such as water supply, transportation, sanitary sewers and stormwater management in order to outline a framework for planning for subsequent projects and developments.
2. Master Environmental Servicing Plans must be prepared prior to *development* occurring if there is no *Council*-approved subwatershed study for the area. If there is a *Council*-approved *subwatershed study* for the subject area, it will be used as background to the Master Environmental Servicing Plan and may be updated as required.
3. Master Environmental Servicing Plans shall be approved by Council in consultation with the *Region*, GRCA and *Province*, as appropriate, and the adjacent municipality, if it is affected.
4. *Development* within the boundaries of a Master Environmental Servicing Plan shall demonstrate conformity with the requirements of the Master Environmental Servicing Plan.

#### **3.B.2 Subwatershed Planning**

1. Subwatershed planning is an integrated, ecosystem approach to land use planning based on the boundaries of a *subwatershed*. These boundaries provide natural limits for managing the interconnections that exist between urban development and *natural features* and processes of the natural environment. The *City* uses

6.2 revised

*subwatershed* planning to provide a broad understanding of ecosystem function and status, recommend actions for appropriate *resource management* in the *subwatershed* and provide relevant ecosystem considerations used in guiding future land use and *infrastructure* decisions. The comprehensive input of environmental considerations into the land use planning process at an early stage is a *City* priority.

6.2.1.1

2. The *City* will participate in the undertaking of *subwatershed studies* in co-operation with other municipalities, the public, landowners, the GRCA, the *Region*, the *Province*, and other agencies. The timing and level of detail required for the *subwatershed study* to meet *resource management* objectives will be determined through consultation with these groups and agencies. The *subwatersheds* in Cambridge are depicted conceptually on Map 13. Those *subwatersheds* for which there are completed *subwatershed studies* and/or master drainage plans are also shown on Map 13.

6.2.1.3 revised

3. The intent of *subwatershed* planning exercises and evaluating water resources is to protect, maintain and enhance surface and groundwater quality and quantity and *natural features* and *ecological functions* through environmentally sound policy development.

6.2.1.2 revised

4. In determining priorities for *subwatershed studies*, the following factors will be considered:
  - a) the significance and sensitivity of the environmental issues;
  - b) priorities for development; and
  - c) funding availability (private and /or public).

Revised 6.2.1.3,  
6.2.1.4 and  
6.2.1.5.

5. The *City*, the *Region*, the GRCA and the *Province*, will jointly prepare the terms of reference for *subwatershed studies*. At a minimum, the terms of reference for *subwatershed studies* will include:
  - a) identification, maintenance, enhancement and, wherever feasible, restoration of *natural features*, surface and *groundwater features* and *ecological functions* which are necessary for the ecological and hydrological integrity of the *subwatershed*;
  - b) identification, maintenance, enhancement and wherever feasible, restoration of *natural features linkages*;
  - c) determination of areas where *development* and *site alteration* will be prohibited or restricted to:

- i) protect existing and potential municipal drinking-water supplies and identified *vulnerable* areas;
  - ii) maintain, enhance and/or wherever feasible restore sensitive and *vulnerable* surface water and *groundwater features* and their hydraulic and hydrologic functions; and
  - iii) protect, maintain and enhance Core Environmental Features, *Natural Features Linkages* and Locally Significant Natural Areas;
- d) identification of areas where *Environmental Impact Statements* may be required for the review of *development* or *site alteration* proposals. Wherever feasible, *subwatershed studies* should fulfill the requirements for *Comprehensive Environmental Impact Statements* for all or part of the *subwatershed*;
- e) protection of the quality, quantity, distribution and direction of flow of existing surface and groundwater;
- f) identification of stormwater management practices that maintain or enhance the quality, quantity and distribution of stormwater including infiltration measures, and minimizing stormwater volumes and contaminant loads;
- g) development of a monitoring plan and definition of roles and responsibilities for pre-, during and post-construction monitoring to determine and address the impact of *development* on the *Natural Heritage System* and surface and groundwater resources; and
- h) any other investigation which the study team deems appropriate and necessary.

6.2.1.6

6. When completion of a *subwatershed study* has been identified as a priority in accordance with Policy 3.B.2.3, the *City* will require the finalization of the *subwatershed study* prior to the adoption of amendments to this Plan or the approval of Community Plans or Secondary Plans which would permit significant areas of new *development* within the *subwatershed*.

6.2.1.8 and  
6.2.1.9

7. Portions of *subwatershed studies* that deal specifically with *Regional* interests identified in the Regional Official Plan will be approved by the *Region* prior to the adoption of amendments to this Plan or approval of Community Plans or Secondary Plans or Master Environmental Servicing Plans that implement the *subwatershed studies*.

Revised 6.2.1.10  
and 6.2.1.7

8. Council-adopted *subwatershed studies* will form the environmental foundation for Master Environmental Servicing Plans. They will also provide direction for further planning such as amendments to

this Plan, as well as individual *development* and *site alteration* applications.

Revised 6.2.5.1

### 3.B.3 Stormwater Management

1. Stormwater management aims to maintain the health of streams, lakes and aquatic life as well as provide opportunities for human uses of water by mitigating the effects of urban development. To achieve this goal stormwater management strives to maintain the natural hydrologic cycle, prevent an increased risk of flooding, prevent undesirable stream erosion, and protect water quality.
2. The *City* has adopted “Stormwater Management Policies and Guidelines” which *development* and *site alteration* applications must adhere to.
3. Draft plans of subdivision and industrial, commercial, institutional and multi-residential site plans shall consider the effects of the proposed *development* and *site alteration* on the existing drainage area, including proposed mitigative measures as required. The design of subdivision and site plan stormwater management plans will implement the recommendations of Master Environmental Servicing Plans, master drainage plans and *subwatershed studies* where they exist.
4. For plans of subdivision, stormwater management areas will generally be located on lands dedicated to the *City* in addition to any lands required to be dedicated for park purposes under the Planning Act. The use of fencing shall be minimized wherever possible through design of facilities to minimize risk to the public.
5. Approved Master Environmental Servicing Plans, master drainage plans or *subwatershed studies* shall provide guidance for implementation of the City of Cambridge “Stormwater Management Policies and Guidelines”.

6.2.5.1

6.2.5.7 revised

6.2.5.4 revised  
to remove park  
amenities

6.2.5.6

### 3.B.4 Urban Forest and Biodiversity

1. The urban forest in Cambridge is the treed environment, consisting of remnant wooded areas, trees in city parks and open space, street trees and trees on private property. The *City* recognizes the urban forest as providing significant environmental, social, cultural

New

heritage and economic benefits and encourages its protection, restoration, wise management and expansion.

6.4.2.1

2. The *City* recognizes the environmental, aesthetic and heritage values associated with trees lining both urban and rural boulevards and streets. As such, the *City* shall promote and encourage the protection and management of such trees and encourage public authorities and agencies to give due consideration for their protection when undertaking utility projects and regular maintenance.

6.4.2.2

3. The *City* shall protect and preserve street trees located within road rights-of-way wherever practical. Trees removed from an existing road right-of-way due to *development* or public utilities projects shall be required to be replaced in the same location or in the vicinity wherever possible by the individual or agency responsible for the removal.

6.4.2.3

4. The *City* will encourage private landowners to protect and preserve street trees located outside road rights-of-way through investigation of approaches such as tree preservation by-laws, private stewardship, advice from the *City's* Forestry Division and conservation district plans.

6.4.3.3 and  
6.4.3.4

5. The *City* encourages individuals and agencies to use indigenous species as appropriate to the locality when planting within or *contiguous* to the *Natural Heritage System* because some non-indigenous species are considered unsuitable and invasive. Guidance in maintaining the *biodiversity* of the *Natural Heritage System* will be provided through the *Regional* list of trees and shrubs suitable for such use and invasive alien herbaceous species and any relevant *City* documents such as the “Tree Management Policies and Guidelines for New Developments” and the “Stormwater Management Policies and Guidelines”.

6.4.3.5

6. Wherever feasible and appropriate, species indigenous to the region will be used in plantings along local roads and on the grounds of *City* parks and facilities.

Updated  
Section  
6.2.2 to  
incorporate  
new ROP  
Chapter 8  
and  
mapping.

### 3.B.5 Source Water Protection

1. Source Water Protection Areas are identified by the *Region* and policies that are applied to them are prescribed in Regional Official Plan Chapter 8. They are identified to protect the current and future municipal drinking-water supply system. These protection areas

are significant in that they contribute water, or are in close proximity, to municipal drinking-water supply wells and surface water intakes that are *vulnerable* to contamination and/or depletion from incompatible land uses. Source Water Protection Areas in Cambridge consist of: Wellhead Protection Sensitivity Areas; a High Microbial Risk Management Zone and a Surface Water Intake Protection Zone shown on Map 15. Policies from the Regional Official Plan which apply to lands in the city are included in Appendix A.

2. The *City* will, in partnership with other public agencies having jurisdiction, provide input into and implement a Source Protection Plan. This Plan will be amended to implement the recommendations of an approved Source Protection Plan, as required.

### 3.B.6 Environmental Hazards

#### 3.B.6.1 Natural Hazards

New

Natural hazards such as flooding, erosion and slope failures pose a risk to human health and safety, as well as property. As a matter of public safety, it is important to reduce the potential risks and costs associated with natural hazards by ensuring that *development* is directed away from these areas. The GRCA is a key partner in this effort through the administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 150/06) . In addition to *City* approval, permission from the GRCA is required to develop in river or stream valleys, wetlands, *shoreslines* or *hazardous lands*.

##### 3.B.6.1.1 Floodplains

###### General

6.2.3.1.1

1. Major floodplains, defined by the Regulatory Flood as identified and approved by the GRCA, are shown conceptually on Map 10 of this Plan. The precise delineation of the floodplain is determined by the GRCA or through *subwatershed studies*. This precise delineation does not require amendment to this Plan.

6.2.3.1.2

2. The floodplain within Cambridge, as shown on Maps 10, 11, and 12 of this Plan, consists of One-Zone, Two-Zone and Special Floodplain Policy Areas. In One-Zone Floodplain Policy Areas

shown on Map 10 of this Plan, *development* is prohibited or restricted in the entire floodplain. In Two-Zone Floodplain Policy Areas shown on Map 11 of this Plan, the floodplain is divided into two zones, the *floodway* and the *flood fringe*. *Development* may be permitted in the *flood fringe* provided appropriate floodproofing measures are undertaken. The Galt City Centre Floodplain Special Policy Area shown on Map 12 of this Plan recognizes the need to allow limited *development* and *redevelopment*<sub>1</sub> in the *floodway* to maintain a Community Core Area.

6.2.3.1.3

3. Certain activities, including the construction of new public roads, or new structures necessary for conservation, public recreation, water supply, wastewater management, stormwater management, utility or agricultural purposes may be permitted, subject to the approval of the GRCA, within the floodplain in a One-Zone Policy Area or the *floodway* in a Two-Zone Policy Area.

6.2.3.1.4, 5 and  
6

4. *Development* or redevelopment is prohibited within the floodplain that is associated with:
  - a) the manufacturing, use or storage of hazardous or toxic substances which would pose an unacceptable threat to public safety if damaged as a result of flooding or failure of flood protection measures;
  - b) institutional uses, such as hospitals, nursing homes, day care establishments, group homes and schools, which would pose a significant threat to the safety of the inhabitants if involved in an emergency evacuation situation as a result of flooding or failure of flood protection measures, except as provided in Policy 3.B.6.1.17 f) (*flood fringe*); and
  - c) emergency services such as police, fire and ambulance stations and electrical and telephone substations, which would be impaired during a flood emergency as a result of flooding or failure of flood protection measures.

6.2.3.1.7 revised  
by adding “is  
generally  
discouraged.”

5. The creation of lots which extend into flood susceptible areas is generally discouraged but may be permitted provided that the *City’s Zoning By-law* prohibits the establishment of structures or outdoor storage on that portion of the lot located within the floodplain in One-Zone Floodplain Policy Areas or the *floodway* in Two-Zone Floodplain Policy Area and that the need for community trails along the watercourse is addressed.

6.2.3.1.8

6. Structures in the floodplain which are replaced due to fire or natural disasters will generally be floodproofed to the Regulatory Flood elevation, with reductions as determined appropriate and

feasible by the GRCA. All buildings being replaced will be floodproofed to the 100 Year Flood elevation at a minimum.

6.2.3.1.9  
updated  
reference to Ont  
Reg 150/06

7. Prior to a building permit being issued by the *City* for construction within the floodplain, a permit from the GRCA, pursuant to the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 150/06) will be required.

6.2.3.1.10

8. The *City* will, where appropriate, encourage the vegetation or revegetation of floodplains with species indigenous to the region.

### One-Zone Floodplain Policies

6.2.3.2.1

9. One-Zone Floodplain Policies apply to the areas identified as One-Zone Floodplain Policy Areas on Map 10. The One-Zone Floodplain designation includes all lands below the Regulatory Floodline.

6.2.3.2.2

10. No *development* shall be permitted in a One-Zone Floodplain Policy Area designation except those uses identified in Policy 3.B.6.1.11 and 3.B.6.1.12.

6.2.3.2.3

11. Notwithstanding Policy 3.B.6.1.10, *minor additions or alterations* may be undertaken on buildings existing in the floodplain at the time of adoption of this Plan provided that:

- a) no new dwelling units are created;
- b) no new floor space (including basements) created within the floodplain is below the elevation of existing first floor space; and
- c) such *minor additions or alterations* including mechanical and electrical services are generally floodproofed to the Regulatory Flood elevation. Under certain circumstances, reductions in the level of floodproofing may be permitted where deemed appropriate and feasible by the GRCA.

New – from  
GRCA policy

12. Notwithstanding Policy 3.B.6.1.10, non-habitable accessory buildings or structures associated with an existing residential use may be permitted where it can be demonstrated that:

- a) there is no feasible alternative site outside the Regulatory Floodplain;
- b) the site is not subject to frequent flooding;

- c) the building or structure is greater than 9.3 m<sup>2</sup> but less than or equal to 46.5 m<sup>2</sup> or in the case of additions, the combined area of the existing building or structure and any proposed addition is equal to or less than 46.5 m<sup>2</sup>;
- d) the building or structure is securely anchored such that it does not obstruct downstream culverts during a flood event where applicable;
- e) floodproofing is undertaken to the extent practical, where floodproofing to the elevation of the Regulatory flood is not technically feasible; and
- f) there is no opportunity for conversion into habitable space in the future.

6.2.3.2.4

13. Outdoor industrial storage is prohibited within the One-Zone Floodplain Policy Area.

#### **Two-Zone Floodplain Policies**

6.2.3.3.1

14. Two-Zone Floodplain Policies apply to areas identified as Two-Zone Floodplain Area on Map 11. The Two-Zone *floodway-flood fringe* concept is selectively applied to portions of the floodplain where *development* could potentially occur without adverse impacts on flood flows, flood elevations or adjacent structures.

6.2.3.3.2

15. Two-Zone Floodplain Policies apply to areas of existing development only, and shall not be applied to rural areas or to new areas of growth.

6.2.3.3.4

16. *Development* in the *floodway* shall be restricted to uses identified in Policy 3.B.6.1.3 and to *minor additions or alterations* to buildings existing as of the date of adoption of this Plan in accordance with the criteria outlined in Policy 3.B.6.1.11 a) to c) inclusive.

6.2.3.3.5

17. *Development* may be permitted within the *flood fringe* provided that the following conditions are met:
- a) a permit is issued by the GRCA pursuant to the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 150/06) on the basis that no adverse effects on the hydraulic characteristics of flood flows will occur;
  - b) all *development* is suitably floodproofed to the Regulatory Flood elevation as determined by and to the satisfaction of the

GRCA and the *City*;

- c) all habitable floor space is constructed at or above the Regulatory Flood elevation as determined by and to the satisfaction of the GRCA and the *City*;
- d) the creation of any uninhabitable floor space below the Regulatory Flood elevation where there is the possibility of conversion to habitable floor space is not permitted;
- e) notwithstanding d) above, the creation of uninhabitable floor space below the Regulatory Flood elevation may be permitted if it is associated with an apartment building, commercial, industrial or other non-residential *development*. Such areas in an apartment building may include foyers, recreation rooms, communal storage areas, or other uninhabitable floor space that is normally associated with this type of *development*. All such floor space in any *development* must be floodproofed to the Regulatory Flood elevation with the maintenance of safe access ensured;
- f) access for all new habitable buildings located in the *flood fringe* shall be such that emergency vehicular and pedestrian movement is not prevented during times of flooding in order that safe access/evacuation is ensured. The determination of “safe” access shall be made by the GRCA based on the depth and velocity factors such as they affect individual sites; and
- g) conversions of non-residential buildings in the *flood fringe* to residential use may be permitted provided that the requirements of a) through f) above are satisfied.

6.2.3.3.6

18. Outdoor industrial storage is prohibited within the *floodway* in Two-Zone Floodplain Policy Areas.

6.2.3.3.7

19. Outdoor industrial storage may be permitted within the *flood fringe* of the Two-Zone Floodplain Policy Areas, subject to the protection of such storage from flood related damages, to the elevation of the Regulatory Floodline to the satisfaction of the GRCA.

**Galt City Centre Floodplain Special Policy Area**

6.2.3.4.1

20. Regulatory Flood Elevation and Regulatory Flood for the purposes of the Galt City Centre Floodplain Special Policy Area designated on Map 12 of this Plan means the level of flooding which has been calculated by the GRCA and used as the basis for the design of the

City of Cambridge Dyking and Channelization Scheme and describes the flood level in a storm where flood waters would flow at a rate of 2364 m<sup>3</sup> per second as measured through this Special Policy Area.

6.2.3.4.2

21. *Development and redevelopment*<sub>1</sub> of lands in the Galt City Centre Floodplain Special Policy Area designated on Map 12 of this Plan are regulated in order to provide adequate flood protection from the Grand River in the Galt City Centre and adjacent areas. *Development or redevelopment*<sub>1</sub> may be permitted in the Galt City Centre Floodplain Special Policy Area provided that the following conditions are met:
- a) *minor additions or alterations* to existing residential buildings of habitable rooms shall be at or above the elevation of the existing first floor space;
  - b) flood protection construction techniques shall be applied to all new *development or redevelopment*<sub>1</sub> below the Regulatory Flood elevation and shall be designed and constructed to the satisfaction of the *City* and the GRCA;
  - c) any new building or *major addition or alteration* proposed to have any window, door or other similar opening lower than the level of the Regulatory Flood elevation shall be protected to the Regulatory Flood elevation using techniques satisfactory to the *City* and the GRCA. No new habitable room shall be provided lower than the Regulatory Flood elevation;
  - d) new utilities shall be located higher than the level of the Regulatory Flood elevation where practical; but, where this is not possible, such utilities shall be floodproofed using techniques satisfactory to the *City* and the GRCA;
  - e) any renovation or rehabilitation proposed for an existing building shall not be required to replace existing windows or doors using flood protection techniques or provide special treatment for other similar openings. However, where a comprehensive renovation is proposed for an existing structure and the renovations include the replacement of windows and doors, such replacements shall be floodproofed to withstand the anticipated pressure from flood depths where feasible. Where new openings are proposed for an existing structure or for an addition to an existing structure, such openings shall also be floodproofed to withstand the anticipated pressure from

flood depths;

- f) new *development* that is associated with institutional services such as hospitals, nursing homes and schools shall only be permitted to locate on lands in the Galt City Centre Floodplain Special Policy Area which would be flooded to a depth of one metre or less in the event of a Regulatory Flood flow provided that adequate protection to the Regulatory Flood elevation and a dry land access to the building are provided;
- g) within the Galt City Centre Floodplain Special Policy Area, service stations, gas bars and other new uses involving the manufacture, disposal, consumption or bulk storage of chemical, flammable, explosive, toxic, corrosive or other dangerous materials shall not be permitted; and
- h) the construction of new permanent buildings or structures and the reconstruction or major renovation of existing permanent buildings and structures will be permitted on lands located between the east limit of Grand Avenue/Tower Drive and the west limit of Water Street, from Parkhill Road on the north to Birch Street on the south, only where the design of such buildings or structures complies fully with the standards established for the City of Cambridge Dyking and Channelization Scheme and provides specifically for the integration of such buildings and structures into the flood control and protection works described in that scheme.

### **Implementation of Floodplain Management**

6.2.3.5.1 with updated reference to Ont Reg 150/06

22. Floodplain policies shall be implemented in the following ways:

- a) the *City's* Zoning By-law by incorporating applicable provisions to its regulations, including permitted uses;
- b) the zoning maps attached to and forming part of the *City's* Zoning By-law, which shall indicate that any construction, reconstruction, addition, extension or major rehabilitation or renovation of buildings or structures on lands lying lower than the Regulatory flood elevation shall, where appropriate, require the approval of the GRCA pursuant to the Conservation Authorities Act and pursuant to the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 150/06) and site plan approval under the Planning Act, prior to the issuance of a building

permit; and

- c) the site plan control provision of the Planning Act, which will be applied to ensure compliance with the floodplain policies of this Plan as amended for the purposes of setting minimum levels, grading and other landscaping features. No site plan shall be approved or building permit issued unless it is in conformity with the policies of this Plan and appropriate consent is given by the GRCA including a permit under the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 150/06).

6.2.3.5.2 revised

23. The lands identified by this Plan as being within the Regulatory Floodplain in One-Zone Floodplain Policy Areas shall be designated and zoned as follows:

- a) all vacant or otherwise undeveloped lands in the floodplain on September 22, 1997 are designated Natural Open Space System in this Plan and zoned to prohibit buildings or structures; and
- b) all lands where development existed on September 22, 1997 are designated Natural Open Space System in this Plan. The lands may be zoned to recognize the existing use, and a prefix or prefixes may apply, which shall serve as notice that properties so zoned are constrained beyond regulations in the *City's Zoning By-law*. In this circumstance, floodproofing measures as deemed necessary by the GRCA shall be applied on a site-specific basis.

6.2.3.5.3 revised

24. The lands identified by this Plan as being within the Regulatory Floodplain in Two-Zone Floodplain Policy Areas shall be designated and zoned as follows:

- a) all vacant or otherwise undeveloped lands in the *floodway* portion of the floodplain on September 22, 1997 are designated Natural Open Space System in this Plan and shall be zoned to prohibit buildings or structures;
- b) all lands where development existed in the *floodway* portion of the floodplain on September 22, 1997 are designated Natural Open Space System in this Plan. The lands may be zoned to recognize the existing use, and a prefix or prefixes may apply, which shall serve as notice that properties so zoned are constrained beyond regulations in the *City's Zoning By-law*. In

this circumstance, floodproofing measures as deemed necessary by the GRCA shall be applied on a site-specific basis; and

- c) all lands located within the *flood fringe* portion of the floodplain are designated in this Plan for the appropriate use and shall be zoned accordingly. A prefix or prefixes shall apply to serve as notice that the properties so zoned are constrained beyond regulations in the *City's Zoning By-law*. In this circumstance, floodproofing measures as deemed necessary by the GRCA shall be applied on a site-specific basis to the satisfaction of the *City*.

6.2.3.5.4 revised

- 25. The lands identified by this Plan as being within the Regulatory Floodplain in the Galt City Centre Floodplain Special Policy Area shall be designated in this Plan and zoned as follows: all lands are designated in this Plan for the appropriate use and shall be zoned accordingly. A prefix or prefixes shall apply to serve as notice that properties so zoned shall be constrained beyond regulations in the Zoning By-law. In this circumstance, floodproofing measures as deemed necessary by the GRCA shall be applied on a site-specific basis.

6.2.3.5.5

- 26. Notwithstanding the floodplain policies of this Plan, where it has been determined by the GRCA that *development* in any part of the floodplain in a One-Zone or a Two-Zone or the Galt City Centre Floodplain Special Policy Area would pose an unacceptable threat to life and/or properties, such *development* will not be permitted.

### **3.B.6.1.2 Watercourses and Shorelines**

Revised 6.2.4.1

- 1. The key watercourses within the city are identified on Map 13. Delineation of the watercourses shown on Map 13 is conceptual only, recognizing that they may vary in extent and significance, particularly in their upstream reaches. Amendments to this Plan will not be required for minor refinements to these watercourses or refinements approved by the GRCA and the *Province*.

Revised 6.2.4.2

- 2. The GRCA regulates areas that are river or stream valleys. These regulated areas are described in Ontario Regulation 150/06 and the regulation applies to all areas described by the regulation, whether mapped or not. The regulation gives the GRCA the mandate to prohibit or regulate *development* in river or stream valleys and to prohibit or regulate alterations which would result in the straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse or

changing or interfering in any way with a wetland. Any *development* applications within regulated areas will be circulated to the GRCA prior to consideration by the *City*, as GRCA permission is required prior to development as defined by the Conservation Authorities Act.

Revised 6.2.4.3

3. The *City's* Zoning By-law will indicate that any development as defined by the Conservation Authorities Act within the regulated areas as described in Ontario Regulation 150/06 shall require the approval of the GRCA. The regulated area shall be generally shown on the *City's* Zoning By-law maps and reference will be made to detailed mapping availability from the GRCA.

Revised 6.2.4.4

4. *Development* is not permitted on the *shorelines* of lakes, rivers and streams except as provided for in the Two-Zone Floodplain and Galt City Centre Floodplain Policy Area or as recommended for stream improvement by a *subwatershed study*.

New

5. The *City* will encourage the restoration and enhancement of the *shorelines* of lakes, rivers and streams with appropriate indigenous riparian vegetation through *development* review and stewardship programs.

6.2.4.5

6. The undeveloped *shorelines* of lakes, rivers and streams are designated Natural Open Space System in this Plan and shall be zoned to prohibit buildings or structures.

### **3.B.6.1.3 Erosion and Steep Slopes**

New Section

1. Erosion is the process of soil loss due to natural or human processes. Erosion along a river bank can threaten existing development or create slope stability issues for proposed *development*.
2. *Development* and *site alteration* will not be permitted within the limits of an *erosion hazard* except for flood or erosion control projects demonstrated to be in the public interest, subject to appropriate geotechnical or engineering assessments and for which no other alternative location is feasible.
3. *Development* and *site alteration* associated with existing uses may be permitted within the limits of an *erosion hazard* where it is demonstrated through a site-specific geotechnical or engineering assessment prepared by a qualified professional approved by the GRCA that:

- a) there is no feasible alternative location outside of the *erosion hazard*;
  - b) the proposed methods of overcoming the physical hazards are based on accepted engineering techniques and *resource management* practices or techniques;
  - c) any proposed building or structure is located in the area of least risk;
  - d) there is no impact on existing or future slope stability and bank stabilization or erosion protection works are not required;
  - e) access for maintenance or emergency purposes is not prevented;
  - f) vehicles and pedestrians have safe access and exit during flooding and erosion emergencies; and
  - g) where unavoidable, impacts on *natural features* or *ecological functions* are minimized and appropriate mitigative and remedial measures will adequately enhance or restore features and functions.
4. Renovations and additions to existing buildings or structures within the limits of an *erosion hazard* may be permitted in accordance with Policy 3.B.6.1.3.3 with floor area of the addition also subject to GRCA approval.
  5. The replacement of buildings or structures within the limits of an *erosion hazard* may be permitted in accordance with Policy 3.B.6.1.3.3.
  6. *Development* or *site alteration* adjacent to a steep slope will be subject to a setback from the stable top of bank. The stable top of bank will be determined in consultation with the GRCA. A minimum setback from stable top of bank of 6 metres will be required to accommodate an erosion access allowance.

New – from  
ROP 7.H.7 b)

#### ***3.B.6.1.4 High Water Table***

1. The water table is found underground and is the level at which the soil and gravel are saturated with water. There is often some seasonal change in the water table, due to rain or drought. A high water table and areas of groundwater discharge to the surface are especially common in low-lying areas or areas where the soil is not well drained.
2. *Development* in areas of high water table or groundwater discharge will be guided by a hydrogeological report prepared by a qualified

New Section

ROP Policy  
7.H.11 and City  
SWM Policies  
and Guidelines

person indicating the levels of the existing water table. This report shall assess potential risks to persons, buildings, structures or public *infrastructure* occasioned by high water tables or groundwater discharge prior to *development*. This report should demonstrate to the satisfaction of the *City* that engineering solutions designed to protect structures from the effects of groundwater discharge and high water tables will be effective, will not require significant ongoing maintenance to remain effective and will not divert or impede natural groundwater flows so as to create hazards or annoyances to adjacent lands and buildings. The base of all building footings should be a minimum of 0.75 metres above the high water table as indicated in the hydrogeological report.

### **3.B.6.2 Human-Made Hazards**

Human-made hazards such as *contaminated sites* and *former waste disposal sites* pose a risk to human health and safety as well as environmental health. It is important to reduce the potential risks and costs associated with human-made hazards by ensuring that sites do not pose *adverse effects* prior to permitting *development* or redevelopment. Other human-made hazards such as noise, vibration and light emissions are important to mitigate in the urban environment in order to enhance and maintain livability.

#### **3.B.6.2.1 Contaminated Sites**

1. *Contaminated sites* policies apply to sites and facilities which are or may be contaminated and pose a risk to human and environmental health. The purpose of these policies is to ensure that site remediation is completed in a manner that meets standards set by the *Province* in conjunction with any *development* approvals by the *City* and *Region*, where applicable.
2. When *development* is proposed on or adjacent to a property known to be, suspected to be or potentially a *contaminated site*, an appropriate level of environmental site assessment conducted by a qualified person may be required in accordance with the *City's* Contaminated Sites Redevelopment Procedures. This may be over and above the mandatory filing of a Record of Site Condition required by the Ontario Regulation 153/04 for a change in use to a more sensitive use.

4.5.1

Revised 4.5.1.1

Revised 4.5.1.2

3. Where it has been determined that an environmental site assessment is required under Policy 3.B.6.2.1.2, *development* applications will not receive final approval until the owner demonstrates that the site assessment (and remediation if required) has been completed following Ontario Regulation 153/04 and the site is suitable for the proposed permitted use(s). This will be undertaken through submission of a Record of Site Condition to the *Province* which passes any audit by the *Province*.

4.5.1.3

4. In instances where the *City* is deeded land for public highways, road widenings, parkland, stormwater management, easements or for any other purpose, the *City* may require evidence, as a condition of the transfer, that no environmental contamination has occurred on the subject lands, that the lands have been satisfactorily remediated, or that a record of on-site contaminants is provided.

4.5.1.4

5. These policies are not intended to apply to the closure of landfill sites or other facilities that are required to meet closure conditions of a Certificate of Approval issued under the Environmental Protection Act.

### ***3.B.6.2.2 Former Waste Disposal Sites***

4.5.2.1

1. The *Province* has identified several *former waste disposal sites* in Cambridge, shown on Map 8 of this Plan.

4.5.2.2

2. Notwithstanding the designated land uses shown on Map 8 *development* may be restricted or controlled on lands containing or adjacent to *former waste disposal sites*.

4.5.2.3

3. *Development* applications will not be considered on lands containing *former waste disposal sites* until the *Province* has indicated its approval of the use pursuant to the Environmental Protection Act.

4.5.2.4

4. Where necessary, *development* proposals will incorporate measures, including technical controls, buffering or rehabilitation as required by the *Province* to prevent any *adverse effects* originating from a *former waste disposal site*.

### ***3.B.6.2.3 Noise, Vibration and Light Emissions***

#### **Noise and Vibration General**

4.2.2.1 revised

1. The *City* may require a noise and/or vibration assessment for the siting of *sensitive land uses*, including residential *development*, in the proximity of potential sources of noise such as existing or planned transportation corridors, the Region of Waterloo International Airport, certain industrial facilities or aggregate operations. The noise and/or vibration assessment shall be completed by a qualified professional to the satisfaction of the *City*. The assessment shall take into consideration the total noise on the site from all sources and demonstrate whether noise control measures need to be implemented to meet applicable *Provincial* and municipal standards and guidelines.

4.2.2.7

2. Noise *sensitive land uses* will be prohibited where the projected attenuated daytime noise level in the associated *outdoor living area* exceeds 70 dBA.

**Noise and Vibration from Transportation Sources**

4.2.2.2 & ROP  
2.G.15

3. The Noise Criteria shown in Table \_\_ of this Plan, as prescribed by the *Region*, will be used as a guide in assessing the noise impact of existing or planned roads or railways:

Table \_\_: Noise Criteria for Noise Sensitive Land Uses

Receiver Category	Time Period	Road Traffic	Rail Traffic
<i>Outdoor Living Area</i>	0700-2300	Leq = 55 dBA	Leq = 55 dBa
Indoor Living Area	0700-2300	Leq = 45 dBA	Leq = 40 dBA
Indoor Living Area (Sleeping Quarters)	2300 – 0700	Leq = 40 dBA	Leq = 35 dBA

Notes: - Leq means average sound level  
- dBA means A-weighted decibel and is a measurement for sound levels

4.2.2.3

4. When a noise assessment recommends warning clauses and/or noise attenuation measures to meet the criteria contained in Table \_\_, such clauses or measures shall be made a condition of the *development* approval in accordance with any *Provincial* and municipal standards and guidelines relating to noise mitigation. Noise attenuation measures may include site design and building layout, air conditioning and/or structural design measures such as multiple glazed windows and brick wall construction, and noise attenuation barriers. Alternative design solutions will be given preference to noise attenuation barriers wherever possible.

4.2.2.5 revised  
per financial provisions

5. Where noise attenuation barriers are constructed on *Regional* or local road rights-of-way, their ongoing maintenance shall be the

responsibility of the appropriate municipal authority, or as outlined in associated agreements, including financial provisions for maintenance and replacement.

New – from CN

6. Where an application for the *development* of a *sensitive land use* is submitted within 75 metres of a property line for a railway, a vibration study may be required. The study must address all sources of vibration affecting the site and include recommendations for mitigation.

#### **Noise and Vibration from Region of Waterloo International Airport**

4.2.2.6 revised  
and ROP 2.G.17

7. In the vicinity of the Region of Waterloo International Airport:
  - a) new residential *development* or other *sensitive land uses* will not be permitted in areas above 30 Noise Exposure Forecast (NEF);
  - b) appropriate warning and/or noise attenuation measures will be required as a condition of approval for any new residential *development* or other *sensitive land uses* in areas between 25 and 30 NEF, including the requirement for permanent signage at the entrance to subdivisions identifying the presence of aircraft noise and other necessary noise attenuation measures; or
  - c) redevelopment of existing residential land uses or other *sensitive land uses*, or infilling of residential or other *sensitive land uses* in areas above 30 NEF may only be permitted where the proposed *development*:
    - i) will not negatively impact the long-term function of the airport; and
    - ii) incorporates appropriate warning and/or noise attenuation measures, including noise warning and other necessary noise attenuation measures.

The NEF contours established under the Region of Waterloo International Airport Business Plan will be used for the purposes of implementing this policy and any other policies or legislation administered by the *Provincial* or Federal governments.

#### **Noise and Vibration from a Stationary Source**

New

8. Any *development* application for any use proposed to generate a stationary source of noise or vibration may be required to undertake a noise and/or vibration study as part of the *development*

approvals process, to the satisfaction of the *City*. The study must address all sources of noise and vibration, include recommendations for mitigation and demonstrate that there are no *adverse effects* on existing or planned *sensitive land uses*.

New

9. Vibration studies may be required for new *developments* and changes to existing industrial development within 75m of a *sensitive land use* or where a new *sensitive land use* is being proposed adjacent to an existing industrial use.

### Light Emissions

New ROP 3.D.7

10. Light pollution is excessive or obtrusive artificial light. While maintaining public safety, the *City* will endeavour to reduce light pollution in an effort to limit energy waste, decrease greenhouse gas emissions, minimize adverse impacts on ecological systems and enhance the visibility of the night sky.

New

11. The *City* will, wherever feasible and appropriate, use and promote the use of responsible lighting practices that eliminate and minimize light pollution.

New

12. The *City* may consider passing an outdoor lighting pollution control by-law that would help prevent the negative impacts of excessive or misdirected light and encourage lighting that is purposeful, minimalistic and energy efficient.

New

13. The *City* may require the proponent of a *development* application to submit a light assessment and photometrics plan to be approved by the *City* in conjunction with the application.

### 3.B.7 Mineral Aggregates

- placeholder awaiting results of Provincial modifications to ROP

## 4. Glossary

Please see separate glossary.

The following terms are proposed to be deleted from the Glossary:

Adjacent lands (replaced with contiguous)  
Locally Significant Wetland (terminology no longer used)  
Major-minor drainage system (within policies proposed to be deleted)  
Negative impacts (no longer used in *fish habitat* section)  
Significant negative impact (use *adverse environmental impacts* for consistency with ROP)  
Water Resources Protection Strategy (replaced by source water protection policies)

## 5. Appendices for Chapter 3

### ***Appendix A: ROP Policies Modified for Source Water Protection in Cambridge***

#### ***General***

##### ROP 8.A.5

*Development* applications within all Source Water Protection Area designations will comply with the following:

- a) employment uses that would direct infiltration of stormwater run-off without pre-treatment through the use of dry wells or artificial/enhanced recharge will not be permitted; and
- b) employment uses that would require new water taking for industrial/commercial purposes and/or for irrigation purposes, except for water taking associated with *mineral aggregate operations* will not be permitted.

##### ROP 8.A.6

New water taking is not permitted for any new or expanding uses where a municipal water distribution system is available within the road right-of-way abutting the property except as permitted in the zoning by-law.

##### ROP 8.A.7

New water taking in quantities greater than 50,000 litres per day may be permitted outside of the City Urban Area and Source Water Protection Area designations provided that the application is substantiated by further study in accordance with ROP Policy 8.A.4.

### ***Source Water Protection Land Use Categories***

#### **ROP 8.A.8**

For the purpose of implementing source water protection, the *Region* has identified four categories of land uses that may pose a risk to drinking-water. They are:

- (a) Category A (Very High Risk Uses);
- (b) Category B (High Risk Uses);
- (c) Category C (Moderate Risk Uses);
- (d) Category D (represents *preferential pathways*, or other land uses that involve soil excavation and/or the creation of subsurface facilities, that contribute to the risk to municipal drinking-water supplies by increasing vulnerability).

#### **ROP 8.A.9**

Land uses typically associated with each of the land use categories identified in Policy 8.A.8 include, but are not limited to, the uses listed in Schedule “B” to this Plan.

### ***Wellhead Protection Areas***

This Plan designates Wellhead Protection Sensitivity Areas around each municipal drinking-water supply well. Wellhead Protection Areas are the total area of land which contributes water to a municipal drinking-water supply well. Within each Wellhead Protection Area, one or more Wellhead Protection Sensitivity Areas (WPSA) may be delineated. The purpose of these designations is to prevent land uses involving hazardous chemicals and/or substances, disease causing organisms and land uses that increase the vulnerability of groundwater from becoming water quantity and/or quality risks to municipal drinking-water wells.

#### **ROP 8.A.10**

Wellhead Protection Sensitivity Areas (WPSA) are classified from 1 to 8. This classification allows for varying degrees of management relative to the vulnerability of the underlying groundwater to contamination, the importance of the well to the capacity of the *municipal drinking-water supply systems* as well as the length of time groundwater within the WPSA will take to reach the municipal drinking-water supply well. WPSAs are designated as shown on ROP Maps 6a, 6f and 6g and are described below:

- (a) WPSA 1 – delineates areas within a 100 metre radius of each municipal drinking-water supply well. It represents the highest sensitivity area with respect to the potential movement of disease-causing organisms and groundwater infiltration;
- (b) WPSA 2 – delineates high sensitivity areas found within the two year *time of travel* to a municipal drinking-water supply well;

- (c) WPSA 3 – delineates high sensitivity areas found outside the two year, but within the ten year *time of travel* to a municipal drinking-water supply well;
- (d) WPSA 4 – delineates medium sensitivity areas found within the two year *time of travel* to a municipal drinking-water supply well;
- (e) WPSA 5 – delineates medium sensitivity areas found outside of the two year, but within the ten year *time of travel* to a municipal drinking-water supply well;
- (f) WPSA 6 – delineates low sensitivity areas found within the two year *time of travel* to a municipal drinking-water supply well;
- (g) WPSA 7 – delineates low sensitivity areas found outside of the two year, but within the ten year *time of travel* to a municipal drinking-water supply well; and
- (h) WPSA 8 – delineates the area outside of the ten year *time of travel* to the limit of the total land area contributing water to a municipal drinking-water supply well.

#### ROP 8.A.11

Within the WPSA 1 designation:

- (a) Category A, B, C and D uses will not be permitted;
- (b) New individual wastewater treatment systems, private wells, pipelines, sewers, stormwater management ponds (or other ponds) and the direct infiltration of stormwater run-off without pre-treatment will not be permitted; and
- (c) New impermeable surfaces of any kind will be restricted or minimized to the greatest extent possible.

#### ROP 8.A.12

Within the WPSA 2 designation, *development* applications will comply with the following:

- (a) Until such time as the Regional Official Plan is amended to incorporate approved Source Protection Plans under the Clean Water Act, 2006, Category A uses, geothermal wells, *mineral aggregate operations* and *wayside pits and quarries* will not be permitted;
- (b) Category B and C uses and underground parking garages will not be permitted outside of the Built-Up area as shown on Map 1;
- (c) Category B and C uses and underground parking garages already permitted by this Plan may be permitted within the Built-Up Area subject to further study in accordance with ROP Policy 8.A.4; and
- (d) Individual wastewater treatment systems, private wells, pipelines, sewers, stormwater management ponds (or other ponds) and plans of subdivision or vacant land condominiums may be permitted subject to further study in accordance with ROP Policy 8.A.4.

#### ROP 8.A.13

Within the WPSA 3 designation, *development* applications will comply with the following:

- (a) Category A uses will not be permitted;
- (b) Category B and C uses will not be permitted outside of the Built-Up Area;

- (c) Category B and C uses and underground parking garages already permitted by this Plan may be permitted within the Built-Up Area subject to further study in accordance with ROP Policy 8.A.4.; and
- (d) Category D uses, individual wastewater treatment systems, private wells, pipelines, sewers, stormwater management ponds (or other ponds), and plans of subdivision or vacant land condominiums may be permitted subject to further study in accordance with ROP Policy 8.A.4.

#### ROP 8.A.14

Within the WPSA 4 designation, *development* applications will comply with the following:

- (a) Until such time as the Regional Official Plan is amended to incorporate approved Source Protection Plans under the Clean Water Act, 2006, Category A uses, geothermal wells, *mineral aggregate operations* and *wayside pits and quarries* will not be permitted;
- (b) Category B and C uses will not be permitted outside of the Built-Up Area;
- (c) Category B and C uses already permitted by this Plan may be permitted within the Built-Up Area subject to further study in accordance with ROP Policy 8.A.4; and
- (d) Underground parking garages, individual wastewater treatment systems, private wells, pipelines, sewers, stormwater management ponds (or other ponds) and plans of subdivision or vacant land condominiums may be permitted subject to further study in accordance with ROP Policy 8.A.4.

#### ROP 8.A.15

Within the WPSA 5 designation, *development* applications will comply with the following:

- (a) Category A uses will not be permitted;
- (b) Category B and C uses will not be permitted outside of the Built-Up Area;
- (c) Category B and C uses already permitted by this Plan may be permitted subject to further study within the Built-Up Area in accordance with ROP Policy 8.A.4; and
- (d) Category D uses and plans of subdivision or vacant land condominiums may be permitted subject to further study in accordance with ROP Policy 8.A.4.

#### ROP 8.A.16

Within the WPSA 6 designation, *development* applications will comply with the following:

- (a) Until such time as the Regional Official Plan is amended to incorporate approved Source Protection Plans under the Clean Water Act, 2006, Category A uses, geothermal wells, *mineral aggregate operations* and *wayside pits and quarries* will not be permitted;
- (b) Category B and C uses will not be permitted outside of the Built-Up Area;
- (c) Category B and C uses may be permitted within the Built-Up Area subject to further study in accordance with ROP Policy 8.A.4; and
- (d) Underground parking garages and plans of subdivision or vacant land condominiums may be permitted subject to further study in accordance with ROP Policy 8.A.4.

#### ROP 8.A.17

Within the WPSA 7 designation, *development* applications will comply with the following:

- (a) Category A uses will not be permitted;
- (b) Category B and C uses will not be permitted outside of the Built-Up Area;
- (c) Category B and C uses already permitted in this Plan may be permitted within the Built-Up Area subject to further study in accordance with ROP Policy 8.A.4; and
- (d) Category D uses and plans of subdivision or vacant land condominiums may be permitted subject to further study in accordance with ROP Policy 8.A.4.

#### ROP 8.A.18

Within the WPSA 8 designation, *development* applications will comply with the following:

- (a) Category A uses will not be permitted; and
- (b) *Geothermal wells, mineral aggregate operations* and *wayside pits and quarries* may be permitted subject to further study in accordance with ROP Policy 8.A.4.

### ***GUDI Wells and High Microbial Risk Management Zones***

#### ROP 8.A.19

This Plan designates municipal drinking-water supply wells supplied by Groundwater Under the Direct Influence of Surface Water (GUDI) as shown on ROP Map 6f. *Development* applications proposing individual wastewater treatment systems and/or private wells are not permitted within the High Microbial Risk Management Zone surrounding the GUDI wells.

### ***Surface Water Intake Protection Zones***

A portion of the *Region's* drinking-water supply comes from surface water through a municipal intake located in the Grand River just downstream of the *City's* municipal boundary, located in the City of Kitchener. The Surface Water Intake Protection Zones are delineated to protect the quality and quantity of the surface water entering the intake, mainly by protecting the surface water upstream of the intake from hazardous spills. In the city, only Surface Water Protection Zone 2 is found as designated on Map 6g. This delineates the area of land over which a hazardous spill could reach the municipal surface water intake within a two hour travel time.

#### ROP 8.A.22

Within Surface Water Intake Protection Zone 2, *development* applications will comply with the following:

- (a) Category A uses will not be permitted; and
- (b) Category B, C and D uses and stormwater management ponds (or other ponds) may be permitted subject to further study in accordance with ROP Policy 8.A.4.

### ***Schedule B: Source Water Protection Land Use Categories***

#### **Category ‘A’**

- Waste treatment and disposal facilities, including lagoons, landfills communal/municipal sewage treatment facilities and including large sewage vaults at sewage pumping stations, but not including facilities regulated under the Nutrient Management Act.
- Salvage yards, including automobile wrecking yards or premises
- Bulk storage of hazardous chemicals and hazardous substances (as listed in O.Reg. 347 under the Environmental Protection Act), including bulk storage of oil, gasoline or petroleum products, and including transportation terminals for these substances/chemicals (including truck/trailer/container parking, washing or cleaning depots)

#### **Category ‘B’**

- Bulk storage of road salt and snow disposal sites
- Primary metal manufacturing, including iron and steel mills and ferro-alloy manufacturing; steel product manufacturing from purchased steel; alumina and aluminum production and processing; non-ferrous metal production and processing; and foundries
- Manufacturing of fabricated metal products, including manufacturing of unfinished metal products and metal finishing operations
- Manufacturing and assembly of transportation equipment, including motor vehicles and parts, aerospace products and parts, rail cars, ships and boats
- Manufacturing of machinery, including agricultural, commercial, industrial, and other machinery
- Chemical manufacturing including chemicals; resins; fertilizers, pesticides and other agricultural chemicals; pharmaceutical and medicines; paint, coating and adhesives; inks and other chemicals but excluding soap and cleaning compound manufacturing. Including manufacturing, packaging, repackaging, and bottling. Excludes uses involving bulk storage of hazardous materials which are included under Category ‘A’
- Manufacturing of petroleum and coal products, including manufacturing of asphalt materials. Excludes uses involving bulk storage of hazardous materials which are included under Category ‘A’
- Manufacturing of electronic components such as semiconductors, printed circuit boards, and cathode ray tubes
- Manufacturing of electrical equipment, appliances and components
- Commercial or industrial dry cleaning of textiles and textile products, excluding depots not performing on-site dry cleaning
- Manufacturing of leather and allied products including footwear
- Wood and wood product preservation and treatment
- Gasoline stations and other retail establishments with gasoline sales

- Wholesale/distributing of cleaning products, pesticides, herbicides, fungicides and chemicals

### Category ‘C’

- Manufacturing of rubber products
- Manufacturing of soap, cleaning compounds and toilet preparations
- Textile and fabric finishing and fabric coating
- Manufacturing of plastic products
- Manufacturing of wood products including wood furniture, and excluding wood preservation
- Manufacturing of glass and glass products
- Manufacturing of paper and paper products including newsprint and boxes
- Printing and related support activities, excluding business support services such as photocopy services
- Repair and Maintenance of automobiles and automotive machinery, electronic equipment, industrial and commercial machinery, and personal and household goods repair
- Golf courses
- Airports, train and public transit terminals, except terminals with no fuel storage or transfer of shipped goods or materials
- Medical, health and other laboratories (other than clinics generally associated with commercial plazas)
- Miscellaneous manufacturing not included elsewhere, including jewellery, silverware, medical equipment and signs
- Recycling, recovery, or remanufacturing of materials including the collection, processing, manufacturing, or reuse of post-consumer or post-industrial materials, not including recycling or disposal of hazardous materials, and not including salvage yards or facilities with outdoor operations which are Category ‘A’ uses

### Category ‘D’

- Underground parking garages
- *Geothermal wells*
- *Mineral aggregate operations* including *wayside pits and quarries*

### *Source Water Protection Glossary*

**geothermal well** – a vertical well, borehole or pipe installation used for geothermal systems, ground-source heat pump systems, geo-exchange systems or earth energy systems for heating or cooling; including open-loop and closed-loop vertical borehole systems. A geothermal well does not include a horizontal system where construction or excavation occurs to depths less than five metres unless the protective geologic layers overlaying a *vulnerable* aquifer have been removed through construction or excavation.

**mineral aggregate operations** – an operation and uses accessory thereto, other than *wayside pits and quarries*, conducted under a license or permit under the Aggregate Resources Act.

**municipal drinking-water supply systems** – all or part of the drinking-water supply, treatment and distribution systems owned and operated by a municipality.

**preferential pathways** – a constructed pathway or excavation to a depth greater than five metres and/or where protective geologic layers overlying an aquifer have been removed that create a direct access or conduit facilitating the transport of contaminants to a municipal drinking-water source.

**time of travel** – an estimate of time required for a particle of water to move in the saturated soil or rock from a specific point in an aquifer to the well intake.

**wayside pits and quarries** – 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 road construction and not located on the road right-of-way.

## 6. Mapping Updates

The revisions to natural heritage and environmental management policies of the Cambridge Official Plan as well as the availability of new information since 1999 will necessitate changes to the following maps:

### *Map 8 Provincially and Locally Significant Wetlands*

This map will need to be revised to show *Provincial* and *Regionally* Significant Systems and Features of the Natural Habitat Network:

- Landscape Level Systems (Blair-Bechtel-Cruikston, Dumfries Carolinian and Beverly *Environmentally Sensitive Landscapes* and the Significant Valleys)
- Core Environmental Features (*Provincially Significant Wetlands, Environmentally Sensitive Policy Areas, Significant Woodlands* and *Environmentally Significant Valley Features* (when available))

### *Map 9 Environmentally Sensitive Policy Areas and Locally Significant Natural Areas:*

This map will need to be removed, as ESPAs are now Core Environmental Features to be shown on map above, and LSNAs will no longer be mapped.

### *Map 10 Floodplains*

This map will be revised to show updated floodplain mapping available from the GRCA and from the Forbes Creek and Hespeler West Subwatersheds studies.

### *Map 11 Preston and Hespeler Two-Zone Floodplain Policy Areas*

This map will be revised to show the updated *flood fringe* for Hespeler and Preston based on refined floodplain mapping from the GRCA.

#### *Map 13 Watercourses, Subwatersheds and Selected Fisheries Resources*

This map will be revised to show updates to *subwatershed* boundaries and areas where *subwatershed* plans and/or master drainage plans exists. Selected fisheries resources will be removed as they are no longer dealt with in policy and stream classifications are not applicable. Updates to the watercourses depicted will include municipal drains and natural channel design projects.

#### *Map 14 Mineral Aggregate Resources*

This map will be revised based on the final map for Cambridge as determined through the Regional Official Plan modifications.

#### *New Mapping*

There will need to be a new map to correspond to Section 3.B.5 – Source Water Protection showing Wellhead Protection Areas, GUDI Wells and High Microbial Risk management Zones and Surface Water Intake Protection Zones.

## **7. Policies Recommended for Deletion**

The following policies are recommended for deletion:

4.2.2.4 All costs associated with the preparation of and review of the noise and/or vibration assessment and the implementation of the approved noise attenuation measures shall be borne by the *development* proponent.

REASON: not needed.

6.1.1.6 Locally Significant Natural Areas (LSNAs) are shown on Map 9 and are subject to the provisions of Policy 6.1.4 of this plan.

REASON: proposed not to show LSNAs on a map

6.1.1.7 The *City* will participate in the completion of a Woodlands Strategy co-ordinated by the *Region* in co-operation with other municipalities, the *Province*, the GRCA and in consultation with affected landowners, to address the following:

- a) establishment of a definition for “significant woodlands”;
- b) identification of significant woodlands fulfilling the criteria of ESPAs in accordance with ROPP Policy 4.3.2;

c) identification of significant woodlands fulfilling the criteria of LSNAs in accordance with Policy 6.1.4.2 of this plan, but not fulfilling the criteria of ESPA in accordance with ROPP Policy 4.3.2;

d) recommendation of lands for designation as ESPAs by amendment to the ROPP; and

e) recognition of lands as LSNAs by their inclusion in this plan.

REASON: now have significant woodlands defined in ROP

6.1.4.4 LSNAs which are privately owned are not for use by the public, except at the discretion of the owner.

REASON: redundant – covered by trespass legislation

6.1.4.6 Where lands have been identified through *subwatershed* or other appropriate field studies as fulfilling the criteria for an LSNA in accordance with Policy 6.1.4.2, this plan will be amended to identify such lands as LSNA.

REASON: proposed not to show LSNAs on a map since not all LSNAs have been studied yet.

6.2.5.2 Stormwater management practices planning will be emphasized in the design of the *major-minor drainage system*, with a goal of preserving the hydrologic cycle and a focus on at source controls.

REASON: covered by “City-Wide Stormwater Management Policies and Guidelines”

6.2.5.3 Storm drainage systems shall be designed using the *major-minor drainage system*.

REASON: covered by “City-Wide Stormwater Management Policies and Guidelines”

6.2.5.5 Developers of plans of subdivision and site plans shall implement erosion and sediment control measures to the satisfaction of the *City*.

REASON: covered by “City-Wide Stormwater Management Policies and Guidelines”

6.2.5.7 (last sentence) Owners of private stormwater management facilities are responsible for their operation and maintenance.

REASON: redundant and covered by “City-Wide Stormwater Management Policies and Guidelines”

6.4.3.2 The *City* will co-operate with the *Region* in developing and maintaining an environmental database with documents the occurrence and distribution of significant species and other features in the City of Cambridge.

REASON: Database does not exist?