

**2ND REPORT OF THE
ENVIRONMENTAL AND ECOLOGICAL PLANNING ADVISORY COMMITTEE**

Meeting held on January 17, 2013, commencing at 5:08 p.m.

PRESENT: D. Sheppard (Chair), K. Delaney, R. Gupta, S. Levin, Dr. W.R. Maddeford, L. Nattagh, S. Sanford, G. Vilks and Dr. N. Zitani and H. Lysynski (Committee Secretary).

ALSO PRESENT: B. Bergsma, C. Creighton, B. Krichker, A. Macpherson and L. McDougall.

REGRETS: H. McNeely, C. Peterson, G. Sass and A. Youssef.

I YOUR COMMITTEE RECOMMENDS:

Planning and
Design
Standards for
Trails in
ESA's

1. (Add) That the Environmental and Ecological Planning Advisory Committee (EEPAC) heard a verbal presentation from S. Levin, with respect to the planning and design standards for trails in environmentally significant areas. The EEPAC asked the Civic Administration to advise the EEPAC when the Civic Administration applies trail standards in significant woodlands.

II YOUR COMMITTEE REPORTS:

Water
Resource
System,
Storm/
Drainage and
SWM
Infrastructure

2. That the Environmental and Ecological Planning Advisory Committee (EEPAC) heard the attached presentation from B. Krichker, Manager of Stormwater, with respect to the water resource system, the storm/drainage and stormwater management infrastructure.

Medway
Valley
Heritage
Forest ESA,
North of
Fanshawe
Park Road –
Trail Planning

3. That the Environmental and Ecological Planning Advisory Committee (EEPAC) heard the attached presentation from B. Bergsma, Ecologist Planner, with respect to trail planning for the Medway Valley Heritage Forest ESA, north of Fanshawe Park Road. The EEPAC referred the presentation to its Working Group to review and report back at a future EEPAC meeting.

Westminster
Ponds-Pond
Mills ESA
Natural
Heritage
Inventory
Evaluation
and
Management
Strategy
Request for
Proposal

4. (2) That the Environmental and Ecological Planning Advisory Committee (EEPAC) received the Westminster Ponds-Pond Mills ESA Natural Heritage Inventory Evaluation and Management Strategy Request for Proposal from B. Bergsma, Ecologist Planner. The EEPAC indicated support for the study, being driven by the Master Plan to bring the existing data up-to-date and asked Members to provide individual comments to B. Bergsma, Ecologist Planner, with respect to this matter.

PenEquity
Realty
Corporation –
3130 and
3260
Dingman
Drive

5. (6) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached, revised, comments, prepared by the EEPAC Working Group, with respect to the application of PenEquity Realty Corporation relating to the properties located at 3130 and 3260 Dingman Drive, be forwarded to Staff for their review and consideration.

Environmental
Impact Study
Addendum –
130, 136, 146
and 164 Pond
Mills Road &
925 Deveron
Crescent

6. (7) That the Environmental and Ecological Planning Advisory Committee (EEPAC) asked that the attached comments, prepared by the EEPAC Working Group, with respect to the Environmental Impact Study Addendum relating to the properties located at 130, 136, 146 and 164 Pond Mills Road & 925 Deveron Crescent, be forwarded to Staff for their review and consideration.

7. That the Environmental and Ecological Planning Advisory Committee (EEPAC) received and noted the following:

1st Report of
the EEPAC

(a) (1) the 1st Report of the EEPAC from its meeting held on December 20, 2012;

Sifton
Properties
Limited - 1400
& 1440 North
Wenige Drive

(b) (3) a communication with respect to the EEPAC comments with respect to the application of Sifton Properties Limited relating to the properties located at 1400 and 1440 North Wenige Drive;

Boler
Mountain and
Adjacent
Lands Subject
Lands Status
Report

(c) (4) a communication, dated January 11, 2013, from B. Tegler, Partner/Applied Ecologist, North-South Environmental Inc., with respect to the Boler Mountain and Adjacent Lands Subject Lands Status Report; and,

2013 Budget
Overview –
Emerald Ash
Borer Funding


(d) (5) a 2013 Budget Overview page, submitted by D. Sheppard, noting the possible financial reduction to the Emerald Ash Borer Strategy funding.

Next Meeting

8. That the Environmental and Ecological Planning Advisory Committee will hold its next meeting on February 21, 2013.

The meeting adjourned at 8:18 p.m.

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**City of London
Water Resources System
Storm/Drainage and SWM Infrastructure**

January 16, 2013
Presented by: Berta Krichbaum, Deputy Assistant
Manager of Stormwater, Drainage,
Environmental, and Engineering Services, Management
Corporation of the City of London




**Our water
resources
are Canada's
most
important
treasures.**



Water Resources

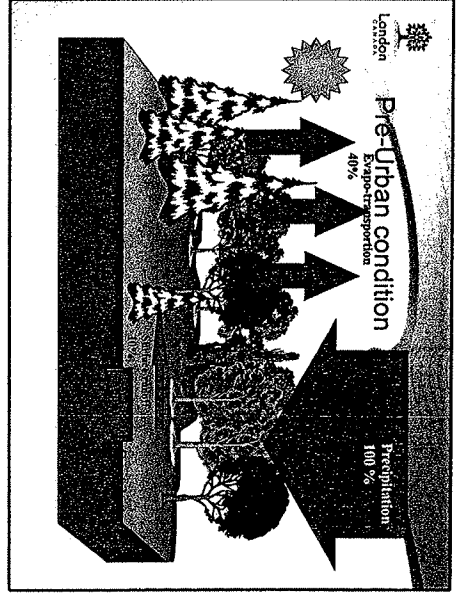
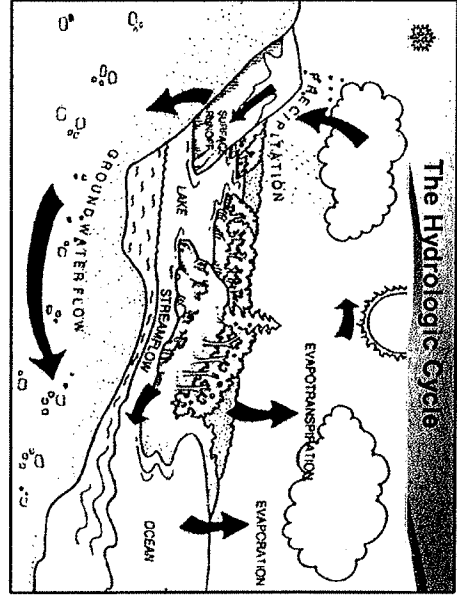
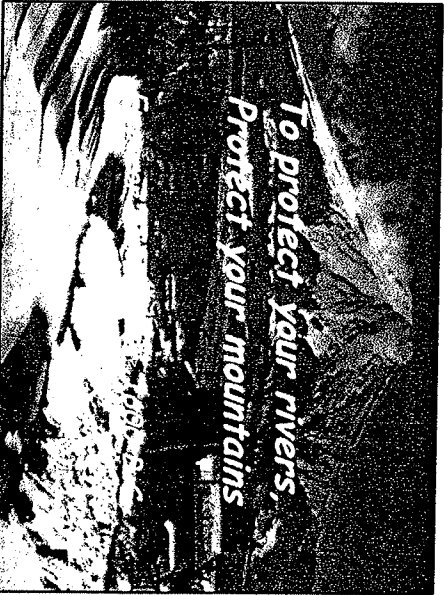
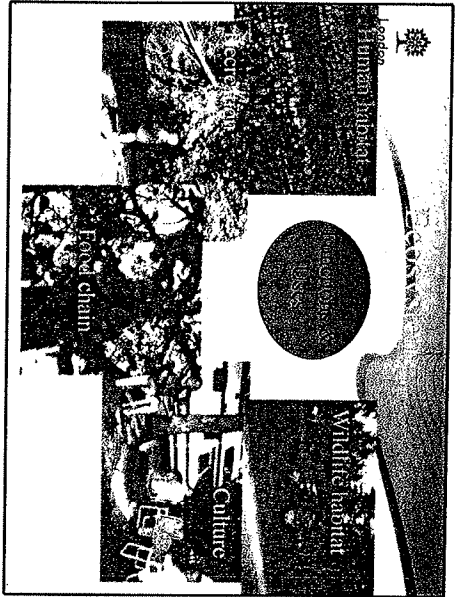
- Approximately 70% of Earth's surface is water covered and approximately 2.5% is fresh water;
- The Great Lakes represent 21% of the world's fresh water resources;
- Canada has approximately 20% of the world's water resources, which 7% is renewable.



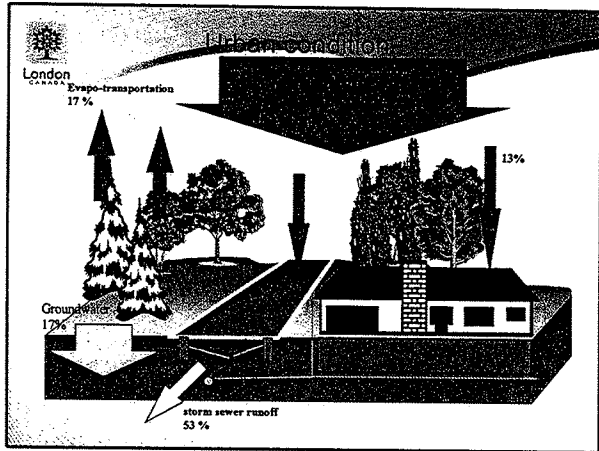
Water Resources

- The measurable water contribution to the Canadian economy is significant in the natural resources section, which is 220 billion dollars a year (12.5% of Canada's GDP);
- Humans require 2.4 liters of water per day to be replaced in their bodies;
- 1 liter of oil can contaminate approximately up to 1 million liters of fresh water;
- Importance of SWM and surface water in Water Resources Management.

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Provincial Statutes

- Beach Protection Act
- Beds of Navigable Waters Act
- Building Code Act
- Conservation Authorities Act
- Consolidated Hearings Act
- Crown Timber Act
- Drainage Act
- Endangered Species Act
- Energy Act
- Environmental Assessment Act
- Environmental Protection Act
- Forest Fires Prevention Act
- Forestry Act
- Game and Fish Act
- Historical Parks Act
- Lakes and Rivers Improvement Act
- Land titles Act
- Mining Act
- Municipal Act
- Municipal Board Act
- Niagara Escarpment Planning and Development Act
- Ontario Planning and Development Act
- Ontario Water Resources Act
- Pesticides Act
- Planning Act
- Trees Act

Water Resources/Municipal Storm/Drainage and SWM Infrastructures

Major Approvals:


- EAA
- EPA
- Ontario Water Resources Act
- Planning Act
- Conservation Act
- Fishery Act



Planning Act


Part I, Section 2
The Minister, the council of a municipality, a local board, a planning board and the Municipal Board, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest such as

- the protection of ecological systems, including natural areas, features and functions;




Water Resources/Municipal Storm/Drainage and SWM Infrastructures

- Subwatershed approach
- Identify Environmental Targets criteria and indicate constraints
- Identify S/D and SWM servicing criteria
- Further refining of Storm/Drainage and SWM Infrastructure will be provided by Municipal Class EA studies



Water Resources/Municipal Storm/Drainage and SWM Infrastructures


- Flood plain, erosion and hazardous slope, lands protection
- Slope stability and engineering setbacks
- Water balance and mitigation measures
- Fluvial geo-morphology of the stream, waterways, tributaries, creeks and river
- Protection of recharge/discharge areas




Water Resources/Municipal Storm/Drainage and SWM Infrastructures

- Water quality and temperature control of the receiving system
- Protection of fishery and aquatic system level of protection for receiving watercourses and tributaries
- Natural features and ecological functions in NHSs and for ESA's in accordance with the City's Official Plan

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How we are managing Stormwater?



Water Resources/Municipal Storm/Drainage and SWM Infrastructures


Ensure the safe conveyance, control and treatment of both major and minor stormwater flows

Ensure compliance with OWRA and Drainage Act and all others applicable Acts to maintain and enhance the existing system



Water Resources/Municipal Storm/Drainage and SWM Infrastructures


- The City of London has constructed 108 stormwater management facilities in the past 10- 20 years.
- Currently, an additional 108 facilities are proposed to be constructed.




Purpose of Stormwater Management (SWM) Facilities

- Engineered facilities to detain/retain storm runoff in order to:
 - Provide attenuation of storm flows (flood and erosion control)
 - Improve water quality discharge from urbanized areas to open water courses.
 - Ensure public safety and provide protection for the ecosystem and its properties.


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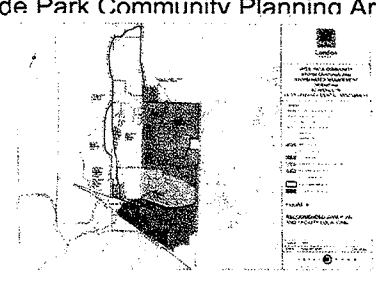
 **Promoting Regional SWM Solutions**


- 2003 Ministry of the Environment Stormwater Management Planning and Design Manual suggests that SWM facilities treating drainage areas less than 10 ha. may not function as efficiently as facilities serving larger areas.
- The City of London promotes a total catchment approach to SWM in an effort to reduce the number of SWM facilities constructed and improve the efficiency of facilities that are constructed.
- Regional SWM solutions reduce capital construction costs and long-term operation and maintenance costs.

 **Regional SWM Solutions**

- Conceptual Regional SWM Strategies can be prepared through:
 - Community Plans
 - Master Drainage Plans
 - Municipal Class Environmental Assessments
- The goals and criteria of the Subwatershed Study are applied to the total drainage catchment of a development area.


 **Hyde Park Community Planning Area**




 **Conceptual Storm/Drainage and SWM Servicing Plan**

- The main purpose of the Conceptual Storm/Drainage and SWM Servicing Plan is to:
 - Identify all main components of the proposed storm servicing option;
 - Develop a conceptual design for the proposed servicing option; and
 - Identify projected storage, flows, land requirements and preliminary buffers and setbacks for proposed SWM facility.
- Conceptual Plan to be consistent with the Subwatershed Studies, Community Area Plan Master Drainage Plan and/or the Municipal Class EA.


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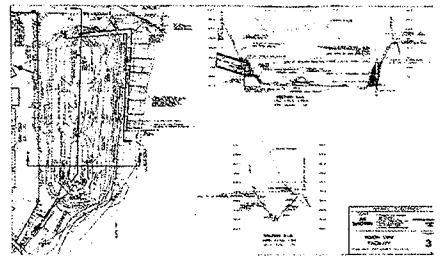
 **Conceptual Storm/Drainage and SWM Servicing Plan**


- Conceptual SWM Plan should include the following:
 - Identification of SWM criteria;
 - Identification of drainage areas;
 - Identification of conceptual minor and major flow routes;
 - Preliminary hydrologic and hydraulic modeling;
 - Conceptual SWM facility design drawings; and
 - Consideration of any site specific challenges (e.g., water balance, slope stability analysis).

 **Functional Storm/Drainage and SWM Servicing Plan**

- The Functional SWM Plan should confirm that the main components of the proposed storm/drainage and SWM servicing option are consistent with the Conceptual SWM Plan and the SWM Master Plan and/or Municipal Class EA.
- Functional SWM Plan to include the following:
 - Confirmation of drainage areas;
 - Refinement hydrologic/hydraulic modeling to be consistent with detailed servicing design;
 - Accommodation of drainage from external lands;
 - Verification of minor and major flow paths and conveyance capacity; and
 - Consider any Site Specific Challenges (e.g., water balance, slope stability assessment)

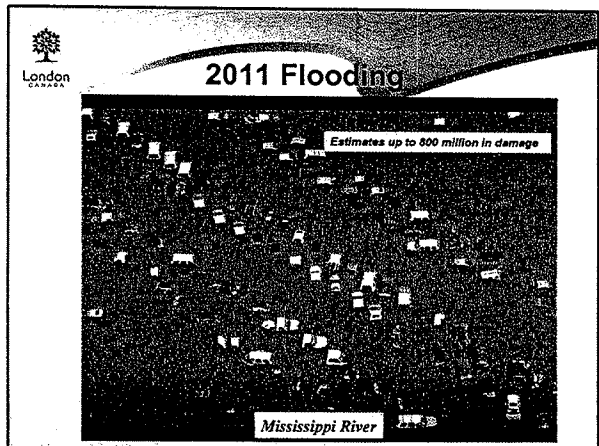
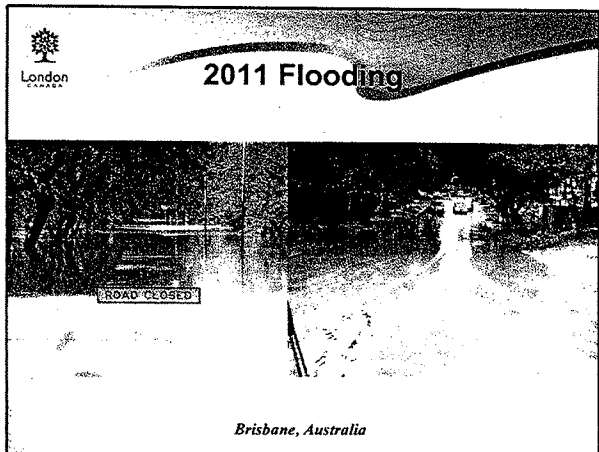
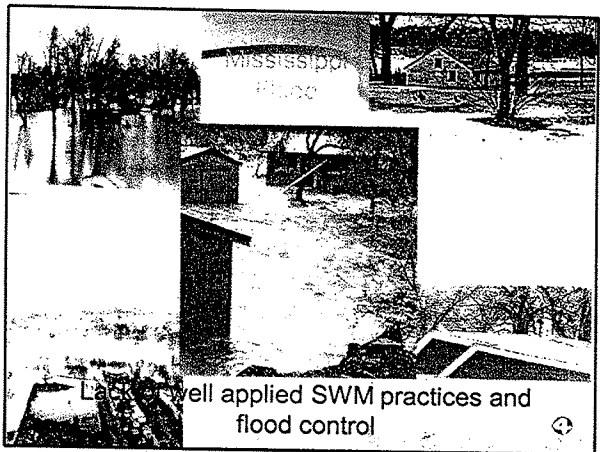
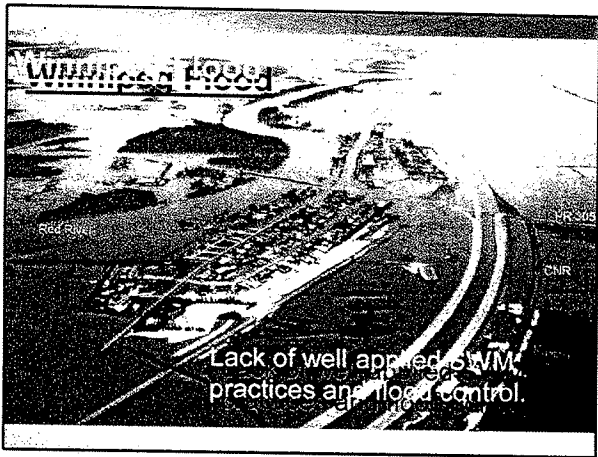
 **Functional SWM Design**



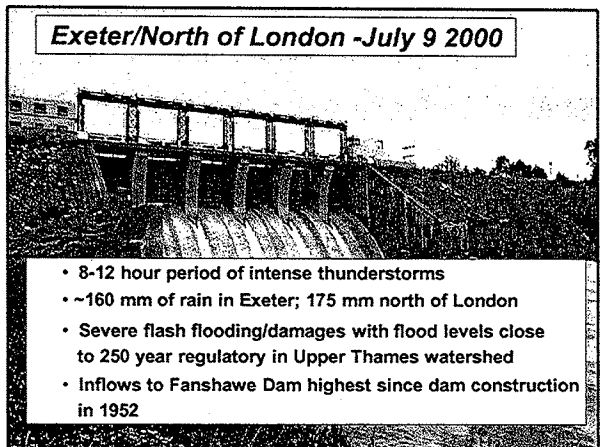
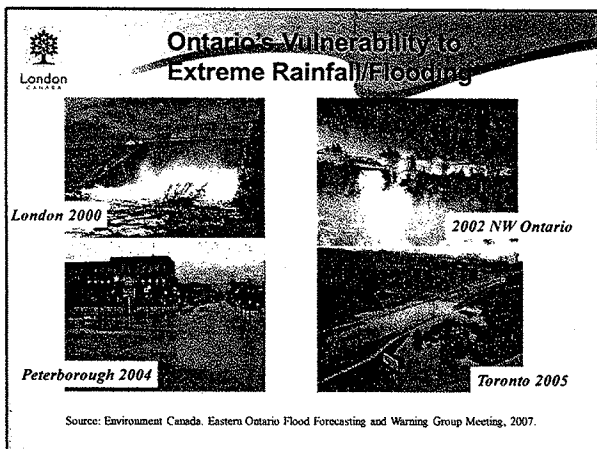
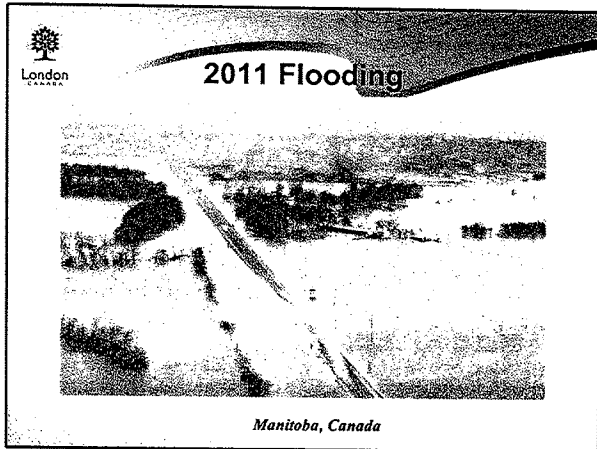
 **Why Do We Have to Manage Stormwater?**


- Protect Public Health and Properties
- Manage WR and provide required protection of stormwater as the resource.

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 **Severe Flooding on the Thames is nothing new**

- In the last 30 years:
 - March 1977;
 - September 1986
 - July 2000
 - April 2008
 - December 2008




in 2000
1

 **Costs, occurrence of flooding on the rise in Canada and Ontario**


- Flood frequency is increasing and severe more intense storms attributed to the escalation of flood damage
- Close to \$250M in flood damage costs from 1970-1999 in Ontario
- Flooding damages cost for major storms in Canada varies from \$100M to \$1B for the last two decades
- Flooding of the Red River in Manitoba, the estimated cost - \$817M


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 **Extreme Rainfall in Ontario Trigger Study**

November 6, 2007 Environment Canada released the study:


"Climate Change and Extreme Rainfall-related Flooding Risk in Ontario"



Canada  Ontario

"...due to the changing climate, future heavy rainfall and high / low-flow events could significantly increase in the 21st century."



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 **Extreme Events -Climate Change**

The Environment Canada Study states:

"The implementation of the [climate] change should be taken in consideration in adjusting engineering infrastructures design standards and developing adaptation strategies and policies."



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Two-phase Climate Change Adaptation Strategy

Phase 1 - Short-term Strategy:


- Conduct general risk and consequence analyses to determine level of service of 'the City of London: Vulnerability of Infrastructure to Climate Change'
- Review Ontario municipalities' practices and standards
- Update the City's current IDF curves, using data from London Airport (1965-2003) Updated Rainfall IDF Curves under Changing Climate
- Develop interim measures if required
- Report on implications



Two-phase Climate Change Adaptation Strategy



Phase 2 - Long-term Strategy:

- Update key elements of London's Subwatershed studies (water resources functions and features and slope stability)
- Develop Green Infrastructure Plan's fundamental principles
- Finalize a Climate Change Long Term Adaptation Strategy



Our Historical standards are not able to provide adequate flooding protection

- Standards based on historical design storms:
 - No longer representative
 - Existing properties in areas with risk of flooding
- Some infrastructure may not have the capacity to handle the new extreme events

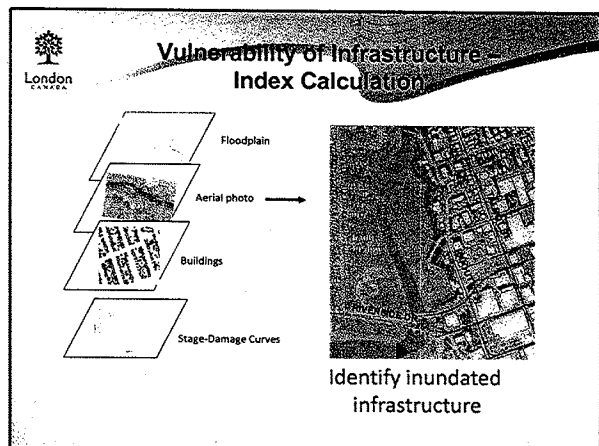
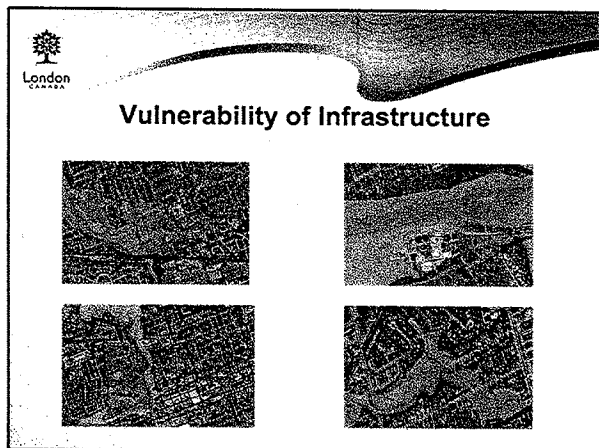


The City of London: Vulnerability of Infrastructure to Climate Change Study

Vulnerability of Infrastructure to Climate Change commenced the end of 2009 and the infrastructure data considered for this study included:

- 216 bridges & culverts,
- 520 km of arterial roads,
- more than 3,000 buildings within the flooding area under consideration,
- more than 1,300 km of sanitary/storm pipe network,
- 6 pollution control plants, and
- approximately 100 stormwater management facilities.


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- Vulnerability of Infrastructure - Results**
- The study identified areas of high risk within the City of London:
- Pollution control plants are high risk infrastructure, specifically the Area containing the Greenway PCP
 - Area behind Broughdale dyke along the North
 - Area behind West London Dyke near the downtown Forks
 - Pottersburg Creek southwest of Trafalgar Street and Clarke Road

-
- Vulnerability of Infrastructure - Results**
- Existing conditions: 250 year flood - approximately \$600 M in damages
 - Climate change conditions: 250 year flood - approximately \$1 B in damages
 - Climate change generates an increase in risk of approximately 70%

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Vulnerability of Infrastructure Recommendations to Council

Subwatershed studies intended to assess impacts and develop mitigation strategies

- Optimize and minimize requirements for storages (on-line and off-line)
- Preliminary estimate of direct increase on SWM footprint is 10-15% assuming IDF increases 21%


21% increase in IDF curves from EC IDF will have minimal impact on pipe sizes as the City does not use EC IDF for pipe design



Decision (City Council July 28, 2011)

Planning, Environmental and Engineering Services BE DIRECTED to proceed with the next set of Climate Change Adaptation Strategy studies as follows:



- update the Water Resources Components of the existing Subwatershed Studies such as the Dingman Creek, Stoney Creek, Mud Creek, Medway Creek and Pottersburg Creek using the Climate Change Upper Bound (CC_UB) scenarios in order to develop climate change Adaptation Policies; assess the impacts of these scenarios on the City's infrastructure and develop mitigation strategies;
- develop the Water Resources Components and slope stability evaluation for a Central Thames Subwatershed Study using the Climate Change Upper Bound (CC_UB) scenarios in order to develop climate change Adaptation Policies; assess the impacts of these scenarios on the City's infrastructure and develop mitigation strategies;
- develop a Green Infrastructure Plan to incorporate an environmental/ecological approach to water resources management;
- develop a Long-Term Climate Change Adaptation Strategy on the basis of the outputs from studies (i) to (iii); and,
- use of 21% Intensity Duration Frequency (IDF) for modeling purposes; and



Phase 2 – Long-term Strategy

The future City's works will include:

- Updates to the Emergency Response plans;
- Developing new protocols for essential services (hospitals, fire stations, schools, etc.) in the flood zones
- Inspection of dams and dykes, in particular the Broughdale and West London dykes
- Reassessing bridges, dykes and dams elevations as new or reconstruction work is proceeding
- Upgrading existing infrastructure as appropriate



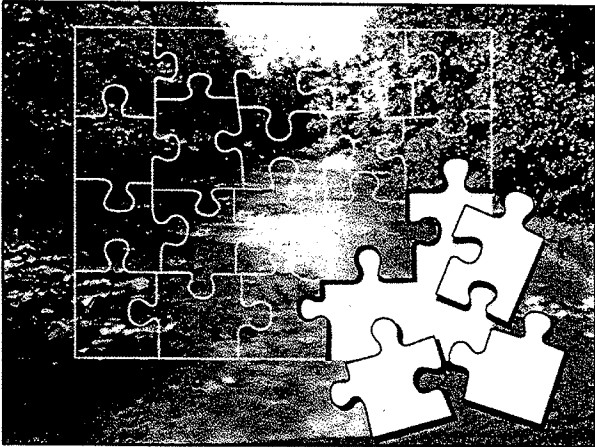
Two-phase Climate Change Adaptation Strategy


Phase 2 – Long-term Strategy:

The City commenced Phase 2 Climate Change Adaptation Strategy Implementation in 2012


- the Water Resources and Slope Stability components of Dingman Creek, Mud Creek, Medway Creek and Pottersburg Creek Subwatershed Studies Updates are ongoing and intended to be completed by the City in spring of 2013
- the Water Resources and Slope Stability components of the Central Thames Subwatershed Studies are ongoing and intended to be completed by the City in spring of 2013
- The first Green Infrastructure SWM Stoney Creek Erosion Control Wetland that service app. 3000 ha was constructed in 2012 and we intend to work on the Green Infrastructure standards in 2013
- a Climate Change Long Term Adaptation Strategy will be starting the end of 2013

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 **Evolution of Standards and Requirements**

- *Planning Act* provides the legislative framework for land use planning:
- Development control provisions can only be used in response to a planning application.
- Infrastructure servicing including storm/ drainage and SWM systems in the subdivision process are very important issues.

 **Evolution of Standards & Requirements**

Land Development Activities:


- Approval activities
- Public request to ensure environmental protections
- Public request to ensure sustainability of environmental and ecological health of the system

 **Evolution of Standards and Requirements**

Approval agencies general requirements are to:

- Protect, improve, restore the quality and quantity of WR/stormwater through minimizing volumes
- Natural hazard policies directing development to locate outside of hazardous lands (including flooding hazards)


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Evolution of Standards and Requirements

Approval agencies general requirements are to:


- Ensure that ecological/environmental adverse impacts are minimized or amming for no impacts on the system (preserve the net environmental benefits and provide a compensation and mitigation measures if deemed necessary by EA)



Evolution of Standards and Requirements

Approval agencies general requirements are to:


- Ensure that land developments will not create permanent adverse water resources ecological/environmental impacts
- Stronger protection measures



Water Resources/Municipal Storm/Drainage and SWM Infrastructures

Generally based on the following:

- System approach
- SWM infrastructure integrated with NHS
- SWM infrastructure developed as an amenity
- Constructed with the regard for source control and Climate Change (Adaptation Strategies)

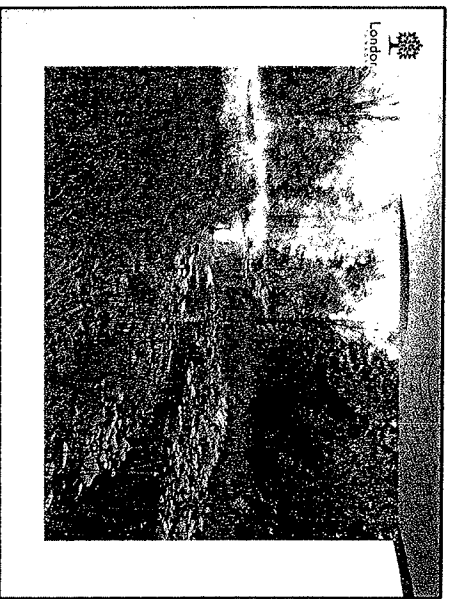
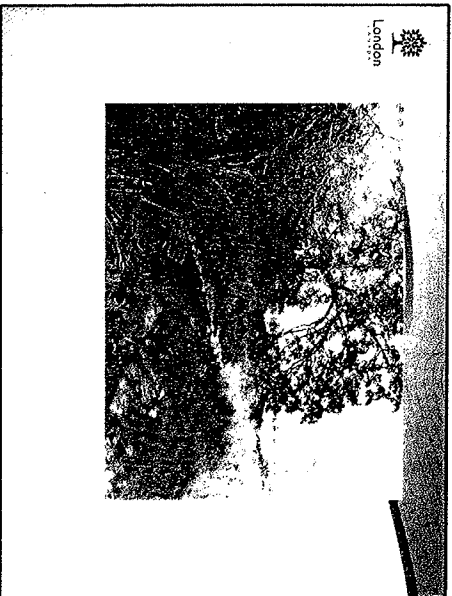
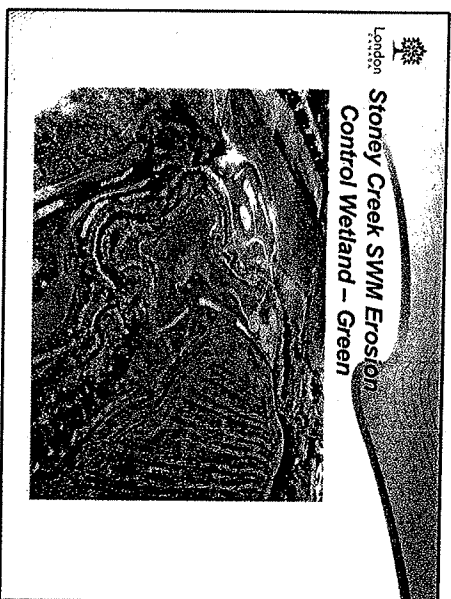
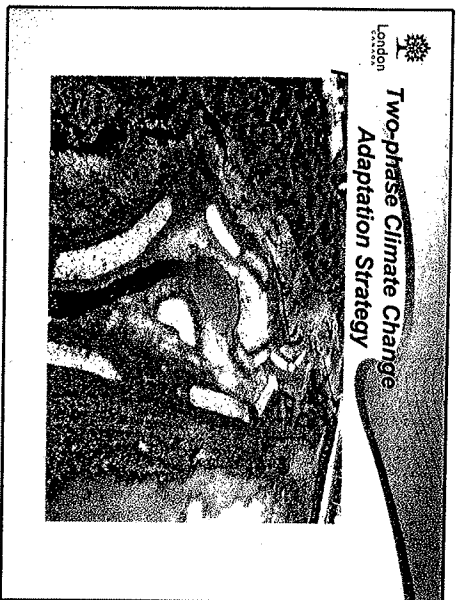


Water Resources/Municipal Storm/Drainage and SWM Infrastructures

Class EA/design of this infrastructure and approval agencies generally require to:

- Undertake inventory of existing environmental conditions (functions and features, NHS, ESA) of the system where this SWM infrastructure is proposed to be located.
- Provide justifications when proposing to locate the SWM system in areas where ecological/ environmental conditions would be impacted.

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**MEDWAY VALLEY HERITAGE FOREST
ENVIRONMENTALLY SIGNIFICANT AREA (ESA)
North of Fanshawe Park Road
Trail Planning**

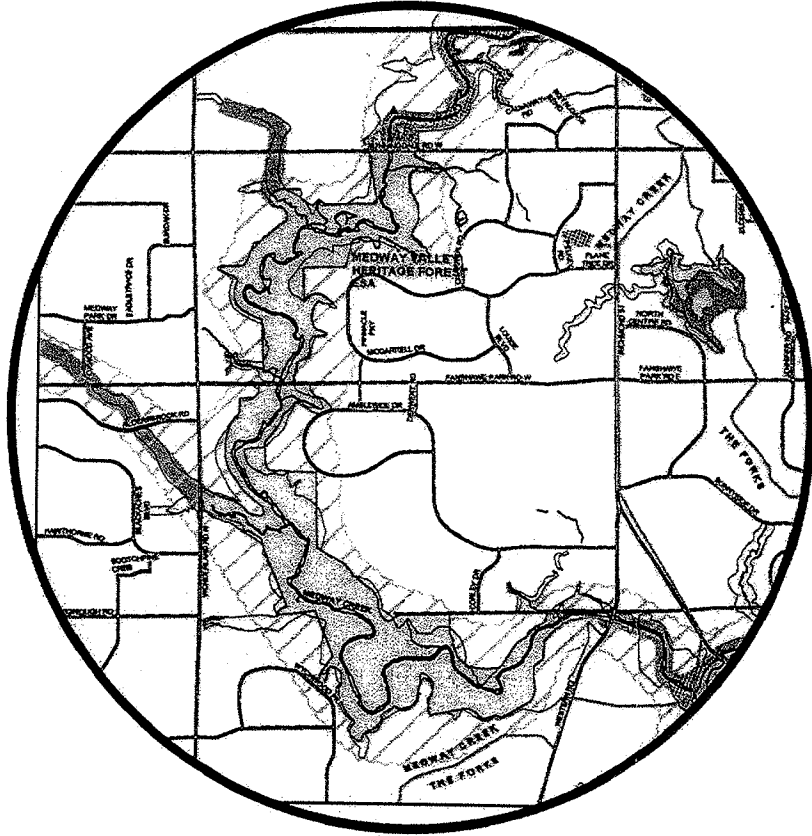
**January 17, 2013
EEPAC**



AGENDA

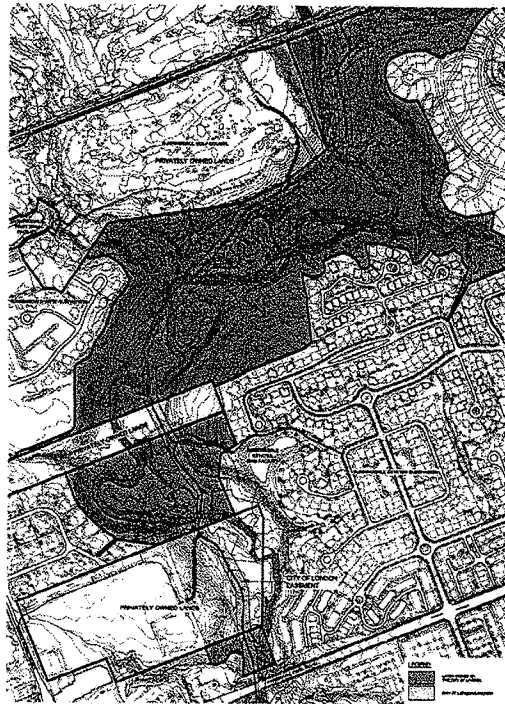
- **Project Status & Background**
- **Trail Options Evaluation Criteria**
- **Trail Option Evaluation Process**
- **Preferred Trail Options**
- **Discussion**
- **Wrap Up and Next Steps**





MEDWAY VALLEY HERITAGE FOREST ENVIRONMENTALLY SIGNIFICANT AREA

MEDWAY VALLEY NORTH – SITE and CURRENT LAND OWNERSHIP



LEGEND



LANDS OWNED BY THE CITY OF LONDON

CITY OF LONDON EASEMENT

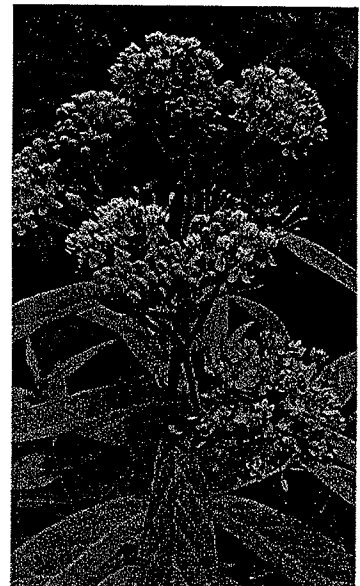
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CURRENT STATUS OF PROJECT

- Public input from March 2012 has been incorporated into the trail option evaluation process
- The broader Trails Standards for ESAs is complete and will be used to assist this process
- Council has supported project with a capital budget of \$440,000 for implementation starting 2013. An additional \$300,000 is in the 2013 budget submission
- EEPAC role is to provide technical review and comments
- The final preferred option will go to Council in April 2013

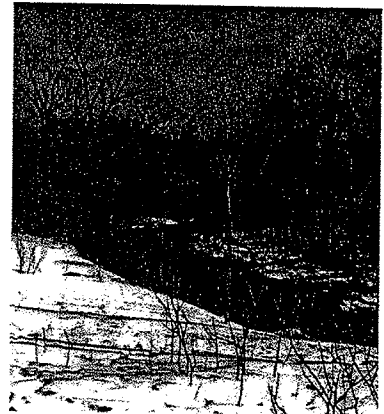
BACKGROUND FOR PROJECT

- Sewer to support development in Sunningdale Area approved in Medway Valley in 2004
- As a result of community input, approval tied to providing social benefit with 'recreational pathway'
- Community participated in developing the 2005 Medway Valley North Master Plan – Continuous pathway/sewer access road & 5 bridges
- Phase 1 sewer was installed with a pathway access road & 2 bridges
- Phase 2 sewer design was changed, eliminating need for 3 bridges & pathway access road



BACKGROUND FOR PROJECT

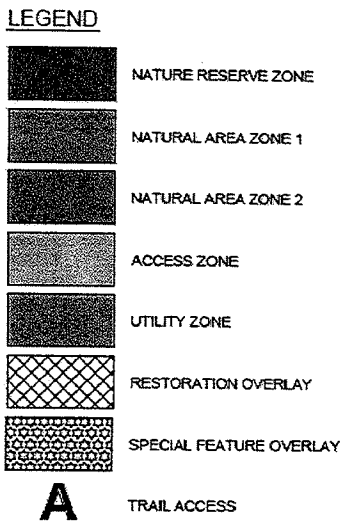
- Process to revisit Pathway Plan extended to allow time to address the 'asphalt moratorium' in all ESAs, City-wide.
- Trails Focus Group engaged to create *Planning & Design Standards for Trails in ESAs* – Completed in June 2012
- 3 Public Meeting held to engage community
- Accessibility Advisory Committee and EEPAC to receive draft Master Planning Study for review and comments
- Planning Advisory Group engaged to assist with developing trail options for Medway Valley ESA North.



APPLYING the P & D STANDARDS FOR TRAILS in ESAs to MEDWAY VALLEY NORTH ESA

1. ECOLOGICAL INVENTORY FOR ESA – Completed through Sewer EA
2. DEVELOP MANAGEMENT ZONES BASED ON INVENTORY AND ESA CRITERIA MET BY THE MEDWAY VALLEY HERITAGE FOREST ESA
3. EVALUATE TRAIL OPTIONS– with consideration for:
 - Sewer EA construction and need for long-term maintenance access
 - Council direction for providing a recreational pathway system in the valley to satisfy EA recommendation
 - Ecological sensitivities of valley (based on ESA criteria)
 - Community input (Public Preference Surveys)
4. DEVELOP OTHER MANAGEMENT RECOMMENDATIONS FOR ESA
5. IMPLEMENTATION

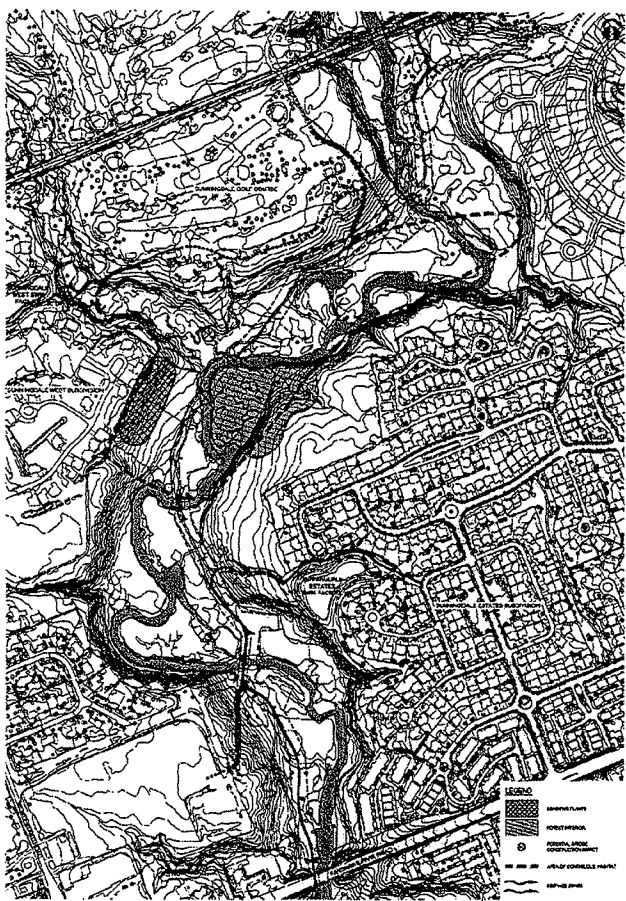
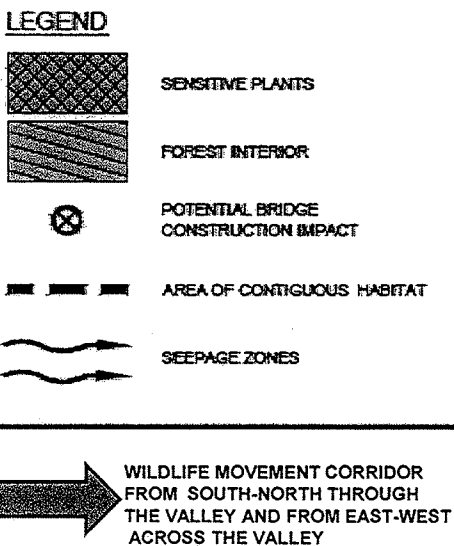
Management Zones for the Medway Valley North ESA



Medway Valley Trail North of Fanshawe Park Road
Management Zones For Trail Planning

Scale 1:2000  

Ecological Sensitivities within the Study Area for Trail Options



Medway Valley Trail North of Fanshawe Park Road
Significant Environment Features

Scale 1:2000  

DEFINITIONS OF TYPES OF ENVIRONMENTAL IMPACT

IMPACT – human generated activity that affects the characteristics of an ecosystem

- **Direct Impact** – impact that results in the immediate loss or removal of a feature or function
- **Indirect Impact** – Impact that results in stress or impairment of a feature or function over time and space.
- **Cumulative Impact** – indirect impacts that are applied to more and more areas

MAGNITUDE OF IMPACT –relates to the type and degree of impact i.e. the intensity (minor or significant) and amount of area affected (small or large).

EXTENT OF IMPACT – relates to frequency (continuous or intermittent) and time duration (short-term or long-term). Generally short-term impacts are related to construction activities, while long-term impacts are related to use.

SCORES FOR ENVIRONMENTAL IMPACTS

Environmental impacts for each criteria are scored as *negative numbers*

- 0 = no impact or change from existing
- 1 = short-term indirect impact affecting a small area
- 2 = long-term indirect impact affecting a larger area
- 3 = minor short-term direct impact
- 5 = significant long-term indirect impact, or significant short-term direct impact
- 8 = significant direct impact with potential for indirect impacts over a small area
- 13 = significant direct impact with potential for long-term indirect impacts over a large area

3

TRAIL OPTIONS EVALUATION PROCESS ENVIRONMENTAL CRITERIA

| ESA CRITERION | FEATURE | POTENTIAL IMPACT (negative) |
|---------------|---|---|
| 3a | Area of Contiguous Forest Habitat | Long-term direct and indirect disruption to Area-Sensitive breeding birds |
| 4a, 4b | Areas of Seepage and Aquatic Habitat at the bend in the river | boardwalk alternative will create minor short-term impact for all trail types |
| 6a | Wildlife movement trails and corridors | Long-term direct and indirect disturbance |
| 3b | Total area of Interior Habitat | Direct and indirect long-term through loss of area |
| 4b | Floodplain Vegetation | Short-term direct site alteration |
| 7 | Habitat for SAR | Short-term indirect to mussels |

TRAIL OPTIONS EVALUATION PROCESS SOCIAL CRITERIA

| C | VALUE | POTENTIAL IMPACT (positive scale of 0,1,2,3,5,8,13) |
|---|---|--|
| 1 | Creates least user conflicts | the widest range of user types will create the potential for greater user conflict |
| 2 | Provides accessible passive recreation with convenient connections between neighbourhoods | continuous, accessible trails will create the best opportunities for connecting communities and neighbourhoods |
| 3 | Provides best opportunity to increase health and fitness benefits | highest scores are achieved by the most connected trails and the greatest types of users permitted |
| 4 | Number of opportunities to highlight points of educational interest or vistas | Scores are based on whether trails of any type intersect with any one of five special features. |
| 5 | Provides quietude and wilderness experience | Trails with the lowest potential user types will create the opportunity for most undisturbed experiences. |
| 6 | Meets public preference | results from the public preference survey |

TRAILS OPTIONS EVALUATION MATRIX

| CATEGORIES | TRAIL OPTIONS | CATEGORIES | | | | | | | | | | | | | |
|--|---|--|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| | | 1 | 2 | 3 | 4A | 4B | 4C | 5A | 5B | 6A | 6B | 7A | 7B | 8 | |
| ENVIRONMENTAL | Area of Continuous Forest Habitat Cba | -5 | -13 | 0 | -13 | -13 | 0 | 0 | -5 | -13 | 0 | -6 | -13 | 0 | -6 |
| | Area of seepage and aquatic habitat at the bend in the river Cba/Cb | -4 | 0 | 0 | -3 | -3 | -3 | -3 | 0 | -5 | 0 | 0 | 0 | 0 | -3 |
| | Wildlife Movement Trails and Corridors Cba | -5 | -6 | 0 | -6 | -6 | -6 | -6 | 0 | 0 | 0 | 0 | 0 | 0 | -3 |
| | Total Area of Interior Habitat C3b to 100m from Edge | 0 | -12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Woodland Vegetation through site alteration C4b | 0 | -6 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 |
| Habitat for Species at Risk Mammals C7 | 0 | -3 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | |
| ENVIRONMENTAL SUBTOTAL | | -13 | -44 | 0 | -24 | -24 | -24 | -24 | -24 | -24 | -24 | -24 | -24 | -24 | |
| SOCIAL/CULTURAL | Creates Least User Conflicts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Provides Accessible Passive Recreation with convenient connections between Neighbourhoods | 0 | 13 | 0 | 13 | 5 | 3 | 2 | 5 | 2 | 1 | 2 | 1 | 1 | |
| | Provides Best Opportunity to Increase Health and Fitness Benefits | 0 | 6 | 0 | 6 | 5 | 5 | 1 | 3 | 5 | 1 | 5 | 1 | 1 | |
| | Number of Opportunities to Highlight Points of Educational Interest or Visual | 0 | 6 | 0 | 6 | 5 | 5 | 1 | 3 | 5 | 1 | 5 | 1 | 1 | |
| | Provides Quietude and Wilderness Experience | 0 | 1 | 0 | 1 | 3 | 3 | 1 | 3 | 3 | 1 | 3 | 1 | 1 | |
| Meets Public Preference | Based on Survey Results | | | | | | | | | | | | | | |
| SOCIAL/CULTURAL SUBTOTAL | | 0 | 39 | 0 | 39 | 19 | 17 | 11 | 19 | 11 | 17 | 11 | 11 | 11 | |
| TOTAL SCORE | | -13 | -5 | 0 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | |
| Notes: | | 1. Probable construction costs are not to be used for budgeting purposes, but have been prepared to provide an order of magnitude related to the possible value of construction. 2. Cost to Construct does not include temporary Crews consisting of site restoration. 3. Cost to Construct assumes a bridge design similar to Stage 2A, that is not constructed to accommodate vehicular traffic. | | | | | | | | | | | | | |

TRAIL OPTIONS EVALUATION OUTCOME

7 POSITIVE OPTIONS represent those with the least harmful impact on environment and highest social benefit

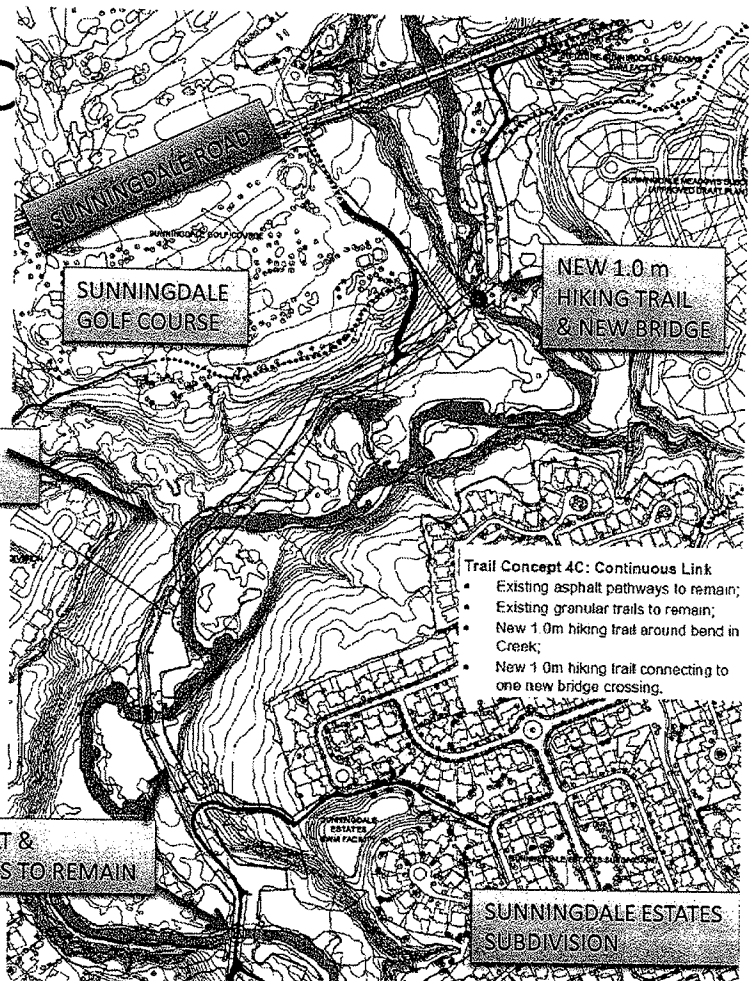
| TRAIL OPTION | SCORE | DESCRIPTION | MEETS P & D STANDARDS FOR TRAILS IN ESAS ? | CONTINUOUS LINK* |
|--------------|-------|-------------------------------------|---|------------------|
| 3 | 2 | No Access to Valley / Fenced | YES | NO |
| 4A | 13 | Asphalt with board-walk around bend | NO if 3.0 m WIDE ASP. YES if 2.0 m WIDE ASP. | YES |
| 4C | 17 | Hiking Trail around Bend | YES | YES |
| 5A | 4 | Some Improved Connections | NO if 3.0m WIDE ASP. YES if 2.0m WIDE ASP. | NO |
| 5B | 12 | Options 4C & 5A Combined | NO 3.0m WIDE ASP. YES 2.0m WIDE ASP. | YES |
| 6B | 8 | North & South Loops | YES | NO |
| 7B | 6 | 3 Loops (N,S, N. East) | YES | NO |
| 8 | 10 | North East Loop | YES | YES |

3

TRAIL OPTION 4C

CONTINUOUS LINK – HIKING ONLY & 1 NEW BRIDGE

NEW BOARDWALK AROUND BEND IN CREEK



NEW 1.0 m HIKING TRAIL & NEW BRIDGE

EXISTING ASPHALT & GRANULAR TRAILS TO REMAIN

- Trail Concept 4C: Continuous Link
- Existing asphalt pathways to remain;
 - Existing granular trails to remain;
 - New 1.0m hiking trail around bend in Creek;
 - New 1.0m hiking trail connecting to one new bridge crossing.

SUNNINGDALE ESTATES SUBDIVISION

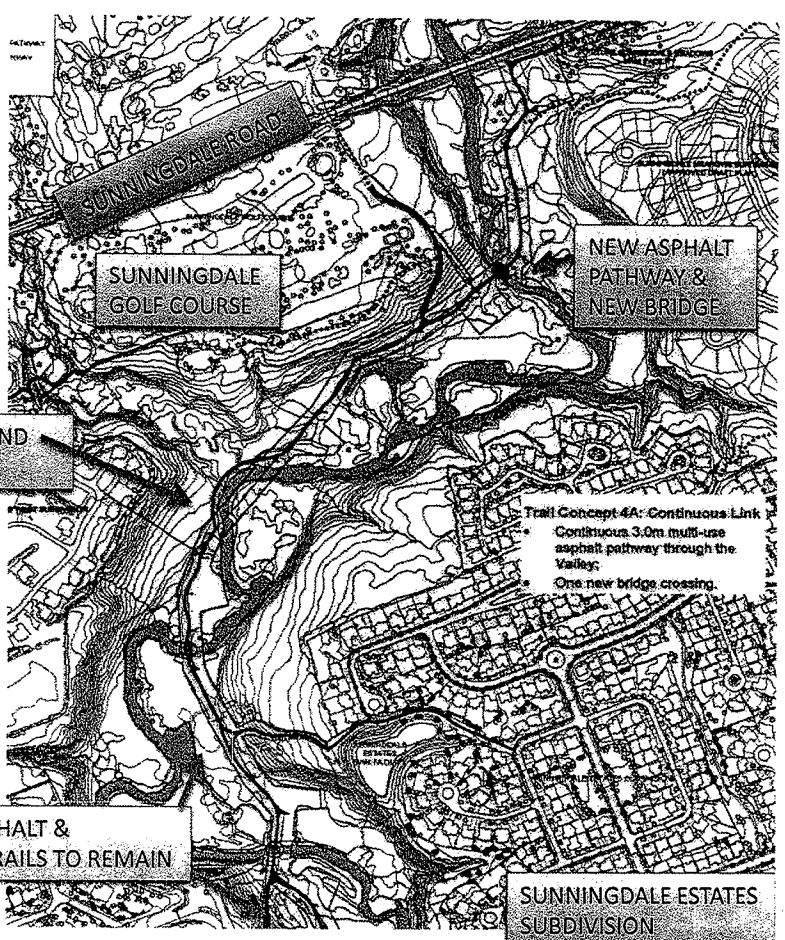
LEGEND

- LIMIT OF DISTURBANCE FOR MTSS PH1 AND 2
- EXISTING ASPHALT PATHWAY
- FUTURE ASPHALT PATHWAY (DRAFT PLAN APPROVED)
- EXISTING MAINTENANCE ACCESS (GRANULAR BASE COVERED WITH TOPSOIL AND SEED)
- EXISTING BRIDGE
- EXISTING TRUNK SANITARY SEWER ALIGNMENT
- EXISTING MANHOLE
- BRIDGE REQUIRED
- STRUCTURE REQUIRED
- PROPOSED 3.0m ASPHALT MULTI-USE PATHWAY
- PROPOSED 2.0m CHIPS AND DUST PATHWAY
- PROPOSED 1.0m HIKING TRAIL

TRAIL OPTION 4A

CONTINUOUS LINK – ASPHALT, BOARDWALK & 1 NEW BRIDGE

NEW BOARDWALK AROUND BEND IN CREEK



NEW ASPHALT PATHWAY & NEW BRIDGE

EXISTING ASPHALT & GRANULAR TRAILS TO REMAIN

- Trail Concept 4A: Continuous Link
- Continuous 3.0m multi-use asphalt pathway through the Valley;
 - One new bridge crossing.

SUNNINGDALE ESTATES SUBDIVISION

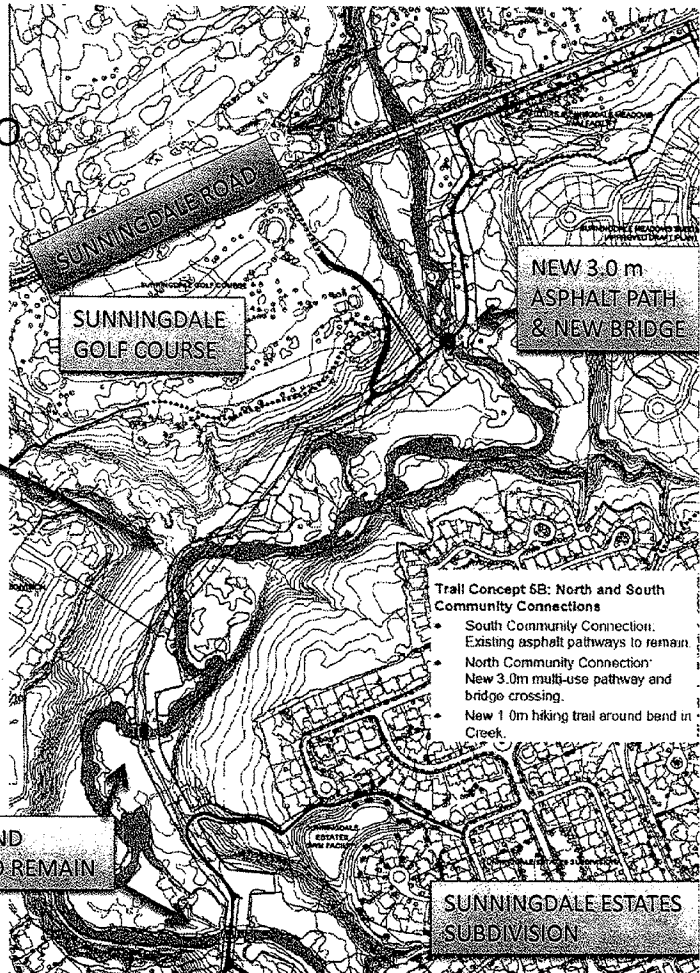
LEGEND

- LIMIT OF DISTURBANCE FOR MTSS PH1 AND 2
- EXISTING ASPHALT PATHWAY
- FUTURE ASPHALT PATHWAY (DRAFT PLAN APPROVED)
- EXISTING MAINTENANCE ACCESS (GRANULAR BASE COVERED WITH TOPSOIL AND SEED)
- EXISTING BRIDGE
- EXISTING TRUNK SANITARY SEWER ALIGNMENT
- EXISTING MANHOLE
- BRIDGE REQUIRED
- STRUCTURE REQUIRED
- PROPOSED 3.0m ASPHALT MULTI-USE PATHWAY
- PROPOSED 2.0m CHIPS AND DUST PATHWAY
- PROPOSED 1.0m HIKING TRAIL

3

TRAIL OPTION 5B

CONTINUOUS LINK – PATH LINK TO
SUNNINGDALE ROAD &
HIKING ONLY AROUND BEND &
1 NEW BRIDGE



LEGEND

| | |
|--|---|
| | LIMIT OF DISTURBANCE FOR MTSS PH1 AND 2 |
| | EXISTING ASPHALT PATHWAY |
| | FUTURE ASPHALT PATHWAY (DRAFT PLAN APPROVED) |
| | EXISTING MAINTENANCE ACCESS (GRANULAR BASE COVERED WITH TOPSOIL AND SEED) |
| | EXISTING BRIDGE |
| | EXISTING TRUNK SANITARY SEWER ALIGNMENT |
| | EXISTING MANHOLE |
| | BRIDGE REQUIRED |
| | STRUCTURE REQUIRED |
| | PROPOSED 3.0m ASPHALT MULTI-USE PATHWAY |
| | PROPOSED 2.0m CHIPS AND DUST PATHWAY |
| | PROPOSED 1.0m HIKING TRAIL |

OUTSTANDING ISSUES

- BALANCING FINAL INPUT
- LAND OWNERSHIP – Phasing?
- CONSTRUCTION TIMING – Environmental constraints

3

NEXT STEPS

- **December 7, 2012** – deadline for public comments from review of the evaluation to select a preferred option
- **December –January 2013** – preparation of the draft Trail Master Plan
- **January 17, 2013** – City to post the draft Trail Master Plan on the website and present to EEPAC for review
- **January 31, 2013** – present to AAC for review
- **early February** – Planning Advisory Group (PAG) to review
- **February 21, 2013** – deadline to receive comments from EEPAC, public and TAG for incorporation into final report
- **April 2013** – Final Trail Master Plan to a public participation meeting at the Planning and Environment Committee

BACK UP SLIDES IF NEEDED

3

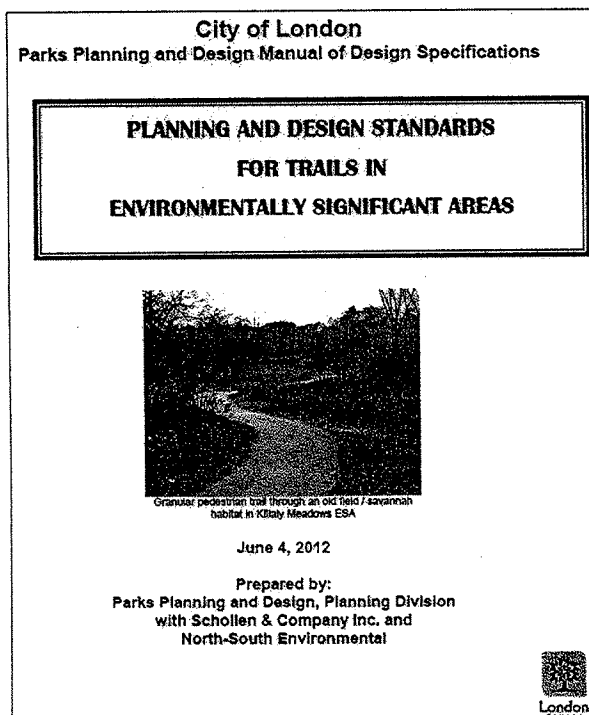
Updating of the 2005 Medway Trail Plan with PAG

GOALS AND TASKS

1. Protect ecological integrity and ecosystem health – Management Zones
2. Address Background documents
3. Provide access for sewer maintenance (asphalt or granular/2" soil/grass).
5. Address London's Strengthening Neighborhoods Master Plan (2009)
 - Provide community connections and meeting places in natural areas
6. Respond to Councils moratorium on asphalt in ESAs.
7. Review Evaluation and Assessment Criteria Matrix.
8. Develop conceptual trail options considering trail width, trail location, surface types
 - Option #1 – Maintain current conditions (do nothing more)
 - Option #2 – Preferred Trail Alignment from 2005 Master Plan
 - Other options....

**THIS WORK WAS COMPLETED IN 2011 FOR THE DECEMBER 2011
PUBLIC MEETING AND THE MARCH 2012 MEETING**

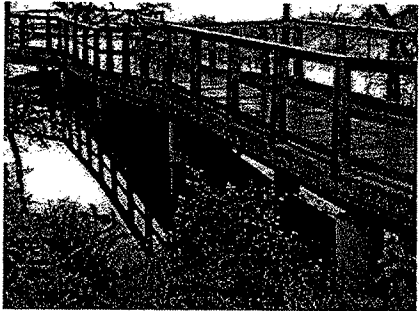
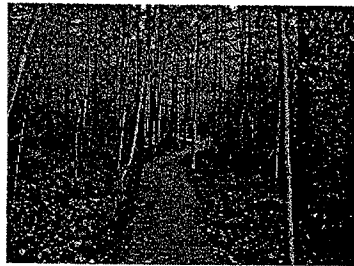
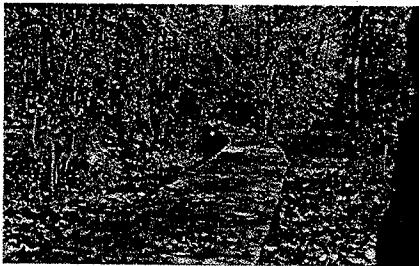
Review of Best Management Practices for Trail Planning and Design in Environmentally Significant Areas



- Will be used to assist with the Medway Valley North Trail Planning Process
- May not be fully applicable as a result of the Sewer EA and construction & Council direction re: pathway need

3

BOARDWALKS

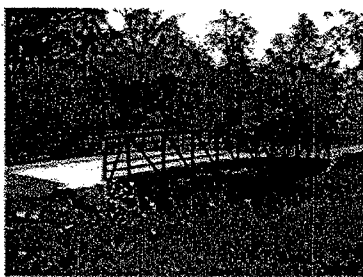


Low profile boardwalk installed through a Silver Maple swamp forest in Forestview Heritage Woodland.

BRIDGES



Small step bridge in Warbler Woods ESA



Kilally Meadows ESA Bridge



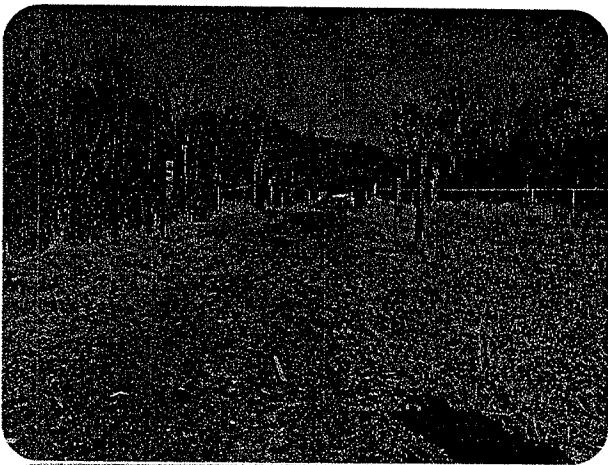
Wood and steel pedestrian bridge in Medway Valley Heritage Forest ESA



Meadowlily Woods ESA Bridge

3

Ecosystem Changes and Current Conditions Post Sanitary Sewer Construction



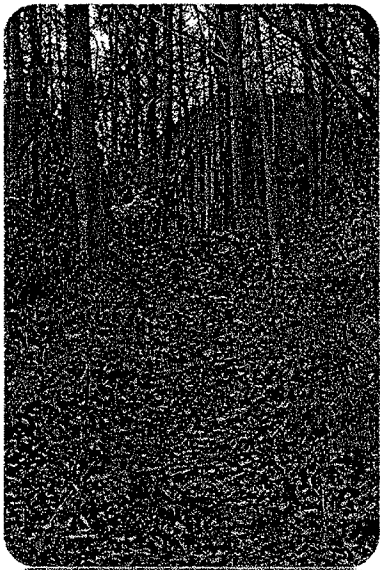
Increase in open canopy areas along sewer alignment



Sections of permanent 4.0m wide paved sewer access road

What is the Most Preferred Trail Type for an ESA?

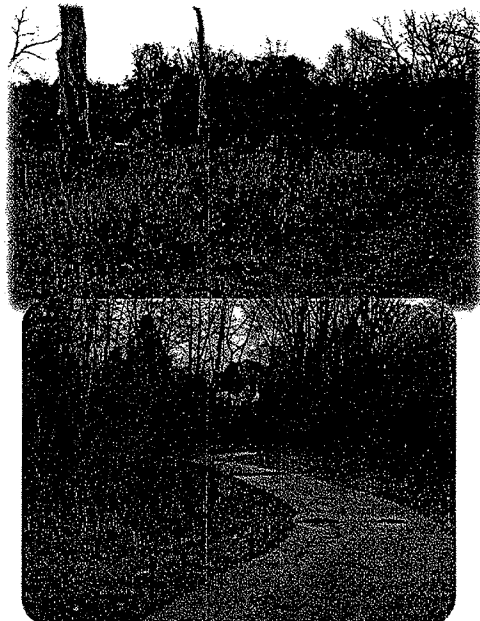
LEVEL 1 Natural Surface TRAIL 69%



LEVEL 2 Improved TRAIL

< 2.5 m width

22%



3

Ecosystem Changes and Current Conditions Post Sanitary Sewer Construction



Sections of 3.5 m wide granular base with 2" topsoil and grass
This is already showing signs of erosion and gullyng – granular trails in floodplains are not sustainable.

Ecosystem Changes and Current Conditions Post Sanitary Sewer Construction



Vegetation rehabilitation and restoration within cleared sewer alignment and staging areas.



Creek crossings secured and reinstated to pre-construction state to protect Species-At-Risk mussels.

3








What is your preference for the relative weighting of evaluation criteria?

- Environmental 100 : Social 0 3.5 %
- Environmental 75 : Social 25 19 %
- Environmental 60 : Social 40 3.5 %
- Environmental 50 : Social 50 72 %
- Environmental 25 : Social 75 2 %

While the environment should be weighted more heavily for an ESA, in this case it is fair to weigh them equally to be consistent with the rationale of the EA Addendum that required a greater social benefit to compensate for the high environmental impact of the sewer construction.

MANAGEMENT ZONES – AT BEND

LEGEND

| | |
|---|-------------------------|
|  | NATURE RESERVE ZONE |
|  | NATURAL AREA ZONE 1 |
|  | NATURAL AREA ZONE 2 |
|  | ACCESS ZONE |
|  | UTILITY ZONE |
|  | RESTORATION OVERLAY |
|  | SPECIAL FEATURE OVERLAY |

A TRAIL ACCESS

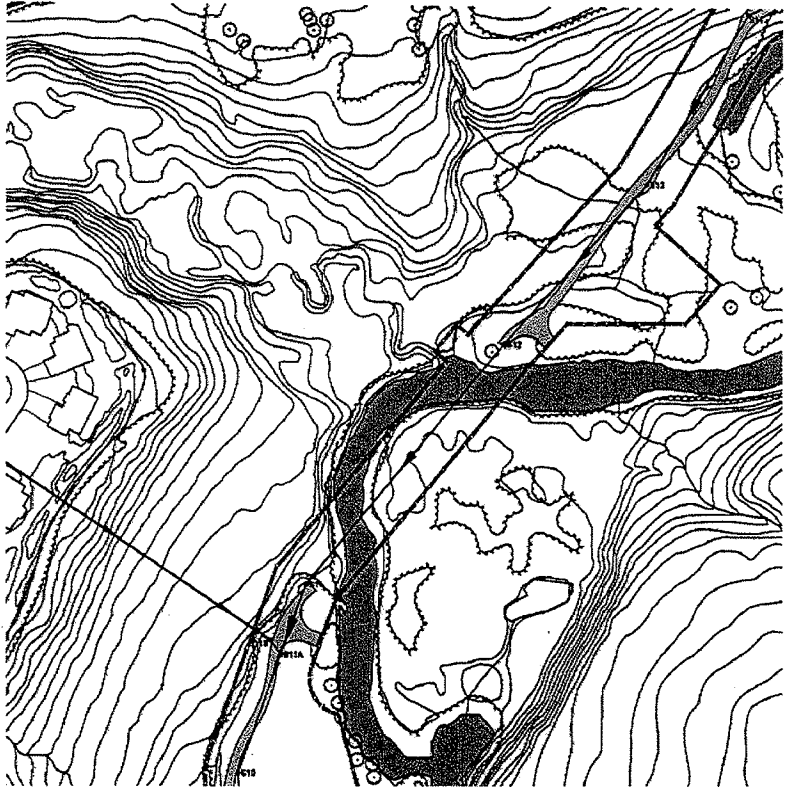


3

EXISTING CONDITIONS – AT BEND

LEGEND

- LIMIT OF DISTURBANCE FOR MTSS PH1 AND 2
- EXISTING ASPHALT PATHWAY
- FUTURE ASPHALT PATHWAY
- ===== EXISTING MAINTENANCE ACCESS (GRANULAR BASE COVERED WITH TOPSOIL AND SEED)
- Ⓟ EXISTING BRIDGE
- EXISTING TRUNK SANITARY SEWER ALIGNMENT
- EXISTING MANHOLE



**Medway Valley Trail North of Fanshawe Park Road
EVALUATION MATRIX**

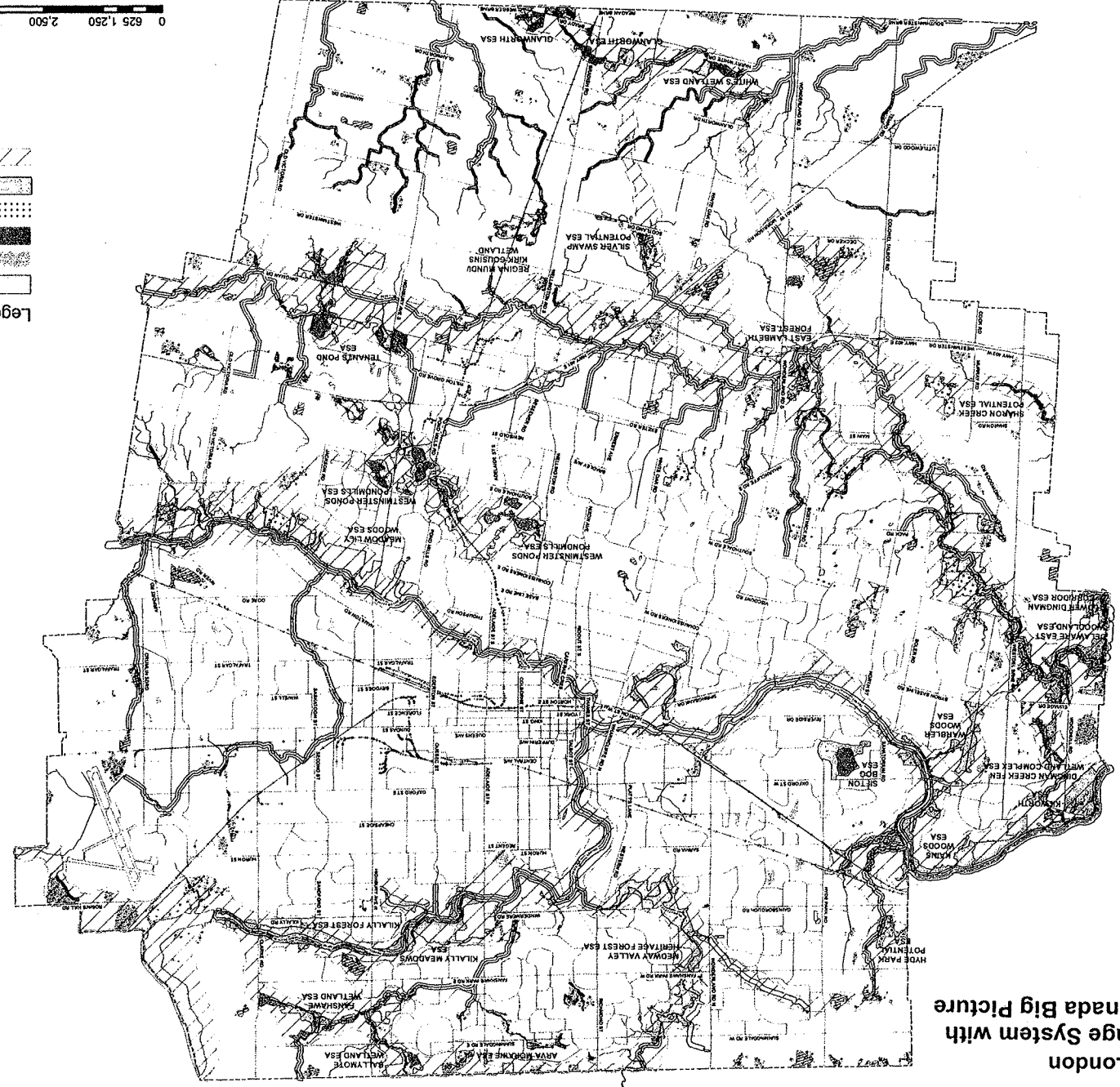
| CRITERIA | TRAIL OPTIONS: | | | | | | | | | | | | |
|---|---------------------------|--|----------------------|--|--|---|--|--|--|---|---|--|---|
| | 1 Do Nothing More | 2 2005 Preferred Alignment (Scored without Secondary Trails) | 3 Restrict Access | 4A Continuous Link (Asphalt Pathway) | 4B Continuous Link (Limestone Screening Trail) | 4C Continuous Link (Hiking Trail) | 5A North and South Asphalt Community Connections with Restricted Access | 5B North and South Asphalt Community Connections with Continuous Hiking Linkage | 6A North-Central Connected Loop and Southern Loop (Asphalt Pathway) | 6B North-Central Connected Loop and Southern Loop (Hiking Trail) | 7A North, South and Central Loops (Asphalt Pathway) | 7B North, South and Central Loops (Hiking Trail) | 8 South-Central Connected Link with Northern Loop (Hiking Trails) |
| ENVIRONMENTAL (Potential to Impact or create impact on) | | | | | | | | | | | | | |
| Area of Contiguous Forest Habitat C3a | -5 | -13 | 0 | -13 | -13 | -8 | 0 | -8 | -13 | -8 | -13 | -8 | -8 |
| Areas of seepage and aquatic habitat at the bend in the river C4a, C4b | -8 | 0 | 0 | -3 | -3 | -3 | 0 | -3 | 0 | 0 | 0 | 0 | -3 |
| Wildlife Movement Trails and Corridors C6a | -5 | -8 | 0 | -8 | -5 | -5 | -3 | -5 | -8 | -5 | -8 | -5 | -5 |
| Total Area of Interior Habitat C3b (> 100m from Edge) | 0 | -13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Floodplain Vegetation through site alteration C4b | 0 | -8 | 0 | -3 | -3 | -3 | -3 | -3 | -3 | -3 | 0 | 0 | 0 |
| Habitat for Species-at-Risk Mussels C7 | 0 | -3 | 0 | -1 | -1 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 |
| ENVIRONMENTAL SUBTOTAL | -18 | -45 | 0 | -28 | -25 | -20 | -7 | -20 | -25 | -17 | -21 | -13 | -16 |
| SOCIAL / CULTURAL | | | | | | | | | | | | | |
| Creates Least User Conflicts | 0 | 1 | 0 | 1 | 2 | 8 | 3 | 3 | 1 | 8 | 1 | 5 | 8 |
| Provides Accessible Passive Recreation with convenient connections between Neighbourhoods | 0 | 13 | 0 | 13 | 5 | 3 | 2 | 5 | 2 | 1 | 2 | 1 | 1 |
| Provides Best Opportunity to Increase Health and Fitness Benefits | 0 | 8 | 0 | 8 | 5 | 3 | 1 | 3 | 5 | 1 | 5 | 1 | 1 |
| Number of Opportunities to Highlight Points of Educational Interest or Vistas) | 0 | 8 | 0 | 5 | 5 | 5 | 1 | 5 | 3 | 2 | 2 | 2 | 3 |
| Provides Quietude and 'Wilderness' Experience | 0 | 1 | 0 | 1 | 3 | 5 | 1 | 3 | 1 | 8 | 1 | 8 | 8 |
| Meets Public Preference | Ranked per Survey Results | | | | | | | | | | | | |
| SOCIAL/CULTURAL SUBTOTAL | 1 | 34 | 2 | 41 | 25 | 37 | 11 | 32 | 15 | 25 | 13 | 19 | 26 |
| COMBINED TOTAL | 17 | 11 | 2 | 13 | 0 | 17 | 4 | 12 | 10 | 8 | 5 | 18 | 10 |
| RANK | OMIT | OMIT | 8 | 2 | OMIT | 1 | 7 | 3 | OMIT | 5 | OMIT | 6 | 4 |
| ECONOMIC | | | | | | | | | | | | | |
| Cost to Construct | Low | High+++ | Low | High+ | High+ | Medium+ | Medium+ | Medium+ | Medium | Low | Medium | Low | High+++ |
| Cost to Maintain | High | High | Medium | Medium | High | Low | Medium | Medium | Low | Low | Medium | Low | Low |
| Time to Practically Implement | None | High | None | High | High | High | Medium | High | Low | Medium | Low | Low | High+++ |

Notes:

1. Probable construction costs are not to be used for budgeting purposes, but have been prepared to provide an order of magnitude related to the possible value of construction.
2. Cost to Construct does not include temporary Creek crossings or site restoration.
3. Cost to Construct assumes a bridge design similar to Stage 2A, that is not constructed to accommodate vehicular traffic.

5

**City of London
Natural Heritage Canada Big Picture**



- Legend**
- ESAs
 - Woodland
 - Wetlands
 - Unevaluated Patches
 - Corridors
 - Big Picture Meta-Cores and Meta-Corridors

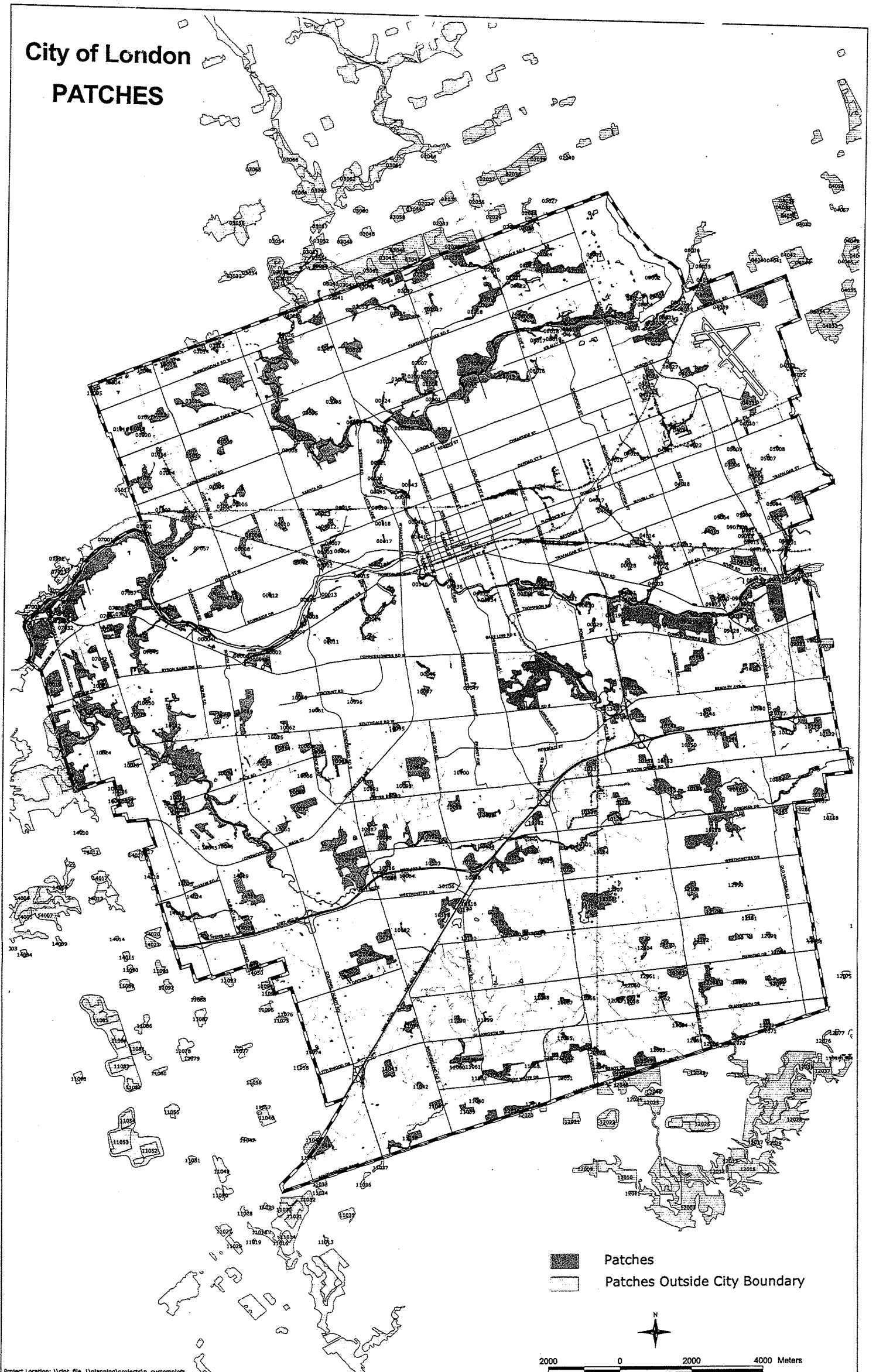


0 625 1,250 2,500 3,750 5,000
Meters

Prepared by: Graphics & Information Services, City of London
Date Prepared: March 3 2008
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(3)

City of London PATCHES



Review of: **Subject Land Status Report for Patch 10102**
as prepared by Aecom; undated

Reviewers: L. Nattagh, D. Sheppard, N. Zitani January 2013

Woodland is Significant

- 1) As supported by the SLSR, Patch 10102 is a significant woodland and should be protected

Rationale

The report scores FIVE (out of a total of eight) criteria as HIGH; only one criterion needs to meet the standard for high in order for the patch to be determined Significant. Therefore the patch exceeds the one-criterion requirement; therefore, the patch is a significant woodland.

"The conservation and protection of woodlands has been identified as a priority for some time..." states the Executive Summary of Section 4.0 of the Guideline document for the Evaluation of Significant Woodlands of the City of London.

Technical Flaws in the Report

- 2) It is interesting that the report has notable flaws that if corrected, would undoubtedly add to the data supporting the conclusion of "Significant Woodland".

Rationale

The floral and faunal surveys are incomplete. It is missing surveys for migratory birds, fish habitat, wetland species, and flora. E.g., field visits in spring 2011 only are not adequate to determine a plant inventory. One field visit on 9 July 2011 is not adequate to determine a breeding bird inventory; site visits in May and June are necessary.

Amphibian survey not complete- only two out of three surveys was done. The second survey wasn't conducted under required weather conditions though the report mentions that it was.

It cannot be concluded that no Species at Risk (SAR) occur on the subject lands (criterion 3.0) when the biodiversity inventory is incomplete.

EEPAC also suspects that the size of the Patch has been under reported by the SLSR. It seems clear that the reported patch size of 4.1 ha (more than enough to be significant on its own) is likely significantly underestimated due to the exclusion of all vegetation communities that do not have 30-60% tree cover. Consultants doing this kind of work for the City of London know well that all vegetation communities are included within the patch unless excluded via

application of the Patch Boundary Delineation Guidelines. Excluding vegetation patches in the manner done here is clearly incorrect.

- 3) As is common in such reports, the maps are of such poor quality as to be unusable.

Protection of Provincially Uncommon Vegetation Community

- 4) The provincially uncommon vegetation community SWT should be protected as per City guidelines.

A Gray Dogwood Mineral Thicket Swamp, SWT 2-9, occurs on the subject lands. It is noted several times in the report that this community is provincially uncommon (S3/S4) "but found throughout the City of London". There is no literature citation or survey data to support the comment.

In actuality, less than 8% of London's vegetation communities comprise SWT (Bergsma and DeYoung 2004). It is clear that those comprising SWT2-9 specifically are in turn far less than common than 8%.

Secondly, if it is true (if they can provide a reference), then this information has an alternate interpretation which is that the presence of this community makes London environmentally unique within the Province, and it should be protected. Furthermore, any community that is provincially rare should be protected.

This is the second time in less than six months that a Gray Dogwood Thicket Swamp has been proposed for destruction (the first time was indicated on agenda item 9b, Stanton Drain Remediation, of the September 2012 meeting). If the City continues to allow destruction of this Provincially rare community then indeed there will be no more Gray Dogwood Thicket Swamp in London.

Extenuating Circumstances

- 5) EEPAC finds many of the listed 'extenuating circumstances' listed which attempt to convince the reader that despite the woodland achieve top scores on five out of eight criterion to be inappropriate.

The goal of an SLSR is to inventory and evaluate the woodland according to City requirements. While both the inventory and the evaluation may be incomplete, it is clear the woodland warrants protection under City policy and it is inappropriate to suggest otherwise within an SLSR which does not deal with impacts nor other planning considerations.

As per OP 15.5.2a)

Subject Lands Status Report shall provide an assessment of natural features on the Subject Lands and within that part of the Sub-Watershed catchment area that may be impacted by the new development and including but not limited to those areas

5

designated as Open Space or Environmental Review on Schedule "A" in accordance with the requirements of 15.4.

EEPAC interprets the above as directing the SLSR to provide an ecological evaluation of the features on the subject land. Conclusions beyond, and contrary to, the approved ecological evaluation method would seem to be subjective

EEPAC disagrees with the unfound report statement that the "long-term viability of the patch...is dubious...its isolation from other patches..." There is no evidence that provided to support this claim. Further, it is inappropriate to make such a claim without the benefit of a proper Environmental Impact Study. Only through analyzing impacts can such conclusions be made.

One of the claimed extenuating factors is not even supported by the SLSR findings in that the woodland does not provide "quality habitat" yet the breeding birds survey shows the identification of 30 species of birds within a three hour period and the observation notes also clearly state "a variety of habitats".

Designation and Zoning of Patch 10102

- 6) Based on the Woodland Evaluation, the full and properly bounded Patch 10102 should be designated Open Space and zoned OS5. Boundary refinements and other protective measures should be determined through a Environmental Impact Study as per OP 15.5.2 b.

OP 15.5.2 b)

If the Subject Lands Status Report identifies any lands that, in the estimation of the City, may meet the criteria for determining significance set out in Section 15.4 for specific components of the Natural Heritage System, the City shall require the preparation of an Environmental Impact Study for these lands in accordance with the requirements of 15.5.2. Lands that satisfy the criteria for significance shall be designated as Open Space in conjunction with any Official Plan amendment required for the proposed development.

/end

6

Review of: **Pond Mills Subdivision - Centre St.
EIS Addendum**

Prepared by Biologic; dated July 2012

Reviewers: S. Sanford, D. Sheppard; January 2013

1. Encroachment and Filling of Ravine

The east ravine should not be altered and certainly not filled to accommodate the proposed development. Proposed developments are intended to preserve and enhance our natural heritage features not build on top of them.

2. Trail/Pathway Placement

It is still not clear where a planned pathway would be located. It is sadly common for this aspect of development to be left undecided at this point in the process which ultimately means a portion of the natural heritage feature would be removed and fragmented in order to any future pathway. The EIS is incomplete without finalization of the pathway location and an assessment of its impacts and any additional lands required to be dedicated specifically for the pathway.

3. Inclusion of Plantation and Other Vegetation Communities in Significant Woodland

EEPAC concerns in this regard do not seem to have been addressed. If the development proposal is to remain unchanged, ie. removing vegetation communities that should otherwise be included in the protected woodland boundary, the EIS should at a minimum propose compensation for these communities.

4. Development Encroaches Significant Woodland

The development proposal still encroaches within the boundary of the significant woodland. Destruction of a natural heritage feature simply because it is convenient to the design layout of a proposed development is not allowed. It is a saddening situation for EEPAC that EIS reports by consultants and proponents that well understand City requirements continue to be submitted.

5. Buffers

Even though this is at least the second revision of the original EIS, the consultant and the proponent have still failed to consider, calculate and propose ecological buffers as required by City guideline.

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As is well known, each segment of the natural heritage feature edge must be assessed for sensitivities and appropriate level of buffering. This has not been done. In fact, many areas of the natural feature edge, (of those not experiencing encroachment) have no proposed buffer at all.

EEPAC recommends that buffer ranges be calculated as per City approved Ecological Buffer Assessment Calculations. The buffer range can then be refined and justified using the sensitivity analysis Table 2 of the Guidelines for Determining Setbacks and Ecological Buffers.

It is disheartening that EIS reports, with this level of serious lack of consideration of ecological protection, in clear contravention of City approved guidelines, are being submitted as professional.

/end